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# **POLICY FEEDBACKS IN INTEGRATED CLIMATE AND ENERGY POLICIES**

*Europeanization and Domestic Preference Formation in  
the Spanish Electricity Sector, 1997-2020*

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# 1. Introduction

## 1.1. Object of Study

The object of this dissertation is the relation between the effects of Europeanization on domestic electricity policies and the expansion of EU tasks and competences in this area. Europeanization is itself a product of the conflict among competing domestic interests and the outcomes of such process feed into the degree of politicisation and contestation or de-politicisation and support (i.e. on the process of domestic preference formation) for further EU expansion. The dissertation then focuses on the domestic policy impact of the first package of a common European Union (EU) energy and climate policy in the field of electricity, adopted in 2008 (the ‘Clean Energy Package’, or CEP) and the effects that the Europeanization experience has had on the process of domestic preference formation with regard to the latest package adopted in 2018 (the ‘Clean Energy for All Europeans’, or CEAE). The dissertation is therefore placed at the interface between EU integration<sup>1</sup> studies and the Europeanization of public policy.

The substantive core of this research lies in the EU-driven endeavour to integrate into a coherent policy framework the traditional triad of energy policy goals. These goals include: the realization of an Internal Energy Market (IEM) based on the liberalization of those segments amenable to competition, i.e. generation and commercialization (supply) of electricity; the environmental goal of reducing and ultimately eliminating the negative externalities associated with electricity generation and consumption, particularly the emission of Greenhouse Gases (GHGs) responsible for climate change, and the development of clean forms of electricity production, particularly Renewable Electricity Sources (RES-E); finally, the overarching imperative to secure security of supply, to which all other goals can be considered to be implicitly subordinated. The simultaneous achievement of these goals is therefore a paramount example of ‘policy integration’. In the field of energy policy, EU negative (or market-enabling) and positive (or market-correcting) integration initiatives have

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<sup>1</sup> ‘Integration’ in the context of this dissertation will refer to two distinct concepts: ‘positive’ and ‘negative’ integration are used in the sense of mainstream concepts of EU studies indicating, ‘market-correcting’ measures (such as the correction of market failures or any other complementary goal that markets alone cannot obtain) and ‘market-enabling’ measures (i.e. liberalization and the prohibition of measures that could interfere with the four freedoms established by the Treaties). The term ‘policy integration’ instead relates to the coordination of cross-cutting goals and instruments in different policy areas.

traditionally been subject to the boundaries set by Member States' concern with safeguarding the sovereign right to determine the domestic energy mix and the basic structure of their electricity sector.

The selection of the topic for this dissertation stems from two fundamental reasons. However, both reasons are rooted in the same fundamental research interest, which is the analysis of the interaction between the dynamics of Europeanization of electricity policy, intended as a progressive contraction of domestic discretion over policy-making, and the corresponding dynamics of domestic support or opposition to the expansion of EU competences proposed by the CEAE. The first motivation resides in the changing substance of electricity policy, i.e. the complex interplay between positive and negative integration which has affected the interests of traditional actors, while also introducing new actors to the sector. The outcome of policy integration under the CEP has been a considerable increase of public intervention in electricity markets. EU studies have treated this outcome as an unproblematic consequence of the 'green turn' of EU energy policy in the recent past, considering that climate change and security of supply have progressively become politically more salient than other goals. Other disciplines, in the legal and economic domain, have instead drawn their attention to this puzzling outcome as an anomaly, highlighting its adverse consequences on the relative distributive position of Member States as well as the emergence of governance and coordination problems both within and across countries' electricity sectors. However, public intervention is a reality that will be relevant and inevitable in assisting market and society in the energy transition process. Anomalies have, if anything else, become the new normal, and the problem has become how to discipline public intervention and make it coexist with markets in an ever more complex multi-level governance sectoral regulative environment. The process witnessed during the last decade has however been fraught with problems, producing positive, negative, and mixed policy feedbacks. One of the relevant aspects of this process is whether the negative and unintended effects suffered by Member States are to be attributed to the incoherence between EU goals and instruments and between them and reserves for domestic sovereignty or to deviant domestic behaviour as compared to the original intentions of the CEP. As a corollary, the expected patterns of opposition and support for the CEAE is also a function of the revised and improved coherence of the complex overlap of positive and negative integration, public intervention, and sovereignty. In that sense, the

CEAE is the result of an effort of synthesis and learning where, in general terms, public intervention has finally found a stable and acceptable role in the overall policy framework but where government discretion, as opposed to intervention, must be consistently reduced as the necessary condition for coherence, efficiency and effectiveness. Obviously, in some cases the reduction required by EU law amounts to its full suppression, although this is rarely the case.

The reaction of different groups within Member States to the new orientations contained in the CEAE constitutes the second reason for the selection of the topic. In fact, there is increased and growing attention in the literature to the question of contestation in relation to the expansion of EU competences following the adoption of the CEAE. The dissertation goal is to understand and explain this recursive and dialectic relation between competition among domestic interests during Europeanization, the outcomes of this process, their impact on the processes of domestic preference formation and EU policy revalidation. The process leading to the adoption of the CEAE and its content, which can be qualified as further EU tasks and competence expansion, raises interesting questions as well as controversies. While not all scholars agree with the proposition that the CEAE entails a significative expansion of supranational competences, this dissertation will show how, when carefully looking at the details of the new rules, there has been an incremental increase in the ways domestic discretion will be further limited by the new batch of goals and rules in the next round of implementation. According to the CEAE, important aspects of the relation between public authorities, producers, consumers, and citizens will now come under the jurisdiction of the EU. Moreover, the new rules have specifically built on the gaps observed in the previous round of implementation and on the considerable technological change that has occurred between the CEP and the CEAE, which is also a partial consequence of the former. This shift in the external technological context is a dimension of political analysis that, if ignored, can lead to an incomplete understanding of the material aspects in which the electricity sector and its policies are rooted. However, the path to policy revalidation has not been one deprived of obstacles, let alone contestation. Consequently, electricity policy must also be placed in the context of the traditional approaches to domestic preference formation as well as the growing literature on contestation and politicization to understand why and where EU electricity policy revalidation has been contested, and with what consequences. Also, there is

a need to understand and explain why and where contestation has not happened, and domestic support has instead prevailed and if and why the relation between domestic support and opposition has changed over time, becoming more or less conflictual.

As such, one of the conceptual and analytical goals of this dissertation is to distinguish between *domestic conflict* among competing domestic interests from *EU contestation*. The former is conceptualized as the normal state of affairs in the whole cycle of the domestic policy-making in relation to the EU, as actors have different interests and strive to first upload them into government negotiating positions and then, based on the outcome of the EU bargaining process, attempt at obstructing or facilitating the Europeanization process. The latter is the limited empirical manifestation of the much broader and complex process of domestic preference formation and it is specifically related to the EU bargaining stage. EU integration literature considers domestic preference formation as an important initial stage, but then recedes in the background once the bargaining process starts. There is little interest in the implications derived by the nature and the composition of the prevailing domestic interest. However, one can expect a strong correlation between the nature and the sign of Europeanization outcomes (positive, negative, or mixed) and the nature and strength of the struggle for domestic preference formation. As a rule, the more positive the policy feedback from Europeanization, the less intense the domestic conflict over domestic preference formation. However, such a simple approximation is also subject to many exceptions, as interest groups have unequal access to government and politicisation has placed a wedge between the search for efficiency and the domestic conceptions of legitimacy.

In sum, and with a view to ensure analytical clarity, the research is therefore divided into two interconnected objects of analysis, related to different stages of the EU policy-making cycle. The first object of analysis will initially look at the process of Europeanization occurring since the adoption of the CEP. The goal is to test hypotheses about the capacity of EU regulation (and enforcement powers) to generate policy feedbacks resulting in self-sustaining or self-reinforcing domestic policy equilibriums involving a majority of actors. Successful Europeanization is not necessarily expected to be a linear process but one with incremental or abrupt inflections depending on the strength of domestic veto players and the degree of ex-ante or ex-post misfits among existing arrangements and newly introduced policies. In these cases, there is, or there can be, a domestic Europeanization conflict among competing

interests but is solved over time in ways that lead to a policy equilibrium to be established and to become largely accepted. Conversely, the opposite is expected when Europeanization is permanently contested and unable to produce such positive aggregative results, or it is simply not perceived to do so, or made to be perceived to do so by interested actors with incentive in casting a negative light on a policy instrument, goals or the EU as a source of authoritative rules. Put it simply, the first object of analysis investigates the following causal relation:

*EU inputs → Domestic Europeanization Contest → Europeanization → Feedbacks → Policy Equilibrium*

Based on the findings the second research object of analysis will instead look at how Europeanization outcomes, the stable or unstable policy equilibria, fuel or dampen conflict in the process of domestic preference formation and how, depending on the institutional links between actors' competing coalitions and governments, it feeds into EU support or contestation.

*Policy Equilibrium → Domestic Preference Formation (Politicisation) → EU Contestation/Support*

## 1.2. Literature Review

There is ample evidence from the different strands of academic research that EU energy policy has straddled somehow uncomfortably along two dimensions. The first dimension refers to the vertical distribution of competences (Talus 2016), featuring a mix of common goals and harmonized instruments with a broad reserve in favour of autonomous domestic action. The second, horizontal, policy dimension refers to achievement of different policy goals and the difficult coexistence between, an ambitious climate and environmental policy on one side and security of supply and the push for an integrated European market on the other. From the perspective of political science and EU studies more specifically, the vertical dimension has received much more scholarly attention. The degree of EU involvement in climate and energy policy varies considerably with decarbonization (climate and renewable energy) policy at the two extremes of the centralization/decentralization continuum and the IEM project somewhere in between (Bausch, Görlach, and Mehling 2017; Helm 2007a, 2014; Schubert, Pollak, and Kreutler 2015; Tosun, Biesenbender, and Schulze 2015b; Wettestad,

Eikeland, and Nilsson 2012). Accordingly, the main variables explaining this peculiar configuration of competence distribution stem from the balance between the unwillingness of Member States to transfer significant quotas of power in what is considered as an area of ‘high politics’ and the epistemic and entrepreneurial role of the European Commission, slowly building a case for collective action and the introduction of common and/or harmonized policy goals and instruments (Skjærseth 2017). Adopting a temporal perspective, the initial research focus has been the conundrum of the construction of a IEM and its attendant regulatory framework (Eberlein 2008, 2012; Eising 2002; Eising and Jabko 2001; Jabko 2006; Jamasb and Pollitt 2005; Matlary 1997; Padgett 1992, 2003; S. K. Schmidt 1998). The Commission has thus managed to push liberalization by breaking down the traditional sectoral and administrative organization based on a vertically integrated, and often state-controlled, industrial complex in favour of the separation and gradual opening to domestic and cross-border competition of contestable markets (Eikeland 2011a; Pollak and Slominski 2011).

However, the irruption of the environmental dimension (Morata and Solorio 2012) and, to a less extent, security of supply concerns (McGowan 2008) caused a clear turn in the research focus, particularly evident since the adoption of the CEP package in 2008 (Pallemans and Oberthür 2010). Since then, the focus has shifted to explain the effects of the growing relevance of environmental goals and instruments in advancing both EU integration and Europeanization (Boasson and Wettestad 2013; Jordan, Huitema, and Van Asselt 2010; Tosun, Biesenbender, and Schulze 2015a). According to this line of thinking, a number of factors exogenous to the EU (including international climate commitments and repeated supply crises) have opened a window of opportunity for the Commission and pioneering Member States to muster enough consensus to refocus the purposes of EU energy policy (Wurzel and Connelly 2011), adding a new dimension to the traditional liberalization goal and accelerating common policy-making. However, the literature warned that the EU would be confronted with a number of governing dilemmas, which involved “*making difficult choices between alternative options that are supported by different groups of actors who often have incommensurate values*” (Jordan et al. 2010, 29). At this point in time, research also became focused on the development of the concept of ‘environmental policy integration’ (U. Collier 2002; Jordan and Lenschow 2008, 2010; Lenschow 2002) and ‘climate policy integration’

(Adelle and Russel 2013; Dupont and Oberthür 2015). The EU was therefore analysed from the perspective of its capacity to engage in a ‘governing process’ to mainstream the environmental dimension into other sectors, minimizing contradictions and maximizing synergies.

A rich specialized literature on policy instruments also started to emerge, in particular in relation to the ‘flagship’ climate instrument of the EU, the Emission Trading System (ETS) (Van Asselt 2010; Ellerman and Buchner 2007; Ellerman, Marcantonini, and Zaklan 2015; Helm 2003; Hepburn 2009; Skjærseth and Wettestad 2009, 2010a, 2010b; Woerdman 2004), renewable electricity (RES-E) support schemes (Finon and Roques 2013; Fouquet and Johansson 2008; Hildingsson, Stripple, and Jordan 2012; D. Jacobs 2012; Jacobsson and Lauber 2006; Johnston et al. 2008; Klessmann, Nabe, and Burges 2008; Lauber and Jacobsson 2016; Menanteau, Finon, and Lamy 2003; N. I. Meyer 2007, 2003) and the interactions of policy mixes (Helm 2008; Del Río 2009; del Río et al. 2013). The literature on the ETS has emphasized the Commission entrepreneurial role in forging a truly supranational policy. RES-E research have instead focused on the role of advocacy coalitions, the entrepreneurial efforts of pioneering actors in the emerging RES-E industry and domestically ambitious Member States (such as Germany, Spain and Denmark) (Boasson and Wettestad 2013) to develop common goals while preventing the Commission from harmonizing policy instruments and steering how the common goals were achieved.

Unfortunately, EU studies have not devoted as much effort in analysing the implementation stage of EU electricity policies as they have poured into explaining EU institutional and competence building. Comparative studies of the effects of liberalization (Bulmer et al. 2007; Jordana, Levi-Faur, and Puig 2006) have been far and between, at least with a specific focus on the political and policy aspects of the implementation process. Other comparative studies of implementation have narrowly focused on decarbonization policies (Skjærseth et al. 2016; Solorio and Jorgens 2017; Verschuuren and Fleurke 2014; Wurzel, Connelly, and Liefferink 2017) leaving behind a research gap in terms of their relation with market liberalization and security of supply. This might not be surprising given the fact that the environmental pillar has been the most visible and possibly empirically tractable area of policy-making in the last decade but also because of normative commitments in much of the specialized literature intending to show why, for example, more ambitious (and interventionist) RES-E instruments

should be preferred over market-based alternatives (Verbruggen et al. 2015). Moreover, there is an outstanding geographical imbalance as analysis of the two pioneering countries in terms of attempts at policy integration has mostly overshadowed the rest. German energy policy under the '*Energiewende*' program has by far been the most covered single case study (Johnstone, Stirling, and Sovacool 2017; Matthes 2017; Solorio and Jorgens 2014; Strunz, Gawel, and Lehmann 2014; Venghaus et al. 2016). The United Kingdom has also received extensive analysis focused on its particularly innovative climate change policy (Carter 2014; Carter and Clements 2015; Lockwood 2013; Lorenzoni and Benson 2014) and electricity market reforms (Newbery 2016b).

To partially fill the gap of knowledge about implementation of liberalization and its interplay with the environmental dimension, the abundant and rich literature produced by energy economists offers a vast repertory of analysis (Buchan 2009, 2015; Buchan and Keay 2015; Finon and Midttun 2004; Glachant 2003, 2016b; Glachant and Lévéque 2009; Glachant and Ruester 2014; Henriot and Glachant 2013; Keay, Rhys, and Robinson 2012). The solid conclusion emerging from this literature is how the impact of public intervention, principally motivated by the support of RES-E, has considerably altered the expected operation, organization, and incentive structure of electricity markets. This outcome is puzzling if compared to the original and intended EU policy blueprint, which envisaged the enforcement of liberalization by establishing private power exchange platforms and the subsequent 'coupling' of domestic markets with a view of obtaining wholesale price convergence through the optimal use and extensions of cross-border grids and the harmonization of cross-border trading rules (Glachant 2016b; Keay 2013).

Many factors have stood in the way of the successful implementation of the IEM blueprint, leading to the paradoxical outcome of the de-facto 'renationalization' of electricity policy and segmentation of markets along national lines (Buchan 2014). The introduction of domestic, government-backed and market-disruptive support mechanism for RES-E has, on the positive side, ensured strong technological deployment and fast cost-reduction. However, the combination RES-E support mechanisms and the absence of a strong and credible carbon price signal have upset the logic of 'marginal pricing' upon which spot markets (and, by extension, also long-term and bilateral trading based on spot prices) had been organized, further undercutting the signalling role of market prices for efficient investment and

consumption choices. Particularly relevant are the negative externalities, defined as ‘pecuniary externalities’ (Buchan and Keay 2015, 93–94), imposed by producers benefitting from RES-E support mechanisms unresponsive to market prices (as in the case of guaranteed FiTs) on conventional electricity market actors: the depressing effect on wholesale prices of RES-E electricity (because RES-E producers sold their electricity at zero-marginal costs and are remunerated outside the market), reduces the remuneration received by their competitors, i.e. conventional power plants. This problem and the absence of well-developed long-term markets (allowing generators and suppliers to hedge the risks related to carbon liabilities, price volatility and obtain the remuneration needed to ensure security of supply) have been identified, respectively as a problem of ‘missing money’ and ‘missing markets’ (Joskow 2006, 2008; Newbery 2016a). The consequent lack of priorities among increasingly rival goals is that the phase-in (of low-carbon electricity) and the phase-out (of conventional, thermal, and nuclear power plants) stages of the electricity transition have thus begun to collide.

Meanwhile, governments have generally responded to the threat of security of supply generated by the disruption of electricity markets and the threatened economic viability of conventional power plants still necessary to avoid power shortages, by introducing ‘capacity mechanisms’ (CM), further reinforcing the renationalization of electricity policy. CMs are another form of out-of-market payments that, contrary to the logic of ‘energy-only-market’ favoured by the Commission (whereby only the electricity produced is remunerated and not the generation capacity that might stand), secure revenue for plants offering capacity deemed necessary to guarantee security of supply. The need for back-up has increased due to the intermittency of RES-E, which cannot be easily forecast in advance nor stored (González-Díaz 2015; Hawker, Bell, and Gill 2017; Henriot and Glachant 2014; Mastropietro, Rodilla, and Batlle 2015; R. Meyer and Gore 2015). Moreover, CMs can also spare governments from confronting high spikes in electricity prices in the energy-only-market. However, governments’ fear of high and volatile electricity prices runs diametrically opposite from the original idea that investments and consumption should be guided by the signals of ‘scarcity pricing’, the hallmark of market-based efficiency, as noted above.

The debate among economists is therefore revolving around the type of market design fit for the challenges of decarbonization (Keay and Robinson 2017). The main question is to establish

what role public intervention plays in distorting the economic efficiency and the optimal outcomes theoretically attributed to market self-organization capacities and whether the same decarbonization and security of supply outcomes could be met in more market-based and cost-efficient ways (Finon 2013; Finon and Roques 2013; Helm 2014; Roques 2014). The question hanging over the discipline is whether the current market organization paradigm can survive or, if a hybrid model has in fact already and implicitly emerged and should be consolidated (Roques and Finon 2017), with the role of competition rethought as competition to receive publicly-guaranteed support<sup>2</sup> rather than, or at least in parallel to, competition in the market.

If the problem of market design is one of ‘software’ and rules, another crucial missing link in the construction of a common electricity markets resides in the ‘hardware’ of the physical interconnection among Member States (Buchan and Keay 2015). While transmission and distribution networks have been historically built around the need to ‘wire’ a nationally bounded geography, the construction of the IEM requires, on the contrary, the development of a new map of cross-borders interconnections to enable trade and competition, the sharing of idle generation capacity for security of supply (as to avoid costly duplication) and, with the growth of intermittent generation, the possibility of transferring excess generation at any point in time over a larger geographical scale<sup>3</sup>. However, the effectiveness of EU policies in stimulating the infrastructural ‘rewiring’ the IEM have so far been rather disappointing. For many, interconnections are the most glaring missing link of EU electricity policy. The reasons behind the dismal result are both political, owing to the asymmetric effects on Member States interests, and economic, as a result of the problem of cost sharing for new transmission powerlines between consumers from different countries which might also benefit asymmetrically from new interconnections (Battaglini and Lilliestam 2011; Helm 2014; Jacottet 2012; Kapff and Pelkmans 2010).

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<sup>2</sup> I.e. competitive tendering in the form of auctions or other mechanism to win long-term contracts backed by public guarantees to recover investments fixed costs, for renewables, but also variable costs for conventional energy given their necessary role as back-up for intermittent renewables.

<sup>3</sup> This is an extremely relevant issue, as sudden surges in production from intermittent and not easily forecastable RES-E technologies, especially wind power plants, can have disruptive effects on the stability of the grid. Moreover, from an economic perspective it is a waste of resources as most of the electricity produced in excess of demand need to be disconnected from the grid, a practice referred to ‘curtailment’.

Besides the shortcomings of the hardware and the software of the IEM, a further concern stemming from implementation involves the distributive dimension and the political economy of the unfolding energy transition. The difference among electricity prices paid by household and industrial consumers across the EU has increased, becoming one of the most important indicators of how the Pareto-efficient distributive condition of the CEP has been progressively been violated (EC 2016c). Governments have ‘missold’ the argument in favour of liberalization arguing that competition would reduce the prices paid by consumers, when in fact what it really does it to reveal the true costs of service provision (Buchan and Keay 2015, 34). While EU legislation has allowed governments to regulate prices in the name of public services obligations (PSO) (Roggenkamp et al. 2016, 260), they have only been able to hide part of the true cost of electricity production from customers, often pushing the repayment of the extra costs to the future (Johannesson Linden et al. 2104), a typical problem of time-inconsistency and political expediency. However, the cumulation of costs coming from different policy priorities and the need of catering to different stakeholder interests (Gawel, Strunz, and Lehmann 2014; Strunz and Gawel 2014; Strunz, Gawel, and Lehmann 2016) have progressively faced governments with the inevitable need to switch to more competitive RES-E support mechanisms (Huntington et al. 2017; Leiren and Reimer 2018; Strunz et al. 2017).

In sum, subject to many different pressure, domestic energy policies have grown apart, with governments confronted with new distributive, technical and coordination problem, while failing to realize the full estimated benefits of a hypothetically well-functioning IEM (Booz & Company et al. 2013). This conclusion seems to support the impression held by its critics regarding the suboptimality of the integrated climate and energy policy promoted by the CEP. Member States have not only been shaped by the growing pressure of EU policies but have tried, sometimes at their expense, sometimes at that of their neighbours, to actively exploit the space for national discretion available to them. The case of Germany and its energy policy, *Energiewende*, is by far the most closely studied and the literature on the German experience is divided about the need for a strict Europeanization of energy policy to produce optimal, from the domestic perspective, outcomes. This subsidiarity version of energy policy defends the convenience to avoid a complete supranational harmonization in order to respect the domestic heterogeneity of preferences and to leave room for domestic experimentation

(Lauber and Jacobsson 2015; Strunz, Gawel, and Lehmann 2014; Tews 2015). Germany has in fact never been a particularly active player in the construction of the IEM, whose liberal principles clashed with its domestic sectoral organization (Eising 2002; Matthes 2017). Despite its progressive climate ambition, it was not even a frontrunner in the construction of the ETS (Skjærseth and Wettestad 2008) and only a ‘foot-dragger’ in relation to the packaging of a common RES-E policy, defending the need of binding goals but resisting interference with its domestic support system based on FiTs (Solorio and Jorgens 2014). From this perspective, Germany has shown the capacity to pursue domestic objectives set on the economic advantages of ecological modernization (Jänicke 2017) and to maintain the most robust market- unresponsive system of FiT RES-E support for a long time, despite the open opposition of the Commission (Jacobsson and Lauber 2006; Lauber and Schenner 2011). From this perspective, this strand of the literature has lamented the intrusion of the Commission forcing a radical change in RES-E support mechanisms following the publication of new guidelines for state aid in 2014 (Gawel, Strunz, and Lehmann 2019; D. Jacobs 2015; Kahles and Pause 2019; Verbruggen et al. 2015). However, such a positive interpretation of German energy policy has also been criticized. First, given the high costs of its RES-E support programme (Delzeit, Klepper, and Söder 2019), avoiding a backlash on domestic competitiveness has mostly come by exempting industrial consumer from the RES-E surcharge and placing the burden on household consumers (Lauber and Jacobsson 2015, 184), triggering grievances from the Commission and other Member States. Second, the ‘missing money’ problem in the German market has been particularly acute. Excess of RES-E production have often resulted in negative wholesale market prices, generating strong reactions from incumbents especially from the powerful coal and lignite sector (*ibid.*, 182), while using a ‘strategic reserve’ to eclipse security of supply problems but in ways that are inimical to liberalization. Nonetheless, as already noted, Germany also had to question its RES-E programme and it has been demonstrated how it has done so not only under the pressure of the Commission since 2014 but also for a change in domestic orientations (Leiren and Reimer 2018). Finally, part of the explanation of Germany successful RES-E deployment might have come at the cost of exporting problems on its neighbours. The irony is that the country has benefited from its extensive interconnections with Continental Europe to spill its excess RES-E production on the grid of its neighbours. This might have relieved Germany from dealing with balancing and missing money problem by simply transferring (or sharing) them

to unwilling neighbours (Sattich 2014). In general, the unilateral policies adopted by Germany in relation to its electricity mix (including the sudden decision of nuclear phase-out after the Fukushima accident in 2011) have been criticized for failing to coordinate negative externalities with its neighbours, showing the incoherence between the spirit of the IEM based on coordination and the retention of sovereignty over the energy mix (Grossi et al. 2019).

If the German case therefore represents only a partially successful attempt at pursuing its interests outside and even in defiance of EU law, a less controversial example is represented by the climate and energy policy of the UK. Starting as a pioneer of electricity market liberalization (Padgett 2003) and as an ally of the Commission in spreading the paradigm to the rest of the Member States, the UK has progressively also embraced the strong drive for decarbonization as a new paradigm shift (Helm 2007b; Kern, Kuzemko, and Mitchell 2014). Moreover, it has strived for ‘joined-up’ government and policy innovation to provide credibility to its ambitious carbon reduction commitment, including a Climate Change Act in 2008, a carbon budget and an independent Climate Change Committee to assess and evaluate government action on its efforts to deliver on its commitments (Rayner and Jordan 2017). The most significant change from the perspective of the IEM has been the Electricity Market Reform (EMR) of 2013 introducing four new and to a certain extent innovative policy instruments, all of them involving more public intervention: an emission performance standard for power plants and a carbon price floor to top up the ETS price; the switch to auctioned FiT premiums (‘Contracts for Difference’) as a RES-E support mechanisms and a competitive capacity market open to different kind of resources, in the line with Commission’s preferences (Leiren et al. 2019). While for some the EMR represents a step in the right direction and the only way in which a liberalized market can deliver on decarbonization goals (Grubb and Newbery 2018), for others it still represents an insufficient, half-way solution risking to achieve the ‘worst of both worlds’, i.e. centralization without the benefit of coordinated planning and a market without efficiency and innovation responding only to central inputs (Keay 2016). An example of that might be the random cuts that are often applied to RES-E programs (Robinson and Keay 2017) as well as the dubious engagement with a ‘nuclear renaissance’ programme driven by a public-private partnership resulting in high costs and planning problems (Thomas 2016).

Returning the attention to EU studies, a new chapter in the literature was opened by the wave of changes that have recently shaken up EU electricity policy. The first relevant event which has rekindled the debate has been the already mentioned publication of the new Environmental and Energy State Aid Guidelines (EEAG) (EC 2014b), a sudden, but not surprising, unilateral move by the EC in its effort to restraint domestic discretion in setting up RES-E support mechanisms (EC 2013c; D. Jacobs 2015). The Commission has forced a considerable turn in a previously almost inaccessible area (Strunz and Gawel 2014; Tindale 2015; Toke 2015), building on a more favourable, as compared to the past, ECJ caselaw (Boasson 2019; Callaerts 2015; Perez Rodríguez 2016) that extended the notion of state aid to cases that had hitherto been considered as falling outside the scope of EU scrutiny and approval. Member States have been forced to strictly follow Commission guidelines favouring the adoption of market-based systems, an option particularly preferred by DG Competition (Dreger 2014) which has erected itself as a veritable ‘guardian’ of market integrity. The same dynamic of ever increasing stringency in the use of competition law to exert pressure on Member States’ interventionist policies is to be observed in the area of CMs, with the Commission forcing the distinction between genuine problems of ‘missing money’ and the need to back-up intermittency from unwarranted interventions distorting the internal market (González-Díaz 2015; Leiren et al. 2019).

In parallel to the use of such powers, a more profound structural change of climate and energy policy started in 2014, when the EU decision-making machinery was set in motion to define the new climate and energy framework for the following decade. The Commission had been patiently working its ground in the previous years to single out the deficiencies that have emerged in the implementation of the CEP. It stressed in particular the need of a new market design, ‘fit for purpose’ in view of the largely unanticipated structural changes brought about by the phasing-in of low-carbon technologies (EC 2015f) and to restraint public intervention in ways that would contribute to benefit and activate consumers by stimulating their engagement in maintaining the balance between demand and supply of electricity (EC 2013b, 2015d). In the Eu literature, the initial assessment of this process had been largely dominated by intergovernmentalist explanations and narratives. Negotiations among Member States in view of the 2030 framework have taken place amid a mixed political and economic environment without a clear ‘focal point’ for preference convergence, as opposed to the

bargaining environment prevailing in 2009 and leading to the adoption of the CEP. Scholars stressed the link that has emerged between implementation experiences of Member States and their domestic preferences, resulting in a lowering of the ambitiousness of decarbonization goals and less appetite for open-ended engagements that could compromise the fulfilment of domestic priorities (Skjærseth 2014; Skjærseth et al. 2016). A relevant factor was identified in the dampening effects of the financial crisis on the willingness of governments and electricity consumers (especially intensive consumers alarmed by the competitiveness effects of the widening gap between EU and foreign electricity costs) to agree to new ambitious decarbonization commitments (Skovgaard 2013, 2014). The environmental policy integration narrative used by the Commission to assemble the CEP would have therefore not survived the test of time because of the lack of deep institutionalization that would have been needed to survive the trade-offs among different goals once the favourable conditions in which the CEP had been adopted disappeared (Bocquillon 2018). Other have stressed how, besides competitiveness, security of supply returned to central stage, offering a new rhetorical line to the Commission for expanding the remit of energy policy, without necessarily abandoning its traditional liberal stance (Goldthau and Boersma 2017). However the Commission discourse on security of supply, in relation to electricity, has traditionally been strictly linked to the building of the IEM (Primova 2015). Other yet emphasize how the international outlook for strong climate action is still an important driver for environmental action (Wurzel, Connelly, and Liefferink 2017). Several authors have highlighted the insufficiency of current policies to secure the long-term goals of complete decarbonization (Fagerberg, Laestadius, and Martin 2015; Rayner and Jordan 2016), even when considering the recent reform of the ETS (Wettestad and Jevnaker 2016).

Under this complex scenario, the EU Council agreement in October 2014 had been considered a sign of growing uneasiness of Member States with a common energy policy further limiting their sovereign right over the energy mix, something that should not come as a surprise considering the reiteration of this crucial legal limit in the new energy art. 194 introduced by the Lisbon Treaty (Braun 2011; Peeters 2014). Proof of this shift in priorities has been attributed to the fact that new renewable energy goals for 2030 will only be binding for the EU as a whole but not on Member States, while individual and binding GHGs reduction goals, which ensure more flexibility in terms of domestic energy choices, have been placed at the

centre of the quest for decarbonization (Fischer 2015; Fitch-Roy and Fairbrass 2018; Spencer, Colombier, and Ribera 2014). To make things even more complex, a new Energy Union plan was introduced in 2015 (EC 2015a) as yet another attempt at streamlining policies and infusing more coherence among the three energy policy goals. Some have pointed how this new initiative did not carry any new bold initiative and have dismissed it either as a list of something that the EC already does or would like to do (Helm 2015) or as a further evidence of the divergence among Member States preferences (Szulecki et al. 2016). Even this interpretation is however contested and not necessarily seen as a re-branding of the existing but rather as a genuine attempt at reconciling the goals of energy policy and retooling the working of the IEM in line with the new realities imposed by the energy transition (Buchan and Keay 2015; Vinois 2017).

The litmus test for the validity of supranational efforts at re-establishing is however to be performed against the legislation proposed to give practical substance to headline goals and general guidelines such as the 2030 framework or the Energy Union. Consequently, the last chapter of the story of EU climate and energy policy surveyed in this literature review starts when the Commission tabled its draft proposals for the new climate and energy legislation in November 2016, the so called ‘Clean Energy for All Europeans’ (CEAE) package (EC 2016b). The proposal, following four years of gradual build-up of Communications, continuous monitoring and reporting on the state of climate and energy policy, in-depth sectoral studies, and inquiries, was considered the most comprehensive of this sort so far. Although it did not enjoy the ‘glamour’ of the CEP, because it was considered an incremental ‘follow-up’ rather than a radical change in EU policies, the context, and the background from which the proposal emerged would have probably suggested a more modest outcome. The CEAE proposal brought together the quantitative operationalization of climate and energy goals together with the qualitative, long-heralded ‘new market design’, a new regulation on security of supply (framed as ‘risk preparedness’) and the absolute novelty of a governance framework intended as the institutional anchor for the relations among Member States and the EU to secure coordination, enforcement, and compliance. Scholarly reactions regarding the significance of the new package have varied. Some have noted how it did not contain any new outstanding policy or institutional novelty, with the exception of the new governance framework, and have lamented the fact that the lack of legally binding of renewable goals on

Member States and the new stress on domestic flexibility represent a step back compared to the past (Fischer 2017; Solorio and Jörgens 2020). Such a negative outlook meets however with different opinions, highlighting how the Commission has not shied away from the challenge to advance a common policy while walking the fine line between providing an answer to the problems emerged during CEP implementation and respecting the sensitivity that some Member States still show in embracing the idea of a step-change in this area (Buchan 2016).

The package has been the object of a long-drawn decision-making process ending in its final adoption under the co-decision procedure in mid-2019: three years of negotiations and several trialogues needed to reach an agreement. The new adopted legislation introduces many novelties, leading the Director of IEM at DG Energy, the President of ENTSO-E (the association of EU Transport System Operators) and a recognized academic expert to affirm that "*this Package provides an excellent proposal to achieve a major step forward for the Internal Energy Market, empowering and servicing energy consumers, improving energy markets, increasing shares of renewable energy and reducing energy consumption*" (Dobbeni, Glachant, and Vinois 2017). The prediction that the package could be heavily watered-down during negotiations (Hancher and Salerno 2017; Hancher and Winters 2017) has not materialized while the negotiation process, after a tug-of-war between the Council and the European Parliament (EP), has even modified the European Council decision to limit the increase in RES target to 27% of total gross final consumption and set instead the new common target to 32%. The setting of the target at a higher level has been object of considerable discussion. It has been noted as citizens in general have continued to accord a high priority to the mandate to increase the RES shares in the domestic generation mix (Tosun and Mišić 2020).

Without entering too much into the details of the CEAE the new legislation advances EU competences in respect to all aspects of the electricity market and provides a better crafted linkage between the liberalization drive and the structural transformations and needs of rapid decarbonization, now underpinned by the considerably lower costs of low-carbon technologies. The EU gains new competences by, for the first time, introducing design principles for newly approved RES-E support schemes, building on the extensive groundwork made by the Commission and the ECJ via competition powers. Recent analysis have moreover

proved how the suppression of legally binding RES targets has been adequately balanced, in terms of the capacities of the Commission to secure compliance, by the rules of the new governance framework (Oberthür 2019; Ringel and Knott 2018). The new governance approach combines increased flexibility for Member States in delivering on their decarbonization goals (particularly RES-E) with more transparent and detailed rules about the required coherence of domestic action, its coordination with other Member States and the broader logic of an integrated and low-carbon EU electric system. The need for flexibility has emerged as an understandable request on the part of Member States, given the problems encountered during CEP implementation, at the same time as the Commission has managed to carve out a role for itself in coordinating the bottom-up approach based on national contributions to the RES-E target. In other words, compliance with RES-E targets within the new governance framework, as compared to the previous directive, has only been softened on the surface, given the fact that the new target is only binding on the EU as a whole and not on Member States. But the core of the regulation, in terms of the powers accorded to the Commission in case of deviation of Member States from their ex-ante stated ambition (the calculation of which, has been anchored to a pre-defined formula leaving little chances to cut slack for themselves) and from their ex-post implementation performance, is not less stringent (Schoenefeld and Knott 2021). For some authors, this sort of institutional compromise between the domestic and the supranational level is the most interesting and novel theoretical fact emerging from the CEAE: on the one hand, the acceptance, on the part of the Council, of a higher target (as demanded by the EP joined lately by the Commission), together with the attribution of novel monitoring and planning supranational powers; however, on the other hand, the resistance of an upward authority shift to the supranational level in terms of the formulation of national RES goals. In that sense, the management of RES policy in the EU can be framed as a new form of ‘embedded intergovernmentalism’ (Bocquillon and Maltby 2020).

The more flexible domestic action in delivering on the environmental dimension will be then combined with an increased top-down logic applying to the management of increasingly interdependent delivery of efficient electricity markets and security of supply. Another cornerstone of the new package is therefore the ‘new market design’. Three previous IEM directives had given almost complete freedom to Member States and private actors to design

their domestic market, except when cross-border trade and flow of electricity was involved, and could only rely on ‘spontaneous convergence’ in the hope that a seamless EU wide-market would emerge from linking the single pieces of the jigsaw (Glachant 2016a). EU law had already started to ‘invade’ domestic markets via the rules on market coupling via increased cross-border trade and the network codes to ensure interoperability and avoid undue restrictions to national transmission grids (Jevnaker 2015; Meeus and Schittekatte 2018). However, the new IEM directive takes an unprecedented step by disciplining and empowering market operators (from generators, to power exchanges through to customers) with specific rights and duties, opening the door to legal appeals against public intervention contrary to EU legislation (Hancher and Salerno 2017). By redirecting the goal of market interaction to the provision of flexibility via more and harmonized short-term trading and the activation of demand-response-mechanisms rather than simply focusing on how to maintain the supply offered by inflexible power plants, the new legislation strikes a balance between the need to preserve the basic structure of the market-oriented approach with the structural change of the intermittent provision of electricity from high shares of RES-E. In sum, according to one of the most recent and comprehensive evaluation of the CEAE (Peng and Poudineh 2019), important steps have been taken in order to deal with the misalignments between the different modules of the architecture of electricity markets and domestic and EU decarbonization policies. However, the crucial problem of the ‘missing money’ and ‘missing market’, which is expected to become more pressing with the mandated incorporation of large quantities of RES-E, has, for the time being, only been postponed. Nonetheless, the new legislation takes also stock of the necessity of continued public intervention, both on political but also on structural grounds, given the limits of the ‘energy-only-market’ approach in the light of the impacts of RES-E, as noted above (Tagliapietra et al. 2019). This is particularly relevant as the clash between liberalization and the other goals seems to have received a more coherent treatment than in the past. The difference is that the new approach now aspires to coordinate (rather than oppose) public intervention at EU level while reducing domestic discretion (Hancher and Winters 2017, 5). This is especially true when considering that CMs are now openly contemplated in the new market directive and subject to an unprecedented degree of harmonization. Flexible design principle for CMs come together with strict rules ensuring that they are a last-resource option when ‘everything else

fail' in relation to market-based measures and that specific emission criteria are also met, reconciling EU objectives of security of supply and emission reduction.

The CEAE has not only extended EU legislation in the area of upstream markets as it has been so far related, but it has also made new provisions with regard the role of consumers and those of prosumers, signalling a change in the ambition to shape the relations between the individual, the market and the state. It then comes to no surprise that the branding strategy of the Commission has been based on a direct reference to citizens ('Clean energy for all Europeans') and place a 'fair deal for consumers' (EC 2016a) among the three key priorities, together with two other appealing aspects from a public opinion perspective (energy efficiency and global leadership in renewables). The attempt at shacking one of the remaining pillars of domestic discretion in shaping state-society relations (and also state-market-society relations) rests on three partially connected issues: further restrictions on the squeezing of competitive retail markets by regulated tariffs, energy poverty (both issues only lightly touched by previous regulations) and prosumers. Despite the fact that the EC has received a blow in its attempt at suppressing all type of regulated prices, not least because of concomitant episodic occurrences such as the yellow-vest uprising in France (THEMA Consulting 2019), the new IEM directive includes new specific requirements for the setting of regulated tariffs as an alternative, or, better said, as an exception to the rule that consumers should be served by market-based prices offered by retailers in a competitive market (Boscán 2020). In addition to the many new principle that Member States will face when setting regulated tariffs, there is also a specific clause setting a date for the evaluation of the continued necessity of such tariffs, their impact on the retail market and the option of submitting a legislative proposal should the appraisal require so.

By considering 'prosumers' (or active consumer and producers) and energy communities as new full players of the electric system, the new legislation also takes a different market perspective than in the past while redefining the boundaries of individual rights in the face of public intervention. To the extent that they serve the goal of creating grass-root engagement with the energy transition, exceptions to strict market rules are now explicitly welcomed. The rise of the prosumer phenomenon is linked to the availability of RES-E producing technology (mostly roof-top PV modules and, increasingly, batteries for electric storage). Prosumers can therefore produce and self-consume electricity, store it and use it at later times, helping to

reduce the peaks in electricity systems (and therefore reduce the system total costs by reducing the amount of investment in fixed infrastructure that is only needed at peak time, while staying idle for the rest of the time). They can obviously also feed their excess production into the grid, and be remunerated for that (Cseres 2018). The problem is that prosumers can be viewed both as a threat and as an opportunity for the traditional organization of the electricity network and the sharing of its costs (Sioshansi 2014, 66). The problem is that, while providing all the benefits listed above, prosumers are also agents that defect from using the grid, which has fixed costs. Moreover, when deciding not to use the electricity provided by the grid, they also avoid the charges that public authorities place on grid-connected consumers not only to pay for the grid itself, but also for the other regulated costs of the electricity system. Such regulated costs include those incurred in the provision of common goods such as the provision of security of supply and the subsidies for RES-E, among others. Therefore, the more prosumers defect from the grid, the higher the overhead costs to be spread among a shrinking number of grid-connected customers. The problem is of a double nature (Batlle, Mastropietro, and Rodilla 2020). From a distributive and social just perspective, it is expected that, given the initial fixed cost involved in purchasing the necessary equipment and the space needed for their installation, prosumers are likely to be wealthier than those on which the residual cost allocation for the provision of public goods must be redistributed. Moreover, prosumers will rarely be totally self-sufficient, using the grid both for offloading their surplus electricity and for drawing electricity when their pattern of consumption does not correspond to their pattern of production. The second problem is that, the higher the residual costs to be recovered via charges on the tariff paid when consuming electricity from the grid, the higher the possibility that prosumers will incur in ‘grid-parity’ (i.e. the moment when self-produced electricity is at least as expensive as that consumed from the grid, or less), inducing a sort of ‘death-spiral’ for utilities and electricity networks (Parag and Sovacool 2016). Therefore, if prosumers are allowed (and, helped through financial or other types of incentives) to grow and create a new kind of low-carbon, decentralized system both the benefits but also the challenges to manage such a paradigmatic change could be potentially daunting. It is not surprising then that before the inclusion in the CEA, practices and regulatory frameworks related to prosumer have varied considerably across the EU (EC 2015c, 2017b).

### 1.3. The Problem

Considering the tensions that have accumulated since its inception in terms of the potential overlaps between positive and negative integration and between these and domestic sovereignty, EU electricity policy has shown a notable degree of resilience to EU contestation, intended as a rejection of authority of the EU in managing the trade-off among the different dimensions of the policy (Herranz-Surrallés, Solorio, and Fairbrass 2020). Energy policy (including electricity policy) has come under pressure from two different sides: the push for the renationalization of certain competences and the push for further integration, but it is difficult to conclude that the former have prevailed over the latter. Overall, EU contestation has subdued over time and the EU has apparently retained its output legitimacy, gaining the confidence of Member States that more integration can increase the welfare of the Union. Using neofunctional language, participants have exchanged concessions in order to upgrade the common interest (Niemann and Schmitter 2009, 50), although with novel institutional arrangements that do not neatly fit neither within a pure neofunctional nor within a pure intergovernmental theoretical account. However, explanations for the progressive neutralization of potentially disruptive EU contestation are mostly placed at the EU level of analysis and in the negotiating context more specifically, while the domestic dimension of contestation has been less intensely studied. At the same time, the mapping of EU contestation seems incomplete, as there are many areas of task and competence expansion that are underreported, and therefore it is yet unclear whether EU contestation has in fact occurred or not in other relevant cases. There are, as a consequence, three problems emerging from the existing literature: one concerned with the level of analysis, the other with case selection and, finally, the undertheorized distinction between spillback (intended as renationalization) and spillovers (intended as both, expansion of tasks within already existing EU competence and the attribution of a new competence).

First, the level of analysis of contestation is centred on the state as a unitary actor, exercising contestation at the EU level, which is certainly necessary to gain insight for the relations among Member States and between them and supranational institutions but leaves an empirical and a theoretical gap to be filled: what has happened within the black-box of Member States while contestation was been exercised at EU level? Empirically, because we know little about why domestic actors have mobilized in favour or against policy revalidation,

the composition of the opposing and supporting coalitions and the strategies and arguments used to exercise influence on their respective governments. This is important because if future implementation is to be successful, many actors will have to actively participate in the mobilization of resources and agree with the profound changes in the organization of the sector, including well-established relations between the state, the market and society. Therefore, it is important to have better knowledge about the opposing and supporting coalitions for policy revalidation and how they map, now that the CEAE has been adopted, on efforts for future implementation. It would not come at a surprise that optimism prevails at the moment of negotiating EU agreements only to find later that what has been agreed does not fit domestic capacities and willingness to comply (Majone 2014, 55–88). Theoretically, the literature makes often reference to the two terms politicisation and contestation, often interchangeably, but few of the reviewed articles make an explicit use of the conceptual framework and the theoretically relevant variables that are used in the specialized literature on politicisation. Therefore, a better linking of with the politicisation literature is needed for explaining patterns of support and contestation, if, again, politicisation is not to be equated only with the manifestation of government unsatisfaction with a specific negotiating proposal. To claim politicisation, one should demonstrate that the issue under negotiation is domestically salient and that some actor is wilfully exploiting it to appeal to mass public in order to gain a domestically electoral advantage. Moreover, the consequences of politicisation are different if the strategy is used by coalition supporting or rejecting policy revalidation. At the same time, politicisation is not necessarily to be found. It could in fact be that what has driven contestation is simply the functional struggle among producers- interest groups or between these and consumers' and other societal groups, which is instead the theoretical preferred terrain of traditional integration theories to depict the process of domestic preference formation.

The second problem, case selection, stems from the fact that too often the literature focuses on cases of EU contestation, disregarding the cases of non-contestation, generating a selection bias. Clearly, if one wants to find instances of EU contestation, they will not be difficult to find. But variation in the dependent variable is of great concern here, as cases of non-contestation could be for example more frequently found in the area of negative integration, were efficiency gains and Pareto-efficient agreements are more likely, even if at

the cost of relinquishing portion of sovereignty, the original mission of the EU, in the end. This is an important caveat because many areas that nominally fall under the heading of negative integration involve important aspects of sovereignty, as for example the case of tariff regulation, which calls into question the crucial (but shifting) role of the state in providing a universal service and a service of general economic interest ensuring distributive justice. The case in question, interestingly is also telling about a triple overlap, as successful positive integration (RES-E integration) requires that consumers are made responsive to price changes to better accommodate fluctuant availability of this type of electricity. Such a unique complexity of the electricity sector must be kept in mind when selecting cases and when placing them under the label of positive or negative integration.

Equally important, some of the controversies that were relevant in 2014, when the whole process of policy revalidation started, might have become less relevant over time. In this case, rather than a selection bias, the problem is one of lack of constant tracking and update of actors' preferences. Considering again how fast technological development is in the area of electricity, this could lead to a serious overrating of the problems that were initially relevant but have decreased in importance over time. One example is emblematic to show how important is updating the significance of cases based on new information. One of the game changers in breaking the prolonged deadlock between the Council and the EP over RES targets, by helping to move some of the reluctant Member States away from veto, was the last-minute presentation of an influential report commissioned by the Commission (IRENA 2018) which updated the figures contained in the impact assessment over the costs of reaching different RES targets (Simon 2018b). Besides this anecdotal but extremely important example, it is not a remote possibility that some of the cases that had initially spurred contestation have lost their salience (political and economic) over the four years of negotiations.

Returning to the original point, cases of non-contestation must be treated as relevant not only for their value in generating variance on the dependent variable and allow for theoretical leverage when tracing back the causes of such variance through comparative research designs. They are also theoretically relevant because they could hide relevant within-case variance, meaning that contested domestic preference formation that could have been elevated at the EU level has been avoided due to the domestic ability to gradually

accommodate competing interests throughout the Europeanization process. Europeanization has in fact progressively decreased in importance for the new wave of energy policy studies, which have recast their focus on the EU level dynamics. But it must be kept in mind that the implementation period of the CEP has continued during the CEAE bargaining process, with an overlap of almost six years. This might have generated confusion and difficulties for both policymakers and scholars, which have extrapolated from current Europeanization outcomes to make inferences for their negotiating positions, the former, and their case studies, the latter. But while implementation and Europeanization have proceeded, their outcomes must be incorporated in the analysis, with hindsight. Some conflicts might have therefore disappeared while new conflicts might have emerged, as Europeanization outcomes were being produced. If certain conflicts have therefore remained domestic, or if certain conflicts that were elevated at the EU level were solved via domestication, it is important to know how and why such domestic conciliation has happened and if such outcome is of a permanent or temporary nature. It could in fact be that the new goals might upset fragile domestic policy equilibria considering that the change demanded by the CEAE is not just of a quantitative nature, but also qualitative. Even though this might be, at the moment, speculation about the future, it could be useful, from a policy-relevant perspective, to identify policy equilibria that are currently self-sustaining or self-reinforcing but that, once the parameters around them change, could become self-undermining.

Finally, more recent development have been often ignored, as for example the emerging trend of coal phase-out which is a long-term consequence of the establishment regulation aimed at internalizing the environmental and health cost of emissions of CO<sub>2</sub> and other harmful substances (Konellopulos 2018). Such an indirect squeeze on the capacity of Member States to exercise their sovereign right to determine the energy mix is one relevant example of cases that do not usually show in the current literature and it is not yet given to know whether they show as cases of no-contestation or otherwise. For it could well be that Member States knew since the beginning that, by accepting positive integration regulation, they would one day be faced with the factual, rather than legal, limitation of their discretion over the energy mix, as a result of the autonomous decision of market actors responding to changes relative prices. However, given the potential of contesting almost every aspect of the energy policy, it is also possible that contestation over this implicit loss of domestic discretion

also exists, or has existed, and it is underreported. Not least because, indirectly, a higher amount of RES-E must obviously be accommodated by a quicker than expected phasing-out of fossil fuel, creating further tensions with security of supply, from a technical and/or economic perspective.

The third problem in the literature is the surprising absence of theorisation about the difference between spillbacks and spillovers. This is, in part, because the main source of EU contestation has been over authority already conceded to the EU, such as the case of mandatory RES-E goals or CMs, inducing demands for renationalization or spillbacks. It is the case that the Commission has been able to autonomously achieve further competence expansion via the use of state aid powers, such as the case of RES-E support mechanisms or CMs. But it is an empirical question the extent to which Member States have not considered the instruments introduced by the Commission as a superior solution to their domestic instruments, relinquishing for good opposition and demands for spillbacks. As for spillovers, even though they have not been as eye-catching as in the previous package, they have not the less been of a minor significance, especially for those Member States that will be now forced to adopt instruments that were not contemplated in their jurisdiction, such as the new prosumers provisions or those on regulated tariffs. This raises the question as to whether such spillovers can be justified from a functional perspective and have received the full backing of all Member States or if they have generated resistance given the fact that, as in the case of prosumer legislation, they could have been adopted autonomously by Member States. This is a legitimate question as some spillovers do not seem to arise from new interdependence but from the application of notions regarding the recognition of individual rights (thereby pitting political spillovers against postfunctionalist resistance). Finally, what is equally missing is an explanation of the behaviour of Member States in the face of missed functional spillovers, whereby areas of asymmetric interdependence among Member States, as in the case of interconnections, are still addressed via mechanisms of cooperation that are have only slightly been enhanced by the creation of new ad-hoc bodies for enhanced regional cooperation.

In sum, this dissertation aims at filling the following gaps in the existing literature on support and contestation of policy revalidation:

- a level of analysis gap: by focusing on the dynamics of domestic struggles leading to specific Europeanization outcomes, showing how these have fed into the process of domestic preference formation and politicisation leading to EU contestation or support.
- related to the previous point, to fill a gap in the temporal and causal analysis of the relation between EU contestation and Europeanization: pointing to instances when the former is prevented by the latter more successful Europeanization over time can in principle feed back into less EU contestation
- a selection bias problem: based on the outcomes of the analysis of Europeanization, it is possible to bring to light negative cases of EU contestation which are as theoretically relevant as those of contestation.
- a theoretical problem regarding the constraints and opportunities that Member States have faced to claim spillbacks, to oppose undesired spillovers and to promote desired spillovers

#### [1.4. Research Question](#)

Summing up the previous discussion, the research questions of this dissertation are the following:

**RQ.1** *Why, to what extent and according to which mechanism the implementation of EU policies has resulted in contested Europeanization outcomes that have generated diverging domestic preferences in the form of opposition and support to task and competence expansion (spillbacks or spillovers)? Has the conflict over domestic preference formation been based on functional claims or has it been fed by politicisation and partisan competition?*

**RQ.2** *Why, to what extent and according to which mechanism the implementation of domestic policies not yet regulated by EU legislation has resulted in outcomes that have generated diverging domestic preferences in the form of opposition and support to competence expansion (status quo or spillover)? Has the conflict over domestic preference formation been based on functional claims or has it been fed by politicisation and partisan competition?*

**RQ.3** *Why, to what extent and according to which mechanism the Europeanization of domestic policies has resulted in outcomes that have not generated EU contestation? is it*

*because there has been no relevant conflict between competing diverging interests at all or is it because such conflict has been solved domestically?*

All the questions are therefore related but refer to different outcomes of domestic preference formations related to different policy equilibria resulting from Europeanization processes. For what we know from the literature and the available information about the negotiation of the CEAЕ, all the directives and regulations of the new package have been adopted by unanimity, and in that sense, there has not been any formal opposition. However, the adoption of the RES Recast directive had been stalled by a blocking minority, whose main point of contestation was the ambition of the RES-E target. Interestingly, such blocking minority has been dissolved following a change in government in Italy and Spain (Bocquillon and Maltby 2020, 47). These cases therefore show that EU contestation in the form of opposition to competence expansion is not necessarily the expression of an unquestioned structural domestic interest equally upheld by all potent government coalition. The reversal of negotiation positions unforced from the outside but coming from within deserves explanation about its causes.

While the first two questions are focused on cases of EU contestation (and eventually support), RQ.3 is specifically addressed to the negative cases, and ask whether they are truly negative cases, meaning that the Europeanization process has not witnessed competing interests (or whether they have been marginal and theoretically insignificant) or whether conflict has been fully internalised and solved domestically, which is a case of theoretical significance. In these cases, explaining Europeanization would by itself amount to an explanation of EU support as there would be no reason for actors to contest a policy which has resulted in a stable and potentially beneficial policy equilibrium, unless it can be demonstrated that the new requirements represent a qualitative or quantitative challenge for domestic actors that might upset such equilibrium.

### 1.5. Hypothesis Generation

The following section will develop the rationale for hypothesis generation in relation to each question. All the hypotheses are based on deductive reasoning rooted on theoretical propositions derived from existing theoretical frameworks.

### 1.5.1. Complete and Incomplete Policy Feedback Loops

Inverting the order of the research questions outlined above, the first hypothesis proposes an explanation for RQ.3, which is in fact the baseline case as it is expected that the most significant and recurrent occurrence is competition among domestic interests that does not spill into EU contestation. The hypothesis is initially rooted in the expected beneficial consequences of EU regulatory action according to normative theories of regulation<sup>4</sup> (Majone 1996, 28–47). Accordingly, EU regulation is beneficial because its leads to better resource allocation, through trade liberalization and trough the correction of negative externalities and the provision of public goods. However, liberalization policies provide ample discretion for domestic authorities in orchestrating deregulation, and Member States engage in regulatory competition (Héritier 2001a). In the long run, regulatory competition should lead countries that have adopted a suboptimal model of deregulation to change and either innovate (Knill and Lenschow 2005, 586) or emulate other successful models (Börzel 2005). Therefore Member States move from a policy that generates negative feedback (A. M. Jacobs and Weaver 2015) to one that generates positive effects or positive feedbacks and actors converge on a stable domestic policy equilibrium. In this case, it can be stated that a *complete policy feedback loop* has been achieved, in the sense that the policy has achieved its goals and actors have no incentives to move from the existing equilibrium (i.e., significantly contest the current policy and/or its continuation). However, stability is compatible with more than one causal mechanisms, a case of equifinality. It can in fact derive from self-enforcing (none of the actors has an incentive to defect because of the positive effects of the policy) or self-reinforcing (in the sense that it generates a positive feedback and not just a positive effect).

Equally, re-regulation via the correction of externalities can be initially domestically contested because while the benefits of efficient allocation can take quite some time to materialize and can have only an indirect and diffuse economic and social impact, the negative consequences in terms of increased costs of production (especially for incumbent industries with sunk costs) can be quite high, concentrated and immediately visible. However, if the initial contestation is contained and the long-run positive policy feedback effects materialize, benefits should overcome costs and a stable policy equilibrium supported by positive effects or positive

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<sup>4</sup> Not to be confused with positive theories of regulation which instead point to the negative consequences of regulatory capture

feedbacks is also reached (i.e., a complete policy feedback loop). Under these conditions, contestation is a domestic phenomenon that recedes over time due to the long-term effects of Europeanization and offers a causal explanation for the absence of EU contestation. To put it simply, what is expected is domestic fit with policy expansion because of previous successful Europeanization. Considering this very broad theoretical approach, the hypothesis is the following:

- *Hypothesis 1 (positive effects- positive feedbacks hypothesis): Domestic conflict is expected to halt when EU regulatory policies, aiming at resource allocation efficiency, generate positive effects or positive feedbacks conducting to either a self-enforcing or a self-reinforcing policy equilibrium. In this case, there is no reason to oppose EU tasks and competences expansion because it is unreasonable that any domestic actor would have an incentive in upsetting the favourable domestic policy equilibrium.*

Moving to the hypotheses for RQ.1 and RQ. 2, it can be noted that all the necessary conditions must be available for a Member State for positive effects or feedbacks to materialize, induce a stable domestic equilibrium and prevent divergence in preference formation as regard to new proposed EU legislation. These necessary conditions not only include positive inducements and incentives but also negative ones. For example, the exercise of autonomous supranational powers can be necessary to neutralize opposition from domestic institutional veto player potentially standing in the way of the complete materialization of the positive policy feedback loop. These conditions are not always given, and it is possible to think of two instances when such possibility occurs, paving the way for contested domestic preference formation.

First, in many cases EU integration is incomplete and while some policies require specific actions on the part of a given Member State, they depend on the existence of other policies that have either not yet adopted or that work according to a different logic and cannot keep a synchronized pace with the policy area were a *functional bottleneck*<sup>5</sup> has emerged. Coherence among EU energy policies is not always readily available (Lenschow, Bocquillon, and Carafa 2018). The concept of incomplete integration lies at the heart of functional and

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<sup>5</sup> By functional bottleneck it will be from now on intended the presence of an impediment to the achievement of one of the objectives of EU energy policy and in particular the coherence between positive and negative integration and sovereign discretion.

neofunctional explanations of the expansion of EU policies (Niemann 2006). The neofunctional focus is however on the almost mechanical expansion of EU policies via spillovers. Another, less optimistic theoretical version of incomplete integration postulates that the answer offered by EU decision-making system when meeting a functional bottleneck is often incremental and not entirely adequate to solve the original problem (by simply putting a patch on the more immediate problem without extending it to future likely problems). Integration, under these circumstances, is a process of piecemeal reform and ‘failing forward’ (Jones, Kelemen, and Meunier 2016), with two consequences: a Member States is faced with a problem of incomplete integration that causes domestic grievances and it cannot be sure that the spillover solution proposed, which is often the result of interinstitutional tug of war (Majone 2005, 30), will solve the functional bottleneck. Moreover, integration in core state powers has been characterised by a glaring contradiction: the extension of formal authority, i.e. the legal capacity to exercise regulatory powers, has not been accompanied by the equally necessary empowerment of the EU with material, capacity-building resources (Genschel and Jachtenfuchs 2016).

Under these circumstances, it can be expected that within the Member State in question there will be contestation in the form of demands for spillback, if spillover in the adjacent area is not on the agenda during the renegotiation of the policy package. Consequently, a Member State will could take a hard bargain approach during negotiations (Dür and Mateo 2010; McKibben 2010), by making its consent to task and competence expansion in Policy A conditional on the spillover on Policy B. In sum, under these circumstances domestic preference formation leading to EU contestation is to be expected, at least on the part of those actors that believe in the close linkage between the need for the missing spillover and policy expansion.

Second, another possible circumstance is when the proposal for competence expansion is based on policies adopted by other Member States, as the EU can be conceived as an organization that allows and promotes experimentation at the domestic level and then subsumes domestic experiences at the higher jurisdictional level. In this case, the mechanisms of pressure to which a Member State is subject are, initially, of a horizontal nature, meaning that learning from other Member States is what drives, if it does, domestic change, without any assurance that this will in fact happen (Bulmer and Radaelli 2004, 11). Later, when the

agenda-setting stage of EU policy expansion (Princen 2011) is solved in favour of actors demanding the attribution of that competence to the EU level, dynamic competition among Member States to upload their domestic model will ensue (Börzel 2002), meaning that voluntary, horizontal policy transfer is likely to become coercive in the future. Environmental policy literature in particular has provided extensive theorizing on the role played by environmental ‘forerunner’ countries in promoting the upload of their policies (Liefferink and Skou Anderesen 2005). But it is by no means certain that opposing Member States will be favourable to attributing the new competence at the EU level. If the policy is sufficiently diffused among Member States and it is visible, there must be reasons why a Member State decides not to spontaneously adopt it. Such Member State is expected to oppose and contest EU competence expansion.

In both cases above, the policy feedback loops operating in cases of successful Europeanization are clearly not working<sup>6</sup>. However, this does not mean that some limited or indirect positive effect does not occur, and that domestic preference formation is uncontested and necessary hinging towards opposition. On the contrary, there are countervailing mechanisms that lead to disputed domestic preference formation and, possibly, politicisation. The Member State is not a black-box and much haggling can take place inside. In relation to the case when a domestic coalition can make the case for spillbacks based on grievances about incomplete integration and unforthcoming spillover (i.e. spillovers that are thought to be necessary but are not on the EU negotiating agenda), the definition of where the domestic interest lies can be disputed based on different interpretations about the relevance (or the very existence) of the negative effects caused by the missing piece of integration, or about the proper way to approach the problem at the bargaining table. Therefore, some degree of conflict in domestic preference formation based on functional arguments can be expected (i.e., related to the functional consequences of accepting policy revalidation even in the presence of a missing spillover).

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<sup>6</sup> It will be noted as horizontal Europeanization has been assimilated to cases where the EU exercises pressure via legal requirements. This is because first, the EU is rarely a source of innovation in policy instruments (Halpern 2010) but recycles instruments experimented in other jurisdictions, including the same Member States. Therefore, it is likely that Member States are already aware of best practices elsewhere. Second, the literature on policy diffusion, policy transfer, policy learning, and lesson drawing demonstrate how policy actors, from government, interest groups, civil society, epistemic communities and so on, are constantly scouring abroad for positive experiences to incorporate.

In the second case, if a domestic policy already exists in the area of proposed task and competence expansion, even if very different from the one now proposed by the EU, it is possible for actors to draw lessons in the form of comparisons with other Member States. Such comparisons then provide those actors aggrieved by being denied the benefits and the rights provided in other Member States with reasons to coalesce and engage in domestic conflict, disputing the arguments that the opposing coalition employs to justify the rejection of the proposed EU policy. The favourable policy feedback is therefore imported from abroad as a positive lesson and it is contrasted with the domestic lack of the same favourable policy treatment. At the same time, other actors will defend the status quo and draw different conclusions about the experiences of other countries and the convenience of replicating them domestically. Drawing lessons from abroad (Bennett and Howlett 1992; Dolowitz and Marsh 2000) or simply accepting the EU as a mean of hierarchical or horizontal transfer platform (Padgett and Bulmer 2005) is not an unproblematic process, as learning is a political process fraught with conflict about the opportunity and the costs of policy translation (Robertson 1991). Moreover, studies of policy convergence and policy diffusion have established that, although there is evidence that over time these phenomena occur, there are many obstacles in the availability of best practices (Busch and Jörgens 2005). This literature highlights that even in the presence of transnational communication, policy convergence should not be expected if adopting a foreign solution requires extensive changes in domestic regulatory and administrative frameworks, or it entails high economic costs and strong redistributive effects (Holzinger and Knill 2005, 791). Therefore new EU policies can cause disputes in the domestic preference formation process, driven by both distributive, functional and, increasingly, identity-based of postfunctional domestic conflicts (Hooghe and Marks 2009a), as well as politicisation based on partisan competition (Hutter, Grande, and Kriesi 2016).

Under these circumstances, domestic preference formation is expected to be disputed and politicised by opposing coalitions of actors. It is therefore also expected that a change in government can lead to a quick change in the negotiating position, given the fact that political actors can be sensitive to the demand, or even part, of different coalitions.

To summarize, the following hypotheses can be derived, the first referring to the case of incomplete integration and the second to the case of horizontal Europeanization and domestic conflict based on comparison with policies adopted abroad:

- *Hypothesis 2 (incomplete integration hypothesis): When incomplete integration generates both positive and negative effects, domestic preference formation is expected to be contested through the confrontation of opposing domestic coalitions holding different views regarding the convenience of demanding spillback in one policy if a related spillover in another policy is not supplied.*
- *Hypothesis 3 (domestic translation hypothesis): When the government opposes spillover in an area of domestic policy not in line with new the proposed legislation, domestic preference formation is expected to be contested if the proposed policy is already applied in other Member States, and different actors draw different conclusions about the expected positive or negative effects of domestic application.*

### 1.5.2. Domestic Preference Formation: Functionalism and Politicisation

These last two hypotheses address the problem of the existence of domestic conflict but do not answer the question of its nature. What are these different views and conclusions about? Who is behind them, and for what reasons do government and opposition uphold them? Theories of domestic preference formation and politicisation can help shed some light. It is possible to either turn to functional accounts of domestic preference formation based on competition among economic and non-economic interest groups or to those based on the emergence of bottom-up mobilization that intersects and often trumps interest group competition. Consequently, political parties in government and in opposition are potentially subject to different pressures and incentives to oppose or support EU legislation.

If the domestic line of conflict is mostly functional, as predicted by Liberal Intergovernmentalism (Moravcsik 1993), it is expected that political parties represent different interest groups that stand to lose or to gain from policy revalidation. Most importantly, political parties must not be ‘bluffing’ in their claim to defend a different but legitimate and viable version of the domestic interest. If, for example, government is opposing competence expansion, supporting opposition parties and interest groups must have the resources and capacities for subsequent implementation, in case they are able to overturn the government negotiating position (either via change in government or via lobbying).

Therefore:

- *Hypothesis 4 (purely functional conflict hypothesis): If EU contestation is mostly grounded on functional competition among interest groups, reversal of the negotiation position is expected to be followed by successful Europeanization only if support for EU task and competence expansion is backed by interest groups with the necessary resources and capacities for implementation.*

However, it could be that parties are also moved by electoral and partisan motivations and politicisation could ‘obfuscate’ functionalism. Under these circumstances, it is theoretically relevant to distinguish between ‘pure’ politicisation that is far removed from the underlying functional problems from politicisation which takes place on top of functional conflict and arguments. In the burgeoning literature on politicisation, the phenomenon is usually identified as ‘constraining dissensus’, meaning the presence of political forces that take advantage of popular dissatisfaction to challenge governments open to strike an agreement at EU level to solve a problem raising from functional interdependence (Hooghe and Marks 2009a). In this case, political parties can, out of necessity or political opportunism, be interested in taking domestic electoral credit for opposing EU task expansion, forgoing functional gains. Domestic and EU politicisation can therefore lead political parties to overplay a functional threat (i.e., if agreeing to EU task expansion would not lead to aggregate welfare losses) and, conversely, to downplay functional benefits. Focussing on the hypothetical case of EU contestation, if politicisation is the result of the existence of a widespread societal negative bias and the topic is domestically salient, if the negotiating position is reversed, Europeanization should be relatively problematic because it will find resistance from lack of public acceptance. Therefore, a strong politicisation hypothesis is put forward, in the sense that constraining dissensus can be an obstacle for subsequent Europeanization:

- *Hypothesis 5 (strong politicisation hypothesis): If EU contestation is grounded in the existence of domestic constraining dissensus, reversing the negotiation position is expected to be followed by controversial Europeanization because of lack of public acceptance*

However, a further hypothesis is also possible whereby functional conflict and politicisation are complementary rather than mutually excluding phenomena, and there are two reasons that support this expectation. First, it could be that functional gains and losses for a Member

State flowing from policy revalidation are not so neatly defined. In the case of unforthcoming spillover, it could well be that the invoked spillover is at least partially necessary, but it could as well be possible that there are domestic and EU alternatives for overcoming the perceived obstacles or successfully manage them at least up to a point when functional bottlenecks become objectively constraining. Same, in the case of the domestic applicability of policies which have been successfully applied abroad, it could well be that there are structural limits to full replicability, but also reasons to believe that a gradual introduction, tailor-made to domestic characteristics is also possible. Second, the problem is further compounded if domestic policies adopted by the government in charge of negotiations run contrary to proposed EU legislation. The government might therefore be genuinely convinced of the lack of functional gains in agreeing to furthering EU policies. If current domestic policies and reforms are electorally salient and disputed, the domestic environment is characterized by party/electoral competition instead of a clear domestic constraining dissensus, i.e., an unambiguous majority or a veto minority in favour of the status quo. In this case, it is likely that domestic preference formation and domestic policy conflict will become ‘bundled’ into the same politicisation dynamic and functional conflict among interest groups will take place together with party competition. In other words, the audience of the conflict is expanded, and each party will try to reinforce its functional claims, addressed to interest groups, with electoral clues addressed to the wider public. Therefore

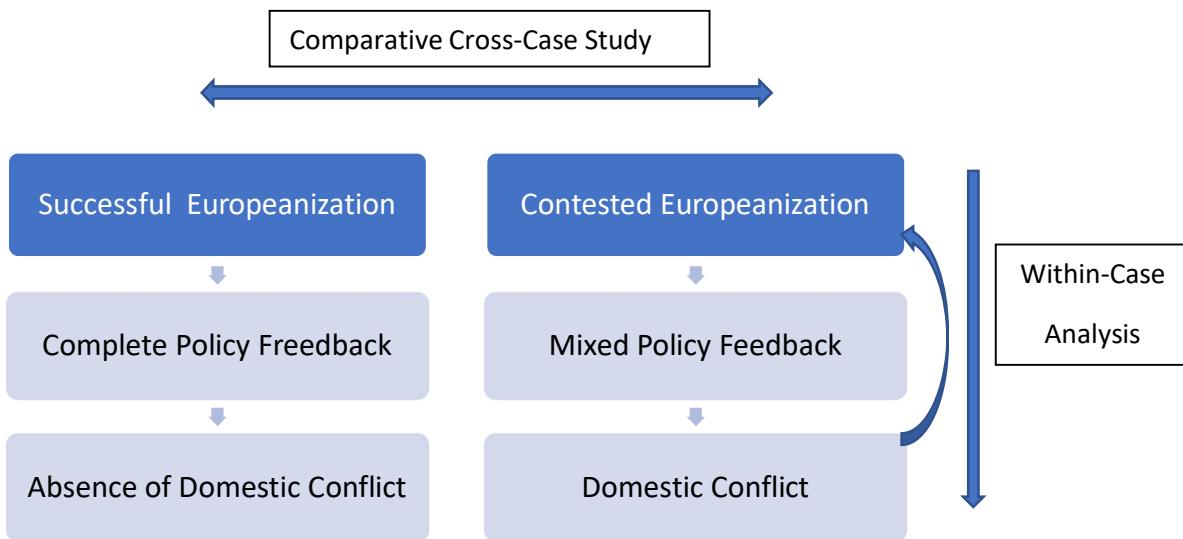
- *Hypothesis 6 (weak politicisation hypothesis): If policy revalidation entails uncertain functional consequences and affects domestically contested policies, politicisation does not necessarily amount to a constraining dissensus but can also entail support for EU policies that run contrary to current domestic policies. Subsequent Europeanization will depend on the extent to which functional arguments have been overplayed or downplayed.*

In such cases of mixed functional and partisan competition, the expectation is that, if EU policies running contrary to current domestic policies are adopted, political parties in support of such policies, once in government, will try to fulfil their electoral promises subject to the functional constraints that cannot be overcome unilaterally. Because EU policies are not unsensitive to the limits of Member States capacities to contribute to EU goals, it is expected that political parties in government will make use of flexibility offered by EU legislation to

maximize the electoral benefits of keeping electoral promises while minimizing the reputational costs incurred if implementation is pushed as far as clashing with the (potential) unsolved functional bottlenecks or ‘forcing’ a foreign experience highly misfitting with the domestic context. At the same time, if the functional negative consequences are weak and where overplayed by the party opposing EU task and competence expansion, the necessary resources for successful Europeanization should be easily mobilized, also considering the change in the domestic opportunity structure. The reason is that once party competition is over (because an EU policy has been adopted) and it is realized that either the functional bottlenecks were not as relevant as depicted or foreign experiences could be successfully replicated domestically, domestic obstacles to Europeanization should not be meaningful. The opposite argument will apply if the functional negative consequences were downplayed by the party supporting EU task and competence expansion. Therefore, a weak politicisation hypothesis is put forward, in the sense that politicisation plays an ambiguous role and can take the form of both dissensus and consensus for policy revalidation:

### 1.6. Research Design

As it can be deduced from the way questions and hypotheses are formulated, this dissertation is not concerned with simple causality connecting single independent and dependent variables. To begin with, the study could be interpreted as both variable or case-oriented (Gschwend and Schimmelfennig 2007) as there are *a priori* justifications to investigate the effects of policy outcomes on domestic preference formation and politicisation (from causes to effects) or, the reasons why there are domestic controversies in one area and not in another (from effects to causes). The research design is organized based on the case-oriented version of the causal arrow (tracing the effects back to their causes). The research design is moreover interested not just on the causes of variance on the dependent variable but also on the mechanisms through which the independent variable work, i.e., how the effects are produced. Taking this caveat into account, the research design can be methodologically broken down into three different modules, each entailing a different type of methodology to draw inference.



As the diagram shows, the research design must be read according to two lines of causal inference. The first and overarching module is the one comparing cases with the goal of drawing causal inference about the role played by Europeanization (the independent variable) in generating or avoiding EU contestation and domestic conflict regarding policy revalidation (the dependent variable). As already stated, the comparison is enriched by selecting cases of task and competence expansion to detect differences among the two possible instances (expansion within the same competence and to a new competences).

The second and third module will instead refer to within-case analysis with the goal to ascertain the internal consistency between the explanation and the purported causes, adjudicate among rival explanations and, where needed, to make the necessary qualification to the original hypotheses. Cases in which domestic contest is prevented by ex-ante Europeanization are different, in terms of the specific research design needs, from cases where domestic preference formation is problematic. To put it simply, the negative cases of absence of conflict serve, in the cross-case study overall framework, as a control cases for cases where conflict occurs (i.e., the positive case), but the research ambition goes further and aspires to show the validity of certain mechanisms in explaining why successful (ex-ante) Europeanization has occurred (hence the demonstration that complete feedback loop have in fact occurred) and why it has not (within-case analysis).

Third, the causal explanation for the positive cases of domestic conflict extends to the validation of rival explanations of why conflict has in fact occurred. In other words, the causal arrow is stretched to include policy dynamics after the adoption of the CEAE (ex-post Europeanization) to increase certainty about the fact that the mechanisms that have generated and sustained conflict were the ones stated in the hypothesis and not others. This causal relation is represented by the arrow going back to Europeanization. If a hypothesis regarding domestic preference formation is true, then, once policy revalidation is agreed, the underlying mechanism is expected to disappear and allow for successful (ex-post) Europeanization. On the contrary, if also ex-post Europeanization is unsuccessful, there are reasons to doubt about the validity of the hypothesis.

#### 1.6.1. Comparative Cross-Case Study

The cross-case study is conceived to approximate the logic of comparison of the ‘method of difference’ or ‘most similar system’ research design (Lijphart 1971), which is considered a valid method to draw causal inference with a small number of cases. The requisite of similarity means that they are “similar in a large number of important characteristics (variables) but dissimilar as far as those variables are concerned which one wants to relate to each other” (*ibid*, 687). In other words, such method allows for controlling all other variables that are in fact similar and therefore safely attribute causation to the only variable that can be demonstrated to be different across the cases examined. Criticism of this method (which tries to approximate a quasi-experimental logic), however, abounds. To begin with, establishing similarity is extremely difficult in the realm of social sciences and the claim of control of potential differences in underlying variable is consequently rather limited. Accordingly, the validity of the method rests on three assumption (George and Bennett 2004, 155–56): that there is a deterministic regularity and the outcome truly depends on a condition that is either necessary or sufficient; second, all causal variables must truly be controlled, making the method unsuitable for complex multicausal explanations; third, there is the possibility that a variable omitted in both cases is in fact the cause of the different outcome (possibly in conjunction with the variable inferred as causal). These shortcomings should be addressed by the task of case selection first (ensuring similarity among cases) and in considering rival hypotheses where variables not present in the selected cases might in fact have causal significance. However, the validity of causal inference of cross- case analysis can be

strengthened by complementing it with within-case analysis, as the latter can make the researcher more confident about the role that the presence or the absence of the variable of interest has played in determining the divergent outcomes of both cases.

In conclusion, the application of the comparative cross-case study should provide enough confidence in drawing causal inference that:

- the absence of domestic conflict is due to the presence of a complete policy feedback loop that allow actors to coalesce around the present benefits of current policies and the future expected benefits of future EU policies which continue and extend past policies. This applies to both task and competence expansion.
- the presence of domestic conflict is due to the presence of mixed and incomplete policy feedbacks of current EU policies (resulting in a divergent demand for spillback as opposed to policy revalidation)
- the presence of domestic conflict is due to divergence of beliefs and interests regarding the future expected costs and benefits of replacing domestic policies with EU policies (resulting in divergent demands for spillover)

### 1.6.2. Within-Case Analysis

In the following two methodological justifications are provided. First, the choice of a single-case research design and, second the associated method to draw causal inference in cases of absence and presence of domestic conflict (or successful and contested Europeanization, respectively).

#### 1.6.2.1. Justification for Individual Single-Case Studies

Beginning with the first issue, case studies and single-case studies in particular have often been criticized for failing to meet the minimum standards of scientific inference due to the lack of variation in observations (King, Verba, and Keohane 1994). However, this extreme position on the value of case-study research for social science has been abundantly and convincingly refuted (D. Collier, Seawright, and Munck 2004; Eckstein 2000, 172–74; Van Evera 1997; George and Bennett 2004; Gerring 2007; Lijphart 1971; Yin 2014). Case studies, including single case-studies, offer the possibility of advancing theoretical knowledge in relation to both theory development and theory testing. Case selection criteria follow the stage of development of a theory which includes the sequential process of inferring causal

relations (theory-building), then testing their validity and finally testing its range of application and scope conditions (Van Evera 1997, 78). Following Lijphart and Eckstein, the most relevant types of case studies include hypothesis-generating case studies (or ‘heuristic’ or ‘extreme’), plausibility probes (to carry out preliminary checks warranting further exploration), theory -confirming or theory-infirming cases (crucial cases and tough tests) and deviant or outlier cases<sup>7</sup>.

George and Bennet (2004) provide a solid justification of the methodological strength of case-study research compared to the criteria for valid inference in social science based on statistical methods (King, Verba, and Keohane 1994). First, they can increase the conceptual validity of the research by avoiding the problem of ‘conceptual stretching’ arising from lumping together cases into broad samples that overlook theoretically relevant differences on the dependent and independent variable. Second, they can help in the generation of new hypotheses via observations made in deviant cases or revealed by fieldwork. Third, they can help in better specifying the operation of causal mechanisms when intervening variables mediate between independent and dependent variables or when historical (and thus unique) explanations are relevant. Moreover, process-tracing techniques help to disentangle complex causal relations, including interactions effects or equifinality (i.e. the possibility that a case can be in principle be explained by the predictions of two or more rival theories even though the purported causal mechanisms are different). At the same time, case-study also has its drawbacks in terms of the specific limiting choices that the researcher must make and the pitfalls to avoid. Limitations and trade-offs include the case selection bias, i.e. selecting cases for which there is a high probability of finding or disconfirming the hypothesis retained as likely or unlikely respectively. To this respect, criticism is often levelled at selection on the dependent variable when there is no variance. However, the authors state that such selection is justified in heuristic cases or whether the selection is associated with a most/less-likely or crucial case condition, which turns process-tracing into a severe theory-testing technique.

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<sup>7</sup> According to Yin ( pp. 51–53) there are five rationales for pursuing a single-case study design. A case can be critical (when all variables predicated by theory are present), extreme or unusual (when a given variable is laying well outside the mean range of the population of cases), common (when it falls exactly in the mean), revelatory (allows to observe previously inaccessible causal relations or phenomena) and longitudinal (explains how conditions or processes change over time)

Case studies are not suitable to capture gradations in the causal effect of a variable (i.e. they are not suitable to answer ‘how much’ type of questions) but can be useful to assess scope conditions and the necessity or sufficiency of a specific variable or a conjunction of multiple variables. Finally, carefully crafted research designed based on case-studies can avoid the problem of overdetermination, i.e. when there are too many parameters or variables in relation to the available observations as to make valid inference impossible or insignificant. However, case-studies offer the advantage of deriving theoretically relevant observations (or necessary ‘implications’ if a theory is to be held as true) when many different causal steps must intervene between the independent and the dependent variable. This is particularly relevant when alternative explanations posit the same outcome but differ on the causal path or, as in the case of the present research, when an explanation does not lead to the expected outcome because the causal path is ‘deviated’ along the line by an intervening variable.

#### 1.6.2.2. Process Tracing

The typical methodology associated with case studies is ‘process tracing’. This methodology helps generating multiple observations within a case and allows analyses about the causal mechanisms linking these observations to produce an outcome. The goal of process tracing is to build an analytical narrative explanation linking causal paths to outcomes. Process tracing is a focused research methodology, as it asks specific questions about well- identified aspects of a phenomenon and it is structured in the sense of being informed by the theoretical framework used in the research design (also including the potential rival explanations if the research aims at providing a fair test) (Vennesson 2008, 234). The premise of process tracing is in fact the absence of independence and the presence of interaction among variables whose causal effects are to be discerned by reconstructing all the intervening steps in the observed chain of events and processes. (George and Bennett 2004, 207). Process tracing allows for assessing and testing causal complexity, where different conditions converge and sequences of events, such as path-dependence, are relevant to explain an outcome. More specifically, in the field of historical institutionalism, the inferential methodology of ‘systematic process analysis’ come very close to the definition and operationalization of process tracing (Hall 2003, 391–95). Accordingly, the researcher formulates theoretical predictions about the patterns of observations to be expected, which should be inconsistent with those of the possible rivals, takes as many observations as possible and then checks for consistency with

the original predictions. The unfolding process is then as important for testing the validity of a causal relation as it is the correlation between the purported causes and its effects.

#### 1.6.2.3. Within-Case Analysis: Successful Europeanization and Absence of Domestic Conflict

The cases of absence of domestic conflict are treated as cases of successful Europeanization, and therefore will make use of research design that are commonly used in this area. However, because of the nature of the hypothesis formulated in this dissertation and the causal mechanisms associated with it, some methodological caveats are warranted. The starting point are institutional explanations of Europeanization according to a bottom-up-down research design (Bache, Bulmer, and Gunay 2012; Bulmer 2007; Radaelli and Pasquier 2007; Vink and Graziano 2007), tracing the impact of the EU not as an assumed a priori cause of domestic change but also one that interacts with domestic and external or contingent factors. Following Radaelli (Radaelli 2004, 4) Europeanization is not an explanans or the sole driver of change, but the explanandum, the problem to be explained. While top-down Europeanization research design starts from EU inputs and traces its impacts down to the domestic level, a bottom-up design reverses this logic. It starts with a ‘system of interaction’ at the domestic level (comprising problems, resources, styles and discourses) and, using time and temporal sequences, determines when and how EU level inputs have affected the system of interaction. This logically leads to two further methodological considerations. First, the interest in the role of process, causal mechanisms and context as object of analysis (Bache, Bulmer, and Gunay 2012, 74) suggests the accurate selection of single-case studies with multiple in-case observations complemented by process tracing as a methodological technique (Martinsen 2012). Given the multifaceted nature of all variables involved in the object of the study, it is unlikely that the causal complexity can be equally well established by using different methodological approaches. Second, longitudinal single-case study methodology allows for the appreciation of the causal value of time whereby the causes and the effects of institutional change are more evident when observed over a long stretch of time. The theoretical perspective adopted is in fact based on the deductive hypothesis that deviations between intentions and outcomes are often the result of ‘effects becoming consequences’ (Pierson 1993) and that processes of policy change are better explained by the cumulative and often unintended consequences of past choices than by the snapshot analysis

of actor-centred functionalism (Pierson 2004, 14). This calls for the use of historical methodology (Mahoney and Rueschemeyer 2003) and the diachronic analysis tracing institutional and policy changes as an incremental or revolutionary process (Bache, Bulmer, and Gunay 2012, 67). It has been noted that (Radaelli and Pasquier 2007, 37), “[T]o chart the interactions between the domestic and the EU levels, one needs research designs that use time to control for sophisticated processes of causation and, in some cases, it may be necessary to dig out the “slow and big movements” that cannot be captured by one-shot interactions between Brussels and the member states”.

Therefore, the type of diachronic analysis employed in the research design will have to prove that Europeanization has led to the establishment of a stable ‘mechanism of reproduction’, showing self-reinforcing positive feedbacks (in the strong version of the hypothesis based on historical institutionalism) or self-enforcing positive effects (in the weak version based on rational choice institutionalism). Comparative historical analysis is interested in the causal mechanism that underlies observed empirical patterns (Thelen 1999, 372). The goal of comparative historical analysis is the demonstration that specific mechanisms of institutional or policy reproduction derive from the evolution of political conflict embedded in the historical context of a country and that institutions change slowly (Streeck and Thelen 2005) or abruptly often following random events or critical junctures (R. B. Collier and Collier 1991) followed by increasing returns (Pierson 1993) or reactive sequences (Mahoney 2000). Rational choice theory instead focuses on the intentionality of actors to establish rules that solve coordination problems (Ostrom 2007; Shepsle 1989) or reduce transaction costs (Williamson 1985). In order to distinguish among the two, it is key to demonstrate that positive feedbacks progressively increase the investments that individuals and elites make into the policy in question because it is increasingly seen as attractive and legitimate and adaptive expectations are generated, making former losers to reconsider their position because and join instead of contesting ‘picking the wrong horse may have very high costs’ (Pierson 2004, 33). Demonstrating the irreversibility of policy and the disappearance or irrelevance of former opposers rather than its mere stability is therefore central to the analysis of positive, self-reinforcing feedbacks as compared to self-enforcing version. One way to draw causal inference among these rival explanations is by observing the changes in the details of policies after a change in government, when it could be demonstrated that the

preferences of the new government, as expressed in the past, would have predicted a change in policy but such change has not materialized.

In conclusion, the application of within-case analysis, process tracing and longitudinal case studies should provide enough confidence in drawing causal inference that:

- The absence of domestic conflict, i.e., the convergence of actors around a position that favours EU task and competence expansion, is the outcome of a bottom-up Europeanization process which has led to the establishment of mechanisms of reproduction based on positive feedbacks from past EU policies. Such mechanisms of reproduction, in turn, could have been preceded, but not necessarily, by negative feedbacks from past domestic policies which have led to their repeal and substitution with EU compliant policy templates.
- Or, that the absence of domestic conflict is explained by the rival explanation based on self-enforcing stability of the (positive) effects of Europeanization which is another causal path (equifinality) to the absence of domestic conflict.

#### 1.6.2.4. Within-Case Analysis: Contested Europeanization and Domestic Conflict

Cases involving contested Europeanization require three steps in the explanation of causality. First, the reasons why Europeanization (incomplete or horizontal) is contested must be explained, looking for the causes that generated outcomes that are in themselves conducive to fragmented domestic preference formation, up to the point to even cause a subsequent reversal of negotiating position (i.e. the maximum expression in terms of disagreement on the definition of the domestic interest). This first step is relevant to strengthen the confidence in the causal inference of cross-cases comparisons as it brings into light the role of the disputed policy feedbacks of Europeanization in the case of incomplete integration and the impact of interstate learning and comparison in relation to the domestic replicability of foreign models.

Second, cases will also be examined in the light of the three rival hypotheses proposed, the functional conflict, the partisan/electoral and the mixed hypothesis. Again, process tracing is considered an appropriate method for adjudicating among rival hypotheses (Dur 2007; George and Bennett 2004, 217–18). While the comparison among rival theories in the case of absence of conflict is about the nature of the policy equilibrium, in the cases of presence of

domestic conflict is about the type of conflict. The hypotheses proposed then differ both as much on the ‘facts’ supposed to be found in the cases examined, i.e., the outcome of the dependent variable, as on the causal process leading to it. It is not possible to determine, ex ante, which one is more accurate, careful tracing of the process and measurement of the dependent variable is needed. As it will be explained in the theoretical section, each hypothesis is rooted in specific theories regarding the process of domestic preference formation, with specific propositions as to which interest should be relevant in determining the nature of the conflict. Functional conflict can be deduced from the interests of the different actors involved, but it might be more difficult to detect because much of the conflict could be taking place behind closed doors. Theories of politicisation have instead pointed, more specifically, at the more visible types of strategies used by political parties and other indicators for the measurement of the level of politicisation.

The third step uses the congruence method to validate the strength of the hypothesis that seems to be best capturing the empirical manifestation of conflict (or their complementarity, if this is the outcome of the inference) by also checking the presence of the necessary conditions that are expected to be found (Mahoney 2012) in terms of the outcomes of Europeanization following the adoption of the CEAE. As already noted in the formulation of the rival hypotheses, what is expected is a mix of functional claims, constraining or enabling domestic agreement to EU policy revalidation and partisan cues directed to the electorate. Therefore, in the congruence test, Europeanization following the adoption of the CEAE should show correspondence between these functional claims (and the measures adopted to overcome them, including the use of flexibility) and instances of functional conflict. In other words, the more functional the conflict, the more Europeanization should be controversial (or sensitive) in relation to functional claims. On the other hand, implementation can show that functional claims were mostly constructed as a strategic device in partisan/electoral conflict, in which case ex-post Europeanization is expected to meet little resistance. To be sure, it is also possible that interest groups, and not just political parties, will participate in the construction of arguments that are disguised as functional claims to the extent that they serve their interests. In that sense, process-tracing and congruence tests can help to reveal the difference between genuine and constructed arguments over the functional

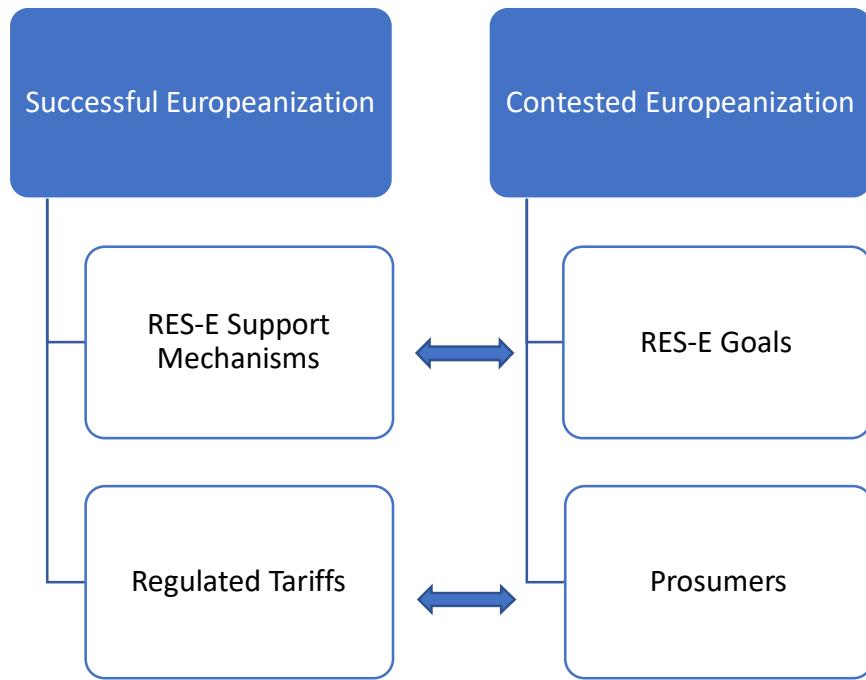
shortcomings of the CEAE in relation to cross-party and cross-groups domestic interest (as opposed to serving the narrow interest of certain interest groups).

#### 1.6.2.5. Case Selection: Spain Electricity Policies as Most Similar Cases

The spatial unit of analysis of the dissertation is the Member State of Spain, whose institutional and policy evolution will be closely tracked during two decades spanning between initial negative and positive integration measures adopted for the electricity sector and the initial implementation of the CEAE, i.e. between the end of 1997 and the beginning of 2021. Using the logic of comparison based on the most-similar or method of difference implies to guide case selection on the principle that only the variable purported to have explanatory power should vary while all other characteristics of the case, which could be potential explanatory if they also vary, should be controlled for by having them similar in both cases. The key factors for case selection are therefore the specification of what are the characteristics of the independent variable that have explanatory power and the organization of control.

The hypotheses state that variation on the independent variable is determined by three elements: the existence of a complete policy feedback loop, when EU regulatory policies aim to resource allocation efficiency; the existence of obstacles for a complete policy feedback loop to materialize in the form of incomplete integration and unforthcoming spillovers; and existence of imported policy feedbacks from other Member States that could generate the same effects if domestic policies were aligned on foreign experience (or, otherwise stated, the existence of domestic characteristics that obstacle the materialization of the same favourable policy feedback).

Electricity policy in Spain holds the conditions to distinguish among these three distinct values of the independent variable while keeping constant the other potentially distorting factors. Obviously, the case under observation here is not Spain itself, but the different policy areas in which variance of the independent variable can be observed and variance of the dependent variable, along with the mechanisms that have been specified as connecting both sets of variables. By selecting four cases, it is possible to match two pairs of cases of absence of domestic contestation to two cases of domestic contestation. Each pair of cases is fine-tuned to provide as much control as possible over the other variables.



The first pair of matched cases concerns the area of RES-E policy, which is relevant from the perspective of international competitiveness because of the costs of policy, and its overlap with the area of security of supply. By comparing the same policy area in the same country, the entire set of functional and societal interests are controlled to a high degree. The literature has shown that one of the main reasons for EU contestation has been the shift from allowed domestic discretion in selecting RES-E support instrument to the imposition, by the Commission, in 2014, of a more uniform and competitive method of remuneration based on auctions and market premium. Therefore, for most Member States it would be difficult to detect positive effects or feedbacks at this stage, as it might be too early. However, Spain was one of the first Member States to shift to auctions and exposure of RES-E producers to market prices, as the government replaced the FiT model that had been used in the country for over a decade with the new market-friendly model already in 2013. Spain made no opposition to this shift in 2014 (State Aid Guidelines) and its subsequent incorporation in the CEAE and the goal is therefore to demonstrate (via within-case analysis) that the change in policy instrument has generated a complete policy feedback loop, in fact following a negative feedback from the use of FiT (an instrument that had, however, enjoyed a long period of positive effects and positive feedback too before running out of steam).

On the other hand, Spain has been one of the countries most opposed to the adoption of a high level of RES ambition, switching from its role as a RES-E forerunner in the negotiation of

the goal for the 2009-2020 period. The main argumentative line used by the government to resist high ambition was the fact that the country suffers from a comparative disadvantage in terms of its level of interconnection with the rest of the continent. While the EU had set, already in 2002, an indicative goal that each country should enjoy an interconnection level of at least 10% of their installed generation capacity, Spain's levels are still below 5%<sup>8</sup>, making it in practice an 'energy island'. The government claimed that this condition would not only make it more costly for the country to integrate high shares of RES-E into the system (a functional, economic concern) but that it could also imperil the stability of the electricity grid altogether, exposing the country to black-out and shortages of supply when the levels of RES-E production, by definition intermittent, are low. For this reason, the setting of RES goal for 2030 is considered a case of incomplete integration and a mixed policy feedback loop, as, obviously, many actors have also benefited from a favourable policy feedback from other consequences of the implementation of the RES-E Directive during the 2009-2020 period. At the same time, the change in government in April 2018 led to a spectacular reversal to Spain's negotiating position, with the new government claiming to be willing to match the proposal of the EP to achieve a 35% target RES target. In the end, in its National Climate and Energy Plan<sup>9</sup>, Spain has vowed to achieve a rate of RES penetration of 42% on the final consumption, with a rate of penetration of RES-E in electricity generation of 74%. In sum, the comparison between the two cases is expected to allow for a methodologically valid comparison of the differential impact of existing EU policies, those leading to a complete policy feedback loop and those that do not because of their incompleteness. At the same time, the two cases, taken individually, show a degree of within-case variance (in terms of the change in policy instrument the first and policy goal the second) that is expected to yield causal inference for the validity of the mechanisms of within-case variation in terms of domestic contestation.

The second pair of matched cases on the other hand, relates to the overlap between the goals of liberalization and positive integration and the prerogative of the state in defining the framework of interactions between market and society. This means that by setting the comparison within the same country, variables that attain to the different domestic traditions

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<sup>8</sup> This level goes down to 2,8% if the entire Iberian Peninsula is considered and considering that Portugal is a net importer of electricity and could not, at least in principle, provide support to Spain in case of electricity balancing and shortages needs.

<sup>9</sup> The document in which Member States must quantify their domestic goals and the means to achieve it, as required by the Governance Regulation

in defining the role of the state in relation to the rights and the duties of the different actors (commercial and individuals, be them consumers and/or citizens) in a liberalized market, which could have a notable impact in cross-country comparison, are controlled for. And so are the interests of utilities which have an important stake in both policies. In the case of regulated tariffs, the previous IEM directives had been quite cautious in intruding the right of the states to limit their use and the discretion on how the regulated prices themselves would have to be used. As noted, the IEM recast directive has given an incremental but notable step forward. Spain had initially been a champion of liberalization, being one of the first countries to liberalize the sector and to privatize the previously state-owned industry. However, the liberalization push had been much stronger in relation to the wholesale market (mostly influencing the relation between the state and industry) than it had been in the case of the retail market (where public intervention mediates the role in the ex-post adjustment of ex-ante market outcomes in terms of the cost of electricity). The problem of surging electricity prices had been compounded by the raising costs of support for renewables and other expensive regulated costs that were transmitted to consumers through the regulated part of the electricity tariff. In order to dampen the effects on final prices paid by consumers, the government had since 2002 adopted a policy that reduced the cost paid by consumers under regulated tariffs by deferring part of the costs of the electricity sector (including the market costs, not just the regulated costs) to the future. The inevitable financial consequence of such method of cost temporal deferral was the generation of so called 'tariff-deficits'. However, in the context of the financial crisis, the amount of the deficit became a political as well as an economic liability. The government then, with the main goal of addressing the tariff-deficit problem, adopted a radical reform of the electricity sector which, among other things, introduced a profound revision of the method for calculating the costs of electricity generation (i.e., the price resulting from the wholesale market) to be passed on to consumers. Interestingly, the solution adopted was the same as one later introduced by the CEAE, i.e., dynamic pricing. Although dynamic pricing, according to the CEAE is an option (and not an obligation) that must be now offered to consumers and other method are also allowed, if the principle of market-based prices is met, it clearly is the method most adapted to the shift towards an electricity system based on renewables. Accordingly, consumers will be charged the exact amount of hourly prices set by the wholesale market, making them responsive to those prices. Although the rationale for the adoption of such measure was rooted in the need

to eliminate the generation of new tariff deficits, i.e., the goal of tariff sufficiency, the policy could also benefit from the early roll-out of smart meters throughout the country (another of the requirements of the CEAE) to empower consumers as active players of the energy transition, in the spirit of the IEM recast directive.

This proactive role of the government in changing one important aspect of the traditional relation between state and market is however compared with the very different attitude the government took in relation to the regulation of prosumers, i.e., their role as self-producers and self-consumers. Oddly enough, considering that self-production is mainly obtained via PV rooftop panels and being Spain one of the countries with the highest levels of solar irradiation in the EU, no government had ever taken active measures to encourage small-scale production as for example German and Italy. RES-E support had only been conceived as a an industrial, technological, and environmental policy via the cooperation between industry and the state. When the falling costs of self-production technology had made it an attractive option for many consumers (or citizens, depending on the framing adopted), the government first ever regulation, adopted in 2015, was highly restrictive and hardly supporting. The rights of self-consumption were severely limited compared to the regulatory frameworks prevailing abroad which instead incentivised small-scale self-consumption. In particular, the new Spanish regulatory framework not only excluded the remuneration the excess electricity fed into the grid (unless the prosumer took on the same status and responsibilities as any other producer) but it also applied charges (a ‘backup charge’) to the portion of electricity that was self-consumed, arguing that doing otherwise would have been a blatant cross-subsidization from the rest of consumers. Such an unfavourable treatment of prosumers was then informally labelled by domestic opposers of the regulation as a ‘tax on the sun’ (‘sun tax’ from here on). During the negotiation period the government actively opposed the pro-prosumer provisions of the CEAE proposal, in a similar vein to contestation as in the case of the RES goals. In particular, it did not oppose so much the competence spillover, but the substance of the regulation, which, in effect, was a close equivalent to contesting the spillover as the government claimed that EU provisions should leave broad domestic discretion in the regulation of prosumers and the charges to be imposed. As in the case of RES goals though, the new government lifted all opposition to EU proposals and swiftly proceeded to introduce domestic legislation in line with the newly adopted RES Recast directive.

In sum, this second pair of matched case allows to make causal inferences between a complete and an indirect and incomplete policy feedback loop. The feedback loop in the case of regulated prices is complete because the new government, has then left the existing legislation broadly in place, as a sign of the fact that the complete policy feedback is now widespread in the electricity sector. If the norm had been unpopular or dysfunctional, it is safe to think that the new government would have attempted to, at least partially, reverse it. In the case of prosumers, the incomplete feedback loop was generated by inevitable the comparison between domestic and foreign regulation, with two opposing coalitions facing each other domestically while the government defended its own policy in Brussels. Moreover, also in this case, it is possible to observe within-case variance as both regulated tariffs and regulation of prosumers' rights and duties have been object of extensive change over time. The establishment of a market-based mechanism for regulated tariffs has been a long and very complex one, with several failed attempts starting from 2006. At the same time, it must be noted how competence over the other part of regulated tariff, the access tariff, was object of a contentious tug-of-war between the government and the independent regulator, supported by the European Commission. In this case, compliance with the 2009 IEM Directive was much more difficult to obtain, increasing the level of within-case variance. On the other hand, the change in prosumer regulation as a result of a government change offers the necessary within-change variance for the prosumer case. As in the matched cases above, while in the case showing a complete policy feedback loop the change in regulation happened well before the negotiation for policy revalidation, in the case of the domestically disputed feedback loop, it only occurred after a change in government.

#### 1.6.3. Variables Operationalization

This section explains of the distinction among *the independent variable* (or the formal causes, i.e. EU inputs), the *mechanisms of transmission* of its effects (policy feedback effects) and the *dependent variable* (policy equilibrium as a presence or absence of domestic conflict) is operationalized. What is relevant form the perspective of the comparison across cases is not just the presence or absence of the independent variable but the presence or absence of the mechanisms of transmission. The causal effect is therefore defined by the presence of the independent variable *and* the mechanisms of transmission.

For the cases leading to absence of domestic conflict, the independent variable must therefore be defined by its capacity to achieve a complete policy feedback loop, i.e. positive effect or positive feedbacks. The combination of independent variables and mechanisms of transmission is defined in the following ways:

- *RES-E Support Mechanism*: policy feedbacks generated by the change of policy instrument within the process of implementation of the 2001 and 2009 RES Directives, which took place with the Electric Sector Law in December 2013<sup>10</sup>. Policy feedbacks are then operationalized via the absence of subsequent legislative modifications. To distinguish between positive effects and positive feedbacks, the number of actors<sup>11</sup> that join the system will be the crucial variable: therefore, adhesion by new actors and the adhesion of old actors that had benefited from the FiT system (and that would have preferred its maintenance) will be taken as a sign of positive feedback and not just positive effect
- *Regulated Tariffs*: positive policy feedbacks generated by the introduction of dynamic pricing which took place with ESL, within the process of implementation of the 2009 IEM Directive (the formal cause). Policy feedbacks are then operationalized via the capacity of the new system to contribute to the reduction of the accumulation of tariff deficits and to stimulate active consumer engagement. To distinguish between positive effects and positive feedback the change in the position of actors that have initially contested the change will be tracked.

For the cases leading to domestic conflict the independent variable is defined in terms of its incapacity to generate complete policy feedback loops generating instead, mixed positive and negative policy effects or feedbacks. The combination of independent variables and mechanisms of transmission is defined in the following ways:

- *RES-E Goal*: different policy instruments deployed by the EU (the formal cause) must be considered: the implementation of 2001 and 2009 RES Directives and their impact

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<sup>10</sup> Ley 24/2013, 26 December, del Sector Eléctrico

<sup>11</sup> Whenever ‘actors’ are mentioned in this section, they are intended as those appearing in the list at the end of this section. In each case some actors will be more relevant than others and their identity will be specified during the exposition of the case. The same applies to actors’ coalitions.

on electricity costs; the Emission Trading system Directives (ETS I<sup>12</sup> and ETS II<sup>13</sup>), the Industrial Emission Directive (IED<sup>14</sup>) and state aid policy related to domestic coal mining for their effects on the availability of low-cost thermal plant back-up to intermittent renewable energy, generating cost and security of supply concerns; the Regulations on guidelines for trans-European energy infrastructure<sup>15</sup> for their incomplete effects on the levels of interconnections, generating security of supply concerns.

- *Prosumers:* in this case, because of the absence of specific EU regulation, the independent variable as a formal cause is more difficult to define based on a specific legislative output. As a way to create a proxy variable, the formal cause is made to coincide with the focusing event that sparks the process of international comparison and learning (i.e. the mechanism of transmission is operationalized as an 'imported' policy feedback for the coalition of actors aggrieved by such comparison). The focusing event is therefore the first regulation of prosumers in Spain. Although the general legislative acknowledgment was made in the ESL, the first proposal for a regulation was tabled in 2011, and it intended to introduce net metering, a favourable treatment for prosumers. The second proposal was tabled in 2013, already containing the restrictive framework, but it took two more years, of intense debate, before formal regulation was adopted in October 2015<sup>16</sup>.

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<sup>12</sup> Directive 2009/29/EC of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community

<sup>13</sup> Directive (EU) 2018/410 of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814

<sup>14</sup> Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control

<sup>15</sup> Regulation (EU) No 347/2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009

<sup>16</sup> Royal Decree 900/2015, 9 of October, *por el que se regulan las condiciones administrativas, técnicas y económicas de las modalidades de suministro de energía eléctrica con autoconsumo y de producción con autoconsumo.*

The *dependent variables* of the study are defined as follows:

- *RES-E Support and Regulated Tariffs*: in cases of absence of domestic contestation, such condition is measured not only by the absence of informal opposition<sup>17</sup> to EU proposed new legislation, but also by the absence of organized coalitions seeking revision of current legislation which must however be fitting with the new proposed legislation. If domestic contestation exists but the contesting actors do not find significant political support either in parliament or in government to achieve their goals, they are considered as marginal and do not invalidate the hypothesis. Finally, if the applicable domestic legislation during negotiation is in line with CEAЕ proposals or only liable to minor, non-essential changes, it will be considered as fitting with EU new proposals. In any case, to further strengthen the validity of the hypothesis, fitting domestic legislation will be tracked even after the adoption of the CEAЕ to exclude any change that might run contrary to the expected outcomes.
- *RES-E Goals and Prosumers*: In cases of domestic contestation the dependent variable is defined in terms of the presence of opposed coalitions, i.e. actors that can be grouped together on the basis of their expressed preference over the convenience of accepting an ambitious RES-E goal and over the proposed Prosumers legislation by the CEAЕ. These findings would be in support for Hypotheses 1 and 2 respectively but a further step must be taken in order to demonstrate the validity of one of the rival hypotheses (4, 5 and 6). The goal is to draw further inference regarding the nature of the domestic conflict and sort out partisan/electoral politicisation from functional mobilization. To distinguish between the two possible values of the dependent variable, operationalization will follow the theoretical characterization provided by the relevant literature. Therefore, functional conflict is defined as one featuring mostly groups with intense preferences and concentrated interests in relation to a policy issue. These include economic (mostly producers) interest groups and public interest groups. However, the list of actors involved in the specific case of electricity

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<sup>17</sup> The term informal is adopted to denote opposition different than a formal Council of Minister vote. However, the analysis of position papers issued by the Permanent Representation in Brussels, the declarations of public actors (Ministers and government officials as well as opposition parties' high representatives) and the positions in EU consultation as well as in media declaration and official statements will be considered as valid proof of informal opposition

policy is larger as it must include other actors with stakes and public responsibilities in the sector<sup>18</sup>. Partisan/electoral conflict will instead be operationalized based on the following methods as commonly used by politicisation theories. The saliency of the issue will be measured by the quantity or articles in the revised media outlets. The polarisation of opinion will be measured via the distance between the major government and the major opposition party<sup>19</sup>. The expansion of the audience will be measured by the appearance of new actors in the public debate and by the shifting of the arena (from the parliamentary to the electoral arena given the proximity of elections in the aftermath of the adoption of the CEAE<sup>20</sup>).

#### 1.6.4. Data Collection

Two main sources of data have been used to substantiate theoretical propositions, construct the hypotheses, and perform the process tracing. The first source refers to quantitative and qualitative information indirectly retrieved through archive research, while the second refers to 32 interviews conducted with selected actors. Archive information in relation to Spanish electricity policy is abundantly available. First, the EU<sup>21</sup> has imposed monitoring and reporting exercises in relation to climate and renewable energy, helping to reconstruct in detail the measures adopted and their effects. The Spanish Ministry of Environment and the Ministry of Industry and Energy (currently rebranded Ministry for the Ecological Transition and Demographic Challenge) have also annually published memorandum of the legislative and administrative measures adopted, often specifically mentioning which activities are performed in conformity to the duty of implementing of EU legislation. The pattern of administrative activity has been matched to political debates through the detailed analysis of the minutes from the relevant Committees in the Spanish Parliament (including Congress and

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<sup>18</sup> Cfr. supra, note 9

<sup>19</sup> This means that the focus will be on conflict among mainstream parties. However, when fringe parties are also relevant for the analysis because their position, in the logic of coalition governments and political competition, has a demonstrable effect on the position of mainstream parties, they will also be considered as part of the measurement of polarisation

<sup>20</sup> The reasoning is that if the issue is considered of partisan/electoral relevance, it would be ‘sticky’ in the electoral debate even after the adoption of the CEAE, as the party now in opposition could reproach the consent to an agreement that could potentially be framed as disadvantageous for domestic interest. Conversely, if the issue is of a functional nature, it is likely that the affected interests would work behind closed doors and other, indirect sources, will be needed, such as media coverage.

<sup>21</sup> Of great value are also the biannual reports that parties must submit to the United Nations Framework Convention on Climate Change

Senate)<sup>22</sup> and, to a less extent, plenary debates. Particularly relevant, the informal rules requesting the regular appearance of the responsible Ministers and Secretary Generals in front of the Committees has allowed to reconstruct the activities of each branch of government especially in the light of the criticism moved by opposition parties which have been eager to exploit deviations from EU implementation as a political weapon demanding justifications and explanations. Finally, from the perspective of the central government, the watchdog role of the National Regulatory Authority (the National Energy Commission until 2012 and the National Commission for Markets and Competition from 2012 onwards) has also been scoured and it has produced some of the most valuable material for this dissertation. Besides their annual reporting on the state of the sector, the NRA has been charged with producing opinions on almost all government measures, often highlighting the possible sources of conflict with EU legislation and practices of deficient implementation.

To reinforce the process tracing methodology, intensive research effort has been centred on the analysis of electricity and climate policy in the Spanish press. More than 3000 articles have been extracted from the databases of the most relevant Spanish newspaper, *El País*, from 1990- through to 2018, corroborated with other nation-wide newspapers<sup>23</sup>. Textual analysis has been manually performed. Also, since the mid- 2000s specialized websites have been producing daily updates on electricity regulation<sup>24</sup> including a considerable number of interviews with governmental and industry actors.

Further data sources have been made available by the regular publications by industry groups, (including UNESA, representing Spain's major electricity utilities, APPA, ANPIER, UNEF, Spanish Wind Association, all of them representing renewable energy producers), consumers' organizations (OCU, Facua, Asociación de Empresas con Gran Consumo de Energía, AEGE), environmental groups (WWF, Greenpeace, Amigos de la Tierra) and unions (CCOO and UGT). The annual reports of Spanish major utilities (Iberdrola, Endesa, Gas Natural-Fenosa most importantly) and some of the major renewable energy equipment producers (Abengoa) have

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<sup>22</sup> The analysis has extended to the following sources. VI Legislature (1996-2000), VII Legislature (2000-2004), VIII Legislature (2004-2008), IX Legislature (2008-2011), X Legislature (2011-2016), XI Legislature (2016) and XII Legislature (2016-2018). In each legislature, the relevant Committees analysed have included: Environment, Industry and Energy and EU Affairs

<sup>23</sup> *La Vanguardia*, *El Mundo*, ABC and the economic newspapers *Expansión* and *Cinco Días*

<sup>24</sup> Notably [elperiodicodelaenergia.com](http://elperiodicodelaenergia.com) and [energiadiario.com](http://energiadiario.com)

also been analysed to complement their regular comments and positions available through the press.

Given the decentralized nature of the Spanish political and administrative system, detailed analysis has also been performed of the main documents and legislative activities of Spanish Autonomous Communities. Given their relevance in the administrative procedures for the deployment of renewable energy, analysis has involved the activities of the following regions: Catalonia, Andalusia, Castilla-La Mancha, Castilla León and Galicia. Although this dissertation has not placed the decentralized organization of the state at the centre of its analysis, it would have been nonetheless impossible to perform process tracing without considering their role in implementation.

The 32 semi-structured interviews, performed personally but mostly by telephone, have provided valuable material for triangulations among the opinions of governmental actors (present and former members of Ministry of Environment, Ministry of Industry), autonomous governmental bodies (IDEA), the NRA and from the Catalan government, industry representatives (utilities and Transmission System Operator), industry lobby groups (utilities and RES-E producers), environmental and consumers groups and experts. All actors have been asked to comment on the past, present and future of Spanish electricity regulations, identifying the sources of successful as well as deficient implementation. The goal has been to try to confirm whether different groups had a common or a divided understanding of who and what has been ‘responsible’ for the renationalization of electricity policy, with a particular view at understanding their position in relation to RES promotion, the role of carbon pricing, the organization of electricity markets and government practices in tariff settings. At the same time, all actors were asked about what they thought the role of EU legislation had been in transforming electricity sector, as opposed to domestic concerns and drivers and what would be the ‘proper’ the role of the EU in guiding the present and future energy transition. Questions then have included the role of markets and public intervention in the future and whether they thought the content of the CEAE went in the ‘right’ direction and whether it fitted their interests and/or the interests of Spain in general.

This then brings to a review of data sources for the EU integration part of the dissertation. Following a process while it is unfolding offers considerable advantages, making it possible to collect a large number of observations owing to the large media coverage. Since 2014, the

specialized EU media have dedicated broad coverage to the evolution of national positions on the future of energy and climate policy. The most solid source of information has however been represented by the responses provided by different governmental and private stakeholders to the raft of consultation processes promoted by the Commission before tabling its proposals in 2012. Further information has been collected by closely following the work of the sectoral Council of the European Union configurations (particularly Transport, Telecommunication and Energy and Environment) and those of the European Parliament Committees (ITRE and ENVI).

Therefore, this part of the research relies almost exclusively on a rich document analysis made possible by an intense work of data mining from the wealth of on-line available material and a daily tracking of the specialized EU and sectoral press. Interviews with EU actors have not been performed, mostly due to lack of research resources. It has been regrettable not to have been able to have access to the Spanish Permanent Representation in Brussels, but no response was ever provided to repeated requests for interviews.

#### 1.6.5. Research Findings

The research demonstrates the validity of the hypothesis that there is a causally significant relation between a Europeanization process culminating in a complete positive policy feedback, a stable domestic policy equilibrium and the absence of domestic conflict when EU policy revalidation is proposed. Conversely, when EU policies are incomplete or when, in the absence of EU policies, policy feedbacks are imported from abroad, domestic conflict about EU task and competence expansion is likely to occur. Taken together, these findings show that EU regulation in the electricity sector, be it aiming at negative or at positive integration, and when all the necessary spillovers are covered by a coherent and encompassing EU framework, achieve levels of domestic efficiency that are at least sufficient to generate consensus among policy stakeholders in relation to furthering and extending EU competences and goals. Conversely, in the absence of such conditions, policy feedbacks are mixed and domestic conflict arises. In the cases under observation, however, the lack of domestic consensus has not impeded the eventual endorsement of the extension of EU policies and goals. The preferences of the government in charge of defending a specific version of the domestic interest during EU negotiations is therefore crucial, and the timing of change in government is therefore equally important. However, the cases where domestic conflict has occurred also

show that neither a constraining dissensus emerges even when an issue is domestically politicised, nor functional conflict has a crippling effect on subsequent Europeanization.

The research shows the added value of exploring long-term Europeanization mechanisms and capture the dynamics underlying the demise of former veto points and entrenched policy instruments. In the case of renewable support mechanisms, sequences of implementation measures have therefore progressively led to a stable policy equilibrium. Four periods are identified, each characterized by a different actor constellation supporting or rejecting the use of specific policy instruments. During the first period, support mechanisms based on FiT have enjoyed the support of a favourable actor constellation with broad convergence of economic and political interests. However, a regulatory mistake in 2007 marked a critical juncture and set in motion the generation of negative feedbacks in the form of high and unanticipated costs. During the third period, the advent of a new government and the pressure exercised by the financial crisis, an exogenous shock, led to the suppression of all support mechanisms. Anticipating the pressure to comply with the 2020 goals and under the need to minimize compliance costs, the introduction of market-based mechanisms, a combination of auctions and, when necessary, FiT premiums, has generated a positive effect, in the sense that the new support mechanisms were also appropriated by more powerful investors and utilities, who converted the rationale of the instrument from support for a niche sector to securing a stable, although low, market price for mature technologies. Over time, actors that might have been contrary to the shift have also joined the new support mechanisms, given its superiority in terms of cost minimization and exposure to the market, the new condition made mandatory by the European Commission by virtue of its state aid powers. Even after a change in government auctions have been maintained, although the remuneration system has been changed, introducing contract-for-difference that are compatible with the 2019 RES Directive.

For the matched case of renewable goals, the research also validates the hypothesis that a complete positive policy feedback could not occur, because of the lack of a robust EU policy leading to the full integration of Spain in the IEM via the physical availability of electricity transport capacity. Despite the attempts of different Spanish governments to place the issue of interconnections high among EU priorities, the competence has never materialized into an effective capacity to pressure Member States. The research shows how Spain has been unable

to achieve its interconnection targets, mostly due to the existence of an asymmetric interest on the part of France in such projects and, to a certain extent, also to the delay caused by domestic grassroot opposition to their environmental impacts. However, not all domestic actors have shared the same conception of domestic interest in relation to the role of interconnections for the achievement of more ambitious renewable goals for 2030 goals. The interconnection issue became moreover intertwined with the availability of generation capacity provided by coal-fired power plants and, to a lesser extent, nuclear power plants. Utilities did not share the opinion of the government that, if more renewable energy was not to be installed, then security of supply would have rested on the maintenance of coal-fired power plants. The combined effects of the ETS, the IED directive and state aid policy on domestic coal, which significantly reduced the economic attractiveness of this fuel, had led utilities to file for the authorization to close most of their coal-fired power plants. At the same time, the PSOE, the main opposition party, also jettisoned its traditional support for domestic coal, leaving the government alone in its defence of a future generation mix with less renewables and more firm capacity. None of these actors, except for the government, considered insufficient interconnections as an immediate obstacle for a more ambitious renewable goal, at least in the short run, and considering that more interconnections would probably be added in the future, therefore adopting a soft- as opposed to the hard-bargaining approach of the government. In the end, a change in government has not only reversed the government position, but it has also led to the submission of a much higher renewable goal than the minimum required by the EU. However, interconnections levels and the accomplishment of the relative EU specific goals continue to be a relevant domestic interest for Spain, and one that is likely to become even more pressing with raising penetration of intermittent renewable electricity. The research also finds that the domestic conflict was mainly of a functional type, with the disputing parties contending over the consequences that the country would have suffered compared to other Member States. Politicisation has also occurred, but playing a minor role compared to the functional arguments and mostly in relation to the question of the future of coal, which became more domestically salient than the relation between renewables and interconnections, despite the functional linkage among the three issues.

The case of regulated tariffs and tariff setting methodologies also confirms the hypothesis of the necessary existence of a positive policy feedback to prevent domestic conflict over EU proposals that would have further reduced domestic public. The research however finds that it must be distinguished between the different components of regulated tariffs, as each component has followed a different path. The starting conditions were very unfavourable to a shift towards market-based and cost-reflective methodologies. The principle of tariff sufficiency had in fact been put aside in the transition to liberalization in 1997, although it was a crucial complement for the new sectoral framework. Government discretion enjoyed a strong positive feedback from political forces and consumers. Governments modulated tariff increase or freezes at will, but the positive feedback was always paralleled by a contextual negative feedback in the cumulation of tariff deficits. One of the reasons behind the decision to hold on to regulated and discretionary tariffs was the belief that the Spanish electricity market was not sufficiently competitive, and, although minor reforms were enacted to increase competition levels, they never amounted to a radical sectoral transformation in terms of ownership concentration.

The implementation of the 2003 IEM Directive however forced the government to take a first step and make the regulated tariff both more transparent and contestable by free market retailers, in view of the full liberalization of the retail market in July 2007. An auction system that would mimic forward electricity markets (which had never sufficiently developed in Spain) was therefore organized, although it only partially solved the problem., as the government continued to set tariffs below cost-levels, now shifting the deficit to the other components of the tariff, the access tariff, where the fixed costs of the system were charged. The tariff deficit kept growing and it came to a head during the financial crisis. The tariff deficit had in fact been traditionally temporarily financed by utilities, but they successfully insisted that they be relieved from the growing burden. The solution was the securitization of the deficit with the indirect guarantee of state finances and became assimilated to the broader financial problems the country was experiencing with its sovereign debt levels. In 2013, the principle of tariff sufficiency was therefore made the centrepiece of a broad reform of the electricity sector act. Moreover, the cost of electricity would be calculated via dynamic pricing, i.e., via the closest possible price setting method to wholesale market outcomes, anticipating what would be one of the most innovative proposals of the Winter Package. The

new regulated tariff, the PVPC, would be first contested by utilities who preferred a shift to a system without state intervention, by suppressing regulated tariffs and maintaining them only for vulnerable consumers, and by consumers' organizations that feared abuse in the market now that the tariff would not be anchored to a long-term maximum value any longer. However, the PVPC has been maintained as an alternative to the free retail market, given its allowed, although revisable, compatibility with the CEAE at least until 2025, and all actors have adapted to it, considering that it has suppressed the deficit-making habit and it is contestable in the free market. At the same time, and to consumers organizations' satisfaction, it still is the cheapest available tariff in the retail market. In that sense, it can be concluded that a positive feedback has materialized and, after 15 years of government intervention, the methodology for calculating the cost of electricity has finally rested on a solution that is both EU-compliant and satisfactory for all actors. As for the access tariff, the government has instead actively resisted the transfer of competences for establishing the methodology for its calculation that, according to the 2009 IEM Directive, should have been ceded to the independent regulator. However, maintaining control over the access tariff was considered a powerful instrument of political economy, allowing to enhance industrial competitiveness by shifting costs to residential consumers at the benefit of industry. The Spanish independent regulator although insisted and, with the help of the European Commission that threatened to open an infringement procedure, the shift of competences would be approved by the new government in 2018, as one of its first acts in power, culminating the process of alignment of domestic and EU practices. Although it is still too early to draw conclusions on the long-lasting effects of the shift in competences to the independent regulator in terms of consumers' acceptance, it seems fair to state that it is an irreversible one. Even if the government, before the change in 2018, contested the shift, arguing that it was an intrusion into domestic political economy, its hands were tied by previously agreed EU rules and resistance was always doomed to be limited in time.

In contrast to the complete policy feedback in the case of regulated tariffs, the case of self-consumption shows the difficult process of agreeing on how to translate foreign experiences domestically. In the absence of an established EU framework, domestic actors have drawn different lessons from the regulation of self-consumption already existing in other states. First, it is noticeable how Spain came very late to establish a framework that would have

engaged residential, commercial, and small industries in the generation of renewable energy, as opposed to the long-time strong support for utility-scale generation facilities. The reason might have been in the higher costs of small-scale, distributed generation facilities, which however plummeted in the mid-2000s. While the existing government in 2011 had tabled a proposal based on net metering, in line with the prevailing practice in other Member States and abroad in general, the new government in 2013 proposed a particularly restrictive framework, which would then be adopted in 2015, that seemed more intentioned to prevent, rather than to support, distributed generation. Three items stood out: the lack of remuneration for surplus electricity produced and not consumed, unless the prosumer also became a producer, with the consequent administrative burden, the prohibition of shared self-consumption, that made it in practice inviable in urban areas, and, above all, the establishment of a backup charge that would have been applied to the self-consumed electricity. The government justified its approach by considering that prosumers should have not benefited from privileges that would have turn them into ‘free riders’ and thus avoid the fixed costs of a system whose benefits they would still enjoy. Opposition considered the new regulation as unique in its kind and out of touch with any other system prevailing abroad. The regulation had been moreover adopted at a time of extreme conflict between the government and the renewable sector, especially the PV sector, as all type of support for renewable energy had been frozen.

The domestic conflict paralleled the one in the EU, as the Council and the EP were engaged in a similar battle, with the issue of remuneration and the backup charge object of a tense negotiation. The opposition parties had all taken a clear position in favour of reverting the restrictive regulatory framework. The research thus shows how this case became extremely politicised, in stark comparison with the renewable goal case where conflict run mostly on functional lines. Utilities had also taken an unfavourable position towards self-consumption, backing the government, and instilling some degree of domestic functional conflict within the politicised debate. However, to testify the weakness of the functional arguments, the change in government, which was crucial for the adoption of a favourable prosumer legislation at EU level, immediately led to a reversal of domestic regulation. Moreover, the take-off of self-consumption following the introduction of the new regulation has been immediate, and utilities have also soon joined the new market, supporting the hypothesis that politicisation

can also create a favourable environment for the adoption, rather than necessarily the rejection, of EU policies and for their subsequent successful implementation.

#### 1.6.6. Plan of the Dissertation

The dissertation is divided into seven chapters, besides the introduction. Chapter 2 introduces the *conceptual framework*. In this chapter, an approximation to EU regulation is offered, starting with basic concepts of the efficiency-enhancing purpose of regulation, followed by a detailed account of how EU regulation increases the efficiency of interstate transactions via negative and positive integration. The chapter also introduces an overview of the EU regulatory toolbox and the modes of delegations to supranational institutions. Because of the relevance for this dissertation, special mention is made of the social dimension of regulation, and the concept of Public Service Obligation and Universal Service. Finally, two criticism of the effectiveness of EU regulation are presented, the Joint Decision Trap model and Integration by Stealth. Chapter 3 introduces the *theoretical framework*. In line with the hypotheses presented, the theoretical framework approaches EU policymaking from two different perspectives. First, Europeanization offers a broad set of hypotheses about the impact of EU regulation on domestic policies. Besides the traditional theoretical framework used to conduct comparative analysis of the more immediate impact of EU inputs, a long-term theoretical framework is also proposed, with a view to capture dynamics that develop over time within the same unit of analysis and that are less immediately visible when the goal is to compare different units of analysis (i.e., different Member States). Historical and rational choice institutionalism offer competing claims related to positive feedbacks and positive effects, respectively. Second, theories of domestic preference formation are also presented, as the object of analysis of the dissertation stretches to the domestic position in relation to the negotiation leading to the CEA. Two competing theoretical frameworks are then presented with a view to determine whether domestic preference formation obeys the logic of functional conflict based on interest groups preferences or electoral and party competition. Chapter 4 describes the negative and positive integration measures adopted by the EU since its inception through to the CEA. The chapter follows a historical timeline highlighting the most salient changes in the relevant policy instruments, with a more detailed description of the last negotiating process, the Winter Package, and its outcome, the CEA.

Chapter 5, 6 and 7 cover the *empirical part* of the dissertation. The approach followed is a longitudinal analysis which, for each period, comprises different stages of the cases object of the analysis. Chapter 5 covers the impact of EU policies in the construction of the IEM from 1997 to 2011. This chapter describes the implementation of the 1996 and 2003 IEM Directives under three different governments, including the software and the hardware of the IEM, i.e., market regulation and the building of physical interconnections. Chapter 6 covers the same implementation period, but in relation to positive integration, with a specific focus on the implementation of the first renewable Directive and of the adoption of the National Allocation Plans under the ETS Directive. Chapter 7 covers the period from 2011 through to 2020, focusing on the four cases of analysis, and bringing together the last years of implementation of the CEP package with the overlapping process of negotiation of the CEAE and its subsequent implementation. Chapter 8 discusses the *findings* in relation to the research questions, pointing to the hypotheses that best explain the cases under observation, and draws some conclusions about the efficiency of EU regulation in achieving its stated goals.

## 2. Conceptual Framework

This chapter introduces the conceptual framework by characterising the EU as a regulatory state. The hypotheses of this dissertation in fact identify EU regulation as a potential source of benefits for the Member States by providing a framework for the transition towards a decarbonized electricity system while at the same time reaping the benefits of a liberalized electricity market at the EU scale. In that sense, regulation of the electricity sector obeys to the principles of efficiency in trade and efficiency in the internalization of negative and positive externalities. The chapter will first introduce general concepts of why regulation has become the hallmark of the modern state, steering society towards the achievement of specific goals while leaving the provision of services to the private sector. However, the EU presents a set of challenges that are proper to a multi-level regulatory system, as the delegation of extensive powers to independent supranational institutions creates both opportunities for achieving regulatory goals in an international setting which must be balanced with the risks of agency and fiduciary costs, even more so when there is a multiplicity of principals with diverging preferences. The chapter will therefore delve in the specificities of delegation in the EU and then moves to the substance of EU regulation introducing the concepts of negative and positive integration and the typology of modes of regulation that the EU adopts. Regulation is however not limited to the search of efficiency and the regulation of utilities, such as electricity, has always raised important questions about the boundaries between efficiency and the provision of essential services which are expected to be provided in the name of social justice and solidarity. The EU general framework on Services of General Economic Interest and Public and Universal Obligations will therefore be briefly commented. The chapter will conclude with two influential sources of criticism to the effectiveness and legitimacy of EU regulation, moved from different perspectives. The 'Joint-Decision Trap' has exposed the risks of the EU becoming a lopsided regulatory system where the institutional capacity of supplying negative integration offsets the corresponding capacity of supplying positive integration, creating an imbalance that it is assumed to favour Member States with stronger preference for unfettered liberalization over those that would like to achieve higher non-market standards. The 'Integration by Stealth' hypothesis on the contrary, conceptualized the opposite problem, setting forth the proposition that it is overregulation and not under-regulation, the problem that has come to engulf the EU. Accordingly, the

extension of EU competences has exceeded the boundaries of the original goals of the EU to deal with the externalities of interdependence. Efficient regulation would have therefore been eclipsed by the goal of achieving political integration. The means of regulation have therefore become an end in itself, and to achieve via regulatory instruments what cannot be achieved via politically more legitimate method.,

### 2.1. The Need for Regulation in the Modern State

Regulation is one of the central activities of the modern state, as private actors have gradually replaced the state in the direct provision for services and goods, but they do so under the supervision of state authority in the form of public authorities within government, bureaucracy, or independent agencies. As it will be explained, this shift in governance has favoured the emergence of the EU as a source of authoritative power in providing regulation at a higher level of jurisdiction. This is because the EU is also a functional answer to the other relevant shift in modern societies, which is the complex interdependence among states and individuals across states. According to one of the most authoritative scholar in the study of the phenomenon of the rise of the regulatory state in the EU (Majone 1996, 11–15, 1997), the demise of the positive state, i.e. the state that regulates the economy through public ownership, is due to a number of factors that have over time led to its progressive loss of legitimacy. While public ownership was supposed to protect the public interest against private interest, countervailing forces such as bureaucratic centralization, the discretion of public managers at the helm of public enterprises and the enmeshment of governments in providing multiple, often conflicting, objectives, have led to uncertain public accountability. The trend towards privatization has however been taken for a confirmation that private ownership is more efficient than public ownership per se, which is not necessarily true as publicly owned companies can be as efficient as private ones if operating in a competitive environment.

The limits of heavy-handed government intervention in the economy have been identified as the risk of government failures (Helm 2010). One is the risk associated with the political market for votes, and therefore the need to assemble voting majorities. When small coalition partners are needed, they can ‘sell’ their votes for a higher share of influence in policy-making than their democratic legitimacy would justify. Second, government (but independent regulators too) are subject to the risk of capture from private interest or of acting based on

some benign or vague conception of the public interest that is however not shared by voters (Levine and Forrence 1990). Hence, the push to make public utilities or any other activity enmeshed with a widely accepted notion of the public interest to be subject to regulation by independent, specialized agencies established by statute (i.e., by an act emanating from democratically accountable bodies) but out of the direct control of government and political hierarchies in the execution of their (again, statutory) mandate. It is therefore clear that the wave of transformation in the positive state since the 70's, including privatisation, liberalisation, welfare reforms and deregulation has not meant a reduction in the power of the state but simply a redefinition of the means used to achieve the overarching goal of serving the public interest: deregulation, intended as a less intrusive and demanding way of achieving the public interest, has been married by re-regulation, i.e. the growth in the powers and instruments to indirectly intervene in the private sphere.

## 2.2. Meanings and Functions of Regulation: a Normative Approach

From the widest to the more specific of all its possible senses, regulation can mean three different things: first, all mechanisms of social control; second, as governance in the general sense of coordinating the activities of public agencies to steer the economy and, third, as governance in a specific sense, authoritative rules that administrative agencies use to monitor and enforce compliance (Jordana and Levi-Faur 2004, 3). The regulatory state is therefore not a manifestation or a consequence of the retreat of public authority in society but simply a new redistribution of tasks where the former *steers* and leads with the setting of goals and the latter *rows* in the sense of enterprising and providing substantive public services. (ibid., 11).

There are two rationales for regulation: the first, and more extensive list is based on a market-failure (or even market absence) rationale and the second, but not less important, on a rights-based and social rationale (Robert Baldwin, Cave, and Lodge 2012, 15–24). In relation to the first rationale, market failures refer to the inability of unregulated markets to adequately achieve the public interest. Under certain conditions it can be assumed that markets ensure allocative efficiency, i.e. the use and consume of resources that maximize the collective social welfare and minimize waste and deadweight losses. Markets are therefore to be Pareto-efficient in the sense that no reallocation of resources would be possible to make someone better-off without detracting from the utility of another actor. A market equilibrium is

reached and everyone, acting in the maximization of its own welfare, contributes at the same time to the maximization of the social welfare. However, this is not always the case, as the ideal conditions for perfect market competition are not always given. The list of market failures is long and varied. Markets do not by themselves ensure adequate competition, but this must be enforced in ways that avoid monopolies or cartels. In this sense, the ‘competition state’ is tasked with the goal of ensuring ‘regulated competition’. This is further divided into ‘regulation of competition’ which consists in maintaining markets by avoiding anti-competitive behaviour or predatory pricing when markets are already formed by state intervention or naturally form and ‘regulation for competition’ (the ex-ante task of engineering markets when they do not exist) (Fligstein 2001; Levi-Faur 1998, 674). A rather specific example of the second is also the regulation of natural monopolies, where public intervention should ensure the achievement of welfare outcomes that are socially optimal by making natural monopolist behave as if it was subject to competitive pressures. Another regulatory task is to prevent private actors to gain excessive profits or ‘windfall profits’ from their activities. When these profits are the result of a strive to innovate, they can be considered a deserved reward for the investor and society might want to allow them in the sake of maintaining an incentive to innovate and make property rights less secure. Therefore, a balance must be found in the definition of what ‘excess profit’ means and what their causes are. The next paradigmatic case is public intervention to correct externalities, either positive or negative. Externalities occur when the price of a product is not equal to the real cost for society from producing or consuming that good. As a consequence, in both cases production and consumption do not happen at the socially optimal level and while positive externalities lead to under-provision and consumption of a good with positive social or individual benefits, the opposite happen in the case of negative externalities. Technological progress is a good example of the former while pollution is an example of the latter (Jaffe, Newell, and Stavins 2005). A particular form of intervention in the cases of goods with positive externalities, called ‘public goods’, occur when there is the risk of free-riding. Public goods have the characteristic that their consumption is not rival nor excludable. Therefore, when produced, it is freely accessible also by those that have refused to participate in the sharing of the cost of production. Information inadequacies or asymmetries follow next on the list, because, if the provision of adequate information is not regulated and this is costly to produce, it will be underprovided (or, in the worst case, even falsified), leading again to misallocation of

resources and socially suboptimal consumption. Next, unregulated markets would only serve customers when the price they pay in exchange of a good is at least equal to the cost of provision. That implies that some services of public interest that have, for example, a cyclical variation in the level of demand, would not necessarily be provided in a continuous manner. Therefore, regulation can impose forms of cross-subsidization among peak and off-peak customers with a view to achieve the socially desirable goal of service uninterrupted availability. Moving on, even if market players have an incentive to rationalize and coordinate their activities to achieve efficiencies in terms of economies of scale or network economies (both depending on the number and the interconnectedness of producers and customers), the transaction costs to do so can be quite high and possibly higher than the initial gains to do so. Again, the setting of common standards by a public authority can solve what is in the end a collective action problem. Finally, public intervention in the form planning is needed when markets do not have incentives to satisfy the needs of future generations (long-term planning) or satisfy altruistic concerns (which is the same rationale for the correction of negative externalities).

Besides this extensive list of market related failures, public regulation is also justified by the goal of furthering rights, such as human rights or social solidarity, which are obviously not an issue of allocating efficiency but value provision. In this case, public intervention is not a second-best solution to markets but rather a normative prior, constitutive of markets relations, providing a basic framework for organising the relation between individuals (and/or society) and the market.

### 2.3. The Provision of Regulation: Positive Theoretical Approaches

Regulation is therefore a complex activity in which public authorities must interact with private ones to first define and then monitor and enforce rules that are conducive to better, more efficient or more legitimate, resource allocation. There are however different opinions about whether this relation is conducive to the maximization of the public interest or whether regulation is subject to its own kind of failures that make it drift from its ideal function. Normative theories of regulation (Joskow and Noll 1981) subscribe to the thesis that regulation can achieve the goals stated in the previous section, or, at least, this is the initial motivation that leads to the establishment of regulatory authorities and, clearly, the mandate that they have to pursue.

However, such a benign view has been contested by a rich body of literature that highlights the positive, rather than the normative, dynamic of regulation, for both economic and political reasons. These theories consider the regulatory activity as a sort of market itself where supply and demand for regulation from actors with different motivations than the public interest meet. Stigler's 'economic theory of regulation' (Stigler 1971) is probably the most important and cited criticism of normative theories of regulation. Accordingly, demand for regulation comes from economic interests rather than the public at large and it is supplied by interested actors with equally relevant personal interests, such as politicians, bureaucrats, or the independent regulators themselves. On the demand side, the assumption is that the mobilization of societal interest is unequal. Building on interest groups theories (Olson 1971; Wilson 1980), economic interests have a strong incentive to mobilize in order to secure the conspicuous rents they enjoy from a specific regulatory arrangement, while regulatory benefits related to the public interests are generally more diffused and thus subject to a problem of collective action. On the supply side, building on theory of electoral politics (Downs 1957), regulatory authorities, namely politicians, are inherently vote-seeking individuals (therefore extracting contributions from economic interests for their re-election) or rent-seeking themselves (as for example securing employment after their public service or, in the worst case, even bribery). Suppliers of regulation assume that the average voter would not notice the fact that regulation is provided in the private interest, even more so when the notion of public interest is for example relatively new in the domestic or international setting. Consequently, their rational behaviour is regulating in favour of the powerful economic interest, or so would suggest the market logic applied. As such, regulation serves the goal of redistributing income from one group to another.

This approach is however quite simplistic and in contrast to the empirical findings that show how regulation is, in general, a balance between the interests of concentrated interest groups and those of consumers or the public at large. In that sense, the market for influence might be more complex and sophisticated than suggested by the positive theory model. The economic theory of regulation (Peltzman 1976) offers a more generally valid explanation of the dynamics at play in the market for regulation. Accordingly, the public is not a mere passive and rationally ignorant actor outside the market, but it competes with organized economic interests with votes and other resources which are relevant for the suppliers of regulation.

Therefore, the outcome is an equilibrium between the demand of the public and interest groups at the point where the utility function of the supplier of regulators is maximized. In an even more refined version (Becker 1983), it can be shown how deadweight losses (i.e. the difference between the size of losses and benefits that inefficient regulation provides to different groups) reach a point where the countermobilization of the losers is triggered. In this case, either the escalating amount of losses stops or the countermobilization, once the collective action problem is solved as a reaction of the saliency of the losses, would also claw back past losses leading to a socially optimal equilibrium. Moreover, if regulation is addressed to correct market inefficiencies it also produces, by definition, an extra wealth to be redistributed. This explains why, where inefficiencies are large and visible, they attract more attention from the potentially beneficiaries which have then a strong incentive to organize, demand and monitor the provision of regulation. As a result, the more inefficient a sector, the less likely the prevalence of regulatory capture by interest groups. Such understanding of the politics of regulation creates a bridge between the normative and the positive and economic theories of regulation

#### 2.4. The Choice of the Proper Institutions for Efficient Regulation

Regulation is not an institution-free activity as the market analogies or the benevolent regulator assumption implicit in the reviewed theories would induce to think. Both normative and positive theories of regulation have indeed implicit institutional prescriptions. Positive theories emphasize the liability of regulators to be captured and its logical conclusion is that the larger, more fragmented, and more directly accountable the regulator, the less the risk of capture. In that sense, responsibility for setting regulation should be placed in democratic/majoritarian institutions (Hix and Hoyland 2011, 181). Normative theory would suggest that independent and non-majoritarian institutions would be better placed to define and uphold the public interest and defend it from the vagaries of politics, being politics itself not immune to regulatory capture although according to different mechanisms. In one sense, the role of non-majoritarian institutions brings up the problem of how the notion of public interest must be defined, which is a rather vague notion indeed (Feintuck 2010). A strict version of the public interest therefore would significantly reduce its scope to policies that correct market failure and therefore achieve more efficient resource allocation and are

Pareto-efficient (Majone 1996)<sup>25</sup>. On the contrary, redistributive policies, which are not Pareto-efficient by definition, should be left in the hands of majoritarian institution which are the only one to possess the legitimacy to shift income among social groups. If this logic is accepted, then independent and non-majoritarian institutions have two advantages, which are expertise and the capacity to make credible commitments (Majone 2001). The power (and the faith) in expertise justifies delegation based on accountability by output. Paradoxically, non-majoritarian institutions whose reputation depends on the efficiency and the effectiveness in the accomplishment of the delegated tasks, procedural transparency and the rationale justification of their actions, are subject to a stricter accountability than majoritarian institution. On the other hand, their independence serves to solve the commitment problem that majoritarian, political institutions meet, due to the inherent instability of political rights which make the investment in commitment as not remunerative from an individual utility maximization perspective (Moe 1990) and leads to time inconsistency problems. The highest form of independence is reached when political property rights are irrevocably transferred to an independent and separate institution. However, if delegation to independent, professionalized agencies solves some problems, it also opens others, in particular the relations between principal and agents and the control mechanisms that the former can use to rein in the independence of the latter, were it to use its bureaucratic discretion for other purposes than the goals delegated. Accordingly, the relation between principal and agents must be analysed from two different perspectives, depending on the logic of delegation. If delegation is based on the principle that the delegated authority possesses more expertise and can reduce the transaction costs of decision-making, the goal of the principal is that the agent executes its tasks keeping as close as possible to its preferences. In this case, the problem for the principal is one of bureaucratic drift, i.e. the potential sway the agent has in pursuing goals that differ from those of the principal, causing agency costs. In other words, the agent does not have to be independent in its judgment. The solution to bureaucratic drift

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<sup>25</sup> Majone (1996, 312) however makes an important qualification to this point. Efficiency can also have redistributive effects, which means that it is not a given that the ‘value creation’ and the ‘value claiming’ of efficiency measures are always distinct. However, he also states that, in theory as well as in practice, they can be made two different stages. Using the Coase theorem for the explanation (Coase 1960), what is important is that the move to a more efficient outcome creates more wealth than the losses of the affected party. Value creation therefore is a process of allocative efficiency while value claiming is an institutional problem that should be solved in ways that allow the loser to be compensated by the winner and still have a net positive collective welfare increase

resides in setting ex-ante and ex-post mechanisms of control and accountability for the agent (Majone 2001, 103). In the second case, if delegation is an answer to the credibility problem, the principal should accord as much independence as possible to the agent, and possibly choose one whose preferences differ the most from its own if the principal commits to a policy for which is known to potentially have an interest in renegeing in the future.

## 2.5. The European Union from a Regulatory Perspective

Based on the general notions of regulation examined above, it should be possible to explain the competences pooled at the supranational level and the type of delegation adopted as justified by the goal of achieving regulatory efficiency at a higher level of jurisdiction. The complex overlap of mixed territorial and functional jurisdictional competence in the EU should be explained by the logic of organizational structure aimed at increasing the overall welfare of its participants (Hooghe and Marks 2009b).

### 2.5.1. The Construction of the European Union as a Regulatory State

The institutional set up of the EU can therefore be, at least in principle, explained according to the need to achieve regulation that is efficient and, to a certain extent, also Pareto-efficient (at least in the long run, as it will be explained) among Member States. In other words, there is a functional explanation to the rise of the regulatory and administrative state in Europe which, slowly and after a century later compared to the US (Lodge 2008, 285) has taken roots and has come to define the EU. The macro sociological and economic factors that lie behind the dissatisfaction with and demise of the positive state, particularly from the 1970s, explain in large part why such shift has happened. The statutory regulation from independent agencies, less hobbled by bureaucratic and changing political influence has been gradually come to be seen as the proper institutional structure for the ever growing complexity of modern society and for more effective problem-solving (Majone 1996, 56). The central actor of the EU regulatory state are the European Commission and the European Court of Justice. The Commission is a more peculiar case than the Court because of its unique status as a supranational independent organization with extensive powers. The growth of regulation and of the powers of the Commission have gone hand in hand and are explained via a combination of demand and supply of Community regulation. As an agency with its own institutional interests, the Commission is obviously interested in acquiring more powers which, from the functionalist perspective adopted, are related to the scope of regulation rather than the size

of the budget that, in the EU, has been traditionally limited. Therefore, the logic of task expansion obeys both to a functional logic but also to self-interested political activism and entrepreneurship on the part of the Commission (*ibid*, 65). On the demand side, different actors have also developed an intrinsic interest in expanding EU regulations, from international business interested in reducing transaction costs by establishing a large market with a common, or at least compatible, regulation to public interest-group organizations that have tried to circumvent domestic political constraints and the same Member States that try to upload at the EU level their own preferences in a specific policy area (Börzel 2002). From the perspective of the regulatory output, the Commission has however little interest in moderating the amount of regulation produced because regulation is relatively cheap to produce while the costs of adjustment fall on the shoulder or other actors, being them private or the bureaucratic structures of the Member States themselves. Therefore, although functionalism would in part explain the growth of regulatory powers, one could have expected more resistance from those subject to the costs of adjustment. However, the potential deadlocks facing competence expansion has been circumvented by supranational entrepreneurship together with the cooperation of the interested actors and the peculiar decision-making system of the EU, where responsibility is shared and diffused and rules are often made initially unclear and developed incrementally over time (Falkner 2011; Héritier 1999). Obviously, as the hypotheses of the dissertation state, functional explanations are often a sufficient condition, although they are not immediately visible to all actors.

Theories of EU integration, notwithstanding their differences, have supported the idea that the EU expands its powers because of the benefits of supranational regulation. To begin with, the neo-functional account of EU integration is based on the idea, among others, that economic integration stimulated by supranational rules leads to economic growth and increased welfare in a positive-sum game for all actors involved (Jensen 2019, 58). The concept of functional spillover is at the centre of the explanation of the expansion of EU regulatory powers, in the sense that sectoral functional interconnectedness create a structural pressure for regulation to be expanded and further benefits of integration to be realized (Niemann and Schmitter 2009, 52). A clear example of this spillover logic is provided by the emergence of environmental regulation in the EU as a consequence of its two-ways relations with the growth of the Single Market (Weale 2002). For one thing, the existence of

different regulatory regimes throughout the EU was considered an undesirable burden on the smoothness of economic transaction in an ever more interconnected market, as well as a potential for protectionist barrier between high and low standard countries, hence the need to shift the regulatory function to the higher jurisdiction. At the same time, the growth in the level of cross-border exchange also fed into higher level of pollution with a transboundary relevance, hence the equally powerful rationale for the involvement of the EU in environmental regulation. On a similar vein, theoretical currents close to neo-functional thinking, such as transactionalism (Sandholtz and Sweet 1998) attribute the rise of regulation to a functional problem such as the need to reduce the transaction costs of cross border exchange, leading to a self-reinforcing process whereby the emergence of rules leads to the institutionalization of the powers of supranational institutions via the adjudication on those rules, exposing the benefits of more supranational regulations and limiting the discretion of domestic regulation (Sweet, Sandholtz, and Fligstein 2001). Liberal Intergovernmentalism (LI) is the theory that takes functionalism as the engine of integration, as member states go about solving their interdependence problems by pooling sovereignty at the EU level. i.e. matching jurisdiction to the magnitude of the relevant problem (or opportunity) area (Moravcsik 1993, 485–86). According to the LI logic, Member States reach out to international cooperation when interdependence renders their unilateral regulatory solutions ineffective to deal with internal problems. As it is clear, LI privileges the domestic motivation as compared to the autonomous and self-reinforcing process of EU institutionalization, an assumption that will be treated later in this dissertation. Moving further, even if it is often taken as a theory whose main purpose is to explain political phenomena from a non-functional logic, it is also possible to identify in the historical institutionalism (HI) literature detailed accounts on the impact of the EU as a regulatory state with efficiency policy effects (as opposed to inefficient institutional effects). What distinguished HI from the other approaches, and from LI in particular, is the distinction between policy and institutional functionalism. The former is, according to the example that will be proposed, often achieved at the expense of the latter. In fact, the regulatory powers of supranational institutions in efficiently regulate at the EU level have been acquired only because the breaks that Member States had placed on the extension of supranational authority (the agent) have been lifted in ways that have escaped the capacity of control of the political principals (the Member States). The first and most significative example form the HI literature is the explanation of the entire single market

project, since the adoption of the Single European Act, as the result of institutional dynamics that have allowed for market reregulation at the EU level (Armstrong and Bulmer 1998). Therefore, while the single market was originally intended as a project or de-regulation, given the prevailing liberalization push during the 1980s, it slowly became a project of regulatory reconstruction at EU level first (via for example the strengthening and forceful application of competition rules) and re-regulation afterwards. The second example is the account of the extension of norms regarding individual rights as a new instrument of regulation, this time via the legal adjudication by the ECJ, as in the case of the progressive applications of vague norms included in the Treaties regarding the right to equal pay for equal work that have led to profound consequences in terms of the eradication of gender discrimination (which an example not only of economic but also right-based regulation) (Pierson 1996). In sum, this is not to say that the EU is just a regulatory state (Caporaso 1996) but rather an explanation of how, once established, the regulatory functions of the EU and its efficiency-generating function can exert an enduring effect that have prevented its roll back and have on the contrary had a considerable structuring effect on domestic policies and polities

### 2.5.2. Delegation of Regulatory Functions in the EU

Without the intention of giving a complete account of the theory of delegation within the EU (Franchino 2007, for an extensive review), it is worth analysing how delegation to supranational authorities has been framed, given the importance that forms of delegation have on both the ability to carry out the delegated tasks and on the accountability of delegated agencies (Tallberg 2002). The simple existence of international market failures is not by itself sufficient to explain delegation to a supranational authority if the states concerned were able to reach an agreement among themselves. However, the conditions for reaching such an outcome are quite demanding as they involve the absence of transactions costs, availability of information and of course the incentives, more often than not asymmetrical or absent, to cooperate to solve the problem (Majone 1996, 69). The extensive delegation to supranational powers therefore is justified by the absence of these factors but it also goes further, and it is also explained by the complexity of the transaction costs involved in the EU, including those related to the search for information, bargaining and the policing of the implementation of the agreement. For example, it has been suggested that extensive agenda setting powers can be justified as a transaction cost reduction measures (Pollack

1997). At this stage, a balance must be found between the desire to limit the agency costs (bureaucratic drift) and the costs of controlling and monitoring the agent (Weingast 1983). Some authors however doubt that supranational institutions always have superior information compared to the member states (Majone 2005; Moravcsik 1993). Based on functional theories of international regimes, LI finds that the decision to delegate to the supranational level is a function of the expected costs and benefits from rapid decision-making (i.e., reduction of transaction and bargaining costs). *Ceteris paribus*, if the expected benefits from cooperation are high, delegation is extensive, as in the case where there is uncertainty about the future implications of a delegated task, as there will be less ground for the potentially disadvantaged to realize the magnitude of the costs and mobilize against the proposed policy. Finally, when the potential risks for governments or interest groups with intense preferences about the possible losses are high and evident, limited delegation is expected or the nesting of the delegated act into previous decisions reached (or to be reached in the future, one could add) by unanimity. Others (Pollack 1997) have focused more specifically on the agenda setting powers of the Commission, noticing that the consequences of the monopoly over tabling a formal proposal depends on the type of decision-making procedure, the distribution of preferences within the Council and between this and the EP and the time pressure to reach an agreement (the higher the costs of waiting for governments or for the EP, the higher the chance of a positive vote far from the ideal preference of the impatient actors). Interestingly, and contrary to intergovernmental expectations, some found that the power of the Commission is enhanced by its informal role of agenda setter. The latter then acts as a policy entrepreneur to break a deadlock introducing proposals that serve as focal point for other actors to converge on and uses its expertise, its role as a honest broker and the persistence in the policy and decision-making environment while most other actors come and go (Majone 1996, 75–77; Pollack 1997, 125–27). Turning to the question of delegation of powers at the implementation stage, the risks linked to decentralized implementation and domestic policy discretion also involve a trade-off between centralized delegation and decentralization. Policy discretion is desirable if the policy is to made compatible with local preferences, but it is also an open door for cheating, making the commitment poorly credible. However, it has been noted how the complexity of policy can also play in favour of delegation in favour to national administration, given the paucity of the resources available to the Commission (Franchino 2007). Further problems arise from the

incompleteness of the contract (relational contract) represented by either the Treaties or secondary legislation (Pollack 1997, 103), meaning that delegation also must include provisions as to how the solution of disputes arising from divergent interpretations of the contract or the treatment of unforeseen events should be solved. In this case, it has been argued that the wide discretion of interpretation provided both to the Commission and the ECJ are based not so much on the principal-agent relation (as by definition the principal cannot give detailed instructions about events it cannot anticipate) but on the fiduciary principle (Majone 2001, 116–18). However, delegation is not always a permanent decision or a one-shot game, as sometimes programs with delegated executive powers (or, by extension, legally binding goals to be reached) have an in-built expiring date calling for policy revalidation (Pollack 1997, 119). This gives the possibility to Member States to engage in a process of dynamic delegation (Tallberg 2002, 36–41), whereby there is a feedback loop from the optimal or suboptimal consequences from the previous delegation experience. Three possibilities have been identified in relation to be object and consequences of such feedback loop: application of the experience to a new area of delegation, by limiting delegation if the agent has behaved in ways that amount to shirking of its mandate; application to the same area where delegation had been already granted but it has led to suboptimal outcomes (which could imply also an extension of the delegated powers if it is considered that it was a lack of conferred powers instead than an excess); or strategic adaptation to an irreversibly altered political context, such is the example of ECJ rulings that set new principles based on Treaty provisions (and the high costs of revising the Treaties).

#### [\*\*2.5.3. The Regulatory Toolbox: Modes of Regulation and Policy Instruments in the EU\*\*](#)

The complex and quite unique political and institutional nature of the EU has led to analyse its action from the perspective of governance, where three different dimensions enmesh to create unique combinations at the sectoral level (Bulmer 1993). At the higher level of analysis, there are general common features regarding the institutional characteristics of the policy process which then vary according to the character of the policy and the instruments that can be legally used in a specific area of policy (Wallace 2010). At a subsystem level, the governance capacities of the EU are further contextualized, generating governance regimes, which contains both informal and formal norms, rules , procedures, conventions and policy instruments that create specific patterns of interactions among actors, including those vested

with legal authority and interest groups (Bulmer 1993, 371). The regulatory toolbox of the EU is quite varied as it must combine the aspiration to have a profound impact (a functional pressure) with the need to guard itself against the political pressure coming from the Member States to limit intrusive forms of governance that limit domestic discretion. Governance can be defined as societal “steering and coordination of interdependent actors based on institutionalized rule system” (Treib, Bähr, and Falkner 2007, 3). Different attempts have been made at classifying the character of EU sectoral governance and at relating it to the policy toolbox. According to one influential typology (Knill and Lenschow 2004), EU regulation can be defined based the level of discretion left for domestic administration in implementation and the level of coercion, or the bindingness of the requirements imposed on implementing actors. When implementation is rigid and the legal goal binding, the EU is coercing Member States into compliance, via regulatory standards that can be substantive or procedural. When the legal goal is binding but domestic implementation flexible, legislation takes the form of framework directives and regulations as well as, increasingly, an approach that uses so called ‘new policy instruments’ that create structures of economic incentives and penalizations (Wurzel, Zito, and Jordan 2013). On the other hand, when the character of the EU rules and policy goals is not legally binding, if the rules are nonetheless specific and target a well-delimited group of actors (or a sector), the goal is to stimulate self-organization and bottom-up initiatives. Usually though, this is a first step as the private and/or public actors involved are acting in the ‘shadow of hierarchy’ (Héritier and Lehmkuhl 2008) in the sense that if self-organization fails altogether or if it is insufficient to achieve the desired policy goal, it is likely that the mode of governance will shift towards more coercive methods. Finally, in those areas where there is not yet a clearly established EU competence and/or national characteristics of policy-making are deemed to be initially highly incompatible, the method of governance is neither legally binding nor prescriptive and regulation is of a more voluntaristic character. Since the 2000s then, various forms and forums of coordination, which are generally labelled as ‘Open Method of Coordination’ have become the mainstream organizational instrument. This type of coordination is based on the exchange of best practices among Member States or transnational policy networks of bureaucrats and stakeholders, trying to achieve cognitive and policy convergence (Borrás and Jacobsson 2004).

In another influential categorization, EU steering methods are divided into the three categories of coercion, competition and communication (Knill and Lenschow 2005). While coercion and communication fit into the modes of governance already explored, competition is a useful addition to characterize the regulatory approach that characterise liberalization, which is not based on a specific institutional template to be adopted but rather on the prohibition of certain practices (namely, those that prevent the functioning of the single market). Change in domestic regulatory setting is therefore left to the discretion of domestic actors and it is assumed that it will be driven by the goal of improving the performance of the national economy and the competitiveness of the liberalized sector in relation to other Member States. Therefore, for the purpose of this dissertation, it is useful to distinguish between the regulatory character of negative integration, or the politics of market-enabling and liberalization and that of positive integration, or the politics of market-correcting. As already said, these are the main rationales for regulation in general and specifically for the EU. However, a third area of regulation is also worth to be singled out, as it contains distinct characteristics, the regulation of utilities and public service obligations.

#### 2.5.4. Regulation as Negative Integration

Standard theories of economic integration state that economic integration follow a staged approach, beginning with the removal of tariffs (free trade area), the creation of a custom union (the establishment of a common external tariff) and then a single market, intended as the free flow of factors of production (labour, capital, goods and services). The ultimate step is the creation of an economic union which involves the harmonization of economic policies, such as monetary and fiscal policies. While the Treaty of Rome established the goal of a single market, its realization was however slower than predicted, as the diversity of traditional models of capitalism among the Member States, including the economic interests of domestic producer groups, ideologies and the domestic costs of adjustment created powerful stumbling blocks (Egan 2019, 297). Two conceptions of the meaning of market were pitting Member States against each other: the neo-liberal model, which rejected the shift of strong regulatory powers at the supranational level and the protection of the market from political interference; and the regulated capitalist model, which instead accepted government intervention, the maintenance of a social market economy and the reconstruction of regulatory powers at the supranational level (Hooghe and Marks 1997). While the

suppression of tariffs and physical barriers to trade was achieved quite quickly, creating a free trade area and a custom union within the EU, the removal of technical barriers to trade, mainly relating to the lack of harmonization of product standards, was frustrated by the persistence of unanimity as the only available decision-making procedure. While the attempts of the Commission at harmonizing all possible standards across the EU was daunting and meeting the opposition of Member States, the judicial activism of the ECJ provided the legal input for breaking the deadlock. The Court introduced the so-called principle of mutual recognition<sup>26</sup>, which deemed as contrary to the letter of the Treaty all national regulations that hindered trade. In substance, all national regulations were *a priori* deemed as equivalent and, consequently, harmonization was not needed (*ibid.*, 299). However, the Court also qualified what could have been a blanket ruling and deemed as admissible national trade-restricting regulations although only for specific purposes (public health, fair competition and consumer protection) and in any case under the purview of national courts and, ultimately, the ECJ. Market integration therefore became intertwined with the legal competences of the EU, the ECJ now able to arbitrate between the economic consequences of public intervention in the market and the political relation between the Member States and the Union (*ibid.*, 300). Often, the consequence of the ruling of the ECJ is however that of creating legal uncertainty for domestic actors (S. K. Schmidt 2008) and a new political ground for competing interests (as already noted, Member States have to adapt to the unintended consequences of irrevocably delegated powers that change the opportunity structure in which they act). There is no doubt that the far-reaching consequences of the introduction of the mutual recognition principle and the limited need for EU-wide harmonization unsettled many Member States wary of the impact of what in fact would amount to a vacuum of rules, or rules set at the lowest common denominator (Young 2015). The de-regulating effects of the mutual recognition principle therefore paved the way for coupling the single market with the reconstruction of regulatory powers at the EU level and, therefore, positive integration (Armstrong and Bulmer 1998), a move that was made possible by the new institutional framework designed by the Single European Act of 1986. However, any account of negative integration would be incomplete without mention of the other far-reaching powers that had been initially delegated to supranational institutions, that is competition policy. Competition

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<sup>26</sup> Two landmark sentences established such principle: Case 8/74 Procureur du Roi v. Dassonville [1974], ECR 837 and ‘Cassis de Dijon’, Case 120/78 [1978] ECR 649

policy enables the EC to use different policy tools to prevent distortion of free-trade and competition in the single market. It includes three main instruments, namely anti-trust (outlawing agreements among firms that restrict competition), the regulation of state aid (prohibition of all form of aid, i.e. subsidies, not justified by the promotion of a clearly defined EU interest as a whole or admissible specific sectoral or regional objectives) and merger control. Competition policy has been particularly relevant in the opening up to competition of sectors that had traditionally been regarded as non-competitive, such as utilities (Cini and McGowan 2009; Pollak and Slominski 2011; S. K. Schmidt 1996) and the Commission has benefited from the help of both interests groups and some Member States with a more friendly attitude to liberalization in its efforts to spread the reach of competition in the EU (Padgett 2003). However, if anti-competitive practices usually finds the approval and cooperation of Member States and affected economic interests, and the Commission can be considered to be acting as an agent of the Member States, state aid policy is much more conflictive and the attitude of Member States less cooperative (Wilks 2015, 152–53), the Commission acting as a supranational body often against explicit domestic preferences. Both competition and state aid policy (especially the second) do not however entail a blind and unilateral approach based on economic efficiency and consumer protection grounds. Political considerations in fact also often lead to balance the pros and cons of applying the letter of the rules to specific circumstances where equity concerns are also a valid argument to allow for exceptions to the general rules, particularly if the impact on EU-wide competition is not relevant. Competition and state aid policies are not and end in themselves but means to achieve a range of goals defined at the EU level that can also run contrary, although sometimes only temporarily, to the rigid application of the considerable powers delegated.

#### 2.5.5. Regulation as Positive Integration: Environmental Policy

Positive Integration refers, as a very broad term, to the re-regulatory policies that are intended to supplement the deregulatory character of the single market. To be sure, the single market is the sum of both negative and positive integration as the introduction of the mutual recognition principle created an incentive to replace the different national rules with common European ones (Young 2015, 126). The rationale of positive integration is therefore to introduce allocative efficiency by correcting all types of market failures and, although more disputed and complex to operationalize, the promotion of specific values. Some authors note

in fact that the correction market failures can also be considered not just as an economic Pareto-efficient activity, with no redistributive effects, but a redistribution of values among citizens, as some might appreciate and some not the values on the basis of which a market failure is defined (Hix and Hoyland 2011, 203), a point that is relevant for the subsequent discussion of the criticism of EU regulatory policy.

By far and large the most relevant example of positive integration in the EU is environmental policy. From a conceptual perspective, which is the relevant here, it is interesting to emphasize the incremental rise of environmental policy as an undisputed EU competence, starting from a functional spillover from the single market, and therefore mainly addressing the physical characteristics of the traded products, to become a policy that aims to internalize (almost) all environmental negative externalities, irrespective of their impacts on trade (Benson, Jordan, and Gravey 2019, 376). As already noted, policy expansion could have not happened without the introduction of qualified majority voting by the SEA and the Maastricht Treaty later elevated environmental protection (in the form of principles such as sustainable development and environmental policy integration) to the status of statutory EU goals, therefore standing on their own and no more ancillary to market integration. The Commission is credited with being the actor that has used all possible windows of opportunity to enhance the status of environmental policy and to bring it at the forefront of EU policy-making, a point that will be expanded later in the analysis of the criticism of EU policy expansion dynamics. However, the role of the other supranational institutions has also been relevant, the EP becoming the standard-bearer of environmental protection and ECJ ruling often in favour of upholding the environment as a reasonable exception to free trade among Member States (Lenschow 2015, 326–28). As already noted, environmental regulation in the EU has progressively come to institutionalize specific principles of actions, up to the point that today, domestic environmental regulation in the Member States is, to a large extent, the direct translation of those principles into domestic legislation (Jordan and Liefferink 2004). These regulatory principles include the appropriate forms of environmental management (prevention, action at source, integrated pollution control); the specification of environmental standards (resource conservation, high level of protection, precaution); allocation of authority (appropriate level of action and subsidiarity) and the integration of environmental protection into other areas (polluter pays principle and environmental policy

integration) (Knill and Liefferink 2007, 27–35). Environmental policy is also a good example of the conflict among Member States to upload their preferred regulatory approaches and of the variation of such approached over time in the attempt to make the policy more effective and more responsive to the changing contextual environment. One crucial line of conflict runs along the dimension of standards and pits technology-based versus cost-oriented standards (*ibid.*, 35). According to the first approach, based on strategies of ecological modernization (Mol 2002), regulation should be constantly updated to reflect (but also to stimulate) progress in the available environmental technology. Alternatively, regulation should not aim at achieving the maximum level of pollution reduction possible, but rather an optimal level which can be defined as the most cost-effective and the one that best suits domestic preferences and firm-level conditions (Knill and Liefferink 2007, 37). The other line of conflict runs along the governance dimension and has had a relative impact in the choice of regulatory instrument as an outcome (Wurzel, Zito, and Jordan 2013) (but also (Halpern 2010) for a different opinion about the capacity of the EU to be truly innovative in the definition of its policy toolbox). Whereas initially the EU privileged the coercive and inflexible approach based on traditional ‘command-and-control’ instruments, the rather poor performance in implementation outcomes has led to an experimentation with new, less coercive and more flexible, market-based, suasive and voluntary alternatives. Although recent analysis shows that the times of political entrepreneurship on the part of the Commission might be gone, at least for the time being (Steinebach and Knill 2017), it is to be proved that the maintenance of specific instruments, in the area of electricity policy at, least, cannot be conceptualized as a regulatory success.

#### 2.5.6. The Social Dimension of Regulation: Services of General Economic Interest

It has been noted how regulation often stands at the interface between the achievement of efficiency and the regard, when in conflict, for non-market values such as social solidarity. This tension is particularly relevant in the case of the liberalization of network industries (Coen 2005, 3). The EU has developed a rich and complex legal system to deal with this tension. Initial accounts of the dynamics of liberalization and the notion of the public interest have focused on the different decision-making routes followed across different sectors in order to bring about a certain disconnection between the notion of competitive services, mostly defended by the Commission and the few Member States that had already moved forward in

the direction of liberalization and the notion that certain services were intimately linked to the provision of public services, defended by the majority of Member States and the EP (Héritier 2001b). Two decades of liberalization show how the boundaries between the market and the provision of public services are subject to incremental shifts and that the legal aspects of the definition and contestation of such boundaries are still relevant. Conceptual clarification is important from a legal perspective (Sauter 2015)<sup>27</sup>, as different notions can be organized according to a decreasing coverage of the obligations that are entailed by the recognition of a public service. A first distinction to be made is between the more general notion of Services of General Interest (SGI) and Services of General Economic Interest (SGEI). The former deals with services that do not have an immediate economic impact and are not subject to general liberalization measures (such as education or welfare), and it is beyond the scope of analysis. SGEI, on the other hand, are of relevance for the object of this dissertation. In the Treaties there is no definition of public service, the relevant legal notion being that of SGEI and they are the object of a relevant exception to the application of the rules on competition<sup>28</sup>. Secondary legislation deals with the question of how they should be treated in relation to the rules on state aid, as the provision of a SGEI will usually imply the use of public resources to finance it and confer a (licit or illicit) advantage to the designated provider. The Treaties, with a notable exception, also delegate to the Commission the power to approve legislation, via directives or decisions, without having to cooperate with the EU legislative bodies. In fact, it was the use of such powers by the Commission to produce more specific and also more restrictive legislation that sparked resistance from the Member States which in turn resulted in a number of landmark cases ruled by the ECJ that cumulatively defined the extension, the limits and the criteria to be followed by the Commission in disciplining the scope and the conditions applicable to SGEI provision. As a result, each utility sector has come to be regulated according to specific rules subject to change as a function of technological development and conditions of affordability and accessibility (whereby the scope of the

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<sup>27</sup> This section will draw heavily on the work of Sauter which is the one found to provide a clear, concise, and not excessively legalistic account of the treatment of public services in the EU.

<sup>28</sup> 2. Article 106(2) of the TFEU: “Undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in the Treaties, in particular to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Union”

population entitled to receive SGEI might be progressively reduced or, more rarely, expanded).

The concept of public service and the related Public Service Obligation (PSO), which is contemplated by secondary legislation, implies two necessary conditions: that the service is provided in the public interest and in a uniform and highly regulated and detailed manner. The third optional condition is for it to be provided by a public undertaking although, following liberalization, this condition can also not apply and the PSO be placed on private companies too. Finally, a Universal Service, and the relative Universal Service Obligation (USO), are conceived as a subcategory of PSO implying a universal coverage, be it in terms of the population covered or the geographical area, at a specific quality and, usually, at an affordable price (Sauter 2015, 15). The provision of a PSO or a USO therefore not only or not necessarily imply the potential use of public resources, as the goal can be equally achieved by the management of a flow of resources between users' groups, i.e., via cross-subsidization. In general, PSO/USO entail an entrustment to an undertaking, be it public or private, to provide the service, subject to specific conditions and parameters that have to be met for it to be considered as admissible, such as the content and the duration, the identity of the undertaking involved, the amount and the source of the resources needed for its financial compensation, as to avoid overcompensation and therefore state aid. In fact, according to the ECJ jurisprudence, when these conditions are met, the compensation cannot be considered as state aid.

## 2.6. Criticism of EU Regulatory Powers: Normative and Positive Standards

This section will expose two sources of criticism to the effectiveness and the legitimacy of the EU in achieving regulatory outputs that justify the delegation of public authority in a supranational jurisdiction that does not enjoy the same characteristics of its agents. The first criticism relates to the supposed lack of legitimacy and effectiveness in achieving positive integration goals while the second refers, more generally, at the expansion of regulatory functions beyond what principle of efficient supranational regulation would suggest.

## 2.7. The EU as a Regulatory Joint-Decision Trap

The reason of being of the EU is to allow its Member States to advance collective problem-solving in those policy domains where unilateral actions is inefficient or insufficient, given the

interdependence that exists as an exogenous given or is endogenously generated by the same EU. Following the categorization made by Scharpf (1997, pp. 70–71), cooperation problems are of three types, each of them featuring a specific actors constellation, that is, the set of interactions defined by the interests that each actor holds, the strategies they can adopt in relation to each other and their preferences over possible outcomes resulting from their interaction. Actors constellation can be usually reduced to specific game-theory matrixes. First, there are problems of coordination. These involve, first, the joint production of an outcome of interest for all actors involved, and should be in principle be unproblematic as actors could clinch a voluntary agreement. Second, there are problems relative to the correction of externalities and the provision of collective goods which, in the absence of well-defined property rights, end up in a suboptimal outcome as some of the actors have no incentive to cooperate. Finally, there are redistributive problems, when a specific optimal outcome (in the sense that the collective welfare increases) causes losses for some of the actors involved. Hence, if the loser consent is a condition for the outcome to be produced, i.e. if it holds a veto power, either it is compensated for the loss it suffers, or the optimal outcome is not obtained.

For the same author, the EU suffers from a structural deficit when it comes to the provision of collective goods or the correction of externalities involving positive integration (Scharpf 1988, 1997b). The problem roots in the EU actors' constellation that characterises the EU, where Member States with different economic comparative advantages and different preference in relation to the provision of the benefits of market-correcting policies clash in the adoption of the latter. Therefore, and as a way of simplifying the nature of Member States' preferences, a coalition of high-standard countries and one of low-standard countries are set to collide on the question of the adoption of a common standard. However, the distribution of preferences alone is not a sufficient condition to explain the undersupply, from the perspective of those Member States that value them, of market-correcting policies. Actors constellation must always be considered within a specific mode of interaction, i.e. the institutional rules, when they exist, that determine the modalities according to which decisions are adopted. In the EU, the principle of qualified majority voting that presides over market-correcting policies is supposed to play against their adoption, as a relatively small minority of Member States can form blocking coalition. The next logical question is to ask

what kinds of losses high-standard countries would suffer as they could, in principle, retain their standards and restrain their market to foreign products or services that do not comply with those standards. The second part of the reasoning involves another aspect of the EU institutional set-up, as negative integration rests on a different decision-making logic than positive integration. The problem, accordingly, is that the Treaties empowers the Commission and the ECJ to, unilaterally, force the opening of markets to intra-EU trade, as the principle of mutual recognition, for example, established. The resulting regulatory competition forces high-standards countries to abandon their standards if they are not to suffer the adverse economic consequences of competing with higher production costs imposed by higher domestic standards. In other words, high-standards Member States find themselves confined within a ‘Joint Decision-Making Trap’ which decreases their domestic problem-solving capacity because they have entered an agreement in which negative integration creates constraints that are not balanced by the necessary corrective measures foreclosed by the hurdles of positive integration. The democratic accountability of the EU, at least from the perspective of its regulatory output legitimacy, would be seriously questioned.

However, the predictions of this model would not be empirically correct if an important caveat is not added, and that is the difference between the consequences of divergence of standards in relation to products and in relation to processes of production (including environmental and social domestic standards) (Scharpf 1997b, 522–26). In the case of products standards, two countervailing factors have played against the failure to harmonize at a high standard level. First, contrary to the assumption that supranational institutions would always follow down the liberalization path, differences in standards have been often upheld as reasonable exception to unrestricted intra-EU trade, providing an incentive to low-standard countries to accept a common regulation in order to expand their markets (provided they could maintain their comparative cost advantage which, as it will be now explained, could be facilitated by the fact that they could continue to enjoy less stringent process regulation). Second, it is not to be assumed that consumers would always base their choices on comparing the costs of products but also on their intrinsic qualities, which means that high product standards, even if more costly, could become a factor of enhanced competitiveness rather than failure (the so called ‘California effect’). The predictions are instead more likely to hold in the case of process standards where consumers are not exposed to the benefits of

better product qualities and the actors' constellation remains adversarial. At the same time, process standards do not directly come under the legal scrutiny of supranational institutions as they are not directly concerned with cross-border trade issues. Confronted with the option of accepting harmonization at a low standard level or refusing harmonization, high standard countries are not necessarily expected to accept the logic of the race to the bottom as their high levels of regulation might be popular at home. The expectation is therefore that high standard countries are forced to accept minimum harmonization or no harmonization at all, hoping to still be competitive thanks to their higher productivity (Hix and Hoyland 2011, 211).

## 2.8. Integration by Stealth: the Limits of the Functional Logic and of the Community Method

If the joint decision trap highlights the suboptimal output legitimacy for more economically advanced Member States with a potentially most sophisticated public opinion, the opposite criticism to output legitimacy has been moved by, quite surprisingly, the scholar that has first theorized the EU as a regulatory state. The argument comprises two different claims, both of which could amount to the conclusion that, while high standard countries escape the joint-decision trap, low standard countries enter a 'reversed joint-decision trap' (Majone 2005, 2014). However, as it will be explained, the argument is more complex and it could be that all Member States, not just the less economically advanced, could suffer from the uncontrolled EU regulatory expansion, according to the nature of the issue at stake. The first claim then is that the application of the Community Method (broadly intended as the adoption of decisions through procedures that do not imply unanimity) does not in fact prevent Member States to enter into extensive and stringent positive integration commitments, neither for product nor for process standards. If this is the case, it is less economically prosperous Member States that would suffer the consequences of ex-ante standard harmonization. The second claim is that, because the different institutions of the EU do not accept the trade-offs between the functional needs of the policy adopted and the equivalent need to relinquish some of their own competences, the outcome is often an incoherent mix of policies doomed to produce suboptimal outcomes. Finally, from a normative perspective, whereas the solution to the joint decision trap would be an extension to majority voting in order to increase EU policy output, unsurprisingly, the opposite recipe is suggested to prevent the EU from continuously expanding its competences and policies at the cost of poor effectiveness and poor legitimacy.

In other words, the EU should go back to be a regulatory state producing Pareto-efficient policies dealing with truly international and transboundary problems. Moreover, instead of the imposition of uniform standards, an approach based on ‘club theory’, whereby only countries that share the same preferences or functional needs would join a ‘club of standards’ and keep the benefits (and the costs) for themselves, would be a more efficient and legitimate form of regulating within the EU (and further, as physical proximity would cease to be a necessary condition for joining a club based on standard and enjoy its benefits and costs)

The argument is rooted in the idea that negative integration is the only policy whose optimal size is the entire EU, while the deep harmonization of standards in relation to positive integration often grossly runs against the grain of the preferences of the citizens of many Member States (but not necessarily the élites). This results in the production of widespread, although often diffused, suboptimal outcomes without the necessary democratic legitimization, given the secluded and unaccountable EU decision-making system (Majone 2005, 21–22). The offshoot of this prolonged illegitimacy by output is that the shift to the supranational level of an increasing number of tasks that further limit domestic discretion are leading to higher level of politicization (*ibid.*, 36). At the origin of the problem of integration by stealth there is the Commission and a distorted, because disconnected from its original meaning and function, neofunctional spillover logic. The EU executive has gone well beyond the limited task of being a delegated agent which should have upheld its reputation and expertise by focusing on output legitimacy. On the contrary, it has been assigned many more functions, including legislative and quasi-judicial, that are used for the rather political goal of self-aggrandisement and the means of integration (the production of efficient policies) have been confused with the ends (the production of mere policy output as a measure of institutional efficiency instead that as a symptom of overregulation). Even worse, the underlying goal of the use of the Community Method is to foster political integration disguised as technocratic policy (*ibid.*, 143).

Focusing more specifically on the regulatory aspect of the criticism and leaving aside the questions of democratic legitimacy, the problem with positive integration is the putative superiority compared to negative integration to achieve efficient outcomes. As already stated, the author casts doubt that positive integration is needed to avoid market fragmentation and that, in its absence, a race to the bottom would have followed suit (*ibid.*,

117-119). Evidence is provided that convergence towards common standards is better achieved via economic growth rather than coercion and that, paradoxically, the imposition of standards can in fact lead to a slow-down of growth and therefore of the more democratically legitimate convergence. As an example, of the disrespect for the principles of efficient regulation, environmental policy is criticised for not respecting the principle of fiscal federalism according to which, the size of the jurisdiction should correspond to the size of the problem, the EU regulating problems that are intrinsically local or global in character. Finally, positive integration is often not only pushed by the self-interest of the Commission but also the result of clientelist policy in the sense of the Wilson typology, where the Commission serves as a supplier of policy to different groups that try to achieve a concentrated benefit and impose diffuse costs on others. The demander of overregulation are many, including multinational firms that like the idea of a EU common standard in order to avoid the risk of unilaterally imposed higher standards in the home country, minoritarian public interest groups that try to achieve via the opaque policy process in Brussels what they cannot achieve via the more democratic and scrutinized domestic political process or Member States eager to avoid the cost of a potential future policy adjustment by uploading their policies at the EU level. On the contrary, the benefits of negative integration have been progressively tarnished with its association to simple deregulation and laissez-faire. In fact, negative integration is in many cases the most effective, although cheaper from the perspective of the costs of implementation, way of achieving consumer protection and protection of individual rights.

As already said, the second problem is that even when positive integration is accepted as valid, the necessary adjustments are not always carried out as each institution clings to its own prerogatives. The defence of the institutional competence boundaries is therefore more important than the effectiveness of policy. An illustrative example of the perverse effects of this claimed jurisdictional inflexibility is provided by the Common Fishery Policy (*ibid.*, 111-114). The example shows how a measure of positive integration that, at least in this case stands the test of necessity (the transboundary problem of overfishing within the EU) has been missed because of the concomitant pursuit of three different principles: the principle of sustainable fishing which would limit the amount of catches in sensitive fishing areas within the jurisdiction of Member States (positive integration); the inflexible application by the Commission of the principle of equal access of fishing boats to the Exclusive Economic Zone

of other Member States (based on the supranational prerogative of upholding the principle of non-discrimination, therefore negative integration); and the absence of supranational monitoring and enforcement powers because of the attachment of Member States to their sovereignty. This concluding example is therefore illustrative of the incoherence that Member State and supranational institution sometimes face when establishing a regulatory regime and are unwilling to face if the proper solution to the problem comes at the expense of a jealously guarded prerogative.

### 3. Theoretical Framework

The main hypothesis on which dissertation is built posits that EU regulation in the electricity sector, when not encumbered by missing spillovers, is unequivocally generating positive outcomes which in turn lead to stable policy equilibria leading in turn to the absence of domestic conflict. However, these complete policy feedbacks, how they have been defined, can take sometimes to settled and become uncontested. Moreover, it is not possible to know *a priori* if they produce self-enforcing or self-reinforcing equilibria. The first part of the theoretical framework will therefore deal with these issues. First, theories of Europeanization will be presented. They are not considered a sufficient explanation for the problem at hand because they do not generally consider the consequences of the overlap of different Europeanization processes taking place simultaneously, nor they make predictions about the long-term effects of Europeanization, i.e. the problem of the nature of the policy equilibrium to which they give origin. It might as well be that the equilibrium following the adoption of a policy is in fact fickle and it is disrupted soon after, something that comparative Europeanization research design often ignore, as the research interest is focused on the short-term differential Europeanization paths across countries and not on the long-term trajectories. For this reason, the theoretical framework will supplement the traditional models presented by Europeanization with specific theoretical proposition about the existence of self-sustaining equilibria, based on rational-choice theories, and about the existence of self-reinforcing equilibria, based on historical institutionalism and positive feedback. However, because the path to equilibrium can be non-linear, the theoretical framework also highlights mechanisms of long-term policy change. In that sense, theorisation of critical junctures can illuminate the dynamic of change linked to exogenous shocks, while negative feedbacks, layering, drift, and conversion illuminate more incremental paths of policy change as an alternative to critical junctures. To be sure, at the end of the process, a stable equilibrium built on positive effects or positive feedbacks must be found, otherwise the policy environment would be in a continuous state of flux and contestation which would run contrary of the empirical observation of the absence of domestic conflict in relation to the extension of competences in the area o RES-E support mechanisms and regulated tariffs.

The theoretical framework also explores the mechanisms underlying contestation and domestic conflict, proposing the two rival hypotheses according to which the type of

contestation in domestic preference formation. Therefore, if such conflict is in line with the expectations of integration theories, and in particular Liberal Intergovernmentalism, that predict functional-distributional conflict among interests groups to be the main cleavage in relation to task expansion while politicisation expect strategic political parties competition to be the engine of conflict, with functional considerations and interest group competition to be only secondary drivers.

### 3.1. Theorizing Europeanization Resulting in the Absence of Domestic Conflict

This section deals with the theories that can help explain why Europeanized policies stick domestically in the long run and generate a policy equilibrium that is stable and does not induce actors to contest policy revalidation in subsequent rounds of EU policymaking. For this reason, it is necessary to supplement traditional explanations of Europeanization, which centre on the question of how EU policy inputs are translated into domestic policy, with theories that explain the long-term effects of policy adoption and the generation of equilibria that are resistant over time. This is not to say that Europeanization research has not considered the temporal dimension of policy change. Some authors have explicitly made reference to the notions of ‘time, timing and tempo’ for the analysis of Europeanization (Bulmer 2007, 56; Goetz and Meyer-Sahling 2009), while others have defined Europeanization as a “*process consisting of complex sequences and time patterns*” (Radaelli 2004, 10). There is however ground to explore further the longitudinal dimension of the phenomenon and to be more specific about the mechanism through which these sequences and time patterns operate. There are in fact two long-term effects that deserve explanation. The first relates to policy evolution within the same area of policy, meaning vertical (within-policy) and longitudinal (long-term) policy effects. The second refers to the possible collision or incompatibilities among polices, i.e. horizontal (across policies) and longitudinal. In sum, the theoretical goal is, by extending the concept of Europeanization without stretching it (Radaelli, 2003, 28–34), to provide an explanation of Europeanization as structural changes occurring over a longer time horizon and its effects on actors’ constellation in relation to subsequent rounds of EU policymaking. Recent contributions to the Europeanization literature have highlighted the ‘circular’ character of Europeanization and how it feeds back into European integration (Coman, Kostera, and Tomini 2014; Kohler-koch 2006, 39; Ladrech 2014; Mathieu 2016; Saurugger 2014). When confronted with high adaptational pressure,

Member States can in fact respond by attempting at changing the source of pressure via EU negotiations rather than changing themselves (Quaglia and Radaelli 2007). Therefore, demonstrating that adaptational pressure, where it existed, has wiped out over time needs a theoretical explanation as much as the explanation of why, despite initial high levels of adaptational pressure, domestic policies are changed. Institutional theories of policy change and stability can help shedding light on this phenomenon.

### 3.1.1. Europeanization as Policy Adoption

Before moving at the analysis of the long-term effects of policy stability and change, the next sections will expose the concept of Europeanization and what mechanisms have been identified for the adoption of EU policies (or EU inputs in general).

#### 3.1.1.1. Definitional issues

Europeanization is here intended according to one of the most influential definitions of the phenomenon, which considers it as a “*process of a) construction, b) diffusion and c) institutionalization of formal and informal rules, procedures, policy paradigms, styles, ‘ways of doing things’ and shared beliefs and norms which are first defined in the EU policy process and then incorporated in the logical of domestic discourse, political structures and public policies*” (Radaelli 2003, 30). There are three possible causal flows in the ways Europeanization creates pressure for Member States to adapt (Bulmer and Radaelli 2004, 8). In the top-down version, the relation between the EU and its states is vertical and hierarchical, meaning that a specific template exercises coercive pressure on domestic authorities who are forced to adopt it, as in the case of positive integration. The other two versions are horizontal, although one is also hierarchical and the other not. Negative integration, based on legally binding rules which prescribe what domestic actors, public or private must not do (i.e. interfere with market competition), is an example of the former. In its lighter and more indirect version, Europeanization means horizontal pressure to learn or to facilitate actors’ coordination on variably defined goals, and it is usually deprived of legally binding measures. This last type of Europeanization pressure is usually associated with bottom-up mechanisms of change, meaning that are domestic actors that mobilize to use the opportunities, sometimes creatively constructed and assembled, rather than the constraints, coming from the EU to achieve domestic goals. In that sense, Europeanization is said to provide opportunities for domestic ‘usage’ of EU inputs (Jacquot and Woll 2003). Finally, the

measurement of change deriving from Europeanization is conceptualized according to four different categories: absorption or accommodation correspond to cases of limited, peripheral domestic change while at the two extremes of the scale, one can expect inertia or retrenchment (i.e. a rejection of pressure the first and negative change the latter) or transformation (i.e. acceptance of the need, obligation or convenience to make radical change) (Börzel 2005, 60).

### 3.1.1.2. Mechanisms of Europeanization

Traditional Europeanization models are based on the explanatory value of the concept of ‘misfit’ between EU requirements and domestic institutions and pre-existing policies (Börzel 2005; Börzel and Risse 2003; Green Cowles, Caporaso, and Risse-Kappen 2001). According to the misfit model, the ‘goodness of fit’ between EU inputs and domestic policies is a necessary condition for domestic change, as only if a Member State faces adaptational pressure there is in fact a need for change, otherwise only minimum changes are needed, which is a theoretically irrelevant occurrence. The misfit model is rooted in new institutionalism theories that allows to make prediction about the level of resistance met at the domestic level and also the possible paths of adaptation (Bulmer 2007, 50–53; Hall and Taylor 1996). As such, the theoretical toolbox has relied on the use of insights from historical institutionalism to make an initial ‘screening’ and predictions about the likelihood of change depending on the misfit between path-dependent and sticky institutions and EU requirements. According to the misfit model, relevant instances of change could be expected only in cases of moderate misfit, while instances of high misfit should lead to only limited, cosmetic change as the stickiness of domestic institutional and policy settings are deemed to prevail. In cases of moderate misfit then, the magnitude and direction of the potential change can be explained by either rational or sociological institutional theory or by organizational theory, all of them pointing to necessary but not sufficient conditions for domestic change. All these models rest on the existence of favourable values in the intermediate domestic variables that mediate EU pressure, although they differ in what mechanisms are relevant to count as intermediate variables.

In the rational choice version of Europeanization models based on the logic of consequentialism (Hératier 2001a; Knill and Lehmkuhl 2002), intermediate variables are usually based on actor-centred institutionalism and point to the shift of material resources in

the domestic opportunity structure in favour of potential reform coalitions as the necessary mechanism of change. The models usually refer to structural variables as a first explanatory step, such as the number of veto points in the institutional system or whether EU institutions themselves can play a supporting formal role. The two variables can be coexisting, as for example when, in an institutional setting with a high and/or entrenched number of veto points, the exercise of autonomous supranational powers can suddenly lead to their suppression. The second step investigates whether the domestic opportunity structure features constellations of actors that allow a reform coalition, whenever it exists, to make a strategic use of the redistribution of resources caused by the EU inputs. Such explanation is generally assumed to work for both positive and negative integration, although the goodness of fit is considered to have more explanatory power in relation to positive integration, because it is immediately clear what is to be done and what resources become available or are absent. In cases of negative integration it is regulatory competition that determines the level of misfit as change is stimulated by performance-based comparison with other models that are reputed, by the results achieved, to have better adapted to the changed context caused by negative integration (Knill and Lehmkuhl 2002; Knill and Lenschow 2005). Interestingly, the actors involved in the process of change are differently motivated at different stages of the process. Bureaucrats are expected to play an initially passive role, due to the large degree of autonomy they usually enjoy, to defend the persistence of the existing model, as they do not perceive the costs of failure. Political actors instead, which might be initially disinterested in the dynamic and direction of change, are made alert by suboptimal outcomes when they pass a potentially damaging threshold of electoral saliency, reducing bureaucratic autonomy as a consequence and facilitating change (Knill and Lenschow 1998). It goes without saying that paradigmatic change (Hall 1993) can also come from purely domestic reasons and only indirectly facilitate the process of Europeanization, which was not neither the cause nor the express object of the domestic shift. However, rational choice models have criticized the general validity of the misfit hypothesis as a necessary condition for change. Misfit is therefore considered an excessively structural explanation and it is instead agency what explains the timing and the degree of change. Misfit, accordingly, would be a spurious variable, while the only relevant explanatory factor are implementers' preferences (Mastenbroek and Kaeding 2006). Accordingly, the institutional structural variable is given a role only to the extent that empowers actors with preferences that oppose

Europeanization to prevent change or, inversely, to allow change once an actor with a pro-Europeanization preference come to replace the previous opposing actor.

Sociological models emphasize instead the logic of appropriateness that characterises actors within their institutional settings (March and Olsen 1989, 2004). Accordingly, individuals are not seen as moved by utilitarian calculations but rather by what it is deemed appropriate in the highly institutionalized environment in which they act, made by structures of rule, routines, standard operating procedures, trust, meanings, reciprocity and learning embodying historical experiences (March and Olsen 1989, 38). Consequently, sociological institutional theories investigate the impact caused by EU inputs on cognitive and normative variables in the domestic opportunity structures and the extent to which these are fitting, or made to fit, with the prevalent understanding of the domestically defined notions of appropriateness. EU inputs are also conceptualized as resources not of a material type, but rather normative and/or ideational that norm entrepreneurs, such as advocacy coalitions (Sabatier 1998) use in their favour by interacting with domestic logics of appropriateness. Therefore, the latter serves as a filter for EU ideas, norms and practices which are considering as misfitting if they do not resonate with it (Checkel 1999, 2001). Such structural filter can therefore only be overcome if EU inputs empower actors, such as particularly powerful norm entrepreneurs, to translate foreign ideas and norms into something acceptable and/or legitimate for domestic audiences, be them bureaucratic, political, or public opinion. Depending on the concrete dynamic used by entrepreneurs, this process can be conceived as a one of socialization involving the framing of domestic beliefs and expectations (Knill and Lehmkuhl 2002, 261), communicative governance (Knill and Lenschow 2005, 599) or even discourse (V. A. Schmidt and Radaelli 2004). Institutions can also play an intermediary role in the sociological sense, as they can serve as informal platform for debating, arguing, and reaching consensus. Therefore, consensus-seeking domestic institutions are expected to be more conducive to change than adversarial ones.

A final mechanisms of change, which share similarities with the sociological one, considers institutions as organizations that adapt to the external environment according to perceived pressures that make the maintenance of existing organizational structures inconvenient and change as a source of legitimacy (Powell and DiMaggio 1991; Radaelli 2000). Legitimacy means adopting an organizational model that is perceived as more appropriate and involves

three potential forms of adaptation to pressure coming from the external environment that invariably lead to forms of isomorphic change (i.e. change in a direction very close to the organization that is considered as embodying legitimacy). One is coercion, meaning that an organization tends to resemble the one on whose resources is dependent (however, in the case of the EU this circumstance is limited as the EU provides little resources and coercion is better treated by the other mechanisms revised). The second form of change is via mimetism, which is a form of adaptation triggered when an organization feels uncertain in, for example, a novel situation and resorts to the imitation or emulation of another organization that is perceived as successful. Finally, normative pressure can come from professional legitimacy, which involves shared cognitive and normative frames among, usually, highly professionalized bureaucrats.

### 3.1.2. Long-Term Europeanization Mechanism: In Search of Stable Equilibria

The Europeanization literature has produced a rich theoretical toolbox to explain policy change following the initial impact of EU inputs. However, the hypothesis of this dissertation suggests the stretching of the analysis further and consider what happens in the post-Europeanization stage or, better said, how Europeanization is sustained in the long-term. It is well possible that the domestic change achieved at the moment of Europeanization is a long lasting policy equilibrium, but there are good reasons to subject this null hypothesis to scrutiny and explore the alternative hypothesis that durable policy equilibria are reached after processes other than those conducive to the initial adaptative reaction to Europeanization pressure. Also, some of the mechanisms of adjustment proposed by the Europeanization literature can be further refined to capture more explicit dynamics through which adaptation occurs in the long run. The starting point for long-term is to consider under what conditions stable equilibria are achieved. There are two possible solution to this question, one based on rational choice theory and the other on historical institutionalism. In the following sections, the two paths will be explored.

#### 3.1.2.1. Self-Enforcing Equilibria and Rational Choice

Rational choice suggests that an equilibrium is reached when two conditions are given. First, the equilibrium is compatible with the intentions and the interests of the designer, which is a functional condition. Second, there must not be incentives or chances for any actors to try to change the equilibrium. Different strands of rational choice however differ on how such

conditions are reached, depending on the degree of cooperation or conflict existing among actors at the moment of institutional design. Institutions, in all the variants of rational choice, are sets of rules and norms that provide incentives for action but also constrain behaviour and the outcomes of the institution are the sum of both. Institutions also serve to provide stability in decision-making, as to avoid the problem of cycling, i.e. the inconsistent projection of preferences on outcomes. In that sense, institutions set rules about how the process of decision making is organized, rather than a substantive outcome itself (Shepsle 1989). In relation to policy issues however, it is better to focus on the substantive outcomes rather than on the decision-making process. Three versions of rational choice can provide an answer to this question. If the problem is to solve a collective action problem and to avoid the free-rider problem, institutions are cooperative social contracts that prevent or sanction opportunistic behaviour. If the institution is seen to comply with certain criteria (fiscal equivalence or contributive equity, redistributive equity, accountability, conformance to general morality and adaptability to ever-changing environments), it is likely that it is in a state of self-enforcing equilibrium (Ostrom 2007). A less cooperative version of rational choice draws instead from power-distributional accounts of institutional origin (Knight 1992, 1995; Moe 1990, 2005). Institutions emerge from the exercise of power in asymmetric bargaining where one or more actors are endowed with more resources, authority, or power than others. The central explanatory variable is therefore the fall-back position of actors in case of no agreement, whereby actors that stand to lose the less from a failure to agree are also the ones that can better manage risk and extract more benefits from an eventual agreement (Knight 1995, 108). New institutional economics instead focuses on the efficiency of institutions and particularly in their capacity to minimize transaction costs. These models can be particularly helpful to capture the complex decision-making choices that governments face regarding the evolving relation between markets and public intervention. This is especially relevant in the context of rapid technological change causing a shift in relative prices among different technologies and in the presence of considerable risks from suboptimal coordination and distributive choices. Accordingly (Williamson 1998, 2000), the institutional forms of the governance of economic organization (among and within firms as well as between firms and public bodies) can be predicted on three crucial variables defining the level and the nature of the transaction costs involved in exchange relations among parties: the frequency of the interactions, the uncertainties that can affect such interactions and the level of asset

specificity of the technology at the centre of this interaction (Williamson 1998, 36). Available governance options vary along a continuum from ‘unassisted’, ideal market to centralization in a public bureau. Ideal markets are characterised by low transaction costs, i.e. low asset specificity and low levels of opportunism requiring few legal safeguards against the negative consequences of incomplete contracts disciplining market exchange relations. On the contrary, when both variables, asset specificity and opportunism, have high levels and market transaction costs are therefore high, centralization in public bureau would be the most efficient solution, but only if this is still convenient when the inefficiencies of government transaction costs are discounted (*ibid.*, 47). In between these two extremes, various options are given, including hybrid markets with strong contractual specifications, depending on the increasing value of asset specificity and the contractual safeguard needed to guarantee that these valuable relationships are not endangered by the risk of opportunism. As such, the ‘recipe’ that institutional designers should derive by this model is: “*try markets, try hybrids, try firms, try regulation, and resort to public bureaus only when all else fails (comparatively!)*” (*ibid.*, p. 47). Finally, efficient institutions can be conceptualized as those that avoid lock-in into suboptimal outcomes and show instead adaptive efficiency to changes in relative prices and preferences (also, but not necessarily, as a result of technological change and entrepreneurship) (North 1990). Irrespective of the initial efficiency of the institutions, what is important is the malleability to changes originating from the external environment (or from endogenous change if it is the same institution to stimulate the efforts to push out the frontier of technological possibilities). In that sense, the entrepreneur and those advantaged by changes in relative prices and/or tastes must find the way to renegotiate the existing equilibrium in their favour (and also to maximize collective welfare, at least in the long-run), which is however a question of how sticky is the ‘institutional matrix’ of both informal and formal rules. Accordingly, (*ibid.*, 86-88) the amount of change in relative prices and tastes will determine the amount of resources that those advantaged by a change in the institutional setting will devote to make it possible. If the institutional matrix shows high path-dependence, then change is not immediate but would follow an incremental pattern of erosion of formal and informal norms until change becomes possible and a new self-enforcing equilibrium is reached (although, it is also possible that a suboptimal outcome will be perpetually reproduced and only upset by discontinuous change caused by internal collapse or exogenous change)

### 3.1.3. Self-Reinforcing and Self-Undermining Equilibria: Historical Institutionalism

Rational choice models, except for the last model presented, either assume that all actors will immediately recognize the benefits associated with a given equilibrium or have the power to impose a permanently inefficient equilibrium. However, in the context of Europeanization this is a hypothesis that needs to be tested. Even if policies are adopted, and especially if they entail more than simple absorption, there is nothing that ensures their continuity in the long run. This is particularly true for positive integration, and even more so when the benefits are diffused and distant in the future while the costs concentrated and immediately visible. As it has been mentioned in the previous chapter, there is ample ground for actors to contest positive integration, before and after its adoption (what is expected by the joint-decision trap and by what has been termed the reversed joint-decision trap respectively). It has been noted how policies that are adopted in the general interest run the risk of being overturned in the post-reform stage for the reversal of the favourable factors that led to its adoption (Patashnik 2008, 22–28). To begin with, often reforms are adopted when the issue attention cycle is high and political symbolism becomes a powerful instrument for reform. But once adopted, the spotlight of attention is bound to move somewhere else. Second, unless sustained by a powerful device for commitment, time inconsistency problems might arise, especially if there is a change in government and the goal is not shared by a new ruling majority. In the long run then, politicians and bureaucrats might have the necessary amount of leeway to make incremental changes that thwart implementation reform. So, what explains that positive integration policies, once adopted, will endure, given the fact that it is difficult to think that they are adopted based on a self-enforcing agreement? Also, in the case of negative integration, according to which exact mechanism does regulatory competition work? What is the moment at which there is evidence that a policy is suboptimal beyond the threshold of domestically acceptability and why should it lead to one reform rather than another? All these questions call for exploring beyond the snapshot analysis of rational choice and explore more in details the temporal dynamics that allow policies to take root even though they were initially adopted against dominant interests groups and the dynamics that lead to the demise of domestic policies cherished by domestic constituencies or, again dominant interest groups and veto players and that prevent Europeanization. It is therefore at theories that explain long-term change that the theoretical framework now turns.

### 3.1.3.1. Positive Feedbacks

The answer to the first question is that, once established through the political process, policies change the context in which they had been adopted or that ‘new policies create new politics’<sup>29</sup>. Positive feedback is the underlying mechanism for institutional reproduction of certain policies that survive even if the original self-sustaining agreement does not any more corresponds to the intentions of their designer (and, possibly, their original beneficiaries). It is also an explanation for the survival over time of policies that might have been irrelevant enough at the moment of their adoption as not to raise concerns by those that would subsequently object to their continuation or that would have initially objected the establishment, had they known the extent of their future consequences. The very broad definition of policy feedback then is that policies enacted at  $t_0$  must be able to affect the modalities in which it is treated at  $t_1$ . Again, for the concept to be different from simple unvarying functionalism, it must be demonstrated that either the policy enjoys the support of more actors than at the moment of its establishment (a sort of ‘bandwagoning’ effect) or that potential opponents that were not present at the moment of policy establishment and that could have blocked it at that time, have lost the capacity to do so at a later time.

The concept of positive feedback originates in the literature on technological evolution and adoption to explain why some alternatives prevail over others even though they are not necessarily superior. The language of positive feedback is therefore similar to the economic concept of ‘increasing returns’. There are four characteristics to this process, according to its original formulation in the technology-related literature (Arthur 1994; Pierson 2004, 18). Events might be unpredictable and random, and it is not possible, at the beginning of the process, to guess what is the likely outcome at the end of the process. The more far out in time the process goes, the more difficult it is to reverse it and certain paths become locked-in. Under these circumstances there is ‘random walk’, which means there is no ergodicity and the chances that an event might occur again, or that certain events that occur in a sequence, occur by chance, are low. Finally, there is no certainty that the positive feedback will accrue to (or only to) efficient solutions and it is instead possible to find inefficiency at the end of the

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<sup>29</sup> These concepts can be applied both to institutions and to public policies as the latter show features, organizational and political, that are similar to the former (Pierson 2006)

process, as more efficient alternatives that were possible in the past are now ruled out by the entrenchment of the now dominant solution.

While these features have been retained in most of the modern theoretical accounts of policy feedback, the intellectual origins of the concept in political science are however not directly linked to this specific understanding (Béland 2010). Going back in time, policy feedback has been intended as policy learning by bureaucrats and policy experts (Heclo 1974) or state-building processes, as national bureaucratic capacities grew up around the management of specific policies which in turn entrenched them creating bureaucratic, besides beneficiaries, vested interest constituencies (Skocpol 1994). The more complete conceptualization of positive feedback was provided by Pierson (Pierson 1993) which identified three areas in which attention must be focused to detect and measure policy feedbacks. The distinction is between material resources and incentives (i.e., interests), and cognitive aspects (*ibid.*, 597). Positive feedbacks refer both to functional adaptation on a specific policy and distributional interests in its maintenance. Interests groups are the most obvious beneficiaries of policies that provide resources and interest group formation does not always precede a policy, but it is also the consequence of the flow of resources that are directed to a specific target group, which, in turn, generate an incentive to strengthen the organizational structure with a view of defending the turf from attempts at cutbacks. From this perspective, it is interesting to notice as positive feedbacks can serve as mechanisms that bring to light latent interests and self-consciousness and thus help overcoming collective action problems (Thelen 1999, 351). Moreover, interest groups get more access into the decision-making process and state bureaucracies might even become dependent, in a paradoxical reverse of causality, on specific resources detained by the beneficiaries of groups, such as skills and information, for the effective management of the policy, a sort of unplanned regulatory capture. But strengthening interest groups that are favourable to a policy can also go hand in hand with the weakening of the reform opposers (Patashnik 2008, 30). Policies that show positive feedback can have the equally powerful effect of dissolving the cohesion of opposers and increase their costs of mobilization. The enfeebled interest groups can see decreasing returns in their lobbying efforts while their public image suffers (a stigmatization effect) if they are seen to run against a policy which is increasingly popular. Second, state capacities can also be affected, if they require specific skills that cannot be obtained by simply tapping into other

areas of government or bureaucracy. As a rule, the more specific and specialized a policy, the higher the level of policy feedback (Pierson 1993, 605). As for resource and material effects on mass public, the effects of policy feedback are relevant if they have pervasive consequences on crucial life-choices and create a strong engagement on the part of citizens. The most relevant example, and one of the most studied, is welfare policies. In sum, the resource and incentive effects of policy feedbacks become difficult to reverse if policy generates large fixed-costs (which would become sunk costs if the policy is abandoned), learning and coordination effects (which increase the functionality of a policy by creating specific skills and network relations that would also be lost in a switch to an alternative), and adaptive expectations (the tendency to pick an option that is more likely to be chosen by others as not to find itself on the wrong side of the road) (*ibid.*, 607). The cognitive effects of policy feedback are instead linked to the role of public policy in the production and diffusion of knowledge about the policy itself and the effect it has on mass public. Accordingly, two variables are relevant for policies to generate a mass public policy feedback, namely its visibility and traceability and both can be manipulated by policy design (*ibid.*, 621). Depending on the expected positive or negative impact on the public, politicians can design policies to be more or less visible and traceable. First, for a policy to be visible, the public must be aware of receiving a specific benefit or suffer a targeted loss. From this perspective, policies that have diffuse and intermittent benefits are less visible and therefore create less feedback than those that distribute benefits to a concentrated group and are delivered in one single endowment. Second, mass public must be able to trace back the effects of policy to specific politicians if they are to reward or punish them. One way to confuse or explicit responsibility is by stretching or shortening the causal and temporal chain of policies, which means that policies are generally designed to have short-term benefits and long-term costs so that policymakers are able to claim credit at the beginning and avoid blame later on (*ibid.*, 622). Recent developments in the policy feedback literature have stressed the growing importance of positive feedbacks in strengthening support by fostering civic engagement and positive images of the recipients of policy (Campbell 2012; Mettler 2002).

Finally, while attention has recently shifted to the question of how positive feedbacks can be intentionally designed into the initial feature of policy instead of being an accidental by-product of past decisions or, in the case of general public interest policies with diffuse effects,

the more or less fortunate chance that those that benefit will come to realize their stakes and resist opposition by more powerful organized interests (Jordan and Matt 2014). Accordingly, there are design features that seem to be able to achieve this goal by creating policy ‘adhesion mechanisms’ that attain both to the goals and to the instruments of policy. The ex-ante establishment of long-term goals delegated to independent agencies are considered more credible and apt at shaping expectations. When credible goals are available, specific instruments can encourage the target group to make the corresponding investments (and therefore get committed into sunk costs) while appropriate monitoring system can discourage opportunistic behaviour. At the same time, both instruments and goals designed to be sticky also run the risk of becoming too rigid, which in turn calls for flexibility mechanisms that strike a balance between preserving credibility and enhancing effectiveness in terms of capacity to adapt to new exogenous changes such as scientific, technological and economic developments.

### 3.1.3.2. Positive Feedbacks and Critical Junctures

One last question is relative to the identification of the moment when a positive feedback starts or ends and what parts of a precedent positive feedback are abandoned and what are retained at the moment of the switch from one path-dependent process to another. Theories of positive feedbacks generally rest on the idea that an equilibrium is difficult to reverse unless an exogenous shock interrupts the mechanism of reproduction on which the production of benefits rests. These exogenous shocks are called critical junctures (R. B. Collier and Collier 1991; Pierson 2004, 51) which are often used in comparative studies of political or policy system to explain why small initial differences at the moment when a critical juncture occurs determines permanent differences across cases as the type of positive feedback is different. This is nicely captured by the sentence that ‘when things happen determine how they happen’ (Pierson 2000, 73). The concept of critical juncture however has been subject to considerable controversy as it seems to imply a profound difference between the prevalence of structure during the path-dependent stability generated by positive feedbacks and the burst of agency at critical juncture (Katznelson 2003) where contingency seems impossible to theorize (Thelen 1999). For this reason, the study of critical junctures has been subject to attempts at better defining the politics of institutional formation at this branching points, highlighting a number of theoretical variables that help to systematize what can

happen at those moments (Capoccia 2015; Capoccia and Keleman 2007). A theoretically informed analysis of critical junctures requires the careful distinction between the structural antecedents that might restrict the set of options available to the actors that try to influence, through their agency, the new course of policy development and the specificities of the policy of uncertainty that often characterises the moment of contingency in which a decision must be made (also considering the cases of missed-change as equally theoretically relevant). In relation to the structural antecedents, it has been suggested that regression in the causal chain helps to highlight past causes that combine with those present at the moment of contingency to produce the outcome of interest (Slater and Simmons 2010). At the same time, politics under conditions of uncertainty is different than structured politics and increases the chances that agency will have relevance over structural factors (Capoccia 2015, 160–66). First, policy entrepreneurs have more leeway in engaging in creative assembling of coalitions that favour the type of preferred policy change (Kingdon 2005). In this case, it is important to ascertain the loosening effects of the contingent event on the organizational landscape and the extent to which it reduces the exercise of structural power or decision-making veto capabilities. Second, structural macrosocial and economic changes might also force or facilitate the strategic interactions between new and old groups and the construction of new alliances that promote policies that do not reflect the preferences of either group, i.e. generate genuine novelty. Finally, from a normative and constructive perspective when contingencies come under the form of crisis, the loosening effect on structural factors is of a higher magnitude and what is to be expected is agency in the form of the ‘politics of ideas’ (Blyth 2002). Under these conditions, coalitions are formed by the actions of agents that are best at manipulating preferences in times of uncertainty by promoting a specific causal narrative about the nature of the crisis and the necessary and unavoidable solution to it.

#### 3.1.3.3. Negative Feedbacks

There has been considerable progress in the literature in theorizing the countervailing effects of positive feedbacks. It has been demonstrated that, unsurprisingly, policies can be self-undermining, following the same endogenous logic that ‘effects become the causes’ in policy dynamic (A. M. Jacobs and Weaver 2015; Weaver 2010). In each policy regime, positive and negative feedbacks live side by side and it is an empirical question to see which one will prevail over time. For a policy regime to survive over a certain period of time, its negative

consequences must be initially ‘bearable’ and become disruptive only over the long term (Weaver 2010, 139–40). The balance between opposing effects of policy is not however the only relevant variable. The incentives for moving away from what looms as a suboptimal equilibrium also depend on the availability of options for incremental reforms (which is not necessarily the same as the return to an efficient path via gradual learning and enhancing proposed by rational choice but rather “*patches that make the negative effects more bearable*” (*ibid.*, p. 142)). Negative feedbacks are the result of two, temporally sequenced and overlapping, processes. First, the self-undermining mechanisms in which the negative effects become visible to an ever-larger constituency<sup>30</sup>, including organized groups suffering from material losses and public opinion affected in their cognitive judgment about the desirability of regime continuation. Second, the options for reform, as alternatives are needed to replace the increasingly discredited regime (A. M. Jacobs and Weaver 2015, 445). In relation to the first aspect, while the aggravated organized groups are a necessary element of the reform coalition, public opinion is a necessary element of an electoral coalition. In other words, governments calculations are made with an eye to both cost and benefits of entering an exchange relation with powerful societal organized groups and those flowing from the electoral payback of their decisions. There is a crucial link between the change in mass public opinion cognition and the occurrence of a ‘focusing event’, such a crisis. For public opinion, the negative feedback of an existing regime (in which it is likely that they had stakes) must become salient, and saliency requires a certain degree of sectoral and temporal concentration of costs as opposed to their dispersion. The difference with theories that predict radical change only at critical junctures (Cashore and Howlett 2007; True, Baumgartner, and Jones 2007), be them exogenous and unpredictable events such a crisis, is that focusing events are not just the result of an exogenous shock. They also have their roots in endogenous dynamics that become politically salient at a specific time and have the effect of impacting and therefore mobilizing a tangible and electorally significative part of public opinion (*ibid.*, p. 448).

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<sup>30</sup> Including, but not necessarily, its original beneficiaries. This distinction is important in relation to the controversy about the role of ‘losers’ in countervailing positive feedback mechanisms. While the theories of gradual change attribute a crucial role to the political contestation of the losers, arguments of positive feedback are more sceptical about the possibility that they would survive over time given the self-reinforcing mechanism of resource and power accumulation in the hands of the initial ‘winners’ (Pierson, 2004, p. 36, p. 139). Moreover, positive feedbacks also predict that mechanisms of adaptive expectations, learning and coordination effects will lead to a decrease in the number of opponents as former losers will bandwagon on the prevailing regime. “Picking the wrong horse may have very high costs” (*Ibid.*, p. 33)

For negative feedbacks to materialize, policies must create unanticipated losses. Losses that could have been anticipated are in fact part of the struggle over policy establishment and might be, to a certain extent, also be built into the original policy design, as noted above. Unanticipated losses are to be expected when policies are built to appease different constituencies and can thus contain too much complexity escaping control as well as overlooked incoherence. Second, such incoherence can also be due to new policies that are usually layered on other existing policies that, intentionally or unintentionally, create frictions over time, a point that will be treated more extensively in the next section. Suffice it to say here that such frictions create slowly accumulating losses that might become salient at one point in time, especially if the surrounding economic context and therefore the levels of social acceptance are also changing. Finally, it has been noted as policymakers have incentives to blur the traceability of policies by frontloading benefits and backloading losses, a form of time-inconsistency. But backloading does not mean that losses will disappear, rather that they will materialize later in time.

However, policy change depends also on the constraints caused by the material benefits that such policies create for specific groups. In other words, negative feedbacks do not necessarily lead to policy change but must be set against the positive feedbacks that accrue to a subset of actors that would be likely to oppose proposed changes. Especially if policy change has the effect of negatively affecting the mass public, three interlinked cognitive elements must concur to make change possible or likely. First, the amount of the losses must be big enough to engender a negative bias in relation to policy continuation compared to policy change. In that sense, theoretical approaches that have focused on the politics of policy dismantling (Bauer and Knill 2012, 37–38) have noted that there are two possible scenarios. In the first, the political benefits of dismantling exceed the costs, in which case politicians can adopt a strategy that make their action visible as to be able to claim credit for their action and transform ‘vice into virtue’. In the second scenario, politicians are forced to choose among two evils, and the losses of policy continuation must be perceived as greater than those of policy discontinuation, which induces strategies of blame avoidance and strategies of policy dismantling that might be less visible than in the previous case. In both cases though, reformers must actively frame the negative bias if mass public is unable to arrive to the same conclusion of unsustainable policy continuation by themselves. If elites act without previous

framing, they run into the risk of electorate backlash that would thwart reform. Finally, for such framing to be possible, it must be made salient or it must be salient for the mass public and this happens if they are concentrated in time (as opposed to a slow accumulation of relatively unnoticeable losses), on a particular group (as opposed to diffused losses) or both.

Creating awareness and support for policy change is however the necessary first step but the sufficient condition for change is the availability of an alternative option regarded as an effective solution to the problem at hand and that it is also considered politically acceptable. Therefore, contrary to the logic of positive feedbacks where the number of possible alternative options is progressively reduced by the entrenchment of the dominant one, negative feedbacks encourage the search for solutions in ways that expand the menu available to policy makers. The stage of search can be influenced by demonstrated positive experiences in other countries, a common occurrence in the context of the EU.

### 3.1.4. Incremental Transformations Inducing Equilibrium: Layering, Conversion and Drift

Europeanization is often focused on a specific policy area and the dynamics across sectors can be overlooked. What are the consequences of one Europeanization process over another? What if two Europeanization processes collide producing unintended negative consequences? Or, conversely, how can two Europeanization processes combine and produce unintended positive outcomes for some actors but negative for others? Is it possible to reconcile, ex-post, the two processes? Under these circumstances, theories of gradual, incremental change can shed light on the conflicting or mutually reinforcing trajectories that different Europeanization processes incur over time. This is particularly relevant in the discussion of the politics and policy of the electricity sector where positive and negative integration have been enmeshed in ways that have created unintended consequences and were the initial construction of the policy mix has been more the result of a patchwork of instruments whose interactions was not carefully designed. Consequently, different private actors have been engaged in activities that have ultimately collided while public authorities have lately realized the consequences of their adhesion to instruments that would have fundamentally restricted their discretion. The mechanisms of layering, conversion and drifting will help in the explanation of collision and ex-post reconciliation of these different, and sequenced, processes of Europeanization.

There are two preliminary considerations to be made. First, in the case of positive integration, there is an initial need to carve out a space where niches of technological innovation are allowed to grow in a protected environment that obeys to a different logic than the prevailing socio-technical regime (Geels 2004), otherwise innovation driven by incumbents would be incremental and would not allow for the emergence of radically disruptive technologies. A socio-technical regime is defined as the set of rules that guide the actions and the understandings of actors in the enactment of a specific activity (Geels 2005, 450) To achieve this goal, the mechanism of ‘layering’ is crucially important. However, there is a point at which the pressure that niche innovation exercise on the socio-technical regime creates inconsistencies and, in the long run, it is realized that the portfolio of policy instruments is not always made according to the principles of consistency, coherence and congruence (Howlett and Rayner 2013; Orren and Skowronek 1994) or that what worked at the initial stage of a process of technological transformation collides with preestablished rules, for example the rules of negative integration. This is likely when niche technologies become competitive and breakthrough as a mainstream option. The mechanism of ‘conversion’ then can help in reconciling such inconsistencies by allowing a group of actors not only to appropriate the benefits of innovation and adapt them to the prevailing rules but also to reengineer the original rules to make them fit with the emerging innovation, although the path of socio-technical change will be altered as a consequence (in the sense of becoming less disruptive and innovative) (Geels and Schot 2007). Finally, the residual opposition of actors that had not predicted the impact on their competences can be overcome by the use of hierarchical powers that will force them to accept the loss of steering powers, an instance that can be explained by the mechanisms of ‘drift’. In the following, these three mechanisms will be better explained.

According to the model of incremental transformation, policies must be conceptualized as “*distributional arrangements laden with power implications*” (Mahoney and Thelen 2010, 8), policy stability becomes a political problem, and its mechanism of reproduction must be sustained politically (Hall and Thelen 2009; Thelen 1999, 396), with political coalitions that actualize themselves in a changing environment. Policies are established on compromises or ‘contested settlements’ resting on the ability and willingness of the supporting coalition to

hold together in a continuous process of mobilization and countermobilization (Mahoney and Thelen 2010, 8–9).

The typology developed to operationalize these modalities of transformative, incremental change of a targeted policy is derived from crossing two variables that define the institutional opportunity structure (*ibid.*, 19). At a broader level of analysis, the political context determines the extent of veto power accorded to the status quo coalition. The political context then determines the possibility of enacting formal legislative changes or ‘penetrating’ the decision-making institutions. Veto power therefore determines the content and the contestability of a targeted policy from within. In this case, the status quo coalition can hold strong or weak veto power in relation to formal change in the rules of a policy. At a more specific policy level, the characteristics of the targeted policy define the scope for outsiders to challenge the existing rules through their contested interpretation and enforcement. Therefore, the rules of the targeted institution can be the object of high or low discretion in relation to the way they are implemented in practice. In this case, change can be obtained via external interventions (i.e. from outside the targeted policy) that change the day-to-day practice of implementation. By crossing these two variables (political context and the strength of veto power and the enforcement context and the degree of discretion) it is possible to understand whether coalitions that oppose the status quo have an incentive to work from the outside or the inside the targeted policy (Hacker 2004; Pierson 2004, 156).

As a result, four dynamics of change and annexed strategies are identified. Under the logic of '*displacement*' the high veto power of incumbents and the low level of discretion accorded to challengers, provides incentives for the latter to promote the removal of existing rules working from the outside of policy. New institutions therefore come to compete with existing ones and the underlying mechanism of change is one of '*defection*' (Streeck and Thelen 2005, 20) whereby the new competing system of rules progressively attracts more ‘users’ than the previously dominant one: in the end, the deviant behaviour would become the new normal and the old institutions will be supplanted by the more successful one(s). When veto powers can instead hold back formal changes and deviant interpretations of the existing rules but cannot prevent the introduction of amendments, additions or revisions to existing rules, the logic of change is one of '*layering*'. The agents of change work this time from within the system instead of trying to reverse it with a frontal challenge. They try to change the policy

trajectory by establishing new behavioural incentives that incumbents cannot prevent, and often do not even initially notice, perceiving such modifications and additions as marginal and inoffensive. However, over time, the differential growth of the new ‘injected’ rules starts to have a corrosive effect on the stability of the established mechanism of reproduction in ways that make them deviate it from its originally intended path. Under the mechanism characterised by ‘*drift*’, veto players can prevent again formal change but cannot ensure the fulfilment of their goals because of the failure to update and adjust existing rules to changing environmental conditions. In this scenario, veto players are undermined by the limited, passive character of their formal prerogatives as they in fact need, and cannot secure, the active cooperation of other actors to ensure the maintenance of their preferred rules over time. Drift therefore rest on the paradoxical power of ‘non-decisions’ whereby challengers can obtain gains by simply preventing opposers to take the necessary correcting actions (Thelen, Pierson, and Hacker 2015) and passively promote the decay of a rule system they dislike. Contrary to the two previous dynamics, actors that cultivate drift do not need to put forward their own preferred system of rules, but they simply make it difficult or impossible for others to maintain theirs. Finally, under ‘*conversion*’, the chances of displacing the dominant coalition are higher than those of reinterpreting and changing rules. It is more likely that formal rules be maintained but become enacted by new actors in ways to redeploy them towards new goals, functions or purposes (Mahoney and Thelen 2010, 18; Thelen 2004). This implies both a reversal of the logic of power relation underpinning functionalist and path-dependent accounts of institutional stability. As opposed to functionalist predictions of continued correspondence between intentions and outcomes, new actors can change policies’ purposes to serve new functions, rather than the original actors making the policy work for their purposes. Also new actors adapt the policy to new purposes, rather than adapting themselves to its path-dependent character (Streeck and Thelen 2005, 26). Finally, conversion might help explain why policies can survive, at least in their formal appearance, even throughout those historical breakpoints that are generally predicted to bring their demise. The reason lie in the multiplicity of intentions that policies come to accumulate over their life-time, opening the doors to new (powerful) actors coalition (that is, different from the original designers), through a reshuffling and renegotiation of the coalitional base, to reconvert existing policies to a new form, role or function (Thelen 2004, 34–36). New actors

can accommodate themselves into an existing policy environment by making it work for themselves even in a radically new external environment.

### 3.2. Theorizing Europeanization Resulting in Domestic Conflict

This section will deal with the reasons and the mechanisms that engender and sustain domestic contestation and how they are translated into contestation at EU level and, eventually, revoked and turned into EU support. The theoretical and conceptual used shed light on the process of conflict in domestic preference formation. The rival hypotheses are that of functional conflict among interest groups and the strategic opportunism of politicisation to gain electoral paybacks. It is once more necessary to emphasize as the two hypotheses can be complementary in the sense that politicisation can be a strategy adopted on top of functional conflict. Functional conflict does not imply politicisation and politicisation does not imply functional conflict, but politicisation can, potentially, increase to have a functional conflict solved in its own favour while also score points in the political competition.

#### 3.2.1. Domestic Preference Formation: Cleavages in EU integration Theory

Before the politicisation turn, domestic preference formation has been the domain of EU integration theories. The only theory that has explicitly analysed and modelled what interest member states will defend in the EU bargaining stage and how the definition of domestic interest is defined is LI. The qualification of ‘liberal’ is in fact due to the criticism moved to former intergovernmental theories, inspired to realism, (Hoffmann 1966) that conceived of states as unitary actors moved by the defence of their interests, mostly based on security and structurally determined by their position in the international system (Moravcsik 1997). On the contrary, LI shifted the attention to issues of interdependence that go beyond security, more attuned to the type of integration taking place in the EU. Therefore, the EU is an organization devoted to achieving functional cooperation, but it is constrained by the domestic distributional consequences that cooperation entails. According to LI, functional cooperation engenders a distributive cleavage in society and the involved actors are, depending on the specific area of interest, producers’ groups and public interest groups. Each group is in fact set to gain or lose from the type of functional cooperation proposed at EU level and what is functional for one group (in the sense that it generates gains) is dysfunctional for another (because it generates losses). Interest groups express their preference, vie for influence on government and the government, based on its utility function which is, implicitly,

of an electoral nature, aggregate these preferences, establishing a negotiating position (Moravcsik 1993). In general, if the problem is related to international trade, the functional conflict is chiefly among producers, while, when the conflict also includes the provision of public goods, public interest groups join the contest and create a further constrain for the slack in government autonomy. Since the easy gains of trade liberalization have been already achieved, most contemporary issues involve a two-dimensional space, including both economic efficiency and public good provision. In general, the more certain the losses for a specific group and the more influence such group exercise on government, the less slack the government will have in EU bargaining. The amount of slack government enjoys is crucial for the efficiency of EU bargain, as it increases the negotiating space in terms of side-payments as well as the possibility of joining policies with long-term payoffs. The last point to make is that governments can cut themselves some slack from domestic constraining opposition via the seclusion of decision-making at the EU level, according to the logic of the ‘two-level game’ (*ibid.*, 514-517). Other theories of EU integration have not fundamentally disputed this distributive framing of domestic preference formation, the only difference being that, instead of being exogenous to the process of integration, as LI posits, they are, at least partially, endogenous, in two senses. First, certain interest groups can emancipate themselves from state intermediation and learn how to realize their interests by lobbying directly at the EU level (Leuffen, Rittberger, and Schimmelfennig 2013, 58). Second, integration changes the original interests of domestic groups, especially when the costs of backtracking in integration are perceived to be higher than following down the integration path, even though, had they known the consequences of the initial integration move, they would have probably decided not to integrate (Schimmelfennig 2015).

### 3.2.2. The EU as a Political System: Left-Right and Postfunctional Cleavage

EU integration theories have therefore implicitly assumed, because they have ignored it, that domestic cleavages in relation to integration were a new breed of conflict compared to the traditional societal cleavages based on class and political/party organization (Rokkan and Lipset 1967) and only centred on a single dimension, pro or anti-integration (Marks and Steenbergen 2004, 5). However, this one-dimensionality of domestic preference formation has become increasingly contested and integration has been progressively meshed into the realm of traditional (and new) societal and political cleavages. One of the first interpretation

of the relation between EU integration and traditional cleavages states that integration domestic conflict is in fact a bi-dimensional space. Opposition or support for EU integration is only one dimension while the other is the traditional Left-Right divide (Hix 1999). The EU would therefore be more of a normal political system than it had hitherto theorized and political actors, including public opinion, projected on the EU, now seen as an authoritative source of power with ‘political colour’, their political-ideological preferences, besides their desire for achieving functional goals (or rejecting dysfunctional ones) with distributive consequences, both domestic and international. In other words, political ideology matters (Aspinwall 2002). Integration theories had therefore failed to notice that the paradox of successful integration, in terms of the growing relevance of the EU in determining the socio-economic conditions of individuals and its standards of democratic accountability, had turned it into a salient domestic political (again, as opposed to functional-distributive) issue (*ibid.*, 73). The Left-Right dimension, moreover, can be further broke down into two different value dimensions. The first attains at the preference for the level of government intervention in the economy, and therefore runs along the continuum between intervention-free market and regulated capitalism. The second value dimension is instead concerned with the growing importance (or, better said, the coming back, since these issues were already salient in the 19<sup>th</sup> century) of the normative dimension of the libertarian expansion and protection of individual rights against the authoritarian control of the state. Based on this distinction, political science has started to map the position of different national parties and EU political families.

In its most recent turn, theorization of domestic preference formation has signalled how, of the three dimensions that shape domestic political conflict in relation to the extent of EU jurisdictional conflict (efficient management of interdependence, distributional consequences of international efficiency and the impact on questions of identity), the latter has become increasingly important and has moved from fringe opposition to the EU to a break on integration, or, using popular captions, ‘constraining dissensus’ as opposed to the previous ‘permissive consensus’ in the age of EU task expansion (Hooghe and Marks 2009a, 5). Postfunctionalism thus echoes only in part the arguments of the Left-Right divide that public opinion is now mobilized in pushing governments towards adopting certain positions in regard to EU affairs, as it becomes more domestically salient and citizens are more informed

and more aware than in the past about the effects of integration. It goes further by positing that the communal identity is the most salient dimension because of a cascade effect on the entire spectrum of party alignment. As the argument goes, fringe parties, mainly on the right, have exploited the potential for resentment against the EU, pitting the ‘cosmopolitans’ against those less equipped to make the most of the possibilities opened by integration (Hutter and Grande 2014). Because fringe parties opposed to the enmeshment of the EU in questions that impinge on national identity are mostly on the far-right, it is conservative moderate parties that feel most of the (indirect) pressure from the new cleavage and must adopt a more sceptical position in relation to integration (Hooghe and Marks 2009a, 17). However, mainstream parties do have a choice to avoid the backlash of politicisation to the extent that they can move the issue from the mass politics arena (where identity-based groups can trump economic interests) to the interest group arena (where the cleavage would again become functional-distributional). Moreover, issues that are not easily framed as identity-threatening, can still be disputed in the mass politics arena without the risk of becoming monopolized or strongly conditioned by the political cues of fringe political parties, in which case, the logic of the conflict is back to the Left-Right distributional cleavage (*ibid.*, 9).

### 3.2.3. Functional Explanations in the Age of Postfunctionalism: Towards a Theoretical Reconciliation?

To what extent is Postfunctionalism an alternative and more powerful explanation compared to the functional, economic, and distributive cleavages purported by integration theories? In an answer to the claim that functional interest representation has lost part or much of its explanatory power for domestic preference formation, LI has pointed to several of its dimensions that allow for a reconciliation between the two theories (Moravcsik 2018). LI is not just concerned with competition for domestic preference formation among producers, but each issue has its own specific functional characteristics that stimulate the participation of all types of interests involved, including those that are non-material and/or non-economic. More specifically, issues that involve high levels of regulation (such as environmental protection) are likely to elicit electoral and partisan mobilization (*ibid.*, 5) and such mobilization can be expected to exert pressure on the government negotiating position under two conditions. Issues must be both intrinsically salient and concrete. Saliency translate into

material incentives for political mobilization on the part of the electorate, with the concrete possibility of producing a change in the electoral fortunes of parties (i.e. influence on the median or swing voter). Concreteness refers to the fact that the issue in question must refer to phenomena (exogenous shocks from interdependence) that make the continuation of integration based on the functional needs of economic interdependence unviable (such as the general claim that globalization is having a detrimental effect on the living conditions of the lower-middle class). Only if integration and openness have a dramatic impact on the legitimate regulatory characteristics of domestic policy and polity, they would trigger a strong and adverse feeling against more integration, i.e., the constraining dissensus effect. This qualification allows to distinguish mobilizations that would seriously restrain the functional orientations of governments in articulating domestic demands for integration coming from interest groups from more diffuse, symbolic and in the end unsubstantiated grievances. The latter would be certainly not ignored but would be met by changes to current integration trajectories that are superficial, rhetoric and formalistic and in the end not quintessential.

In sum, LI accepts that there are instances of mass mobilization with substantive electoral consequences that could, in principle, offset the prevalence of the functional needs of interest groups in determining government negotiating positions but it rejects the claim that they amount to a distinct type of integration dynamic. Postfunctionalism can be in the end be considered a qualification for the general validity of the LI theory of domestic preference formation.

Notwithstanding the ongoing validity of domestic preference formation based on functional integration needs, it is also the case that politicisation is a phenomenon that has taken permanent roots in the EU (de Wilde and Zürn 2012). It might not have the constraining effects that the postfunctional thesis theorizes, but if the functional thesis is to be set against its rival, it is necessary to explore how politicisation works in practice as to be recognized and measured. To this end, the next sections will deal with the conceptual and operational characteristics of the phenomenon.

### 3.2.4. EU Politicisation: Definitional and Conceptual Issues

The broad interest sparked by the politicization hypothesis has generated much empirical and theoretical work. The big question of whether the EU is a ‘sleeping giant’ (Van der Eijk and

Franklin 2004) that holds a great potential for domestic electoral mobilization that is in fact left unused has been systematically addressed. The null hypothesis is that EU issues have been left aside by mainstream parties because the potential drawbacks of breaking domestic consensus on the convenience of more EU (or asking for renationalization) are higher than the benefits (Green-Pedersen 2012). This hypothesis posits that mainstream parties, whose mobilization is a necessary condition for politicisation to have an empirically relevant domestic impact (unless fringe parties become electorally relevant), would be faced with two problems if they opted for politicising the EU: internal disunity, as support for the EU is both orthogonal and still majoritarian to mainstream parties and the potential consequence to have to accept ‘strange bedfellows’ (extreme parties) when defending an anti-integration positions. However, this blanket hypothesis has been scrutinized and mostly rejected in the sense that politicisation do occur, even if the phenomenon is subject to many conditions that significantly reduce its potential and its scope in relation to issue areas. There is general agreement, from a conceptual perspective, that politicisation is, at its core, an electoral phenomenon whose consequences can potentially reach to halting or slowing down integration.

An accepted working definition of politicisation is “*an increase in polarization of opinions, interests or values and the extent to which they are publicly advanced towards the process of policy formulation within the EU*” (de Wilde 2011, 566). The phenomenon can attain any area related to the EU, being it EU institutions, the decision-making process or specific issues related to policies and it is space and time specific. The effects of politicisation are three-folds. First, it structures the domestic political conflict, in that political parties are normally in charge of organizing the debate and make it politically and electorally relevant. Second, it raises questions of legitimacy regarding the EU, which according to some scholars it is an indirect palliative to the putative EU democratic deficit (Follesdal and Hix 2006; Moravcsik 2002). However, it could also be the case that politicisation that rests mostly on cultural and electoral calculus prevents the achievement of policies which are inherently Pareto-efficient from a regulatory perspective. Finally, politicisation can alter the course of EU integration by creating constraining dissensus, as already noted (in contrast to the functional preference thesis). Politicisation therefore is pushing on the EU from the bottom-up, via increased domestic awareness and mobilization, and from the top-down, as EU policy-making has had to

incorporate the growing politicisation of its decision-making structure (V. A. Schmidt 2019). Such a changing landscape has forced but also incentivised actors to use, often to their own advantage, strategies of politicisation and de-politicisation in order to move forward with the production of EU policies *cum* politics (Schimmelfennig 2020). At one extreme, New Intergovernmentalism has theorized the progressive disconnection between EU decision-making and the channels of domestic representation. Because governments still recognize the functional need of cooperation, they must nonetheless pay the price caused by the domestic constraining dissensus and reduce the amount of discretionary power accorded to supranational institutions as not to retain legitimacy and the perception that sovereignty is being retained and protected (Bickerton, Hodson, and Puetter 2015).

### 3.2.5. EU Politicisation: Mechanisms

Politicisation can be empirically detected when three variables are present (Hutter, Grande, and Kriesi 2016, 16; de Wilde, Leupold, and Schmidtke 2016), namely the domestic saliency of EU integration correlated to high intensity of the public debate, the polarisation of public opinion and the expansion of actors and audience. In other words, politicisation implies intensity of concerns about the EU, very different opinion about it and extension of the quantity as well quality of actors involved in the debate. It should therefore already be clear the difference with functional conflict that are usually confined to elites and the small cercle of affected interests. These three variables align quite closely with the theorization of the mobilization strategies used by political actors to achieve electoral advantages through politicisation. A model based on the theory of ‘issue evolution’ is an example (de Vries 2007, 366). Party elites are the actors that voluntarily set in motion the process and the public follow the elites. Elites then look for issues that are not currently salient but that, if turned into divisive issues and have a durable effect, they could potentially lead o major party realignment. Once the issue is identified (or once it appears by chance), the party will use different tactics (priming, framing, and cueing) to make voters aware of the issue and of the different positions that parties take on it. Interestingly, this model has in fact a logic that reverse the causal arrow between public awareness and elite behaviour as compared to those theories that assume there already exists an untapped potential of EU domestic opposition. If it is elites that create the bias by framing issues in a certain way, then it is not possible to say that sceptical views are some sort of natural condition of EU electorate. Scholars that have

studied the strategic behaviours of political actors have emphasized the three following aspects (Hutter, Grande, and Kriesi 2016, 22–26). First, the selective emphasis on certain aspects of the object of politicisation. By highlighting certain aspects and keep others on the background, actors try to gain a competitive advantage over their rivals. Second, actors that aspire to profit from politicisation must gain a certain public resonance by acquiring public visibility, therefore they must take a position that is extreme or visibly different from that of their rivals. In that sense, polarisation becomes a second necessary strategy. Third actors must frame the issue along one of the cleavages that structure EU politics and justify their position, being it the identity or the distributional-economic dimension (with a link back to the discussion of old and traditional cleavages).

In relation to the forms that politicisation can take, a typology has been proposed via the study of mass media (de Wilde and Lord 2016, 150–53). In the ‘remote conflict’ type, the EU is seen as a foreign problem that involve conflict among other Member States and receive low coverage, and therefore low saliency, domestically. In the ‘international conflict’ type, the EU is considered as a distributive, zero-sum, game in which the Member States to which a person belong is seen as opposed to other Member States or supranational institutions, nationality is the defining variable and governments are seen as the natural defender of the domestic interest. Although the intensity of the debate, the public resonance and the saliency are expected to be high, the degree of domestic polarisation is not, as it is likely that different domestic groups converge on the definition of the domestic interest and on the opportunity and the strategies to defend it. The ‘domestic conflict’ type is the one of most interest for this research as it features domestic polarized opinions and high saliency. The different actors involved take a clear pro or anti-European stance. Importantly, this type of conflict can vary in terms of its temporal duration and its relevance on concomitant domestic decision-making choice moments. For example, if it is punctual and not cumulative and it is distant in time from domestic elections or other type of important decisions, then their impact is low. This obviously differs if the opposite conditions apply but it also must be considered that brief episode of strong domestic conflict can be recalled at later time and therefore have an impact that is disconnected from the time in which the episode occurs.

## 4. EU Electricity Policy and Regulation

This chapter aims at providing an overview of the development and the content of EU regulation in the electricity sector, emphasizing the difference between negative and positive integration. Within the macro-field of energy policy, electricity policy can be considered the area where the EU has been able to make the most inroads into domestic sovereignty, the most important reason being the fact that, different from the regulation of gas, the weight of the external security dimension is less relevant. This statement can obviously be qualified by the consideration that the production of electricity still depends on imported primary resources (CCGT than burn gas being the most glaring example, or uranium for nuclear power plants) and that climate change policies have an obvious global dimension. That said, it has been easier for supranational institutions to frame electricity as a service (more than a commodity) that should have fallen within the rules of the single market and progressively erode the traditional sovereignty claims made by the Member States.

### 4.1. EU Electricity Policy: Filling a Paradoxical Void of Authority. Positive and Negative Integration before the Lisbon Treaty

Most academic work on EU energy policy highlights the paradoxical beginnings of the treatment of energy in the EU, as two of the foundational treaties of European cooperation were expressly based on energy sources (the 1951 Treaty of Paris dealt with the prevailing source of electricity production, coal and the 1957 Treaty of Rome established Euratom to enhance cooperation on the development of nuclear energy) while in the European Communities Treaty, energy was notable for its absence (Birchfield and Duffield 2011; Buchan 2015, 346). Coal and nuclear power were to become less relevant than oil both as a source of energy and as an energy policy concern for Member States following the 1970s oil crisis, but still there was reluctance to include a reference to a specific energy policy competence in the treaties that would have created a supranational competence.

Between the 1980s and 1990s however, the paradoxical void was progressively filled via the de facto piecemeal extension of competences in energy policy borrowing from other areas, such as the single market or environmental policy, culminating the process with the de jure recognition of an energy policy in the Lisbon Treaty. The Commission is credited with having started to challenge the status quo and the joint-decision trap in which energy policy had

fallen via the use of competition and negative integration (Pollak and Slominski 2011) and, years later, via the use of environmental policy integration (Morata and Solorio 2012), the creation of technological positive externalities (Boasson and Wettestad 2013) and therefore positive integration. The process and the content of negative and positive integration will be separately analysed in the following sections.

#### 4.2. Electricity Policy and Regulation: Negative Integration

Accordingly, there were many anomalies that the Commission point to and the advantages that could have been derived from moving the provision of electricity towards a more liberal approach than had been the norm so far. However, this outlook was not immediately shared by the relevant players. Jabko (2006, 92–95) argues that the economic, functional and utilitarian rationale for integration of electricity markets was however weak, compared to other policy areas. In his opinion, electricity policy was a static environment with little technological change expect for the introduction of CCGT. The ‘quite revolution’ to which the Commission committed can therefore only be explained via the use of the ‘market as a norm’, i.e., via the strategic construction of the idea that moving from the traditional understanding of electricity sector as a monopoly based on long-term state planning towards a liberalized and thus more ‘efficient’ organization would have yielded advantages. The Commission used both threats and cajoling in order to reshape public and private actors’ expectations regarding the viability of the status quo.

The first ‘unsettling’ acts adopted were the seemingly innocuous Transit<sup>31</sup> and Price Transparency Directives<sup>32</sup> of 1990. Both directives can be taken as the first legislative milestones of negative integration of electricity markets. In the following, the analysis of negative integration is therefore divided into the two categories of the ‘hardware’ of EU electricity policy (cross-border infrastructures) and the ‘software’, the regulation of electricity markets and the limits to sovereign discretion.

##### 4.2.1. Dealing with the Missing Link: Trans-European Networks Guidelines

The Transit Directive linked two issues, the right of transmitting electricity via the grid of another Member State (therefore a measure of negative integration) and the need to start

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<sup>31</sup> Council Directive 90/547/EEC of 29 October 1990 on the transit of electricity through transmission grids

<sup>32</sup> Council Directive 90/377/EEC of 29 June 1990 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users

thinking in terms of a community-wide interconnected grid (the need for positive measures to make negative integration possible). The interconnection issue was perceived as a crucial missing link in the architecture of EU cooperation and in fact found its way into the Maastricht Treaty who attributed to the EU a competence for the improvement of cross-border energy infrastructures, although through an ad-hoc form of cooperation, based on a mix of intergovernmentalism and private actors steering, the Trans-European Network (TENs) programs. It must be noted how Transition System Operators, which were semi-public institutions, had a long history of cooperation agreeing on the technical details of grid system linking and management (Eckert and Eberlein 2020), but it was meant to deal with existing infrastructure and never extended to the strategic planning of cross-border interconnections. Transport grids had been built with the goal of structuring and serving the domestic market, intended as closed systems (Buchan and Keay 2015, 38; Helm 2014). The European dimension of network infrastructures has therefore focussed on increasing the levels of interconnections and ensuring their interoperability. The latter dimension, which includes the technical and economic conditions under which access to a foreign network is granted, can be considered as ‘software’ measures, and are not of interest for this section which deals with the building of new infrastructures. It was clear since the beginning that such competence would not have accorded autonomous powers to supranational institutions as it implied the mobilization of Member States’ economic resources. However, as it will be explained, the EU dimension of a seamless grid and the added value for all Member States would also be recognized and the mobilization of EU common economic resources, from the budget or other funds, will be made available to co-finance specific projects. In its 1992 White Paper on the Single European Market, the Commission stressed how high-quality networks were a priority task to be tackled by the EU and insisted on the establishment of common planning instruments (Delvaux 2013, 278). Initially, EU policy was limited to the issuance of guidelines in the form of Decisions. The content of such guidelines was, and continues to be, the removal of regulatory and financial obstacles to and investments in the building of cross-border infrastructures and principles that would serve to identify those projects that were more urgent and beneficial.

There were (and are) many obstacles that stand in the way of upgrading of the common interest in terms of TEN-E building, mostly related to the sharing of costs and benefits (Battaglini et al. 2012; Puka and Szulecki 2014). Although the costs and benefits are similar

to those of international trade, therefore are Pareto-efficient because they generate a welfare surplus, they still entail redistribution among consumers of the two countries involved, as the transmission of electricity leads to an equalization of prices, which means an increase in one country and a decrease in the other. It is obvious that the domestic interest of the low-price country is not necessarily well served (Jacottet 2012). In order to stimulate the economic interest in investing in transmission infrastructure, the owners of the transmission grid are accorded the right to retain part or all of the ‘congestion rent’, i.e., the difference in price between the two areas multiplied by the quantity of electricity exchanged. The existence of such congestion rents should attract more investments by actors who want to capture them (private investments are called ‘merchant’ investments, but they are quite rare) but can also provide a perverse incentive to keep price differentials and therefore provide a suboptimal amount of interconnections compared to the quantity that would allow to equalize prices between two countries (Supponen 2012). A further and final relevant obstacle is the invasive nature of such infrastructure which often incur into fierce opposition by local population and environmental groups.

Before the entry into force of the Treaty of Lisbon, there have been three TENs-E (electricity) guidelines adopted, in 1996, 2003 and 2006. The first set of guidelines<sup>33</sup> stated that the goal of interconnection building was threefold, including the effective operation of the internal market, the cohesion goal of reducing the isolation of less-favoured Member States and the reinforcement of security of supply. The action lines consisted in the identification of ‘Projects of Common Interest’ (PCIs) and the creation of a more favourable framework for their realization. Regarding the latter, there was a strict sovereignty clause in the sense that PCIs were in any case subject to Member States approval. If this was granted, Member States should have facilitated and sped up the measures necessary for their realization, in particular authorization procedures, such as environmental assessment. The economic viability of the process should have always been based on a cost-benefit analysis that considered all aspects of the project, including environmental, security of supply and economic and social cohesion aspects. PCIs would then be eligible for financial support from targeted EU funds, for

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<sup>33</sup> Decision No 1254/96/EC of the European Parliament and of the Council of 5 June 1996 laying down a series of guidelines for trans-European energy networks

feasibility studies, loan guarantees, interest rate subsidies and from Cohesion funds for those Member States who were beneficiaries.

The 2003 Decision<sup>34</sup> introduced, as a novelty, the concept of ‘Priority Projects’ to narrow down the list of PCIs and identify those that could have a significant impact on the competitive operation of the single market and security of supply (irrespectively of their cross-border nature). This Decision also incorporated the goal set by the European Council, known as the Barcelona Declaration, that every Member State should enjoy a minimum cross-border interconnection capacity level of 10% of its nominal installed generation capacity by 2020. The issue of a minimum target was elevated to the status of highest-level informal commitment in the EU by the action of peripheral Member States that felt they were geographically disadvantaged and reclaimed more solidarity, in particular Spain and Portugal. The 2006 Decision<sup>35</sup> was instead influenced by the growing importance of the environmental dimension in EU energy goals and added new objectives that would justify EU action, namely the contribution to sustainable development and the integration of renewable energy. To further narrow down the list of priority projects, the 2006 Decision introduced the concept of ‘Projects of European Interest’, which would be, within the priority projects, those that lie along one of the corridors identified as crucially important from the cross-border transmission perspective. Moreover, the EP insisted and obtained that more powers be conferred to supranational institutions to make sure that PCIs were carried out on time. These powers implying the possibility for the Commission to inquiry over the reasons for delays and, ultimately appoint a European Coordinator to help solving them and mediate among conflicting interests. A specific regulation established the type of financial support and the limits of eligible costs for PCIs. These limits were quite low, as they covered only up to 50% of feasibility studies and up to 10% of construction work<sup>36</sup>. The guidelines framework has been criticised by the Commission in its 2010 review. They have been considered ineffective because of the lack of adequate funding and because of the bottom-up approach that

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<sup>34</sup> Decision No 1229/2003/EC of the European Parliament and of the Council of 26 June 2003 laying down a series of guidelines for trans-European energy networks

<sup>35</sup> Decision No 1364/2006/EC of the European Parliament and of the Council of 6 September 2006 laying down guidelines for trans-European energy networks

<sup>36</sup> Regulation (EC) No 680/2007 of the European Parliament and of the Council of 20 June 2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks

provided an incentive to Member States to upload projects in the PCIs list that were less than optimal from the perspective of their contribution to the construction of an EU integrated grid. Finally, the Commission found that Member States still suffered from asymmetrical interest that led them not to place sufficient importance to cross-border infrastructures

#### 4.2.2. The Internal Market for Energy: the Difficult Path to Liberalization

The Commission faced an uphill struggle in moving electricity policy into the remit of the single market as the electricity sectors of the different Member States were organized very differently, because of national traditions but also because of the difference in the material base of electricity, the type of generation capacity used. Even within the Commission there were different idea about the opportunity of such shift, as DG Energy was closer to interventionism than liberalization. The vagaries of the market were in fact considered at odds with the long-term, government-led planning that had characterised the organizational culture of the sector. Liberalisation then was, and for a long time would be, an initiative of DG Competition. However, competition policy is always a rather blunt tool to unsettle existing arrangements than a regulatory programme, especially where no market existed before, and the approach to be followed caused frictions between the two DG (Pollak and Slominski 2011, 95). DG competition started to question supply contracts that were accorder to public or private utilities, which escaped the logic of competitive access to public resources (Jabko 2006, 101). The other soft spot that the Commission found were the significative electricity price differential among Member States, considered a structural obstacle for the single market. Tariff structures were also considered inimical to fair competition, as they often resulted in cross-subsidization that favoured domestic industry, at the expense of households and small business (*ibid.*, 103)<sup>37</sup>. Indeed, tariffs were designed in ways that did not privilege the efficiency signal of market prices (or simply the cost of energy), but a bundle of policy objectives such as security of supply, PSOs, environmental goals and any other policy goal the government wanted to pursue. It is not therefore surprising that the first directive focused on the relatively easy target of price transparency, and the Commission hoped to bring to light the rent-seeking character of the monopolies on which the industry was based. Competition

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<sup>37</sup> The author notes that the methodologies for calculating tariffs were more of a ‘ceremonial’ organizational tool, something to retain for the explanation of the empirical case of this dissertation

in the single market could, it was hoped, raise concern of a race-to-the-bottom for high-electricity-price countries that resisted liberalization.

The Commission however came to the conclusion that the sector was too sensitive to use competition policy as a legal weapon against Member States and it could not even be sure to be able to count on the support of the ECJ that had always been cautious in questioning Member States competences in this area (Eikeland 2011b, 18). The First Internal Market Directive<sup>38</sup> was therefore a watered-down version of what should have been a textbook version of a liberalized electricity market. Although Great Britain had offered an example to follow in terms of substantial liberalization, most Member States were not ready to follow it (Padgett 2003). However, in hindsight, the 1996 IEM Directive laid the foundation for the subsequent questioning of the organizational basis of the sector, which was centred on a vertically integrated industry, which, very often, also took the form of a public monopoly.

At the risk of simplification, liberalization in electricity markets means intervention at three levels (Glachant and Finon 2003, 9–11). First, competition among generators of electricity, the upstream supply-side of the market. Therefore, generation was opened to competition and Member States could only select between tendering or authorization procedures to regulate access to wholesale markets. Interestingly, there was no provision on wholesale market design, which was left to domestic discretion. Therefore, the question was opened whether spot markets, bilateral contracts or forward/future markets would have prevailed within each country. If they were transparent and open to domestic and foreign competition, all organizational forms were admissible (*ibid.*, 14–15). Second, the demand-side of the market, or what is referred to as downstream supply-side (or commercialization or retail) was also considered a contestable market, although there were two important caveats. The first referred to the fact that the right of customers to freely contract their supply of electricity was to be accorded according to the criteria of ‘eligible consumer’. The latter was defined as a consumer with a minimum consumption of electricity per year and the directive allowed Member States not to open the retail market to consumers with a consumption below the threshold established by the directive. Because such threshold was set at high levels, the intention was to provide Member States with the possibility of excluding households and

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<sup>38</sup> Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity

small consumers from eligibility, but not industrial consumers. Third, and most importantly, generators and eligible consumers could only exchange their electricity if they had both had access to the grid, the high-voltage transport grid, and the low-voltage distribution grid. This was a sensitive issue for many Member States because both grids were usually integrated within the monopolist company that also operated as a generator and as a retailer and it was clear that it could have discriminated against competitors by limiting access. Germany and France were adamant that the grid should remain within the ownership of the former monopolist (Eberlein 2008) and the final compromise had to settle for the coexistence of two formulas, the ‘Third Party Access’ (TPA) and the ‘Single Buyer’ model which were second best solutions to the divestment of transport and distribution grids and its assignation to an independent company. In the absence of harmonization on its form, access to the grid had to be conceded to anyone requesting it either based on published or negotiated tariffs.

The outcomes of the timid directive were quite modest in the more reluctant countries, as it was in the end a compromise text that established a ‘liberalization à la carte’ (Jabko 2006, 111). But the interests of Member States had somehow changed, as the imperative to revive the flailing European economy had created a more favourable environment for the negotiation of what would be called an ‘acceleration directive’. The strategy had also changed, and the Commission, besides the continuous threat of the shadow of hierarchy via competition policy, had also adopted three parallel new strategies. First, soft-steering via the issuance of reporting and interpretative notes on how the regulatory gaps should be filled (Falkner 2011, 98). If uneven implementation was a concern for Member States, the reports left it clear that it was taking place. Second, the Commission explored the depoliticisation route via consensus-building among experts and stakeholder. This bottom-up approach had already started in 1998, with the establishment of the Electricity Regulatory Forum of Florence, with the intention of creating a transnational community of domestic regulators who could converge on common notions of how domestic electricity markets should work within the broader IEM framework (Eberlein 2007).

The second IEM directive adopted in 2003<sup>39</sup> did not introduce new ground-breaking innovations but significantly strengthened the provision of the former directive. In relation to

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<sup>39</sup> Directive 2003/54/EC of 26<sup>th</sup> of June 2003 concerning common rules for the internal market

TPA, it was established that TSOs and distribution system operators (DSO) should be legally and functionally unbundled and be placed in a separate subsidiary, as to increase their independence and impartiality in providing access to networks. In relation to the liberalization of the retail market, it was established that full liberalization would be mandatory no later than the first of July 2007. This second aspect is of particular importance because full liberalization called into question the future of regulated tariffs to which small consumers had been subject so far. Certainly, they were now given the possibility of contracting their electricity in the free retail market, but some Member States wanted to make sure that an option did not become an imposition, and the regulated tariff was therefore maintained as an alternative.

Since the first IEM directive, the same article had clearly established that the principle of public service obligations would be an integral part of the IEM. The first directive referred to PSO in terms of security of supply, regularity, quality and price of supplies and environmental protection. As for the way they were determined, it was stated that, in line with the prevailing doctrine, they should be clearly defined, transparent, non-discriminatory and verifiable. The 2003 directive had to be more explicit because, at least in principle, regulated tariffs had to now coexist with a fully liberalized retail market. In fact, the same article expressly referred to the possibility of Member States to ensure that all household customers and, where appropriate, small enterprises, could enjoy universal service, that is, the right to be supplied with electricity of a specified quality within their territory at reasonable, easily and clearly comparable and transparent prices. The task should be placed upon a supplier of last resort, which meant a retailer tasked with a public undertaking. More importantly, this directive entrusted the National Regulatory Authority (NRA) to fix or approve the methodology for the part of the tariff related to covering network costs, i.e., transmission and distribution. Therefore, regulated tariffs were allowed, and would include three components: the cost of electricity generation, that was now determined by a competitive market, the access fees, related to network costs and, optionally, other policy costs that were directly or indirectly linked to the provision of electricity. Although the Commission might have wanted to opt for a different model, prevailing in the British tradition, and take the competitive segment of the market (i.e., the cost of electricity generation) away from government discretion, many governments were not ready to give up a powerful politically and electorally sensitive

instrument (Buchan 2009, 43–47). Although the directive referred to the need of protecting vulnerable consumers, reluctant Member States wanted to extend this protection to all consumers. But, as it has been noted, the downside of regulated end-use tariffs are notable. First, they can be used to protect domestic competitiveness via the favourable treatment of energy-intensive users (*ibid.*, 44). Second, if the price of electricity is set below its real costs, it effectively kills off free retail competition as it would be impossible to compete with below-cost prices. The difference between insufficient revenues raised through below-cost tariffs and real costs would then be presumably reimbursed to the undertaking subject to the provision of such tariffs via deferred payments or, possibly, state subsidies, providing an unfair advantage to incumbents, who are, in most cases, the owners of PSO undertakings. As a corollary, tariff deficits are usually correlated with regulated tariffs. As it will be shown in the empirical chapters, the problem is not just settings the cost of electricity production at below-cost levels but also under-charging access fees and other policy costs. However, these last two components do not affect the free retail market as they are equally charged to all consumers, those under regulated tariffs and those sourcing their electricity in the free market. The Commission would have therefore liked to phase-out regulated tariffs but was faced not only with the obstacle of reluctant Member States but also with a solid and constant case-law doctrine by the ECJ that had upheld the right to maintain regulated tariff in general and in the electricity sector specifically (Woerdman, Roggenkamp, and Holwerda 2015, 261). In relation to PSOs and rules on state aid in general, the ECJ doctrine had established that if the measure in question complied with the principles that had been laid out in the *Altmark* sentence<sup>40</sup>, it should have been considered as legitimate state aid. In the specific sectoral doctrine<sup>41</sup>, the ECJ established that Member states must inform the Commission of the existence of a PSO obligation and pass a proportionality test. If the PSO is established in the general economic interest but in fact limits liberalization, it should be limited in duration, do not go beyond what is strictly necessary, be periodically reviewed, limited to the price

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<sup>40</sup> Case C-280/00, 24<sup>th</sup> of July 2003. The '*Altmark test*' establishes that a PSO is not considered illegal state aid if: a) a company acts on the basis of a clearly-defined PSO obligation, b) the parameters for cost calculation are pre-established in an objective and transparent manner, c) the compensation does not exceed what is strictly necessary and d) the selection of the company is made through public tendering or the compensation is calculated by comparing the costs to which a well-managed and adequately resources company would incur (Talus 2016, 106)

<sup>41</sup> Case C-242/10, commonly known as 'Enel' and case C-256/08, commonly known as 'Federutiliy'

component that is subject to undesirable increases by specific circumstances and limited to those consumers that require protection (Talus 2016, op. 32)

### 4.3. Electricity Policy and Positive Integration

During the period preceding the Lisbon Treaty, the electricity sector became the object of environmental regulation. For many authors, the environmental dimension has progressively become the defining feature of EU energy policy, as stated in the literature review (Morata and Solorio 2012) and, although the formal recognition of this indissoluble link would be formalized after the Lisbon Treaty and the adoption of the first integrated climate and energy package, the seeds of this outcome were planted before the different policy strands would be reunited under the umbrella of a common energy policy. Climate change and renewable policy have therefore transformed EU energy policy, although liberalization and security of supply continued and continue to be pillars standing on their own (Buchan 2009; McGowan 2008; Natorski and Surrallés 2008). In this initial, ‘unlinked’ period, three environmental regulations impacted the sector. In chronological order, they are air quality regulation, renewable energy policy and climate change. In the following, a detailed account of the last two is provided, while air quality policy will be briefly mentioned here and in more detail in the empirical chapters.

#### 4.3.1. Climate Change Policy: The Emission Trading System

Environmental concerns had certainly entered EU energy agenda even before climate change surged as a priority issue, notably moved by the need to control air pollutants from the combustion of fossil fuels, the two most important examples being the Large Combustion Plant Directive<sup>42</sup> and the Integrated Pollution Prevention and Control Directive<sup>43</sup> (96/61/EC). Moreover, after the adoption of the Single European Act, the new environmental competences of the EU were also extended to the energy sector, although a specific Declaration was attached specifying that in any case these new rules could affect member states’ ability to develop their own energy resources (McGowan 1996, 16). The most significant push for comprehensive consideration of environmental issues in energy policy however came from EU involvement in the international climate change agenda since the end

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<sup>42</sup> Directive 88/609/EEC of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants, amended by Directive 94/66/EC of 15 December 1994

<sup>43</sup> Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control

of the 1990s. EU commitment to exercise leadership in this emerging domain of international politics was not immediately obvious (Grubb and Gupta 2000; Gupta and Rings 2001; Sbragia and Damro 1999). Before the landmark adoption of the Kyoto Protocol the EU had showed little problem-solving capacity and, hampered by profound divergence among Member States interests (Skjærseth 1994), the prospects for a robust inclusion of a sustainability dimension into EU energy policy was still way off mark (U. Collier 1997). Member States found it difficult to agree on common approach and policy instruments that could give internal and external coherence to climate change policy was clearly demonstrated by the failure to adopt, in 1992, the Commission proposal for a common carbon and energy tax (Jordan and Rayner 2010, 59). The choice of policy instruments was therefore confronting the EU with a difficult governance dilemma (Jordan et al. 2010, 32–33).

However, under the pressure of the need to operationalize EU commitment to deliver on the Kyoto Protocol and to act as a leader by example to convince other reluctant countries to sign and ratify the Protocol after the US withdrawal, the Commission exploited a window of opportunity to introduce what is still today the main and possibly only common instrument of climate policy in the EU (Costa 2008). The adoption of the Emission Trading System (ETS) in 2003<sup>44</sup> represented a watershed moment in the instrumentation of climate change policy for the electricity sector. The ETS has been the object of extensive academic analysis because of its truly innovative character in the EU policy toolbox not only in relation to climate change (Jordan and Huitema 2014) but more generally in the context of the traditional command-and-control approach of EU environmental policy (Wurzel, Zito, and Jordan 2013).

The intellectual origins of the instruments are located in the American debate among economists about the most cost-effective way to reduce pollution, in particular the relative merits of price and quantity instruments under conditions of uncertainty regarding marginal abatement costs and benefits (Aldy and Stavins 2012; Nordhaus 1991, 2007; Weitzman 1974). Although the EU had initially been opposed to the idea of carbon trading because of the poor fit with its regulatory tradition (Damro and Méndez Luaces 2003; Woerdman 2004; Zapfel and Vainio 2002), the entrepreneurial role of the Commission is a key explanatory factor in introducing this ‘alien’ instrument into the EU. Certainly, the impossibility to place carbon

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<sup>44</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community

taxes on the EU agenda played a negative incentive for exploring alternative ways to establish a common climate policy instrument (Van Asselt 2010; Convery 2009). Also, the Commission was entering a scarcely populated policy domain because, save for a couple of pioneering emission trading pilot programmes and some voluntary agreements with industry, few Member States had long standing and entrenched climate policy instruments in place, diminishing the barriers to innovation.

A multi-level perspective on the adoption of the ETS reveals however how it cannot be explained only through the lenses of a supranational policy-making led by Commission ‘intellectual’ entrepreneurship (Skjærseth 2017) but other factors, including Member States’ and non-state actors, in particular industry, were also relevant (Skjærseth and Wettestad 2008). Member States secured, at least initially, a decentralized system architecture including the right to determine the initial distribution of allowances among installations and to decide how to protect those sectors that could be exposed to ‘carbon leakage’. Also part of the affected industry, which had been cajoled by the Commission through extensive preliminary consultation (Skjærseth 2010), showed a positive reception to the idea, although with significant differences between the more open and enthusiastic electricity sector and the less forthcoming energy-intensive industry (Ellerman and Buchner 2007). Although both industries had been assuaged by the initial free distribution of allowances (‘grandfathering’) instead of auctioning, only the power industry, sheltered from international competition of firms without similar carbon pricing systems, could profit from the allowance cost pass-through to final customers, while energy intensive industries had to forgo this possibility because of the risk of carbon leakage. A particularly delicate position was however held by those electricity-intensive industries that, although not formally part of the ETS because they did not emit GHG directly, were bound to be exposed to higher electricity prices that would inevitably affect their costs of production. The Directive therefore included a specific provision allowing member states to provide exemptions, under the limits set by state aid rules, to the financial burden that this industrial sector was supposed to shoulder as an indirect consequence of the ETS.

What is important to remark in relation to the electricity sector is also how the logic of carbon trading fitted nicely with the logic of liberalization. If prices set by competitive spot and long-term markets were to send an efficient short-term operational and long-term investment

signals to both generators and consumers of energy, the inclusion of the carbon component in the cost structure of electricity production and its reflection in final electricity prices was heralded as the most market-friendly and cost-effective option to deliver intended result.

In sum, the ETS was adopted as a decentralized market-based instrument although it still contained a good dose of hierarchy in that a central authority (in this case the Member States) still controlled and could potentially manipulate the total cap and the relative scarcity of allowances. Hence carbon prices would still depend on decisions from supranational and domestic governments (Van Asselt 2010, 137–38). If this reserve in favour of public discretion and political concerns over the potential negative repercussions for the competitiveness of specific sectors was understandable in view of the adoption of an innovating and untested policy instrument, it also exposed the ETS to many risks. Its credibility could be in fact undermined and it would provide incentives for rent-seeking behaviour on the part of firms as they saw the possibility of governments reneging on their original intentions (Grosjean et al. 2016; Helm 2003, 2010). This would potentially forestall the effectiveness of the instrument and decrease its capacity to promote the kind of dynamic efficiency and the proactive investments needed for the transition to a low-carbon economy. This was, among others, one of the reasons why the ETS run parallel to other policy instruments sharing the goal of fostering and accelerating the provision of new technologies.

From an operational perspective, the ETS would cover an initial pilot period (2005-2007) and then a ‘Kyoto compliance’ period (2008-2012), after which a new compliance period would have followed also depending on the outcomes of the new round of international negotiations. Responsibility for setting the caps on emissions and the distribution among sectors was decentralized, as already stated, and individual caps would be set for each Member State based on their relative contribution to the Kyoto target. The allocation method for these two initial periods would be mostly based on free allocation of allowances, although a minimum amount of auctioning was also allowed. The Commission was responsible of vetting the National Allocation Plans (NAP) to determine whether excessive allocation would compromise the achievement of the Kyoto target or if it would exceed projected emissions, therefore undermining the price signal. The system was linked to the Kyoto Protocol

mechanisms<sup>45</sup> allowing to buy and import international credits from abroad and surrender them in compliance with the ETS. However, an implicit cap was also established on the quantity of credits that could be imported as they should have been supplemental to and not substitutive of domestic reduction efforts

#### 4.3.2. Renewable Energy Policy: Still Domestic Realm

Renewable electricity policy in the EU was strongly influenced by the wide variety of options available to EU policymakers. In fact, in sharp contrast to climate policy, where the absence of established domestic instruments decreased the transactions costs for preferences convergence on a common EU instrument, the Commission attempt at proposing an harmonized approach to renewable energy policy, was faced with a variety of entrenched mechanisms operating at Member States level (N. I. Meyer 2003; Nilsson 2011). Since the beginning, the Commission had tried to promote the idea of a market-based support system, possibly harmonized and pan-European (Boasson and Wettestad 2013, 84) in order to guarantee a cost-efficient approach that would allow investments in the less expensive locations (given the strong locational character of resource availability such as wind, sun and biomass) and also, notably, coherence with the nascent IEM that risked being considerably distorted by domestic support mechanisms (Lauber 2007). However, the harmonization proposal did not cut much ice with Member States and found formidable resistance from those countries that had a domestically successful and popular FiT support schemes (Germany, Spain, and Denmark). It has also been emphasized how domestic schemes that pay for ‘local’ electricity go beyond the simple goal of deploying a certain amount of installed capacity and also contribute to meet objectives such as industrial policy (fostering a national manufacturing industry in equipment and components), employment creation, rural and social cohesion (del Río 2005) and community ownership (Toke 2007), all of which can obviously increase the resistance of domestic interests to agree to a common instrument with uncertain distributional effects.

FiT schemes had, in other words, a relevant positive feedback effect in creating a novel ‘policy clientele’ within the electricity sector. Because of the lack of interest form incumbent utilities

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<sup>45</sup> Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms

at the early stages of RES-E development, who snubbed renewable electricity as a fringe and niche experiment not worth their attention (Kungl 2015), FiT schemes with their open-ended and usually generous level of financial support allowed small players, ranging from a growing specializing industry and community-owned small-scale generation assets, to enter the electricity system form the backdoor (Jacobsson and Lauber 2006). The Commission continued to be determined in avoiding the diffusion of FiT support and to regain some control over the development of domestic renewable energy policy, but a major setback came from a landmark ECJ ruling in 2001<sup>46</sup> on the alleged incompatibility of the German FiT support system with both state aid rules and freedom of movement of goods denounced by German utilities with the support of the Commission. The ruling had a ‘tremendous impact’ (Lauber 2007) on the future prospect for the harmonization of support system in two ways, both of them diametrically opposed to the opinion held by the Commission. First, it upheld a narrow interpretation of what constituted state aid when the flow of resources was not directly managed by the state (that is, when the FiT support tariff is not financed directly through public budget resources but by a levy or purchase obligation imposed on electricity system actors). Second, it declared the restrictions applied to imports of renewable electricity produced in other Member States, aspiring to qualify for FiT benefits on the same footing as domestic producers, as a justified exception to the general rule of the free movement of goods on behalf of environmental and climate objectives in the light of the actual conditions of the internal energy market (Perez Rodríguez 2016).

Operationally, the first renewable Directive<sup>47</sup>, which established an indicative and not binding target of 12% of gross national energy consumption by 2010 and a specific technology target of 22,1 % for the share of electricity. The outcome of this directive was therefore only a modest upward shift of competences towards EU level steering when compared to the bolder moves in market liberalization and climate change policy (Solorio and Bocquillon 2017). Council opposition to binding targets (Johnston and Van Der Marel 2016; Rowlands 2005) and the failed harmonization of support mechanisms meant that renewable policy came close to a policy coordination governance type (Hildingsson, Stripple, and Jordan 2010, 114) and confirmed the primacy of domestic preferences in terms of the choice among energy

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<sup>46</sup> Case C-379/98, 13<sup>th</sup> of March 2001

<sup>47</sup> Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market

sources. At the same time, in line with the logic of the open method of coordination (Borrás and Jacobsson 2004), it also provided a platform for benchmarking and cross-country learning based on the national experiences of implementation of different support mechanism.

From this perspective, renewable policy was institutionally set on a path where Europeanization of policy instruments would occur horizontally through policy diffusion rather than in a top-down fashion (D. Jacobs 2012; Jörgens and Busch 2012; Solorio and Jorgens 2017) and renewable policy remained a ‘national affair’ (Helm 2009). Although the debate on a possible harmonization was formally postponed to 2005 based on a stock-taking report of the Commission on implementation outcomes (Rowlands 2005), the trend towards bottom-up convergence was influenced by the demonstrated higher effectiveness of price mechanisms, FiT in particular, over quota-based schemes, in terms of growth in installed capacity and cost-effectiveness. However, this would also depend on the digression of tariff levels adjusted to the rate of technological progress and learning curves as to avoid over-compensation of maturing technologies (Haas et al. 2011; Ringel 2006).

#### 4.4. The Rise of a Common Energy Policy: The First Integrated Climate and Energy Package

On the background of growing fragmentation of policy frameworks and diverging domestic implementation practices, the leap in energy policy that would take place between 2005 and 2008 with the gestation and adoption of the 20-20-20 integrated energy and climate package, including a new IEM and RES directive and a revised ETS has been the object of extensive analysis in the literature, with often divergent views as to the coherence of the process but substantial agreement on its drivers. Again, most authors stress the crucial brokering role of the Commission in crafting a bargaining, taking advantage of all the windows of opportunity that opened in this period while using the limited legal instruments at its disposal to create consensus but also to put pressure on Member States.

##### 4.4.1. The Process leading to the Integrated Climate and Energy Policy

The discussion cannot ignore the significance the inclusion of energy within the formal competences of the EU, after five decades of ‘stealthy’ legislation borrowing from other policy areas. The ill-fated Constitutional Treaty already listed energy as a shared competence, listing the three goals that the new common policy should meet, namely the functioning of the internal market, energy security, the promotion of energy efficiency and renewable energy

and the promotion of energy interconnections. The wording and the list of competences would then travel to the Lisbon Treaty. The new legal development has not however been considered a driver of the common energy policy as the new article was, in the end, a de jure and ex-post acknowledgment of things the EU already did (Benson and Jordan 2010; Calliess and Hey 2013), possibly with the exception of the mention of interconnections as a goal on the same legal footing as the other ‘traditional’ energy policy goals. And in any case, the last paragraph of the new article 194 of the Treaty on the Functioning of the EU reinstated another long-established principle, namely the sovereignty reserve for Member State’s “right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply”.

Since 2005 there had been a combination between the entrepreneurial role of the Commission which set forward a number of policy documents advancing proposals for how to foster climate ambition by linking it to the other strands of policies with an energy component (and not yet ‘energy policy’ as such) and a receptive European Council that, under the leadership of the UK Prime minister, Tony Blair, and the German Chancellor, Angela Merkel, looked for fresh ideas to relaunch the EU after the Constitutional Treaty debacle (Boasson and Wettstad 2013, op. 44). The high- level input came from the informal Hampton Court summit in London in 2005, where the UK, who had started to awaken to a new domestic energy context now that its oil reserves in the North Sea were dwindling, opened the door for a stronger and more coherent energy policy integration including climate and security of supply. The Commission jumped on the opportunity and prepared a Strategic Energy Review Green Paper (EC 2006) which concluded that the EU energy scenario was not particularly promising because of mistakes of its own making and a less than promising international outlook. The Green paper was well received by EU leaders and non-state actors, including industry. Under the mandate of the European Council, the Commission came up in January 2007 with two communications, the most relevant of which outlined a now not so visionary plan, an energy policy for Europe (EC 2007). The document also contained an action plan in which climate action featured as the glue around which other policies would synergically adapt. Following the logrolling between the two institutions, the European Council endorsed, in March 2007, the three goals of a 20% reduction in GHG emissions, and 20% of renewable energy and 20% of energy efficiency increases, which were developed by the Commission in

January 2008 into a legislative proposal (EC 2008a). As expected, all the different aspects of energy policy had been dealt with simultaneously, promoting the idea that an integrated climate and energy policy should look for synergies among different goals and instruments at the outset of the legislative exercise.

External windows of opportunities also contributed to catalyse the process, in the form of recursive gas supply crisis following disputes between Russia and Ukraine in 2006 and 2009 as well as the need to secure a united and ambitious EU position for exercising leadership in the upcoming conference in Copenhagen in 2009, considered a crucial crossroad for the future of the international climate regime (Eberlein 2012; Oberthür and Roche Kelly 2008). Conversely, the spread of the effects of the economic and financial crisis to Europe had the countervailing effect of making Member States more cautious in relation to their own evaluation of the package's costs and benefits. The Commission therefore constructed a broad discursive line on the compatibility of energy policy goals, including the link between liberalization and energy security (Maltby 2013; McGowan 2008). The different DGs adopted a more collective and cooperative working style, preparing carefully detailed impact assessments of the different options available while taking into account national preferences and objections (Dreger 2014). Linking different policies within an integrative package also offered the opportunity to create synergies through the establishment of side-payments to win over reluctant Member States and possible losers in the industry while minimizing (but also ignoring) possible trade-offs among the three goals of energy policy. In other words, the Commission privileged the short-term goal to craft a deal that could be acceptable for all Member States and actors involved and be perceived as fair and solidaristic (especially with the new central and eastern member states that had traditionally been very sensitive about their dependence on fossil fuels) at the cost of laying the ground for potential troubles in the implementation phase (Skjærseth 2014; Skjærseth et al. 2016). The package was then adopted under the urgent pressure to attend the 2009 Copenhagen climate summit, considered as a crucial milestone for the future on international climate policy, as it was expected to set new goals and timetables for the post-Kyoto Protocol. To signal the urgency but also the solemnity of the new package, it was adopted by a vote of the European Council instead of the Council of Minister. The new package was however not only the result of a

rapid sequence of windows of opportunity but also the culmination of more incremental dynamics set in motion by former legislation.

#### 4.4.2. The 2009 Internal Market Directive: Liberalization for Real?

Despite the centrality of climate change goals, liberalization remained the Commission preferred organizational architecture for delivering the energy trilemma. The degree of market integration and regulatory convergence achieved via the previous directives could not be considered satisfactory (Buchan 2009; Glachant and Léveque 2009). The list of factors contributing to this underachievement was in effect very long. Market designs were still in evolution and incumbents had not manifested much interest in developing a wider range of differentiated wholesale trade instruments, such as future contracts, that could invite and facilitate the participation of new entrants by lowering and spreading business risk. Moreover, the industry had reacted to the uncertainties of liberalization by strengthening the vertical integration of generation and retail, something that the Commission did not like, as it aimed at maximizing competition on both ends of the market but that was not seen as a problem by some analysts who considered it an efficient business model intended to manage risk via hedging among the different segments (Buchan 2009, 31; Joskow 2009). Member States also continued to stifle retail competition using regulated tariffs usually below the total cost of electricity provision, hampering the transmission of effective price signals for investments and efficient consumption, discouraging potential new entrants, and creating perverse incentives for a future mismatch between generation and supply (*ibidem*, 45). Tariff deficits, as predictable, had started to appear. Even though the Commission continued to signal the existence of regulated prices as an anomaly (EC 2008b), the new IEM directive<sup>48</sup> did not feature any radical break with the form in which PSOs and regulated tariffs could have been combined by Member States wishing to do so.

However, the issue that most concerned the Commission was the lag in achieving effective unbundling of transmission networks which was still considered the crucial condition for EU market integration and liberalization. In effect, TSOs held the keys for market making and its possible distortion in three ways. Besides controlling access to network, with the potential of favouring their vertically integrated parent generation company, TSOs were also in charge of

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<sup>48</sup> Directive 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity

allocating capacity for cross-border trade across existing interconnections and responsible for the planning and financing the construction of new ones (Glachant and Lévêque 2009, 16). For the reasons exposed in previous paragraphs, the Commission was convinced that some TSOs had little political and economic incentives to move from the status quo. The Commission, in the run-up to the new IEM directive, reinforced its already existing multi-pronged strategy. The first part of the strategy was to establish new governance structures to bring together TSOs as it had done with national regulatory authorities to discuss and work out possible solutions to improve and accelerate cross-border trade. Through this type of experimentalist and network governance and trans-national institution building (Coen and Thatcher 2008; Eberlein 2008) the Commission tried to circumvent government veto powers by building consensus and by tapping into an important source of knowledge that would produce evidence of the existence of distortions and the benefits deriving from their correction. The second component of the strategy consisted in enlarging the number and nature of involved stakeholders. By bringing in energy consumers and electricity intensive users, who could gain from the advantages of unbundling and competition, it was hoped to generate a new source of pressure for change (Eikeland 2011b). Third, it was hoped to gain leverage vis-à-vis the member states by the enforcement of ex-post competition powers. To avoid direct confrontation with governments, the Commission directed its pressure against the companies themselves, opening cases for abuse of dominant position leading to settlements whereby companies would sell-off their network in exchange for lower fines (Hancher and Hauteclercque 2010). The Commission hoped to make ownership unbundling mandatory, but it was defeated and had to settle for a second-best option. Vertically integrated companies could maintain ownership but also had to establish an independent system operator (ISO) or an independent transmission system operator (ITO) to considerably limit discretion and discrimination in grid management and network access. Both figures would in fact be provided with considerable legal and management safeguards to assert independence from their owners.

To increase the credibility of the new division of competences between market players, the Commission would be assisted by two new organizations vested with regulatory authority (although far from being regulatory agencies in the proper sense). The 2009 IEM directive created in fact the Agency for the Cooperation of Energy Regulators (ACER) and the Energy

Network of Transmission System Operator for Electricity (ENTSO-E). The latter in particular was made a liberalization stakeholder via the attribution of the responsibility for proposing ‘network codes’, i.e. harmonized rules to ease and increase the efficiency of cross-border trade, although their final adoption is subject to a Comitology procedure (Meeus and Schittekatte 2018). The establishment of a new administrative-executive space in electricity regulation (Jevnaker 2015) together with a more detailed specifications of the powers and independence of national regulatory authorities and TSOs have been considered important moves to strengthen the internal market by fostering a less nationally focused mindset on possibly contentious issues such as the development of new infrastructures. One of the potentially important tasks assigned to ENTSO-E was, for example, the production, on a biannual basis, of a Ten-Year Network Development Plan to identify the most urgent missing interconnection and guide member states and domestic TSOs in their investment decisions.

#### 4.4.3. The ETS Supranational Turn

The revision of the ETS reflected a self-reinforcing dynamic generated by the perception of deficient implementation, resulting in a preference shift on the part of Member States and the power industry regarding the level of harmonization and decision-making (Wettestad, Eikeland, and Nilsson 2012). The choice of decentralized implementation for the first two phases of the ETS had in fact resulted in a mixed experience, with a negative balance altogether. From an administrative perspective, it was a relative success as Member States were generally able to overcome the organizational challenge of negotiating with domestic industries and enforcing their NAPs (Ellerman and Buchner 2007; Skjærseth and Wettestad 2008). At the same time, the outcome had been much less satisfactory, as most NAPs had been overly cautious and generous in the amount of allowances distributed and on the amount of allowed imported international credits (Buchner, Carraro, and Ellerman 2007). As a result of this ‘race to the bottom’ (Wettestad et al., 2012, 75), the allowance price crashed at the end of the Pilot Period (2005- 2007) and, although the Commission exercised a much more rigorous control over the second round of NAPs prepared for Phase II (2008-2012) and prices recovered, a powerful policy feedback mechanisms led almost all stakeholders to share the position held by the Commission that an effective ETS required the injection of a strong dose of harmonization and centralization (Van Asselt 2010; Boasson and Wettestad 2013; Skjærseth and Wettestad 2010a).

The reformed ETS for Phase III (2013-2020)<sup>49</sup> therefore led to a significant break with the past and the instrument was not only improved on its many shortcomings but also became a truly supranational instrument, especially for the power sector (Ellerman, Marcantonini, and Zaklan 2015; Meadows, Slingenberg, and Zapfel 2015). What the new system achieved in practice was to delink governments and power industry and make the latter dependent from an independent regulator, the Commission. To begin with, national caps would be replaced by an EU-wide cap, meaning that all power generating installations would compete for a single pool of allowances, irrespective of the Member State where they were based. The number of allowances distributed over the period would achieve a reduction of GHG emissions of 21% as compared to 2005 levels by 2020. Allowances for the power sector would be now distributed entirely via auctioning to suppress the windfall profits reaped by including the opportunity cost of grandfathered allowances into final electricity prices charged to consumers (Sijm, Neuhoff, and Chen 2006). Member States would however still be responsible for organizing the auctions of the share of allowances that corresponded to the allowed emissions within their territory. The main reason was to make Member States ‘stakeholders’ by still allowing them to keep the revenue raised through auctions. In this way, governments’ concerns about the consequences of an increase in carbon price levels were, at least partially, mitigated by a corresponding increase in the domestic revenue raised. Domestic discretion was however constrained, as the destination of such revenue was partly earmarked. Half of the revenue was therefore to be used for climate change reduction projects, including adaptation to climate change, and to pay for the costs of renewable energy for the period up to 2020. The cost of renewable support was expected to be large, given the ambitious goal set by the new renewable energy directive

#### 4.4.4. Big Jumps: Renewable Energy Goals Becomes Binding

The remarkable supranational turn in the ETS was not entirely mirrored in the evolution of renewable policy. The diagnosis made by the Commission of the implementation record of the ‘soft’ approach of the previous Directive showed a mixed picture of achievements and blind spots. Although in almost all Member States renewable energy had turned ‘from a nice

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<sup>49</sup> Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community

to have to a must have component of Europe's energy mix' (Buchan 2009, 137), many Member States had ended up below their 2010 indicative target. The proposal and adoption of a binding and legally enforceable domestic targets in the 2008 directive has thus been considered a surprising turn, partly influenced by the strong lobbying network featuring the renewable energy industry, that had been joining forces by acquiring organizational strength at the EU level, sympathetic Member States (especially those featuring a domestic equipment industry themselves), members of the European Parliament and NGOs (Boasson and Wettestad 2013, 88).

The new directive<sup>50</sup> contained other elements that signalled a modest supranational competence shift (Nilsson 2011, 118), such as interim targets to be assessed by the Commission and the submission of national specific action plans in which rich details must be provided on the type of support and the overall strategies to meet individual targets. On this account, EU renewable policy moved from policy coordination closer to a harmonised regulatory method (Hildingsson, Stripple, and Jordan 2012, 19). Conversely, little progress could be made on the vexing issue of harmonizing support mechanisms. This time the Commission, although internally divided (Dreger 2014; Nilsson, Nilsson, and Ericsson 2009, 4457) went on a more decided offensive by advancing, in its draft, a proposal for the establishment of a EU market in tradable certificates either at a company level or between Member States (Johnston et al. 2008). The split between interests in favour and against the proposal was broadly moving along the same line that had hitherto persisted in the EU: pro-traders included a coalition of relevant parts of the Commission, most big utilities, and some Member States. However, it must be noted how some incumbent utilities rejected the instrument as they had thrived under domestic support mechanisms and put their full weight behind their maintenance, such as the Spanish Iberdrola, leader in the sector (Boasson and Wettestad 2013, 82). The discursive line of the 'flexibility' argument underpinning the pan-EU certificate market (Lauber and Schenner 2011) was, as usual, based on cost-effectiveness, placement of installations in location with the highest renewable resource potential and, importantly, the compatibility with the internal electricity market. On the other hand, the coalition in favour of maintaining the status quo and domestic price-based support schemes was, as stated above, resting on the strong and highly specialized advocacy power of the niche

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<sup>50</sup> Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources

organization of renewable producers (Nilsson 2011, 126). Their counter-argument was also solidly rooted in the economic evidence that price-based mechanisms, FiTs in particular, had been more cost effective in mobilizing investment and that well-adjusted tariffs had avoided windfall profits for low-cost renewables remunerated by a single price based on the marginal cost of the most expensive technology, as in the certificate system (Del Río and Cerdá 2014; Toke 2008). As already stated, domestic price-based scheme proponents could also enjoy the advantage of leveraging their position upon a broader policy framing, including security of supply, innovation and employment creation, two factors that also played in favour of continuing with a domestic rather than EU-wide territorial reference (Nilsson, Nilsson, and Ericsson 2009, 4460). Finally, allowing cross-border certificate trade would have been de facto incompatible with a parallel domestic support system, because producers could have exploited Member States' differences in FiTs levels and 'flood' high-support Member States with certificates in exchange for a FiT payment, causing a loss of control over domestic implementation costs (Buchan 2009, 146).

Opposition to the Commission proposal grew during the negotiations, with some notable defection in the pro-trading side such as the UK, whose government decided to switch from its lacklustre domestic tradable scheme to a FiT scheme. In the end, the trading proposal was abandoned, subsidiarity in the selection of support mechanisms was confirmed and only a weak and government-led provision for statistical transfer of 'virtual' renewable quotas was introduced with a view to help, at the end of the compliance period, those Member States falling short of their target. Moreover, the directive confirmed another measure in favour of the uptake of renewable electricity, the principle of priority or guaranteed access and priority dispatch, mandating that TSOs gave precedence to RES-E in their operational procedures regarding connection and access to the grid and in their procedures for selecting which kind of electricity should be curtailed in case of grid congestion, two significant sources of potential bottlenecks for the decentralized and intermittent electricity production.

#### 4.5. The 2030 Climate and Energy Framework and the Clean Energy for All Europeans Package

Equipped with the new 2009 regulatory package and a new energy in title in the Lisbon Treaty (Braun 2011; Calliess and Hey 2013) the EU could have therefore been expected to increase its leverage on domestic energy policies to an unprecedent level. However, since its inception,

many voices of scepticism and criticism raised in regard to the realization of such expectation, not for a lack of potential (Buchan 2009, 14) but rather because of the fragmented and uncoordinated ways in which energy policy had come to be institutionalized and for its equally deficient instrumentation. Part of the literature sensed that that the new architecture lacked consistency among its many parts and did not really amount to an ‘energy policy’ as such but was still a collection of rules and instruments rooted in different policy fields and fundamentally conceived as derogations to the internal market (Delvaux 2013, 45; Peng and Poudineh 2017; Van Der Woude, Andoura, and Hancher 2009). Accordingly, the long list of deficiencies included: lack of compliance with internal market rules; an incomplete and limited policy toolbox; a lack of credibility and legitimacy of EU intervention in the eyes of Member States still strongly attached to their sovereignty; importantly, inconsistency in its ‘simultaneous reliance on market forces and apparent distrust of them’ as liberalization was constrained by a complex market oversight system and consumer protection rules. According to these scholars, what had been achieved so far had also come at the cost of the ‘institutionalization of fragmentation’ with potential negative consequences for the coherent long-term development of EU energy policy.

The process leading to the adoption of the 2020 climate and energy framework has been more complex than that of its predecessors, for different reasons. First, the outcomes of the implementation of the 2020 package would provide policy feedback that had an impact on the (re)formulation of goals and instruments. Second, the context in which both implementation and negotiations took place was also different. At the beginning it was characterized by the financial crisis and other exogenous shocks, such as the migration crisis and the stall in international climate negotiations which have initially diverted the attention of EU leaders from climate and energy questions, resulting in a stagnation of ambition (Slominski 2016). However, since 2016, the easing of such tensions, the adoption of the Paris Agreement and the need to relaunch the EU economy have partially refocused attention and political efforts to craft a package where positive and negative integration goals and instruments could be better integrated and more future-proof than what it was emerging from the implementation of the 2020 package.

#### 4.5.1. The Initial stage: Commission Proposals and the European Council Agreement

The new legislative process started in 2013, when the Commission published its Green Paper on the 2030 climate and energy framework (EC 2013a). The document was fairly critical of the combination between domestic initiatives and EU legislation, considering that while some Member States were concerned with climate policy ineffectiveness and had taken domestic corrective initiatives, unilateral initiatives could lead to a policy fragmentation with a negative impact on the Single Market and the ETS. The list of problems extended to renewable energy policies, whose integration had become a major concern since the levels of intermittent electricity had significantly grown in parallel to the need for investments in grid reinforcement, also cross-border. The Commission did not miss the occasion to stress how the impact of renewable support mechanisms on market integration and on electricity tariff had not been fully considered. Moreover, their impact on electricity markets was failing to provide incentives for investments in new and complementary generation and grid infrastructure, raising the spectre of security of supply concerns. Security of supply concern then resulted in the adoption of out-of-market mechanisms to obtain the desired level of generation capacity that would further negatively affect the goal of market integration. As for the new quantitative goals, it was proposed a target of 40% for GHG reductions and 30% for renewables by 2030. For the first time, it was floated the possibility of having one goal only, namely GHG reductions, or to drop the bindingness of renewable energy targets. The possibility of moving to one-target only goal would become one of the main lines of conflicts among Member States and among industry and NGOs stakeholders (Fitch-Roy and Fairbrass 2018).

Although it is true that the Commission leadership in relation to the climate dimension was not comparable to what had been in the run-up to the 2020 package (Skjærseth 2017) it would be an understatement to say that its initiative was on the retreat during this time. It might be more correct to state that it had taken different routes and it was addressing, for the time being, different problems. In November 2013 a Communication was published, focusing attention on the question of the relation between the IEM and public intervention (EC 2013b). Although it was recognized the utility and the need of public intervention, and therefore of legitimate state aid and PSOs, the risks of poorly designed interventions were highlighted. The Communication did not hesitate to point at uncoordinated public

intervention as distortive, ineffective, and even counterproductive and claimed that a ‘strong regulatory framework at the Union level’ was needed, inviting the relevant domestic regulatory authorities to consider their mutual interdependence when designing public intervention. Separate accompanying documents focused on specific public intervention measures that, according to the Commission, could and should be designed in accordance with the principles underlying the IEM. The three targets of such guidelines were renewable support mechanism (EC 2013c), demand-side flexibility and demand response (EC 2013f) and capacity mechanisms or other measures to ensure security of supply via the support to generation adequacy (EC 2013e).

The shift of initiative in relation to renewable support mechanisms was particularly notable and a clear break with the past submissive attitude to the resistance of Member States to allow interference with their right to select their preferred support system. According to the document, reform was indispensable in view of the falling costs of renewables, while reforms taken at the domestic level had often resulted in the loss of investors’ confidence. On the other hand, best practices could be identified, such as a long-term commitment to phase-out support, planned reviews periods and announcements of automatic reductions of support when specific caps had been fulfilled as opposed to retroactive changes. The way forward would have had to consider the need to integrate renewables in the market, which meant exposure to market prices and competitive allocations mechanisms (tendering or auctions) that would have revealed the real cost of new technologies as opposed to guesses made by regulatory authorities. In sum, the suggested mechanism was a combination of auctions or tendering for winning the right to a specific remuneration and the use of a market premium remuneration on top of the price market to expose renewables to market price dynamics and avoid distortions such as the appearance of negative prices in electricity markets due to excess renewable supply. The communication announced that the Commission would adopt a revised version of state aid guidelines for environment and energy in 2014, raising the prospect that it would not wait for its recommendations to be negotiated with Member States or be spontaneously adopted. Acting on its announced intention, such guidelines would turn into practice what the Communication had outlined, the new rules becoming effective from the beginning of 2017 (EC 2014b).

During this time, Member States were forming coalitions where specific operationalizations of the concept of ‘climate’ ambitions were proposed. Apart from some central and eastern European Member State, no member States was openly questioning the need for ambition, but ideas differed on the question of the number, the legal nature and the quantitative content of targets. The EP was meanwhile adopting resolutions that set a general higher ambition than Member States would seem available to accept (Ydersbond 2016, 27–28). Discussion among and between institutions intensified since the publication of the Commission Green Paper (EC 2014a) culminating the process of deliberation, within the EU executive, on the concrete options to be presented to the EU legislative bodies. The proposal was not featuring much surprise compared to what had been discussed during the past year, except for a new governance mechanism that would have provided a partial corrective to the shift to a more flexible commitment system on the part of Member States and also to the uncoordinated action among the different strands of climate and energy policy. The climate dimension was therefore anchored to the 40% GHG reduction target and to the strengthening of the ETS (with a projected reduction of 43% as compared to 2005 levels). More specifically, the Commission intended to stabilize price carbon levels with new mechanisms that will be described in a subsequent paragraph dedicated to the ETS reform. The approach to renewable energy was to be modified and made more flexible in relation to the 2020 architecture. The 2030 goal was set at 27% of gross final consumption (therefore on the lower band of the targets that were being discussed and with a projected penetration of RES-E of 45% of total electricity consumption) and would be binding on the EU as a whole and not on Member States individually. Member States would thus be accorded flexibility to cost-effectively achieve their individual contribution based on specific circumstances, energy mixes and capacities. Flexibility also meant that support mechanisms should be as market-driven as possible, as the Commission had so far insisted. Moreover, the deployment of renewable energy, and electricity in particular, was linked, now beyond the realm of informality, to the development of cross-border infrastructures. The internal market dimension was also object of a specific mention, stressing how insufficient competition and market distortion needed to be corrected to achieve a more dynamic and competitive market that would allow consumers and EU industry to reap the potential benefits of a still incomplete market. Finally, the proposed governance framework was built upon two pillars. First, it would have allowed to streamline and rationalize the different and dispersed

reporting measures to which Member States were subject in relation to their climate and energy goal, as to provide better stock-taking and monitoring. Second, Member States should prepare national plans where they detailed the measures that intended to adopt and implement to meet their new goals, thus allowing the Commission to better check ex-ante conformity with the expected level of contribution to individual and collective goals and ex-post goal-achievement. In sum, the Commission and the Member States would become closely linked in an iterative process of proposal and assessment of domestic goals and policies that stretched from the initial formulation at the start of the new compliance period up to its implementation.

The Council started analysing and debating the Commission proposal and four different meetings, between March and June 2014 were held with this purpose. When the European Council, on the 24<sup>th</sup> of October Of 2014, endorsed its version on the 2030 climate and energy framework, it basically upheld the Commission proposal in its main elements with one important addition or caveat. The high-level summit agreed on the 40% and 27% targets for GHG and renewables respectively (plus a 27% for energy efficiency) and supported the completion of the IEM. But it also laid emphasis on a new quantitative goal, which had not been explicitly mentioned by the Commission, in relation to interconnection levels. It was therefore stated that the completion of the IEM was meant to be carried out "*by achieving the existing electricity interconnection target of 10% as a matter of urgency no later than 2020, in particular for the Baltic states and the Iberian Peninsula, and the objective of arriving at a 15% target by 2030*". It is debatable whether the European Council referred only to this narrow goal when interpreting the Commission proposals in relation to achieving the IEM, as it is reasonable to infer the Commission referred to a much broader set of problems affecting the incompleteness of the IEM, as it will then become clear judging from the content its legislative proposals in 2016.

#### 4.5.2. Agenda-Setting for Climate and Policy Integration in the run-up to the Winter Package

Although the European Council agreement set clear quantitative limits to agenda-setting goals, the room for manoeuvre for the Commission to realize other preferences was broad enough. The Commission had been explicit in former communications about its vision on how energy and climate policy should be integrated (or re-integrated) during the upcoming

decade. During the lapse of time between the Council decision and the presentation of legislative proposals, the Commission continued to pursue its activity in setting the conceptual ground for its specific vision of climate and energy policy integration. From an institutional perspective, the major innovation was the introduction of the Energy Union. The idea of an Energy Union, initially developed by the Polish President of the European Council as an energy-security instrument with a view to ensure more solidarity among Member States, was recrafted by the Commission to include a much wider set of goals and, in many ways, modelled on the 2030 climate and energy framework plus a more specific focus on energy security, also including the external dimension. The impact of the Energy Union, at least during this time, does not seem to be significative and left open the question of the balance of power between Member States' attempt to reassert control over energy policy and the desire of the Commission attempts at shifting it towards more centralized steering (Szulecki et al. 2016; Szulecki and Westphal 2014). In terms of policy agenda-setting, the ETS and renewable energy seemed to be the least problematic area for the Commission. The reform of ETS, as it will be explained, enjoyed broad support and it would in fact follow a different and swifter decision-making than the rest of the package. As for renewable energy, the 2014 guidelines had settled the question of competence over support mechanism and it did not seem likely that the legislative bodies could reopen the dossier during the decision-making process. On the other hand, the question of renewable targets would have been left to the decision-making stage, as it seemed unlikely that the Commission could take an independent stance, by proposing a different target than the one indicated by the Council, in what seemed likely to be a confrontational issue among the two decision-making bodies. Where the Commission had ample margin of agenda-setting discretion was in relation to the future architecture of the IEM and other issues that had not become the object of specific treatment during this time, as for example self-consumption. The policy document presented by the Commission during 2015 and 2016 provide evidence in this sense.

The Communication on a new design for energy markets (EC 2015f) stressed the importance of adapting the rules of the increasingly coupled domestic market to the need of intermittent renewable energy. This implied that short-term markets would become cross-border (after the achievement of daily markets coupling, intra-day markets would have to follow suit), and allow long-term markets to receive the right price signal for investors to plan with a

sufficiently long time-horizon as to avoid underinvestment, in both renewable and back-up technology. The Commission sponsored the idea that the new market design would have had to ask for ‘sacrifices’ from both sides: traditional players would have to adapt to a more flexible market ‘fit for renewables’ and renewable investors and operators would have to accept that their shielding from market dynamics would come to a progressive end and become ‘fit for the market’. Finally, the linking between wholesale and retail market became a necessary and unavoidable condition for demand-side flexibility and for engaging consumers in the energy transition. Again, the explicit targets of such conclusion were regulated prices that prevented the right transmission of price signals to consumers, keeping them as passive actors with a substantial untapped potential for active behaviour that would result in both lower consumer prices (because of the reduction of peak loads and therefore the expensive maintenance of back-up firm generation and networks) and easier balancing of intermittent renewables. Consumers and citizens were thus made the explicit object of another Communication which envisaged a ‘fair deal for consumers’ (EC 2015d). The Commission’s Energy Union Framework Strategy (EC 2015a) had already laid a strong focus on citizens, which were to be placed at the core of the project, taking ownership of the energy transition, benefiting from technological development and actively participating in the market. At the same time, vulnerable consumers would also have to be protected. The new communication stressed the importance for consumers to be better informed and empowered to control their growing energy costs, for example via smart meters that allowed for real-time reaction to market prices. But consumers could be engaged even more substantially by unlocking the potential for self-generation and self-consumption, which was an area that EU legislation had so far only remotely touched, given the fact that the technological potential for large-scale deployment of distributed energy had only really taken off since the 2020 package. The Commission stepped into this new area with a communication on best-practices on self-consumption (which will be analysed in the empirical chapter 7), which would be followed by a comparative study on residential self-consumers in the EU in 2017 (EC 2017b), right in the middle of the difficult negotiations on the favourable prosumer treatment proposed by the Commission in the Winter Package. The last piece of this preliminary agenda-setting work by the Commission was an inquiry on the use (and abuse) of capacity mechanism across Member States (EC 2016d). The report acknowledged the fact that the surge of renewables had led to a corresponding decrease in the demand of thermal (and

fossil-fuels) plants generation, undermining their profitability below levels that ensured their permanence in the market. Security of supply concerns were thus, in general, justified if these plants, which offered a necessary firm, back-up generation capacity to intermittent renewables, had to be retired from the market. However, the report was critical with the methods used to identify and assess the causes and the consequences of the potential decrease in domestic firm generation capacity (EC 2016d). Accordingly, generation adequacy assessment usually overplayed the risks and/or did not consider the capacity offered by cross-border generation capacity, which was one of the supposed benefits of an interconnected energy market. The consequence of this ‘hyped’ insecurity on the part of the Member States was the deployment of often unnecessary capacity mechanism that distorted the domestic and the EU market besides causing unnecessary extra costs for the consumers. As it will be seen in the next section, the Commission proposed to at least complement domestic adequacy assessments with an objective, EU-wide and fact-based security of supply assessment, therefore putting a foot, via the internal market, into a core sovereignty competence.

#### 4.5.3. The Architecture of Climate and Energy Policy for the Period 2020-2030: Implications for the Electricity Sector

After almost four years since the beginning of the policy-making process, the final architecture of the climate and energy framework for the 2020-2030 decade was finally agreed in December 2018. In this section the different strands of policy that, taken together, conform the new package will be analysed, highlighting, where relevant, the sticking point in the negotiation between the Council and the EP. As already noted, the ETS reform was agreed in a separate process than the ‘Winter Package’ (i.e., the set of legislative proposals tabled by the Commission) and the subsequent ‘Clean Energy for All Europeans’ package (the adopted legislation). Also, policies relative to interconnections, do not, strictly speaking, form part of the package agreed at the end of 2018, although the new interconnection goal is formally included in the new governance regulation. In sum, the following exposition will in turn analyse the reformed ETS, Trans-European networks policies as of 2020 and the aspect of the ‘Clean Energy for All Europeans’ package with a relevant impact for the electricity sector, namely the two recast directives (IEM and RES) the IEM regulation and the new Governance of the Energy Union and Climate Action directive.

#### 4.5.3.1. The Emission Trading System: Upholding Carbon Price

The ETS had been one of the main victims of the financial crisis, as the demand for allowances had plummeted and so had the price of carbon. The assessment of the role of the ETS in the context of climate policy has been subject to considerable debate (Buchan 2015, 128–37). From a purely technical perspective, the ETS had been a success as the GHG reduction goals had been met and the market for allowances fully developed. Its impact in terms of being a real driver of emission reductions as compared to other factors (i.e., fossil fuel prices, renewable and efficiency energy policies) and a driver of low-carbon investments has however been called into question too, given its low but also volatile price during most of the years of its functioning. At the same time, ironically, its limited price and costs effects had also allayed fears about its impact on competitiveness, at least in the electricity sector, while the industrial sector continued to air concerns about the potential ‘carbon leakage’ (which allowed it to be preferentially treated via free auctioning). Coherence with other instruments, and specifically renewable and energy efficiency policies continued to be questioned and had been one of the main arguments in favour of the ‘one goal only’ policy coalition during the initial stages of the 2030 framework agenda-setting process. Continuation of renewable energy support was however and paradoxically still justified by the fact that carbon prices levels were difficult to predict and to a certain extent subject to political discretion if they spiked, in other words a problem of credibility.

Nonetheless, the ETS continued to be considered the climate flagship instrument and mustered enough political and stakeholder support for incremental reforms (Wettestad and Jevnaker 2016). The first measure to be adopted was the ‘backloading’ regulation<sup>51</sup> that, although initially contested, allowed to modify the auction calendar, postpone the auction of 900 million allowances during 2014-2016 and reschedule it for 2019-2021 as to prevent a further price crash. In fact, these allowances were not even auctioned as established by the backloading regulation as a long-term structural measure was adopted soon after, the Market Stability Reserve<sup>52</sup>. The Commission in fact successfully proposed a mechanism that would regulate the number of allowances in the market so that allowances would be retired or

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<sup>51</sup> Regulation (EU) No 176/2014 of 25 February 2014 to determine the volumes of greenhouse gas emission allowances to be auctioned in 2013-20

<sup>52</sup> Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC

released in the market (via auctions) according to the ‘surplus’ of allowances in circulation, i.e., allowances that were not surrendered at the end of each year and that therefore were in excess of the real emissions. The Market Stability Reserve would enter into force in 2019 and be in principle open-ended although subject to periodical a review.

Considering the long-term impact of carbon prices on investment decisions and actors’ behaviour, the process for the revision of the ETS for its fourth compliance period (2021-2030) was set in motion already by summer 2015, even before the conclusion of the Paris Agreement (EC 2015e). The ETS run the risk of fragmentation via unilateral measures, such as the carbon price floor introduced by the UK in 2013 which, although effective from a domestic perspective, risked undermining the logic of the ETS as it would have simply increased the number of unused allowances in circulation. Many Member States were keen to see meaningful carbon prices but within the ETS framework, although a coalition of more recalcitrant Member States and an ambiguous role of the EP dragged the negotiations for a revision of the ETS for almost two years (Wettestad and Jevnaker 2019). The outcome however can be considered a sign of the positive consideration that carbon pricing managed to muster and the fact that climate policy is not necessarily subject to lowest-common-denominator outcomes. Therefore, during the 2021-2030 period, several changes will take place according to the amended ETS Directive<sup>53</sup>. First, the linear annual reduction factor will be increased to 2.2%, up from 1.74% and in line with the new 2030 GHG reduction goal. Second, the number of allowances that can be placed into the Market Stability Reserve each year (if there is a surplus) is doubled and they can moreover be permanently cancelled, starting from 2023, if the amount within the reserve is equal to the number of allowances auctioned in the previous year<sup>54</sup>. Finally, Member States will be able to cancel allowances unilaterally and voluntarily in case of closure of installations that would have purchased allowances if they had continued to operate. This was considered an important new rule and exception in view of the coal phase-out that many Member States are witnessing because of autonomous utilities’ decisions or that are actively being pursued via agreement with the sector.

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<sup>53</sup> Directive (EU) 2018/410 of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814

<sup>54</sup> That means that the Reserve would contain at maximum a quantity of allowances worth a year of verified emissions

#### 4.5.3.2. Interconnections: Ambitious Goals, Still Insufficient Instruments?

The European Council had thus elevated the informal goal of interconnection levels that dated back to the Barcelona Declaration to something more than an aspirational goal but not quite a binding goal neither for the EU nor for individual Member States. As it will be explained, the goal is mentioned in the Governance of the Energy Union Regulation and Member States are required to indicate how they intend to contribute to reaching such goal. However, from an operational perspective, the common aspects of interconnection-related policy have not been changed. In the previous overview of interconnection policies, the last instrument analysed was the 2006 TEN-E decision and the subsequent 2007 financing regulation. The approach had been judged unsatisfactory as it run into one of more of the following problems: a legal or regulatory framework that created obstacles for authorization and permitting procedures; problems with the initially chosen route due to NGOs and landowner resistance; financial and technical constraints (EC 2014c).

Since then, the policy had been subject to a ‘revolutionary new approach’ (in the words of the Commission), via a new regulation adopted in 2013<sup>55</sup>, the main goal of which was to further streamline administrative and authorization work and to further narrow down the list of projects eligible for EU support. The preamble of this regulation stated that TEN-E framework, while giving political visibility to the selected projects, lacked ‘vision, focus and flexibility to fill identified gaps’. Meanwhile the investment need grew (also because of the 2020 climate and energy goals) and the problem could only become cumulatively worse. Therefore, the Commission would take more powers and responsibility in picking PCIs, which were to be selected from the 10-year development network plan prepared every two years by ENTSO-E, be part of one of the 12 strategic priority corridors and, most importantly, be cross-border or entirely within a Member State but with a clear cross-border impact. Regional groups were also to be created, each responsible for one of the priority corridors and comprising national authorities and stakeholders with the responsibility of drawing up a provisional list of projects to submit to the Commission for approval and inclusion in the Union PCIs list. Moreover, the financial resources available had also been increased. Finally, the regulation addressed for the

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<sup>55</sup> Regulation (EU) No 347/2013 of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009

Regulation (EU) No 1316/2013 of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010

first time the question of the long permit granting procedures and the obstacles of public acceptance. It set a binding limit of 3.5 years for the conclusion of authorization procedures, which lasted on average 10-13 years and prescribed the establishment of a ‘one-stop-shop’ competent authority for their streamlined and simplified management (EC 2015b). Quite controversially, it also established that authorization could also be given in the name of the public interest to projects with a negative environmental impact. The situation had also been object of improvement from the funding perspective. In 2009, a portion of the European Energy Program for Recovery had been allocated 1 €billion to electricity infrastructures and in 2013 a new instrument, the Connecting Europe Facility, had allocated 5 € billions for the same goal. In 2015, the European Strategic Investment Fund had been added to the list of funding instrument, which had allocated 2 €billions up to 2017. However, if it is considered that the estimated financing needs were around 200 €billions, and that the funding gap had to be provided by either TSOs investments to be recovered through tariffs or ‘merchant’ private investments, the quantity of private resources to be mobilized remained considerable.

After the adoption of the Winter Package, no new proposal had been presented that could support the heightened interconnection ambition. In a communication issued in 2017 on the need to strengthen interconnections (EC 2017a), the Commission could only recognize that, although the effects of the 2013 regulation had begun to be felt, with the number of PCIs which were completed increasing compared to the past, and that the development for interconnections should now proceed at the same speed that the energy transition for it to be successful, there were geographical areas that were still lagging behind. The communication highlighted the situation of the Iberian Peninsula as a glaring case, recognizing how the region suffered from the lack of price convergence and the challenge of integrating intermittent renewable electricity, inviting political commitment not to falter and overcome such obstacles.

#### 4.5.4. The New Internal Energy Market

The recast IEM directive<sup>56</sup> and the recast IEM regulation<sup>57</sup> have redesigned many crucial aspects of the triangle of relations that characterizes the electricity sector, (service providers, end-users/consumers/citizens, and public authorities) as well as the horizontal relations

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<sup>56</sup> Directive (EU) 2019/944 of 5 June 2019 on common rules for the internal market for electricity

<sup>57</sup> Regulation (EU) 2019/943 of 5 June 2019 on the internal market for electricity

between Member States and the vertical relations between Member States and supranational bodies<sup>58</sup>. Given the extension of the legal framework covered by the two legislative acts, this section will limit itself to highlight the relevant aspects for the purpose of this dissertation.

In relation to consumers, the goal of the recast IEM is to create a level playing field among Member States by redefining the role of consumers and public authorities. As the Commission had been promoting for quite sometimes, consumers would become active players for the energy transition, which means that they are both empowered but also made more responsible for their actions. The starting point of this discussion can be electricity bills, which differ notably across Member States because of the relative weight of their three components: cost of electricity, network charges (transport and distribution) or fees and charges, i.e., all other costs of the system. The structure of electricity bills varies because of structural factor, such as the generation mix of a Member State, but also because of the different ways in which public intervention mediates between the electricity systems and its costs and the consumer. The recast IEM has taken steps to limit public intervention and its impact on consumers by redefining the boundaries of public service obligations. Regulated tariffs still find their place within the IEM architecture, but they are meant to be much more targeted, selective, justified, and temporary than in the past. Although the Commission would have liked to see retail competition entirely replace public intervention, except for vulnerable and poor consumers, the transition to that scenario will take longer but the path seems set. Therefore<sup>59</sup>, while Member States maintain ‘wide discretion’ in imposing PSOs in pursuing the general economic interest, when these are in the form of price setting, they are now subject to strong limitations to the derogation of the now general norm that consumers should face market-based prices<sup>60</sup>. The first derogation refers to the protection of energy poor and vulnerable household consumers, which could also take place via the use of social and welfare policies as opposed to regulated tariffs. The second derogation refers to a transition period to establish effective retail competition, and households and microenterprises can continue to enjoy regulated tariffs under stringent conditions (stricter, because more specific, than for

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<sup>58</sup> The descriptive work of the recast IEM directive and regulation is based on the fork of Noucier and Meeus (Noucier and Meeus 2019)

<sup>59</sup> Recital 22 of the 2019 IEM Directive

<sup>60</sup> Art. 5, 2019 IEM Directive

example those established by the ECJ doctrine on PSOs). Such conditions include, inter-alia, the specification of a methodology that is non-discriminatory for free-market retailers and that prices are set above cost, allowing for price competition by free retailers to occur. The measure must be notified to the Commission and it must justify why other measures have not been sufficient to achieve the pursued objective. Member States shall also submit reports (by January 2022 and January 2025) on the necessity and proportionality of the measure and their progress towards the goal of phasing-out retail tariffs. The Commission is then enabled to table a legislative proposal with the possibility of including an end date for regulated prices. The goal of creating a level playing field and empowering consumers is also extended to the network component of the electricity, which has become progressively more relevant both in economic terms and in its role of enticing efficient consumer behaviour. Therefore, the recast IEM regulation<sup>61</sup> envisages a process for the soft harmonization of the methodologies used to determine cost-effective and efficiency-enhancing network tariffs. ACER, the EU agency of European regulators, is expected to develop best practices in this sense and national regulators to take duly account of them when approving or fixing network tariffs or their methodologies.

While the limits to public intervention and to PSOs address the ‘passivity’ to which consumers have been traditionally relegated in the electricity sector tradition, the stimulation of an active behaviour, closer to the concept of empowerment sponsored by the Commission, requires more rights than a change in the way the bill is calculated. The concept of active consumer is therefore introduced by the IEM directive<sup>62</sup> (an equivalent of the concept of prosumer) to which several rights are recognized. These rights are recognised when acting individually or through aggregation, which is an important caveat as the emergence of aggregators, i.e., entities that act on behalf on several individuals and are therefore able to exercise a considerable power in wholesale markets or citizens communities. This variety of actors signals the intention to foster diversity and the democratisation of the electricity system traditionally based on centralized production and supply managed by utilities. Active consumers are then allowed to sell self-generated electricity and to participate in demand-response and flexibility markets. Importantly, the new rules establish general principles

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<sup>61</sup> Art. 18 IEM Regulation

<sup>62</sup> Art. 15 IEM Directive

regarding the network fees prosumers are expected to pay in relation to the electricity they self-consume and the electricity they feed into the grid. This issue will be treated in more detail in the empirical chapter 7, due to its complexity and relevance. Finally, the consumer is also entitled to have the opportunity to be active even if it is not a prosumer, i.e. even if it does not engage in generation, storage or demand flexibility services in the market. Small consumers can in fact be engaged in small scale demand flexibility simply by being informed of when the price of electricity is lower or higher, which usually means that there is less or more congestion in the system and it is therefore more or less efficient, economically, and environmentally, to consume electricity at a specific time. All retailers with more than 200,000 customers must therefore offer their clients equipped with a smart meter a 'dynamic pricing contract'<sup>63</sup> and allow them to profit from reacting to price changes during the day, either in real time or through broader time-bands.

In relation to market design, the recast regulation contains a more detailed description of the principles on which domestic markets should be organized<sup>64</sup>. Domestic markets should therefore become more flexible and market coupling will progressively extend to the time-frames closer to 'gate closure', i.e., closer to real-time as to allow for more efficient balancing of intermittent renewable integration. However, the most relevant limitation of domestic sovereignty and public intervention is in the process and the criteria to be followed when determining resource adequacy and the consequent use of capacity mechanisms<sup>65</sup>. A European resource adequacy assessment, developed every year by ENTSO-E, will now be the first step of the process for evaluating the reliability of existing capacity at Union and Member States level. Domestic capacity assessments will be complementary to the Union-level assessment and must use reliability standards that are in conformity with the EU-level methodology. If there is discrepancy between the domestic and EU assessment, domestic authorities must justify their position and transmit it to ACER who will have to provide its opinion, which must be duly considered. Finally, when a reliability problem is identified, national authorities must submit a plan to overcome it based on a list of remedies specified by the regulation (including flexibility in wholesale markets, demand-side flexibility and cross-border capacity and the building of new interconnections) and only after all these measures

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<sup>63</sup> Art. 11 IEM Directive

<sup>64</sup> Art. 3-13 IEM Regulation

<sup>65</sup> Art. 20-27 IEM Regulation

are adopted, the least distortive capacity mechanisms (open to all resources and not just firm thermal capacity) can be adopted. One of the most controversial issues during the negotiations was the proposal to introduce an Emission Performance Standard, i.e., a CO<sub>2</sub>-based emission standard for power plants to be eligible for capacity mechanism. After much resistance from a blocking minority in the Council of Ministers, a compromise was reached<sup>66</sup>. New power plants emitting more than 550g of CO<sub>2</sub> per KW/h of energy produced will not be eligible for new capacity mechanisms. For existing power plants, this provision will apply from July 2025. A grandfathering clause has also been introduced, in the sense that power plants above the limits that benefited from a capacity mechanism introduced before December 2019, can indefinitely continue to benefit until the original expiring date of the contract.

#### 4.5.5. The New Renewable Electricity Directive

The content of the new renewable directive<sup>67</sup> as compared to its predecessor has been conditioned by three events occurring after the adoption of the 2009 directive, namely the change in support mechanisms instruments imposed by the Commission via its state aid guidelines, the European Council decision that targets would be binding on the EU but not on Member States, i.e., domestic flexibility, and the rise of prosumers. In many ways, it can be considered the paradoxical outcome of the notable achievements of the previous directive in terms of cost reductions and technological maturity (IRENA 2018) and its negative impact on the financial burden needed to make it possible. The new directive thus marks, in many ways, the end of the justification for several market exemptions previously enjoyed now that renewable technologies are considered to be able to compete on a par with conventional generation.

The main elements of the new directive relevant for this dissertation are listed as follows<sup>68</sup>, although it must be noted that, especially when it comes to domestic targets, the directive must be read in conjunction with the Governance regulation, object of the next section. While the change in the nature of legal bindingness has fundamentally never been seriously under discussion during the decision-making process, despite the preference of the EP to maintain domestic bindingness as opposed to the Council position, the level of ambition has probably

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<sup>66</sup> Art. 22 IEM Regulation

<sup>67</sup> Directive (EU) 2018/2001 of 11 December 2018 on the promotion of the use of energy from renewable sources (RES Directive)

<sup>68</sup> This section is based on the technical report of the Florence School of Regulation (Noucier et al. 2020)

been the most visible and also domestically salient issues during the process. In the end, a compromise between the Council position, firmly anchored to its initial 27% figure, and the EP, whose plenary converged on a 35% goal, was struck at a 32% target share, binding on the EU as a whole. In the next paragraph it will be detailed how Member States should determine their contribution to the target.

The strict limits to the freedom of choice of Member States in relation to support mechanisms is implicit in the wording of the relevant article which defines them as instrument to “*provide incentives for the integration of electricity from renewable sources in the electricity market in a market-based and market-responsive way, while avoiding unnecessary distortions of electricity markets as well as taking into account possible system integration costs and grid stability*”<sup>69</sup>. It is also stated that support mechanisms must aim to maximize the integration of renewables in electricity markets and ensure they respond to market price signals and maximise their market revenue, implying that support mechanisms are a ‘top up’, in the form of market premium, sliding or fixed. The method for granting support, as already established by the state aid guidelines, is tendering or auctioning. State aid guidelines would have expired in 2020 but, in 2019, their validity has been extended for two more years. Small installations (whose parameters are defined by the state aid guidelines) and demonstration projects can be exempted from tendering. However, a review clause on the effectiveness of the new support mechanism method is due at the end of December 2021, opening the door to a possible revision should they be found to be less effective and/or efficient than the former allowed instruments. The Commission had initially proposed to make the opening of such scheme to producers from other Member States mandatory, but Member States opposition has watered down the proposal and made it a discretionary decision based on indicative targets of up to 10% in 2030<sup>70</sup>. Importantly, priority dispatch for renewable electricity has been suppressed and it is now reserved only to small-scale facilities of less than 400 kW<sup>71</sup>.

Whereas the choice of renewable support instruments has been made more stringent, its legal certainty has conversely been strengthened as the experience collected during the implementation of the previous directive had shown that the rising costs of support

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<sup>69</sup> Article 4, RES Directive

<sup>70</sup> Art. 5, RES Directive

<sup>71</sup> Art. 12, IEM Regulation

mechanisms had led many governments to retroactively change significant aspects of the agreed support, undermining investors' confidence. Therefore, while the levels and conditions of granted support can be adjusted in conformity to state aid rules, such revisions should neither negatively affect the rights already conceded nor affect the economic viability of projects already benefiting from support. Adjustments should be made based on pre-established objective criteria. At the same time, investors' confidence is positively affected if Member States publish in advance a long-term calendar of expected allocation of support, covering a period of five years and indicating the indicative timing, frequency, and capacity to be allocated. Finally, Member States should supplement the Union-wide review of the effectiveness of support mechanisms with an individual review every five years, including, notably, the distributive effects on different consumers groups and on investments<sup>72</sup>.

Another remarkable change to be emphasized is the inclusion and detailed treatment of self-consumers<sup>73</sup>, which must be read in conjunction with the rules of the IEM directive, although the latter apply to all types of self-consumption while the rules contained in the RES directive are narrowly targeted to prosumers that use renewable energy facilities and are, therefore, subject to a more favourable regime. Chapter 7 will provide a detailed description of these norms and of the contentious negotiation to which they have been subject. Finally, another parallel between the IEM and the RES directive must be noted, as while the former contains rules for the empowerment of citizens energy communities the latter specifies the benefits to renewable energy communities<sup>74</sup>, both norms intending to provide an exceptional framework, compatible with the IEM rules, for the democratization and the collective engagement with the energy transition.

#### 4.5.6. The Governance of the Energy Union

The establishment of a governance framework for the Energy Union is the institutional innovation introduced by the CEAE, intended to bring more horizontal coherence in the steering of different EU policies and achieve better vertical coordination between the EU and the Member States and horizontal coordination among Member States. Although new in the area of energy, the concept of governance based on reporting, monitoring and hard and soft

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<sup>72</sup> Art. 6, RES Directive

<sup>73</sup> Art. 21, RES Directive

<sup>74</sup> Art. 16, IEM Directive and Art. 22 RES Directive

steering via recommendations and peer-pressure already existed in other policy areas, the most relevant example being the European Semester (Wyns, Khatchadourian, and Oberthür 2014). Although the proposal of framing the 2030 climate and energy policy within a new governance mechanism was already floated in the communication of 2014 that set the process in motion, it was soon linked to the Energy Union project, probably because of its broader scope (the governance framework is in fact also mentioned in the 2015 communication where the Commission develops the Energy Union concept). Therefore, while it is certain that the governance framework has been considered as a necessary corrective step for the increase in flexibility in renewable energy policy (Bocquillon and Maltby 2020), as it will soon be explained, it is also true that it would be reductive to consider the process as the exclusive outcome of a compromise in the shift of competences between jurisdictional levels. Adopting such a more general perspective, the Governance regulation is an instrument that brings together three broadly overlapping commitment processes, the 2030 climate and energy framework, which is nested within the Energy Union, and the Paris Agreement compliance<sup>75</sup>. The Governance framework thus builds on the legally binding character of the planning, reporting, monitoring tasks that are placed on Member states and the scrutiny that is reserved to the Commission in each of these stages. Climate and energy goals, as it has been mentioned, are a mix of quantitative targets and other less quantifiable enabling policy measures, such as those related to the internal market. Moreover, besides their binding nature, while some of the targets can be achieved unilaterally, such as GHG reductions or renewable deployment, others need active cooperation, such is the case of interconnections. It is certain the case that the loss of domestic bindingness in renewable energy targets and the uncertain legal concept of EU-level bindingness could pave the way for less than effective compliance, but it has also been noted that infringement procedures, which is supposed to be the stick that would push Member States to compliance, is also a blunt and potentially ineffective instrument in the case of goals with a temporal significance (Johnston and Van Der Marel 2016). Infringement procedures take a long time and, given the nature of renewable energy investments, it is unlikely that the shortcomings incurred in 2020 could be quickly made up for in later years. From this perspective, the Governance regulation could represent

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<sup>75</sup> The Commission had in fact started to link the Paris Agreement Compliance with the other two energy-related initiatives in 2016 (EC 2016f)

more than a second best as it allows for an ex-ante appraisal and a periodical, at short time intervals, ex-post evaluation of outcomes.

The main policy instrument envisaged by the Governance regulation are the National Energy and Climate Plans (NCEP), which are meant to be a planning instrument based on a very detailed template covering all the relevant dimensions of the Energy Union. For the first time thus all Member States are forced to follow a pre-defined format, different and broader than the National Renewable Action Plans and the National Allocation Plans and other reporting instruments for GHG emissions required by the previous renewable and ETS directives respectively. Not only the planning will have to be more detailed, but it will also have to consider the cross- impact of any policy related to one of the Energy and will also allow for comparability across Member States. For the first time, infrastructures, internal energy market, energy poverty and regional cooperation measures are also object of detailed specification, as a sign of the holistic approach taken. Finally, NCEPs should also include long-term strategies with a time-horizon of 30 years which means indicating the indicative plan to contribute to the zero-emission target by 2050 that has emerged as the ultimate EU decarbonization goal.

Focusing on renewable energy (although a similar mechanism is valid for energy efficiency), the regulation attributes powers to the Commission allowing it to address inconsistencies between national intended contributions or actions and the attainment of the collective EU goal. Therefore, an ‘ambition gap’<sup>76</sup>, meaning a national intended contribution, shall be closed, if detected, in two steps. First, the gap is quantified using a specific formula that would allow the Commission to show by how much the Member State is deviating from what it is expected. Second, the Commission can issue recommendations to any Member State whose contribution is deemed insufficient to close the gap. Moreover, if the sum of the individual actions is insufficient to achieve the EU goal, the Commission is empowered to propose measures and exercise its powers at Union level to ensure the collective goal achievement. If the gap is instead emerging at the delivery stage<sup>77</sup>, the Commission should also issue recommendations and the Member State should indicate how it intends to fill its delivery gap and comply within a year. Besides physical delivery of the required quantity of renewable

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<sup>76</sup> Art. 31, Governance Regulation

<sup>77</sup> Art. 32, Governance Regulation

energy, a Member State can also decide to make a voluntary financial payment to a new renewable energy financing mechanism set up at EU level<sup>78</sup>. The eventual funds that accrue into this mechanism can then be used by the Commission to tender renewable projects across the EU with a view to fill the delivery gap. As with the previous renewable directive, delivery by Member States will be measured according to a specific trajectory based on reference points of at least 18 % in 2022, 43 % in 2025 and 65 % in 2027.

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<sup>78</sup> Art. 34, Governance Regulation.

## 5. Negative Integration and the Spanish Electricity Sector: from the ‘Golden Age’ of Liberalization to the Onset of the Tariff Deficit

### 5.1. The Spanish Electricity Sector from its Origins to Liberalization.

#### 5.1.1. Coping with Autarchy and Private Self-Organization: the Challenge of Organizing State-Wide Electrification during the Early Years

At the beginning of the XX century, the electrification of Spain was a process developed by private initiative scattered in regional monopolies, rather than a centralized effort coordinated by the state (Sudriá 2007, 51–63). During the Franco regime, characterized by an economy based on autarchy, the sector witnessed frequent electricity shortage crisis, in part because some of the companies that run the regional monopolies were foreign and the regime was generally hostile to them. The intervention of the state markedly increased, establishing a new tariff system in 1951 with the goal of attracting domestic private capital for the construction of new power plants and re-establish the balance between demand and supply. At the same time, the state also entered directly in the activity of electricity generation via the National Institute of Industry (INI). Three companies were established, with the goal of producing electricity from indigenous coal<sup>79</sup> (Endesa and Encaso) and from the increasing number of hydroelectric dams built in the Pyrenees (Enher). However, private companies resisted the creation of a state-wide monopoly and could do so because of the deep mechanisms of coordination and sectoral representation developed throughout the years (Soriano 2008). Established in 1944, UNESA organized the actions of 17 electricity companies that represented 80% of the total generation. Although its original goal was to cooperate with the Ministry of Industry, the organization soon developed a high degree of autonomy and self-organization, up to the point of being delegated crucial tasks such as the management of the transmission network (which was also private at that time) and proposing electricity tariffs.

One of the most notable aspect of this self-regulation and public-private partnership model was the introduction, in 1952, of a tariff system (Maximum Unified Tariff, TTU) which entailed

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<sup>79</sup> Indigenous coal was of low quality and more expensive than imported coal, and therefore not used by private companies, but coal mining in the northern regions of the country was already at that time an activity that the state supported with the goal of ensuring a minimum of energy self-sufficiency

the recovery of the costs incurred by all companies, the public and the private ones, the latter acting in a coordinated manner under UNESA. The methodology for the calculation of the tariff was based on the principle of cost recovery. However, the tariff was seldom actualized, and supplier were compensated ex-post for the imbalances between the costs they incurred, and the revenue raised through the tariff. Compensations were, quite surprisingly, calculated by the same companies. This tariff system, which was highly inefficient, would stay in place for the next two decades and contributed to the embedding, by both the companies involved and the supervising administrative bodies of a culture of continuous provision of incentives to the growth of the supply-side of the system and little or no attention to rationalization and efficiency, both on the supply and the demand side of the electricity system (BizkaiLab 2013, 31–33).

The rapid industrialization during the 1955-1975 period resulted in very strong increase in electricity demand which, together with the effects of the oil crisis, led to the adoption of strategic energy planning instruments, the Energy National Plans (PAN, in the Spanish acronym) starting in 1969. However, the turmoil of the transition to democracy did not allow the adoption of a meaningful PAN until 1975. The PAN was first proposed by UNESA, but at this time the power relations between the private sector and public authorities had started to change and UNESA control over the system started to erode. The PAN was in fact revised by the government and the Parliament and transferred the management of the transmission system network and the ‘merit order’ (i.e. the amount of electricity fed by each power station) to a new entity (COCOEL) a mixed public-private entity where state representatives could exercise veto power. A new tariff system was also introduced in 1973, (Integrated Electricity Billing System, SIFE), replacing the system of ex-post compensations that covered for the financial imbalances incurred by the utilities with a methodology of tariff calculation which tried to set the amount paid by consumers much closer to the real costs. More importantly, the responsibility for establishing the methodology and tariff levels was entirely attributed to an administrative body (OFICO) which will be subsumed into the first independent regulator (National Energy Commission, CNE) in 1994 (BizkaiLab 2013, 34).

### 5.1.2. Nuclear Dreams and the Beginning of Rationalization (and Democracy)

The main goal of the new energy planning strategy was to reduce the high dependence on imported oil, but it was still mostly conceived as a supply-side instrument. It envisaged an

increase in the use of all the available alternatives to oil, including natural gas, and the beginning of an ambitious effort to build nuclear power plants (Costa-Campi 2016, 143–46). The stubborn determination to the continued use of domestic coal led to investments in ad-hoc thermal power plants that would create a singular interdependence relation between the domestic coal mining sector and electricity companies for years to come. The 1975 PAN soon started to be considered incoherent, especially because it was based on overly optimistic growth forecast and, following the worsening of the economic crisis and the establishment of a pact of cooperation among the major political parties with a view to modernize the economy<sup>80</sup>, a new PAN was adopted in 1979 for a planning term up to 1987. One of the main combined effect of the different PANs was the massive mobilization of investments to increase supply. Besides the already mentioned expansion of new thermal power plants, the 1975 PAN also envisaged the construction of 25 nuclear reactors, under the influence the strategy of France which was perceived as successful and worth emulating. However, a strong anti-nuclear movement managed to halt 15 projects, reducing the total of operational plans to 10 nuclear reactors (Castejón 2014, 62–63). The nuclear plan though was to yield fewer encouraging results than expected. The private and public utilities soon found themselves highly indebted, as they had been borrowing in international capital markets rather than using own resources. Moreover, the total installed capacity was soon revealed to be much higher than the country's demand need, worsening utilities' financial situation even deeper (Costa-Campi 2016, 145), causing concerns about their viability and therefore about security of supply risks.

When the Socialist Party (PSOE, in its Spanish acronym) became the ruling party in 1982, a new PAN was adopted, with a time horizon up to 1992. It featured the first effort at introducing efficiency criteria and at questioning of the unilateral supply-side focus (Sudriá 2007, 57). Besides the establishment of the first measures for lowering the energy intensity of the generation fleet, the new PAN established a moratorium on the construction of nuclear reactors, scrapping for good the plans of those that had not yet started and temporarily (and then also definitively) suspending the ongoing construction of five reactors. The government and UNESA also signed two crucial Protocols to settle their relation and the respective limits

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<sup>80</sup> The Socialist Party was at this time in favour of the nationalization of the sector, but it would drop its demand within the climate of cooperation following the national cooperation pact

to public intervention and private self-regulation (Moral Soriano 2008, 98). The First protocol (1984), led to the nationalization of the transmission network, ending with the vertical integration of utilities (which, however, maintained control and ownership over the distribution network). A new company, Red Eléctrica Española (REE), was established in the same year to take over ownership and control of the transmission network. The company would initially be conceived as participated both by the state and the different utilities that had owned transmission networks, with state representative holding veto power. In the absence of a market, REE would then assign production quotas to the different companies according to principles of operational efficiency. With the second Protocol (1987), the PSOE managed to force the private companies to accept a much more interventionist role of public authorities than in the past, which would take legal substance under a new regulatory framework called ‘Stable Legal Framework’ (*MLE* in its Spanish acronym, 1987). The companies integrating UNESA were at that time, as already noted, in a particularly vulnerable position due to their dramatic financial conditions and could not oppose much resistance to the government interventionist push.

### 5.1.3. Public Intervention Gets Stronger: from the MLE to the LOSEN

The introduction of the MLE focused the relations between government and UNESA towards the establishment of a new tariff system that would contribute to improving the financial conditions of the sector and a rationalization of the planning process. There was agreement on the need of cooperation on the material and operational aspects of new plants construction and the efficient use of the existing ones. Above all, it was recognized the principle that the investments made would be adequately remunerated. The new tariff system should have allowed generation companies (and now, also REE) to recover their costs, ending the habit of setting tariff well below the costs that were effectively incurred, which had been the cause of the accumulation of huge deficits in the companies’ financial sheets. In fact, if the goal of reducing external oil dependence had been met by the construction of a generation fleet that did not use oil fuels, the costs of such endeavour had mostly been met at the expense of the companies that had invested in such new generation capacity. According to available estimations, because of the unwillingness to regularly update them, tariffs’ real value was 50% lower in 1980 than in 1959, while the exchange rate of the domestic currency

compared to the dollar (a relevant data, as most of the borrowed capital had been raised in international markets) had depreciated by 158% (Rivero Torre 2015, 54–55).

The allowed, and now also regulated, costs to whose recovery companies would be entitled were established by the Ministry of Industry based on reasonable estimations of ‘standard costs’. This system was conceived to introduce efficiency by setting incentives that would allow companies to profit by keeping their real costs below pre-established standards. However, if a company raised more tariff revenue than the one allowed by its own standard cost, the difference would be transferred to a common account managed by the Ministry of Industry and redistributed to those companies that had earned less or kept within the common account for future inter-companies compensations (BizkaiLab 2013, 42). Moreover, the MLE started to distinguish among different categories of costs, separating those strictly linked to the actual generation of electricity of each plant from other activities of the electricity sector. Among activities other than generation, the most obvious category was the regulated remuneration of the network segments, i.e. transport and distribution. Other allowed system costs were also considered as separate categories, including a new one, intended to incentivise demand-side flexibility. Such new cost, (called ‘interruptible supply’) would be paid to those energy-intensive users that would accept to have their supply momentarily cut-off during periods of imbalances between demand and supply or congestion in the network.

A major exception to the system of standard costs was however represented by the public generation company Endesa, excluded from the rules of the ‘electricity subsystem’ to which all other private companies belonged. Endesa’s remuneration was made object of a plus compared to private companies according to a different methodology established by the government (almost 39% higher than the value of the standard cost). One of the reasons for such special treatment was linked to the role Endesa would be called to play in the restructuring of the sectoral actors’ landscape orchestrated by the government. Because of the consequences of the chaotic planning of the past decades, alongside the MLE, the government proceeded to get rid of those companies whose financial liabilities were beyond any chance of being overcome. Via a process of mergers and cross-shareholder’s participation into newly established companies, the government reduced the number of actors with the finality of ending up with only few, big and financially viable players. At the

end of the process, the number of companies in the sector would be reduced to four, with two of them, Endesa and Iberdrola, controlling more than 80% of total generation. These companies would however not be just competitors but also become, through the interchange of participations, common shareholders in many power plants, mostly nuclear.

This approach based on heavy-handed government intervention and ad-hoc domestic solution was to soon meet a powerful obstacle. The accession into the European Communities in 1986 confronted the government with the first, although still gentle, winds of liberalization in the electricity sector that had started to blow across Europe since the adoption of the first directive regulating the trans-border cross of electricity in 1990. Negotiations were also under way for what will become the first internal market directive in 1996. Considering and anticipating the potential misfit to which it would be subject in the future, the government adopted a new law, (Law Organizing the National Electricity System, *LOSEN*<sup>81</sup>) that introduced an initial degree of competition in the sector. As stated in its motivations, the law was intended to be the first step towards the gradual adaptation to the patterns found in neighbouring countries and in the internal energy market. The programmatic aspiration of the law was quite ambitious as it planned to achieve a ‘corporativist horizontal framework’ to replace the traditional vertical integration in the sector, in line with the prevailing global orientations relative to the organization of competence in the electricity sector. Accordingly, each segment of the value chain should be separated from the other upstream and downstream segments and different businesses should specialize and compete in each segment. However, the law had limited liberalization ambition and only envisaged a layering of a competitive ‘independent system’ with freedom of establishment and enterprise on top of the government-controlled ‘integrated system’ engineered by the MLE. The tariff to be paid would be calculated by the government (through the Ministry of Industry) based on a reference criteria, which would consist of the average cost of electricity per kw/h resulting from the ratio between the total of the regulated costs (i.e. the remuneration of the standard costs allowed to the companies in the ‘market’ and the other regulatory costs derived by the

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<sup>81</sup> Law 40/1994, 30th of December

different policies pursued by the government<sup>82)</sup> and the total estimated demand over a period of a year or when exceptional circumstances might require it.

Another notable innovation contained in the LOSEN was the establishment of a still primordial version of an independent regulator, the National Electricity System Commission (CNSE) which would in fact be more of a consultative body than a true regulator with executive competences, except for some substantive powers in relation to the production of rules relative to the transmission network and the quasi-judicial functions relative to litigations. Although the government did not have enough time to develop the general legal framework, as it was soon replaced by the liberalization act, it is likely that the integrated system would have always been a more attractive option for the sectors' incumbents. To a potential new entrant, the corporativist spirit of the integrated system, linking UNESA (i.e. the private sector utilities ), Endesa (the public utility), REE (a company with a public majority shareholder) and the government would have seemed more secure than an uncertain new system that, in the end, did not enjoy the support of any of the major actors in a system that had very little resemblance to a contestable market (Moral Soriano 2008, 99).

## 5.2. Shock in the System? Liberalization as Reactive Deregulation Under the Popular Party Government

The change in government after the general elections of 1996, and the return of a conservative party, the Partido Popular, to power, is probably one of the reasons why the LOSEN was not developed and was instead replaced by a new governance framework which, at least in its spirit, intended to steer the sector towards paradigmatic change. As it will explained, the initial steps of liberalization obeyed more to the logic of 'reactive deregulation' than true innovation. Liberalization was in fact the result of the inevitable adaptation to the first IEM directive and of the electoral credit-claiming charm of attempting to do something radically different from the previous government. The antecedent to the liberalization act (the Electricity Sector Law, LSE<sup>83)</sup> was yet another Protocol stipulated with the industry, which basically laid out most of the structural element of the future act. UNESA and the government

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<sup>82</sup> Among the costs to be recovered, the nuclear moratorium accorded a right to be compensated to those companies that had already started building the reactors. The debt was securitised and placed on international markets. The repayment lasted about a decade, ending in October 2015 and amounted to a total of 5,717 € millions (CNMC 2015)

<sup>83</sup> Act 54/1997, 27<sup>th</sup> of November 1997

also instituted specific working groups to turn the Protocol into legislation (Moral Soriano 2008, 101). On the other hand, Endesa was probably forced to accept the Protocol and the shift to competition as, being still partly a public utility, it could not have opposed much resistance. Endesa was the company that had the least to gain from competition given its generation mix, highly reliant on coal and partly forced to buy domestic coal because of the government security of supply strategy. In fact, the radical left (Izquierda Unida) and the PSOE were concerned that liberalization would have entailed a reduction of the use of domestic coal, provided that already at that time power generation using natural gas (Combined Cycle Gas Turbines, CCGT) were considered as more convenient and competitive because of their flexibility and their lower environmental impact.

The Protocol, and the LSE, contained many compromises between government and private industry. According to the explanation given by the Minister<sup>84</sup>, the government estimated that the benefit of competition and liberalization would have entailed a reduction of about one third of the average cost of electricity production and it therefore proposed a reduction of tariffs of about 3% for 1997. Tariffs had been increasing since 1988, as it might be remembered that one of the goals of the MLE was in fact to ensure ‘tariff sufficiency’, i.e. the capacity to cover the standard costs of industry and adequately remunerate their capital. Reverting the trend would have therefore been a violation of the MLE and UNESA companies had threatened to legally challenge the government in courts. The government however was seeking tariff reduction as one crucial element of a broader deflationary fiscal policy strategy to meet the inflation Maastricht criteria to join the Monetary Union in 1999 (Rivero Torre 2015, 55), and it publicly stated so, possibly to have one more argument to press UNESA. In fact, the measure was intended to last few more years, at least until 2001<sup>85</sup> and the total tariff reduction sought over that period, considering the projected inflation, would be of about 20%. As a measure to ‘sweet the pill’ for UNESA (and to make Endesa appetible to investors in view of its progressive privatisation<sup>86</sup>), the government decided to offer a smooth transition

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<sup>84</sup> Diary of the Congress of Deputies, Industry, Energy and Tourism Commission, IV legislature, 19 December 1996 No. 133

<sup>85</sup> More in details, the Protocol established a reduction of 3% in 1997, 2% in 1998 and 1% from 1999 to 2001, but there was no long-term commitment to what would happen afterwards, i.e. whether prices would continue to increase as originally established in the MLE or otherwise (Arocena, Kühn, and Regibeau 1999, 395)

<sup>86</sup> The privatisation process lasted almost ten years (1988-1998) and entailed four different rounds of IPO (Initial Public Offering) until full private ownership.

to competition by agreeing to compensate 50% of the estimated losses in capital that the industry would suffer by being exposed to more competition. This would be achieved by the establishment of another allowed regulated cost to be recovered through the tariff (Transition to Competition Costs, TCC) for an estimated period of about 10 years. The disbursement of such compensation would not be automatic but, at least in principle, conditional on the effective drop in wholesale market prices. A specific wholesale market prices threshold for activating the mechanisms was therefore established, meaning that if liberalization and competition had not achieved their expected outcomes, no compensation would have been disbursed.

#### [5.2.1. The 1997 Electricity Sector Act: Gold-Plating the 1996 Directive](#)

In many ways, the LSE was a gold-plating of the 1996 IEM directive, but there were many countervailing factors that worked to make liberalisation less effective than it could have been deduced from the letter of the norm (Arocena, Kühn, and Regibeau 1999). One of the most important and most effective part of the norm was the vertical separation of the transport network from generation and supply (retail). Among the different options offered by the 1996 IEM directive, the Spanish legislator picked the one ensuring less collusion between generators and network owners and operators. REE was then appointed as the Transport System Operator (TSO) and the owner of the transmission network<sup>87</sup>. But this was most the fortuitous consequence of the peculiar history of the Spanish sector than an intention of the legislator. It has already been pointed how the dismantlement of the regional vertically integrated companies and the subsequent nationalization of the transmission network had been carried out more than a decade before the directive was implemented. REE would then guarantee unrestricted third-party access to the network, strictly enforcing the principles of the IEM Directive.

Besides the orthodox approach to transmission network unbundling, the LSE also fully liberalized the generation segment of the market by making the right of establishment (in this case, not only by buying existing assets, but also by building new ones) free of government discretion. This obviously did not however mean that the government would relinquish its

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<sup>87</sup> It must be remembered how utilities had also been given shares in REE, but they did not hold special decision-making rights, the only veto power being placed in the hands of government representatives. The government also held the right to appoint the company's President and CEO.

right to sectoral planning, which in fact did regularly via the use of 10 or 5-years planning documents suggesting the minimum necessary amount of generation desired and leaving it to the private initiative to decide how to cover it. In relation to the actual working of competition, the LSE established rules regarding the basic framework of the wholesale market. Such framework was further developed by more specific regulation<sup>88</sup> leading to the organization of a wholesale spot market (commonly referred to as the *Pool*) based on the principle of marginal pricing<sup>89</sup>. The only explicit exception to the free interplay between supply and demand in the wholesale market was the sovereign privilege to reserve up to 15% of the daily generation (and thus market) share to power plants using indigenous primary resources which were to be intended (as it more explicitly done in the final depositions of the act) as domestic coal. The 15% limit was allowed by the 1996 IEM directive. In the following chapters, the role of coal in the Spanish electricity market will be treated in more details and so will the treatment of renewable electricity, which is the second major exception to the functioning of the electricity market.

#### 5.2.2. Tariffs and the Retail Market: Laying Down the Ground for Cost Transparency and Competition

Where the LSE clearly exceeded the minimum requirements of the 1996 IEM directive was in relation to the opening of the market to consumers. The LSE established the concept of supplier (again, in the sense of retailer) for the first time and a rather ambitious calendar for the progressive access to all consumers to the possibility of acquiring electricity in the liberalized market. Such access would first be permitted to ‘qualified’ consumers, i.e. industrial customers with consistent yearly consumption of electricity, and only progressively to smaller customers up to full market opening, which was initially set for the 2007. As for tariff setting, the LSE still maintained regulated tariff set by the government as the main instrument for those consumers that did not want to make use of the liberalized retail market. In fact, the methodology for calculating the regulated tariff would have differed much as compared to the MLE system. Even though the different sources of electricity costs were now clearly specified and could be attributed to different market segments and therefore

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<sup>88</sup>Royal Decree 2019/1997, 26<sup>th</sup> of December

<sup>89</sup> Marginal pricing means that all electricity offered in the market and accepted to balance demand is remunerated according to the price offered by the last (i.e. marginal) unit needed to reach market equilibrium.

separated, the tariff charged to consumers was still presented as ‘integral’. The five different identified components were: the cost of electricity, which would still be calculated as the average cost registered in the wholesale market during a regulated period established by the competent authority<sup>90</sup>; an access tariff or fee, including the network regulated costs of transport and distribution; the cost of commercial supply or retail; the ‘permanent costs of the system’, intended to be a general category including all the costs generated by the different electricity policies set by the government; and, finally, a more specific category which referred to the costs of guaranteeing security of supply and diversification (including the costs of supporting renewable energy).

This was a subtle but important change compared to the MLE as it laid down the basis for a shift from the concept of ‘integral tariff’ (i.e., one where all concepts are bundled together and provide little information to consumers) to that of additive tariff (allowing the consumer to clearly recognize the different sources of the costs of service provision). This distinction was a necessary prior step to competition among suppliers in the retail market, which were called to compete on two cost categories only, the cost of electricity acquired in the wholesale market and the cost of retail. All other cost categories were instead set by public authorities and therefore outside the purview of competition and to be distributed among consumers based on criteria determined by either efficiency or political discretion. There was instead continuity, although using a different language, between the LSE and the MLE in relation to the notion of electricity as a public service. The LSE in fact did not use the expression ‘public service’, although the notion of public and universal service was translated into a new concept compatible with the domestic constitutional language, that of ‘essential’ service (Bacigalupo Saggesi 2009).

The final relevant aspect of the LSE was the definition of the status and the tasks of the independent regulator, the National Energy Commission (CNE). As in the past, there was broad reticence to go beyond the formal institution of an independent regulator and to give substance to its competences. The CNE was thus still primarily intended as a body with consultative functions to assist the Ministry of Industry in its normative function, including

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<sup>90</sup> The norm would be for this period to be as long as a year. Only when it would become clear the considerable deviations that were caused by taking such a long period as a reference, the regulatory period would be shortened to three months

the setting of tariffs, long-term planification and adjudication of minor conflicts in relation to the technical and economic management of the system (Moral Soriano 2008, 104). The CNE was therefore to be considered a very weak agent, whose opinions were not binding on the government.

### 5.3. The Europeanization Impact on Liberalization: Struggled Accommodation?

The transition to an efficient and autonomous liberalized market was however hobbled by political and structural limits. It has been pointed to political factors as the main cause of the limited reach of deregulation policies in Spain and its reactive, rather than proactive character (Molina 2001). In a way, many economic sectors were still characterised by a solid corporativist and protectionist consensus, linking financial and economic élites to a bureaucracy with a strong statist and interventionist mindset. It must also keep in mind that the structural characteristics of the variety of capitalism to which Spain is considered to belong do not conform to the standard ‘liberal market economy model’. The breed of domestic capitalism has been in fact defined as ‘mixed market economy’ (V. A. Schmidt 2009, 520) or ‘state-influenced mixed market economy’ (Royo 2008). Under this label, the role of the state is even more important than in ‘coordinated market economies. Whereas in the latter private and corporate actors possess sufficient self-coordination capacity, in the case of mixed-market-cum-state type, these are missing or insufficiently developed, and the state plays a more important and structural (not just mediating) role.

The electricity sector moreover represented a double interest groups, clientelist obstacle to unfettered liberalization as the shareholder structure of many of the private utilities featured the strong presence of the banking sector, which exercised its own channel of influence on government (Arocena, Kühn, and Regibeau 1999, 389). To be sure, the need to modernize the economy and the ideological convictions of the ‘new’ socialists and ‘new’ conservatives, with the support of the regional Catalan party Convergència i Unió, had provided a degree of motivation, if not credibility, to the intentions to move the sector away from the traditional opaque clientelist bonds. Therefore it is said that both mainstream parties had gone through, under the push of the EU, a process of ‘liberalization learning’. However, this renewed spirit was not considered sufficient, in the electricity sector, to dissipate the “*unbearable obscurity*” (Arocena, Kühn, and Regibeau 1999, 390) that characterised the sectoral policy-making centred on private networks of affected interests and their political-bureaucratic

counterparts. The same Ministry of Industry, on the other hand, had defended the opportunity to move towards liberalization in a concerted manner with the sectoral interest. During its initial years of implementation, LSE outcomes have been subject to much criticism, due both to the lack of specific action to deal with the necessary prerequisites for liberalization to work and for the fragmented and incomplete approach taken, as it will be better explained in the next sections.

### 5.3.1. The Missing Liberalization Precondition (I): Wholesale Market Concentration, Geographical Isolation and Limited Competition

The most glaring shortcomings was beyond doubt the concentration on the generation side of the market and the consequent uncompetitive prices in wholesale markets (Arocena, Kühn, and Regibeau 1999). Paradoxically, this was the unintended outcome of the solution adopted to the problem of financial distress that many utilities had endured in their investment efforts to increase the levels of installed generation capacity, which was in turn based on faulty demand forecasts made by the government. The process that led to the strengthening of Endesa was a case in point, allowing the utility to take over many other financially distressed companies as a way for the government to artificially increase its market value before privatisation. In other words, a trade-off had been made between the benefit of the revenue that would accrue to the Treasury from privatisation for a future likely increase of the prices consumers would have to pay as a result of a more concentrated market<sup>91</sup> (*ibid.*, 392). Whatever the reasons, the government did not heed the lesson of the British experience and did not address the problem of concentration before proceeding to liberalization. In the case of Britain however, the government remedied with via a successful authoritative ex-post intervention that forced the dominant actors to divest part of their generation assets and achieve an adequate level of upstream competition<sup>92</sup>.

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<sup>91</sup> Another clue to the intentionality behind market concentration and the role of Endesa privatisation are the late take-overs that the company carried out over two companies it partially controlled (Sevillana de Electricidad and Fecsa). Liberalization in fact would have advantaged vertically integrated companies in the generation and distribution segments (given the absence of a retail market, it was anticipated that distribution companies would have turned themselves into retailers). To obviate its lack of presence in the distribution segment (the company had in fact been conceived as the operative arm of the state in the more strategic segment of generation), Endesa was allowed to complete the take-over of the two companies at the cost of further market concentration. The CNE had expressed a negative opinion on the opportunity of such transaction (Velasco 2015, 131–33)

<sup>92</sup> However, other countries, such as France or Belgium, also showed, at that time, high level of concertation, close to monopoly (Beato 2005)

One more structural aspect of the Spanish wholesale market deserves attention in relation to the issue of concentration is the limited market contestability due to the incompleteness of the IEM in terms of transborder interconnection capacity. In principle, market concentration can be redressed by the endogenous competitive dynamics. In the absence of barriers to entry, if markets are concentrated and prices are high there is an incentive for new entrants to dispute the high rents to incumbents, progressively leading to competitive prices. However, notwithstanding the possible political and administrative barriers, international competition in electricity markets is conditioned by the presence of transborder transport infrastructure and it has often been mentioned that this is not in fact the case for Spain. The only possible solution then would have been increased competition from within, either in the form of international investors from the same sector entering the electricity market or domestic investors coming from other related sectors (the sectoral proximity being a necessary condition due to high technical specialization and know-how). Both expected events would actually gradually take place in the following years, with the entrance of the Italian public-owned electricity utility ENEL in 2001, the Portuguese EDP<sup>93</sup> and the Catalan company Gas Natural which started to build CCGT and take advantage of its competitive position in the natural gas sector (Vives 2007, 227–28). Although the appearance of new entrants slightly improved the situation, it was still far from dissolving the oligopolistic conditions. In the long run, it will also be explained, the irruption of RES-E generation would also partially contribute to market deconcentration, but it was something that could have not been anticipated when engineering liberalization. The government seemed to recognize the problem of market concentration and followed the advice of the CNE and the national competition authority by first placing demanding asset divestment conditions on a proposed merger between Iberdrola and Endesa in 2000 and then vetoing an attempt of Gas Natural to take over Iberdrola, considering that the new company could have significantly manipulated the wholesale market (Crampes and Fabra 2005, 130).

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<sup>93</sup> Even though both companies however entered the market by taking over the smaller actors already active in the market, they pursued a politics of relative expansion. As it will be related, the case of ENEL is however quite singular as it would become, after a highly contentious political and business struggle, the owner of Endesa in 2007

### 5.3.2. The Missing Liberalization Precondition (II): Capacity Shortages and State Planning Prioritising Investments and International Interconnections

Another missing precondition at that time was feeling that the domestic market would soon be facing a tight margin between demand and supply, a problem only made worse by the already mentioned insufficient cross-border interconnection to the rest of the continent. These bottlenecks were addressed by the government when it started to exercise its new role as planner for the electricity sector within the logic of a liberalized system. According to the LSE, the government would retain full competence in planning network infrastructure (transport and distribution) development, while limiting its role to indicative planning in relation to the generation fleet. The planning role was justified by the fact that markets alone would not have ensured security of supply and, increasingly, environmental goals. The latter had started to become a new crucial constraint on a fully market-driven approach, given the requirements of three different EU regulations (reduction of the impact on GHG emissions, emissions from thermal power plants and the development of RES-E).

The first planning document of this kind, which was intended to cover a ten-year period between 2002 and 2011, was adopted by the government in September 2002 and, once again, was centred on the need to increase generation capacity to meet the future expected needs of an economy that started to be buoyant. The plan made a clear bet on two technologies to attain the goals of diversification of primary energy sources, moving away from the dominance of coal and nuclear power. According to the prevailing new technological paradigm, the choice was to stimulate the construction of CCGT power plants, which was perceived at that time as the more efficient form of thermal generation based on natural gas, of which Spain had started to import considerable quantities given its proximity to the North African gas field, and the development of windfarms. At the same time, the document also stressed the need of increasing the interconnection with France, considering the political impulse provided by the Barcelona Declaration adopted by the European Council in 2002. The high-level commitment established an aspirational goal of having each Member State enjoying a 10% interconnection of its installed generation capacity with neighbouring Member State. The government intended to build two new interconnections of 400 kV high-voltage lines across the border with France. The preferred option was to build at least one via a corridor running through the central Pyrenees, to exploit the hydraulic power generation

on the Spanish side and the nuclear one on the French side. However, the technical difficulties involved in such building plan suggested a more readily feasible alternative, via the Catalan border with France (the Bescanó-Figueres-Freixas corridor), with a view to have it completed and commercially available by 2005. This project would however incur into fierce resistance by the environmental movement and create tensions within the new Catalan coalition government who came into power in 2003. Within the Catalan government, a fracture emerged between the green party (ICV) who supported the environmental group thesis, and the other two government parties. The latter embraced the view that the new powerline was needed to alleviate the shortage of electricity frequently registered in the north of the Catalan region and to feed the new high-speed-train link that was projected to run from France through Catalonia up to Madrid, an historical demand of the Catalan economic sector. Interestingly, the environmental movement disapproved of the project on two grounds: not only the damage to the landscape that it would entail but also the fact that importing electricity from France would be an unnecessary and costly alternative to increasing the amount of decentralized renewable generation within the region.

The political sensitivity of the interconnection question already at this time could not be underplayed, with the Catalan party CiU insisting more than others to extract assurances by the central government that it was using its diplomatic influence to put pressure on France to cooperate for the approval, building and completion of the necessary projects. Spain and France had not built any new interconnector since 1982, the actual interconnection commercial capacity being limited to 1400 MW<sup>94</sup>. In an appearance to the Energy Commission in Congress<sup>95</sup>, the Secretary of State for Energy assured that the government, through REE, was actively working to increase the available interconnection capacity, that he had the assurance of his French counterpart about the willingness to cooperate but that the

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<sup>94</sup> The existing interconnections crossed the Basque Country (the 400kV Hernani-Argia interconnector and the 200 kV Arkale-Argia interconnector), the Aragón Autonomous Community (the 220 kV Biescas- Pragnèred connector) and Catalonia (the 400 kV Vic-Baixas connector). In reality, the initial interconnection capacity of these existing transmission lines was limited to 1.100 MW and it was only after bilateral work by the Spanish and the French TSOs that it increased to 1.400 MW. This upgrading was part of the bilateral agreement between France and Spain that is related later in this paragraph.

<sup>95</sup> Economy Commission, Diario de Sesiones, VII Legislature, no. 818, 23 September 2003

French authorities were experiencing problems in having the agreed projects approved because of local resistance<sup>96</sup>.

The government had however reasons to believe that the French counterparts would cooperate because they had been forced by the European Commission to do so, as an unexpected spinoff of a merger case in which the Commission became involved. In 2001, the French public utility, EdF, via a German utility it controlled, launched a takeover bid over one of the four Spanish utilities, Hidrocantábrico. The Spanish government vetoed the operation, with the allegation that it did not accept the fact that a liberalized market as the Spanish one was to fall prey of a public-owned company that competed unfairly as it enjoyed the backing of the government. Moreover, there was no reciprocity as the French market was not as open as the Spanish one (implying that it was not possible for Spanish utilities to equally expand in the French market). The Commission took an initial unfavourable position in relation to the Spanish government veto, but once it got involved in the fine-grained analysis of the case, it came to the conclusion that there was ground to make the operation conditional on concession on the part of EdF. Although it might come as no surprise that the Competition Commissioner took a hard stance against a public quasi-monopolist as EdF<sup>97</sup>, the reasoning used on the case was more nuanced and it offered the Spanish government an opportunity to extract concessions from France that it had never been able to obtain by means of bilateral spontaneous cooperation. The Commission found that, by entering the Spanish electricity generation market, EdF, which is not an unbundled company and therefore also controls the French TSO, could have led the latter to lose interest in increasing the level of interconnection between the two countries, to keep prices high in the Spanish market and let EdF profit from them. The Commission, in other words, acknowledged the peculiar condition of the isolated Spanish market and feared that the only chance the latter got to become fully integrated in

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<sup>96</sup> A public consultation for an interconnection through the Eastern Pyrenees that would run parallel to the high-speed rail line had caused the project to be rejected. The Eastern Pyrenees connection was an alternative to the Central Pyrenees connection, favoured by both governments, but had also met unsurmountable resistance by the French environmentalist movement. It was nonetheless assured that there was a firm bilateral agreement among the countries to build two more interconnections of 400 kV each that would have increased the commercial interconnection capacities to 4000 MW. The Secretary of State specifically referred to the technical work being done on the exact placement of the Eastern Pyrenees interconnector plus another one that was still at an early project stage. He also stated that by 2007 there would be 20 connections with France (but it is unclear what the mentioned number refers to).

<sup>97</sup> At that time, France was opposed to the idea of a fully contestable EU electricity market and defended the sovereign right to limit foreign presence in the domestic market, a position that was manifestly contradictory with the expansionist strategy of EdF.

the IEM, and therefore make Iberian consumers benefit from increased competition, could be thwarted by the proposed merger operation. It therefore conditioned the takeover to an informal commitment by EDF to increase the connection capacity between the two countries. Such commitment was elevated to the status of an intergovernmental informal agreement between the two countries: interconnection capacity would be increased to 4.000 MW in a reasonable time. The agreement was hailed by the Prime Minister, José María Aznar, as fully satisfactory, assuring that, given the guarantees provided by the French government, he had no doubt that it would be accomplished. Subsequent statement from government representatives in 2004<sup>98</sup> continued to show optimism on the possibility of reaching the 10% interconnection goal.

This was also a matter of interpretation on which reference should be taken into account for goal's calculation: if, besides the link with France (that were now vaguely said to be able to reach 2.600 MW in 2007 and 4.000 MW in 2010) those with Portugal (with which cooperation was more smooth because of the strong symmetric interdependence among the two countries) were also added to the total sum, then the 10% target would still have a slim chance to be achieved. Connection with Morocco would obviously not account and were however of a modest importance.

### 5.3.3. The Missing Liberalization Precondition (III): Retail Market Concentration and Limited Competition.

Legal and ownership separation between transmission network and the generation segment had solved one of the problems of vertical integration. However, distribution networks had been excluded from the same requirements by the 1996 IEM directive, which raised a likely problem insufficient competition in relation to the downstream market segment, retail. The argument goes that a market is made both by offer and demand. If the generation side of the wholesale market (i.e., the offer) is highly concentrated, a partial countervailing effect could nonetheless come from a more atomized and competitive demand. However, at the beginning of the process of liberalization the existence of conditions were highly unlikely because of the absence of a well-developed retail market (and the LSE in fact had opted to limit the possibility of freely contracting their supply of electricity to a limited number of high-

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<sup>98</sup> Industry, Tourism and Trade Commission, Diario de Sesiones, VIII Legislature, No. 78, 22/9/2004

consumption consumers). Consequently, demand in the wholesale market would have mostly come from the few distribution companies that still directly served, by statute, the overwhelming majority of consumers. Distribution companies were themselves vertically integrated (only subject to legal and accounting separation) to generators. Under these conditions, it would have been difficult to expect countervailing forces to the exercise of market power that would have put competitive pressure on prices (Arocena, Kühn, and Regibeau 1999, 393).

However, the government was cognizant of the problem and became stimulated by the comparatively lower prices registered in the first years of experience in the unregulated market for industrial consumers. The calendar for full consumer eligibility was accelerated by establishing, already in 2000<sup>99</sup>, that total liberalization of the retail market would have occurred sooner than originally planned. This would impose distribution companies, hitherto responsible for the provision of the supply of electricity according to integral tariffs, to make available metering devices for their customers (at a loan price decided by the government) to enable future retailers to establish commercial contracts with their new customers. The date for full liberalization of the retail market was then set for January 2003. However, it was also decided that accessing the liberalized market would be an option and not an obligation. The option to be supplied under the integral tariff system would not disappear, and the old system of regulated supply would coexist with the new system of free commercial supply. This option would be however denied to large consumers, i.e., those connected to high-voltage lines who would therefore lose the right to be supplied at regulated prices. All other consumers, notably the electoral sensitive segment of households plus small and medium enterprises (SMEs) could still find refuge in the integral tariff system.

It was debated though at that time if a truly competitive retail market could emerge out of the oligopolistic and vertically integrated structure of supply that had characterised the Spanish market (Fabra and Fabra Utray 2010, 37). Although the potential existed for competition among retailers to offer prices that better reflected competition on the wholesale markets (but also transmitting to customers price signals for efficient consumption), it was conditional on several factors that made it difficult to remove barriers

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<sup>99</sup> Royal Decree 6/2000

for new entrants. First, it was expected that the same dominant distribution companies would turn themselves into retailers, inevitably enjoying great advantages in retaining their old, regulated, customers. Access to information about their identity and their consumption profiles was an obvious advantage, allowing the former supplier to make tailor-made offers to their customers. Moreover, the administrative barriers to switching supplier could also increase the transaction costs (including searching and psychological costs, the latter related to the perception of risk linked to a new kind of contractual relationship) for a product that does not raise much interest in consumers, especially if it represents only a small share of their available income. There was evidence from other countries that, paradoxically, liberalization had resulted in price increases by the former regulated utilities, once they started to act as commercial supplier, and no variation in their large base of customers. The reports issued by the CNE during these initial years of liberalization clearly pointed at very high concentration ratios in the free retail market. As expected, the new retail units of the vertically integrated generation and distribution utilities, totalled market shares not lower than 80% of the still limited, market.

#### 5.3.4. A Contested Precondition for Liberalization: The Transition to Competition Costs

It has been noted how the LOSEN had created an implicit legal entailment for utilities as it acknowledged the right to be reimbursed for the depreciation of their capital value because of the introduction to liberalization. Such reimbursement would have been assured via the tariffs paid by consumers. The estimated amount was almost 12 €billion. TCCs were characterized by two variables: the amount of capital depreciation and the condition that such depreciation would in fact occur, which was operationalized as wholesale market prices being lower than a specific threshold (36 € per MW/h) on a yearly basis average and over the following ten years (from 1997 until 2007). Therefore, TCCs not only would represent a considerable source of distortion for the proper functioning of the market but they were also the outcome of a hypothesis about what could have happened under a more competitive environment. There was room for uncertainty that these conditions would have materialized, at what speed and to what degree (Crampes and Fabra 2005). TCCs rights were obviously only assigned to those generators that already existed under the MLE framework based on their market shares at the time of the introduction of liberalization. This implied that the existence

of TCCs generated different incentives in relation to the bidding behaviour in the wholesale market between the beneficiaries and new entrants. As such, while beneficiaries could have had an interest in keeping prices low (because they would have received TCCs compensation and deter new entrants by making price levels unattractive), new entrants (but also beneficiaries that had received low shares of TCCs and would see their reimbursement run out quickly) would perceive it as an implicit price-cap. This asymmetry of interests caused tensions among the utilities within UNESA with Iberdrola and Gas Natural particularly vocal to oppose what would be in the end a privilege for Endesa.

Although TCCs mechanisms had already been used in the US, and the 1996 IEM Directive was opened to the possibility of compensating former monopolist for their expected losses, the Spanish case (together with that of few other Member States that had decided to adopt the same compensation strategy) was closely scrutinized because of the possibility of the involvement of state aid. TCCs had caused an intense domestic political skirmish between PP and PSOE, the latter considering that they were particularly generous and the outcome of clientelist policy. Being the Spanish EU Energy Commissioner at that time a former PP politician, it was also argued that she had tried to influence the decision of the Competition Commissioner. After two years of negotiations among the Commission and the government, TCCs were deemed admissible and legitimate state aid. As already noted, TCCs were financed via a levy of 4.5% on the bill paid by consumers, as an allowed regulated cost, with a formula that emulated the one for the compensation of the nuclear moratorium (and that would in turn inspire the formula for the attribution of the tariff deficit in the late 2000s).

However, the hypothesis on which the TCCs had been built (power prices lower than the set threshold) only lasted until the year 2004, which meant that the sum of what had been received via the TCCs plus remuneration via market prices had already exceeded the allowed amount of TCCs. Nevertheless, the lack of specific provisions about who was in charge of taking care of the net accounting, had cause the surcharge to be still applied through 2005 and 2006, generating an excess remuneration in favour of the beneficiaries which was estimated in the order of 3.4 €billions (de las Heras 2016, 39). The PSOE government, in 2006<sup>100</sup>, suspended the payment for the remaining years, but a fierce struggle followed suit

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<sup>100</sup> Royal Legislative Decree 7/2006

over the political and legal case to recover the supposed undue received by some of the beneficiaries. While some have suggested that there was no clear legal case for claiming that TCCs have been disbursed in excess and that in any case had been disbursed according to the dispositions enshrined in the LSE (de la Quadra- Salcedo 2009), the case has been politically quite sensitive. As it will become clear in the next paragraph, the issue has become relevant within the increasingly difficult condition in which the electricity sector became involved, the need to find financial resources to cover the financial hole of the tariff deficit<sup>101</sup>.

#### [\*\*5.4. Inheriting Liberalization: Structural Constraints and Agency by The Socialist Government\*\*](#)

During the PP government, the PSOE had adopted a mixed, almost uncomfortable, attitude in relation to the process of liberalization. The LSE was clearly a rebuke of the LOSEN, which the PSOE had considered as an acceptable compromise between the need for a strong presence of the state in the sector and a gradual opening to competition via the independent system. It is difficult to predict, counterfactually, how the PSOE would have transposed the 1996 IEM Directive, but its criticism of the LSE had never gone as far as calling into question liberalization as such. The LOSEN would have probably raised eyebrows in the Commission and for this reason, the PSOE had contested more the form of liberalization than the substance. The electricity policy context that the PSOE found when in government was therefore quite removed from its past policy preferences. Although the electricity sector had firmly moved into the realm of EU, there was much room for improvement on the liberalization as implemented by the former government. Although the country was in the middle of an economic boom, it was probably felt that there were enough governmental and economic potential to commit to reforms. A new IEM directive had been adopted in 2003 and still needed transposition in many of its prescription. The greatest challenge for the new government was not however represented by market reforms. The electricity sector had been

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<sup>101</sup> There have been several attempts at obtaining a judicial order to recover what are claimed undue TCCs. The CNE suggested in 2010 their recovery as a measure to finance the tariff deficit. Different interest groups, mainly from the renewable sector, have suited the PSOE government for relinquishing its right to reclaim the undue TCCs. Apparently, the Ministry of Industry had requested an opinion from the State Legal Service, which concluded that there was ground for asking the reimbursement of the excess TCCs and that, in any case, it would have been the Courts to decide on the litigation, had the beneficiaries decided to challenge the injunction form the government. The question has also been elevated to the European Commission by the same interest groups which found, to their own surprise, that also the PP government, in 2015, had done the same, motivated by the even more pressing need to deal with the tariff deficit. The Commission has not taken a decision yet, but it has asked the claimants to provide more detailed information about the case.

fully engulfed by environmental policies, but the integration of this dimension had barely been a concern for the former government. The next chapter will deal with the environmental action of both governments, narrowing the focus here on the restructuring of the domestic electricity market during the years that, in hindsight, saw the Spanish economy getting to the highest point of its twenty or so years of spectacular growth and then tumbling down into one of the worst crises in the memory of the country.

#### 5.4.1. The White Book: A Blueprint for Remedial Action

Upon arrival, the new Ministry of Industry commissioned to a team led by one of the most respected energy economics academics, the Spanish Ignacio Pérez Arriaga, a comprehensive diagnostic of the state and the consequences of liberalization and the measures needed to possibly improve on its performance (Pérez-Arriaga 2005). To its own credit, the government had chosen an impartial ‘agent’, as the professor was a supporter of liberalization and had extensively worked on the conditions needed to achieve the most out of it, i.e. considering the many specific constraints that characterised electricity markets. In that sense, it cannot be said the Ministry was looking for a scientific excuse to overturn liberalization but was most likely moved by a genuine desire to acquire knowledge and direction about how to redress an experience that had lasted long enough to reveal both its benefits and shortcomings. The 600-hundred pages long document offered, as expected, a rigorous analysis of both benefits and limits of the Spanish liberalization experience and an equally straightforward set of recommendations to ameliorate the conditions of the electricity sector.

The premise of the White Books was that reform was both necessary and urgent, that the original approach to liberalisation had failed to achieve its main goal, i.e., an efficiently working market, and that the perceived need for a change in regulation had generated a climate of uncertainty with prejudicial consequences for all actors involved, including companies, consumers and the same regulatory agencies. The long list of problems<sup>102</sup> clearly

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<sup>102</sup> The diagnostic included: an inadequate market structure for achieving significative competition; a wholesale market price that did not convey a meaningful signal; the need for regulatory harmonization with Portugal to achieve an Iberian electricity market; a tariff structure that ignored the wholesale market price, that created obstacles to retail competition and did not send meaningful price signals; costly capacity mechanisms that did not achieve the goal for which they are established; distortionary TCCs ; a retail market stifled by the vertical integration between the distribution and the retail segment and by the competition with integral tariff; mismanagement in the procedures to access to the transport network; a suboptimal operation of the transport network, which was increasingly subject to the challenge of managing intermittent generation from renewables but did not have the necessary physical and regulatory resources to deal with it; and, finally, an unsustainable

demanded a change in the regulatory approach to restore coherence and make real the benefits that had originally inspired the decision to shift to a system characterized by more competition in those segments where it was possible to achieve it. The White Book focused its attention on two problems that were generating the most inefficiencies and incoherence. First, it emphasized the shortcomings of the tariff model, singling out the fact that it made little sense to have established competition in order to make the real price of electricity emerge out of the free interplay of agents into organized market only to then sell it at regulated integral tariffs that were calculated via mechanisms that little had to do with market prices. It stated that, in relation of its role as a tariff setter, the government had to opt between two very distinct and opposite regulatory styles.

The first, which corresponded to the current behaviour, consisted in exercising strict governmental control over tariff levels, as an instrument to influence utilities' financial balances (generation, transport, and distribution above all other activities) and inflation levels. What counts according to this approach is the overall level of the regulated, integral tariff (or the access tariff, for the liberalized retail market) more than the efficient regulation of each segment. The volatility and uncertainty of the wholesale price of electricity is thus a nuisance to deal with because it could generate tariff deficits if the estimation used in setting the tariff does not correspond to the actual wholesale market outcomes and requires more ad-hoc and ex-post regulatory adjustments. The achievement of stable, and possibly low, tariffs over time is the overarching goal. The obvious drawback of such approach is that the different activities are retributed according to a regulatory logic that differs from that of competition and efficiency on which they are run (and on which the expectations of their shareholders and capital lenders are based). This regulatory mismatch often causes financial imbalances with adverse consequences for these activities. A further consequence is that consumers end up acting on distorted price and economic signals that generate inefficient individual and the collective behaviour.

The second approach, the one suggested by the White Book, was therefore to develop targeted and efficient regulatory measures for each of the regulated segments according to their singular characteristics, in search of the maximum possible efficiency, while ensuring

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energy model in need of a global plan to integrate the different action lines and policy decision that were cumulatively placed upon it (Pérez-Arriaga 2005, 3)

that market competition, wherever possible, is as undistorted as possible and allowed to pass its outcomes on to consumers to stimulate efficient behaviour. As an institutional rule, the expert also suggested that, for tariff methodologies to be credible and legitimate, the responsibility for their setting should be granted to the independent regulator, while the government role would be limited to their approval.

However, the White Book placed great emphasis on the fact that the problem with the Spanish electricity sector was not just the interventionist and distortionary approach adopted by the government, but also the absence of real competition, a problem due both to horizontal concentration in the different segments of the market (i.e. the presence of a few dominant actors which resembled an oligopoly more than a competitive market) and vertical integration (the few dominant actors in the wholesale market were also controlling the distribution and the retail sector, as it has been stated in various occasions). The central message of the White Book was thus to try to improve on all accounts, by first creating the conditions that would render the electricity market truly competitive (therefore a positive action by the government) and then acting on the efficient signals provided by the market (therefore government constraint). In terms of Europeanization, the White Book suggested to make the most from negative integration. The reaction of utilities, that had been pleased by the selection of an authoritative and apolitical source of expertise, was understandably mixed, as the recipes contained in the White Book would run in their interest as regarding to the limitation of government regulatory discretion, notably in relation to tariff setting, but also contrary to it, if the advice of limiting their power market was also considered.

#### 5.4.2. The PSOE Government and Negative Integration: Between Innovation and Renewed Interventionism

##### 5.4.2.1. Acting on the White Book: Limiting Wholesale Market Power

The new government seemed to take the recommendation of the White Book quite seriously, and it had an occasion to act on them when transposing the 2003 IEM Directive. Market concentration was first tackled by the introduction of an innovative instruments, that avoided the adoption of more radical measures as the mandatory divestment of assets (the solution adopted in Great Britain years earlier was rejected because of the anticipated frictions with the domestic industry). One of the peculiar characteristics of the Spanish electricity market

had been, since its inception, the prevalence of the spot market, the *pool*, where approximately 80% of the electricity was daily traded, and the underdevelopment or forward markets and bilateral contracts. The problem with this distribution of market activity is the sensitivity of the spot market to price manipulation by dominant actors. It might be remembered moreover that the rules regarding the TCCs had introduced a strong element of distortion in the market too, creating frictions between Endesa and Iberdrola. It was difficult to have confidence that the Spanish pool was generating prices that reflected the true cost of electricity. To partially alleviate this problem, the Ministry of Industry followed one of the suggestions of the White Book by first, establishing the legal concept of 'dominant operator' in the electricity market and then by creating 'virtual power plants' (VPP) that would compete with the other generators in the wholesale market<sup>103</sup>. These VPP would be created by forcing the two dominant (and belligerent) players, Endesa and Iberdrola, to auction part of their generation on a three-monthly basis (through a system called 'energy primary emissions'). The buyers of such virtual generation capacity were then allowed to participate in the pool, increasing the level of competition.

#### 5.4.2.2. The (Forced) Internationalization of the Electricity Sector: the Troubled Endesa Take-Over

However, the reformist momentum and the apparent intention of taking no sides in the domestic contest between competing domestic economic interests was seriously compromised by an economic and political earthquake that shook the Spanish electricity sector in 2005. The epicentre of what was to become an international affair was the hostile take-over that Gas Natural launched on Endesa in September 2005. Gas Natural was a Catalan company, controlled by the Catalan bank La Caixa, while Endesa, who also featured among its main shareholders a financial institution, Caja Madrid, was part of the financial establishment based in the Spanish capital. The offer received the approval of the central government, which was at that time maintaining good relations with the Catalan government given the participation of the Catalan branch of the Socialist Party in the regional ruling coalition. It was clear from the beginning that the operation was regarded by the Madrid establishment as much more than a hostile take-over and a challenge to the balance of economic power in the country launched by the Catalan economic élite. The offer was turned down by Endesa and

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<sup>103</sup> Royal Legislative Decree 5/2005, 11<sup>th</sup> of March 2005

the issue was politicised by the PP, who claimed the government approved the operation to please the Catalan economic élite and public opinion. Endesa then found a *white knight* in the German utility E.ON that decided to launch its own friendly take-over in February 2006. However, this time the Spanish government expressed an unfavourable opinion and made a swift legal change to give a legal mandate to the CNE to decide on the admissibility of the operation, claiming that the loss of control over the most important domestic utility to a foreign company was a risk for the security of supply of the country. The CNE then issued its decision that involved harsh conditions on E.ON were it to gain control over Endesa, seriously limiting its operational autonomy. The hostility of the Spanish government did not go unnoticed in Brussels, and the Competition Commissioner opened an infringement procedure against Spain. In the end, quite surprisingly, a third actor joined the scene, the Italian (and public-owned) utility ENEL, who, without launching a takeover bid, bought a significant participation in Endesa and, together with the Spanish multi-utility company Acciona which also possessed a significant share of Endesa, made it known that it also aspired to the control of Endesa. E.ON then decided to come to an agreement with the new competitors, retiring its offer and selling its shares to the Italian-Spanish duo, who became the new majority shareholders of Endesa in October 2007. The ECJ also ruled in favour of the Commission in the infringement case opened against Spain in 2008, leaving the reputation of the Spanish government and the CNE badly damaged. In any case, the harsh climate created by the Endesa incident led, as a side-effect, to the slow-down of the reformist action of the government.

#### 5.4.2.3. Acting on the White Book and Implementing the 2003 IEM Directive

The overlap between some of the White Book recommendations and the norms included in the second IEM directive provided the government some extra leverage in relation to the private sector. The government felt that the new directive did not require a major overhaul of the existing legislation, considering the incremental but substantive reforms to which the original LSE had been subject over time. However, the new directive required some action, with respect to the relations and the respective roles of public authorities and private actors. The new directive was more explicit in relation to the legal and functional separation of the activities exercised under a fully competitive regime and those that operated under a regulated regime (Carrillo de Albornoz 2009). Although this was not a problem in relation to the transport network, a legally separate company had to be created out of REE to act as TSO.

As for the distribution network, the new directive imposed a more stringent requirement as the degree of vertical integration between generation, distribution and retail was, in the case of Spain, still a relevant problem. The act adopted to modify the LSE and transpose the IEM directive<sup>104</sup> explicitly mandated for the functional separation of distribution, generation and retail activities and, consequently, deprived the distribution companies of the responsibility to carry out the activity they had hitherto traditionally exercised, i.e. the commercialization at regulated integral tariff. Therefore, since the beginning of 2009, commercialization of electricity would be an activity of exclusive competence of retailers. Still, a particular category of retailers was identified, those that would now be tasked with the offering of the regulated integral tariff. Unsurprisingly, these retailers were affiliated to the dominant players, on which the government continued to count for carrying out regulated activities.

The change went further than a simple transfer of responsibility between legally and functionally distinct entities, as the new law also changed the notion and the modalities of the public and universal service that had characterized the relation between the state and the consumer/citizens in the commercialization of electricity so far, even within the liberalization spirit of the LSE. According to such ‘new’ public service notion (Bacigalupo Saggese 2007), the default modality for the supply of electricity to households and SMEs would cease to be the integral tariff system, and it would now consist in a mixed tariff that combined the freely agreed price offered by retailers in a competitive market and the regulated access tariff that would include the cost of the regulated activities plus the other costs of electricity policy (and taxes) established by public authorities. Such change would however be gradual<sup>105</sup> and engineered to be more an accommodation of the requirements of the directive than a transformative shift towards the phase-out of regulated tariffs. The universal right to be supplied at a price that corresponded to the notion of public service as envisaged in the IEM directive would be preserved, although, conceptually, as the right to opt for a ‘last resort tariff’ (or *TUR*, in its Spanish acronym), i.e. as an option that consumers should use if they did not find it convenient or attractive to use the market instead.

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<sup>104</sup> Act 17/2007, 4<sup>th</sup> of July 2007

<sup>105</sup> The suppression of the integral tariff provided by the distributor was also set for January 2009. The Ministry of Industry stated that he was receiving pressures from the Commission to accelerate the calendar for the suppression of the integral tariff, but that he had resisted it and conditioned an accelerated shift to oil price levels. This is because the marginal price of electricity in the pool was determined by thermal power plants whose operational costs depended on oil prices to which coal and gas prices are indexed.

#### 5.4.2.3.1. The Introduction of the Last Resort Tariff

The TUR was conceived as a ‘maximum price’ (i.e. a price-cap) that the consumers could have been asked to pay, thus setting a reference levels for retailers in the market but, at the same time, placing on public authorities the responsibility to ensure that TUR levels would be set at high enough levels to allow effective competition from retailers in the free market. In fact, if the TUR was set at very low levels, there would have been a squeeze on the profit margins of retailers that would have potentially discouraged them to enter the market. As one of the interviews for this dissertation stated (himself working for a free market retailer), “*it was simply impossible to beat TUR prices, it was the most successful loss-making company in town, and its shareholders were the same consumers that enjoyed below-cost tariffs*” (interview INGEBAU).

As for its provision, the responsibility to supply consumers at these new regulated tariffs would now be placed on a new legal and commercial figure (also allowed by the directive), the ‘supplier of last resort’<sup>106</sup> which, as commented above, were the new commercial units of the distribution companies that had been responsible for providing the suppressed integral tariff (which were called Suppliers of Last Resort, or CURs in the Spanish acronym). Such obligation was not however considered, from the legal perspective, as a regulated activity, although, according to the requisites of the IEM directive and those relative to the provision of public services, the process of selection and attribution of duties and privileges was to be subject to strict conditions (Sala Arquer 2009). The problem, for the CURs and the utilities to which they belonged, was intimately linked to the tariff levels that that government would have established. If they were insufficient to recover the costs of the provision of the public service, the CURs could have faced the risk of not being compensated by the government for the tariff deficit so generated, unless there was a specific legal and irreversible commitment by the government to do so. On the other hand, as already said, the TUR often was a ‘political price’ and a price cap that placed CURs in a favourable position as compared to commercial retailers (*ibid.*, 724), as they would not lose customers to competition. UNESA, whose members were designated to be CURs, was not in fact contrary, at least initially, to this change as its companies saw the possibility of having the ‘best of both worlds’, as they could have

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<sup>106</sup> Royal Decree 485/2009

retained households' consumers as 'captive consumers' via their CURs divisions, especially if 'political' prices were set at a low level. If, on the contrary, TUR levels were set high enough to induce consumers to move away from the TUR and look for more favourable commercial options, they could 'convince' them to switch to the free market with, quite obviously, their free-market retail unit<sup>107</sup>.

#### 5.4.2.3.2. The Introduction of Auctions as a Discretion-Limiting Measure

The reformulated 2007 LSE stated that TUR levels would be determined according to the principle of tariff sufficiency and in ways that would not cause a distortion of the market, a necessary condition to conform to the rules of the 2003 IEM directive. The government had therefore to escape two evils: being suspected to set political low prices, and thus generating deficits and preventing effective retail competition, or setting high prices that would attract political blame or reflected a distorted and uncompetitive wholesale market.

It might be remembered that the methodology used by the government to determine the price of electricity before liberalization was quite straightforward: total standard costs (therefore the costs estimated by the government together with the industry) were divided by the amount of electricity that was also estimated to be sold. When the LSE was introduced, this system had to be changed, and the cost of the electricity to be included in the integral tariff was instead calculated based on an averaged index of estimated pool prices and forward market prices. This system however had generated two problems. One, that will be detailed later in this chapter, was that, if pool prices deviated substantially from estimations on which tariff had been based, the tariff would be either too high or too low (the second event much more often recurring) and would then generate either a tariff surplus or deficit. The second was that, again, as the White Book signalled, if there was little confidence that pool prices were the result of a truly competitive market, customers would be paying an inefficient price and would be captive of the dominant pool players.

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<sup>107</sup> It will be explained in Chapter 7 how this process has in fact occurred, with many consumers benefiting from the TUR (or PVPC, its new name since 2014) switching to free market retailer belonging to the same utility as the CURs they were served by.

The introduction of the TUR had notably compounded the problem of calculating the cost of electricity in two ways. The first was that from July 2007, regulated tariffs had to coexist with free-market tariffs, established by retailers. As said before, TUR levels were to represent an implicit maximum price that free-market retailers could demand, but they should have not been set at a level that prevented free-market competition, as stated above. Free retailers would buy their electricity to be supplied to final consumers in the wholesale market, which meant that the government had to at least expose itself to the same dynamic if it was to set a price that was not completely arbitrary. Which in turn lead to the second problem because, if the government had to depend more on prices set by the market, it was necessary to further mitigate market power. The government had always looked at prices set by future contracts in forward markets to set its tariff levels, as they were meant to cover long periods of time (a year initially and three months later). However, forward electricity markets, as the White Book had also warned, were not sufficiently competitive and illiquid, therefore unreliable from the perspective of the regulator, as the general rule is that the less liquid a market the easier its manipulation.

To remedy the lack of meaningful long-term price signals in forwards markets that could guide the price-setting process, the government progressively introduced a system of auctions to which the supplier of energy would be forced to participate. The goal was to artificially ‘mimic’ forward markets by forcing companies that had to provide electricity under the regulated tariff to buy the electricity to be provided in advance and therefore increase the liquidity of this government-mandated marketplace. The subjects of this actions differed before and after the shift from the integral tariff to TUR, as distribution companies were replaced by the CURs in 2009, when the latter became responsible for the supply of the TUR in obeyance of the 2003 IEM Directive. After the shift to supply by CURs in 2009, the latter were therefore forced to participate in auctions, called *CESUR*, in which they would buy forward contracts that insured the price at which they would then sell electricity at final costumers (i.e., an electricity derivative market in which however the advantages of ‘insuring the future’ are balanced by a risk premium, as it will be see in the following sections<sup>108</sup> (Peña and Rodriguez

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<sup>108</sup> Each of the designated distribution company would have to act as a price acceptant buyer of the forward contract (derivative instruments of a *contracts for difference* type) that were offered by sellers (usually financial institutions specialized in insurance and hedging contracts). The price of the auction would set the price at which the electricity would then be sold. The seller/insurer would then compensate the distribution company if the wholesale market price (at the moment of physical delivery to the costumers) was higher than the bidding price

2018)). In sum, both the VPP and CESUR auctions were remedial actions to reduce the market power of the dominant players by forcing them to participate in so far underdeveloped future markets and this increase the number of players and therefore competition (Martín Marines and Villaplana Conde 2009).

#### 5.4.2.3.3. The Access Tariff: Still a Blackbox

In any case, the price of electricity was only one of the two components of the TUR, the other being the access tariff the ‘black box’ where everything else was included and where government discretion could have had a major impact which in fact was the case. In the transposition of the directive, the government adopted a considerably conservative approach, in the sense that it excluded the possibility of sharing its right to determine the corresponding tariff levels with the independent regulator, as it was explicitly suggested by the 2003 IEM Directive in the name of efficient and non-discriminatory regulation. In that sense, the 2003 Directive, compared to its predecessor, had empowered independent regulators to become responsible for ensuring fair access to networks, which extended to how its costs should be shared. Given that networks where monopolies, pricing policies were to be decided by a competent authority, and, since 2003, independent regulators were better candidates than governments or bureaucracies to do so. However, the Spanish government intended that such authority could be still wielded according to traditional rules and the competence to set access tariffs was exclusively reserved to the government while the CNE would still be confined to its consultative role. In more details, the Ministry of Industry would be the main responsible authority, but it had to seek agreement with the Delegated Government Commission for Economic Affairs, which meant in practice the supervision of the Prime Minister and the Ministry of Economy and Finance). The government approach was not only conservative in relation to the distribution of competences, but it also resisted the opening up of the black box of the access tariff and clearly distinguish between the costs that could be attributed to the regulated activities per excellence (transport and distribution) from the costs of electricity policy, that were still generally defined as costs referring to security of

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and vice versa. The rationale of this complex operation was to shield customers from the risk involved in the volatility of wholesale market prices and shift it to other players, in this case the distribution company and the insurers

supply and diversification, a very generic expression in which many different items were included.

The reformist efforts under the double pressure of the necessity of more efficient liberalization, addressing both the structural limits of the concentrated and isolated Iberian market and the limits to the discretion of public intervention, particularly in relation to the setting of tariffs and the transmission of market price signals to consumers, have been at the heart of the action of the first PSOE government between 2004 and 2008. The outcome of the reformist pressure points to mixed results, with better outcomes in relation to the first than the second problem, also because the 2003 IEM directive was objectively an incomplete and timidly incremental norm, one small milestone of a long process. The same author of the White Book acknowledged this duality of outcomes, stating that in relation to its role in setting tariffs, the government had been acting in opposition to the recommendations of the White Book. Accordingly, the government was still using a misleading language, promising to either increase the tariff (when addressing the utilities) or decreasing it (when addressing public opinion).

To the credit of the government, it can be argued that, although it is difficult to establish a counterfactual, it is nonetheless inevitable to wonder what would have happened if the reformist action had not been heavily conditioned by two mutually reinforcing factors, one endogenous and the other exogenous. The first is the burden on government action that was progressively placed by the tariff deficit, the second was the burst of the financial crisis that engulfed Spain in dramatic ways. From the perspective of the electricity sector, the two factors were linked and reinforced, as the slump in electricity demand precipitated the problem of the tariff deficit. Before turning to the analysis of the origin, development and consequences of the tariff deficit on the second Socialist government (2008-2011), the issue of international interconnection will be also be analysed, with a view to establish how a different government treated it and if it was still considered an issue of primary importance.

#### 5.4.3. Addressing Interconnection Gaps: Facing the Reality of a Slow and Difficult Process, the MAT High-Voltage Line

The Socialist government had inherited the promise that France would cooperate for building the necessary infrastructure to achieve the goal of 4.000 MW of commercial capacity. The

government had proceeded to a revision of the planning document for the transport network infrastructure in 2005, keeping the same horizon as the amended planning which extended up to 2011. A more profound revision of planning was made in 2008, because of the need to update the strategy considering the strategic reorientation demanded by the growing importance of the environmental constraints (and opportunities) which had emerged from the EU (as it will be explained in detail in the next chapter). However, when it comes to cross-border interconnection, there was not much that the government could add to what had been planned by the previous government, if not to make an exercise of sober realism and acknowledge more realistic time horizons for the completion of the two projects that had come to vertebrate the informal 2004 agreement with France. The Eastern Pyrenees connection, which was in advanced planning stage, had in fact faced all the problems that already seemed evident at the time of presenting concrete proposals for the physical siting of the infrastructure, i.e. *not-in-my-backyard* grassroot resistance from both sides of the border. The project had received in 2003 the status of 'project of common interest' from the Commission, meaning that it would benefit from financial and technical assistance. REE and RTE (the French network owner and TSO) had since been struggling since 1994 with the problem of finding a solution that would overcome both the considerable technical problems of building a line through the Pyrenees mountain chain and the social acceptance problem. From a technical perspective the projected line was left with a limited number of possible options. From a social perspective, the need of gaining public acceptance from directly interested local populations and a more diffused environmental group resistance had proved more difficult than initially expected. It might be remembered that the previous government expected the new transmission line to be up and running already by 2007, but still at that date no project had been yet approved.

To break the deadlock, the Commission appointed in September 2007 a EU mediator in the figure of the former Competition Commissioner Mario Monti, who vowed to find an acceptable compromise for all parties but also adamant in insisting on the absolute necessity for the project to be successfully carried out because it was considered a glaring missing piece in the jigsaw of the IEM. On the Spanish side, Catalan activist groups objected that neither REE nor the central or Catalan government had neither provided sufficient evidence that the transmission line was necessary nor had engaged in a proper consultation process with the

local affected population. The anti-MAT movement (MAT being the Spanish acronym for High-Voltage line) and the allied no-THT on the French side grew in importance and activism throughout the affected region turned into an obstacle that could not be easily ignored by the public and private actors' interests. Catalan parties themselves were divided on the necessity of the project, some arguing that it did not serve the local interest and other arguing that it was a necessary and essential infrastructure for regional development. The EU mediator concluded, in April 2008, that, while assuring his neutral stance on the issue, the professional technical studies (carried out by the Italian consulting firm CESI) he had commissioned confirmed the necessity of the infrastructure and its technical and economic viability. The compromise solution he envisaged was to partially change the original projected route, which featured the deployment of aerial cables with a bigger environmental and landscape impact, for one based on the use of an existing corridors and, more importantly, the laying of underground cables for a length of 64.5 Kms.

Although the compromise did not find the agreement of all the involved actors, especially on the part of environmental groups, the Spanish and the French government signed an agreement in June 2008 which sparked the operational building stage of the project. REE and RTE entered into a joint-venture via the establishment of the company INELFE, and started building the transmission line in 2011, which costed a total of 700 €millions, benefiting from a European Bank of Investment loan of 350 €millions and a 225 €millions grant by the EU under the European Energy Programme for Recovery. The line was completed in late 2014 and started to be operational in 2015, doubling the capacity of commercial exchange between the two countries to 2.800 MW. However, the gap in interconnection capacity was only partially filled and, moreover, eight years later than the intentions of the Spanish government. Going back to the planning exercise, the planning documents of 2005 and 2008, besides the eastern Pyrenees project, highlighted the need for a second line across. The latest of the two documents still refers at the Central Pyrenees option as the preferred one. In the next chapter it will explained as neither this option will in the end prevail nor a second line will see the light at least until 2026-2027.

Finally, it must be noted how the link between interconnections and the growth of RES-E had started to be explicitly acknowledged. Not only the new planning document devoted attention to the grid bottlenecks that had started to appear in those areas where windfarms

development had been particularly strong. The Energy Secretary of State claimed<sup>109</sup> that he had raised to the European Commission the question of the impact that the unfavourable interconnection position of Spain would have for the achievement of RES-E goals, when presenting the new Spanish renewable energy plan. The official stated that he made aware the Commission of the fact that without more interconnections it would have not be possible to achieve the 2020 target. According to his statement, while the EU had achieved credibility in RES policy because of its capacity to make Member States comply with their targets, the same credibility did not existed relation to interconnections. Overcoming this shortcoming in EU action capacity should have been converted in a priority action line in the following round of strategic Community Infrastructure planning. He also stated that Spain had worked during its semestral chairmanship of the Presidency of the Council of Ministers to reinforce these aspects of EU policy (at least at the planning level) and that more authority was needed at the EU level, including specific mechanisms to move interconnection project forwards, because it was clear that there was a gap between the planning and project stage and the capacity to achieve pragmatic outcomes in term of actual building and timing thereof.

### 5.5. Origin and Development of the Tariff Deficit: The Making of a Negative Feedback

The tariff deficit has its origin in norms established at the beginning of the process of liberalization that would be reproduced for more than a decade, generating a snowball effect that will be slowly addressed before it would become too big a problem for piecemeal reforms in the context of the financial crisis. In this section, the origin and the development of the deficit is detailed, before its comprehensive treatment which will occur in later years and will be therefore dealt with in Chapter 7.

#### 5.5.1. Disregarding the Deficit: Discretion in Tariff Setting (1997- 2005)

It might be remembered how the problem of recovering the investments made by utilities had been a constant problem in the regulation of the sector. In very broad terms, the financial relation underlying the electricity sector can be conceptualized as a flow among consumers (which are the final beneficiaries of the services provided and therefore those responsible for covering its costs and, in case, the deficit), the government (the manager of the economic

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<sup>109</sup> Industry Congress of Deputies Commission, IX Legislature, Session no. 45 Diario de Sesiones, 16 of February 2011

flow between the providers of the different activities that, directly or indirectly, bundled together, add up to the services offered by the electricity sector) and the private or public sector providers (which are, in the logic of the flow, the formal creditors of the repayment obligations). Before liberalization, this flow was rather unstructured or informally structured, and utilities had ended up investing, often under an express request from the state, without a clear definition of how they would have recovered their investments under the tariff systems orchestrated by the state. The ill-conceived oversized nuclear plans of the 1970s are just one example, but the problem was more structural than these occasional blunders might induce to deduce. The chronic tariff deficits arising from the day-to-day running of the system were in fact turned into losses for the utilities and the state would end up rescuing them adopting ad-hoc solutions.

The MLE had therefore been the first attempt at rationalizing this flow, and its ‘stability’ was in fact based on the principle that tariff should be sufficient to guarantee the expected return on investment. The principle of tariff sufficiency had naturally migrated into the LSE, but the regulated tariff system envisaged by the LSE, at least initially, was not exactly a model of tariff sufficiency. The LSE clearly distinguished among the different sources of system costs and therefore the different components that should have, additively, made up the tariffs, but the methodology used for its calculation were almost entirely subject to government discretion, meaning that the interpretation and modulation of the concept of tariff sufficiency was not legally grounded in any constraining norm. However, utilities had learnt from previous experience and hoped to be better able, under the LSE, to defend their right to be fully reimbursed, although the modalities were yet to be specified.

To be sure, the introduction of the LSE did not exactly start with an orthodox application of the tariff sufficiency principle. It has also already been said that the 1996 Protocol that preceded liberalization included an initial agreement to allow for tariff reductions during the first years of liberalization and that consensus was also in part reached on the need to achieve the inflation goal on which admittance in the EMU was made conditional<sup>110</sup>. However, the

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<sup>110</sup> This is confirmed by economic interpretations of the Maastricht criteria, according to which, the possibility that high-inflation Member State would try to ‘artificially’ comply with the inflation goal by reducing regulated prices was anticipated by low-inflation Member States and offset by the long-term interest rate conditions. The rationale for linking the two criteria was based on the assumption that, if financial market were suspicious of manipulated anti-inflationary strategies on the part of public authorities in any Member States, they would anticipate a surge in inflation at a later time, when the ‘inflation lid’ would have been inevitably lifted. If this was

agreement only covered the period up to the year 2000, while for the following years, it could have been expected that the general principles of tariff sufficiency that were implicit in the articulation LSE would have shaped the electricity system financial flow (de Ros y Cerezo 2009, 349–50). It is important to stress once again how the LSE broke down the different components included in the tariff and clearly distinguished between the *cost of the generation* of electricity on the one hand and the regulated costs on the other (the *access tariff -transport and distribution-*, the costs of *commercialization* and the other *policy costs* - that were generally referred to as costs of *security of supply* and *diversification* plus the *permanent costs* of the system, including the remuneration of institutional actors and, until they were allowed, the *TCCs*-)<sup>111</sup>.

This distinction only made sense for those costumers that sourced their electricity outside the regulated integral tariff system, a right that was initially reserved only for the ‘qualified’ costumers and that would be slowly extended to other categories of consumers until full liberalization was achieved in 2003. Therefore, despite the fact that the wholesale market had been liberalized and thus subject to a process of price formation that depended on a pure market logic, for those costumers that were served under the integral tariff system, the cost of electricity was also part of the regulated activities: the distribution companies that were charged with providing the integral tariff were also entitled to receive compensation for the difference between the price at which they supplied electricity (decided by the government based on its estimations at the moment of setting the tariff, at usually yearly intervals) and the price they had to pay in the wholesale market to buy the electricity they provided to regulated consumers<sup>112</sup>.

In sum, deficits could arise from deviations between the tariff that were established by the government at the beginning of the billing period and the costs that would be effectively incurred during the same period. In theory, these deviations could be attributed either to

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true, the long-term interest rate would have reflected such long-term inflation effect, allowing to uncover the artificial low-inflation strategy (Richard Baldwin and Wyplosz 2014)

<sup>111</sup> In reality, regulations will indiscriminately use the term ‘access tariff’ in ways that included *all* the costs other than the cost of generation. Although this broad meaning of access tariff was not used in the original wording of the LSE, it will be used in the norm that developed the tariff structure alluded by the LSE, the Royal Decree 2016/1997.

<sup>112</sup> It must also be noted how the way in which estimations were made changed since the introduction of the CESUR auctions in 2007, with a view to reduce market distortions by increasing competition and also relieving the government from making ‘educated’ guesses about future prices.

factors that the government could have not anticipated at the moment of setting the tariff (such an increase or decrease in the costs of the different activities or to variation in the overall level of the demand, in which case the fixed costs of the system should have been divided among more or less consumers) , or to an express will of the government that, for political and/or macroeconomic reasons, decided to over- or under-charge consumers (BizkaiLab 2013, 133). The existence of a tariff deficit and its treatment was not, quite surprisingly, contemplated by the LSE. The LSE in fact only referred to the process of distribution of the resources collected by the distribution companies, that were in charge of collecting the bills paid by consumers. Such funds were transferred to the CNE who then proceeded to a redistribution based on the allowed costs recognized to all the different actors involved in the process, each based on the real, as opposed to the estimated, cost incurred during the billing period. The legal treatment of the temporary attribution of the deficit was, probably not by chance, linked to the legal remuneration benefit under the TCCs system (CNE 2000). This meant that all the distribution companies belonging to the historical utilities would have to shoulder the burden of the deficit in the same proportion as their right to perceive TCCs, therefore mostly Endesa and Iberdrola. Therefore, it was not important to know which specific cost item had been wrongly estimated, because, in the end, there was no attribution of cost causality in attributing the deficit, which would always be shouldered by the same legal subjects irrespective of their responsibility in causing the extra cost. However, it must be noted that those activities that were remunerated on a fix basis, such as the segment of transport or distribution, could only generate an extra cost if there was a fluctuation of demand, as the tax base would have shrunk<sup>113</sup>. Major deviations could instead come from the prices in the wholesale market (which was highly unpredictable) or from RES-E support mechanisms to the extent that the amount of new RES-E capacity incorporated in the system was also not always predictable (a topic that will be treated more in detail in the next chapter)

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<sup>113</sup> In binomial tariff structures, fixed costs are recovered via a *capacity tariff*, that does not depend on consumption levels but is applied to the capacity contracted by the consumer at the beginning of the billing period, and an *energy tariff*, which is instead applied to each unit of electricity consumed. The rationale of distributing fixed costs between capacity and energy tariffs is double. First, because a variable term induces efficient consumption in the form of energy savings. Second, because tariffs, as taxes, can be progressive or regressive. If high consumption consumers are charged more because they consume more, they will by logic pay a higher share of fixed costs, which is a progressive taxation principle.

The first deficit appeared in the year 2000, but it is not known whether they were the outcome of an intentional setting of the tariff at a low level or a random and unforeseen deviation. The first intentional creation of a deficit however appeared in 2002, when the act that established the methodology for calculating the tariffs<sup>114</sup> also established that its value, when calculated in the following years, could not increase by more than 2% year on year, except for the changes that could be attributed to variations in the reference price from the wholesale market. The same act also established that the deficit that would eventually be generated, could be added to the tariff for the following year as a new type of allowed regulated cost, until the year 2010, which was the date originally envisaged for the expiration of the right to receive the TCCs. It is quite evident how the government used the TCCS 'privilege' as a weapon to force their beneficiaries to accept the curtailment, even if temporary, of their legitimately expected remuneration. Because the government could not or would not predict in advance the amount of the deficit that would be generated, this type of deficit was called *ex-post*, in the sense that its existence and its subsequent treatment would only be considered after the materialization of the fact. For the deficit generated between 2000 and 2002, the companies to which it was attributed were given the right to turn their credits towards the electricity system into securities backed by the guarantee of the state that it will be reimbursed at a specific date and at a specific interest rate. The utilities decided to organize auctions with credit institutes to sell such state-backed securities, although the process generated uncertainties on the part of the banks as the governmental guarantee was not clearly defined. In fact, the banks that acquired these securities found problems in using them as form of payments in international financial markets because rating agencies did not give them an investment grade as they considered that the guarantee was offered by the (unreliable) Spanish electricity system as an institution rather than by the Spanish state itself (de Ros y Cerezo 2009, 354).

While the deficit of 2002 was the first to show a considerable amount (1.910 €millions), those of 2003 and 2004 were less relevant. However, in 2005 the level of the deficit was high enough to create a shock in the system, reaching 4 €billions and from that moment on, it continued to generate alarming figures during the years of the second PSOE government (3,026 €millions in 2006, 1,571 €millions in 2007, 5,108 €millions in 2008, 4,300 €millions in 2009,

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<sup>114</sup> Royal Legislative Decree 1432/2002, 27<sup>th</sup> of December

5,554 €millions in 2010, 3,899 €millions in 2011, (CNE 2012b)). While there was disagreement about the causes and the responsibility on the side of costs increases, it was clear that, on the part of revenues, the policy (or the politics) followed by the government had played a major role. According to calculations by the Ministry of Industry, while tariff levels had decreased in nominal by 23.26% between 1997 and 2008, inflation had increased by 40.86%. The decrease in real terms of tariff levels was therefore substantial and the principle of tariff sufficiency clearly violated, as the White Book had taken pain to stress.

By 2005, UNESA had started to be vocal about the need to start reverting the government approach to tariff setting, although, at that time, the excellent financial results posted by the companies integrating the organization, which had been gaining 15 €billions during the same year and that had launched themselves into ambitious financial operations inside and outside the country, might have made their request less urging for the government than if their financial conditions had been worse. UNESA proposed not only to start increasing the tariff in real terms, but also to revise them every three months rather than every year. The representative of one of the company lamented that liberalization and competition had been equivocally sold as an instrument that would inevitably led to price reductions, but that the reality was, unfortunately, different (Carcar 2005). The government seemed however to start paying attention both to the problem and to the requests of UNESA and, while 2005 was the first year that tariffs were raised above the 2% threshold set by the 2002 regulation, the following years saw increases that were positive also in real terms. This reversal marked the beginning of a long process for tackling the problem although it was clear that it could not have been possible to solve it only via price increases, whose increase would have been politically unacceptable, but also by targeting the root causes of the problem, i.e. the increases in system costs.

#### 5.5.2. Initial Tariff Deficit Containment Measures (2006-2008)

The government then started to focus its regulatory activity on conjunctural and structural remedies to the problem, from both sides of the equation (decreasing costs and raising revenue) but also to make sure that the balance sheet of the companies that were required to take the burden of the deficit would not deteriorate. There was in fact an additional problem the government had to face, because in 2006 it had adopted, the decision to suspend the TCCs due to their anticipated reimbursement. The original rationale to impose the deficit

on the TCCs beneficiaries had therefore expired and other solutions or justifications were needed, also because a legal action on the part of the burdened companies might have been likely under the rapid deterioration of the situation. Unsurprisingly, since 2006, the motivation to reduce the tariff deficit was clearly stated in the preambles of all the acts adopted to deal with the problem. The negative feedback had started to kick in and the government started to be pedagogical, so to speak, about the unsustainability of the deficit-making policy so far followed.

In 2006, two important decisions were therefore adopted. First<sup>115</sup>, the government reiterated its right to decide which actors would continue to take provisional financial responsibility for the deficit and, unsurprisingly, they continued to be the companies that had hitherto done so. The same decree however also contained a sweetener, as it was established that the government could provide financial help to those companies that, due to their financial problems, could face difficulties in continuing to run plants deemed crucial for the security of supply. It was also established, in the name of the exceptions to undistorted competition admitted by the IEM directive for security of supply, an incentive, or capacity mechanism, for those plants using indigenous coal to help them sell their electricity in the wholesale market. Second<sup>116</sup>, those companies that had received free allowances from the first ETS National Allocation Plan for the period 2005-2007 and that had used the opportunity-cost of those allowances in the wholesale market (therefore increasing the price of electricity), were required to reimburse the value used in the transaction (i.e., the market value of the ETS allowances when they were used as an extra cost item in a company's bid in the wholesale market<sup>117</sup>). The government applied the 'windfall profits' doctrine to justify its intervention<sup>118</sup>. The government planned to extend the reimbursement (or prevent the use of the freely distributed allowances) for the duration of the second NAP (2008-2012), but because of the legal challenges launched by the targeted companies, it decided to suspend the application

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<sup>115</sup> Royal Legislative Decree 7/2006, 23<sup>rd</sup> of December 2006

<sup>116</sup> Royal Decree 6/2006

<sup>117</sup> Generators had to provide information about the costs that go into the prices they ask in wholesale markets

<sup>118</sup> The reimbursement of 2006 was challenged by all companies, because of its retroactive character and because of its compatibility with the IEM directive. The case landed on the table of the ECJ which, in 2013, sided in favour of the Spanish government arguing that the request to retroactively reimburse was compatible with both the ETS and the IEM directives (Perez 2013)

after July 2009<sup>119</sup>. The same decree also established a major interventionist rule in the wholesale market by assimilating the sale of electricity between two groups of the same company (i.e. the generation unit as a seller and the distribution unit as a buyer) to a bilateral contract at a price established by the government.

This act also changed the approach to the acknowledgment of the deficit, moving from the ex-post approach followed so far, to an ex-ante recognition. The government, in other words, now openly admitted that it would set tariffs at levels that would not cover for the whole costs of the system<sup>120</sup>. The move might have been politically controversial, as the government openly rejected the principle of tariff sufficiency in ways that would have required some justification. But it also was a necessary to generate more legal certainty in the process of securitization of the debt instruments that would then ensure financial coverage of the deficit. In fact, the government established auctions to directly allocate the securities in financial markets, therefore bypassing the temporal placement of the deficit on the companies. The norm also established how future reimbursement would be made (via a specific percentage increase on the tariffs to be paid in the following years) and the interests that would accrue to such securities. Unfortunately for the government, financial markets did not consider the new process of securitization as satisfactory, because they still perceived the lack of a formal sovereign commitment to reimbursement and they were probably unconvinced of the fact that tariffs would ever be set at high enough levels to guarantee the repayment (de Ros y Cerezo 2009, 353). Some of the auctions organized by the state went desert (forcing the companies to accept the securities in their balance sheets instead). The change from an ex-post to an ex-ante deficit was also motivated by the fact that, in view of full liberalization of the retail market, the deficit could not be any longer considered as caused by an excess cost in the generation of electricity (which would now be an exclusive market

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<sup>119</sup> The motivation given in the Royal Legislative Decree 6/2009 was that, with the establishment of the TUR, all activities in the wholesale market would cease to be controlled by the CNE as far as the setting of the tariff was concerned. Therefore, the government backed down for future application of the rule but defended the legitimacy of its past actions.

<sup>120</sup> The intervals at which tariffs were set also changed, from a yearly to a three-monthly basis, as to allow increased that were more gradual and possibly less headline-catching than one single annual increase

dynamic and not a regulated cost any longer) but had to be entirely attributed to regulated costs, which would still be under the authority and the discretion of the state<sup>121</sup>.

In 2007, the government decided to freeze tariff levels, admitting that it was taking a political decision, and to act entirely via cost reduction measures. Among these measures, the most impacting was the change in the setting of the support mechanisms to RES-E (which will be treated in the next chapter), the reduction of the costs of capacity mechanism by two-third of their value and the internalization of costs for the maintenance of security in nuclear power plants to their owners. Although the government intended to limit the deficit to 1 €billion, the deficit for that year was 500 €millions higher than the estimation. In 2008, at the beginning of the second Socialist government and with the financial crisis already at the door, the new Ministry of Industry stated<sup>122</sup> that the tariff deficit was a labyrinth difficult to find a way out from, but that it was not admissible to maintain the ‘fiction’ (in his own words) that today’s consumption was to be paid in the future. He noted that consumers were also little informed of the fact that they were assuming an ever increasingly high debt. However, the solution to the problem were to have the minimum possible impact on consumers. With full retail liberalization in view, the government was thinking of adopting a social tariff, for vulnerable consumers (also contemplated by the 2003 IEM directive) and to shift to a progressive tariff system, implying that tariff levels would be proportionally higher for those consumers with higher contracted capacity<sup>123</sup>.

#### 5.5.3. Tariff Deficit as a Risk for the Financial Sustainability of the Electricity Sector

The most comprehensive reform would take place in 2009, with the adoption of the Royal Legislative Decree 6/2009, amid the realization of the gravity of the financial crisis and the pressing demands from the utilities to finally achieve a solution that would avoid temporary measures and instead established a stable, transparent and sustainable regulatory framework. The sector had in fact started to signal to the government that a unilateral focus

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<sup>121</sup> The Secretary of State for Energy stated that while under the deficit ex-post it was illogical that consumers would pay, in 15 years, the cost of electricity consumed today, it would make sense that the payment for regulated activities with a long-term character, such as fixed infrastructure or RES-E generation facilities, would be paid according to a fractioned multi-annual writing-off scheme (Industry Commission, Diario de Sesiones, session no.55, 11<sup>th</sup> of October 2007)

<sup>122</sup> Industry Commission, IX Legislature, Diario de Sesiones, session no. 2, 4th of June 2008

<sup>123</sup> The representative of the Basque National Party expressed concern over the treatment that would receive high-intensive energy consumer industries, most of which are located in the region.

on cost reductions would cause a shortage of investments in new generation plants as well as the possibility that currently operating plants would be forced to shut down, raising the spectre of a security of supply risk<sup>124</sup>. The preamble of the mentioned act was a very detailed statement about the causes and consequences of the tariff deficit. It stated that one of the main goals of liberalization, the establishment of a retail market that could sent price signals efficient for efficient final consumption, had been undermined by the tariff setting system, and that, consequently, a wrong idea about the price of what was, in the end, a scarce resource had been generated. The tariff deficit was creating serious problems to the (economic) sustainability of the system, aggravated by the consequences of the financial crisis which could have led to investment shortages and security of supply crisis in the future. The solution to securitize the debt produced by the tariff deficit had also met considerable problem in the context of financial markets that had become more sceptical about the quality of private debt instrument. For this reason, a new securitisation instrument would be established (the Electric System Tariff Deficit Securitisation Fund, *FADE* in the Spanish acronym)<sup>125</sup>. Such instrument would be used to emit the corresponding debt instruments, now formally guaranteed by the state and not just by the future revenues of the electricity system, through competitive auctions organized by the State<sup>126</sup>.

At the same time, this situation occurred in parallel to the disappearance of the integral tariff system. Although the TUR could still constitute a ‘refuge’ for those consumers that did not want to move to the fully liberalized system, the government was also determined to progressively increase the level of such tariff, as it could be clearly deduced by its analysis of

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<sup>124</sup> All the major utilities had issued investment plans that featured consistent reductions in the amount of investment levels. An analyst of the sector however also noted how the government might have become more insensitive to the request of the sector since the capital composition of the utilities had changed over time. In particular, most Spanish holding-groups from the construction sector, which had been investing in utilities in the past, had sold their shares mostly to foreign capital, deleveraging the influence that utilities could exert on government (Carcar 2009) (i.e. under the assumption of ‘crony capitalism’ and collusion on the part of the government and domestic capital at the expense of foreign capital)

<sup>125</sup> The FADE would become operational in 2011 and all the ex-ante deficit would be directly transferred to it, freeing utilities from the burden of the deficit. They would however still be called to temporarily finance the conjunctural deficits that were expected to appear as a difference of the estimations of the ex-ante deficit and the actual debt incurred. Such difference would have then been in part transferred to the FADE and in part charged on the tariff set for the subsequent year.

<sup>126</sup> It must be certainly noted how the Spanish State was therefore assuming a considerable amount of new debt in the midst of a sovereign debt crisis, something that would elevate, in the following years, the status of the tariff deficit from a purely sectoral problem confined to the Ministry of Industry, to a higher level problem including the Ministry of Economy and Finance.

the problem. For this reason, and in view of the transposition of the 2003 IEM directive, a new ‘social voucher’ was introduced, that would be available to vulnerable consumers with a low contracted capacity and that would be financed by all generator companies. At the same time, the government shifted to the owner of nuclear power plants the financing of the Nuclear Waste Management Plan (amounting to 2,7 €billions) and introduced more restrictive conditions for the support of RES-E new generation (addressed in the next chapter). Interestingly, the act also introduced the first shift of electricity system costs to the budget of the state, a paradigmatic shift as it broke the prevailing principle that all the costs derived from the system should be burdened by its actors. The cost item that would now be financed via the state budget were the extra costs generated by the maintenance and subsidisation of the Spanish islands electricity system. The rationale used to justify this shift was that such measures were dictated by the need of territorial solidarity and social cohesion among Spanish citizens, which was a responsibility for all taxpayers and not just the electricity consumers. It was announced that tariff levels would progressively increase and that since January 2013, tariffs would be set at levels that would comply with the principle of tariff sufficiency, ending for good the establishment of ex-ante deficits while only minor deviations could be expected in the form of ex-post deficits, to be in any case fully and immediately compensated by an equivalent increase in the tariff levels set for the following period. Finally, the act imposed, as a form of self-commitment on the part of the government, limits to the amount of ex-ante deficit that could be legally generated for the years 2009 to 2012. These limits however were surpassed in each of those years, not only because the measures adopted to cut back and shift the costs of the electricity system had been evidently insufficient but also because the financial crisis had caused a massive drop in the amount of electricity consumed which had a tremendous impact on the sufficiency of tariff revenue to cover the system fixed costs.

In this worsening context, the government adopted a new set of emergency measures<sup>127</sup> to deal with the deficit, which again forced a difficult balance between the possibility to increase tariffs or to make further cutbacks to the system allowed costs. On the tariff side of the equation, it was acknowledged that the scope for new tariff increases had been considerably reduced because of the crisis. At the same time, and to the consternation of the utilities called

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<sup>127</sup> Royal Legislative Decree 14/2010, 24<sup>th</sup> of December 2010

to finance it, the mechanisms for the ‘social bonus’ was extended until January 2014. However, the government seemed to have heeded the growing pressure and dissatisfaction of the incumbent utilities in relation to the other side of the equation, the system cost cutbacks. The preamble of the act acknowledged how the crisis had generated an asymmetrical situation between the traditional power plants (in particular coal and CCGT), which had seen their remuneration dwindle because of both the limited amount of hours they could work and the decrease in price levels in the wholesale market due to drop in demand, and RES-E installation that, because of their guaranteed access to the wholesale market and their remuneration independent from market prices, had not suffered from the consequences of the crisis. These measures, which would trigger the enraged reaction of the photovoltaic (PV) sector, the main target of the government cutbacks, will be detailed in the next chapter.

### 5.6. Summary

This first empirical chapter has covered the historical development of the electricity sector with a focus on the evolving relations between the three main actors involved, utilities, government, and consumers. The origins of the Spanish electricity sector are quite peculiar because of the prevalence of private self-organization as opposed to public ownership and centralized planning. During the 1970s and 80s, the state started to increase its interventionism and, under the pressure to match demand and supply, orchestrated investments from utilities that ended up causing them considerable losses (the nuclear power plants expansion being the most relevant example) and forced the state to re-organize the sector via the provision of financial rescue, mergers, and shares transfers. The Socialist government in the late 1990s tried to make centralization and liberalization coexist under the MLE but the advent of the PP and the implementation of the first IEM directive marked the beginning of a permanent change.

It has been stressed how Europeanization under negative integration has been mediated by three factors. First, the interaction between government and utilities in relation to achieve a deconcentrated market structure. Embracing liberalization implies the belief that, under the supervision of the state, healthy competition can be achieved. Results have been mixed, and the seeds of mutual distrust were planted during this period. State intervention and mixed-market characteristics of the Spanish variety of capitalism can be clearly identified during this time, together with the influence of clientelist mechanisms of coordination between utilities

and government, at the expense of a transparent and efficient system of market competition. While the PP government was not particularly concerned about the consequences of a concentrated market structure, the PSOE government, especially during its first legislature (2004-2008) tried to act on the recommendation of the White Book and reduce the detrimental effect of weak competition. However, after the relation with the sector were damaged by the Endesa take-over affair, the reformist spirit dwindled.

Second, an enduring feature of deficient Europeanization has been the path-dependent role of the state in mediating the financial flow implied by the provision of electricity to final consumers. The principle of tariff sufficiency, which is particularly important in a liberalized market, was difficult to properly be applied under all governments. The habit of tariff insufficiency prevailing in the old, pre-liberalisation system was clearly been maintained under the legal framework of the LSE. During the first PP government, the principle had been initially sacrificed in the name of inflation control to meet the Maastricht criteria, while during the second PP mandate, tariff deficits were considered an anomaly that could be solved via attributions of temporary responsibilities to incumbents and financial securitisation. The problem of tariff deficits would however assume a crucial role during the PSOE mandate, without however ever receiving a conclusive solution. The shift from ex-post to ex-ante deficit acknowledgment is a case in point. The government simply decided to institutionalize its intention not to balance costs and revenues. The system had grown out of government control, saddled by generation capacity oversize and many costs items that had cumulated over time responding to often incoherent, policies.

The late PSOE government was forced to start opening the black box of system costs and try to revert the trend by cutting back on some cost items, but the negative feedback from below-cost tariff setting also demanded action from the revenue side. From this perspective, liberalization was resisted, and each government did not feel the need or opportunity to align regulated tariffs with the new logic of liberalized markets. Therefore, consumers were never asked to face the reality of a fully liberalized market without the fall-back option of a regulated tariff. The implementation of the 2003 IEM Directive however forced a change because of the introduction of a fully liberalized market with which regulated tariffs had to coexist. This implied that their setting should be made compatible with the possibility of free-market retailing. The main innovation were therefore auctions, intended to artificially reproduce the

outcomes of liquid forwards markets and so determine the cost of electricity production to be charged to consumers. However, even CESUR actions were a wedge between markets and consumers, via, for example, high risk premiums (as it will be explained in the chapter 7).

On the other hand, the regulated part of the tariff, the access tariff, was firmly under government control and discretion, without any transparent methodologies ever established for its calculation. The EU had left During the period covered by this chapter the financial crisis had not yet started to bite and constraint government activity, showing how the tariff deficit problem was not only a consequence of worsening financial conditions, but that it had deeper roots. What emerges instead is a lack of political will to deal with a problem that was still considered manageable by using ad-hoc measures. Negative feedbacks were considered of a lower magnitude than the countervailing positive feedback of tariff discretionary regulation.

Finally, a structural Europeanization deficit has been identified in the physical isolation of the Spanish electricity system in relation to the continental platform. In this initial stage of the development of the IEM, the interconnection issue had started to attract political attention at the higher level, as the 2002 Barcelona Declaration clearly shows. However, the practical implications of high political commitment were effectual, except for the ad-hoc pressure that the Commission could put on France to cooperate to help ending the isolation of the Iberian Peninsula. At the same time, the disputes among domestic actors in the construction of the MAT interconnection had also manifested how difficult it was to gather consensus of this type of infrastructures.

## 6. Positive Integration: Renewable Energy and the Emission Trading System (1997-2011)

### 6.1. The Early Development of Renewable Policy in Spain: On the Right Track

The early successful outcomes of RES-E policy in Spain have attracted much academic interest as they could have hardly been anticipated, given the country's lacklustre environmental policy innovation capacities (Aguilar 1994; Font 2001). The key to understand this apparent 'Spanish miracle' is to approach RES-E policy from a broader perspective than the environmental, as it had been locally framed as a policy of technological development and energy diversification. The origin of the policy in fact goes back to 1980, when Spain suffered the consequences of its belated reaction to the oil crisis. The country had in fact never adopted a taxation policy aimed at decreasing oil dependence and was particularly hard hit as a consequence. The Energy Conservation Act of 1980, whose goal was not environmental but the reduction of energy dependence, was adopted amid cross-party support and it allowed the emergence of a network of pioneers RES-E supporters, drawn from both the private and public sector. Central to this network was the public institute IDAE (Institute of Energy Efficiency and Diversification), established in 1984 which, given the high cross-party support that the policy enjoyed, continued to receive generous budgets to advance its policies through the 1980-90s. According to one account of RES-E development in Spain (Dinica 2008), IDAE holds a crucial explanatory role because, at least until 2004, RES-E support instruments were risky from an investor perspective and cannot offer a valid explanation. Accordingly, Spain is a country characterised by risk-averse investors and many of the initial support mechanisms were subject to political discretion and offered low level of economic support. IDAE managed to start many public-private partnerships that involved a large number of actors, including wind technology manufacturers, energy companies (Endesa and Iberdrola), regional and local authorities and banks. Moreover, IDAE had initially quite large discretion in choosing which technology to select for early development and deployment as well as the type of support instrument. Others have also highlighted the role of societal groups in this stage of early development and the strong interest of regional and local authorities in attracting a new, indigenous industry, creating jobs and economic activity in depressed areas of the state. Many peripheral regions could however also boast a high renewable energy

potential, especially the windy northern region of Galicia and the central region of Castilla la Mancha and Castilla y León (Garcia and Mendez 2006).

Nonetheless, the regulatory framework offered by the Spanish government also played a role by adopting sophisticated policy instruments and by offering the necessary stability to attract investors and developers (Ciarreta, Gutiérrez-Hita, and Nasirov 2011; de Delás 2003; D. Jacobs 2012; del Río González 2008). Under the LOSEN, RES-E generators with a generation capacity of less than 100 MW could contact and oblige distributors to buy the electricity produced at a price indexed to electricity prices (this linkage becoming a durable feature throughout time)<sup>128</sup>. The LOSEN also established that RES-E producers belonged to a ‘special regime’, therefore creating a niche for technological development. The LSE had maintained the existence of a special regime besides the new liberalized sector, and it also introduced a not legally binding RES-E target of 12% of primary energy. The goal was the same as the one indicated in the European Commission 1996 White Book. The linking to a EU dimension can be considered the first step in the Europeanization of Spanish renewable energy policy (Solorio 2011).

The three guiding policy principles were the mandatory purchasing by distributors of RES-E, a fixed price established by the Ministry (via administrative acts) and favourable terms for connection to the grid (de Delás 2003, 3). The first comprehensive regulation of support mechanisms after liberalization was adopted by the PP government in 1998<sup>129</sup>. The regulation established another durable policy principle, i.e., the possibility for the RES-E owner to choose between a system based on a market-premium, in this case a fixed premium on top of market prices, or a fixed feed-in tariff. However, both were reviewed annually, generating uncertainty in investors. Moreover, support was in principle only guaranteed via a 5-years purchase contracts, which could in principle be extend to a life-time guarantee. The first planning document for RES-E deployment, the 1999 Plan for the Support of Renewable Energy

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<sup>128</sup> Royal Decree 2366/1994

<sup>129</sup> Royal Decree 2818/1998

(PFER 2000-2010)<sup>130</sup> was a clear bet on wind energy, a technology that was considered close to technological maturity. Solar PV was relegated to a minor, almost demonstrative role<sup>131</sup>.

The imbalance between wind and PV technological support was a reason for friction between PP and PSOE, the latter reclaiming a more decided support for PV, considered that Spain had become one of the most important producers of PV panels (that were mainly exported to other markets). It was however already evident at that time that wind energy had managed to create a strong support network involving a broad set of actors, because of its proximity to commercial development. Utilities such as Iberdrola, had created their own renewable energy division already in 2001 and much of the technology used was produced by the Spanish company Gamesa. Interestingly, many regional governments were rushing to speed up the process of preparing their own RE-E development plans, especially centred in developing windfarms. It is important to notice how, compared to conventional power plants, the role of regional governments in the deployment of RES-E generation facilities was far more relevant. Spanish Autonomous Communities enjoyed competences in relation to territorial planning and exclusive competence for authorizing the installation of power generation facilities<sup>132</sup>. RES-E installations can be quite controversial because of their landscape impact and, while renewable energy enjoys support from public opinion in general, it can suffer from local opposition to specific siting of large-scale projects<sup>133</sup>. Therefore, the political and administrative capacity and willingness to authorize RES-E of projects became a crucial factor in attracting or deterring RES-E investments. Over time, moreover, Autonomous Communities and the Central government became engaged in jurisdictional conflict over the boundaries of their respective competences as well as over the discretion of the peripheral governments (and also municipalities) in imposing fiscal conditions (i.e. extracting rents) from

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<sup>130</sup> The document was then used as the Spanish guidance document requested by the first RES directive. Because of the requirements of the first RES directive, the PFER had to be updated with the inclusion of a specific target for RES-E which stood at 29.4% of total of electricity consumption,

<sup>131</sup> Accordingly, wind power installed capacity was expected to increase from almost 800 to 8,000 MW and solar PV from 9 to 144 MW.

<sup>132</sup> However, the central government indirectly decided how much generation capacity could be installed in a specific territory, via its control over the planning of transport and distribution infrastructures. An example is the mismatch between the Galician Wind Plan in 2000 that envisaged a capacity of 3,000 MW and the infrastructure plans of the government that would have not allowed more than 1,810 MW to be transported.

<sup>133</sup> An example of the impairing effects of local opposition is Catalonia, whose Wind Energy Plan had taken many years to be approved due to the avalanche of legal and political challenges it had to face for its adoption and the restrictive criteria that were finally approved in order to appease opposers.

RES-E facilities (Bacigalupo Saggese 2010). These problems notwithstanding, in 2002 Spain was second only to Germany in terms of installed wind capacity.

#### 6.1.1. The First Change in Support Mechanisms: More Wind for the Wind Sector

The first generation of support mechanisms were changed in 2004<sup>134</sup>. Although the new policy instruments maintained the basic philosophy of the previous system it also reflected the accumulated experience and learning from abroad (D. Jacobs 2012). Economic and financial interests around the sector were also growing. The government hoped to keep developing the sector without creating excessive burdens for consumers which ultimately paid the cost of support via their tariffs. The sector presented singular characteristics. Utilities had taken a deep root in the sector as a complement to their still prevailing conventional power plants and were disputing the ground to independent RES-E producers. Spain could in fact be considered quite an exception compared to other RES-E pioneer countries, such as Germany or Denmark, in that utilities were not opposing but actively participating in RES-E deployment. This might also be due to the fact that, at that time, electricity demand was growing very fast and there seemed to be little incompatibility and competition between different generation facilities (de las Heras 2016). It is also the case that incumbents that controlled both types of electricity facilities could achieve better outcomes in terms of wholesale market remuneration under a marginal pricing system, debunking the idea that technological diversification run against their interests (Batlle, Pérez-Arriaga, and Zambrano-Barragán 2012; Ciarreta, Gutiérrez-Hita, and Nasirov 2011). Independent RES-E producers had also acquired organizational lobbying capacities and standing, notably via the peak association APPA, which mustered enough resources to establish contacts with relevant domestic institutions. What all players had in common was the demand for an adequate and stable level of support. The LSE already established among its principles that generators could legitimate aspire to, in a very generic formula, a ‘reasonable’ return on their investment. However, retroactive regulatory changes could have been an even bigger risk than an initially attractive investment. Even worse, if initially attractive conditions led to commit to a costly investment in sunk-cost technologies, retroactivity that substantially changed those

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<sup>134</sup> Royal Decree 436/2004

conditions would have resulted in considerable losses or suboptimal profits<sup>135</sup>. From the perspective of the government it might be noted the supposed inconsistency between the goal of achieving a specific percentage of RES-E production by 2010, a set by the PFER 2010, and the 2002 planning document that envisaged the increase of all types of electricity (mostly CCGT, while providing subsidies to thermal plants burning domestic coal) (Garcia and Mendez 2006). RES-E development was therefore considered just another plank of a multi-faceted energy policy rather than a paradigmatic shift towards a more sustainable energy system.

The 2004 support system maintained the binary option of selling electricity at a fixed tariff or via the market plus a fixed premium. However, the influence of the RES-E lobby could be felt in a number of favourable changes. First, the support levels would cease to be decided at the discretion of the public authorities but would be calculated as a percentage of the tariff set for electricity consumers. It is true that such tariffs, as it has been explained in the previous chapter, were also calculated by the government, but there were specific methodologies. If a logic can be found in linking support levels received by RES-E producers to tariffs paid by the consumers, is the principle of tariff sufficiency: the higher the tariffs, the higher the support levels that could be financed through the tariff. Second, to provide incentives to participate in the market (which was a goal for increasing the transparency of price formation mechanisms and also to involve RES-E producers in balancing mechanisms), RES-E producers would have received a fixed premium, a market incentive premium (both calculated as percentage of the consumer tariff) plus the market price. The system was also provided stability and certainty in the sense that support was guaranteed for the whole lifetime of the installation. While the update of the support level was annual (every time the consumer tariff was revised), revision of support levels for new installations would have taken place in 2006 and every four years afterwards, and retroactivity was expressly ruled out. Finally, wind generation plants were made partially responsible for deviations of their output, i.e. responsible for their imbalances. According to the press, this question had confronted the CNE, who was critical of the problems caused by the integration of increasingly large quantities of wind electricity in the grid and the costs that support mechanisms, with IDAE and APPA that minimized the problems and attributed a pro-nuclear stance to the CNE. In

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<sup>135</sup> For example, in 2003 the government decided to reduce the support levels for wind energy by 8%, causing frictions with the wind peak association (Plataforma Empresarial Eólica) and APPA

2004, REE, CNE and the peak association of wind energy producers decided to establish a platform for the study of possible solutions to wind electricity integration, as it was clear that wind generation capacity would increase in the following years due to the fall in costs generated by an impressive technological learning curve and because the PEFR had established explicit, although not binding, targets. Moreover, wind energy was attracting investments not only from all major Spanish utilities, but also from other relevant domestic and foreign economic sectors, increasing the financial and political weight behind the technology (Gómez 2004). Contrary to the favourable prospects for wind electricity, the support for PV did not constitute, at this time, a sufficiently attractive investment and the technology was left behind. The Spanish PV industry association at that time lamented that, because of the lack of interest on the part of the utilities to take an active role in the sector, financial and institutional barriers were not being lifted (del Río and Unruh 2007, 1508)

## 6.2. Early Climate Change Policy in Spain: A Late Comer

During this initial formative stage, it is difficult to identify a climate policy in Spain and even less so one that had a meaningful impact on the electricity sector, given the absence of specific instruments that addressed GHG emissions from power plants. Spanish stance in relation to climate policy has been described as being rooted in a strategy of 'climate rhetoric and non-policies' (Tàbara 2003). Another account of Spanish climate policy during this time describes it as the outcome of double Europeanization process. On the one hand, the country had to reluctantly follow the collective approach under the EU umbrella in international climate negotiations. On the other, the outcomes of EU internal burden sharing, following the adoption of the Kyoto Protocol, collided with substantial increases in GHG emissions that were, paradoxically, the undesirable outcomes of the intense process of economic catching-up following accession into the EU (Costa 2006). It must be noted how Spain had also expressed repeated opposition to the original proposal of a carbon tax as the main EU climate policy instrument.

Emissions from the electricity sector at the beginning of the 2000s were fundamentally generated by coal-fired power plants, as CCGT plants using natural gas were only starting to be built according to an ambitious deployment plan. Climate policy in Spain was led by the National Climate Commission, established in 1992 within the Ministry of Environment with the remit of preparing a national climate program and assist the government. In 1998, a

National Climate Council (NCC) was also established, with a more operational remit following the adoption of the Kyoto Protocol. The National Energy Plan at that time estimated an increase of 40% in GHG emissions by 2010 as compared to 1990 levels. Another study made by the IDAE in 2000 estimated an increase of 48% in the current policy scenario. These projections sharply conflicted with the Spanish target within the ‘EU bubble’, i.e. the EU internal agreement to share the efforts to comply with the Kyoto Protocol. Spain, which negotiated without anticipating the consequences of its economic growth potential, had been able to obtain an increase of GHG up to 15% during the first commitment period (2008-2012). Around the same time however, the government also defended the idea that Spain was one of the EU Member States with a lower level of emissions per capita, a discursive line that was often adopted to justify the peculiar conditions with which the country had arrived at negotiating the Kyoto Protocol. Mentions of a concrete policy instruments for the electricity sectors included the development of RES-E (according to the PEFR 2000-2010), the role of CCGT in providing new generation capacity and possibly the substitution of old coal power plants because of the application of the 1996 Integrated Pollution and Prevention Control, which will not however be transposed until 2002<sup>136</sup>.

Within the EU, Spain took a favourable position to the introduction of the ETS as the central climate policy instrument, whose negotiation was carried out by the newly established Spanish Climate Change Office (OECC, in its Spanish acronym), a unit within the Ministry of Environment, also tasked with drafting the Spanish Climate Change Strategy (Costa 2006, 230). While the ETS directive was still under negotiation, in 2003, the Minister of Environment had announced that the preparation of the National Allocation Plan would have required considerable efforts for collecting the necessary information and deciding how the allocation would be carried out. Another indicator of the scant consideration of the emission constraints imposed by the Kyoto Protocol was the absence of any reference in the Energy Infrastructure Plan for 2002-2011 to GHG emissions reductions. The only measures the plan mentioned were increases in RES-E generation and the development of CCGTs as less emitting power plants<sup>137</sup>. Finally, the debate around the future of nuclear energy was revived by the potential

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<sup>136</sup> Act 16/2002, 2<sup>nd</sup> of July 2002

<sup>137</sup> According to the environmental group Ecologistas en Acción, which were also Members of the National Climate Council, the measures adopted in the plan would have amounted to a 71% increase of GHG emissions from the electricity sector

consideration of a nuclear revival as a partial solution within the electricity sector. The PSOE was firmly entrenched in its opposition to the construction of any new nuclear power plant and instead set up a plan for their progressive decommissioning by the time of the expiration of their agreed lifetime. The PP instead opened the door to revise the timetable of the nuclear phase-out, while the construction of new plants did not receive any concrete mention, although Endesa had been flirting with this possibility. The Ministry of Environment finally announced, in January 2004 and with a delay of three years, that agreement had been reached within the National Climate Council on a Spanish Climate Change Strategy, a set of 440 measures that would be submitted to the Council of Ministers. The Strategy received 71% of favourable voted in the National Climate Council but it was considered insufficient and deceiving by the PSOE, environmentalist and unions represented in the institution. The plan was presented two months before the date set for the general elections and the deadline for presenting the National Allocation Plan to the European Commission.

Certainly, there was a NAP under consideration in the Ministry of Economy, and there was a sharp division among the electricity sector utilities about its expected impact. The estimations about the costs of buying extra emission allowances, besides those that would be assigned for free, varied between one and five €billions per year. On one side of the fence there were Endesa, Unión Fenosa, Hidrocantábrico and Viesgo, which were airing an openly sceptical posture, and on the other Iberdrola, which instead perceived an opportunity from the application of the ETS and decarbonization in general. The first group of utilities were operating 12 coal power plants. Endesa was particularly alarmed, not least because it was the utility with the largest coal thermal plants fleet (7 in total, some of them using domestic coal). The utility considered that the Kyoto goals were 'excessive' and its messages to the government was not to take 'improvised' measures that could hurt national competitiveness. Coal, which at that time represented almost one third of annual generation, was considered crucial if the country was to meet the galloping increase in electricity demand at a reasonable price, compared to the less polluting but more expensive CCGT. Indigenous coal, Endesa claimed, also offered the advantage of avoiding even more resource dependence from abroad and it would have been unfair to penalize those companies that had been historically loyal to the desire of different governments to keep the domestic mining industry running. Finally, it

proposed a common management of allowances (although the proposal seemed to fly in the face of what the ETS directive established).

Iberdrola, on the other hand, defended that the Kyoto target could be met by reducing what it considered an anomaly in the system, the use of imported coal (although it admitted the continuity in the use of imported coal) and centred its strategy in the construction of CCGTs<sup>138</sup> and renewables. It also requested that the assignation of allowances be based on future rather than historical emissions as a measure to incentivize competition and avoid favourable treatment for past polluters. Iberdrola, must be said, was also owner of many hydro and nuclear plants, which would have benefited from the introduction of the ETS. The difference in the estimations of allowance needs for the 2005-2007 period between the two opposed group was of about 90 million allowances (almost one third of the total estimated by Iberdrola). Notably, Iberdrola was also backed by the unions, which, especially through Comisiones Obreras, had taken a progressive stance on the issue, minimizing the adverse economic impact that the Spanish business associations, CEOE, considered instead almost catastrophic for domestic economy and employment levels. A particularly vocal group in their concerns about the consequences of the application of the ETS was the electricity-intensive-user industry, represented by their own association, AEGE. To quell their concerns, the government promises to maintain the favourable regulated tariff (the so-called G-4) at least until 2010<sup>139</sup>.

### 6.3. Renewable Energy Policy under the Socialist Governments (2004-2011)

The first Socialist government under the leadership of José Luís Zapatero has been often described as an attempt to mark a rupture with its predecessor on many policy issues, especially in the area of social policy (Field 2011). Although continuity on certain aspects linked to liberalization and economic policy could be detected (Royo 2011), environmental policy, was a likely case for the government to seek programmatic differentiation with the weak environmental and climate policies of the PP government. The appointment of one representative of the leftist area of the PSOE party, Cristina Narbona, to the role of Minister of Environment was beyond doubt a message to both the electoral base and to the interest

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<sup>138</sup> Iberdrola was therefore entering into *take or pay* type of natural gas supply, which meant that if its estimations of the actual amount to be used were incorrect, it would have suffered economic losses

<sup>139</sup> Some electricity intensive companies such the steel producer Arcelor, were threatening to leave the country if they were made to pay for meeting the Kyoto targets.

groups involved in the policy sector. However, the Minister of Environment had to share its policy remit in the electricity sector with the Minister of Industry and policy outcomes thus depended on the relations and coordination between the two departments.

Upon arrival, the new Minister of Industry announced the intention of revising RES-E support mechanism to make sure it would be able to sustain the more ambitious goals that were deemed necessary in the area of RES-E deployment. In any case, the 2004 regulation already foresaw a review of its effectiveness by 2006. The PFEF was also deemed to need revising, given the deficiency detected in its progression towards the achievement of midterm and long-term goals. According to IDEA, which was responsible for the plan follow-up, and at the end of 2004, only 28% of the goal had been achieved and in very imbalanced ways, with wind energy representing the only area of satisfactory progress. The problem was, in great part, the spectacular increase in demand of electricity which diluted, in percentage terms, whatever increase had been obtained in terms of RES-E production. Therefore, the RES-E goals had to be updated to reflect this constantly adverse evolution of electricity demand. The government was however cognizant of the fact that, although increases in demand were in part the welcomed consequence of economic growth, they were also the consequences of the high energy intensity of the Spanish economy. High energy intensity was partly structural, due to the prevalence of energy intensive sectors in the composition of the domestic economic activity but also the consequence of the lack of any serious past attempt, to improve this crucial indicator by establishing effective energy saving and efficiency policies (de Alegria Mancisidor et al. 2009; Mendiluce, Pérez-Arriaga, and Ocaña 2010). A priority was thus set to remedy this shortcoming by revising the energy efficiency plan adopted by the PP government. The commitment to progressively reduce the participation of nuclear energy within the domestic energy mix (with an envisaged drop of four points, from 23 to 19% by 2012) was also maintained.

To explain the change that would occur to RES-E support mechanisms, it is necessary to explore first the revision to RES-E planning to which the government committed first. As said above, there was evidence that the plan adopted in 2000 was out of touch with the rapidly evolving reality. Furthermore, the first RES directive also included specific targets for RES-E that had to be translated into operational measures. Moreover, the surrounding normative context had also changed, with the formalization of the GHG reduction targets at EU level,

the consequent approval of the first NAP (next section) and the adoption of an Energy Efficiency Action Plan as new interacting elements to be considered. The synergies were clear: without action on energy efficiency, increases in electricity demand would have always raised the bar for RES-E goal attainment, while, if the ETS was not to be converted in just an extra cost of carbon intensive electricity production, investing in RES-E generation would have been an economically smarter strategy to achieve GHG emission reduction targets and keep investments in the country. The revised renewable plan developed extensively this rationale, also building on the fact that the Spanish RES-E industry had grown into a relatively strong niche industrial sector with benefits in terms of job creation, international projection capacity and export potential. The revised plan then increased the original PFER goals by the following amounts: wind energy goal by 12,000 MW, to achieve a total installed capacity by 2010 of 21,000 MW and solar PV by 363 MW, to reach the goal of 400 MW in 2010. However, the planning document also imposed a certain rationalization in the uncoordinated projections made by the Autonomous Communities, increasingly attracted by the benefits that windfarm drew with them. The sum of the different regional installation plans amounted to almost 36,000 MW, well beyond what the central government planned. Most regional governments complained about the cap placed on their aspiration, but, according to media reports, the secretary of state for energy stated that they could not plan with resources they did not control, and the level of support was mobilized (via the tariff) by the state (Gomez Mardones 2006). Interestingly, the complaints of the Autonomous Regions received the support of the lobbying organization, the Association of Wind Energy Entrepreneurs (AEE) that brought together incumbent utilities and independent producers, as a demonstration that, at least in the wind segment of RES-E, there was a united industry front.

The AEE was worried about the fact that the government might have tried to curb excess enthusiasm for windfarm construction by decreasing the amount of support. However, the revised PFER intended to mobilize a considerable amount of financial resources (more than 18 €billions) and only 2.9% would come in the form of public investment. It was deemed unlikely that the 2006 planned revision of support mechanism adequacy would result in a major downward shift, if it aimed at attracting that large quantity of investments. In the wake of the approval of the new support system, the Minister of Industry launched appeasing messages to the sector. Although it was stated that the new support tariffs would be tailor-

made to those technologies that still had not reached the stage proximate to commercial maturity (with a clear reference to solar PV and concentrated solar) it was also remarked how windfarm had beneficially contributed to achieve a reduction of generation costs (via the merit order effect and by avoiding the construction of new fossil fuel plants with high marginal costs that would have increased the wholesale market price) and an improvement of the external trade balance (via less fuel imports and more technological exports). Iberdrola had just signed a landmark loan contract with the Climate Change Facility offered by the EIB by an amount of 450 €millions<sup>140</sup>.

The first draft of the new RES-E support regulation however generated mixed reactions, as the AEE found that the new 'reasonable return' calculated by the IDAE (7% for the fixed FiT tariff and between 5 and 9% for the market premium option) was too low, while the PV were more pleased (even though their retribution was also set on a 7% rate of return on investment), probably because, as a nascent lobby, they had not yet reached the same level of bargaining power as their wind counterparts. It was also aired that the level of support would be delinked from reference to the consumer tariff, because of the increases in its levels that the government had started to adopt as concerns over the tariff deficit in the electricity sector grew. If it was understandable that support levels needed a more stable reference, there was concern in the sector that the new system would have meant a return to government discretion<sup>141</sup>. Close to the revision of the support mechanism, the government was also stating that some windfarm project could be competitive even without support, and that integration of large quantities of wind generation into the grid had started to be a technical challenge for which windfarms operators should be made partially responsible. The question of the lack of interconnections resurfaced (the secretary of state saying in an intervention to the Industry Commission that Spain was not like the other wind energy champion, Denmark, that enjoyed interconnections from all sides<sup>142</sup>). Uncertainty was high and parties on the right and on the left, for different motivations but that reflected the high consideration that the sector enjoyed across the political spectrum, were backing the wind

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<sup>140</sup> Reported in the newspaper *El País*: "Más aire para las renovables", 29th of October 2006

<sup>141</sup> APPA and AEA had also offered IDEA their availability to maintain the link to the consumer tariff but establishing a price cap at 92€ per MW.

<sup>142</sup> In the same intervention, it also accused CiU to maintain a double posture on interconnections, as it reclaimed them in the Spanish Parliament, but it also rejected them in those Catalan municipalities where it ruled and where there was popular opposition to the projected MAT.

energy lobby. The CNE rejected the first official draft of the new support regulation because of the presence of a retroactive measure for the wind sector and because it also intended to disincentivize those windfarms that were considered inefficient because would produce during less than 1,600 hours per year<sup>143</sup>. Banks had started to join promoters and signalled to the government that they would have not financed any project at those conditions (Gomez Mardones 2007).

### 6.3.1. A New Support Mechanism: PV Joins Wind

After much haggling, and after the promise of increasing the amount of projected wind capacity in the imminent revision of the RES planning document by further 2,000 MW between the government and the wind sector, an agreement was reached. The new support mechanisms<sup>144</sup> would therefore include more restrictive measures for wind energy, in part a consequence of the favourable cost learning curve and in part because of the concern by the government to be feeding an investment bubble that would increase the already evident problem of the tariff deficit. On the other hand, the PV sector had many reasons to cheer at the new regulation, as it contained incentives that were meant to overcome the many regulatory and economic barriers that had so far surprisingly prevented its take-off in a country rich in solar irradiation. It must also be mentioned how the posture of the government had changed right after the March 2007 European Council that laid the basis for the integrated EU climate and energy policy, hence the need to ensure a solid framework to achieve what would probably be RES-E ambitious goal. The new framework then maintained the traditional binary option between fixed FiT and market premium. The substantial novelty was, as already stated, that the tariff would now be calculated based on parameters established by the government. Interview with former IDEA director (interview MARGARIT) has confirmed that the organism oversaw the process of setting the level of support through their knowledge of the relevant technological environment and in consultation with the broad network of sectoral actors. For the market premium option, a cap and a floor were established (resulting from the sum of the market price plus the premium) to provide certainty to investors (the floor) and avoid windfall profits that would have damaged consumers that

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<sup>143</sup> This fact had however started to be the norm because all the best spots in terms of wind availability had already been taken in previous years.

<sup>144</sup> Royal Decree 661/2007, 25<sup>th</sup> of May 2007

ultimately paid the support price (the cap). The evolution of wholesale market prices, which had become more volatile with time, had made this option necessary, as the absence of upper and lower limits in the past had originated under- and over-retributions, but also variability in the flow of revenues for the generators, causing cash-flow problems. Tariffs and premiums would be updated on a three-monthly basis and were linked to inflation levels, another factor that ensured certainty. Revision of support levels were again set at specific dates, the first during 2010 and then every 4 years. The revision would have considered the degree of goal attainment in the revised PFER and the evolution of technology (plus other factors as the percentage of total generation, in view of possible technical RES-E integration problems, and the interest rate in capital markets). Other important clauses included the obligation for plants with a capacity above 10 MW to be connected to the control centre of REE<sup>145</sup>, limited responsibility in case of deviations of output and priority access to the grid. Going back to the levels of support, APPA noted (del Río González 2008, 2926) that they had in fact increased for all technologies, including wind, and how the increase for solar PV was spectacular (82% compared to the previous system). Moreover, retroactivity, as originally envisaged by the government, had been suppressed and support was guaranteed without temporal limits. In other words, it is unclear whether the government, which initially intended to strike a balance between the need to increase the amount of installed RES-E and the need to ensure a reasonable remuneration without generating excess profits, had made an informed and conscient choice among the two desiderata, generating a potential for what will become in fact an ‘unintended consequence’ years later.

However, the government wanted also to take more control over the rate of installation of new capacity, and for this reason a register was created to which all promoters of RES-E projects had to be inscribed. The Spanish support system, in fact, was different from that of other Member States in that it did not establish ex-ante fixed limits to the quantity of RES-E that could be installed and benefit from the support regime. Such limit was, generically and

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<sup>145</sup> REE had developed a control centre for the management of intermittent electricity that had gained international fame for its level of innovation. The relation between REE and RES-E generators was subject to moments of tension because of the growing difficulty that the latter posed for the former, but it was also subject to mutual understanding and accommodation, with in particular wind generators (that, different from solar power generators are subject to more variability in their output because wind patterns are less predictable than solar patterns) available to incorporate more sophisticated technologies as to better predict their output and maintain the necessary tension in the grid (del Río González 2008, 2928)

implicitly, the one defined in the PFER. The Register then was intended as an instrument of control of the quantity (and quality) of the project started by promoters. In relation to quantity, the idea was to control that the amount of projects set in motion would not lead to an excess of capacity installed as compared to the government goal (something that had not yet happened in the past, so the government was probably not too worried by this possibility). In relation to quality, the goal was to screen out promoters who lacked competence or experience and speculators (anyone that would initiate the administrative paperwork and then sell it on to real promoters that could not benefit from the favourable economic regime if this was suppressed and changed for less favourable conditions). There was a pre-inscription and a definitive inscription in the register, and at each stage the promoter had to surrender certificates that proved it was complying with all the necessary regulations to be in line with the technical and legal norms of the electricity system. However, The Autonomous Communities had the possibility of setting their own registers and communicate within one month the inscription of a project to the Ministry of Industry. The CNE was charged with keeping track of the state of goal attainment (based on the number of projects that were inscribed in the central government register). When new installed capacity would have reached 85% of the planning goal, the Ministry should have set a deadline for new projects to be inscribed in the register and have the right to benefit from the support regime. The deadline could have not been less than twelve months from the date the 85% threshold had been reached. The CNE would advise the government on the extension of the deadline (but not inferior to twelve months), considering the estimated amount of time needed for projects to be completed.

In the end, the new support system seemed at that time to have created stable equilibrium among all the players involved. The lobbying of RES-E interest groups had clearly pushed the government to accept more favourable conditions that it would have probably desired, but the momentum for RES-E, also because of the increased saliency of the issue at EU level, seemed unstoppable.

### 6.3.2. Regulatory Blunders: the PV Bubble of 2007

The honeymoon between the government and the RES-E lobby was however to last only few months, as the government paid the price of asymmetric information between PV producers and IDEA about the costs of technology. With the adoption of the new support mechanism

and levels, the government had in fact tried to amend its past miscalculations in relation to the adequacy of PV support levels, which had caused Spain to be a paradox of a sunny country almost without PV electricity. The attempt would however result in a gross miscalculation of the opposite sign and with equally stunning effect. The 82% increase in the level of PV remuneration was so high that the 400 MW of PV generation capacity that the government hoped to be reached by 2010 were triplicated in only three months. There was an avalanche of PV projects since March 2007 and in July 2007 the government tried to remedy. By the letter of the regulation, the government should have set a deadline of at least twelve months for new projects to be inscribed in the register and be entitled to receive the, now the government knew, extremely generous retribution and so it did, setting a year-long deadline, at the risk of having to accept an enormous quantity of very costly projects. However, on the 25<sup>th</sup> of July, a new version of the regulation was published, stating that the originally published regulation in the official bulletin (25<sup>th</sup> of May) contained an errata and should have read six instead of twelve months for the deadline duration. The following day, the original deadline (12 months) was however re-established and it was stated that there had in fact been no errata. An interview with a member of the CNE (see Annex) who was directly implicated in this issue explains what had happened (according to the interviewed). The question asked was if there were speculators behind the projects presented.

*CNE Official: I don't think there were speculators, but lobbies. The CNE warned the government that maintaining the 12 months deadline would have caused more and more projects to request inscription in the register. This was the only decree I remember being amended twice. The first errata was fine, they shortened the deadline by six months. When they reinstated the twelve months deadline, we were really upset. They are only rumours, but apparently PV economic interests from California, Israel, Australia put pressures on the government.*

A similar version is provided by in his memories by the person who would then be the Minister of Industry few months after the regulatory mistake. It is stated that it was impossible to come to an agreement with PV investors to burst the bubble because it was a fragmented sector and lacked a common representative. He had tried to convince the Prime Minister to burst the PV bubble by changing the regulation, but it was not possible because the government would have not found majority in the Parliament, as even the PSOE was divided on the issue.

Moreover, he states, the Prime Minister had fully embraced the climate change cause and did not find it convenient to be seen as acting contrary to what had become one of the main motives of his political action. There was a ‘sunbelt’ blocking minority made by the representatives of three Autonomous Communities (Castilla-la-Mancha, Extremadura and Andalusia) where these projects were going to be built. The Ministry of Economy also denied to take action, as it saw no immediate consequence for public finances and the Ministry of Industry was therefore let alone in his attempt of solving the problem (Sebastián 2015, 168–69). The former Minister also states that many Autonomous Communities had played a disloyal role in the issue by accelerating and simplifying administrative procedures for inscription in the register as to make sure that projects will be executed in their territory. A further factor that reinforced the process was the arrival of the domestic construction sector that was in search of new investment opportunities given the extremely negative outlook for the building sector (Mars 2007). As a result of this regulatory accident, 3,000 MW of PV (which amounted to more than the global installed capacity for that year) would have costed 3 €billions every year for the following 25 years. A similar dynamic, but with much less dramatic effects, had also involved the wind sector as promoters rushed to take advantage from the transition period between the 2004 regulation (much more favourable) to the 2007 regulation (Gomez Mardones 2008) to register their projects under the former regulation.

### 6.3.3. Contested Solutions: Retroactive Changes to Renewable Support

However, the government reacted over time and, with hindsight, it can be said that all subsequent interventions were aimed at avoiding making regulatory mistakes and, to a certain extent, filter as much as possible RES-E investment as to reduce their costs, without necessarily affecting goal attainment. Or at least this was the initial intention, which will turn into a hostile relation with the RES-E sector, especially with the PV industry, after the progression of the crisis and the change in government two years later. The first action of the government was to change the regulatory regime specific to PV, considering that the goals in relation to this technology had been abundantly achieved. As the same regulation stated, the Ministry was authorized at devising another instrument based on the evolution of the technology. The new regulation<sup>146</sup> contained two important innovations (Del Río and Mir-Artigues 2012). First, it differentiated between roof-installed PV and ground-installed PV,

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<sup>146</sup> Royal Decree 1578/2008, 26<sup>th</sup> of September 2006

because one of the effects of the 2007 regulation had been the conversion of many farmlands into ‘PV-farms’, especially in the southern regions, as developers would pay rents to landowners that offered a better return than agricultural exploitation. Therefore, more roof-top facilities started to be incentivised at the expense of utility-scale facilities. Second, a system of caps, calls and changing remuneration for each call would ensure that the addition of PV would happen according to the quantities desired by the regulator (each call would require the installation of a maximum, capped quantity) and at a cost that would be adjusted based on the outcomes of each call. If a call managed to cover at least 75% of the desired quantity, the following call would offer a lower regulated tariff (under this regulation, the market premium option was not available), while the same tariff would be maintained in the following call if this threshold was not met. Tariffs would be increased only if in two consecutive calls, the achieved installation was less than 50%. Finally, a pre-entitlement register was established with a view to avoid what was considered by the government a fraudulent ‘rush to gold’ under the 2007 regulation, as many projects sought inscription in the register even if there was no organization behind. Under the 2007 regulation, many inscriptions had been of a purely speculative character, as, once the inscription was completed and the right to remuneration secured, the beneficiaries would then sell the inscription (and the remuneration right) to real project developers who then had to accept a lower remuneration (the government-backed remuneration minus what they had been paying to the speculator). This, it will be explained in the next chapter, caused great problems to the sector when the PP government retroactively changed remunerations in 2013. In many cases, the owners of the installations had changed, and the new owners were not in fact receiving the bloated or ‘irrational’ remuneration the government claimed, as they had bought the facility from speculators and their rate of return was by consequence less than it was on paper.

Under the pre-entitlement register method, the government would now require proof of the promoters’ technical and financial capabilities and acquired the right to make on-site inspections. In any case, by fractioning the new capacity goals into periodical calls, the right to remuneration, for those that managed to get access into the pre-entitlement register, was linked to specific levels that were set for each call. With this method then, the government hoped to control both the costs of support and the quantity of PV capacity installed. The PV

sector accepted the change because they now perceived the need to distance themselves from the wave of speculation that had swept the sector, in the hope of preserving their legitimacy and credibility for effectively negotiating with the government in the future.

The second RES-E containment measure, in 2009, was included in one of the acts adopted to reduce the tariff deficit<sup>147</sup>. It consisted in the extension of the pre-entitlement register method to technologies other than PV, such as wind, concentrated solar and biomass, that had not yet filled the 2010 capacity goal set by the PNFER. The projects that would obtain the pre-entitlement registration, would then benefit from the 2007 support regime until the capacity goal had been met, after which, a new regulation would have to be adopted.

In 2010, the approach taken by the government became more decidedly aggressive and guided by the pressing need of reducing the tariff deficit amidst the constraints imposed by the financial crisis. With the crisis turning almost into an emergency, the measures adopted by the Minister of Industry overcome resistance from other members of the cabinet and what had seemed impossible and politically inadmissible in 2007 became the norm in 2010. Relations with the RES-E sector were instead different. In the words of the Minister at that time, it was possible to come to terms and reach an agreement with the wind sector. The PV sector instead rejected all the attempts at finding a concerted solution and started a legal warfare with the government, with legal challenges at the domestic and EU level. The Minister was decided to act on two fronts, one more immediate and conjunctural and the other more long-term. In the immediate, the government requested that RES-E participated in the effort to ensure the financial sustainability of the electricity sector and help contain the deficit within the yearly ex-ante limits that the new legal framework required. For this reason, the level of support for existing installations was temporarily reduced. For wind installations, such reductions would be both permanent and temporary<sup>148</sup>. The number of hours with a right to support tariff was reduced for the remaining lifetime of the installation, while support tariff levels were reduced by 35% until 2013. After 2013, they would receive a lower tariff than the original one, and for a longer time, but higher than the one significantly reduced during these imposed three years of ‘austerity’. As stated in many occasions, relations with the wind sector were facilitated by the presence of almost all the utilities integrating UNESA, which meant

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<sup>147</sup> The Royal Legislative Decree 6/2009

<sup>148</sup> Royal Decree 1614/2010, 7<sup>th</sup> of December 2010

that they were also interested in solving the tariff deficit problem and saw the measure as part of a larger package that included cutbacks to their remuneration for conventional electricity and other activities, such as distribution. The discourse of the two main actors, Endesa and Iberdrola started to be openly critical of renewables, although emphasis was often placed on the ‘failed’ PV ‘experiment’, in which they had taken little or no interest, while sparing windfarms from criticism<sup>149</sup>.

It must be noted that, more than their renewable assets, utilities were worried about their conventional power plants that, because of the crisis, were working for only a fraction of the hours they needed to recover their fixed costs. CCGT was a particularly pressing economic problem (Interview Gas Natural and Iberdrola). This technology had experienced an installation boom similar to that of renewables in the period between 2000 and 2008 (in response to the indicative planification made by two consecutive governments, in 2002 and in the 2005,) and now that demand had plummeted they were mostly idle (Bianco, Driha, and Sevilla-Jiménez 2019; Ciarreta, Espinosa, and Pizarro-Irizar 2017). Their owners were threatening the government with closing them, something that could have affected security of supply in the long run (de las Heras 2016; Vélazquez 2014). However, the government was more concerned about the effects of high renewable penetration and low electricity demand on thermal power plants using domestic coal. A targeted subsidy was adopted in 2010, in the name of security of supply, to make sure coal power plants would be able to sell their (subsidised) electricity in the market. This measure will be analysed in the next chapter in the wider analysis of coal-related policies but suffice it to say here that the measure generated conflict among the utilities and between these and the government. The involved parties had then tried to sort out the problem within a wider agreement that, indirectly, also involved further restrictions imposed on renewables.

The measures adopted in relation to the PV sector were intended to imitate the pattern followed for wind, but the affected sector was different in terms of its characteristics and the

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<sup>149</sup> Endesa CEO stated that renewables were a ‘unapproachable luxury for an economy in crisis’ and that they should have not been deployed at those levels when their price was 5 times higher than other technologies which were also secure and clean. Renewables were welcomed, but according to the maturation of their commercial character, time, and ordered introduction. ‘*When experiments do not turn out well, they turn into nightmares*’. Source: El País, 22<sup>nd</sup> June 2010 “*Endesa dice que las renovables son un “lujo inabordable”*”. Iberdrola CEO was equally explicit in pointing the finger against PV and concentrated solar electricity (El País, 28<sup>th</sup> April 2010 “*Galán apuesta por retrasar el crecimiento de la energía solar*”)

impact of the cutbacks proposed by the government did not sit well, opening the way for an intense conflict. The first act<sup>150</sup> adopted by the Ministry of Industry implied a clarification of the supposedly vague wording of the 2007 regulation in relation to the temporal duration of the support mechanism. While the regulation was initially interpreted as lifetime support, it was now interpreted to be valid for only 25 years. However, and as measure of partial appeasement of the sector, the government would propose an extension to 28 year first and, given the cold reception of the proposal, to 30 years. The sector still considered it an illegal retroactive measure. The second act<sup>151</sup> limited, as in the case of windfarms, the number of hours that were entitled to retribution, intended as a temporary deficit-reduction measure, until 2013. The justification provided by the government was that there was an implicit cap contained in the PNFER 2005-2010 as it specifically indicted the expected contribution of PV installation in terms of functioning hours, to the achievement of EU RES-E goals. These two measures were considered retroactive by the sector because were affecting those installations that had been built under the 2007 regulation and were made the object of legal challenges (Castro-Gil Amigo and García Breva 2015). The PV sector had a very different idea about the real causes of the economic imbalances in the electricity market, and it was defended that responsibility should be places in the way the market had been organized. The main criticism, which was supported by a large number of critical economists, was therefore directed at the marginalist pricing model adopted for the wholesale market (Fabra Utray 2014). A marginal model only made sense to optimize the functioning and the competition among power plants that shared the same characteristics, such as high variable and marginal costs and low fixed costs. Therefore, CCGT and coal power plants were apt to compete in such type of market. But the Spanish generation mix was characterised by the presence of three types of generation capacity that had the opposite cost structure, high fixed costs, and very low marginal costs. They were renewables, hydropower, and nuclear power plants. Nuclear and hydropower fixed costs, according to the critics, had been working for so long that their fixed costs had already been abundantly recovered. Continuing to remunerate them in the market with the same high prices need to remunerate CCGT (which was the technology that most often set the marginal price in the pool) was an economic no-sense that had generated conspicuous windfall profits for their owners. The same CNE had alerted of this problem back

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<sup>150</sup> Royal Decree 1565/2010, 19<sup>th</sup> of November 2010

<sup>151</sup>The already mentioned Royal Legislative Decree 14/2010

in 2008 and had suggested that part of the market remuneration for nuclear power plants needed to be reconsidered<sup>152</sup>. On the contrary, RES-E generation facilities had a genuine need to be supported as they had been in place for a much shorter amount of time and their initial investment in a fixed cost was still far to have been repaid. The cutback measure RES-E technologies were subject were thus perceived as an injustice, as the marginalist model and the windfall profits of the other two technologies had not come into focus as a part of the problem.

The PV sector, although fragmented among different peak associations, managed to act conjunctly, and elevated its challenge to the Supreme Court which would, however, ruled in favour of the government in 2012 and in 2014. These rulings could be considered landmark as they established a legal doctrine in relation to the extent to which retroactive measures could be considered illegitimate. The Court found that such measures did not breach the principle of 'legitimate trust' in the regulatory powers of the state and they fell within the definition of 'regulatory risk' for investments. In other words, the Court hinted at the fact that the investments made in the renewable sector under the provisions of subsidies could not expect to have secured an unmodifiable right (Ruiz Olmo 2014). In particular, the Court stated that if the overarching principle of the expectation to receive a reasonable return was not violated, investors' rights were guaranteed. The cutbacks in question, according to the Court, did not amount to an infringement of the principle and therefore the reasonable expectations of investors had not been violated. The PV sector also tried to involve the European Commission, but it decided not to intervene directly. However, the Energy and the Climate Commissioners sent a letter to the Minister in which they, using a rather diplomatic language, considered that adjustments to RES support mechanisms should not have a retroactive character because they could have a negative impact on investors' confidence. The letter also invited the Minister to guarantee the respect of EU legal principles, including 'juridical security and the protection of legitimate trust'. For the PV sector, the problem was not only how they were being treated for their past investments, but also about future perspective. A further complain was then directed against the tariffs for new PV facilities that the government was adopting under the new 2008 regulation, with a reduction of 45% and 25% for ground and

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<sup>152</sup> CNE, "Informe Complementario a la Propuesta de Revisión de la Tarifa Eléctrica a Partir del 1 De Julio de 2008. Pecios y Costes de la Generación de Electricidad" July 2008

roof-top installed panels. The sector considered that such support levels were so low that they constituted a de facto moratorium on the installation of new PV capacity.

#### 6.3.4. Preparing for the 2020 Climate and Energy Framework

Meanwhile the government was also acting at EU level in the context of the negotiations for the 2020 climate and energy framework. Spain had played a decisive role in arguing in favour of a 20% RES target and contested the proposed competence shift in relation to the adoption of RES support mechanism (Boasson and Wettstad 2013, 79–104). Spain was among those countries, including Germany and Denmark, who defended the opportunity of maintaining domestic discretion and of keeping FiT as a model compatible with state aid rules. It must be noted that these discussions at EU level were taking place during the application of the 2007 regulation and the introduction of the 2008 PV regulation, therefore the Spanish EU position was coherent with domestic action. The perception was not so much that FiT mechanisms had lost their initial utility but that they had to be better tailored to the evolving technological context, such as the case of the 2008 PV regulation.

Back to the domestic context, the political saliency of the energy mix question was clearly on the rise. The government proposed a debate among all parliamentary groups to try to achieve a cross-party consensus on the energy model for the next 25 years, with a view to achieve a ‘state pact’ and ensure coherence and credibility beyond partisan preferences that led to act differently at every turn of ruling government coalition. The *‘Subcommission of Analysis of the Spanish Energy Strategy for the Next 25 Years’* produced a final document that reflected the existence of a consensus among the political parties on the general guidelines for the composition of the energy mix in 2020 under the new goals set by the EU. The document recommended to achieve a RES goal of 20.8%, slightly higher than the minimum goal set by the EU. The report was published after the government had sent to the European Commission its first, provisional, version of the National Renewable Energy Action Plan requested by the 2009 renewable directive. This document indicated a higher target, 22.7% of RES on final consumption. However, the influence of the Subcommission report and the worsening crisis context led to a re-evaluation of the goal. The new document submitted to the EU was then an adapted version of the new domestic Renewable Energy Plan (PER 2011-2020) which was adopted by the new PP government in December 2011. In the document sent to the EU, express mention was made to the need of considering the effects of the crisis for the

recalibration of the originally intended targets. In any case, in both plans the amount of expected RE-E on total electricity generation was substantially stable, with a an expected 40% by 2020. All the documents mentioned made explicit reference to the need of increasing the interconnections with France as a priority. However, for the first time it was mentioned the change in the location of the second transmission line, as the Central Pyrenees option was discarded in favour for a submarine cable that would connect the two countries via de Gulf of Biscay. The project was still at a preliminary stage of technical exploration, but it was assumed that it would be built by the end of the 2020 climate and energy framework commitment period, in 2020. It must be noted here that in its appearance before the Mixed Commission for the Study of Climate Change in the Spanish Parliament in 2010, the president of REE was quite adamant in stating how the lack of interconnection with France was the single most important bottleneck the domestic electricity system was facing and how the growing amount of wind electricity was becoming a concern that would only increase if the 2020 goals were to be achieved without a parallel increase in interconnection levels<sup>153</sup>.

#### 6.4. Climate Energy Policy under the Two Socialist Governments (2004-2011)

##### 6.4.1. The First National Allocation Plan

After the March 2004 elections, the new government obtained a delay for the submission of the Spanish NAP, justified by the fact that it would have to take charge of its preparation and the state of progress was still unsatisfactory. The government was being subject to political, besides economic lobbying, pressure. The Catalan CiU party was being more explicit in expressing its concern about the impact on the local manufacturing sector and the PP, now

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<sup>153</sup> The explanation provided was that there were only two alternatives to the technical challenge. One was to increase the domestic storage capacity, which at that time meant using the excess electricity for pumping water uphill into large water basins that could be used in hydroelectric power stations. However, the domestic potential for increasing this type of storage capacity was rather limited. The second was the disconnection of windfarms, something that was a no-sense and a waste of electricity. In his opinion, the interconnection capacity with France should increase to 5,000 and not 4,000 MW as currently planned. However, he also referred to future possible complements, rather than alternatives, to interconnections, such as demand-side management. This required however the establishment of mechanisms that would send the right price signals, coupled with smart meters, smart grids, and electric vehicles. Finally, he singled out the problem of grassroot opposition to the deployment of high-voltage transport lines. In the past, according to his reasoning, this was not a problem as transport lines were considered necessary to bring electricity that citizens felt they needed. Nowadays, because all electricity needs were covered, and there was little public understanding of the role that new transport lines play in the deployment of a sustainable electricity system, these favourable conditions were any longer available. Source: Mixed Commission for the Study of Climate Change, session no. 32, IX Legislature, Diario de Sesiones, 2<sup>nd</sup> of September 2010.

in opposition, was free to take a more critical stance with regard the compatibility between climate commitments and competitiveness. The Ministry of Industry, a Catalan himself, also openly acknowledged that agreeing to the Kyoto target of a GHG 15% increase had been an act of political correctness more than an act in the interest of the Spanish economy, given the fact that already at the time of the agreement Spain emissions were already above that level and it was clear that they would have continued to grow. However, it was also stated that the country had to comply with this ambitious goal out of coherence with international commitments. The Minister thought that the 2005-2007 pilot period would have not created competitiveness problems, but that for the 2008-2012 period it would have been advisable for the EU to reconsider its goals. However, the Ministry of Environment defended a different opinion, as she saw the Protocol as an opportunity to modernize the Spanish economy. Compared to the PP government a crucial change took place in institutional responsibilities in relation to the leadership for the preparation of the NAP. While during the PP government the Ministry of Economy had been at the helm, under the PSOE government it was the Ministry of Environment to command operations. Rearrange macroeconomic policies was too much of a burden for the Economy department and the Ministry of Environment filled the gap (del Rio 2007) The NAP for the 2005-2007 period<sup>154</sup> was the object of discussions in the Interministerial Climate Change Working Group, which had replaced the previous Interministerial Commission, and it was submitted in time with the accorded extension, avoiding the infringement procedure. The Ministry of Environment and the OECC had taken the lead in preparing the NAP<sup>155</sup>, putting an enormous effort in completing the drafting of the NAP by July 2004. The electricity sector continued to be divided on the levels of ambition and the allocation criteria to be followed but promised ‘unconditional cooperation’ to the new Minister. Given the imminence of the decision, new proposals started to be floated by UNESA, such as the possibility of adding a new regulated cost (an ‘environmental tax’) to electricity tariffs. UNESA demanded favourable conditions, that were not well aligned with the Commission guidelines on how to prepare NAPs. The demands included free allocation of allowances, the possibility of grouping installation (to favour the most polluting ones), maintenance of 2002 emissions as the baseline reference for the quantity of allowances to be

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<sup>154</sup> Royal Legislative Decree 5/2004, 27<sup>th</sup> of August 2004

<sup>155</sup> A former high official from the Spanish oil company Repsol was appointed as the head of the OECC, for its specific competence and for facilitating the dialogue with the sector (interview with OECC)

distributed<sup>156</sup>, the possibility of increasing emission by 1% in the 2005-2007 period and a share of 54% of the allowances to be obtained via the Kyoto flexibility mechanism. Iberdrola continued to lead with its pro-Kyoto stance, arguing that it was logical that the electricity sector would be asked to make the most reductions and so allow more allowances to be distributed to the industrial sector, which had less immediate opportunities to adapt. It was evident in fact that the electricity sector, compared to the industrial sector, had more abatement technological alternatives and at a lower marginal cost (which were two of the cost-effectiveness cornerstones of the ETS), less exposure to international competition and higher profit margins (del Rio 2007, 190). Iberdrola continued to suggest to, above all, penalize coal-fired power plants. Gas Natural, which was becoming a major new player in the market and operated almost exclusively CCGT, was also taking a conciliatory attitude and agreed to penalize coal.

Within the government, there also were diverging views about the distributive consequences of Kyoto compliance. The Minister of Environment had made clear that the cost would be formally shifted to consumers via the electricity tariff while the Minister of Industry also made clear that, using its tariff-settings competence, he would not increase the tariff by an equivalent amount either. As already said, unions took a favourable stance to Kyoto, but there was another pending dossier on the table of the government, with a new coal mining plan to be approved in 2005 (as part of the EU state aid policy on coal). The two issues overlapped, because the treatment of power plants using domestic coal would have had a substantial impact on domestic mining and vice versa. Being conservative in the phase-out of domestic mining would have forced the government to be lenient with the allowances assigned to power plants that burnt it. News coming from other Member States, such as Germany and Portugal, were signalling explicit favourable treatment for domestic coal and the pressure on the Minister of Environment to take note, grew.

There were many difficult decisions to take. The first and possibly most difficult decision was how to distribute the effort between the industrial and the electricity sectors which were the two sectors called to play, by large, the most important role in the application of the ETS. Then, within the electricity sector, the government had to strike a compromise between the

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<sup>156</sup> The baseline year was crucial, as the electricity sector emissions had grown very fast in recent years. The closer the baseline reference year, the easier to stay within the limits.

opposed groups by fixing criteria that would complement the basic principle of assignation based on historical emissions with others that recognized past efforts to move away from fossil fuels (or increase energy efficiency of combustion plants) and that generated incentives to accelerate the transition process. The first draft of the plan proposed an assignation of 260 million allowances to the sector (therefore closer to the 290 million wished by Endesa than the 209 proposed by Iberdrola) which implied an emission reduction of 5% between 2005-2007 (as compared to the 2002 baseline). The news was then that, while for the industrial sector reductions would start in the 2008-2012 period, allowing simple emission stabilization during the pilot period<sup>157</sup>, the electricity sector would have instead to start its reduction efforts at the onset of the process. The proposed NAP was acclaimed by environmentalists and unions, while economic interest groups were concerned, not just for their own industrial emissions but also because they feared an increase in their electricity costs because of the pass-through from the electricity sector. However, the government, now united in its stance, launched conciliatory messages to industrial groups arguing that they should not have expected substantial electricity tariff increases.

All utilities declared themselves reasonably satisfied, probably because the details of how allowances would be distributed among installations had not yet been revealed. This was the second major distributive decision to be taken by the Ministry of Environment, besides the allocation among sectors. With a bit of irony, the Ministry for Environment predicted that the distributive criteria would not have left anyone completely satisfied. Cooperation between the government and UNESA started to intensify for this second part of the process (interview with UNESA and OECC), with the establishment of working groups tasked to strike a balance between the position of Endesa, which was firmly centred on assignation based on historical emissions and Iberdrola, that pushed for choosing future expected emissions, as CCGT, being relatively new, had less historical emissions than coal power plants. Iberdrola started to propose that coal-fired power plants be made to reduce their hours of functioning or set aside as strategic reserve to meet peak hours demand, as to free allowances for more efficient plants. It also wanted that a conspicuous reserve for new entrants be set aside, because of its

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<sup>157</sup> The NAP proposed that, given the fact that emissions were 40% higher than in 1990 and Spain had been allowed to emit 15% more compared to 1990, the reduction effort would be of 24%, of which 15% would have been made domestically (i.e. real reductions) and the remaining 9% via flexibility mechanisms (7%, purchased by the state) and forest sink (2%)

more favourable expansion expectations via the construction of CGTT, a proposal that Endesa firmly opposed. Endesa started to circulate numbers about the adverse economic impact of switching from coal to natural gas, stating that the former would have been 24% less expensive than the latter over the first compliance time. Unions also started to have mixed feelings, defining the plan as a ‘graveyard’ for the mining sector. Finally, while the Socialist government reaffirmed its intentions to proceed with a gradual nuclear phase-out according to the expiration of their currently agreed lifetime (i.e. discarding its extension), there were some concerns about the possible economic and security of supply impact of a rapid coal phase-out forced by high allowance prices.

In the end, the installation-level allocation criteria was based on three criteria (del Rio 2007, 197). Geographically, power plants based in the islands were privileged, due to their extra costs of supply. Second, the historical emission criteria prevailed, although it was partially corrected by using emission factors benchmarks that partially penalized the most polluting coal-fired power plants. Third, a slightly higher share of allowances was given to CCGT than their average emissions in 2002 would have predicted (reflecting the fact that it was coal generation was expected to decrease in favour of increased CCGT output). However, strong allegations on the part of Endesa led to a partial retreat on the part of the government which corrected the already published NAP to provide 3% more allowances to coal power plants<sup>158</sup>. At the same time all utilities started to set up international projects linked to flexibility mechanism allowances, preparing for a possible allowance shortage and to avoid purchasing their shortages in the new ETS market, that at that time was feared because of the unpredictability of the future allowance prices.

#### 6.4.2. The Second National Allocation Plan

The process leading to the adoption of the second NAP (NAPII) took place amid the deception generated by the apparent unstoppable growth of emissions (projected to be 50% higher than 1990) and the renewed political commitment to leave behind the image of a climate laggard. In that sense, the government had actively engaged in a parallel process that would lead to the first comprehensive climate strategy, the Spanish Strategy for Climate Change and Clean

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<sup>158</sup> It has been demonstrated how the provision of subsidies to power plants using domestic coal has had a notable distorting effects in their output, which has been less responsive to the impact of carbon prices than unsubsidised plants using imported coal (Ellerman 2008)

Energy (which would be finally adopted in 2006). However, upgrading the country's environmental credential was not the only source of concern as, because of the relatively high carbon price at that time, it was feared that the cost of compliance via the purchase of carbon allowances in the market would end up being particularly expensive, both for the state (responsible for the diffuse sectors) and for the sectors included in the ETS. Bending the curve of emission growth was a shared concern that by now ranked high among public and private actors (interview OECC).

The attitude of the actors involved in the process of preparing NAP II did not change much though, with strong activism on the part of the Ministry of Environment and the same pattern of mixed enthusiasm and mild opposition from the sector. The Minister of Environment, who was leading the process, could use its institutional leadership to leverage on the NAP I experience as a truly pilot period. As it had been agreed, the greatest part of the reduction effort was to be achieved during the 2008-2012 period. This time however, the policy mix with which the government could count was more varied and robust than in 2004, as energy efficiency and renewable policies had been strengthened or were to be so in the course of the compliance period. The combined effects of these policies were expected to alleviate the reduction effort burden and offer more alternatives to utilities.

The first decision in relation to NAP II was to allow the non- ETS, the diffuse sector, to absorb the increase in emissions allowed by the Spanish commitment under the EU bubble (+ 15%) , while the ETS sector would be constrained to make the needed reductions. In other words, no leniency was accorded to the electricity sector, in view of the evident difficulties the Spanish economy was meeting in reducing emissions, except for the allowed, generous use of flexibility mechanisms. The electricity sector was presented with a considerable reduction on its annual allowances. The government did not go as far as introducing auction, but the quantity of allowances distributed was reduced by 45% compared to NAP I, a stunning number if it is considered that sector emissions had grown during the pilot period. As for the allowed use of flexibility mechanisms, the original version of the NAP II<sup>159</sup> contemplated the possibility that each installation could use a quantity of allowances obtained through flexibility mechanism as high as 70% of the allowances received under the NAP, in

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<sup>159</sup> Royal Decree 1370/2006, 24<sup>th</sup> of November 2006

consideration of their quality of public service (as compared to only 20% for other sectors). However, the European Commission found this percentage to be out of line with EU guidelines and it was then reduced to 42% (and 7.9% for the other sectors)<sup>160</sup>. Endesa made plans to acquire as much as 100 million allowances through flexibility mechanism, given the difficult position in which it found itself due to the high carbon intensity of its generation mix.

As for the criteria to assign allowances to individual technologies and installations, the pecking order of NAP II was similar to NAP I, with the geographical criteria and a special regard for domestic coal. It must be noted in fact that the new plan for domestic coal mining had now been adopted and that it would last from 2006 to 2012. Part of the plan was the assurance that domestic coal would be in fact used in domestic power plants. The remaining allowances were then assigned to all other electricity installations, this time on criteria set on the best available technology benchmark<sup>161</sup>. UNESA was not satisfied as most utilities had received only 67% of the allowances they hoped and it intended to present grievances to the Ministry. However, the split among UNESA members did not help, as Iberdrola broke ranks and made its own allegations for the opposite reasons than UNESA, i.e., the high number of allowances assigned to coal and the absence of auction mechanisms, for which it was already prepared. Finally, in her intervention before the Parliament, when asked about the impact of carbon pricing, the Minister stated she did not expect utilities to pass on the full cost of compliance to consumers but that an increase in consumer prices was not necessarily a bad thing, as it would have helped in providing signals about the true costs of electricity, including the environmental ones. It was 2006 and, since the tariff deficit issue had started to be relevant, the Minister took the opportunity to create the link with the environmental dimension.

#### 6.4.3. Policy Incoherence: Support for Domestic Coal Production (2010-2014)

As it has been explained, the Spanish government was explicitly committed to providing extra support, when needed, to coal-fired power plants using domestic coal. The LSE had introduced a permanent exception to market mechanisms in the wholesale market to guarantee access to plants using domestic coal as a measure to guarantee security of supply. It was debatable to what extent, already in 1997, security of supply depended on the

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<sup>160</sup> Royal Decree 1030/2007, 20<sup>th</sup> of July 2007

<sup>161</sup> It is not unfortunately specified how these benchmarks were set

exploitation of the few quantities of low-quality domestic coal. It is more reasonable to think of such commitment as a policy of support to miners which had constituted an important electoral base for the PSOE in the northern regions. Coal miners were a powerful and vocal group and not even the PP had dared to openly confront them when liberalization was first introduced. The use of domestic coal was therefore placed at the centre of a very tense triangle including liberalization, EU state aid rules and security of supply. Within the ever more strict limits of the EU state aid policy on coal, (Krämer 2017), since the introduction of liberalization, the use of domestic coal in thermal power plants could only occur by the provision of subsidies allowing these plants to be dispatched into the wholesale market (by artificially matching the costs of more efficient plants).

This system worked until 2007 when the European Commission, considering the high coal prices in international markets, considered that domestic coal could be competitive and imposed the end of extra subsidies for the electricity sector (Martín Gonzales 2015, 249)<sup>162</sup>. However, when the international price of coal plummeted during the financial crisis, domestic coal became again uncompetitive. To guarantee the continued use of domestic coal, the Ministry of Industry decided to use again its sovereign prerogatives in terms of security of supply and established a system of ‘preferential dispatch’ of thermal plants using domestic coal. Utilities whose power plants were displaced from the market as a consequence of the measure (mostly CCGT but also thermal plants using imported coal) strongly opposed the norm. To buy their consent, the Ministry intended to provide financial compensations for the lost revenue. The CNE advised the government to submit the new decree<sup>163</sup> to the European Commission and ensure that it was compatible with state aid regulation. The Commission approved the measure regarding the use of domestic coal under the security of supply justification (for its compatibility with the IEM directive) but did not approve the compensation measure for the installations that would suffer an economic damage as a result. The compensation was therefore suppressed while the preferential dispatch mechanisms was maintained<sup>164</sup>. The approved measure was intended to last until 2014 and would cost 1,300 € million, to be added to the tariff. The affected utilities (including Endesa,

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<sup>162</sup> Obviously, domestic coal mining continued to be subsidized. What the Commission argued against was the extra subsidy for the power plants that used domestic coal.

<sup>163</sup> Royal Decree 134/2010, 12<sup>th</sup> of February 2010

<sup>164</sup> Royal Decree 1221/2010, 1<sup>st</sup> of October

whose thermal plants were those interested by the measure) continued opposed the measure because it was considered a blatant violation of competition that would distort the market during a long time (and possibly lead to lower wholesale market prices, affecting their revenues). They then tried to block its application via legal challenges in Spain (which did not work) but also through the ECJ, defying the approval to the scheme accorded by the Commission. However, the government quelled their opposition by increasing the amount the affected power plants would receive by means of capacity mechanisms. In other words, the decree not only increased the use of coal (as it displaced some CCGT plants) but it also forced the government to increase the tariff deficit by first compensating the plants using domestic coal and then those that had been negatively affected by the measure via capacity mechanisms. Once they had assured compensation by other means, utilities abandoned their legal challenge before the ECJ, which was however pursued by other claimants contesting both the market distortion and the environmental consequences of the measure. These challenges turned out to be unsuccessful as the ECJ, in 2014, ruled in favour of the Commission<sup>165</sup>.

### 6.5. Summary

This chapter has dealt with the effects of positive integration on the Spanish electricity sector, covering renewable and climate change policies since their origin up to beginning of the financial crisis. There are stark differences between the two policies. Renewable energy policy was developed well before the EU started to take an active role and, at least until the burst of the crisis, it had enjoyed considerable support. The origin of the policy was not linked to its environmental effects but was framed as a measure to increase security of supply and would progressively also become an industrial policy supported by an internationally competitive manufacturing industry. The sector attracted different types of interests, from utilities who, given the continued need of expansion of generation capacity in the context of a rapidly growing economy, did not see RES-E as a direct competitor to their core business but a remunerative addition. Local governments also actively contributed, as they saw the installation of RES-E as an opportunity for generating local employment and to raise tax revenue. This was especially the case of the northern and central Spanish regions that combined strong renewable energy potential and low employment opportunities. Spain was

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<sup>165</sup> ECJ, case T- 57/11, 3<sup>rd</sup> of December 2014

a pioneer and a strong supporter of FiT support mechanism. What is striking is the unbalanced development of wind and PV technologies, with the latter enjoying the almost totality of support until 2007. The wind sector had been favoured by the convergence of many factors, including rapid technological maturation and the support of a policy network which brought together all potential veto players, from utilities, to governments of different political ideology to manufacturers and renewable industrial associations. However, the attempt at correcting this imbalance, with the provision of strong incentives to PV technology under the revised support mechanism regulation of 2007, led to a regulatory failure with long-lasting consequences. The government good intentions were turned into an unexpected very large extra cost that forced the government to backtrack on part of its initial financial commitment. The onset of the financial crisis did not certainly help, and the timing of the two events, the regulatory blunder, and the crisis, clearly made a bad situation worse. The reaction of the government via retroactive cutbacks generated a high-pitched confrontation with the PV sector, which took the form of repeated legal challenges that were however rebuked by the Courts. At the same time, the European Commission also preferred to take a low-profile on the issue. Tensions grew within the electricity sector, as utilities starting to adopt a very critical stance on the development of ‘immature technology’, also because they were starting to suffer from cutbacks in their conventional activities themselves. This was the beginning of a bitter finger pointing contest that would become even more acrimonious in the following years, as it will be explained in the following chapter. Finally, the government tried to learn from the experience by changing its approach to support mechanisms. Interestingly, FiT were maintained but mechanisms that reduced costs and allowed for a better control of the quantities of RES-E installed were also introduced.

Climate policy was much more difficult to implement as, at least initially, it did not find any constituency in its support. The ETS was considered as a threat to economic competitiveness and therefore not a priority for the PP government, which in fact kicked the can down the road for as long as it could. But compliance pressure and change in government, notably accelerated the deployment of the instrument and a favourable constituency started to emerge. Politically, the PSOE government came to power with the intention of making environmental protection if not an overarching priority, at least a visible driver of its policy action. In that sense, the role of the Ministry of Environment and the institutional

strengthening of the climate-related administrative capacities played a crucial role in defending an ambitious allowance allocation process. It has been noted how other sectors of the government, closer to industrial interests, were rather cold and, although they did not turn into a veto player, they had kept a vigilant high on the roll out of the ETS. The favourable constituency also included part of the electricity industry as, particularly Iberdrola, saw the climate policy and the ETS as an opportunity to gain market shares via the support for CCGT at the expense of coal. Endesa, with its generation mix highly dependent on coal, was obviously opposed to a stringent ETS and one that would be forward looking in the sense of providing incentives for transition to new generation technologies. However, it was clear to all the actors involved that numbers had to add up, as the ETS did not leave many other options open than compliance. During this time, the ‘silver bullet’ that allowed to clinch consensus was the generous use of flexibility mechanisms, which was a route to ‘buy compliance’ at a relatively cheap cost.

In many ways then, the role of coal in the electricity sector was the most uncomfortable problem to be confronted. The different interests behind coal were in fact the real informal veto player for climate change policy. Coal has always been the ‘elephant in the room’ for electricity policy and it by extension also became so for climate policy. The problem was rooted in the path-dependent character of domestic coal mining which, although initially framed as a necessary diversification policy in the name of security of supply, over time turned into a welfare policy for miners and support for the local economies of mining regions. Domestic coal needed to be used in the domestic electricity mix if the coal mining activity was to be continued, and coal-fired power plants had traditionally enjoyed. As it has been noted, the government was available to go a long way in the distortion of liberalization principles to allow the use of domestic coal, forcing the hand of the EU when it was necessary, and the EU turning a blind eye on the issue, at least until state aid rules allowed for the coal mining industry to be kept alive. In relation to climate policy, the NAPs had also to accommodate the presence of coal and, in hindsight, an occasion was lost to bring forward a technological shift that, as it will be explained in the next chapter, would have soon be inevitable.

## 7. The Bumpy Road to Europeanization: Ten Years of Intense Conflict in the Spanish Electricity Sector (2011-2020)

### 7.1. Policy Reform and Policy Dismantling under The PP Government

During the last months of 2010, there had been an attempt made by PSOE and PP to seek a rapprochement and reach bipartisan agreement on how to deal with the electricity sector crisis. Cross-party consensus was deemed necessary to deal with the tariff deficit and also, in the words of the Minister of Industry, to work together without ‘red lines’ or ‘ideology’ in setting once and for all the sector on a path of financial and environmental sustainability. Moreover, one of the conclusions that the Subcommission on the Spanish energy strategy had reached was that the problem of the sector rooted in ‘regulatory failure’ rather than market failure. Such conclusion could be interpreted as bipartisan agreement, at a lower political level, on the political responsibility for the less-than-optimal sectoral outcomes. From the opposition, the PP was opposing, presumably for electoral reasons, the substantial increases in tariff levels that the Ministry of Industry had been approving almost on a three-monthly basis. However, it also signalled its availability to sit with the government and scrutinize the sector balance sheet from the side of its costs, as to avoid squeezing consumers with higher tariffs during the crisis. In exchange for its availability to cooperate, the PP, which had always had a pro-nuclear stance, demanded that the government reconsidered its decision to shut down the nuclear power plant of Garoña, whose lifetime was to expire in 2013, and to freeze tariff increases. The pact never took off and the PSOE was left alone in taking the blame for the increases in tariffs and the cutbacks made to RES-E support mechanisms as seen in Chapter 6.

The new absolute-majority PP government that emerged from the general elections of November 2011, had been brought to power also in part because of the dissatisfaction of the electorate with the crisis-management of the previous government and was therefore bound to demonstrate its capacity with dealing and bringing some order into a sector that seemed to defy all logic of intervention. The action plan of the new Minister of Industry placed the correction of the deficit, which stood already at 24 €billion, as a priority. In spite of its obscurity to the general public this amount was almost half of the total debt of the Spanish banking system (estimated at 52 € billion), who received the most mediatic attention (Carcar

2012d). It seemed therefore inevitable to take more than simple remedial action also because the different debt problems were embraced in a vicious circle. First, the securitization of debts from the electricity sector before the establishment of the FADE and the first emissions of debt instruments by the FADE in 2011, was a financial liability placed on public finances at a time where the prospect of a sovereign debt rescue from the EU seemed very likely. Moreover, international financial market lacked confidence in Spanish solvency and, given the difficult situation in which the Spanish banking system versed, it was likely that placing FADE's securities in those markets would have been either costly or even impossible. In its investiture speech, the new Prime Minister had also referred to the tariff deficit, promising how the solution would have not been at the expense of consumers, which was one of its electoral campaign promises. In fact, in its first tariff revision, the Ministry of Industry was quite restrained and made clear his intention not to make consumers responsible for the measure that would be adopted to absorb the deficit. Obviously, if the plan was not to approach the problem from the side of revenues, the logic consequence was that the solution would come from the side of the system costs. Utilities and the renewable sector had all the reasons to be concerned, and they were so.

#### 7.1.1. Dismantling Renewable Policy: Part I

The Minister was cognizant that the tariff deficit was only one of the challenges he had inherited (PWC 2012), to which he had to add at least three more: first, the relations with the renewables sector that had been badly damaged during the last couple of years following the draconian cutbacks; second, the future of domestic coal and its related power plants beyond 2014, when the temporary preferential dispatch system approved by the previous government would come to an end; third, the transposition of the 2009 climate and energy package, in particular the IEM directives for which the European Commission gave, in February 2012, a two-month deadline before opening an infringement procedure.

Initially the government took some distance from the solutions the different actors involved were floating. UNESA started a lobbying offensive in which it suggested to 'clean' the tariff from all those extra policy costs that had been piled up over time and that had little to do with the market. Such costs included items such as support for coal, the extra costs of the extra-peninsular system, capacity mechanism and renewable support, among others. But the main target of UNESA lobbying strategy clearly was tarnishing the image of renewables

pointing at their cost as the fundamental cause of the deficit (Fundación Renovables 2011). Even Iberdrola, the ‘greenest’ of all the UNESA members, participated in this campaign, signalling how Spain had been the least efficient country in the EU in terms of cost of support per MW installed (Lafont 2012). Given the climate created around the question of the economic efficiency of renewable support<sup>166</sup>, it is probably not surprising how the first step taken by the government to solve this interlinked set of problem was, possibly symbolically, the suspension of any new support for all renewable energy<sup>167</sup>. The government justified its move using different arguments. First it criticised and made responsible the former government for the discrepancy between the costs of technology and the amount of support provided<sup>168</sup> and its role as a major driver of the tariff deficit. At the same time, the silver lining of past governmental action was the fact that the country was already in a good starting position to meet its 2020 goals and therefore the goal of deficit reduction could be made compatible with a temporary suspension of incentives for new installations. Accordingly, the re-establishment of support was made, at least temporarily, conditional on the evolution of the tariff deficit. The alternative offered for encouraging the development of renewable energy and to comply with the RES directive was the announced support to self-consumption and distributed energy, for which, as it will be detailed later in this chapter, a fully-fledged regulation did not yet exist. If this generic statement of intention was to be good news or the renewable sector, the other good news was the fact that the measures adopted were not retroactive, which also meant though that their impact on cost reduction would have been minimal, estimated in 160 € millions per year<sup>169</sup>. In other words, the measures were more

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<sup>166</sup> A study suggests that the efficiency of RES support policy has been positive between 2002 and 2010 and negative ever since. The study calculated the ‘net social cost’ of the benefits and costs of RES deployment, including its depression of wholesale prices and avoided fuel and CO<sub>2</sub> costs. However, the authors also admit the limitations of the study as it did not include other non-environmental positive externalities, such as employment, industrial development, and health benefits. It also failed to include other costs sources, such as the cost of intermittency, the cost of extra back-up and grid reinforcement (Espinosa and Pizarro-Irizar 2018). A similar evaluation was conducted by Ciarreta et al. in 2014 (Ciarreta, Espinosa, and Pizarro-Irizar 2014)

<sup>167</sup> Royal Legislative Decree 1/2012, 27<sup>th</sup> of January 2012

<sup>168</sup> A similar conclusion had been reached by the public agency for the evaluation of public policy, which had not been lenient with the government cost performance (i.e. the efficiency) as opposed to its efficacy in achieving and gold-plating the RES-E targets included in the PFER 2005-2011 (AEVAL 2011)

<sup>169</sup> The act suspended the four calls for PV generation capacity that were scheduled for 2012, with a total of 550 MW. Given the system of decreasing support adopted by the 2008 RES regulation, the expected amount of support was therefore minimal. Surprisingly, the moratorium did not involve concentrated solar energy, the most expensive technology yet for which there was a capacity goal in the PFER 2011-2020. It has been reported that there was an influential US group already interested in building a plant and that the government had been cautious in derailing such project which would however have had a strong impact on the cost of renewable support.

relevant for the signal launched to the sector and to public opinion than for their deficit-reducing potential. As expected, all renewable sector associations denounced the new measure as the definitive blow to an already battered sector and feared losses of up to 20,000 jobs in the industry (Carcar 2012b)<sup>170</sup>.

### 7.1.2. Targeting Utilities: Cutbacks Across the Board

Once the renewable sector had received its own message, utilities started to fear that they could have become the next target. The government made it known that it was preparing a measure that would have amounted to a thorough reform of the electricity system but it was keeping its distance from sectoral lobbying, including UNESA. The Minister also aired that he was considering a partial write-off of the deficit, because he considered unacceptable that private debts would convert into a public liability, but that had in fact already happened via the securitization process backed by state-guarantees (Carcar 2012d). The government also requested the CNE to make specific proposals about how to go about solving the problem. The extensive document prepared by the regulator contained a large set of proposal to discharge policy costs that had little direct relation with the electricity market from the tariff (echoing the proposals made by UNESA) and to reduce the costs of regulated activities (including not only renewables but also transport and distribution). In any case, the regulator also made clear how all these cost-reducing measures should go together with an increase in the tariff of at least 3% on a yearly basis (CNE 2012a). The EU also started to enter the fray with the Commission evaluations of the National Reform Plan (which included the energy sector) and the recommendations issued by the Council. In its 2012 evaluation, the Commission criticised the creation of the tariff deficit, but it emphasized the role of low tariffs for household consumers under the TUR and the low levels of the regulated access tariff for those consumers who had opted for the liberalized market. However, it also feared the impact that sharp tariff increases could have on domestic consumption and external competitiveness<sup>171</sup> (EC 2012, 26–27). But other actors started to move. The Supreme Court had in fact been brought in by means of a legal challenge from the utilities against the freezing

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<sup>170</sup> Interestingly, the Minister also faced criticism from his own party, in particular the influential President of the government of Galicia, a region that had thrived on the wind energy industry in terms of job creation.

<sup>171</sup> In its evaluation, the Commission also warned the government on the consequences of the moratorium on renewables on the ability to reach its 2020 goals. Notably, the Commission recognized the negative impact of the lack of interconnections on renewable energy, causing a waste of electricity and extra costs for the increased need of domestic back-up as compared to other, better connected, Member States

of tariffs and, in a ruling that was a novelty in its kind, it acknowledged the duty for the government to apply the principle of tariff sufficiency in the exercise of its authority over tariff setting (Monforte 2012). The Minister of Industry was then forced to change the original electoral campaign promise that tariffs would remain stable and bowed to necessity by approving two consecutive trimestral increases which amounted to about 10%. Between 2006 and 2011, the cost of electricity for Spanish households had grown by 70%, against 13% in the Euro area (Carcar 2012a). In a gesture of fairness and as a sign that not only consumers would have to contribute to the cause of deficit reduction, the other measure adopted aimed at utilities, reducing the retribution of regulated activity of 10% and a similar reduction in the amount of capacity mechanism (at a time when the generation overcapacity of the system, due to the fall of demand, was at an all-time level, it made little sense to continue to provide incentives to investments). All construction of new distribution and transport lines were also paralyzed at least until the socio-economic context would have not changed, except for trans-border interconnections.

The government was however also internally divided on how to proceed to the comprehensive sectoral reform it was continuously announcing and postponing. The Minister of Industry intended to use fiscal measures to, *de facto*, reduce both support levels for renewable energy and avoid using retroactive measures for renewable support and wholesale market prices without complex ex-ante, distortive, interventions in the market. the Ministry of Economy was unconvinced because of the different tax rate that Industry intended to use<sup>172</sup> and feared legal challenges to what was a clearly discriminating treatment of different sources of electricity. Moreover, the two Ministries clashed over jurisdictional competence on the issue, one considering falling entirely within energy policy and the other considering that fiscal policy was involved too. When the first draft of the new regulation was filtered, all the actors involved suffered huge losses in the stock market. In the end, a balance between the two positions was found in that the reform would, for the time being, only aim at conventional electricity producers, but it was clear that renewables would have been made object of a specific treatment later. A flat tax rate of 7% for all electricity was used, while a special tribute was slammed on the owner of nuclear plants in the form of a tax on the

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<sup>172</sup> The intended tax rates were as high as 11% for wind, 19% for PV, 4% for thermal electricity and a fixed extra-tax per MW for nuclear and hydropower, which were considered as receiving wind-fall profits from the marginal price used in the Spanish wholesale market

treatment of nuclear waste. The rationale of the act<sup>173</sup>, which this time was not a regulation, but an act passed by the Parliament, was presented as a stable fiscal framework measure to internalize the environmental costs of electricity production. These extra resources should then be used to finance the tariff deficit. To complement this act and to seek coherence between the actions of the departments of industry and economy, the Budget Act for the fiscal year 2013<sup>174</sup> included two more provisions intended to stem the tariff deficit. First, it acknowledged that the limit to the annual tariff deficit that had been set back in 2009, were, once again, too optimistic. Therefore, the guarantee of the state was extended to the higher-than-expected deficit in order to secure the safe emissions of the FADE fund for that year. Second, given the fact that 2012 was the first year that ETS allowances would be auctioned, the revenue raised was earmarked for financing the cost of renewable support. In an interesting turn of event, the first version of the norm secured the whole revenue for this concept. However, the Ministry of Environment raised objections since those funds were, in principle, under the jurisdiction of its department and that the EU ETS directive also mandated that the funds be used for climate change related actions. Although the Minister of Industry argued that support for renewables could be assimilated to a climate change related measure and that therefore it was unlikely to incur in objections on the part of EU institutions, a compromise among the different departments was reached in that Industry would have used 90% of the ETS auctions revenue (up to 450 €million), Environment the remaining 10% (up to 50 €million) and Economy any leftover from this distribution. Finally, for the first time, the Ministry of Industry received grant from the state budget of 2 €billion specifically for covering electricity system costs and so avoid a larger deficit, to testify the broadening of the scope of the competence, or, better said, the responsibility, of the matter.

Utilities had no doubt of that the intentions of the norm were purely revenue-raising and reacted by displeasing the government on its intention to avoid shutting off the Garoña nuclear power plant, of which Endesa and Iberdrola were the two equal co-owners. The debate between government and the two utilities had been going on for the past months, with Endesa undecided whether to cave in and accept the government wish that the companies filed in a request for an extension for the plant lifetime authorization (which would

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<sup>173</sup> Act 15/2012, 27<sup>th</sup> of December 2012

<sup>174</sup> Act 17/2012, 28<sup>th</sup> of December 2012

have been most likely been accorded, even though the decision was in the hands of the Nuclear Security Council) and Iberdrola decided to shut down the plant, given its business plan expansion in the area of renewables. The relations between the government and utilities degraded to the point that the secretary of state of energy boasted his government had been the first in history to manage to subtract 3,000 €million from the ‘electricity oligopoly’. As a response to those that accused the government of lacking an energy policy, he stated that the best possible energy policy was the one that reduced the tariff deficit<sup>175</sup>.

#### 7.1.3. Dismantling Renewable Policy: Part II

The specific measure for the cutbacks affecting the retribution of existing renewable installations would not be postponed for too long and in March 2013 a new act<sup>176</sup> was adopted which confirmed the less optimistic expectations of the sector. The Minister had been airing for some time the fact that the new measure should not be considered as a retroactive cut, but as the application of the statutory principle already present in the original LSE that all regulated activities should be remunerated according to a reasonable return, something that, in his opinion, had not been the case for many of past investments in renewable energy<sup>177</sup>. The new act was therefore more comprehensive and included all regulated activities, not just renewables, but it was the latter that were to be the most affected by the retroactive application of the principle, as transport and distribution were already remunerated based on an agreed ex-ante rate of return (Interview AEE).

The act opened with some figures that were meant to place the problem in context: while between 2004 and 2012 the revenues from the tariffs paid by consumers had grown by 122%, the associated costs had done so by 197% and the cumulative tariff deficit estimated for 2013 stood at 26 €billion. The need to honour the commitment to follow the recommendation of the European Council on the National Reform Plan was also mentioned, not least because the analysis made that year by the European Commission had also placed even more emphasis on the tariff deficit question and referred to the excess costs generated by renewable support

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<sup>175</sup> Source: El País, “*Industria dice que “los consumidores, sus hijos y nietos” pagarán la deuda eléctrica*”, 23<sup>rd</sup> of December 2012

<sup>176</sup> Royal Legislative Decree 9/2013, 12<sup>th</sup> of July

<sup>177</sup> Source: El País “*Industria igualará la rentabilidad de las renovables, el transporte y la distribución*”, 11<sup>th</sup> of June 2013

in less favourable language than the previous year (EC 2013d, 37–38)<sup>178</sup>. Therefore, a new framework for the support of renewable needed to be established, changing the overall rationale of support, and framing it as support limited to finance the extra costs that could not be recovered through the market, implying that most of the financing should have come from competition in the market. The reference for the estimation of such extra costs would be the initial investment costs of a well-managed and efficient enterprise (this latter definition moulded on EU jurisprudence) plus its variable costs. These standard parameters would then be calculated for each type of technology which would qualify for support (i.e. the regulator would create a typology of ‘ideal-type installations’). The principle of reasonable remuneration would then be operationalized, based on legal doctrines, through reference to the average interest rate on secondary markets of 10-years government bonds plus an adequate increase. All parameters would then be revised every six years. The new regime would supersede the support mechanism of the 2007 and 2008 regulations and would be retroactive (however, the former regimes would be applied until the regulatory development of the norm, as the characterization of the ideal-type installation would have required some time). Finally, the door was also opened to the possibility that the cost of support could also come from the general budget.

Although it was long expected, the magnitude of the change and the fact that it was a norm to be developed in detail yet<sup>179</sup>, triggered strongly negative reactions, and not just from the sector. Predictably, the renewable energy sector, and the PV industry in particular<sup>180</sup> started to show their outmost disagreement with the regulatory ‘revolution’. The PV sector was

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<sup>178</sup> In this evaluation, the Commission adopts a perspective close to that of the government: it states that the costs of renewable support were ‘unexpectedly high’, due to the difference between decreasing technological costs and tariffs indexed to consumer tariffs (i.e. to an unrelated variable). The Commission suggests that the deficit be treated via a ‘general approach’ including a gradual consumer tariff adjustment, a downward revision of costs and broadening of the revenues, including the possibility of sharing the costs with other energy sectors. It also, as usual, considered that the TUR was negatively affecting competition in the retail market.

<sup>179</sup> The Ministry of Industry issued a call for three consulting firms to externalize the complex work of determining the retributive parameters for the very large number of ideal-type installations, considering the retroactivity of the norm, it covered many years and many different technologies. IDAE and the same ministry would then be responsible for validating the parameters. However, the sector was left hanging, because such preliminary work would have still taken a very long time and investors did not know the amount of remuneration they would have finally receive. Considering that much of the investment was project-financing, banks and investment firms were also particularly worried. In other words, the gap between the change from one established system of remuneration and cash-flow to a still uncertain one, brought uncertainty and tensions among borrowers and lenders (interview with UNEF and Pérez).

<sup>180</sup> For a review of opinions on the treatment of PV and the role of the technology in contributing to the deficit see (Bolaños 2013)

particularly hit, because of the larger amount of reduction in its remuneration, given the gap between the amounts secured under the 2007 regulation and the standard reasonable return parameter that would likely result for the regulatory operationalization of the principle. The annual cutback for the PV sector was initially estimated at around 500 €millions, almost the same as the wind sector, but the financial consequences were different, given the expected impact on capital repayment and the structure of the sector. The PV sector was much more fragile in terms of financial capital and more atomized, meaning that small investors were the norm, a different situation than the wind sector. In the wind sector, four utilities (Iberdrola, Acciona, EDP and Enel Green Power) controlled almost 60% of the market, while in the PV sector the highest market share was between 2 and 4% (Patiño 2013). Therefore, PV interest groups were more vocal than their wind counterparts, although the latter were no pleased or satisfied either<sup>181</sup>. Moreover, utilities were, at least at this time, less concerned about the cutbacks to renewables than about the change in the overall sectoral regulation, given the more complex game they were playing with the government. This included government discretion in setting tariff levels and the question of the evolution of the generation mix for conventional power plants. The future of coal, particularly domestic coal, nuclear power plants and, the treatment of the overcapacity of CCGT were still to be defined<sup>182</sup>. Utilities however shared with the government the idea that renewable support policy should change, allowing mature technologies to already compete in the market, or receive the little extra support they needed and treat those at a still immature stage via aid for technological support rather than massive deployment. They had also started to campaign at EU level, within the initial debate over the 2030 climate and energy framework (Noceda 2013b).

The PSOE also entered the fray, being critical with the new regulation and making public an alternative proposal that, it will be seen, was not dissimilar to what it will in fact implement

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<sup>181</sup> The President of the European Wind Energy Association stated that, although it was true that other Member States had also made cutbacks to support levels, the damage in Spain was much higher for the retroactivity which seemed like a ‘vengeance’ on the sector and would have turned investors away from the country for the foreseeable future. Source: El País, “España va a pagar caro esta ‘venganza’ contra la eólica”, 13th of June 2013

<sup>182</sup> Utilities proposed that at least 7GW of CCGTs plants be temporarily ‘mothballed’ (i.e. hibernated) as to reduce the excess capacity, but the Minister refused to do so claiming these plants were receiving capacity mechanisms and they should continue to be available. One reason could be the Minister feared that retiring capacity from the market would have raised wholesale prices. Source: El País, “Las eléctricas presionan a Industria para poder hibernar centrales de gas”, 6th of June 2013

five years later<sup>183</sup>. Finally, while the European Commission was monitoring the process closely opinions differed between different areas of the EU executive. The Energy Commissioner admitted that, to the extent that a Member State was on its path to compliance with the 2020 goal (and Spain still was), there was little the Commission could do on the basis of the principle of no interference with decisions over the domestic mix. He stated that Spain had indeed achieved much more than other countries between 2009 and 2011 and installed more renewable capacity than it really needed. However, the Commission would keep a vigilant eye on future developments, considering that his department was in principle opposed to retroactive cutbacks (as they could also affect the viability of the capacity already installed), although the EU lacked legal capacity to prevent them. The Climate Commissioner was more explicitly disappointed about the singling out of renewables as the main source of problems in the country electricity sector and worried the impact that the new policies would have on a previously innovative domestic industry (Sevillano 2013).

The action of the government in the first two years of legislature had therefore been characterized by a patchwork of regulations that had tried to stem the problem of the tariff deficit with a multi-pronged approach that had caused much opposition. For the government such measures were inevitable as they avoided the financial collapse of the system. It was clear that the original formulation of the LSE, although still valid in its main normative framework, had been profoundly changed by the cumulative effects of 15 years of technological change, piecemeal transposition EU directives and government intervention. The time had come for a more comprehensive synthesis of all these changes and there was a window of opportunity to shape the sector according to principles that reflected what had, in the end, already been largely achieved. Tensions between the government and sectoral actors were already a consumed reality and the patchwork of regulations had been achieved without seeking sectoral consensus. In that sense, the political cost of a comprehensive reform had

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<sup>183</sup> The PSOE defined the reform as a temporary patchwork with a clear revenue-raising goal that would cause worse problems in the future. Accordingly, energy policy had been sacrificed in the name of the tariff deficit problem, with measures that would not even solve the problem. The party proposed a strategy that would have been compatible with the economic sustainability, security of supply and technical management, with a view of integrating up to 40% of RES-E by 2020 (the PFER 2010-2020 goal) and 60-70% by 2030. It emphasized the potential of supporting renewables for the reindustrialization of Spain. In operational terms, the proposal included auctioning for new RES-E capacity and a consequent fixed remuneration based on contract for difference with the spot market price. It also advocated against retroactivity introduced by the new regulation (Noceda 2013a)

already been discounted, as relations with the sector could not possibly be worse and they could only get better if a more coherent framework had been proposed. The government had moreover tried to provide a positive image of its actions to public opinion, which was already strained by the effects of the crisis. The message was that it was acting in the name of the general interest by suppressing privileges born by past mistakes, while at the same time being forced to increase tariffs. A new Electricity Act might have seemed a good opportunity to take credit for its past actions.

Before moving to the analysis of the new LSE, it is worth mentioning one more thing. Among the legislative acts that needed to be brought together in the new general regulation, it must also be mentioned the act that had allowed for the last-minute transposition of the 2009 IEM Directive<sup>184</sup>. The Ministry of Industry had been forced to strengthen the power of the independent regulator, in particular transposing the disposition according to which the latter was now responsible to approve the methodology for the access tariff in relation to the costs of transport and distribution. The other relevant addition to domestic regulation was the concept of ‘vulnerable consumer’ that, for the time being, was accommodated within the existing figure of the beneficiary of the social bonus, introduced in 2009.

## 7.2. The Reformulation on the Electricity Sector Act

The new LSE<sup>185</sup>, unsurprisingly, mentioned the tariff deficit already in the second page of the preamble, as a symbolical demonstration of the centrality of the issue in the new regulatory framework. It went on to acknowledging that the main cause of the emergence of the deficit resided in the lack of flexibility in the system of remuneration of regulated activities, unable to adapt to the changing environment. The result had been a state of economic unsustainability and a flurry of patchwork measures to redress it, which now needed legal systematization. Therefore, the goal of the new regulatory framework was to ensure regulatory stability and security to achieve sustainability. Again, given the broad meaning of the concept of sustainability, the mention of ‘financial sustainability’ to be achieved via a new system of revenue and spending was immediately stressed. The basic principle to meet this goal would be the statutory impossibility to generate new deficits in the system, meaning that every increase in costs should have been compensated by a corresponding increase in

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<sup>184</sup> Royal Legislative Decree 13/2012, 30<sup>th</sup> of March 2013

<sup>185</sup> Act 24/2013, 26<sup>th</sup> of December 2013

revenue. Temporal deviations, due to conjunctural factors, were allowed but should have been shared among all the system actors and not just the ‘big operators’. No more deficit could have been transferred to the FADE, implying that deferral of costs out to the future was not any longer an option. Temporal deviations could in principle have not been higher than 2% of the estimated revenues and the total cumulated debt could not be higher than 5%. Deviations higher than these limits were to be compensated via increases in tariffs and, in case this increase was not sufficient, the ‘big operators’ would still temporarily finance the difference, with a guaranteed reimbursement within 5 years. The practice that emerged during the previous years to transfer part of the costs, in duly justified cases of public and collective interest, to the taxpayer through the budget was also incorporated. The costs of the system different from the cost of electricity production were now clearly distinguished between ‘access tariff’ (transport and distribution) and ‘charges’ (all other costs, including support for renewables, security of supply costs and past deficit repayments). While the former was to be determined according to the methodology approved by the independent regulator, the latter would be determined according to the methodology selected by the government, being them the outcome of policies also determined by the government.

The change in the regulatory approach in relation to renewable energy was conceptualized in terms of the need to abandon the seemingly outdated distinction between ‘special’ and ‘ordinary’ regimes. All technologies would be now subject to a unified regulation in which the capacity of a generation facility, and not the amount of electricity produced, would be the object of remuneration. The goal, was, again, to ensure a reasonable retribution for all activities, with the possibility of a complementary retribution for those technologies that could achieve it through the market only (although the market should now be, within the limit of its possibilities, the main source of remuneration). Therefore, the concept of special regime was replaced with that of ‘specific retributive regime’. Moreover, the introduction of such specific regimes was made conditional on the existence of an obligation imposed by an EU norm or when it would generate a reduction in the cost of the electricity system or reduce external energy dependence. The conditions of such regimes would be valid for a regulatory period (a new concept) of six year, at the end of which changes could be done to adapt it to the cyclical fluctuations of the economy and the change in the system needs. In other words, the concept of flexibility was operationalized in terms of more regulatory discretion, but one

that the agents could now predict, or at least expect. The concept of self-consumption was also introduced, and it was immediately qualified with the injunction that prosumers would be called to contribute to the costs and services of the system on the same footing as all other consumers. Finally, the other relevant novelty was the suppression of the TUR and its replacement with another instrument, the voluntary price for the small consumer (PVPC in its Spanish acronym). The PVPC which would also serve the goal of setting the maximum price that those consumers that did not want yet to contract their electricity in the liberalized retail market, could be asked to pay. The concept of TUR was instead now reserved to vulnerable consumers, with a view of establishing a specific regime under the rationale of social policy, although still under the umbrella of the electricity sector.

All parties presented amendments to the act during its passage in parliament, and most of them shared the view that the reform would fail to achieve the goal of deficit reduction and that it inflicted an excessive punishment on the renewable sector, both in retrospective and prospectively. Moreover, it was felt that the act was setting almost unsurmountable barriers for self-consumption. However, the absolute majority enjoyed by the government allowed for the dismissal of the most significant amendments. Utilities continued to be sceptical, and considered that this was not an electricity sector reform, but an austerity measure for the sector (Espinosa 2013). They were also united in defending that the problem of the sector was rooted in the cumulation of regulatory and policy failures that stood in the way of the possibility of having effective competition. The shared approach of utilities was basically unchanged and that, if tariffs were depurated of all inefficient or unrelated policy costs, Spanish electricity prices (market prices) would be competitive in comparison to other Member States. The diagnosis was very simple: the problem was government discretion in electricity policy, increasing its costs; that the effects of such discretion would end up in the tariff; and that, because of more discretion, tariffs would never be sufficient to cover these costs. As a sign of the discomfort that the utilities felt in dealing with the government, Iberdrola CEO stated that his company was now as much international as Spanish and that the company did not have to continue investing in a country that did not offer enough investors' security. In presenting the investment plans for the 2014-2016 period, the trend would be a progressive reorientation towards other countries in which the company had acquired a substantive presence, and reduce the exposition to the Spanish market "at least

until a new conjuncture favourable to investments would materialize” (Noceda 2014a). A similar attitude was adopted by the Enel group that controlled Endesa which had less qualms than Iberdrola in stating that it would freeze the investments in the country because of the harsh impact that the successive reforms adopted by the government had had on the company’s financial results.

The government then was met with the challenge of developing the new framework and provide coherence to a sector that did not seem to find consensus on the appropriate balance between the necessity of regulatory stability and the legitimate needs of government-led energy policy (Club Español de la Energía 2013). At the same time, domestic developments also started to be intertwined with the beginning of the long process of CEAE negotiations, which started in earnest in 2014. To narrow the focus on the cases selected by this dissertation, the rest of the chapter is then divided into three sections, each tracing domestic regulatory development in the more specific area of policy object of analysis. The sections will also include the consequences on the Spanish CEAE negotiating position following the change in government in April 2018. Finally, a brief account of the activity of the new government after the adoption of the CEAE will also be provided as to increase the robustness of the findings. This empirical work will then set the ground for the final discussion on the explanatory power of the hypotheses and the theoretical framework proposed in relation to the research questions in the final chapter. The first section will therefore focus on the first set of cases to be compared, renewable support mechanism and the setting of the 2030 goals, which is treated contextually to the question of cross-border interconnections. The second section will focus on the second set of comparative cases, i.e. tariff setting and self-consumption/prosumers.

### 7.3. Renewable Support Mechanisms, Renewable 2030 Goals, and Interconnections

As already noted, the regulatory change of 2013 had limited itself to a broadly introducing how the new remuneration framework would work and its retroactive application but had left the details for subsequent detailed development. The sector awaited to know how retroactivity would impact each single installation, given the stated intention to fine-grain the calculations at the level of individual ideal-type installations. There were fears, on the part of plants owners, that there would be little relation between the real characteristics of each plant and the category to what it would be assigned, as minor deviations (for example, less solar

irradiation or cost of capital incurred than the one estimated) could cause major differences in the amount of remuneration to be received (interview UNEF). Second, the sector also awaited how future support mechanisms would be provided, the fear being that, at least provisionally, the government would set up mechanisms that would not offer any incentive, as it might have concluded that most technologies would be now mature. It was clear that the government thought that it could use the fast progress in renewable installation occurred during the past years to bide its time in meeting the 2020 EU renewable target. The same new LSE clearly stated that the main reason why more RES would be installed would be compliance with EU directives. The numbers, effectively, where in 2013 on the part of the government, which in its biannual progress report could boast the country was on track to achieve its 2020 goals<sup>186</sup>. With utilities lamenting the consequences of excess installed generation capacity on their conventional power plants, and the expiration date for the preferential dispatch for domestic coal coming soon (in 2014), there was little hope the government would offer any incentive to renewable any time soon. The problem was, on the contrary, to make room for conventional capacity which was still considered to be necessary for security of supply and economic reasons. In the sector, it was also thought that the government wanted to prove that some technologies had already reached the maturity stage and if new ‘merchant project’ (i.e., projects that would be carried out without support) would see the light, the government could count on a powerful weapon in the delaying and setting of future support levels.

### 7.3.1. The New Renewable Support Mechanism: Aid to Investments and Auctions

The new regulation<sup>187</sup> did not go far from the expectations of the actors involved, and it set forth the new complex (and retroactive) retributive mechanism<sup>188</sup> as well as a new mechanism to qualify for support, which was, probably the most relevant, and with hindsight,

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<sup>186</sup> In its 2015 “Report on Progress in the Promotion and Use of Energy From Renewable” it is stated that the share of Renewable was 15.3% in 2013 and 16.2% in 2014, significantly exceeding the minimum indicative trajectory of 12.09%. Moreover, RES-E specifically had achieved levels close to the final target (40%), with 36.7% and 37.8% respectively for the two years.

<sup>187</sup> Royal Decree 413/2014, 10<sup>th</sup> of June 2014

<sup>188</sup> Few days later, a ministerial order would be published with the details of the retributive parameters for the ideal-type installations. In an interesting turn of events, when the government was asked, during the legal challenges that would follow the publication of the parameters, to produce the technical work and methodology on which its estimations had been based it apparently had to contradict itself. The government claimed that it had contracted external experts for this task, but when forced to produce the documents, only one of them could be shown and with a finalization date later than the official publication of the established the parameters. In the end, the government quelled the issue stating that the parameters had been calculated by the IDAE (Méndez 2015)

durable, innovation. The new retributive system then was grounded on four elements. First, the establishment of the reasonable return calculated based on the average interest rates of 10-year government bonds in the two years before the 6-year regulatory period for which the parameters would apply, plus an incentive to be determined at the beginning of each period. Second, the government reserved the right to change, in the middle or at the end of every regulatory period, all the retributive parameters except for the agreed lifetime of the installation and the initial value of the investment. Third, the retribution would be calculated as a difference between the revenue raised in the market and the value of the investment. The goal was to partially expose RES-E generators to market price fluctuations, as to make them flexible and responsive to the market. To operationalize this principle, the government would estimate a reference price in the wholesale market for the regulatory period and establish two bands (a narrow and a broad band) of fluctuation. If the difference between the effective and the estimated wholesale market price would stay within the bands, the investor would not be compensated for the deviation (or only partially if the difference fell between the broad and the narrow band). In other words, within these limits, investors would be exposed to legitimate levels of market risks. In the difference exceeded the upper and lower limit of the broad band, either the plant owner would have to return the excess profit to the regulator (high market prices and positive difference with the reference price) or the regulator would compensate the plant owner (low market prices and negative difference). Finally, access to the special remuneration system would be assigned via auctions, this being an absolute innovation for Spanish RES support schemes so far and something that the European Commission had introduced as a mandatory requirement for all new support schemes approved after 2017 in its 2014 State Aid Guidelines. The government in any case believed that auctions were the best method to reduce costs and the asymmetric information between public authorities and promoters.

One interesting fact that emerged in one of the interviews made for this dissertation (Interview Perez Rodríguez) was the question of the notification of support mechanisms to the Commission to check their conformity with the EU rules on state aid. Accordingly (Perez Rodríguez 2016) until 2008 the general orientation, dictated by the ECJ, was that support mechanisms were not to be considered funds directly administered by the state, which limited itself to organize the transfer between actors within the electricity system (i.e.

between those subject to pay the cost, usually consumers, and renewable promoters). However, after 2008 the orientation changed, and it was intended that these funds were state funds and had to be subject to state aid notification and legitimacy control. Spain had never notified its RES support mechanisms (as it had for example done with TCCs and, later, with the 2010 preferential dispatch for coal). Because no one had ever raised a legal challenge, the Commission never took the occasion of scrutinizing past support mechanisms. When introducing the new regulation, the government did notify the measure<sup>189</sup> and the Commission did indeed extend its scrutiny to past support mechanisms (however limited to the 2007 regulation, as state aid measures prescribe after 10 years of their and the 2004 regulation was not part of the investigation). According to the interview, the Ministry was pleased by the Commission investigation as, if resulted in a negative opinion, the beneficiaries would have had to devolve whatever quantity of support the investigation would find illegal state aid. The Ministry in fact asked the Supreme Court, that at the time had not yet ruled on the cases that had been brought before it by RES-E producers affected by the 2010 cutbacks, to suspend its decisions until the Commission had not pronounced itself on the legality of the 2007 regulation. The Supreme Court rejected the request and, in any case, the Commission decision, who came in 2017, declared both the 2007 unnotified regulation and the 2014 notified regulation as compatible with state aid regulation<sup>190</sup>.

The new support mechanisms, as expected, triggered immediate reaction on the part of the affected sector. This time, also the big weight of utilities had joined the chorus of discord, considering that a serious damage had been made to their legitimate interests and that the government was creating legal insecurity and loss of credibility for investors<sup>191</sup>. According to estimations made by the independent regulator, (who had now changed, because in 2014 the

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<sup>189</sup> In a letter sent to the Commission on February 2014 during the consultation period on the new State Aid Guidelines for the 2014-2020 period, the Spanish REPER had let the Commission know that it considered the proposed restrictive measures as 'intrusive' and in contradiction to the principle of domestic sovereignty over the generation mix. In particular, the letter stressed as how, given the peculiarity of the Spanish electricity system for the lack of interconnections, the integration of renewables required the maintenance of great quantities of back-up that would only possible to maintain via capacity mechanisms. Therefore, if the Commission had started to scrutinize them according to more strict competitive principles, there was a risk of collision between national prerogatives and specific needs and the new proposed rules. It was clear that the government was worried about the impact that the new rules would have on conventional, rather than renewable electricity.

<sup>190</sup> European Commission, State aid SA.40348 (2015/NN) — Spain, C(2017) 7384 final, Brussels, 10<sup>th</sup> of November 2017

<sup>191</sup> Source: ABC, "Las renovables, «en pie de guerra» contra el decreto que recorta su retribución", 6<sup>th</sup> of June 2014

government decided to merge the CNE and other sectoral regulators into one umbrella institution, the National Commission for Markets and Competition, CNMC in its Spanish acronym) calculated that the impact would amount to an annual reduction of 1,671 €million, with wind producers being the most affected (33% reduction) and PV less (13.4%). The regulator also warned that the impact would be felt differently across individual installations and that, paradoxically, while some installation would lose all support (because already consumed by past remuneration) and others would become financially inviable and could also cease to operate, some would see their support increase. Although the CNMC expressed a positive evaluation of the norm, it also said it had received 615 objections to the proposal, coming from private actors and public authorities, as municipalities and even regional governments were unconvinced and determined to recur to judicial litigation (Noceda 2014b). In a written answer to a Spanish member of the EP, the Energy Commissioner made again clear that, although the Commission was concerned about the turn in renewable energy policy, and that it would not hesitate to take legal action if Spain did not comply with its goals, there was little in the reform that could trigger a response at the moment. In its 2014 National Reform Program evaluation, the Commission reasoned that the changes in domestic electricity sector reform, although laudable from the perspective of its effort in introducing and implementing the principle of budget balance, had also created much regulatory uncertainty.

The legal warfare between the affected actors and the government did not yield the result that the claimants were hoping for, and it seemed clear that the domestic judicial channel had been foreclosed by the legal doctrine that retroactivity was not breaching any of the principles relating to the reasonable expectations of investors in the sector. It has been previously said how the Supreme Court had ruled in favour of the government in relation to the reduction of support levels imposed by the regulatory changes adopted in 2010. The depth of the 2013 reforms had however raised the bar of the challenge to the constitutional principles of juridical security and protection of legitimate expectations. The Supreme Court had started to be doubtful about the constitutionality of retroactivity and was available to further explore the question. However, the Constitutional Court, in January 2016, ruled against the presumed unconstitutionality, interestingly, on a case brought before it by the Autonomous Community of Murcia, which was ruled by the PP, to show the extent of the

political opposition that the new regulation had managed to generate. Once the domestic judicial channel hinging on constitutional principle had been precluded<sup>192</sup>, the only available alternative for domestic producers was to recur to the ECJ, hoping to redress the domestic setback via a possible breach of EU legal principles. This would however be a difficult and long path to walk. If the threat of a legal dispute in the EU seemed remote to the government, a more worrying and present threat came instead from international investors. An authoritative source interviewed (interview Ribera) explained that, in her opinion, within the EU, Member States' government whose investors had suffered losses from the retroactive changes, had, during the crisis, adopted a strategic behaviour with respect to the pressure to be applied on the Spanish government related to broader interests. Germany, who feared that without the retroactive changes the amount of debt the country faced could have been even bigger, let the Spanish government off the hook. It was a choice between two evils, either to turn its back on domestic investors for what in the end were relatively small losses or risk having to rescue the whole country and be responsible to its taxpayers. The UK instead, who would not have to suffer from an eventual financial collapse in Spain, exercised more pressure on the government.

While domestic investors could only use the domestic channel and, if they found a favourable domestic court, eventually also the EU one, international investors had the privilege to have recourse to international arbitration systems. Because of the fact that the 2007 regulation had attracted much foreign investors, it was not surprising that the government was sued before the CIADI, the International Centre for Settlement of Investment Disputes run by the World Bank. The government had already used this institution in its support to the oil company Repsol acting against the expropriations of its assets by the Argentinian government at the beginning of the 2000s. According to the same interview, the government was aware of the risk of losing a case in such less favourable judicial environment, but two factors played in its favour: it would have taken time (and it might have not been responsible for dealing with a problem that was seen as less urgent than the deficit) and the outcome of the arbitration was not applicable to domestic investors, at least according to the little jurisprudence existing on the relation between international and domestic law.

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<sup>192</sup> The Supreme Court then rejected the cases before it following the Constitutional Court ruling

### 7.3.2. The 2015 and 2016 Auctions: the Slow but Steady Acceptance of Change

Once the new regulation had overcome political, sectoral, and judicial opposition, at least the domestic one, the government started to feel, during 2015, the pressure of the need to comply with the 2020 goals. The financial crisis had in fact offered a double cushion for its electricity policy. On one hand, the austerity climate had helped the government to present its reforms in line with the expectations of creditor Member States and the same Commission. Although the language used in relation to what it was a de facto moratorium on renewables and questionable retroactive changes could be intended as one of disapproval (and the Commission was taking note and prepare a no-retroactivity clause for the next directive) in reality, at least until 2015, and in line with the findings of the literature on EU electricity policy, there was little appetite for making renewable policy a political priority. On the other, the financial crisis had had the statistical effect of increasing the percentage of RES-E on the gross electricity consumed, because the slump in demand had been almost entirely absorbed by thermal power plants, to the point that the government, as it has been seen, had to force the use of domestic coal.

However, it was reasonable to think that, once the light at the end of the tunnel of the financial crisis started to shine, the 2020 goals would become again relevant for the EU. At the same time, once demand started to grow again, since almost no extra RES-E capacity had been installed since the beginning of the moratorium in 2012, the percentage of RES-E would be reduced as compared to the ‘bonanza’ of the worst years of the crisis and the 2020 goal would become more difficult to reach<sup>193</sup>. Spain had obviously stopped to be the poster child of renewable electricity support in the EU. In its 2015 State of the Energy Union report, the country was placed by the Commission among those that had to reconsider their support policy in view of goal accomplishment and, in its, National Country Report for the same year, the EU executive stated that it was essential to put more interest in recovering investor confidence in the medium- long term and to promote the most rentable technologies. Moreover, it denounced lack of clarity in the promotion of rentable self-consumption and distributed generation.

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<sup>193</sup> At the end of 2015, the European Commission also revised the figures on RES target accomplishment provided by the government and reduced them by 1.3%.

The government updated the figures of the PANER 2011-2020 in its planning exercise of 2015. The energy planification document for the 2015-2020<sup>194</sup> saw it necessary to install 8,500 MW of new renewable electricity to comply with the 2020 goals, mostly wind (6,473 MW) and PV (1,370 MW). The document also foresaw the possibility that, in view of the evolution of the macroeconomic scenario and the effectiveness of energy efficiency policy in generating structural change in the demand, this total could be reduced by 2,000 MW. Even though these were not tremendously high quantities the government could fear that the goal would not be met because of lack of investor interest, as a consequence of its retroactive measures, and because of the long lead building times that such projects entailed. Finally, general elections were also approaching, and the government could possibly not want to be seen as coming empty handed during its mandate in terms of progress on renewables (AURES 2016, 12).

Time had therefore come to start using the combination of the new remuneration system and the access procedure to it, the auction. The first auction was considered a pilot and for this reason the quantity to be auctioned was small. It was not technological neutral as it was specifically addressed to wind and biomass energy, with a quantity of 500 MW and 200 MW respectively. The Ministry first issued a decree establishing the specific remuneration regime for the auction and then the regulation for this specific auction. Being a pilot, the government did not want to set rules that would be generally valid for future auctions. Most actors from the sector had shown initial interest, and expressed the intention of participating, however the result of the auction was quite surprising and interpreted as highly satisfactory or deceiving. Focusing on the wind energy part of the auction, the winning bids were placed by two outsiders from the sector and the utility EDP. The first surprise was therefore the fact that most experienced actors were displaced. But, most importantly the result of the auction in terms of remuneration demanded by the bidders was a 100% discount on the remuneration offer made by the government, meaning that the projects would be built without any subsidy<sup>195</sup>.

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<sup>194</sup> Minsistry of Industry, Energy and Tourism, “*Planificación Energética. Plan de Desarrollo de la Red de Transporte de Energía Eléctrica 2015-2020*”, p.28

<sup>195</sup> The bidding process in fact consisted in the discount offered in relation to the portion of the value of the initial investment that the calculations of the government thought was necessary to remunerate, via support, in order to ensure the established level of reasonable rentability (7%).

Explanations from the sector for this outcome varied, but most actors agreed that it was not reflecting the reality of the sector and that it was still impossible to source remuneration exclusively from the market (AURES 2016, 22–30). Some attributed it to the fact that the moratorium had created a bottleneck of projects that were already under advanced state of completion and that needed to be finalized otherwise losing the initial investment made. Obviously, one would ask why they had not built them even without auctions. Other thought that the outsiders were unexperienced and had underestimated their costs. One of the criticisms made to the auction was that it did not restrict participation to qualified bidders, i.e., investors that could demonstrate experience in the sector<sup>196</sup>. For this reason, there was the sensation that the outsiders might be speculators or investment forms that considered the auction a financial product to be sold to project developers<sup>197</sup>. Others thus pointed to one of the potential problems of auctions, that economic efficiency might come at the cost of efficacy, in the sense that many successful bidders would not be able to build their projects. Traditional renewable interest groups, such as APPA or AEE were also critical of aspects that went beyond the structure of the individual auction, such as the absence of a calendar that allowed time for preparing projects and bids. They also pointed to the fact that the fundamental problem resided in the investment insecurity generated by the possibility for the government of revising the remuneration parameters every six years (Polo Gomez 2016). Moreover, retributing the initial value of the investment (and therefore the generation capacity) rather than the actual cost per KW/h produced, was an incentive for those investors that could have had a better access to capital markets at the expense of those project developers that used more efficient technology but had less financial leverage power, causing a long-term damage to technological development. Utilities also demanded that other criteria than the simple competition on investment costs be added to select the winning bid. They insisted that the government screened out speculators and leave only actors with experience in the sector by raising the requisites in terms of financial guarantees to be provided and the need to present a fully-fledged project, including its siting, before or right after the

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<sup>196</sup> It might be remembered as the rationale for establishing the pre-assignment register in 2008 and 2009 was an express measure to deter speculators. The outsider in this case immediately looked for a partner to finance the project, as a partial demonstration of the limited self-sufficiency of the initial winning bidder. However, it finally found the support of General Electrics, which might disprove the fear of letting outsiders into the auction.

<sup>197</sup> One reason could be the fact that being the beneficiary of a special remuneration regime entitlement could have sped up the administrative work for receiving the concession to access the grid, one of the bottlenecks of RES-E installation

celebration of the auction (Page 2016). The PV sector was obviously furious for having been excluded and demanded technological neutrality, to which the wind industry responded that technological neutrality would have favoured cheap Chinese PV modules at the expense of domestic wind aerogenerators industry. Finally, the lack of a reserve of capacity for small projects also irritated those that considered the deployment of RES-E not just an industrial goal, but also a form of democratizing the production of electricity (Victoria and Calvo 2017).

The government considered itself satisfied and emphasized how it had been able to add RES-E capacity at no cost for the consumer. However, it might have been alarmed by the fact that its reputation for the achievement of the 2020 goals depended on actors that had no proved experience in the sector. The political context had changed, in the sense that two general elections had partially changed the balance of power in the domestic landscape. The PP had lost the absolute majority in Parliament and had, now that it was governing in minority, to be more attentive to the demands of other political groups. At the same time, the deadline for the 2020 RES goals would fall within the current legislature lifetime, which meant that, considering the entire policy time-span since 2012, it would have been the party entirely responsible for the success or failure in goal achievement. Finally, now that the economy had started to pick up again and electricity demand was on the rise, it was clear that the full 8,000 MW of extra RES-E were needed, and that meant the mobilization of a considerable amount of financial and technical resources in a short amount of time. The laxity of the first five years in government demanded accelerated action at the end of the compliance period. For this reason, not only two consecutive auctions were called, but its structure was also object of modification. The Minister of Industry had to take heed of at least of the complaints of the utilities investing in the sector, and therefore especially the wind lobby (Page 2016), but less those of the PV lobby, at least initially.

The second auction<sup>198</sup> called for 3,000 MW of RES-E capacity and was also technologically neutral, apparently according to the preferences of the PV lobby. However, when two bidders offered the same discount, the technology associated to more hours of functioning would be selected, which was a factor that played in favour of the wind lobby, given the fact that they performed better on such parameter. Finally, some measures were also adopted to ensure

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<sup>198</sup> Royal Decree 359/2017, 31<sup>st</sup> of March 2017

the financial and technical solvency of the bidders, by increasing the amount of the deposit needed to back a winning bid and by asking that the winner present a project outline within few months from the celebration of the auction. The results of the second auction were again particularly cheerful for the government for two reasons. First, because they confirmed the capacity of RES-E to be able to work without subsidies, as again the winning bids offered the maximum possible discount. Second because a more realistic landscape of the sector emerged from the identity of the winners. Surprisingly, again, Forestalia, the outsider of the first auction, was the most successful bidders (although it was now supported by General Electrics). However, this time, most utilities also managed to win considerable blocks of MW except for Iberdrola. The only controversy, but a major one, was again coming from the PV sector that only managed to win 1 MW, even though it had equalled the bidding price of wind energy bidders. PV interest groups appealed against the auction claiming that it violated the constitutional principles of equality of treatment and non-discrimination, without much success (Mendoza Losana 2017). The PV lobby group Anpier started a public campaign to denounce the concentration of renewable energy in the hands of few big companies, that risked to reproduce the logic of the electricity oligopoly of conventional energy in the renewable sector (Noceda 2017c)<sup>199</sup>. The Ministry of Industry however said he was confident that the following auction would be a good occasion for the PV sector, because of the higher quantity to be auctioned and possibly the fact that most of the more competitive wind projects had already been presented. With this auction the government intended to close, for the time being, the question of the missing installed capacity necessary to meet the 2020 goals. In fact, the July 2017 third and last auction of the PP government was a great success for PV bidders, which won 3700 of the 5000 MW being adjudicated, offering lower prices than wind bidders. Once again, the auction resulted in the lowest possible price (i.e. without support) and one that was lower than the expected price in the wholesale market. However, it is unlikely that the PV lobbies and associations promoting small scale PV installation had a reason to agree with the Minister as almost all of the capacity went to corporations, from the utility sector and from the construction sector (Noceda 2017b).

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<sup>199</sup> Et the same time, the Ministry of Industry started a campaign to warn citizens and individual investors to be careful about ads that promoted the auctions as financial products with a fixed rentability, which was not the case given the possibility of changing the regulatory parameters every six years.

According to financial analysts, the profile of the winners of the latest auctions was revealing an interesting change in the sector in relation to the nature of players. First, utilities were still present, but they were not any longer the dominant players. In many ways, the technological know-how of renewable electricity production was starting to cease to be the monopoly of utilities, as it had been the case with conventional power plants, due to their technical complexity and the scale economies of learning that their management and operation implied. Second, projects were not being financed mostly by banks as in the past, with leverage ratio of up to 90%. Investment funds were increasingly penetrating the sector that they considered an attractive financial investment, either via equity stakes or debt financing. And even if a sophisticated forward market for electricity had not developed in Spain, RES-E investors were increasingly signing Power Purchase Agreement with big electricity users (Ojea 2017a, 2017c) that, given the growing competitiveness of RES-E generation, found it convenient to source their electricity from bilateral contracts rather than from the wholesale market or from commercial retailers (Cruz Peña 2017, Interview Price Waterhouse Cooper). Also, S&P noted how utilities that had so far been less active in ‘greening’ their generation mix, such as Gas Natural and Endesa, had been the most aggressive utilities in the auctions (as compared to Iberdrola that almost took no part in them) as a sign of both, the transition in the sector towards renewables and the use of auctions as an instrument to secure a minimum guaranteed price in a situation where marginal pricing could cause a considerable drop in future wholesale market prices (Barrero 2018). In other words, a positive feedback, bringing in new players and reorienting expectations, had emerged.

#### [7.4. Positive Policy Feedback? Auctions Under the New Coalition Government \(2018-2021\)](#)

To increase the confidence in the existence of a positive policy feedback, this section will briefly deal with the treatment of auctions under the governments presided by the PSOE taking over from the PP in June 2018 (including the coalition governments formed after the general elections of April 2019 and November 2019). Although the action of the PSOE has been fragmented across three different legislatures, since its beginning the government made climate change and renewable energy one of the banners of its programmatic action, which was rebranded as working towards an ‘energy transition’. Although more specific details about the governmental strategy will be exposed in the next paragraph, suffice it to say that the National Energy and Climate Plan 2021-2030 requires the incorporation of 60 GW of RES-

E between 2020 and 2030, of which 22 GW of wind and 30 GW of PV. The government intends to follow a linear trajectory, installing 6 GW per year and has chosen auctions as the main instrument. The programmatic agreement between PSOE and its junior coalition partner, the leftist Unidas Podemos (UP) included a specific clause according to which the auction mechanism and the support mechanism would be changed, shifting from the retribution of capacity to the retribution of the electricity produced, based on the costs of each technology. This last point must be place in the context of the debate within the government about the possibility of reforming the wholesale market. UP had been a staunch critic of the marginalist model of the wholesale market and had long espoused the opinion that it caused windfall profits for inframarginal generation and was one of the causes of the tariff deficit and the high cost of electricity. However, its radical proposals such as reform the wholesale market and radical modification of marginal pricing were rejected by the Ministry of Ecological Transition, Teresa Ribera, who explicitly said it would be contrary to the EU model (Noceda 2021; Roca 2021a). However, if changing the marginal model was not possible for those technologies that operated in the market free of support, the same would not apply to RES-E under support mechanisms. Therefore, as it will be explained, the government chose to keep marginal pricing for other technologies but limit its impact, favourable or not, for renewable energy, also with a view to minimize costs for consumers.

After much haggling, in 2020 the new combined system of auctions and support mechanism<sup>200</sup> was introduced as partial transposition of the 2018 RES directive. In many ways, auctions are the only instrument that the new government borrowed from the previous one, although its actual mechanism was also changed. The government based its decision on four justifications. First, it acknowledged that the marginalist model would end up generating the ‘missing money’ problem and that the wholesale market prices in the 2030 horizon would follow a descending path because of the incorporation of considerable quantities of RES-E. Hence, the necessity of ensuring a stable source of financing for RES-E developers that did not rest exclusively on market prices. Second, the government thought that the previous system of auction based on a uniform clearing price method did not achieve the goal of reducing the cost of support. Under that system all successful bids received the same remuneration level as set by the highest bid. The government thought further support cost

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<sup>200</sup> Royal Decree 960/2020, 3<sup>rd</sup> of November 2020

reduction could be achieved via a pay-as-bid system. Each bidder would therefore submit a bid that indicated the fixed price for KW/h produced that it would accept for the regulated lifetime of its installation. The government would therefore remunerate the electricity produced by successful bidders via a contract for difference: RES-E producers would first sell their electricity in the market and receive the market price, but subsequently, it would see their remuneration adjusted by the positive or negative difference between the market price and the agreed fixed price that results from the auction. Moreover, in obeyance to the RES-E directive, RES-E producers would be exposed to the market and to flexibility in a second sense, as they would be denied remuneration if the market price falls below a threshold, such as zero or negative prices<sup>201</sup>. The government stressed that these measures would allow consumers to benefit from technological price reduction. Third, auctions would not necessarily be technology neutral and, as an exception to the rule, they would not be used for small scale RES-E and demonstration project. Specific measures would also be adopted to allow specific projects and citizens' participation, such as renewable communities (as specified by the new RES directive) to compete on equal conditions with other participants in the market. Finally, the government intended to provide certainty to investors by issuing an indicative calendar of the time and timing of each auction, establishing as a rule that at least 5 GW per year would be auctioned, as to achieve the goal of 60 GW by 2030 according to a linear path that would also benefit from the expected improvement in the technology learning curve.

The first auction under the new model was held at the end of January 2021, with 3,000 MW been offered (2,000 MW for wind and 1,000 MW for PV). The outcome of the auction was satisfactory, with a high level of participation (more than 9,000 MW have been offered) and competition (the average price was 24,47 €/MWh for PV and 25,31 €MW/h for wind) which are prices well below the averages in the wholesale market.

Following the introduction of the new support mechanism system and the stated intention to use it as the pillar of renewable support policy, some tension has surfaced between

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<sup>201</sup> The regulation establishes that such threshold or 'exclusion price' could be higher than zero and the actual level would be decided for each auction. The government also intends to use positive incentives for those RES-E technologies whose output is manageable or that invest in system of storage by establishing that they could receive a percentage of the market price, on top of the fixed remuneration, if they shift their production to a time of very high prices (therefore beneficially contributing to peak market price depression) or very low prices (therefore beneficially contributing to avoid the formation of negative market price depression)

government and utilities. Iberdrola and Endesa have in fact launched mixed messages. The CEO of Endesa (whose plan is to build 8,000 MW of RES-E in Spain until 2030) welcomed the regulation and stated that they would participate, but also showed some indifference as the company's plan are not necessarily depending on securing government support via auctions. Equally, Iberdrola stated that, although the company had regularly participated and won auctions celebrated in other countries, it did not consider auctions as the only instrument available to secure the financing of RES-E, such as PPA. Iberdrola is sceptical of the fact that, since renewables have already attracted the interest of investors and there are many commercial formulas that allow to build renewables, government intervention is still necessary. The risk is that of perpetuating a system that in fact locks some producers out of the market (notwithstanding their exposition to market prices)<sup>202</sup>. In spite of the expressed reticence, both companies have successfully participated in the new auctions (Villar 2021). On the other hand, renewable interest groups of non-utilities producers, such APPA and UNEF, were more enthusiastic of the new system that, according to them, gives certainty and confidence to investors and to the industry of independent RES-E producers. Moreover, they consider that the system can live side by side with PPAs, contrary to the sceptical view of utilities that argue that PPA and auctions can become incompatible. Utilities in fact argue that auctions achieve artificially low prices because the state act as an implicit guarantor, and such low prices have a negative effect on PPA established between privates without public intermediation. On the contrary, for Appa and UNEF they are two different ways of meeting the same goal, as investors that go through auctions prefer to offer low prices and take less risks than those that choose the PPA path (Aleasoft Energy Forecasting 2021).

#### 7.5. Spain and the 2030 Renewable Goal: Interconnections and Its Role in Functional Conflict and Politicisation

The centrality of the interconnection issue in the Spanish approach to its contribution to the development of a common energy policy and the expectations that it derived from its participation has already been extensively mentioned. At the outset of the process for the establishment of the 2030 targets, the issue already became a central plank of the definition

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<sup>202</sup> Source: Expansión, "Galán pone en duda la necesidad de subastas en España para impulsar las renovables", 5<sup>th</sup> of November 2020 and Merca2, "Endesa e Iberdrola escenifican su indiferencia con las subastas renovables", 6<sup>th</sup> of November 2020

of the Spanish position. In its contribution to the Commission 2013 Green Paper that launched the process, the government mostly agreed with the 40% GHG reduction target and the goal of 80-95% reduction for 2050 that it considered reasonable. Strengthening the ETS was considered the obvious path to follow. The position was nonetheless remarkable also for its agreement with the other emerging motif in EU energy policy, i.e., flexibility. Therefore, mention was made of the need to consider flexibility in relation to the specificities of the energy sector before agreeing the concrete measures for a long term strategies, such as cost reductions, the development of the internal market and that of interconnections. But flexibility was, above all, a matter of domestic specificities, and in particular the need to ensure security of supply that for Spain it meant to make additional effort to guarantee the 10% interconnection goal agreed in 2002. No mention was made in this document of the future of renewable policy.

Since the European Council agreement of October 2014, which expressly stated the urgent need to ensure that the 10% electricity interconnection goal be achieved<sup>203</sup> the high ranking officials of the Ministry of Industry had continuously stressed the fact that, according to their understanding, that agreement meant the subordination of all other goals, including the renewable goal and the goal of reducing and disciplining public intervention in the market, to the accomplishment of the interconnection precondition. The government negotiating position was therefore centred on the principle that it was neither legitimate nor possible to ask Spain the same efforts and at the same conditions of other Member States that enjoyed a level of integration in the backbone of the internal market that the Iberian peninsula did not. At the same time, it was hoped that the appointment of the former Minister of Environment and member of the PP to the role of Energy Commissioner would have helped Spain in either achieving the interconnection goal or receiving the due, exceptional, treatment in relation to its contribution to the EU 2030 goal. Moreover, the PP tried to took credit for having raised the issue as an EU priority, given the fact that all the milestones of interconnection policy (the 2002 Barcelona Declaration, the 2004 informal agreement with France that paved the way for the construction of the Eastern Pyrenees connection and the

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<sup>203</sup> In its exact wording: '*the European Commission supported by the Member States will take urgent measures to ensure the achievement of a minimum target of 10% of existing electricity interconnection, as a matter of urgency, and no later than 2020 at least for Member States which have not yet attained a minimum level of integration in the internal energy market, which are the Baltic States, Portugal and Spain*'. European Council (23 and 24 October 2014) Conclusions on 2030 Climate and Energy Policy Framework.

current positioning on the 2030 framework that set conditionality for other goals' achievement) had all been adopted under the clock of its government mandate. The Minister of Industry in many occasions stated that if the 10% goal had become a priority at the October 2014 European Council, it had been at the insistence of the concerted action of the Spanish and the Portuguese Ministers. During this time, negotiation at EU level was still strictly limited to the 27% RES goal, which meant that the Spanish government was referring its conditionality not to a possible increase in the level of ambition, as it would become the case later, but to this original goal. The discussion on interconnections was moreover increasingly linked to the use of the so called 'Juncker Plan', the EU infrastructure Investment Plan agreed as one of the macroeconomic stimulus plans envisaged by the EU to relaunch the economy. After years of austerity, anything that would sound as a potential investment in the country was, quite understandably, something the government would immediately jump on.

In the Spanish Parliament, the saliency of the interconnection question grew considerably, at least judging from the number of mentions that the issue received in the meetings of the Industry Commission in Congress. In April 2015 the Minister scheduled, at his own petition, a specifically dedicated session<sup>204</sup> to inform on the issue and narrowed down on the specificities of the relation between electricity interconnections and the different strands of EU energy policy. The Minister started pointing to the fact that the interconnection between Portugal and Spain was almost never congested, for which reason the two countries could be considered as one, the Iberian Peninsula. Although this is not stated by the Minister in his speech, there is an important caveat to mention in relation to the ambiguous computation of the 10% interconnection goal. In fact, if the connections between Portugal and Spain were considered as part of the 10% goal, the relative grievance of Spain would be less than if the whole Iberian Peninsula was taken as a reference. The idea is that considering the relatively little dimension of the Portuguese electricity system (and the growing penetration of renewables in the windy and sunny country) there is little Spain could benefit from Portugal in terms of electricity balancing and capacity back-up needs. Therefore, EU market integration means that interconnections should logically refer to the flow of electricity from between the Peninsula and Continental Europe. The Minister also pointed to one of the

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<sup>204</sup> Industry and Energy Commission, Congress of Deputies, X Legislature, Session n. 55, Diario de Sesiones, 22<sup>nd</sup> of April 2015

reasons why France had historically had little interest in developing interconnections. The bordering regions of Southern France are in fact very little industrialized, and therefore the electricity grid serving the area is little developed. Integration of large quantities of electricity coming from Spain would imply, for technical reasons, also the necessity to reinforce the local grid, with little benefit for France. Spain, the Minister went on, was in the paradoxical situation of being one of the EU Member States with the higher share of RES-E intermittent generation but also one of the Member States with the lowest rate of interconnections. Increasing the share of renewables in such conditions implied a triple extra cost. First, that of the costly managing of intermittent electricity within a limited domestic grid, i.e. a balancing cost, especially when the EU directives also imposed priority of dispatch for renewable electricity which caused the costly disconnection of thermal power plants<sup>205</sup>. Second, the cost of disconnecting and wasting renewable electricity (which had also to be compensated) when other alternatives were not possible. Third, the cost of maintaining a large quantity of firm back-up capacity (i.e. thermal and nuclear power plants). But there was also one more problem, this time linked to the failure of equalising prices in the wholesale market with the rest of the EU, which was the core goal of the IEM. While prices between Portugal and Spain were most of the time the same, because of the lack of congestion, the opposite happened with France. Because of the frequent congestion at the border, Spanish prices were lower when there was a high share of renewable (at that time, mostly in windy days) and higher in the days with little renewable contribution. Both, producers of electricity and consumers in the Iberian Peninsula could not enjoy the same level of necessary price stability as their EU counterparts. The position of the government was therefore clear, RES goals and interconnections were two issues intimately linked, and the conditionality of one upon the other was a matter of necessity and national interest, economic and, possibly more importantly, of security of supply.

#### 7.5.1. Acting in the EU: Project of Common Interests and The Madrid Declaration

There is convincing evidence that the government attached high importance to the interconnection issue. The PP government had managed to have the Gulf of Biscay connection

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<sup>205</sup> The Minister at one point also provided an economic estimation of this extra cost, 1,200 €million per year (Source: eleconomista.es “*La falta de interconexiones cuesta 1.200 millones al año*”, 29<sup>th</sup> of June 2016

into the 2013 Project of Common Interests list<sup>206</sup>, and Inelfe had already started to receive funding in 2014 for the feasibility technical studies. However, the project was not expected to be available until 2025. In 2015, the Eastern Pyrenees line had also become operational. Domestically, the electricity infrastructure planning document for the 2015-2020 period included a broadened and more defined menu of projects to make the increase possible. These included two more lines through the Pyrenees, one via Navarra and the other via Aragon, as already stated. In 2016, these two projects were also admitted into the PCI list<sup>207</sup> but as generic projects, and became operationally identified projects in the third PCI list in 2017<sup>208</sup>. Taken together, these projects would have finally increased the interconnection capacity to 8,000 MW that the government took as a prerequisite for the increase of its RES-E goal contribution, but it was however clear that, given the experience with the former interconnection projects, there were very slim chances of having them available within 2030. Even though it was not made explicit, conditionality implied by the government might have referred to the only project that could have reached a stage of maturity beyond the state of project speculation, the Biscay Gulf.

These goals were also made possible by the political activism of the government in lobbying for having its priorities considered as a matter of urgency at the EU level. In other words, the government took advantage of the momentum created by the 2014 European Council and force its EU partners to act, backed by the other Member States with a stake in the issue, Portugal. The major achievement of the government diplomatic push was to increase the level of formalization of the 2004 informal intergovernmental agreement, which took place in 2015 through the so called Madrid Declaration. As it might be remembered the 2004 agreement had been the unintended consequence of a merger operation attempted by EdF that had involved the EU in its capacity of guardian of competition. This time, it was a politically orchestrated manoeuvre by the government that convened together, in March 2015, the Prime Ministers of Spain and Portugal, the President of France, the President of the Commission and that of the European Investment Bank. The Declaration summoned up the need to use the available funds, those that the EU had at its disposal for the specific purpose of interconnection building (e.g., the Connecting Europe Facility) as well as the Structural

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<sup>206</sup> Commission Delegated Regulation No 1391/2013

<sup>207</sup> Commission Delegated Regulation (EU) 2016/89

<sup>208</sup> Commission Delegated Regulation (EU) 2018/540

Funds and other funds at the disposal of the EIB for the goal of developing interconnections. The European Commission was therefore invited to consider the common strategy paper produced by the French, Portuguese and Spanish TSOs with a view to connect the Iberian Peninsula to the continental internal market when drawing up its upcoming PCI list, something that, as already seen, would take place between 2016 and 2017. The institutional framework was to be reinforced by the creation of a regional High Level Group for the South-West Europe on interconnections, tasked with the development of the identified projects, assessing the financial needs and monitoring the progress of projects. Although it seemed unrealistic already in 2015, the goal was still to meet the 10% goal by 2020. The Ministry of Industry had therefore on its side the justification provided by the long lead time between the identification of a project and its material realization to oppose renewable targets higher than those agreed in 2014, let alone any increase. It must be also noted how the construction of international transmission lines had been excluded from the freeze that the government had imposed on the construction of new internal transport and distribution line as a part of the measures adopted to deal with the tariff deficit.

#### [\*\*7.5.2. The Position on the Winter Package: The Renewables-Interconnections Linkage\*\*](#)

The information available on the Spanish position on the proposed legislation of the Winter Package shows an unequivocal relation between opposition and the interconnection issue. Moreover, the Ministry of Industry was also eager to defend its domestic reforms to renewable support mechanisms from proposed norms that were specifically aimed at rebuking what had been carried out during those years or, in the case of self-consumption, what had not been done. Spain was on the staunchest defender of the Council position that RES targets should not be mandatory on Member States and that the level of ambition should not be set higher than 27%. The comments made by the government to the proposals submitted by the Commission, both in terms of suppression and modification of existing norms and addition of new one, are in line with what the government considered the domestic interest. These included the relation between renewable energy targets and interconnection to the internal market and domestic flexibility to accommodate diversity among Member States. Without being comprehensive, a selection of the Spanish comments is offered.

In relation to the proposed renewable energy directive, Spain proposed to broaden the definition of instruments to meet EU targets and support a ‘high level of ambition of national targets and policies. The purposes of such instruments should have been the reduction of the cost of capital for renewable projects; the development of transmission and distribution lines to achieve the new 15% interconnection target and increase the technical and economic affordability of the integration of RES-E in the electricity system, with a specific framework that would accord priority to EU funds to those projects necessary to reach 10% of interconnection; enhanced regional cooperation, allowing joint projects to access EU funds and research and development projects. It opposed the provision that forced Member States to assess the effectiveness of their support scheme every five years. It proposed that if interconnection targets had not been met, Member States could opt out from opening their support schemes to producers from other Member States. It proposed to change the article that mandated the stability of financial support mechanisms (i.e. the no-retroactivity clause) for one that allowed the adaptation of remuneration envisaged by existing support schemes to current market circumstance (as the government in fact done in the past two years). The justification given was that the government had to protect the public interest, consumers, and the stability of the electricity system. It proposed that Member States that had not reached the minimum interconnection binding target (as it will explained later, it was also proposed that this target become *binding*) would have to include in their NECPs a roadmap for achieving this target, identifying efficient projects that should become *Priority Investment Projects* for the Internal Market (i.e. a new concept). Member States would then be allowed to extend their compliance period with RES national contributions until these projects were not completed. In other words, this proposal encapsulated the backbone of the Spanish position, the conditionality of RES targets on interconnection levels. In relation to the integration of RES-E in electricity market, Spain pushed for reducing to the maximum extent possible the exceptions for priority access and priority dispatch, proposing its new regulation as an example of the feasibility of moving away from FiT and increasing the market exposition of renewables. In relation to norms contained in the Governance directive, it was rejected the option of meeting RES goal according to a linear trajectory and also fixing individual targets for specific technologies, supporting the principle of technological neutrality and in any case leaving discretion to Member States.

The Governance directive was also made the object of targeted proposals that, as said before, were to complement those on RES-E in terms of flexibility and conditionality. There were two crucial and intertwined proposals, related to the legal treatment of RES targets and interconnections. In relation to RES targets, Spain reiterated its grievances to its peculiar situation and therefore argued that for the calculation of national contribution to the overall EU target, the following factors be considered: economic potential; geographical and natural constraints, including those of non-interconnected regions; sensitivity to the levels of interconnections, not only when submitting the initial goals but also in the course of evaluation of progress and updates; finally, relating the achievement of RES targets to the corresponding achievement of the (now binding) interconnection targets. Therefore, interconnection goal should have been placed on an equal footing with the RES target, binding at the EU level, and accompanied by provisions to ensure its compliance. A new article was then proposed that established the binding nature of the target and another one specifying the contributions of Member States to achieve it and to cooperate with other Member States' to achieve it. The Governance framework should have created the concept of Priority Investments Projects for the Internal Market, that Member States had to specify in their NECPs and that would have then received the status of PCIs. A Member States that suffered from interconnection levels lower than 10%, would identify such projects, have them approved by the Commission and, automatically, create an obligation for the bordering Member State to cooperate for their realization. Based on its own experience, Spain proposed that such mandatory assistance would consist in simplified procedures for the authorisation of projects by national authorities and that denial of authorisation could only be justified by negative environmental impact assessment. If this was the case, however, the Member states should have proposed an alternative. Cost-benefit analysis should not be a reason to reject another Member State Priority Investment Project but only a method to distribute the benefits and costs among Member States. Finally, in case of conflict or delay in the implementation of projects, the Commission should have designated a mediator or a group of technical experts.

### 7.5.3. The Great Paradox: Pivotal Position in the EU and Domestic Functional Opposition. Limits to Sovereignty over the Electricity Generation Mix

During 2017, the position of the Spanish government within the Council of Ministers seemed to enjoy a pivotal position. In the run-up to the Council of Minister that had to fix its position vis-à-vis the EP, which had become entrenched in its request for an ambitious target of 35% of RES (and which started to receive support some from the Commission) Spain, Germany and Italy constituted a solid blocking minority in favour of maintaining the 27% target (Dufour 2017; Ojea 2017b; Planelles 2017). The outcome of the Council of Minister could have been considered a victory from the perspective of the Spanish position and the domestic interest defended by the Minister (Roca 2017).

The disagreement among the three institutions had grown not only in relation to the RES target, but also in relation to another, less eye-catching, but equally important proposal: the limit of GHG emissions for thermal power plants to qualify for capacity mechanism. The norm was contained in the new proposed IEM regulation and it was the only but crucial norm that directly linked climate change policies to the Winter Package. The reform of the ETS had in fact followed a different path but it was still too early to tell whether it would be enough to revive the effectiveness of the instrument. The price of carbon was however still registering very low levels, far from those expected to trigger the structural change it had been hoped for and emissions from coal power plants were on the rise in Spain (Planelles 2016). The Commission had therefore proposed that an emission performance standard (550gr CO<sub>2</sub> per KW/h) would be applied to qualify for capacity mechanism, which would be gradually applied to existing power plants until full application in 2025 (Morgan 2017b). For many Spanish coal-fired power plant, which had been often the object of specific capacity mechanisms measures to ensure their permanence in the market, the norm would have probably meant their premature foreclosure. The capacity mechanism rule had therefore become another target of the Minister of Industry and the position of Spain on this point, according to the available documentation, was quite clear. At a general level, it was said that the norm breached the subsidiarity principle and that the analysis of reliability of generation capacity for security of supply, establishing the need for capacity mechanisms to existing plants, should be left to domestic discretion. At a more specific level, it was again pointed to the fact that a country

with poor interconnections had even more reasons to be concerned about its security of supply. The emission performance standard, according to the document, was criticised for being an intrusion into the domestic right to determine the generation mix and it was not even clear, from the impact assessment, how it had been calculated.

While the Minister was engaged in this controversial aspect of the Winter Package, domestically he was facing a situation that could only reinforce his determination to obtain via EU rules what he was clearly struggling to achieve domestically. Starting in 2017, the Minister realised how the right to determine the energy mix had started to collide with the right of utilities to determine their investment decision and, above all, with the unintended consequences of past directives and EU rules that had been implemented over the years. As it will be explained, if the Minister was to oppose an increase in the quantity of RES-E to be incorporated into the domestic generation mix, he also had to make sure that there would be enough capacity at home and that the generation mix would set prices that would be in line with the goal to keep the electricity tariff at low levels (at least the portion of the electricity tariff that was determined by the cost of electricity generation). Moreover, the argument that more RES-E was indeed not needed because of overcapacity in the electricity system would have been invalidated if such capacity, because of the decisions taken by utilities, was to decrease (del Río and Janeiro 2016).

The origin of the problem rooted in the consequences of the Industrial Emission Directive of 2010 (IED) which replaced und brought under a single framework the previous Large Combustion Plants and IPCC Directives. The directive established limits for emissions of harmful particles (mostly sulphur and nitrogen dioxide) that would be periodically updated based on best available technology standards. Stringent limits would have started to apply from 2016. The directive allowed flexibility to Member States and owners of emitting installations to decide when and if make the necessary investments to comply with the emission standards. They could either decide not to refurbish their plants, in which case the later would have been allowed to function for a limited number of hours and then shut down in 2023 or to take their time in making a decision and be inscribed into a National Transition Plan. Accordingly, during the transition period (2016-2020), plants would be allowed to function under the condition that their cumulative output of the regulated emissions during the period would be capped at specific levels. In 2020, the plants should have decided

whether to shut down or upgrade their standards to the levels set in 2010. 97% of Spanish coal plants (15 plants in total) had opted for this second flexibility option and only one filed for the 2023 deadline (Fernandez Montes 2016).

For different reasons, in 2017, most utilities started to think that the age of coal had come to an end and that it would not be economically beneficial to make the necessary upgrade investment. The first reason was that new emission standards had been approved in 2017 according to the best available technology criteria, implying even higher upgrading (Morgan 2017a). Second, the ETS reform made plausible to forecast higher future carbon prices, at least up to a level that would have made coal-fired power plants less competitive compared to gas-fired power plants. If a thermal back-up was needed, the latter would have offered a less expensive and technically superior alternative<sup>209</sup>. Third, most coal-fired power plants had been designed to use domestic coal, and therefore their use depended on the availability of such resource. Their continued existence and use had been treated by successive government as a measure to ensure security of supply and therefore a variety of incentives had been used for achieving this goal. As it might be remembered, until 2007 the government had provided an economic incentive to plants using domestic coal, at least until imported coal had not started to be more expensive in international markets, leading to an end of the measure lest be treated as state aid. However, since 2007, that measure had been replaced by an ‘environmental’ incentive to allow those plants to upgrade and fulfil the 2020 emission standards (Greenpeace 2009)<sup>210</sup>. In 2017, the Commission opened a state aid investigation regarding this measure, signalling to the government that environmental standards set by the EU should not be the object of public funds and there was therefore a serious risk that those funds, 440 €millions, should be returned as illegal state aid (Galvez 2017). The following measure, the 2010 decree allowing for priority dispatch of power plants using domestic coal, had expired in 2010 and there were little chances that the Commission, provided the overcapacity of the Spanish electricity system, would agree to a renewal of the measure, at least in the original terms. Finally, domestic coal availability would soon come to an end, as

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<sup>209</sup> Gas powered plants have a quicker rump-up time, which means that their output can be regulated (up or down) faster and therefore represent a better complement for intermittent renewable electricity, allowing for more efficient integration in the electricity system

<sup>210</sup> Under this incentive, the beneficiaries would then commit to buy domestic coal for specific quantities but would not be forced to use it. When domestic coal was not competitive however, utilities had problems in stocking large quantities of coal (Monforte 2015a)

mining had become victim, so to speak, of another long-term EU policy, state aid for coal mining. Utilities had also been for some time owner or co-owners of some mines, but they had progressively dismissed them and started to see the use of domestic coal as an imposition rather than a business opportunity (Interview Carbúnión). According to the latest (and last) coal plan accorded by the government and the European Commission in application of state aid coal policy<sup>211</sup> (Warral and van der Berg 2017) all mines that were uncompetitive should stop receiving state aid, which also meant that they would close, by the end of 2018 (Planelles 2018b).

Given the extremely unfavourable landscape, it is not surprising that many utilities started doubting about the opportunity to make the necessary investments to upgrade their power plants and started to file requests for the administrative authorization to close them by 2020, according to the IED directive deadline. The first to file for an application to close two of its plants was Endesa in 2017 (which was the owner of the great majority of the 15 plants that were still functioning), immediately followed by Iberdrola who announced the company decision to close all its coal-fired power plants worldwide as part of the commitment to become a carbon-neutral company by 2050. Moreover, Iberdrola started to actively campaign for the adoption of ambitious RES-E goals, backing the EP proposal of a 35% target. In November 2017, three utilities operating in the Spanish market, Iberdrola, Endesa (via Enel, its Italy-based owner) and EDP (Portugal-based) issued a statement addressed to EU policymakers where they considered the 27% goal as one lacking ambition, putting more pressure on those Member States that were blocking the agreement with the EP. Natural Gas also hinted at the intention of ending its relation with coal in 2020. However, utilities did not share the same views regarding the emission performance measure. While Iberdrola, Natural Gas and Acciona (all of them without significant interests in coal) had joined the pro coal phase-out lobbying group Make Power Clean that actively backed the proposition at EU level, Endesa (which still wanted to maintain some of its coal-fired power plants, at least for a relatively brief transition period), via Enel, sided with the position of Eurelectric, the EU-wide electricity utility association, which shared a different opinion<sup>212</sup>. Despite the new clash

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<sup>211</sup> Council Decision 2010/787/EU

<sup>212</sup> Eurelectric argued that the norm would have backfired because the premature phase-out of coal would have not necessarily resulted in its substitution with carbon-free generation but would have instead led to the construction of more gas-fired power plants. Such investments, with a lifetime of at least 40 years, would have caused more resistance for gas phase-out in the following decades, it was argued. The association saw it more

between Iberdrola and Endesa, and the possibility that a few of the coal-fired power plants would be upgraded and maintained beyond 2020, the general trend among utilities was to considerably reduce the amount of coal-based generation capacity by 2020.

From a party-political perspective, the quick (but long-time in the pipeline) turn of events was to create a problem not only to the actual government, but also to some of its opposers on the left. The PSOE was in fact confronted with an internal coherence problem, as the coal mining basins had historically been regions where the party had enjoyed considerable support, the same for the leftist party Izquierda Unida. While the latter took an almost unequivocal position in favour of defending miners, the PSOE started to be internally divided between the local leaders of the affected regions that also supported the continuity of coal mining by other means and the Madrid-based, ‘new’ generation of younger progressive leaders who were instead ready to cut the tie with the past and clear the party from what was a rather blatant contradiction: support for high RES-E targets and climate neutrality and promotion of coal, against the climate and market logic<sup>213</sup>. The PSOE progressive wing was taking steps to frame the coal phase-out from a different perspective, that of a ‘just transition’ that would offer compensations and alternative development plans for the affected regions and workers<sup>214</sup>.

The Minister of Industry was therefore engaged in a complex multi-level negotiation as he was defending a position at the EU level that was increasingly contested domestically, although he enjoyed a comforting position in the EU (the blocking minority within the Council together with a heavy-weight such as Germany and Italy) and the domestic landscape was fragmented enough to allow for exploitation of divisions among utilities and among and within political parties. His first reaction was to engage in a polemic with Endesa, denouncing the lack of commitment to the domestic interest of its Italian shareholders, who were ‘acting in favour of the Italian citizens at the expense of those of Spanish consumers and workers’. A similarly bitter dispute involved Iberdrola, whom the Minister had invited to sell the plants it

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convenient, and more environment-friendly, to allow coal for more time until carbon-free technologies were able to be the real and only alternative to coal.

<sup>213</sup> Source: El Periódico de la Energía, “El PSOE se inventa un ‘céntimo verde’ para bonificar la quema de carbón autóctono”, 7<sup>th</sup> of April 2016;

<sup>214</sup> Source: La Voz de Asturias, “La presidenta del PSOE defiende que el cierre de las térmicas abarataría la electricidad”, 30<sup>th</sup> of November 2017

wanted to sell close instead of filing for an authorization to close them, hinting at the fact that the real reason was not the lack of profitability, but the rather more venial intention of the company to profit more from the higher prices of gas. This was in fact the main argumentative line that the Minister had been following, the fact that retiring coal from the generation mix would have not only caused security of supply problems, but also an unjustified extra cost for the Spanish consumers and industry as coal was still the least-cost option for back-up of intermittent renewables that served to lower prices in the wholesale market. In one remarkable statement, the Minister noted that ‘energy policy is decided by the government, not by the private sector’ (Noceda 2017a).

At the same time, he took aim at the PSOE, by first, claiming that they had been approaching him to provide their support for a governmental intervention to discipline coal plants foreclosure and then let him alone in defending this option. Second by exploiting the internal division by seeking the consensus of the regional PSOE leaders who were unabashedly favourable to any option to keep coal alive<sup>215</sup> (Carcar 2018c). Besides this limited ‘strange bedfellows’ coalition, the relevant and paradoxical political fact was that the PP had now become the staunch defender of domestic coal (although counting on a very reduced number of coal mines that could be viable without direct subsidies) while most of the left had embraced an energy policy that had no room for coal within it. The political pressure on the Minister increased when Congress passed a motion, with the favourable vote of most political parties<sup>216</sup> who urged the government to support the most ambitious goals in EU negotiation (40% RES and efficiency goals and using capacity mechanisms only as a last resort measures, as proposed by the European Commission). The Ministers rebuked the motion stating that the parties were acting irresponsibly, had no knowledge of how the sector worked and that what was most important, from an environmental perspective, was to meet the climate

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<sup>215</sup> Source: El País, “El ministro Nadal acusa a Enel de favorecer a Italia “a costa de los españoles””, 9<sup>th</sup> of May 2017

<sup>216</sup> The motion, presented by UP, was voted by UP, PSOE, the centrist party, Ciudadanos, that was at that moment, backing the government and all political parties with the exception of the regionalist party of Asturias, the coal region per excellence and Canarias, plus the abstention of the Basque nationalist party, PNV

reduction target, which was not only possible but also cost-effective with a generation mix including coal<sup>217</sup>.

Moving from words to facts, the Ministry of Industry prepared, in November 2017, a regulation that would have provided the government with the authority to have the last word and thus overrule the decision to close any power plant in the country (Robert 2017). The preamble of the regulation entirely reflected the argumentative line that the Minister had defended so far: that the freedom of enterprise needed to be subordinated to the general interest and the decisions to close a power plant had to be coherent with the general orientations of the government in relation to its planification, and with its cost-benefit analysis of the path towards complying with EU climate and energy goals and of the evolution of prices and domestic competitiveness. When and if the government, informed by the independent regulator, would find the request for closure submitted by a plant owner contrary to any of those orientations, the government could then force plants' owners to continue the operations, to sell the plant or to ask the government to organize an auction. The regulation would be valid for all power plants, including nuclear power plants.

This last provision was particularly relevant as a parallel debate to that on the future of coal was inflaming the relation between the government and utilities as much as the Parliament. The standard lifetime of most nuclear power plants was in fact to expire between 2020 and 2024, which meant that about 25% of firm electricity generation risked disappearing in a very short time. The government was even more adamant than in the case of coal that such an event would have catastrophic consequences on all fronts, including security of supply and fulfilment of GHG goals, and that renewables would have never been able to replace the role of these plants and therefore pushed for an extension of the lifetime<sup>218</sup> (Martinez 2017). The situation was however complex, as such extension both divided and united the utilities who were the owners of such plants. Utilities claimed that the original investment in nuclear power plants had not been written-off yet and that the extra investment to prepare them for an extended lifetime required a different economic regime than the one in place. It was contested the fact that over time, nuclear generation had become subject to an unbearable

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<sup>217</sup> Source: El Periódico de la Energía, "El Congreso insta al Gobierno a que aumente los objetivos a 2030: 40% de renovables y 40% de eficiencia vinculantes"; "Nadal acusa de «irresponsables» a los grupos que no han querido al carbón en el mix energético" 17<sup>th</sup> of October 2017

<sup>218</sup> Source: Expansión, "Nadal: la tecnología actual no permite sustituir la energía nuclear", 26<sup>th</sup> of May 2017

fiscal pressure that made them economically inviable. The Minister held a very different opinion though and maintained that the economic analysis presented by utilities was the result of financial engineering and that they were making consistent profits, even windfall profits, from still using assets whose fixed capital had been already paid off (Page 2017b). However, while Iberdrola was sceptical about the continuation of its nuclear assets, Endesa was keen to keep them open but to negotiate and obtain better conditions from the government (Masa 2018; Pozo 2017): the problem was that they were co-owner of some of the plants and could veto each other. Politically, the question had reopened the traditional fracture between the pro-nuclear posture of the PP and the anti-nuclear one of the left with UP and PSOE opposed to any lifetime extension and continuously challenging the government to commit to the original expiration date for such plants (Roca 2018a). PSOE and UP, in what would then be the last days of the government, promised that if their no-confidence vote against the government had been successful and therefore be in charge of the government, they would have not backtracked on their posture (Ojea 2018).

The intention of the government to reassert its authority over the freedom of choice of the utilities in disposing of their assets was however not favourably met neither by the independent regulator nor by the European Commission. The CNMC informed<sup>219</sup> the government that it was opposed as much on the content as on the form. Regarding the content, it considered that the proposed regulation would be contrary to EU legislation on many accounts, such as the freedom of enterprise, the orientations of the Winter Package on decarbonization and the provisions on state aid if the government had provided incentives for their continued use in spite of their lack of profitability, or even auctioned them. Moreover, it disagreed with the government that there would have been an imminent risk of security of supply (Planelles 2018a). All the contrary, argued the regulator, the problem was the fact that consumers had suffered, over all those years, from the unnecessary cost of all the incentives that had been provided to incentivise the construction of generation capacity that had been turned to be well in excess of what was needed. In relation to the form, it was argued that the norm would have changed important aspect of the LSE and that it needed to be approved by the Parliament. The Minister then was resigned to try to muster some

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<sup>219</sup> Source: CNMC: "La CNMC publica el informe sobre el Proyecto de Real Decreto del Ministerio de Energía que autoriza el cierre de centrales de generación eléctrica", 24<sup>th</sup> of January 2018

consensus among the other political parties, given the minority position of its party in Parliament, but, as expected, did not find enough support, except for Ciudadanos that hinted, without much concretion, that it would only support the part relative to nuclear power plants but not coal (Roca 2018b). The Energy Commissioner also let it know that it had started to consider the (difficult) compatibility of the proposed regulation with EU legislation but that it would not intervene at least until it was clear that it stood a chance to be adopted.

#### 7.5.4. Epistemic turn in the Debate over Decarbonization Pathways

There was one last front in what increasingly resembling a warfare among the government, economic actors, and opposition, and that was the climate and energy dimension. Since the adoption of the Paris Agreement at the end of 2015, climate change had become if not a priority, at least a salient issue for the government. The Prime Minister had therefore announced, immediately after the signature of the agreement, that Spain would adopt a climate act to provide coherence to governmental action to achieve its GHG reduction goal. All political parties competed in taking the lead on the issue and different legislative propositions had been introduced since 2016 by the opposition in the Climate Change Commission in Congress, putting pressure on the government to adopt one. The Ministry of Environment pressed at the beginning of 2017 for the operationalization of a goal that the opposition started to depict as ‘smoke in the face’ and an Interdepartmental ad-hoc group was tasked with the preparation of such act. The stated intention was to pass a ‘climate and energy transition act’, for which reason the Ministry of Industry was to take the lead on its jurisdictional area. Amid the growing salience of the negotiation of the Winter Package, the concept of ‘energy transition’ applied to the future act brought the process of its elaboration into the realm of the ongoing debate on the role of the energy mix to achieve such transition.

One of the novel aspects of the process was the establishment of an expert committee to provide qualified advice on the different available paths to achieve the decarbonization goals to which Spain had signed up through the Paris Agreement (which, according to the effort sharing agreement within the EU was of -26% as compared to 2005). Although the Expert Group was supposed to reflect the different political, economic, and societal interests, the government reserved the right to pick four members, while three were reserved to social and economic interests and the remaining six would be assigned to political groups in parliament. The Ministry of Industry chose the former President of REE, possibly as a sign of its concern

about the issue of interconnections in relation to the composition of the generation mix. In many ways, this process could be considered a crucial epistemic test for the thesis defended by the Ministry in relation to the technical and economic impact of the different goals that were being negotiated at the EU level. It took almost nine months for the experts to produce their results and, although the complexity of the scenarios proposed did not allow to draw a clear-cut answer to which path would be preferable, the government felt they broadly confirmed the validity of its positions. The report<sup>220</sup> based its estimations for the electricity sector on two scenarios commonly used by ENTSO-E in its analysis<sup>221</sup>, both leading to different combinations of GHG reductions and RES-E goals that would be compatible with those negotiated at the EU level. The lower-end RES goal was considered more feasible and least-cost, especially if not based on the growth of distributed generation (prosumers). For achieving the 35% goal, all the possible levers of the energy system would have to be simultaneously activated and it was considered almost unattainable. Therefore, both scenarios resulted in RES penetration of 29.7 and 28.4% respectively. The report therefore discouraged an ‘extreme’ installation of RES-E. The maximum level of RES-E generation achieved in 2030 in both scenarios would be 62 and 67% respectively. However, the costs of generation (€ per MW/h) would be very different, 52 and 32.7 € respectively. Importantly, the study considered an interconnection level with France of 5,000 MW, what could be realistically possible to achieve within the 2030 horizon with the construction of the Biscay Gulf connection. Surprisingly, the experts warned that increasing interconnections to 8,000 MW would have mixed effects. Spain would become a net exporter of electricity, which means that its domestic prices would, in general, increase, because the depressing effects of RES-E generation on wholesale market prices would be lower. At the same time, the losses (or waste) of excess RES-E electricity would decrease by 31%. Although the report admitted that it had not consider other monetary benefits of interconnections (such as the increase in energy security and the reduction in balancing costs), it still recommended that the construction of extra interconnection lines be submitted to cost-benefit analysis as their utility and necessity was not to be taken for granted. Within the limits of the partial inclusion

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<sup>220</sup> Report availale as: “Comisión de Expertos sobre Escenarios de Transición Energética. Análisis y propuestas para la descarbonización”

<sup>221</sup> DG, Distributed Generation, with a high penetration of small-scale renewable and ST, Sustainable Transition, with more centralized electricity production, both large-scale renewables and

of those extra benefits, it was concluded that the total yearly cost of electricity would increase by 740-990 € millions per year and GHG emissions could also increase. The report finally estimated that while coal-fired generation could suffer a considerable decrease in both scenarios, it was necessary to maintain the current nuclear generation at least until 2030, both for cost and GHG reduction reasons. One of the main recommendation of the experts was to overhaul the fiscality of energy with a view to re-equilibrate the efforts among different sources of energy, emphasizing how actual taxation levels were extremely inefficient because penalized electricity (what was desired) against oil and other fuels (what was to be phased-out) (Noceda 2018). The report was not approved unanimously by the experts however, with two political (UP and Esquerra Republicana) and one union-designed experts abstaining because of the lack of proposals on how to increase competition in the market and for the explicit backing of the nuclear lifetime extension (Carcar 2018b).

The Minister of Industry took note and, in any case, decided to leave the adoption of the act for after the final outcome of the negotiation of the Winter Package, imposing its decision on the Ministry of Environment. The Minister justified his position by the need to know what kind of coordination among Member States would had been achieved at EU level before committing to specific goals and measures (possibly referring to the interconnection issue). The Minister of Environment instead considered such dimension less relevant and pressed with the adoption of the act in the shortest possible time, privileging the political capital that was at stake for the government after many years of tinkering with the issue and the risk of losing initiative in favour of opposition groups (Carcar 2018d).

The epistemic challenge, so to say, had not however been confined to the government as, during the same time, at least ten different planning and programmatic exercises with the ‘energy transition’ as their object of analysis had come to light. They included think-tanks (Economics for Energy), energy corporations (Cepsa), consulting firms (Deloitte, KPMG), renewable interest groups (Fundación Renovables, AEE), environmental and social groups (Greenpeace, Observatorio Crítico de la Energía) and a ‘shadow expert committee’ created by the PSOE, the Consulting Council for Ecologic and Energy Transition (CAPTE). The next and concluding section for this case study will pick up from the CAPTE proposals for the energy transition.

## 7.6. The New Government and the Priority of the Energy Transition

To understand the considerable change, almost paradigmatic, that Spanish electricity policy would suffer with the change in government following the successful no-confidence vote in May 2018, a good point to start is the constitution, the composition and the work of CAPTE. When Pedro Sanchez took over the PSOE presidency, his intention was to offer a more proactive, dynamic, and programmatic image of the party. The purposeful image and action capacity had been somewhat lost since the public opinion perception that the Zapatero experience had not been entirely successful. Climate and energy policy offered a clear window of opportunity to challenge the PP on a ground where, once in power, it had wanted to show problem-solving mostly in terms of ‘cleaning up the mess’ left by the former government, demonizing the regulatory mistakes, and offering an image of improvisation and wishful thinking on many policies, especially in the realm of renewable support. During these years, PP Ministers of Industry had often made references to the fact that their actions were mostly the result of problems created by the former government and that they had finally managed to reinstate coherence into the system, benefiting consumers at the expense of the different interest groups that had conditioned the action of the Zapatero’s governments. But, after seven years in power, the PP government action on energy policies could hardly be defined popular and conflict-free, and its opposition to a more ambitious EU renewable policy was an issue that had acquired much political and economic salience.

The CAPTE was directed by Teresa Ribera, who was well-experienced in climate and energy policy having worked under the Zapatero mandate first as head of the OECC and then as Secretary of State for Environment and Climate. After her passage in government, she had continued to cultivate professional and technical experience by working for a French think-tank also specialized on environmental and climate issues. The CAPTE then reported to Cristina Narbona who was, as already said, the former Ministry of Environment and member of the CSN and one of the most important figures of the leftist wing of the party. The report issued by the CAPTE as a counter-expert group to the one established by the government contained, in hindsight, the blueprint of what would be the action of the PSOE government once in power. The CAPTE took note of the government expert reports but defined it as conservative in its estimations on RES potential and on the presumed need to maintain the whole nuclear generation capacity until 2030. The CAPTE report (Carcar 2018a), whose title

defined energy transition as ‘ambitious, solidaristic, smart and socially fair’, started with the value-laden aspiration that climate and energy were policies where social democracy could fill the space left by the conservative right in guiding and organizing public and private action in a crucial driver of modernization and economic progress. The programmatic proposals started from the premise that market forces alone would have not been able to achieve the ambitious and daunting decarbonization targets and that, without public guidance, outcomes would be insufficient, erratic and structural, as the GHG emissions from the electricity sector demonstrated with reductions in some years followed by increase in subsequent years. The report was critical with the Spanish market regulation, which caused over-remuneration for some technologies while leaving others without economic and legal certainty. Therefore, the future market regulation was envisaged as one where centralization and competition coexisted, via the organization of auctions to enter the market and competition within the market that did not however create excessive volatility in spot prices, unless they signalled the efficient use of electricity rather than manipulations from market power.

From the perspective of the generation mix, retiring coal was considered the necessary turning point for decarbonization, because of the existence of already available alternatives, such the idle CCGT but, above all, the potential for RES-E expansion. Such potential was said to be compatible with a 40% RES penetration in the total energy output and up to 80% in total electricity generation by 2030, with a view to achieve 100% renewable penetration by 2050, implying the progressive closure of nuclear power plants according to their established expiration date. The future was also envisaged as one with large quantities of distributed generation. Interconnections were also mentioned in the document but did not assume a central role, although the vertebration of the internal energy market was recognized as a desirable condition, but not a precondition, for achieving ambitious goals.

When Ribera was appointed to lead the new Ministry of Ecological Transition which, for the first time, integrated environment and energy policy in one department, moving the latter away from its traditional anchorage in the Ministry of Industry, she immediately translated to the EU the intention to not only lift the vetoes that had been exercised by her predecessor, but also to be available to go further than minimum ambition. The new Spanish negotiating position changed with a U-turn to first back the ambitious RES target (35%) defended by the

EP<sup>222</sup> (Keating and Simon 2018) and then to lift the veto on the emission performance standard for capacity mechanism (Simon 2018d). However, this U-turn begs the question of whether the new Ministry intended to simply score points in the EU and domestically by claiming credit for helping to breaking the deadlock of a negotiation that seemed very difficult to conclude and that had started to call into question the existence of political willingness to comply with the Paris Agreement or if there was a real plan behind the decision. In the end, the CAPTE document was a list of good intentions but they needed to put into practice. The change in Member States' preferences and therefore Council orientations might have been a factor. Members of the new Spanish government are reported having said that, before their arrival, Spain was siding with Poland, the staunchest opposer of any increase in RES ambition and restrictions on coal, in trying to block a more conciliatory attitude of the Council towards the upcoming trialogue. This might be interpreted simply as if the new government did not want its reputation to be tainted by being side-lined and associated with an environmental laggard. At the same time, the same source said that the new position would have been aligned with that of the PSOE group in the EP, and therefore with the negotiating position of the EP which was supported by such group (Planelles 2018c). It is worth noting that the rapporteur of the renewable directive in the ITRE committee of the EP, responsible for agreeing the text to be submitted to the plenary, was in fact a member of the PSOE, José Blanco. This makes it likely that the PSOE had been supportive of more ambitious energy transition positions for quite sometimes already and that the changes in Council alignment had no impact. All the contrary, Spain now was on the side of the high-ambitious countries, and the 35% RES goal could not be agreed because of opposition by Germany (Simon 2018c)

The content of the Spanish NCEP and the subsequent negotiations with domestic actors can provide further empirical evidence to support this interpretation. Some aspects have been already dealt with in the analysis of the previous case, in particular the ambition level on renewables, which exceeded by far the minimum that would have been required to comply with the EU goal (42% of gross energy consumption). The previous section also explained the continued use of auctions and the change in remuneration instruments, intended to make possible to achieve the three goals of spurring investor interest and confidence, to unlock the

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<sup>222</sup> According to WWF, positions in the Council had somehow shifted in April 2018, during the informal Council of Ministers held in Sofia. Germany had opened the door for a 30% target, while Poland and the UK were the staunchest supporters of the 27% target. Italy and Spain were standing in between the 27-30% gap.(WWF 2018)

resources needed for the massive renewable deployment, and ensuring the lowest cost for consumers. Therefore, what is left to explain is how the new government treated the issue of interconnections and the related issue of security of supply considered the intention to allow for rapid coal phase-out and for the paced phase-out of nuclear power.

Starting with interconnections, the change is not as paradigmatic as one might think, in the sense that higher levels of interconnection are still considered both necessary and desirable, but their urgency, or their treatment as a precondition that would justify the adoption of hard-bargaining position not. Therefore, the NECP agrees with the Commission proposed change on how the interconnection target should be calculated, which, in the context of the developing nature of a renewable-based electricity system, must be more nuanced<sup>223</sup>. Although Spain still fails on these parameters, the future needs of interconnections must be determined accordingly. Second, all the possible options for ensuring domestic resilience are explored and supported first. This implies the reinforcement of the domestic transport and distribution grid, a greater use of demand flexibility, also via the participation of consumers and the development of electricity storage technologies<sup>224</sup>. The government thus still expects to have its interconnection priorities considered as a matter of urgency at EU level, also considered the long lead time that these projects entail, but this reality is not considered as a crucial enough reason to delay further the integration of renewables to the extent that is considered technically and economically feasible according to the optimisation of currently available resources (the document makes reference to the back-up potential of domestic CCGT generation capacity) and the technological change that might be expected during this time. This change in the priority and the (non) conditionality accorded to interconnections is revealed by the proposal for the new Infrastructure Plan for 2021-2026 in which the majority of resources is assigned to the goal of strengthening the domestic transport system (84% of the planned investment) as opposed to the development of international interconnections. The Biscay Gulf project is the only interconnection project with France that will be developed

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<sup>223</sup> The additional parameters, which are used to operationalise the prioritisation of projects for achieving interconnection target for 2030 are: a) if the price differential between wholesale markets exceeds an indicative threshold of 2€/MWh between Member States, regions or bidding zones; b) countries where the nominal transmission capacity of interconnectors is below 30% of their peak load; c) countries where the nominal transmission capacity of interconnectors is below 30% of installed renewable generation capacity

<sup>224</sup> In February 2021, an Electricity Storage Strategy has been launched with an ambitious goal of reaching 20 GW by 2030

during this time, while the other two projects currently on the PCI list will continue to be explored from the perspective of technical feasibility in view of a still unplanned future building stage. With such measures, the plan intends to reach a level of integration of renewables by 2026 (expected to fully replace coal during this time, although nuclear phase-out will only start in 2027) of 68% of total electricity produced with only 5% on average of curtailment (i.e., surplus that cannot be used).

The government therefore takes responsibility for ensuring security of supply while managing the process of coal phase-out, which is the outcome, as it has been explained, of the application of positive and negative integration measures to the electricity sector and of organizing the process of nuclear phase-out which is instead the consequence of an explicit political decision. For coal phase-out, the government has adopted the strategy of allowing plant owners to freely divest their assets and, although 2,000 MW of capacity are expected for 2025, by 2030 coal should be absent from the generation mix. Government and utilities have also reached a framework deal for the ordered and paced shut-down of the remaining five nuclear reactors that should take place between 2027 and 2033 (Monforte 2019). This means that the government has been more flexible than its moderately anti-nuclear position would have suggested, as some reactors have been accorded a short lifetime extension, causing some problems with its junior coalition partner that wanted to stick to the original agreement of non-negotiable and undelayable shut-down according to the existing lifetime. Finally, in 2019, the government also set up the second pillar of its energy strategy, the Just Transition Strategy (besides the NCEP and the Climate Change Act, still to be adopted) which is intended to strengthen the social pillar of the energy transition and also to deal with the economic impact of coal phase-out on the affected area (mostly rural) and workers.

## 7.7. Tariff Setting and the New Internal Electricity Market Directive

The new LSE adopted in 2013 had adapted the model of regulated tariff to the broad framework established by the 2009 IEM directive, distinguishing between regulated prices for universal service (the PVPC) and for the protection of vulnerable consumers (a now refocused TUR), but for it to represent a break as compared to the TUR, the announced regulatory development would have been a crucial test. To recap what the new LSE had introduced, the PVPC now distinguished between four components of the final end-user tariff: the cost of electricity generation, the access tariff (which should have remunerated the activities of

transport and distribution), the charges for all other regulated costs of the system, including the repayments of past deficits and the costs of retail. This last component was particularly sensitive for the private sector and a crucial element for making the PVPC compatible with EU rules. The PVPC, as regulated tariffs had come to do so far, was in fact intended to set the *maximum* price that consumers could have been asked to pay, but if such price was set at very low levels, it would have been impossible for retailers in the free market to compete against it. If this was the case, the goal of the IEM directive to create a fully competitive retail market and to stimulate, through competition, consumers to be active and responsive to price dynamics would have been lost. At the same time, if the government feared that there was not yet enough competition in the retail market, the PVPC would represent a guarantee for the consumer not to be subject to uncompetitive prices. The problem, however, risked becoming circular. If the PVPC was set at too low levels, the retail market would have not developed because there would have not been enough profit margins to make for retailers. As it will be seen, the definition of this retail margin in the setting of the PVPC will soon become the bone of contention between the government and retailers (both, independent retailers, and the utilities' retail branches). During the formulation of the new LSE, UNESA had proposed in fact to, once and for all, move to full market liberalization. The association cited the example of telecommunications, where the outcome of this bold step had been a remarkable reduction of prices. According to the UNESA proposal, by lowering the contracted capacity to access the regulated tariff to 3kW would have immediately shifted 16 of the 20 millions consumers still under the TUR to the liberalized market and relieved the government of its responsibility of setting the part of the tariff related to the production cost of electricity and determine the retail margin<sup>225</sup>.

The government was therefore confronted with four regulatory challenges in its attempt to comply with EU rules and at the same time design a tariff that would help stem the tariff deficit problem. First, it had to decide whether to continue with the current mechanism for establishing the cost of electricity to be included in the regulated tariff. The new tariff sufficiency principle could have been compatible with the CESUR method, which shifted the risks of cost deviations on different subjects than the consumer, but at the extra cost of the

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<sup>225</sup> Source: El País, "El presidente de la patronal eléctrica pide liberalizar todo el mercado para bajar precios", 17<sup>th</sup> of February 2013

price of insurance. Second, it had to apply the IEM directive and cede to the CNMC the competence for fixing or approving at least the methodology for establishing the access tariff, a principle that had been incorporated within the new LSE but that had not yet materialized in practice. Third, to avoid the appearance of future deficits, which were now prohibited under the new LSE, it also had to transfer the full amount of the costs of the electricity system to the charge component of the tariff (and for this reason it would start its flurry of reforms to decrease such costs, as it has been explained in the previous sections) and, finally, apply a retail margin that would have allowed retailers to dispute regulated consumers in the market by offering lower tariffs than those set by the PVPC.

#### [\*\*7.7.1. Change in Public Intervention in Relation to the Cost of Electricity: Moving To Dynamic Prices, the CESUR Scandal as a Critical Juncture\*\*](#)

It might be remembered how the CESUR auction system had been designed in 2009 as a response to two problems. The first problem was linked to the appearances of deficits due to the inherent difficulty of determining the future cost of electricity in wholesale markets, which had become more volatile and therefore less predictable. CESUR auctions therefore were meant to relieve the government from making long term estimation of the average cost of electricity generation. The cost of electricity would therefore be determined by such auctions and the risks of deviations between the real costs and the price resulting from the auction would be moved from consumers to the parties that were acting in the auction, the utilities that were forced to offer the regulated tariff (through their regulated retail units, the Retailers of Last Recurs, or CURs, in the Spanish acronym) and the actors that would offer the derivative insurance instruments, usually financial institutions. As already said, the consumer would still pay an extra price, as such mechanism of financial insurance was obviously costly, and the CURs would reflect the cost of insurance (i.e. the cost of these *futures* contract) on the price applied to consumer. But (and this is the second problem the government wanted to solve through CESUR), the introduction of a competitive mechanism that mimicked what it had not, for many reasons, developed in Spain (i.e., a fully-fledged forward market for electricity), would have ensured that the cost of insurance would be also minimized.

Analysts had never been however convinced that CESUR auctions were as competitive as the government wanted to believe and were considered to be vulnerable to manipulation by the actors involved (Fabra 2013). The rationale for this criticism was very straightforward: how

can the consumer benefit if the two parties that are supposed to negotiate in the CESUR auction can translate the price of the product they trade on a third party (the consumer) which does not participate directly in the market? There were strong suspicions that CESUR auctions were indeed inflationist and that both the CURs and the financial institutions involved were, if not colluding, at least ‘miscalculating’ the real cost of electricity that they were negotiating in the auction<sup>226</sup>.

All these suspicions, of which the consumers were very likely ignorant about, as the process of tariff setting was obscure to the great majority of them, came to a head, quite paradoxically, a few days before the new LSE was adopted by the Parliament. On the 19<sup>th</sup> of December, the CESUR auction registered a 26,5% increase in the cost of the generation of electricity that the consumers would have had to pay in the subsequent three months. This increase would have forced the government, to increase the TUR levels for the corresponding period by about 11%. The event busted into an economic and political scandal, media attention focused for the first time on this previously unknown mechanism and the government was forced to react. The government immediately charged the CNMC to open an investigation on the possible causes of the surprising increase. The CNMC concluded that there had been ‘atypical circumstances’ that had caused the price of electricity in wholesale markets to raise in the days immediately before the celebration of the auction, that were then translated in the auction and that there was ground to invalidate the auction. To demonstrate the saliency that the issue had acquired, the same Prime Minister announced during a press conference that the government would not accept the outcomes of the CESUR auction and that the price of electricity for the following three months would be administratively determined by the government considering other parameters.

However, this was only the beginning of a tense debate with all actors involved. The Minister of Industry unabashedly accused the utilities to have manipulated the prices in the wholesale market and tried to make them appear as the main culprit. UNESA responded that the Minister was making unfounded accusations and that the CNMC had so far simply pointed to atypical circumstances that could, UNESA insisted, be duly justified with data and that it was

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<sup>226</sup> The CNE had calculated that in its first year of functioning, the difference between the prices of the CESUR auction (i.e. the sum of the estimated cost of electricity plus the cost of Insurance) and the real cost registered a posteriori in the wholesale market had been 726 € millions (Monforte 2013)

therefore improper to use them as scapegoats when the CNMC had not yet concluded its investigation. The PSOE also accused the Minister of improvisation and that the new LSE was dead on arrival, as it did not contemplate specific measures to deal with the problem of CESUR and the determination of the cost of electricity in general. The Minister obviously retorted that CESUR auctions had been introduced by the previous socialist government and that the LSE now foresaw the possibility of switching to another system of tariff setting. The CNMC reminded both parties that it had often warned about the shortcomings of the system and that it had made many proposals in the past for its improvement. All the consumers' organizations, finally, raised to demand the end of a system that, they claimed, gave the opportunity to utilities to press their interests against those of the consumer.

This perfect storm opened the door for the paradigmatic change the Ministry of Industry announced in February. From April 2014<sup>227</sup>, consumers could have chosen between regulated tariff two systems, that would still be offered by retailers selected by the government. Because of the distinction between PVPC and TUR, the retailers called to offer the first would be now called 'retailers of reference' (COR, in the Spanish acronym), while CURs would have still been responsible for the now targeted TUR for vulnerable consumers. The first tariff system, and preferred by the Ministry, would set the cost of the generation of electricity on the hourly prices set by the (day-ahead) wholesale market. The most extreme form of dynamic pricing based on real time was thus introduced, something that EU legislation would only consider in the 2018 IEM directive. However, because not all consumers would have liked this price volatility, CORs would however also have to offer a fixed-price option, valid for a whole year. However, the intention was to make this second option less attractive than the dynamic price, and therefore CORs were allowed to include the costs of insurance into the fixed-price offer, with the implicit understanding that consumers would be discouraged to select it and either opt for the dynamic pricing PVPC or for free market retailers offers.

The CNMC provided a positive appraisal<sup>228</sup> of the proposed change in its consultive report, as it saw many advantages compared to the long story of failures of the different methods adopted to determine the cost of electricity generation. First, as the CNMC had repeatedly

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<sup>227</sup> Royal Decree 26/2014, 28<sup>th</sup> of March 2014

<sup>228</sup> CNMC, "Informe Sobre La Propuesta De Real Decreto Por El Que Se Establece La Metodología De Cálculo De Los Precios Voluntarios Para El Pequeño Consumidor Y Su Régimen Jurídico De Contratación", 25<sup>th</sup> of Februyay 2014

pointed in the past, wholesale market prices had almost always been inferior (11% on average) to those estimated by the Ministry or resulting from the CESUR, therefore the consumer could benefit from such a change in monetary terms. Second, it provided signals to consumers for efficient consumption which would have resulted not only in an individual benefit, but also in a collective benefit because, if consumers effectively responded to price signals, the overall stress on the transport and distribution lines would have decreased<sup>229</sup> and less polluting generation plants would be used, therefore decreasing the amount of GHG emissions and other pollutants<sup>230</sup>. However, for the realization and maximization of these benefits, two conditions were necessary. First and foremost, the benefits of dynamic pricing were conditional on the availability of smart meters. Although a plan for the roll-out of smart meters had existed since 2007, with the goal of full roll-out to be achieved by 2014, the effective rate as of 2014 was as little as 35%. This was also a concern expressed by the European Commission in its appraisal of the PVPC, which, on the other hand, was received with enthusiasm and predicted benefits for the consumers<sup>231</sup>. Overcoming this bottleneck was crucial to unlock the economic benefits for the consumer and for the demand-response role that it would play, with the corresponding economic and environmental benefits for the electricity system (Gomez Bueno 2014). Second, the CNMC also saw necessary a massive information campaign as electricity consumers were still mostly unaware of how the system worked. It was already possible to know the hourly cost of electricity for the upcoming day via the website of REE and through many other internet resources and smartphones applications, but consumers had to made aware of this. The CNMC stated that the norm was following the best-practices that ACER and CEER (the Council of European Electricity Regulators, to which the CNMC belonged) had been developing in recent years, but it was only a first step. The CNMC considered in fact that, although a positive step compared to the previous systems, the impact of the PVPC on the free retail market could have delayed its development and the CNMC thought it convenient that the government considered a phase-

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<sup>229</sup> This is the basic rationale of dynamic pricing, to allow for consumption behaviour that lead to 'load shifting' and better distribute the consumption of energy across time and avoid peaks, being peaks the major cost driver of infrastructure (the higher the peak, the more infrastructure is needed)

<sup>230</sup> This is because peaks in electricity demand require the use of more thermal plants. This is especially important in relation to the increase of RES-E generation, because, if the consumer shifts its consumption when there is abundance of RES-E electricity, this is not wasted (as storage capacity is limited).

<sup>231</sup> Source: El País "Bruselas pide acompañar la nueva tarifa eléctrica con intensa campaña informativa", 29<sup>th</sup> of March 2014

out of the PVPC in the future, leading it to competition in the free retail market to establish electricity prices. To compete with the PVPC, free market retailers were in fact left with only three options. First, by reducing their retail profit margins, and from this perspective, if the PVPC fixed by decree a regulated retail cost for its provision by the CORs that was not cost-reflective, there would have been little chance for a free retailer to compete. Second, the free retailer could have competed by optimizing its acquisitions of electricity in the wholesale market and in future markets and to offer tailor-made tariffs that better adapted to the specific profile and preference consumptions of individual consumers. From this perspective, there was ground to compete with the PVPC which was a system that offered flexibility to the consumer but required an hourly engagement with the wholesale market that could have turned out prohibitively demanding for many consumers. Third, free retailers could differentiate their product by offering extra qualities, such for example the commitment to buy RES-E green certificates to make the consumer feel environmentally conscious, or by offering packages of electricity and other services. Finally, the CNMC suggested the establishment of a website where consumers could compare the PVPC with other free market retail options, to increase transparency and competition.

#### 7.7.2. Initial Impact of the PVPC

The PVPC could have therefore found two obstacles in its acceptance by the broad constituency of actors involved: free market retailers that considered it as an instrument that prevented the transition to a fully competitive system, as already signalled by the CNMC and by consumers' organizations that feared the opposite, i.e. the progressive distancing of the government from its role of guaranteeing a public service at transparent and affordable prices. In fact, this divergence of opinions was reflected in the approach followed by the EU so far, whereby the retail liberalization push of the European Commission had been constantly rejected by a blocking minority of Member States that had defended the need to maintain the option of a regulated prices. The only reason to insist on regulated prices was either to consider that markets are not fully competitive or to consider that the outcomes of a fully competitive market are not socially optimal and need government intervention. The doctrine on SGEI has always been the mediator between the opposed views, the liberalising view of the Commission and the less enthusiastic approach of the Member States, about the

role of the state in mediating the relation between markets and consumers in the provision of electricity.

So, how did the PVPC fared when it was introduced in its acceptance from the actors involved? UNESA felt that with the adoption of the PVPC, the window of opportunity opened by the new LSE had been closed by the adoption of the PVPC. It has been said how, in the run-up to the new LSE, UNESA had repeatedly advocated for a shift to full market liberalization in the spirit of a maximalist interpretation of the market-related content of the IEM directive, but the CESUR incident certainly did not help in leveraging the role of utilities in setting the new system. If utilities were being accused of manipulating the regulated retail market, how could they be trusted to take full responsibility in a fully liberalized market? The paradigmatic change in the way the cost of electricity was calculated did not extend to calling into question the presence of a regulated tariff, at least for some time. Therefore, the strategy of utilities was adapted to the existence and likely persistence of the PVPC. First, all utilities started to take advantage of the installation of smart meters, of which they were responsible based on a government mandate<sup>232</sup> and started to offer tariffs with dynamic prices or alternative tariffs for those consumers that preferred a different system (Delle Femmine 2016). From this perspective, there was little else they could do then compete on prices and consumer preferences against the PVPC. Ironically, the benefits of dynamic pricing could have been lost if a consumer switched from the PVPC to a retailer tariff with fixed prices or less flexibility, but it is also the case that those same consumers would not actively engage with demand-flexibility, even if it was the only available option. Second, the main point of contention, as already anticipated by the CNMC, was the setting of the retail margin that the Ministry fixed for the CORs in their provision of the PVPC. Utilities hoped to increase this margin for two reasons. First, because a low margin could have resulted in the imposition on their CORs of the provision of a service below cost, therefore a net loss. Second, because by increasing the margin, it would have been easier to compete with the PVPC for free retailers, and utilities

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<sup>232</sup> The plan for the roll-out of smart meters started in 2007 (Ministerial Order ITC/3860/2007) and was updated in 2012 (Ministerial Order IET/290/2012). The responsibility for the roll-out was originally placed on the distributors that provided the TUR (and then the CURs), with a view to complete 35% of the roll-out by December 2014, 70% by December 2016 and 100% by December 2018. Each company would have served its own regulated customers. Free retailers would have then taken over the smart meters already installed when a consumer would move away from the CUR and compensate the owner. By the end of 2019, almost all electricity customers in Spain had a smart meter, according to CNMC sources.

which owned CORs might have preferred to shift their regulated customers under the CORs to their free market retailing companies (obviously, also running the risk of losing them to competition, but it was clear that they preferred competition to the regulated market). The government initially failed to establish a methodology for the calculation of the PVPC retail margin and established one that utilities successfully challenged in courts. The CNMC then issued a proposal based on consultation with retailers from the free market and increased this margin, but the government, who was not bound, according to the new LSE, to heed the CNMC on this issue<sup>233</sup>, decided differently, although it approved a methodology<sup>234</sup>. The new amount was also challenged in Court in a process that has continued almost recursively ever since, to testify that this was (and in many ways still is) the only weakness of the PVPC in relation to the challenge from retailers.

The initial reactions of consumer organizations, on the other hand, was not favourable (Arranz Lazaro 2015), as the widespread idea among such organizations is that the electricity system is not competitive enough to ensure that consumers would not be abused by private companies. Consumer organizations then echoed a concern that is shared by the CNMC that vertically integrated companies still control most of the retail market (besides their dominant position in the wholesale market) and had always positively valued the fact that the government regulated tariff set a maximum price and a reference value for the free retail market. Therefore, they feared the shift from the TUR to the PVPC. The former was appreciated for being a clear reference, published every three months, constraining the free market retailers to a specific price limit and one against which consumers could protest if they perceive that the TUR increased excessively from one trimester to the next. In other words, the TUR, according to consumer organizations, was an instrument that empowered consumers against free retailers, by constraining their possible abuse in a concentrated market, and against the government if it was considered incapable of avoiding a surge in electricity prices. The fact that the PVPC, because of its variance, did not provide a clear and identifiable reference any longer, was perceived as a way of weakening consumers' power and rights. However, fastening forwards to a later time, it is possible to notice how the PVPC has maintained the perception, from the perspective of consumers' organizations, of being the

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<sup>233</sup> The government must cede competences on network access tariffs, and the retail margin is not part of network access

<sup>234</sup> Royal Decree 469/2016

tariff that best serves consumers' interests and one that can put pressure on free market retailers. To begin with, the PVPC, as feared by free market retailers, has not been matched, in terms of prices, by offers in the free retail market. According to figures from the CNMC annual retail market monitoring report<sup>235</sup> since its introduction the PVPC has always offered the lowest electricity prices for consumers. Although this cannot always be predicted in advance, because of the variance of electricity prices on a hourly basis, versus the stable prices offered by free retailers (when they do not offer dynamic pricing themselves), consumers' organization are usually suggesting that consumer do not switch to the free market (Interview FACUA). This campaign in favour of the PVPC shows how consumers' organizations have also moulded their strategy on an instrument that they now perceive to have acquired a degree of regulatory stability and political support, as the next paragraph will show. However, free retailers are gaining market to the PVPC and, according to the report of the CNMC, in 2019 61% of household consumers have already switched to the free retail market. Without entering the question of why this is happening, the CNMC notes also that the free retail market is still highly concentrated (with the three large retailers, Endesa, Iberdrola and Naturgy- former Gas Natural, controlling 81% of the household market) and that electricity is still a sector that suffers from the disinterest of small consumers. According to a CNMC consumer panel survey, 77% of Spanish households does not know the difference between the regulated and the free retail market and 64% do not know whether they have their electricity supplied by PVPC retailers (CORs) or by free retailers. These data are quite at odd with the fact that so many households have switched to the free retail market. According to two interviews, one with a member of a free-market retailer different from those of the dominant players (Interview INGEBAU) and one with a member of a consumers' organization (interview FACUA) this gap can be in part because CORs take advantage of their relationship with consumers and their ignorance of the difference between the two options, regulated and free market, to make them switch to the free market without a clear explanation of the nature of the change.

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<sup>235</sup> CNMC, Electricity Retail Market Monitoring Report Year 2019

### 7.7.3. PVPC as an EU Compliant Instrument: Joining the IEM and the Energy Transition?

The Spanish position on the new IEM directive was concerned about the initial proposal to phase-out regulated tariffs and stressed the fact that the PVPC, because of its indexation on wholesale prices and the inclusion of retail margins into its computation was compatible with the spirit of the proposed legislation. It was defended how the PVPC in fact could stand the compatibility test because it married the need of offering efficient consumption price signals with the need to protect consumers in an insufficiently competitive retail market. Interestingly, the position document showed that the government was concerned with the fact that the proposed abolition of price caps in the wholesale market could cause problems to the PVPC. The Spanish wholesale market was capped at 180 € per MW/h, but the proposed legislation intended to abolish caps and/or harmonize them at EU level, at a possible value of 3,000 € per MW/h. Being the PVPC indexed to such value and given the volatility of the domestic market due to the lack of interconnection, it was argued, the elimination of price caps could cause problems for consumers. Dynamic pricing was welcomed but an option including fixed prices was also to be maintained (as established by the PVPC regulation). The final agreement on dynamic pricing (Simon 2018a), which is an option that all retailers with more than 200,000 customers must offer a contract of this type, can therefore be considered largely in line with domestic interest. It remained however an open question if it would survive the test of its indexation to a wholesale market without price caps.

The new government appointed in 2018 and thereafter has not substantially modified the PVPC approach but it has done so in relation to other aspects of tariff setting, demonstrating how the PVPC approach has enjoyed a positive policy feedback. The coalition agreement between PSOE and UP included a specific chapter on the electricity sector, considered by both parties as the source of many regulatory failures that ended up causing higher consumers prices. Both parties agreed that the marginalist principle in the wholesale market caused windfall profits for inframarginal technologies, such as nuclear and hydroelectric power plants, even if the PP had introduced a high tax burden on such activities, de facto reducing the retribution received by market mechanism. These excess remunerations are then charged to consumers. As it has already been noted, the CAPTE document made express reference to this question and there was expectation about the reform of electricity markets that had been

announced by the government<sup>236</sup>. The action of the government did not however call into question the PVPC, but it addressed its attention on the upstream problem, the wholesale market and on a side problem, energy poverty. A radical reform of the marginalist model was not thus approved by the Ministry of Ecological Transition, despite the pressures of UP, because it was acknowledged that it would have been contrary to the EU directive. The Minister stated that it would study more compatible instruments that could reduce the windfall profits of those technologies that could be proved to be benefiting beyond the principle of ‘reasonable return’ as it the LSE established and that was applied by the former government to reduce the remuneration of renewables (Roca 2021b). The announcement had however raised strong objections from utilities and this might have been a factor that induced the government to be more cautious in the choice of instruments for its acting on this issue (Monforte 2018)

The new government wanted to signal a clear break with the former in relation to another question, related to tariff setting and government discretion. One of the major conflicts during the PP government was the transfer of competences on the methodology for calculating of access tariffs to the CNMC, as established by the 2009 IEM directive. The transfer of this competence was first included in the new LSE, but it was never made operational. Competence over the methodology for access tariff was in fact of crucial political importance because it determined the way in which a considerable part of the fixed costs of the system, those related to transport and distribution activities, are spread among different consumer categories. An example of the political saliency of this competence is the so called ‘Eusko-tariff’, which has traditionally exempted electricity intensive companies in the Basque Country from paying a high access tariff. Its maintenance had been a constant condition that the PNV has imposed throughout the years for supporting the electricity policies of the different governments. The European Commission had also opened an infringement procedure against Spain for failing to correctly transpose the IEM directive in relation to the issue of national regulatory empowerment for access tariff (Monforte 2015b) and it had derived into a tense pulse between the Energy Commissioner and the Ministry of Industry. The latter considered the EU norm as an illegitimate intrusion, under a seemingly technical

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<sup>236</sup> Source: El Periódico de la Energía: “Sánchez e Iglesias ponen patas arriba el sector energético en el acuerdo de PGE 2019: las 15 medidas pactadas”, 10<sup>th</sup> October 2018

pretext, in the domestic political autonomy to redistribute the costs of the electricity system among consumers (Page 2017a). Although during the final year of the previous government it seemed clear that the threat to bring the question before the ECJ had finally convinced the Minister of Industry to devolve such competence, the formalization of the transfer was only accomplished by the new government. Upon arrival, the new Minister of Ecological Transition proceeded to clearly formalize the distribution of competences among the different actors (the government, the competent Ministry and the independent regulator). Therefore, a new governance system has been established balancing the legitimate claim of the government to fix the political orientations of electricity policy with the role of the independent regulator to adopt measures inspired by the principle of efficiency (and increasingly subject to the informal pressure of the best practices established by ACER) and impartially translate government orientations into methodologies that efficiently attribute the costs of the access tariffs among consumers<sup>237</sup>. In case of discrepancy between the Minister and the independent regulator, a conciliatory committee has also also established. According to the distinction that is made in EU legislation between access tariffs and charges relative to past and present electricity policy decisions, the government has competence over the latter and a specific methodology has therefore been introduced to distribute charges among consumers<sup>238</sup>. Interestingly, the preamble of the norm states that to avoid complexity and to increase transparency for the consumer, the government adopted the same tariff structure established by the access tariff methodology elaborated by the CNMC. To conclude, the sticking point and Achille's heel of the PVPC, the calculation of the retail margin, is still one of the few issues that the new government has not regulated. It seems reasonable to argue that, in view of the new IEM regulation, when the government will be now asked to report on the capacity of the regulated price system to allow for the development of competition in the retail market, it will be crucial to demonstrate that the methodology that will be established for its calculation reflects the true costs of retailing to which are subject free market retailers.

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<sup>237</sup> Royal Legislative Decree 1/2019, 12<sup>th</sup> of January 2019

<sup>238</sup> Royal Decree 148/2021, 9<sup>th</sup> of March 2021

## 7.8. Prosumers: From Resistance to Catch-up Europeanization

### 7.8.1. Introducing Distributed Generation, an Overview

Support to distributed generation (El-Khattam and Salama 2004), intended for the purpose of this dissertation as small-scale renewable generation as opposed to utility-scale generation, has been the object of intense academic and political debate, as already briefly described in the literature review. The debate is centred not so much about its positive contribution from the perspective of the energy transition but about how to strike the balance between individual benefits and net collective benefit, as, according to many, self-consumption can also generate costs that can turn into negative economic and technical externalities for the electricity system broadly speaking and can raise distributive conflict among prosumers and traditional consumers (Dueñas Martinez et al. 2018) . Briefly stated, through individual investments in distributed generation a prosumer sources part of its electricity from its own facilities and becomes partially self-sufficient. From the perspective of the electricity system, besides the production of clean energy, if the production facility is of a carbon-free type (e.g., renewable energy) or if it is highly efficient (e.g., cogeneration), prosumers can also contribute to reducing the costs of grid use and expansion (IEA 2014). This is particularly so if, depending on the time of use of the electricity self-produced, prosumers contribute to decreasing peak demand. Unless a consumer is motivated by reasons other than economic benefits, if these benefits are absent, it is unlikely that it would commit to an unprofitable investment, also because many distributed generations technologies are not just scaled for residential household, but also for small industries and commercial buildings, for which the economic rationale is even more relevant.

Broadly speaking, support for distributed generation can come in two ways, one related to the consumer and the other to the producer dimension, which, taken together, result in the ‘prosumer’ concept. First, support is given via the recognition of rights related to on-site consumption of the electricity produced, such as the right to be exempted from paying part or all of networks costs (access tariffs) and charges. Second, by valuing and remunerating surplus electricity which is not consumed, and which is fed into the grid (except for the case of isolated systems disconnected from the grid, in which case, there is no relation with the electricity system) prosumers. Such support can be necessary to make the initial investment profitable (i.e., reach break-even) or to simply ‘break even’ in a shorter amount of time. These

two dimensions are often brought together in support mechanism such as ‘net metering’ (when the electricity exchanged with the grid is valued at the same price, irrespective of the possible different value in hourly prices between the time of consumption from the grid and the time of surplus production fed into it) or ‘net billing’ (when the difference in prices of the electricity exchanged is instead considered and the prosumer is credited or charged the positive or negative difference) (IEA 2016). Given the small scale of the installations, another non-monetary support measure consists in the simplification of administrative procedures for connection to the grid (usually the distribution grid). Complex administrative procedures can turn into a considerable barrier to the expansion of distributed generation (Lavrijssen and Parra 2017). Countries such as Germany, Italy, Portugal, Australia and California have pioneered the use of generous support for distributed generation, in some cases leading to booms that have then entailed the application of measures to contract such expansion (Inês et al. 2020).

Accordingly, the drawbacks of a large quantity of DG can also be considerable and can, under certain circumstances, overweight its benefits. The criticism is mostly of an economic nature (Aragonés, Barquín, and Alba 2016; Dueñas Martinez et al. 2018). First, the net benefits in terms of reduction of grid costs depend on the prosumers’ ‘load-profile’, meaning that they would materialize only if there is a correspondence between the time of production and that of consumption. Second, utility-scale installations are said to be cheaper because of economies of scale, therefore distributed generation might be an inefficient way of generating renewable energy and abating GHG emissions. Third, and most importantly, distributed generation can cause the problem of how to allocate the fixed costs of the electricity system when an increasing number of consumers are (partially) defecting from the grid. To understand this last problem, another crucial characteristic of electricity economics and policy is worth mentioning, tariff setting and structures (Pérez-Arriaga, Pia Rodriguez, and Reneses 2013). Electricity tariffs are usually binomial, meaning that they have a fixed and a variable component. It has been extensively seen elsewhere in this dissertation how electricity system costs are both variable and fixed and, in principle, they should be allocated accordingly in the tariff. But this is not necessarily the case, as fixed costs can also be partially recovered through the volumetric (or variable) part of the tariff to provide incentives for efficient consumption and to apply progressivity among consumers who consume different

quantities of electricity. When this is the case, self-consumers would pay a lower share of the fixed costs, which must be redistributed on other consumers. These considerations lead to two further problems, according to the critical view of distributed generation. First, a self-enforcing dynamic can be set in motion, because the higher the price of electricity fed from the grid (because of its higher fixed and variable access tariff and charges), the more prosumer technologies would reach ‘grid-parity’ or ‘socket-parity’<sup>239</sup>. Second, if it is assumed that the upfront costs of distributed generation technology are high, and prosumer are likely to be the better-off in society, promotion of distributed generation via tariff exemptions can have a regressive effect.

#### 7.8.2. Prosumer Regulation in Spain: From Early Regulation to the ‘Sun Tax’

Legally speaking, the concept of self-consumer (or self-producers, in its original version) was already considered by the 1997 LSE, which established minimum thresholds of self-consumed quantity for a prosumer to fall under this category (Álvarez Pelegry and Castro Legarza 2014). At the same time, the first regulation of the administrative, technical, and economic conditions to be connected to the grid<sup>240</sup> also made specific mention of the legal figure of self-consumer. However, and surprisingly, there had not been any specific measure to encourage this type of distributed generation using renewable technology as opposed to the generous regime for the support of utility-scale renewable<sup>241</sup>. The exception was cogeneration with the use of biomass or organic waste from livestock, which was particularly diffused in some part of Spain (for example Catalonia) and that was however remunerated via FiT. However, the focus here is on renewable electricity produced by wind and, most importantly, PV facilities. It has been noted that the absence of a target prosumer support policy has been a regulatory and economic mistake, as the promotion of distributed generation as a complement to existing industrial and commercial activities could have been a way to keep economic

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<sup>239</sup> Although the two terms are sometimes used interchangeably, there is a relevant conceptual difference among the two. Grid parity, in the strict sense of the concept, is achieved when the cost of self-produced electricity is equal to the cost of electricity drawn from the grid, including network costs. To reach socket parity, the comparison should add charges and taxes that are levied on the electricity drawn from the grid. It is evident how it is easier to reach socket than grid parity.

<sup>240</sup> Royal Decree 1955/2000

<sup>241</sup> RD 661/2007 made mention of self-production but did not regulate it. Even if this support mechanism and the one that followed it in 2008 admitted small scale PV, as well as cogeneration and biomass, the beneficiaries were always treated as producers only and the consumption dimension was not considered.

incentives within the domestic economic system, whereas large-scale renewables had attracted a considerable amount of foreign capital (Sebastián 2015).

The first mention and partial regulation of self-consumption appeared in 2011<sup>242</sup> with the establishment of specific and simplified measures for the connection to the grid of installations of low capacity and of a mandate for the Minister of Industry to table a proposal for the administrative and economic treatment of self-consumers. A proposal was indeed presented, in November 2011, at the very end of the second PSOE government and it proposed net metering together with the right to temporally differ consumption (i.e. the surplus electricity could be netted with consumption up to 12 months of distance). The PP government, upon arrival, also flirted with the idea as an alternative to renewable policy it had decided to freeze via the moratorium and the same decree that established the moratorium also announced a regulation for self-consumption. PV interest groups, such UNEF, started debating the detail of the norm, given the variety of available models from foreign experiences. The economic treatment of the electricity fed into the grid and the exemptions from system costs were, unsurprisingly, the main topic of the debate, as well as the possibility that different legal persons could share the same distributed generation facility, as there were rumours that the government would not allow it (Carcar 2012c). This caveat was particularly relevant for residential prosumers segment as in Spain, different for example than in Germany, the urban landscape is characterized by multi-apartment buildings rather than individual houses, which both reduces the space for rooftop PV and make it necessary to share the space among the tenants. Interestingly, many small installations had begun to be built even without any kind of support, as the cost of modular PV was already 80% lower than 10 years before and in the PV industry there was a feeling that the introduction of net metering would have generated a PV boom. This possibility however was not a welcome news for utilities, which started to air their opposition to what they considered the making of another ruinous solar boom as the one of 2007-2008. PV generation was, the future, so it was argued, but not quite yet (Mendez 2012). The future Minister of Ecological Transition also advocated for net metering and charge exemptions for self-consumed electricity, citing the experience of Italy, Denmark or California (Ribera 2013). The PSOE also tabled a legislative proposal that included net balance and received the backing of most other

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<sup>242</sup> Via the already mentioned RD 1699/2011

parliamentary groups, showing how net metering was a popular option, considered beneficial for reviving renewable policy along a rather different path than before, and the only possible one given the adverse economic circumstances. The proponents then saw it as an opportunity to create more employment, especially for semi-skilled workers from the building sectors and an opportunity to engage local administrations with renewable policy.

However, at a time when the government was desperately trying to stem the tariff deficit and reduce the bill footed by consumers, the prospect of allowing a considerable number of them to ‘dodge the sacrifices’ that were been imposed on all other consumers seemed, to the government, inopportune and potentially unpopular. The first proposal tabled by the government was much less promising than what the sector had expected, as it did not contain neither net metering nor exemptions from charges. On the contrary, the government had espoused a different idea of the concept of prosumers and its rights and duties as compared to what the sector considered international best practices. The draft of the first administrative, technical, and economic regulation considered that a consumer that was also a self-consumer would have to assume the costs of its investments without compensation for the electricity fed into the grid. Unless it did not intend to also take on the role of producer, in which case it would be entitled to compensation, but it would also have to be treated on the same legal footing as any other producer, meaning that more stringent regulatory requirements that this entailed. In any case, both type of self-consumers would have to still participate in the sharing of the fixed costs of the electricity system, in particular those policy costs that were not properly related to the grid, which they would objectively use less. However, it was thought that exemptions were not justified for the charges relative to the system costs that kept the system running, supposedly for the benefit of all, including prosumers. The norm that operationalized this last principle would then become one of the most contested and salient issues of electricity policy for the foreseeable future, and not just domestically. It was in fact decided that not even the electricity produced and consumed within the premises of self-consumer was considered exemptible from paying their share of costs. The government called this contribution a ‘backup charge’, but it soon became dubbed as the ‘sun tax’.

The 2013 draft attracted much criticism from many different sides, and it was probably for this reason that it took two full years to turn it into an act. During this time, the backup charge

became the focus of heated discussions, much more than the other potentially salient issue, i.e., the lack the economic compensation for the self-consumers that would not opt for also becoming producers. This is possibly because what was perceived, by the opposers, as an unjustified penalty had more electoral saliency than the provision of a monetary incentive that, in time austerity, was an argument easier to rebuke. The arguments used by the secretary of state to energy, in a debate in the Industry Commission in Congress however made references to both sides of the equation. The high-ranking official rebated the accusation of stifling a promising environmental and societal development arguing that what the government was doing was to avoid another bubble and that self-consumption was only profitable if it was exempted by the variable part of the charges. Accordingly, those who could afford to install a PV panel on their rooftop did it at the expense of low and medium class consumers. Self-consumption was welcomed only insofar it did not cause a double loss for the system in terms of lost revenues and unjustified incentives provided to prosumers that did not want to qualify as a producer and therefore assume the corresponding responsibilities.

#### [7.8.3. The Royal Decree 900/2015 and the Expansion of Conflict](#)

One of the reasons why self-consumption regulation took two years to be approved was the extremely negative appraisal of the 2013 draft made by the CNE. To understand its criticism, the concept of backup charge must be explained in more detail. As already explained, the rationale for this charge was based on the expectation that self-consumers would legitimately contribute to the fixed costs accruing to the benefits generated by the electricity system (such as security of supply and the balancing mechanisms between demand and supply). Self-consumers, so the argument goes, are also a beneficiary when they use the system to source the electricity, they cannot self-produce, and when they sell or discharge their surplus electricity into it. The Minister on many occasions stressed the fact that a self-consumer in a isolated system would not be subject to a backup charge, but these were clearly very few cases and such a modality would have not have contributed to the large scale promotion of distributed generation, the PV interest groups rebated.

Therefore, the first draft of self-consumption regulation defined the backup charge as the necessary contribution to the fixed costs of the system to be applied to the electricity produced and self-consumed, which meant that the self-consumer would therefore had to

install a meter that allowed the measurement of its self-consumed electricity<sup>243</sup>. The backup charge would then refer to two types of fixed costs: one, were the capacity mechanisms that paid for the necessary backup generation (usually thermal plants) that ensured security of supply, and the other category included all other system costs (such as the cost of financing renewables, the extra costs of the extra-peninsular system, the tariff deficit repayments, etc...). Moreover, shared self-consumption was also prohibited, which meant a crippling obstacle for insurmountable for its take-off in urban areas. However, this restriction was dropped after the Constitutional Court declared it, in May 2017, unconstitutional because it was invading the legal competences of the Autonomous Communities, who could decide over issue related to distribution networks and self-consumption was considered to belong to this last category. Most Autonomous Communities then asked the government to change the regulation in obeyance to the verdict otherwise they would have started legislating autonomously, at the risk of generating a heterogeneity of norm across the territory.

The CNE found<sup>244</sup> that the backup charge based on these concepts, was discriminatory in many ways. First, it noted that a similar backup charge would also have had to be applied, by logic, to other types of investments that resulted in less use of electricity, for example energy-efficient technologies, if the rationale was to be applied in a coherent way. The CNE wanted, in this way, to stress the incoherence of the norm with other policy objectives that promoted environmental sustainability and reduction of demand placed on the system. Second, self-consumers were made to contribute for the support of renewable energy when they were themselves investing in renewable energy and contributing to the achievement of RES-E EU goals without being remunerated for this. It explicitly reminded the Ministry of the fact that it was not considering the environmental and social benefits of self-consumption and that many EU directives were, although indirectly as there was no specific treatment of self-consumption yet, promoted the acknowledgment of these benefits. Third, the CNE considered that to make self-consumption pay for capacity mechanism was a contradiction,

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<sup>243</sup> The draft however spared the self-consumer to pay the part of the access tariff relative to transport and distribution that was computed in the volumetric consumption part of the bill, because, obviously, that electricity would have never circulated on the common grid. However, just as any other consumer, it would have been subject to pay the fixed part of the access tariff.

<sup>244</sup> CNE, “Informe 19/2013 De La Cne Sobre La Propuesta De Real Decreto Por El Que Se Establece La Regulación De Las Condiciones Administrativas, Técnicas Y Económicas De Las Modalidades De Suministro De Energía Eléctrica Con Autoconsumo Y De Producción Con Autoconsumo” 4<sup>th</sup> of September 2013

because self-consumers were adding capacity to the system. In sum, the CNE, which had received and considered a large number of comments from different organizations, was expressly advising the Ministry to change the regulation and suppress the backup charge. It expressly also stated that the promotion of an efficient modality to meet long-term environmental goals was being sacrificed in the name of the short-term need to solve the tariff deficit problem. The National Competition Commission also made it known that it considered the backup charge discriminatory and suggested its suppression (Romero 2013).

It is not possible to unequivocally state that these authoritative negative opinions were the reason why the Ministry paralysed the process of the adoption of the regulation, but it is reasonable to think that if the norm had been challenged in the courts, the weight of such opinions would have played in favour of the claimants. However, the revised version of the first draft, which slightly changed the rationale for of the back-up charge, found a different and much more favourable treatment by the new independent regulator who had resulted from the merging of the CNE and the CNC into the CNMC, in 2014. The basic structure of the new regulatory framework was the same, with two allowed modalities of self-consumptions, one without right to compensation<sup>245</sup> and the other one allowed to receive the market price for the electricity sold to the system, i.e., a form of net-billing. The second option was conditional on the self-consumer also becoming a producer, as already stated. The backup charge was slightly modified. One part of the charge was intended as the contribution to fixed system costs that the self-consumer of electricity would have to pay in its standard condition of ‘general’ consumer of electricity (therefore the self-consumer ‘backing’ the system). Another part of the charge was instead intended to pay for the specific services that the system was providing to make self-consumption possible (therefore the self-consumer paying the system for the ‘backing’ it received). However, an important caveat was added, as installation with a capacity of less than 10 kW were exempted from the charge, which can be intended as a conciliatory gesture towards residential self-consumers, whose facilities are usually lower than the stated capacity. This time, the CNMC emitted a favourable opinion<sup>246</sup>, arguing that it was in fact licit to make self-consumer participate in the remuneration of all the

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<sup>245</sup> Which also meant that the excess electricity fed into the grid was then sold in the market and the profit obtained by this transaction would be appropriated by the system and used to pay for its costs.

<sup>246</sup> CNMC, “Informe sobre el Proyecto de Real Decreto que regula el autoconsumo eléctrico” IPN/DE/011/15, 8<sup>th</sup> of July 2015

system costs, including capacity payments, because the capacity it was adding to the system would be intermittent and not firm, and as such it would not be contributing to make the system more reliable. All references to discriminatory treatment that had been at the centre of the previous appraisal had disappeared from the new evaluation.

An influential study demonstrated as the new regulation would have made self-consumption uneconomical under most scenarios (López Prol and Steininger 2017). For the commercial segment, the rate of return of self-consumption installations would have been lower than the opportunity cost of capital. For the residential sector, even considering the exemption for small installations, it would have been impossible to recover the costs of the investments at the current technology cost levels<sup>247</sup>, while for the industrial sector it could have been paradoxically convenient to install PV panels but disconnected from the electricity system (with the consequence waste of excess electricity) as the backup charge would have made the investment unprofitable<sup>248</sup>. On the other hand, it was calculated that the impact on the finances of the electricity system would have been positive in the case of the residential segment, negligible for the commercial segment and negative for the industrial segment.

The new regulation was received with a strong and vocal opposition by the affected interest groups, especially the PV sector, who considered it a measure that effectively prohibited self-consumption given its uneconomical impact. A flurry of reports was produced that compared the Spanish regulation to that of other countries<sup>249</sup>. The Ombudsman also entered the debate asking for the removal of the backup charge. The norm was however supported by the utility sector which had maintained a very critical posture in relation to self-consumption, and to the net-metering option more specifically. Utilities made references to two reports that had been published few weeks after the adoption of the regulation by the consulting firms PwC and the Boston Consulting Group that warned of the negative impacts of a rapid growth of self-consumption, which they considered a likely possibility if incentive mechanisms had been provided. PwC estimated the economic impact of self-consumption on the electricity system

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<sup>247</sup> Residential consumers, depending on their load profile, would have given away 67% of their self-produced electricity to the System, as it has already been noted, for free.

<sup>248</sup> UNEF calculated that it could take up to 31 years to recover investments for commercial and industrial installations, a timeframe longer than the same lifetime of the installations

<sup>249</sup> The most comprehensive comparative study of this kind was prepared by the Fundación Renovables in 2017("Autoconsumo. Lecciones aprendidas en la Unión Europea") in which it was emphasized how Spain stood out as an exception both for allowing self-consumption modalities without remuneration and for the back-up

in the order of 2-3 € millions for every 100 MW installed, but estimated a growth up to 16,900 MW in 10 years, something that the PV sector considered a blown exaggeration, since they considered that without backup charge a more realistic growth path would be of 4,000 MW in 10-12 years (Planelles 2015a). The Boston Consulting Group anticipated an increase of 6% in the electricity tariff. UNESA gave full support to the backup charge, using social security as a metaphor and stating that deciding to invest in an installation for private use should not be considered a justification to stop contributing to the collective system. It was moreover defended that self-consumption contribution towards the achievement of the 2020 goals was negligible. All things considered, the backup charge was considered by its supporters as a useful backstop mechanism to avoid the uncontrolled expansion of a technological option with uncertain, and potentially also very negative, consequences for the financial sustainability of the system, pretty much in line with the opinion held by the government. Iberdrola was also active in an international lobbying activity, as it had written a letter to the US regulatory authority (a market in which the company had started to have considerable staked) warning how self-consumption under a net-metering system was a serious threat to the traditional utility model, without there being an exit strategy of sort. The discourse was however sometimes more moderate, as it was recognized that distributed generation would have been, at a later time and under different conditions, an inevitable instrument to incorporate into the system (Ojea 2016a). The PP also tried to defend its position via its think-tank, FAES, which published an expert report in which it was stated how the self-consumption issue was more than a simple economic problem but also an ideological one and that for this reason it received so much support. The report framed the question of the backup charge as a free-riding problem, mirroring the argumentative line adopted by the government (Navarro and Lopez Cardenete 2015).

The self-consumption regulation was adopted in a particularly sensitive time of the political cycle, as elections were due in December that year. The issue was considered as salient enough for all parties to be wanted to be seen engaged with, given the media attention on the colourful expression ‘sun tax’ and also because of the fact that, probably for the first time, debate on renewable energy was centred on an issue people could relate directly to. It is not surprising then that, in what was a tense electoral campaign, most parties made an almost common front against the regulation. In a public opinion setback for the PP, a common

declaration was signed by 18 political parties, together with unions and sectoral, societal and environmental organizations in which the political forces took the commitment of abrogating the norm if they had been in government after the election. The back-up charge was depicted as ‘an unfair illiberal measure against the citizen’, together with the many administrative barriers contained in the norm (such as for example the obligation to be inscribed into a public register also for the modality of self-consumption without compensation or the request for preliminary and costly feasibility studies). Even the centrist and economically liberal party Ciudadanos took a particularly active stance on the issue, which was considered a good opportunity to question the PP liberal credentials, given the relevance of that dimension on the electoral base the two parties were disputing at that time. Ciudadanos also introduced its own legislative proposal in Parliament, which was rejected by the government arguing on its economic impact on the electricity sector. Ciudadanos did not hesitate to embrace the slogan that the PP was acting on behalf of the utilities oligopoly, at the same time when, as it has been seen in previous sections, the PP was boasting to be depriving the same utilities of their privileges through its reforms of the electricity sector (Planelles 2015b). The new balance of power in Parliament after the December 2015 elections was however different, as the PP government was now in a minority position, and the relations among parties became even more tense, to the point that the Ministry of Industry ‘challenged’ opposition to pass a new self-consumption law if they thought they had got the number and the sufficient cohesion to overrule current regulation. UP even started to consult the other political forces for achieving such outcome, but to no avail, as it was thought that the PP would have difficulted the development of the act, unless it had been very detailed, something that would have probably required a higher level of coordination and technical expertise than it would have been possible without the availability of bureaucratic resources (Ojea 2016b).

#### 7.8.4. The European Dimension of Conflict: Multi-level Politics

It has been already noted how EU competences in relation to the promotion of self-consumption were rather limited and implicit at that time, as EU regulation had never extended into the details of the composition of the energy mix, nor to the type of renewable electricity to be supported and the methods to be used. However, the turn that the Commission had intended to impress on its approach to energy policy in the run-up to the tabling of the Winter Package proposals, placing citizens at its core, was clearly in line with

the promotion of distributed generation as an important lever of the energy transition. This was reflected in the very first document where it outlined best practices for its promotion (EC 2015c). The document highlighted policy options that were in plain contradiction with the Spanish legislation, such as introducing simplified authorization procedures, avoiding discriminatory charges<sup>250</sup> and, as a rule, remunerating surplus electricity fed into the grid<sup>251</sup>. The Commission almost never failed in its assessment reports to show its disappointment with the treatment of self-consumers in the Spanish legislation but its pressure could be only limited to evaluating the effectiveness of current policies or, from a legal perspective, contesting the only actionable part of the existing renewable (and also internal market) directive, which consisted in the establishment of streamlined and simplified authorization procedures for small-scale renewable technologies<sup>252</sup>. At EU level however, when the Winter Package proposals<sup>253</sup> were presented, regulation of self-consumption soon became another sticking point between the three EU institutions, in a similar vein to the issue of RES goals<sup>254</sup>.

The position of the Spanish government was dictated by outright rejection of those proposals that plainly contradicted its domestic policies. Self-consumption proposals were scattered

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<sup>250</sup> The document acknowledged the need to consider the diversity of national access and charge tariff structures but envisaged the need to reform them and accommodate the transition to a renewable- and efficiency-based system, without harming the principle of tariff sufficiency. For example, it suggested that grid cost exemptions for self-consumers could be guaranteed up to a pre-announced cap, and then, if needed, be revised.

<sup>251</sup> The document privileged a pure-market approach, i.e., the valuation of electricity fed into the grid at market values, rather than feed-in-tariffs or net metering schemes. However, the latter were considered adequate for initial stages of self-consumption penetration.

<sup>252</sup> The Spanish lawyers' firm Holtrop received an answer from the Commission, saying that they had contacted the government to ask for explanations regarding the compatibility of the authorization procedures with EU legislation. Holtrop denounced how, whereas it could and should have been possible to simply notify public authorities about the existence of an installation, the current regulation required the authorization of both the retailer and the distributor, the submission of a costly preliminary feasibility study and a technical access contract. (Interview PEREZ)

<sup>253</sup> The impact assessment accompanying the proposal had confirmed the need to shift from subsidiarity to a more centralized EU policy. It was found that leaving it to the Member States to empower citizens and consumer to self-consumption had resulted in a fragmented and uncertain regulatory landscape, with different degrees of empowerment and even nine Member States without a dedicated regulatory framework. There seemed to be a double rationale then, the market-drive to ensure harmonization and legal certainty in what had started to be a relevant economic activity in the EU as well an individual right-driver, to ensure a minimum amount of equal rights to consumers across member states. The options provided to Member States, besides, besides the status-quo, were: the issuance of non-binding guidelines; the empowerment of citizens to self-consume and store renewable energy; and, together with the second option, a more specific approach for municipalities to allow via distance (i.e. connected) self-consumption in municipal building. Option two was considered to be the most appropriate in terms of the balance between efficiency and effectiveness (EC 2016e)

<sup>254</sup> The European Parliament had also carefully prepared its arguments for supporting self-consumption by commissioning a report on the shortcomings of solar policies across Member States, selected from the petitions received. Spain was mentioned for both the retroactive changes to support systems and the back-up charge (EP 2016)

between the IEM and RES proposed directives, the most general ones being placed in the former, to testify that the issue was not just an environmental or positive integration one, but one most fundamentally related to negative integration and fundamental freedoms. The IEM directive, stated that the right to generate, consume and store electricity should not be subject to '*disproportionately burdensome procedures and charges that are not cost-reflective*' specifying how these charges should be separately applied to electricity fed into and drawn from the grid (i.e. not to electricity produced and consumed within the consumers' premises). In its position, the government demanded clarifications about how the principle regarding charges should be specified and complained that the impact assessment analysis had been scarce in this respect. The promotion of self-consumption should be only promoted if it was beneficial for the whole system, irrespective of the individual benefits for the individual consumers, while consumers' cross-subsidization and uneconomical effects on the whole system should be avoided. Positive discrimination in favour of prosumers should therefore be ruled out. Self-consumption was considered onerous because it implied the deployment of further backup generation and balancing, which was particularly costly for a country with low interconnection levels. It was believed necessary that all prosumer installations be properly registered because the government needed to control the growth of capacity and its impact on security of supply. The argument obviously extended to the other new figure the Commission intended to promote, local energy communities. In the comments to the proposed new RES directive, the same arguments were made, although the justification was even more explicit: the Spanish electricity system was characterized by important fixed costs that had to be recovered through charges, there was an accumulated tariff deficit to write off, in good part due to the historical cost of renewable support schemes and the peninsular territories, that few other countries had, were costly to maintain: if prosumers had been allowed not to pay their share of charges, the burden would have fallen on consumers who did not have such possibility, leading to a paradoxical regressive cross-subsidization.

While the government was domestically pressed and in an increasingly uncomfortable position, at EU level it managed to have its thesis adopted by the Council, or, at least, shared by enough Member States as to be accommodated in the Council negotiating position. During 2017 and 2018, self-consumption provision in the IEM and RES negotiated directive seemed

to have partially parted their way<sup>255</sup>. The IEM directive referred to the concept of ‘active consumer’ and mostly treated with the contentious question of net-metering. Contrary to the position of the EP, the Commission also wanted to prohibit net-metering and the Council proposed a phase-out date for existing net-metering schemes, after which (according to the RES negotiated proposal) remuneration at market value should follow. The regulation and negotiation on the backup charge were instead translated to the RES directive, where the redaction of article 21 on renewable self-consumers was bitterly disputed among the three institutions. The Council position limited itself to the vague concept that self-consumers should not be subject to discriminatory *network* charges, opening the door for charging *other costs* of the electricity system, as it was the Spanish case which charged energy policy costs but not transport and distribution costs. This was an important difference and the Council position differed from the Commission original wording that only referred more generally to charges, which could have been interpreted as including network and all other type of charges. Moreover, no mention was made of self-produced-and-consumed electricity within the prosumer’s premises, which meant that domestic discretion to impose a backup charge was not, *a priori*, discarded. From this perspective the Spanish position (and current regulation) was therefore well accommodated and the Spanish Minister of Industry, given the pivotal role of the country in terms of blocking minority, had the keys to any compromise with the other institutions (Ojea 2017b) and he in fact stated to be very satisfied by the Council position. The EP had instead voted in favour of an express prohibition of applying charges (of *all* kind) to the self-produced-and-consumed electricity, which was depicted as a vote against the ‘sun tax’ in domestic media<sup>256</sup>. The same vote included the decision to increase of RES target to 35%. The great majority of the representative of the PP in the European Parliament (14 out of 17) were among the few that voted against the proposed EP position, breaking ranks with the position of the European Peoples Party, something unusual in the voting informal norms of the EP which is taken to represent discomfort with a collective position that runs contrary to a vital domestic interest.

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<sup>255</sup> Given the absence of literature on this recent topic, these observations are based on media reports and the analysis of the evolution of the Council Positions between 2017 and 2018.

<sup>256</sup> The EP amendment of the EP to the Commission proposition stated that “[renewables self-consumers, individually or collectively] are entitled to consume their self-generated renewable electricity, which remains within their premises, without liability for any charge, fee, or tax”

### 7.8.5. The New Government Turn: the Beginning of a Positive Feedback in Domestic Self- Consumption Policy?

The U-turn of the new government that has been described in section relative to renewable energy goals, also included the position on self-consumption. Although it has not been possible to gather information on the exact details of the proposals made by the new government on this issue, an indirect reconstruction can be attempted via the changes in the Council position and the outcome of the decisive trialogue with the EP. Up until the presence of the former Spanish government in the Council, the last Council position available (dated 3<sup>rd</sup> of May 2018) did not accept the provision from the EP which specifically prohibited backup charges<sup>257</sup>. Moreover, the wording related to the remuneration of surplus electricity fed into the grid also showed subtle but potentially relevant differences between the two institutions. The proposed amendment of the EP hinted at the establishment of net billing as it referred to remuneration based on *at least* market prices levels<sup>258</sup>, while the Council position was rather vague in its working and would have left much more leeway for domestic discretion.<sup>259</sup>

As a result of the last trialogue, which took place on the 13-14<sup>th</sup> of June, six days after the communication on the part of the Spanish government of its changed position, a compromise was reached. The final redaction of the contested article 21 of the new RES directive was an evident compromise among the two opposing views about the treatment of electricity self-generated electricity that remains within the prosumer's premises. As a rule, no charge or fee would thus be allowed to on self-consumed electricity that will be considered as a private good of the prosumer beyond the reach of public authority discretion. However, the general rule is qualified by a subsequent paragraph which establishes three conditions under which Member States might apply non-discriminatory and appropriate charges and fees to self-consumed electricity<sup>260</sup>. In relation to remuneration, the agreed text also showed an

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<sup>257</sup> Cfr. note 200

<sup>258</sup> The EP amendment stated that remuneration should be "*equivalent to at least the market price and may take into account the long-term value to the grid, the environment and society in line with the cost benefit analysis of distributed energy*"

<sup>259</sup> The Council General Approach stated that prosumers would be "*able to be remunerated appropriately for the self-generated renewable electricity they feed into the grid reflecting the market value of the electricity fed in and the relevant support schemes, if any in place*"

<sup>260</sup> Article 21, paragraph 3, contemplates the following three conditions: a) when the prosumers benefits from a support scheme, and the economic viability of the project is not made ineffective by the backup charge or fee b) from December 2026, if the overall share of self-consumption installations exceeds 8 % of the total installed electricity capacity of a Member State, and if it is demonstrated, by means of a cost-benefit analysis performed by the national regulatory authority of that Member State, which is conducted by way of an open, transparent

ambiguous wording, in the sense that market value is not a lower limit as intended by the EP and the inclusion of environmental and societal benefits are optional<sup>261</sup>.

Considering its wording, the final compromise would not place a significant legal constraint on the new government to adopt an ambitious self-consumption policy if regulation was crafted within the perimeter traced by the combination of the relevant article on active consumers contained in the IEM directive and the renewable self-consumer article contained in the RES directive (Schneidewindt 2019). In other words, any new self-consumption scheme would have to avoid backup charges and could remunerate surplus electricity based on net metering up to 2023 or, for an indefinite time, through net billing up to the market value plus any incentive reflecting environmental and/or social externalities.

Upon arrival, as it could have been expected, one of the first measures adopted by the government was the derogation of the current self-consumption regulation, which took place through an urgent decree that suppressed the disputed backup charge, and the subsequent introduction of a comprehensive regulation which transposed the new renewable directive. Moreover, the NECP provided generic information about how self-consumption would contribute to the achievement of the 2030 RES goals and how it would fit into the future envisaged structure of the electricity sector. The two regulations<sup>262</sup> introduced four crucial changes. First, it simplified the modalities of self-consumption and related them to the second substantial reform, the introduction of a net billing scheme. Therefore, the first category of self-consumer would include those opting for a net billing scheme, establishing that self-consumers can compensate the value of their surplus generation fed into the grid with the

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and participatory process, that self-consumption either results in a significant disproportionate burden on the long-term financial sustainability of the electric system, or creates an incentive exceeding what is objectively needed to achieve cost-effective deployment of renewable energy, and that such burden or incentive cannot be minimised by taking other reasonable action and c) if the self-generated renewable electricity is produced in installations with a total installed electrical capacity of more than 30 kW. According to media reports, Germany unsuccessfully attempted to revise this last provision after the triologue agreement, suggesting to considerably lower the threshold to 3 kW

<sup>261</sup> In italics, the ambiguous wording of article 21 of the RES directive in its adopted version: “to receive remuneration, including, where applicable, through support schemes, for the self-generated renewable electricity that they feed into the grid, which reflects the market value of that electricity and which may take into account its long-term value to the grid, the environment and society”.

<sup>262</sup> Royal Legislative Decree 15/2018, 5<sup>th</sup> of October 2018. The opposition parties decided to abstain rather than issuing a negative vote. The second and more comprehensive regulation was introduced by the Royal Decree 244/2019 of 6<sup>th</sup> of April 2019.

value of their consumption drawn from the grid. Both would be valued at market prices<sup>263</sup> and the netting could be deferred up to a month. Importantly, the self-consumer cannot profit from selling its electricity surpluses to the grid, as the monthly rebate is capped to the economic value of what it consumes from the grid. This provision, existing in many other countries with net metering or net billing schemes is intended to avoid the undesirable proliferation of distributed generation beyond what is justifiable from an efficiency and democratization perspective. From an efficiency perspective because the efficiency gains of distributed generation are lost if electricity is then sold in the market and transported across long distances. Therefore, the goal is to provide incentives to maximize the use of self-produced electricity as opposed to its transfer to the system. From a democratization perspective because the ‘producer’ condition would overshadow the ‘consumer’ condition and grassroot engagement would turn into a for-profit activity which is already disciplined under a different legal and economic framework. To prevent and disincentive such less-than-desirable behaviour, in order to qualify for the net billing scheme, the self-consumer must have a generation capacity lower than 100 kW, which means that this option is reserved for residential and small-scale commercial and industrial activities<sup>264</sup>. Self-consumers that opt for the second modality would instead sell their surplus electricity in the wholesale market and would be subject to the obligations of any other electricity generator. Any self-consumer can opt for this second modality, which is however mandatory for installation with a generation capacity higher than 100 kW. In both cases, the self-consumed electricity is not subject to any access fee or charge, meaning that the backup charge has been suppressed<sup>265</sup>. Administrative authorization procedures have also been simplified, the Ministry keeping a register which is free and only used for statistical purposes. Finally, and importantly, the new regulation lifts the ban on collective self-consumption, therefore paving the way for the flourishing of self-consumption in urban areas.

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<sup>263</sup> Depending on the type of retail option chosen by the self-consumer. Therefore, if the retailer is contracted through the free market, the market value of the excess and deficit electricity is freely established by both parties. If the self-consumer is instead served by the PVPC, the market value is established by the hourly prices as set by the wholesale market. As it will be explained later, free-market retailers have started to compete to attract self-consumers as the new regulation has created a new market-niche.

<sup>264</sup> The democratization perspective is stressed in the NECP (p. 9), where self-consumption is depicted as an instrument to foster energy communities, the proactive role of citizens in achieving decarbonization and the diversification of actors in the electricity system

<sup>265</sup> Moreover, for self-consumers under the net billing scheme, the excess electricity fed into the grid would also be exempt from the access fees that are imposed on generators.

It is somehow surprising to notice how the CNMC has changed again its opinion on the impact of self-consumption regulation, as it might have been expected that, given its previous justification of the backup charge, its appraisal of the proposed regulation would have been a warning to the government of the negative consequences on the financial and operational sustainability of the system. The CNMC has been instead supportive of the new regulatory framework<sup>266</sup>, which has judged to have fully and correctly transposed the new RES and IEM directive in relation to self-consumption and has gone as far as amending the economic impact assessment made by the Ministry by decreasing the amount of the estimated losses accruing to the electricity system. In fact, while it has been found that there would be a negligible expected loss of revenue of about 5 €million every 100 MW of self-consumption installed (obviously because of the access fees and charges avoided by self-consumers), the increase in public finances accruing from the tax revenue from the expected investments was estimated at 28 €millions. However, the CNMC also strongly recommended the close follow-up of the growth of the quantity installed as such an open-ended commitment to what in the end is a favourable regulatory framework without a pre-defined quantity cap could in principle result in regulatory failures resembling the PV boom of 2007-2008, whose consequences have then haunted the electricity sector for many years afterwards.

The risk is not only theoretical, as recent analysis of the impact of self-consumption regulation on the profitability of investments shows that, under average conditions, (López Prol and Steininger 2020), positive returns should be achieved in the three mentioned sectors and that the growth of a dedicated business sector is also likely. There is empirical evidence that the new regulatory framework has created a favourable business environment and that the bottled-up self-consumption potential has been released after the removal of the backup charge. According to data from UNEF<sup>267</sup>, the growth of PV installations for self-consumption in the last three years shows the role played by previous administrative and economic barriers in stifling the take-off of the sector. While under the former regulation self-consumption PV

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<sup>266</sup> CNMC, “Acuerdo por el que se Emite Informe Sobre la Propuesta de Real Decreto por el que se Regulan las Condiciones Administrativas, Técnicas y Económicas del Autoconsumo”, IPN/CNMC/005/19, 21<sup>st</sup> of February 2019

<sup>267</sup> UNEF, “El Sector Fotovoltaico Hacia Una Nueva Era Informe Anual”, 2020

installation was almost symbolic, in 2018 and 2019 it has doubled each year (236 and 459 MW installed respectively) and in 2020, despite the COVID-19 crisis, it has also managed to grow and reach 600 MW. UNEF reclaims that the Self-Consumption Strategy announced by the NECP would clearly state what is the contribution expected from self-consumption in view of the 2030 RES goal achievement, which it esteems at 6-10 GW in total (i.e., a growth of 600-1,000 MW per year). UNEF and the sector in general prefer that the growth process be ordered and regularly distributed across time, as it is considered healthier from the business perspective to avoid the stop-and-go policies (and the consequent boom and bust in sectoral economic activity) that have characterized the installation of RES-E in the past. From the sector it is seen as necessary that the binomial tariff structure also be changed, and the relative weight of the fixed part of the tariff lowered compared to the variable part. The convenience of self-consumption depends on the savings that the self-consumer can make on each kW of electricity not bought from the grid. Savings are in turn equal to the difference between the retail price of electricity from the grid (which is the sum of the cost of generation plus the variable part of network fees and charges) and the unitary costs of the self-produced-and consumed electricity. While the cost of technology continues to decrease, it is also important, from the sector perspective, that retail prices stay at a high level and that is the case if the variable part of the tariff is increased and the expense of the fixed part. As it has been already said, assigning fixed costs to the fixed or the variable part of the binomial tariff is a decision where economic efficiency but also politics intervene. During the years of the financial crisis, the fixed part of the tariff has increased because, given the collapse in electricity demand, it would have been impossible to recover the fixed costs of the system via the variable tariff. In other words, consumers had been required to maintain a costly and largely unused infrastructure, considered as a collective 'club' good. Accordingly, the fixed part of an average consumer electricity bill is about 40% of the total (up from 23% in 2013), when the EU average is 22%. According to UNEF, the progressive Europeanization of the distinction between access tariff and charges and the distribution of competences in their respective setting process between the independent regulator and the government is an opportunity to question the actual tariff structure and make it converge again with EU standards. All of this should then turn into more efficient consumption decision as well as more and more efficient distributed generation investment decisions and use of self-consumed electricity.

Finally, given the fact that self-consumption is evidently becoming a permanent feature of the electricity system and one with potentially disruptive features for traditional business model, it is not surprising that utilities have moved from their almost frontal opposition to joining the trend and avoiding reacting when it might be too late to do so. For example, many oil companies have entered the sector, given the now low technological and know-how barriers to operate what is, in the end, a very simple technology. All major utilities operating in Spain now offer their own self-consumption plan, including either the option of selling and financing an installation or simply being the retailer of reference of the self-consumer that still needs to buy from the centralized electricity system. In the end, prosumers are also consumers, and if utilities do not offer them a competitive contract which includes the purchase and/or net billing of their surplus electricity, they risk losing a customer and suffer a net loss<sup>268</sup>. While it is still early to say, it seems that self-consumption shows the characteristics of a positive feedback and that former opposers are now ‘betting on the right horse’ since they have failed to hobble it. At the same time, it is also possible that an uncontrolled expansion of distributed generation can lead to negative layering effects on other parts of the electricity sector that are still of importance (i.e. distribution and transport network) and that without a planned growth of the sector, such layering effects could turn into negative financial and technical feedbacks.

### 7.9. Summary

In this chapter, following a chronological order, a comprehensive account of the evolution of the electricity sector has been provided, covering the period from 2011 until 2021. The first part of this decade has been characterized by the almost exclusive efforts on the part of the PP government to deal with the tariff deficit issue. As stated by one of the top officials of the Ministry of Industry, energy policy meant solving the tariff deficit. Because of its solid majority in Parliament, the government could carry out its action without the need to compromise either with other political forces or with sectoral interests. The tariff deficit had reached very alarming levels and its solution was framed within the harsh austerity policy measures that were adopted elsewhere in the economy and social welfare policy. The government felt legitimated in using a heavy-handed approach with sectoral interests because of two reasons.

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<sup>268</sup> This is in fact what has happened in other countries where self-consumption has been a reality since before it did in Spain (Stone 2016)

First, because it could claim it had inherited a set of cumulative problems from the previous government, which allowed it to deflect the blame. Second because, within the state of quasi-emergency that characterized political action and the relation between government and public opinion during this time, it was also possible to claim credit for avoiding the collapse of the system and attribute responsibility on actors that were depicted as enjoying privileges that were could not afforded any longer. The ‘dismantling’ of electricity sector policies that had caused the costs of the system to grow out of control has therefore been the driver of policy-making especially during the first two years of government mandate. The cutbacks interested all actors, including utilities that for the fist time found themselves with less influence on sectoral policies that in the past. The renewable sector was however the privileged target of the cutbacks made, also because the cumulative amount of the cost of subsidies had become a visible driver of the increase in system costs. Policy dismantling was then followed by an attempt at reorganizing electricity regulation on a new basis, and the new LSE, adopted in 2013, was established on the principle of financial sustainability. The centre of gravity of the new regulation was thus the principle that the sectoral financial outcomes should always been balanced as structural tariff deficits would be now banned. In operational terms, because revenues had to match costs, and raising tariffs was always politically unpopular, the focus was thus shifted on permanent cost-containment measures, framed as efficiency measures.

The second part of the chapter has thus narrowed the focus on the development of the norms of the new LSE and their enmeshment with the EU decision-making process which had begun in 2014. The case of renewable goals and instruments, tariff setting, and self-consumer policies have been thus analysed in depth, focussing on the two-way circular Europeanization process whereby Europeanization based on the existing measures, extending up to the 2020 horizon, has overlapped with the negotiation of a new framework that it was clear would have led to profound changes in the immediate future. For each of the cases, the analysis has stretched from domestic policy development during the negotiation stage, the position of the government and other domestic actors during in relation to the same negotiations when relevant, up to Europeanization following the adoption of the new legislative package in 2018. In the case of renewable energy, the empirical analysis has tried to emphasize the difference between the governmental approach in terms of finding instruments that better adapted to

the technological and price evolution of renewable energy and its approach to setting goals for 2030. Whereas the former was in line with the prevailing orientations at EU level, with the shift to market-based mechanism in the form of auctions and market premium, the latter placed the government firmly on the side of those Member States demanding flexibility and consideration of its domestic peculiarities. Two intertwined elements have been central in the quest of the government to defend its resistance to renewable ambition. First and foremost, the lack of adequate interconnection, which has become a negotiating hard-bargain weapon, as it was felt that there was enough and evident ground to claim that requesting ambition to a country that had not received its fair treatment on a related policy goal, would have been a violation of a basic principle of Pareto-efficiency of EU bargains. Therefore, any engagement in more or less ambitious renewable policies would be conditional on the materialization of a prerequisite, sufficient interconnections levels, which was moreover proposed as a new binding target, given the poor EU record in promoting interstate bilateral cooperation. Second, the government started to feel even more aggrieved by the constraints on its real, as opposed to legal, capacity to determine the generation mix because of the effects of past EU policies on the incentives to private actors to abide by the desired government mix. The case of coal was particularly relevant, with the government trying to resist what had become an efficient, from the utilities' perspective, decision to quickly exit a technology that did not offer long-term benefits any longer. The change in government in 2018 would represent a U-turn on the dispute, domestic and European, related to the future generation mix with a clear bet on ambitious renewable energy deployment as the backbone of the Spanish mix. Interconnections were deemed necessary, but its role within the 2030 horizon was downplayed while domestic solutions for the integration of renewables would be prioritized. At the same time, the market-based approach to renewable support was maintained, reflecting the domestic consensus that it could now be compatible with the deployment of large quantities of renewable capacity within an evolving market design and an equally rapid evolving contractual environment among private actors.

In the case of tariff settings, the tension between domestic versus EU preferences and market versus public intervention approaches was instead less pronounced. The way regulated tariffs were calculated has considerably evolved over the period considered and a convergence of

preferences could be detected. The tariff deficit had considerably lowered the traditional resistance to decrease the intervening role of the state as a mediator between the wholesale market and consumers and the idea that the real cost of electricity production should be paid by consumers made its way into the Ministry of Industry. Following the failure of the CESUR auctions, there were few options left than shortening the intermediation gap between market and consumers. However, it is striking to notice as the government still resisted the calls from utilities to let them be the exclusive commercial mediator of this relation via the abolition of regulated tariffs and the establishment of the PVPC as an alternative. The remarkable fact here is that the PVPC and its dynamic pricing system represents the most radical form of market-consumer relation. The new pricing system was perfectly aligned with the orientations of the Commission about the opportunity of exposing consumers to market price signals in view of the changes in the availability of electricity in the energy transition to a system characterized by the high penetration of renewable energy. It is debatable whether this was the original intention of the government when adopting the PVPC, but the instrument ‘stuck’ with the following government too. Although the PVPC had initially raised perplexity among utilities, which considered it yet another excuse for the delay of full retail liberalization and consumer organizations, that feared the loss of the capacity of the government to restrain market abuse, it has found acceptance as a valid substitute of the previous system. For utilities, PVPC prices are more contestable in the market for they reflect the prices they also must face in the wholesale market. For consumer organizations, the reality of the tariff deficit (which consumers must repay, sooner or later) has also constrained their capacity to claim the establishment of below-cost prices and it would then be difficult to switch the previous discretionary system. At the same time, the access tariff and the retail margin have shown a different dynamic. The PP government had tried to resist the transfer of competences to the independent regulator in relation to the access tariff methodology, but the combined interest of the latter and the European Commission in forcing the government to comply with EU rules has in the end prevailed. The only pending issue is the establishment of a transparent methodology for setting the retail margin, which could be, in the future, the Achille’s heel of regulated tariff in its present form.

The case of self-consumption, finally, is the one where the most politicised conflict has been detected. First, it has been shown as Spain was a singular late comer in the promotion of

distributed generation, except for the cogeneration, generally pushed by farming and livestock interests rather than grass-root organizations. Renewable energy support had been traditionally the realm of utility-scale promoters (even if not always in the hands of utilities). Second, if it is easy to understand why utilities were opposed to the introduction of a favourable support system for self-consumption, it is less so to explain why the government embarked in a regulation that, in hindsight, would only cause it domestic and, to a certain extent, EU isolation in defending an unpopular position. Because this explanation will be provided in the discussion chapter, suffice it to say here that the empirical chapter has shown how, the government adduced reasons that were intimately linked to the ‘ethical’, so to say, question that all consumers should have paid the high fixed costs of the system and tried to depict self-consumers as ‘dodgers’ of their fair of costs. On the contrary, opposition drew strength from the comparative grievance of domestic self-consumers in relation to policies prevailing in other Member States and abroad. It is then unsurprising that the new government, that would have probably adopted the same pro-prosumer measures acting on its policy preferences, also saw a further political opportunity generated by the acrimonious debate in being perceived as joining the mainstream EU orientation towards the empowerment of citizens and the democratization of the energy transition. Utilities on the other hands, once the battle on the backup charge was lost, as shown in the chapter, were left with little choice than bandwagoning and enter the new business sector.

## 8. Discussion and Conclusions

In this chapter, the results of the dissertation will be presented and the validity of the hypotheses in answering the research questions will be assessed based on the empirical analysis presented in chapters 6 to 7. For each of the two cases of absence of domestic conflict in relation to the CEAE, a brief resume of the empirical evidence is offered, and it is put in relation to the explanatory power of different mechanisms of Europeanization, which were presented as rival explanations, leading either to a positive effect or a positive feedback. They were however expected to be equifinal in relation to their impact on domestic preference formation, i.e., the establishment of a stable domestic policy equilibrium preventing conflict in domestic preference formation in relation to EU policy revalidation. For the two cases in which domestic conflict has instead occurred, explanations will be offered of why a stable policy equilibrium has not been reached. Moreover, a justification of the type and drivers of conflict in domestic preference formation that has fuelled EU contestation will also be provided.

### 8.1. Renewable Energy Support Mechanism: a Long and Troubled Path towards an Innovative Policy Equilibrium

There is broad evidence that a stable policy equilibrium has been in the making during the negotiation of the CEAE, although not at its beginning, and that it was the end point of a long process of change in support mechanisms. The evolution of renewable support mechanism can be divided into four time periods, each corresponding to a different support mechanisms type, a different actor constellation and institutional mechanisms of reproduction. It has been noted how, initially, renewable energy policy found a favourable niche due to the perception of the country vulnerability to high oil prices which, in turn, was the outcome of suboptimal tax policies in the 1970s that, unlike other western countries, had not penalized the use of oil-derivates. The country found itself exposed to a high presence of oil-fuels in the electricity sector and diversification was promoted as a domestic priority. In the lacklustre innovation landscape of Spain, the promotion of renewable energy stood out as an exception. Until the adoption of a fully-fledged support mechanisms, these formative years laid down the foundations of acceptance and support on the part of some utilities and of administrative capacities for policy implementation. At the level of public administration, such institutional capacities were developed at the central government level, with IDAE providing an

institutional ‘anchor’ blending technical expertise and responsibilities for the proposal and management of support mechanisms, and at the local level, with many regional administrations that actively participated in the successful finalization of renewable energy projects in their territory, mostly moved by the economic and employment benefits brought by the industry. The first and the second support mechanism adopted (1998 and 2004) were therefore already enjoying the support of a favourable actor constellation and renewable energy was an add-on to a system in which there seemed to be little concern over the amount of generation installed. All the contrary, during this period, characterized by a strong growth of electricity demand, the problem seemed rather the need to incentivise additional capacity into the electricity system. In that sense, rational choice seems to offer a more valid explanation for this initial period of renewable energy policy. From an institutional perspective, the potential veto player positions were not activated, and most actors were supportive or simply uninterested. In that sense, it is necessary to emphasize that during this time, renewable energy policy meant to an almost exclusively extent support for utility-scale windfarms, an important caveat to be kept in mind. Wind energy was in fact incorporated into the generation mix of Iberdrola, who started since the beginning to refocus its activities towards less emitting technologies, including natural gas, as an attempt to differentiate and compete with Endesa. Endesa had in fact inherited most of the coal fired power plants built in the previous decades and was feeling comfortable with its market position, also because it was assured by government support for domestic coal, most of which was used in its power plant. The strong interest of Iberdrola in wind energy policy supported by FiTs can be considered crucial. It provided a firm renewable footing into one of the most important members of UNESA and, in that sense, a sort of opposite veto power as Iberdrola could shield, if needed, the niche market from a possible policy backlash. No backlash, in any case, happened at least until the second period. It is also important to notice how the cumulative costs on an annual basis were rather contained. According to CNMC figures, the annual cost of renewable support until 2006 ascended to 3 €billions per year and represented a small fraction of the total value of generation produced. Support for renewables moreover increased after the adoption of the first and second NAPs, as it became clear that an electricity generation mix with a high presence of coal would be incompatible with the constraining GHG emission reduction targets assigned to Spain, and that an excessive exposition to coal would be costly in the long run if allowances had to be bought in the international carbon market,

whose price levels were still uncertain. It made therefore economic sense to continue investing into a domestic industry which was moreover internationally competitive rather than squandering money on international carbon markets. In sum, although it came close to the theoretical model of layering, because renewable energy was conceived as a ‘special regime’ to be layered on top of the ordinary regime of the pool (thus creating possible frictions with the marginalist pricing model), it does not obey to that logic since neither there were outstanding veto players that forced such institutional change strategy, nor it was difficult, at that time, to bend market rules to accommodate small, but increasing, RES-E quantities. Nor, during this period, path-dependence can be detected, as the development of renewable electricity seemed to proceed according to the plan, i.e., the gradual expansion without a clear ultimate goal in mind, as long-term decarbonization plans seemed a distant reality yet.

The second period is however characterized by the appearance of what can be defined a critical juncture which in turn caused a quick negative feedback. Ample evidence has been provided of the dramatic effects of the regulatory change introduced by the decree 661/2007, which tried to rebalance the distribution of support between wind and PV in favour of the latter. The PV sector had formed an advocacy coalition that found its way into the government in the context of the favourable approach of the PSOE government toward a more robust and comprehensive clean energy policy (which had been elevated at the level of government strategy together with and as part of climate policy). However, the combination of information asymmetries about the costs of technology and the fact that the government decided not to backtrack on what had become a manifest regulatory mistake explains the end of the ‘harmonious’ actor constellation of the previous period and the beginning of a state of turmoil that would last for at least a decade. According to the information gathered, there is evidence that the government did not intend to incur into such elevated costs for so little quantity of PV generation installed. What is surprising is to have found external veto players that prevented the government to stop the inflation of a dangerous bubble whose unintended consequences could already be anticipated. The government then decided to sit on twelve months during which it knew it was subsidising both genuine investors and foreign and domestic speculators at prices that bore little relation with the cost of the technology installed. To begin with, the episode can be considered a critical juncture, from a theoretical

perspective, as it was an unforeseeable event. Second, it produced long lasting unintended and cumulative consequences. However, instead of setting in motion a positive feedback, its effect was the contrary, a negative one (although the positive feedback for FiTs as an instrument would last until 2011, with very little quantities installed). Since then, the gap between the estimated and the effectively disbursed cost of support became considerable and alarming in the context of both the sectoral tariff deficit and the financial situation of the country. According to CNMC data, in 2008, when the effects of the flow of expensive PV projects started to be felt, cost deviation was as high as 78% (from 2.3 to 4€ billions) and 62% in 2009 (from 4 to 6.5 € billions). Such elevated costs became flat afterwards, even if the cutbacks that would be progressively made would slightly reduce the annual payment amount. A theoretical relevant proposition from historical institutionalism to be applied during this period is the use of timing as an explanatory variable. It is therefore reasonable to argue that if the unintended consequences of the regulatory failure had occurred at another time, the approach to amend the regulatory blunder could have been different. But the fact that it was occurring at the same time in which the tariff deficit met with the financial crisis it is likely to have narrowed the alternative available to deal with the problem. As it has been explained in the empirical chapters, different actors offered their own explanation of the causes of the tariff deficit. Renewable producers, particularly from the PV sector, tried to deflect responsibility pointing the fact that other drivers of the deficit, such as the windfall profits accruing to inframarginal technologies that had gone unnoticed for a long time, while the attention was almost exclusively directed on a ‘focusing event’ affecting renewables. They also acknowledged that speculators had profited of the crack in the support mechanism opened by the regulatory blunder, but this was not a good reason to stigmatize the entire industry and to act in ways that amounted to a harsh punishment for well-intentioned renewable promoters. However, the context was not favourable for this type of narrative. The actor constellation was in fact now dominated by the government who was interested in finding some short-time remedy, as much as more long-term measures to make renewable support less prone to unexpected cost deviations. Utilities also increased their pressure to change support mechanisms for renewables, as they were now struggling with securing revenues for their conventional activities, including a bolted thermal generation mix that found little place in the wholesale market and the threat of draconian cuts to their regulated activities, such as distribution. There has therefore been little space for a consensual

approach to solve the problem of support mechanisms without generating a clash between the renewable sector, with the lead of its PV branch, and other actors: retroactive changes were introduced. This did not mean however that FiTs were considered the cause of the problem. The government learnt during this period and tried to amend rather than ditch FiTs. In fact, the 2008 reform of PV support mechanisms maintained FiTs, although it introduced innovations, such the use of a pre-entitlement register and, above all, caps combined with a mechanism for the close adaptation of support levels to the technological learning curve. The fact that if the cap was filled, the government would have automatically reduced tariffs for the following call introduced a degree of indirect competition that, in hindsight, can be considered a first step towards the introduction of competitive allocation mechanism.

During the third period, the fitting theoretical characterization is one of continued negative feedback, a prolonged critical juncture, and the beginning of a process of conversion. The negative feedback continued because, despite the cutbacks, the amount of support to be disbursed was still notable and, in relative terms even more onerous as demand continued to slump, at least until 2014: therefore, its impact on the tariff paid by consumers was relatively higher in comparison to other cost drivers. This situation was made even worse by the change in government, in 2011, since it had an incentive to disown the previous support mechanism as a part of its strategy of blame deflection (promoting the idea that they were not the ones that committed the dramatic mistake) and credit claiming (promoting the idea that they would be the ones to make the necessary harsh but effective adjustments). Policy termination can therefore be considered as part of the critical juncture process, but it was necessarily a temporary limited option as the government did not question the necessity to comply with the 2020 goals. It was simply buying time, helped by the two factors, i.e., past RES installation achievements, and the conjunctural slump in electricity demand that, statistically, that, combined, gave some relief in terms of the urge to think of a different support mechanism. The suppression of support mechanisms for three full years, between 2012 and 2014 (which would become five, if it is considered that the first auction was finally held in 2016) could clearly not turn into a permanent policy especially because the end of the crisis, and with it the need to comply in a different scenario of economic growth, was already in sight.

At this point, the process of conversion started, and different factors converged to give new support mechanisms their final shape. First, the European Commission had stayed relatively

at the margin during all this time. It was known that it did not particularly like FiTs and that, as a policy entrepreneur, it would have jumped on any occasion to make Member States shift towards a more market-friendly support mechanism. The negative feedbacks of FiTs support costs were not just a Spanish problem, as other Member States had taken action to curb some of their benefits, although probably not in the same aggressive and draconian way as Spain. It must be noted that the Commission had already published in 2013 its guidance on support mechanism and suggested the combined use of competitive allocation and market-based support, i.e., a shift from FiTs to auctions and market premium. Although there is no prove that this was a cause in the decision adopted by the government, the Commission proposal, which must have been in the air for quite some time (as it was published around the same time as the reform of the LSE) was an element of the ‘policy soup’. The second element is thus simply the fit between the necessity for the government to find a new support mechanism that would reduce costs and the proposal coming from the Commission. It is difficult to think of a better way to solve the government problem at that time, as reintroducing FiTs, even with a cap, would be, from a cost-reduction perspective, still a second best compared to the sponsored option of auctions and market premium. The second factor proper to the theoretical approach of conversion, resides in the opportunity for bigger, more resourced actors to transform RES support mechanism into a system that was less accessible to smaller actors. FiTs are an open system, the level of support offered being the same for everyone, and anyone with a project can access the call if it manages to table a proposal at the right time. Auctions create uncertainty in relation to future support prices and obviously add an element of price competition that could deter smaller actors with higher costs, although is clear that small but nimby actors could also match the costs of bigger players. But auctions raise the bar for accessing support and lower profit margins. Renewables, it was clear, had come to stay and the future of the generation mix would be mostly renewable, although there would be some space for new CCGTs as a backup. In a marginalist market, the missing money effect would become ever more important with the growth of renewables. In that sense, auctions and support guaranteed by the state can be considered a valuable alternative, for big players, to invest in an ever more uncertain wholesale market. Even if they lower the price, auctions allow to secure a floor price guaranteed by the state, and at the same time to screen out from the market potential competitors, especially independent producers of small dimensions. It is therefore reasonable to think that support from utilities to the choice of

auctions and market premium can be interpreted as a way of converting an instrument originally reserved to the promotion of a niche technology into one reserved for a mature technology. This was all the more necessary since the surge of renewable energy was de facto creating a new market arrangement where market prices, especially spot market prices, are not a useful investment signal and a secure source or remuneration (while they would continue to be a signal for efficient consumption).

During the fourth period then the new support mechanism started to finally enjoy its positive effect and positive feedback. It is argued that a positive feedback has in fact developed on top of an initial positive effect. According to the explanation provided above, the original introduction of auctions and market premium as opposed to open FiTs can be traced to the converging interests of the government, the Commission and bigger market players. Since the publication of state aid guidelines, this was also clearly the only possible method, as the EU had finally exercised its unilateral autonomous powers and anchored support mechanism into fundamental treaty rules. However, as it has been explained in the empirical chapter, an increasing number of actors has started to join auctions and, paradoxically, it is now utilities that criticise them, although they also continue to participate. It might be true that small market actors might find it difficult to access auctions, but other players from outside the sector have joined too, using their financial muscles and taking advantage of the lowering of technological barriers. From the perspective of any government this is good news, because it increases the resource base needed to attract investments into the energy transition. Utilities or any other player will now be faced with a choice: either to participate in auctions or to 'go merchant', i.e., to invest in renewables via other types of long-term contracts than state-backed auctions, such as PPA. The PSOE, which had long resisted in previous rounds of policy-making at the EU level the shift of competences over support mechanisms at EU level, once back in power in 2018, has not contested the shift and has found itself comfortable with the use of auctions, even if changing the structure compared to the one engineered by the PP government, better tailored of its idea of the role played by renewables in the electricity market and, surprisingly, with a method that reduces even further the remuneration of renewable but offers a better deal to consumer (using as pay-as-bid rather than a uniform price auction the cost of support is generally reduced). Now that auctions give access to well-resourced players, one might think, governments have an incentive to squeeze their profit

margins. It can thus be concluded that auctions and market premium are a self-reinforcing mechanism.

In sum, Hypothesis 1 can be considered valid to answer RQ 3, because support for the change in renewable support mechanism is the outcome of a domestic positive feedback process. The caveat, in relation to the hypothesis, is that EU pressure is less relevant than domestic explanations at the onset of the feedback process, as Spain has suffered from a critical juncture and a negative feedback that made change necessary, even without EU pressure.

## 8.2. Renewable Goals, Interconnections, Coal and Security of Supply: Overlapping Policy Feedbacks

The case of the renewal of renewable goals has shown instead a high degree of domestic conflict and EU contestation. The paradox is that the absence of a positive policy feedback was not generated from within renewable policy, but from the outside. It is certainly true that problems from within have existed, as it was the case of the cumulative costs generated by the fulfilment of the 2020 goals, but they did not extend to the following period. The costs of renewable electricity have in fact considerably reduced and they are projected to be competitive with that of conventional electricity and even lower for the 2020-2030 period. Moreover, the new support mechanisms have also ensured the possibility of introducing new renewable generation at the lowest possible cost, at least for utility-scale and mature technology.

The lack of a complete positive policy feedback in relation to renewable goal setting can be then traced to the sum of policy feedbacks effects emanating from Europeanization dynamics in related areas of electricity, climate, and environmental policy. The explanatory variable thus resides in the net effects generated by the overlap of individual but interrelated policy feedbacks. Different actors have thus perceived different feedbacks, positive and/or negative and acted based on their perceptions, which were mostly of a functional nature. The empirical chapter 7 has provided abundant proof of the fact that the government in charge of negotiations during 2014 and 2018 used the lack of sufficient interconnection as the main bargaining argument to oppose EU renewable ambition. From the part of government, this position was defended as a functional constraint, and arguments were provided why Spain was set to suffer higher costs and security of supply problems if it were to accept an ambitious

target without the corresponding (and long due) interconnection levels. To place EU contestation in a broader historical policy context, the empirical chapters have reconstructed the effects of EU policies aimed at developing Trans-European electricity networks of interest for Spain, particularly in the case of the relevant interconnection with France which is, from a technical perspective, key to allow the Iberian Peninsula to be fully integrated in the IEM. It has been demonstrated how the EU has not been able to develop sufficient capacities to force Member States to actively cooperate in case of asymmetric interests and therefore upgrade the common interest. Spain has long wished to increase its interconnections and has constantly tried to place the issue on the highest priority scale, but its success has been only partial. While the goal continued to receive high governmental backing via what in the end were aspirational goals, it was not supported by neither effective policy instruments nor adequate supranational powers. It has also been explained how the problem is not just economic and it is not just inter-state or intergovernmental, as interconnections often fall prey of high levels of domestic local and environmental opposition that seem to negatively affect the leverage that one government can exercise on the other. TSOs have also an important role and their independence might have negatively affected the coordinating capacity of governments. Over time, the saliency of interconnections has grown, in proportion to the increase in the quantity of intermittent renewable electricity incorporated into the system. In that sense, there has never been a catch-up between the little incremental interconnection built and the magnitude of the real or perceived problem caused by increasing renewable supply. At the same time, the problem is also economic because Spain, despite the market coupling that had taken place in 2014, almost never enjoys the same wholesale market prices prevailing in central Europe due to the presence of congestion at the border most of the hours of the day. It can be concluded that a positive effect or a positive feedback from interconnections has never materialized and that, according to some domestic actors, the Europeanization of Trans-European Networks for electricity falls behinds its energy transition aspirations, at least for the Iberian Peninsula.

From this perspective then it might have been expected that the government position, which made strict conditionality a functional pre-requisite to agree to any other policy goal implying a loss of domestic discretion over the electricity mix, would have been perceived as a matter of shared domestic interest and enjoyed broad domestic support. Consequently, no variation

should have been observed in the negotiating positions of different governments. This has not been the case and the empirical findings support the hypothesis that domestic conflict over the levels of renewable ambition has been to a certain extent at least as intense as the EU contestation exercised by the PP government during negotiations. At one extreme, it has also been noted how domestic actors have taken decisions that run contrary to what the Minister was portraying and defending at EU level as a vital domestic interest. All actors involved seemed to recognize the importance of interconnections for the future massive deployment of renewables for enhancing security of supply and achieving it at a lower cost, but few actors have shared the opinion that it was a functional pre-requisite for agreeing to higher renewable ambition for 2030. Actors supporting higher renewable goals have argued that there is enough technical capacity margin to manage an ambitious target while the future evolution of interconnections would more clearly defined. But this is only a partial explanation. Many actors have in fact also acted on policy feedbacks coming from related areas and placed less importance on interconnections.

The role of interconnections in the 2030 framework became, from the perspective of EU contestation, in fact intimately intertwined with security of supply and the future of firm domestic generation capacity, i.e., coal and nuclear power plants. the argument goes that if the government refused to install more renewables, it should also count on sufficient generation capacity for the foreseeable future, a certainty that, it found out, was not there. It is certain that utilities are not institutionally responsible for ensuring security of supply and therefore take their decisions based on a logic of private profit, but it is doubtful that they would not cooperate with government if they had perceived a future role for coal into the generation mix envisaged at EU level. In the case of coal phase-out, it seems clear that no utility has considered coal as crucial for security of supply as the Minister did and that coal had become an economic liability compared to cleaner forms of electricity generation, chiefly renewables. It could be, as the Minister seemed to hint, that utilities had colluded to phase-out coal and make natural gas the default back-up for renewables because of its higher price, but the existence of such collusion would have required a level of coordination among utilities that it did not exist. Over time, the strategies of the different utilities, particularly Endesa and Iberdrola, have drifted apart and they competed more than coordinated. If there was an opportunity to make a profit from abiding to government request, at least for one of the

companies, it seems likely that this would have happened. The case of nuclear power provides support to this interpretation, as utilities have been more open to extend the lifetime of their nuclear plants than they were in the case of coal. But nuclear power has little relation with Europeanization as it is the only form of electricity production that does not come under the purview of any specific EU regulation, except for security standards.

At least in the case of coal, a paradoxical Europeanization effect can in fact be detected. Coal was simply priced out of the market by several unintended consequences, at least from the government perspective, such as the expected future price of carbon (which the government had actively supported) the end of domestic mining and the cost of complying with the IED directive. In that sense it is thus interesting to notice how governmental energy and climate actions are sometimes incoherent and the long-term effects heavily discounted. The government had actively contributed to amend the drift of the effectiveness of the ETS by agreeing to strengthening the instrument and adapt it to changed circumstances, only to indirectly oppose its outcomes by trying to prevent utilities from doing what the ETS was expected to do, i.e., move away from coal towards less polluting, although possibly and only initially, more expensive technologies, such as natural gas and, obviously, renewables.

The same applies to the rights conferred by the single market in relation to liberalization. When the Minister tried to adopt the decree that would have prevented the closure of coal power plants it met resistance not only from utilities but also from the CNMC who warned the government that there was little chance, also because of the comfortable domestic capacity margin to ensure security of supply, to avoid incurring in a likely rebuttal by the European Commission on state aid grounds. Finally, when, after several decades, domestic mining could not be subsidised any longer, the bond between utilities and coal was further severed, and Endesa considered that its coal power plants would soon become an unprofitable burden. The possibility of adopting new rules that could have provided priority dispatch to domestic coal seemed remote in the energy transition context where the goal is to find alternative and innovative means to ensure security of supply. The orientations of the European Commission were in little agreement with resorting to 'old' fuels for security of supply, unless they could really be considered the last resort method to which a country had recourse, and it did not seem the case of Spain. The Commission had made clear, over time, that it would scrutinize any domestic proposal in that sense, using its state aid powers. The

Minister seemed out of touch with this new reality. It seems that the Minister found out that his real, as opposed to legal, right to decide over the generation mix, had in fact drifted. Circumstances had in fact changed and the exercise of domestic discretion, who could not be actualized at will, did not have the same effects as in the past: utilities could dispose of their assets as they thought convenient, in the absence of a justifiable objection, and the Minister was not any longer the only authority that could, almost arbitrarily, decide if there was a security of supply problem. Moreover, many utilities had expressed their support for ambitious renewable goals, further weakening the government position. The functional character of the conflict around domestic preference formation is therefore beyond question and the distance between government, or at least the Ministry of Industry, and utilities in full display.

This leads to the question of domestic conflict, functionalism, and politicisation. As already stated, the empirical record is in line with Hypothesis 4, meaning that the conflict has been mostly functional, and that EU support coalition thought to have the necessary resources for overcoming functional bottlenecks. However, the issue has also been, to a little extent, politicised, especially in relation to the future of coal, as expected by Hypothesis 6. The impression that can be derived by the empirical findings is that the Minister was genuinely concerned about the functional problems of agreeing to an ambitious renewable target in the context of weak interconnections. He might have been upset in seeing his functional concern not to be shared by other domestic actors, including opposition. However, when it was clear that he had been left alone in fighting is battle in the EU and that, moreover, he had to face domestic opposition that could weaken his position, the use of domestic politicising strategies became almost inevitable. Again, the target was not the EU, but domestic actors that did not seem to understand where the domestic interest laid. The Minister felt in a comfortable position at EU level, as there was enough support in the Council for limiting renewables ambition and a certain consensus had emerged on the status of interconnections as an integral component of the 2030 framework. In sum, the EU could not be made the visible target of contestation, except for the EP who pushed for a higher target. However, it is also true that over time, the Spanish position in the Council become ever more minoritarian, although not isolated.

Politicisation has mostly played out as a domestic issue and among different visions of the future of domestic electricity sector, more than as an issue regarding the role of Spain in contributing to EU energy goals (which was instead mainly portrayed as a functional issue). Especially during the last two years of minority government and in a state of domestic political tension, with the support of Ciudadanos also fledgling on energy issues, renewable energy and coal phase-out became quite salient issue in the political debate. The PSOE had espoused the renewable ambition position and its representation in the EP was at the helm of the committee fixing the negotiating position of the EU decision-making body. From this perspective, the tug-of-war between the Council and the EP was replicated, at a smaller scale, within the domestic realm, with the government backing, and to a certain extent also actively shaping, the Council position, and the PSOE on the side of the EP. But politicisation also extended, and even to a greater extent, to the parallel issue of security of supply and coal support. The Minister was also been taken aback by the change in the position of the PSOE in relation to coal, opening a new domestic frontline while he thought his position could instead be shared by a party who had traditionally been electorally popular in mining regions. In that sense, the change in policy orientation within the PSOE can be considered a major factor in the politicisation of the coal question, up to the point that the Minister actively tried to bring regional PSOE leaders on his side and so force the new leadership to explicitly come out in its intention to conceive of a coal-free energy transition. However, the strategy of the government to politicise the coal issue has found with notable obstacles, first in the form of an almost united parliament opposition to take up the question and, second, with the doubts raised by CNMC which in fact amounted to a gentle challenge to the government who was invited to better substantiate its concerns about security of supply. The final observation to make is that, carbon pricing has never entered either the functional or politicisation equation. All involved actors have agreed to the necessity of having a meaningful carbon pricing and no actor has raised the issue that carbon pricing could have an adverse inflationary effect on electricity prices, nor it was singled-out for its effects on coal-phase out, to testify how the instrument had enjoyed a positive feedback that had put it beyond contestation.

To conclude, the answer to RQ. 1 is in line with Hypothesis 2 because the lack of substantive EU competences in completing the IEM via the building of the necessary interconnections has prevented a complete policy feedback to materialize and prevented domestic actors to

converge on a shared conception of domestic interest. As such, a comprehensive positive policy feedback, in the sense of a comprehensive self-enforcing or self-reinforcing equilibrium encompassing all political forces, has not emerged, and it has been disrupted by at least one veto player. However, the role of the veto player has not been long-lasting, and the hypothesis must also be complemented by considering other policy feedbacks from the ETS, the IED and state aid to mining in this case positive, which have brought together many relevant actors in support for higher renewable targets. Such policy feedbacks have progressively weakened the factual capacity of the government to exert control over the policy mix and have led to question the role of interconnections as the centrepiece of domestic interest. Hence, domestic discretion is more limited than it could be derived from the letter of the Treaty, and it is consequently increasingly difficult to backtrack on the energy transition, as the authority to decide over the policy mix is now more diffused and also, informally, in the hands of private actors. Counterfactually, it is difficult to guess what would have happened if there had not been a sudden change in government, as the institutional veto player exercised by the Minister could have led to a different outcome at EU level. However, it also seems plausible to think that a change in government, even at a later time, would have led to a change, even unilateral, of domestic renewable ambition. It is in fact clear that the new government considered the deployment of renewable energy as a matter of domestic convenience rather than an EU imposition. As it has been noted, the new government exceeded by far the minimum requirements of the EU agreement and it is reasonable to think that it would have changed the course of domestic policy irrespectively. The hypothesis that changing prices and preference, sooner or later, lead to institutional change is a powerful one when applied to energy policy. Finally, functional, and politicised domestic contestation have both be present in the case, but the former has been more important than the latter. Moreover, since the Minister insisted that more powers be made available to the EU to force cooperation on interconnection issues, it seems that the functional character of EU contestation, rather than the defence of sovereignty, be more important in this case. Politicisation, in this case, was more focussed on domestic conflict than EU contestation.

### 8.3. Regulated Tariffs: The Bumpy Road to a EU-Compliant Methodology

The dynamic leading to a policy equilibrium in relation to the methodologies used for setting regulated tariffs shares many similarities with the case of renewable support mechanism, although, in this case EU pressures stemming from negative integration have had a more relevant role in activating long-term Europeanization mechanisms. In this case too, in fact, it is possible to distinguish a sequence involving an initial positive feedback, followed by a negative feedback, a critical juncture and, finally, the introduction of an instrument generating a positive policy feedback and preventing contestation at EU level, given the convergence on a model compatible with that suggested by the Commission proposals.

As predicted by Europeanization theories, negative integration, in the absence of a specific template, does not lead to domestic change in entrenched institutions until these are not manifestly suboptimal and the political salience of domestic economic inefficiency forces transformative change. The Spanish domestic approach to regulated tariff setting enjoyed a long period of positive feedback going back to the beginning of liberalization, when public discretion in mediating between the markets and consumers was immediately spared from the application of the principles of market competition. It was consequently ruled out that the cost of electricity to be charged to consumers would be left entirely to the market. The corporatist and clientelist relations that characterised the sector were solid and, even though utilities had reasons, based on experience, to distrust the government that, even if tariffs were momentarily set at below-cost levels, they would be increased at a future time to recover the deficit so created. This was immediately clear when, in 2002, the government decided to place a cap on the annual increase of the tariff, a norm that in turn derived from the freeze that had been agreed to comply with the Maastricht criteria and found its way in the very first specific, and at the same arbitrary, methodology for calculating tariffs. In this case, positive institutional feedback that allowed for the maintenance of government discretion were immediately associated with a negative economic feedback, as the deficit did not just go away but cumulated, although slowly in the initial stages and then accelerating. The tariff deficit was in fact fed by deviations in cost estimations across the board, from the cost of electricity, which was set by the market, to the different regulated costs that depended on policies independent from the market, chiefly among them the promotion of renewables and of security of supply. At one point the debt-making practice became also institutionalized,

with the shift from an ex-post deficit (the ‘surprising’ appearance of a deficit at the end of the period, due to ‘wrong’ estimations) to an ex-ante deficit, when the government, in an exercise of transparency, stated at the beginning of the period that it would set a tariff below cost and estimated the amount of the deficit that it expected.

The path to the institutionalization of tariff sufficiency (which can be equated to the path to Europeanization) was a bumpy and not a linear one. Different governments first tried to lower as much as possible electricity system costs and, sometimes as arbitrarily as they had contributed to cost inflation, to attribute losses to producers whenever was possible. Slowly, they also came to terms with the fact that replacing the market and make ex-ante estimations about future costs was always going to be a very difficult guess and that creating a climate of conflict with the industry, fostering regulatory and investment uncertainty was going to damage the sector in the long run. This applied to both, the costs of electricity in the wholesale market, which were estimated for periods as long as a whole year or six months, as well as for regulated costs, whose recovery also depended on regulated tariff levels. In other words, the negative feedback progressively became of a bigger relative importance than the positive feedback that kept the system in place.

It must be noted how there has never been a feeling of trust for Spanish utilities and that political suspicion that liberalization had in fact resulted in an oligopoly played a role in the reticence to entrust the sector with the provision of a politically sensitive service at market prices. The 2005 White Book had been clear in that sense, as it suggested the government to act on competition first and then take a hands-off approach and let the market establish and signal prices to consumers. Again, physical isolation and the limited contestability of the Iberian market have also played a critical and negative role as the beneficial effects of negative integration were always going to be of lesser importance compared to other Member States. At the same time, there had also been active resistance to the internationalization of the sector, which might have had a positive effect on domestic competition levels, at least until the ‘fall’ of Endesa to foreign capital in 2008.

That said, the implementation of the 2003 IEM directive forced the government to be less discretionary with the setting of the cost of electricity because regulated tariffs had to be contestable by free-market retailers. Such new Europeanization pressure was accommodated with the establishment of auctions that intended to approximate what private initiative had

not been able to accomplish by itself, i.e., competitive, and liquid forward markets. This can however be considered a first step towards Europeanization as the tariff setting methodology for the cost of electricity was, for the first time, linked to a more immediately identifiable market mechanism and reference value, although the Ministry of Industry still had the last word on the level of estimation it had to infer from the price resulting from such auctions.

Within this context of incremental changes, the financial crisis qualifies as a critical juncture, leading to an abrupt ending of the practice of deficit-making tariff setting. It is however plausible to argue that, counterfactually, that this would have inevitably happened at some point, as the amount of cumulative tariff deficits had reached unbearable levels. In the context of the financial crisis, the measure used to deal with negative feedbacks had run their course. The securitisation practice, although almost institutionalized, was in the end a temporary backstop and financial markets only reluctantly accepted the securities backed by a system that never seemed to increase its revenue capacity. At a moment when it seemed that the country could even default on its sovereign debt, it was clearly not a viable option any longer. Therefore the 2013 reform and the introduction of the principle of tariff sufficiency can be considered as an event forced both by endogenous dynamics, in the sense that the mechanisms of financial reproduction of the electricity sector had reached a point of no-return, and an exogenous shock, the financial crisis.

If the crisis then explains the timing of reform, it is difficult however to find an explanation of why, among the several available options, the government picked a specific tariff setting methodology that, at least in relation to the cost of electricity, had few precedents in the EU contest. It must be noted that the CESUR scandal had generated the urgency to find an alternative method. It is true that, as in the case of renewables, the European Commission had published its communication on public intervention in electricity markets where it stressed the importance of providing more direct price signals to consumers, but there was probably no need for the government to go as far as choosing real time pricing, as established by the new instrument finally adopted, the PVPC. Three interpretations, based on rational choice, come to mind. One reason might be that the government genuinely believed that consumers could become masters of their bill by adapting their consumption to the real-time information coming from the market. In that sense, the instrument would have been directed to consumers, the government making them responsible and at the same time aware of the

true cost of electricity, which had been obscured to them ever since. A second interpretation is that the instrument was directed at utilities and that its introduction was somehow related to the distrust in the existence of a truly competitive market. It is in fact puzzling that the government left it to the market to determine the price when it had accused utilities to have grossly manipulated market prices a couple of months before, during the CESUR scandal. In that sense it is therefore possible that the government intended to put pressure on utilities not to engage in suspicious behaviour because now consumers would notice it more, since they were being intimately linked to hourly prices and therefore the government could have been even more legitimated, backed by consumers awareness, to scrutinizing and questioning market outcomes. Therefore, the government would still mediate between market and consumers, but according to a different role, giving up arbitrary discretion and becoming instead more of a regulator (and in that sense, it could also make avail of the CNMC). The third hypothesis is that the government was moved by the desire to increase the efficiency of the system. In any case, the PVPC was the result of an imposition by the government from its vantage institutional position and from the empowerment provided by the need to avoid financial collapse.

This contrasts however with the behaviour of the government in relation to the other part of the tariff linked to efficient behaviour, the access tariff for network use. The fact that the government actively resisted the transfer of competences in relation to the access tariff to the CNMC as prescribed by the 2009 IEM directive raises doubts about the efficiency motives behind its actions. Maintaining control of the access tariff also meant to keep political discretion in the allocation of costs among groups of consumers which, particularly for industrial consumers, was considered an important level of industrial policy. Europeanization in this case was only obtained by the threat of infringement procedure, showing the importance of the exercise of supranational autonomous powers and the empowerment of independent regulators, given the insistence of the latter in having its competences transferred. In respect to this last issue, politicisation directed at the EU has also been detected, as the Minister opposed access tariff EU provisions, considering that the EU had entered an area where domestic political discretion (i.e., the attribution of network costs to different categories of consumers) was still justified. However, the low saliency of the issue in electoral terms prevented the extension of audience and therefore it limited itself to a

conflict with a functional character between the government (possibly acting on behalf of industrial consumers) and the independent regulator.

In any case, after its establishment, the PVPC, has become a sticky instrument. The empirical findings point to the fact that, although initially imposed by the government against utilities that preferred a shift to the phase-out of regulated tariffs and consumer organizations that preferred to maintain the methodology of the TUR, the instrument managed to put itself beyond contestation, if exception is made for the retail margin question. Utilities and other free market retailers will always wait for an occasion to overturn the instrument, and therefore it can be argued that the positive feedback rests on shaky ground, but at least a major point of conflict between them and government has been eliminated from the list of sectoral conflicts as tariff deficits are not supposed to appear any longer and the risks linked to government discretion has been sensibly reduced.

In sum, and to explicitly answer RQ 3, the case of tariff setting is in line with Hypothesis 1 and a positive policy feedback has been established at the end of a long policy sequence. However, a distinction must be made in relation to the mechanism of Europeanization leading to a policy equilibrium. In the case of the setting of the cost of electricity, the mechanism did not result from direct EU pressure but was the combination of long-term Europeanization mechanisms. i.e., an endogenous negative feedback and the exogenous shock of the financial crisis, which allowed the government to, single-handedly, introduce the real time pricing system of the PVPC. In the case of network access tariff, EU pressure was more directly determinant in ending public discretion in favour of the competences of the independent regulator. The comprehensive new tariff methodology has since enjoyed a positive feedback as all actors have reoriented their strategies and expectations towards an instrument that now enjoys broad political support. In the future however, regulated tariffs are likely to come under pressure from the European Commission and the justification of maintaining the PVPC, despite its innovative character, will be increasingly difficult, especially if the retail market will become less concentrated and there will be less reason to maintain a regulated tariff.

#### 8.4. Self-Consumption: Politicisation and Polarization for a (Still) Minor Issue

The case of self-consumption was sampled because of the absence of specific EU regulation and it was therefore predicted that, in the absence of shared domestic consensus, it would

have been difficult for positive effects or feedbacks to emerge. On the contrary, different actors would have drawn different lessons from abroad and about the domestic replicability of foreign experience. The empirical findings broadly support this hypothesis. It has been emphasized how self-consumption stood out as an anomaly in the context of support mechanisms for renewable policy in Spain as it never found a place within its framework during a long time. This is in partly because renewable policy was not initially framed as a grassroots engagement but as an industrial policy with collective benefits, including environmental and employment positive externalities. ‘Small’, in the context of renewable policy meant small investors but not (necessarily) consumers or citizens. This is probably because the costs of distributed generation were still very high compared to utility-scale renewables, although countries such as Germany had since long offered incentives to individual prosumers. Whatever the reason for this initial lack of support, a powerful constituency had never emerged and the project for a net metering scheme surfaced as late as 2011 and it was then set aside after the change in government and the freeze of renewable policy. To be sure, the PP government considered prosumer support as an opportunity to provide some relief to the battered sector, given the small (although less efficient) amount of resources to be invested for support as compared to large renewable development, but its initial proposal, in 2013, made it immediately evident how the government had learnt a different lesson than what the sector expected from the support mechanisms prevailing abroad. It could be also questioned that the government intended to support self-consumption or simply intended to provide a formal regulatory framework of sort, given the void in domestic legislation. Therefore, the government promoted the idea that self-consumption was not only unworthy subsidizing but that it could even turn into a subtle way for individuals to profit while ‘free-riding’ on the benefits provided by the electricity system, a ‘club good’ for which, given the binomial tariff structure, the ‘privileged’ prosumers would now contribute less than their fair share. It is true that the problem of the fair allocation of the fixed costs of the electricity system in relation to prosumer was not a new one and that in other countries where there had been a surge of distributed generation the topic was also debated. On the other hand, those countries had come to face the problem after many years of support and high levels of prosumer deployment.

It is therefore reasonable to argue that the restrictive regulation engineered by the government responded more to a politicisation logic than to a real functional problem as projections about the possible negative impacts of high self-consumption levels were very far out in the future yet. Although the debate started in 2013, that is, in the last stages of the financial crisis, it was still framed within the logic of the reform establishing the overarching principle of financial sustainability. The government had therefore promoted the idea that the reform had been made necessary by the many regulatory mistakes of the past that had generated bloated costs and unjustified rents for many actors. Now that all actors were asked to contribute to the rebalancing of a difficult situation and that every single new cost item would be subject to deep scrutiny, it would have seemed incoherent to allow a new privilege to emerge. The continued use of analogies with other collective security systems is a case in point. Opposition at EU level, after the Commission had tabled its Winter Package proposals, was therefore based on similar arguments, as it should have been up to Member States to decide which part of the ‘club good’ prosumers should have been asked to pay.

Opposers obviously had learnt a different lesson from abroad, implying that the government had no right in intruding into what occurred into their own private space and that it would be at least odd that the surplus electricity they fed into the system should have gone without remuneration, unless they became producers, with all the regulatory hurdles that such a condition entailed. Comparison with other countries made it clear that there was hardly anything comparable to the ‘backup’ charge the government had established. The administrative procedures for small prosumers moreover could also be breaching the modicum prosumers norms contained in the existing 2009 RES Directive, let alone the prohibition for shared self-consumption. The sovereignty argument used by the government flied in the face on the framing of self-consumption as an issue of both, negative integration, because it denied individual rights that were protected by the fundamental freedoms of the Treaty and positive integration because renewable energy needed to count towards the achievement of a Member State 2020 renewable goals.

Therefore, RQ. 2 is satisfactorily answered by Hypothesis 3, as the brief but eventful development of prosumer regulation before and during the negotiation of the Winter Package is clearly driven by the translation of domestic experience more than any other factor. EU pressure could be minimal, as again there was little in the norms contained in the

2009 IEM and RES Directives that could force Member States to offer support to prosumers, except for simplified authorization procedures. Although the European Commission was clearly unsatisfied, the legal underpinnings for exercising formal pressure were weak. Paradoxically, Spanish regulation, although not expressly mentioned, served as a negative model and the proposed tabled in the Winter Package were an indirect rebuttal of the Spanish approach. Although the wording of the article on self-consumption could be compatible with a backup charge, it was not with the spirit of the norm was not, considering that it intended to empower self-consumers. The Winter Package then added fuel to the domestic debate, because, while the Council position was receptive of the right of Member States to regulate prosumers as they wished, given the lack of an outright prohibition for backup charges, the position of the EP, on the contrary, introduced a specific paragraph that prohibited backup charges for self-consumed energy, empowering domestic opposition to existing regulation. Domestic opposition and support for regulation actively promoting self-consumption could therefore find themselves reflected in the positions of the two legislative bodies. Under these conditions, a stable domestic equilibrium was difficult to reach.

Lastly, empirical evidence has shown how the level of politicisation outweighs the functional impact, and therefore it is in line with hypothesis 6. It is somehow surprising that such a relatively unimportant issue has attracted so much political attention and become a salient topic in public opinion. It is not so surprising that the government had adopted a restrictive regulation in the first place, but it is puzzling why it did not backtrack and continued to uphold its position in a domestic debate that became increasingly polarized and with the government clearly losing the struggle for public opinion support. The only answer is that the government saw it as an ideological battle in which it upheld the defence of a specific equity principle, that all consumers should shoulder the fixed costs of a ‘club good’ and that allowing to do otherwise would have amounted to admitting free riding. As noted, the ideological component must be read in the context of the attempt by the government to present its sectoral reform as an equitable and necessary act to prevent consumers to pay for the excess that had been allowed in the past. However, what stuck most with public opinion was by far and large the ‘sun tax’ narrative, also fed by foreign media where the topic started to have a certain resonance. In the end, far from being a constraining dissensus, politicisation turned into an ‘enabling dissensus’ in the sense that support for EU task expansion has benefited

more from the polarisation and saliency of the debate than the defence of the domestic status quo. However, the functional dimension was not totally absent, with Spanish utilities also active in trying to prevent the adoption of a strong prosumer policy fearing its impact on their traditional business. Prosumer supporters have also proposed that its growth be subject to an ordered process and so avoid another bubble.

### 8.5. Conclusions

Twenty years after its inception, the impact of EU regulation on the Member States electricity sector is very close to be qualified as transformative. Positive and negative integration have touched on almost every aspect of the way electricity is produced, transported, distributed, and sold, and the relation between the state, the market and citizens has thus been profoundly changed. In this conclusion, two reflections are proposed, the first referring to the conceptual framework and the efficiency-making character of EU regulation, and the second to the process of Europeanization that has been analysed in the empirical chapters.

There is little doubt that the regulatory action of the EU for the electricity sector has met with most if not all the problems in the path to efficient regulation and that the whole process has been one of trial-and-error. Many authors emphasize how EU regulation for the electricity sector is even more uniform than the corresponding regulation in the US, to testify how conceiving EU electricity markets as homogenous units was, and, possibly, will always be a very ambitious endeavour. Establishing the proper limits to subsidiarity and the amount of efficiency that can be achieved by shifting competences at the supranational level has been a difficult exercise, made even more difficult by the traditional reticence of Member States to cede competences in this area even when manifestly efficient or necessary. However, although the Commission has used competition policy to move Member States from their entrenchment on certain practices that were a clear obstacle to the creation of the IEM, the approach has been mostly based on incrementalism rather than dramatic ruptures with domestic traditions. Each IEM directive has built on the success and the failures of the previous one and a distinct form of EU regulation in which all Member States can identify themselves has progressively emerged. This process has been simplified by the fact that technological choices have also been reduced, especially in the generation side of the sector, and peculiarities that set Member States aside have been less relevant. The process is likely to continue in the shift towards a renewable-based and decarbonized system, where the

complementarities, more than the differences, among the resource potentials of Member States will become even more important.

At the same time, efficiency has also meant that EU regulation has come to strengthen and rationalize government intervention, not just to substitute it with market forces. It is beyond doubt that, when comparing the electricity sector today with its organizational bases 20 years ago, the importance of the role of private actors has sensibly increased. However, in this dissertation it has been shown how the role of the state, at least in the Spanish case, was not always inspired by solid criteria of efficiency and the relation with the private sector were less than transparent. It comes to little surprise then that the European Commission has tried to progressively empower consumers by bringing into light the characteristics of the different segments of the sector and establish more accountability in terms of their costs drivers and the way these costs are assigned among system users. Consumers have been offered opportunities but also responsibilities. By taking on an active role they can put pressure on electricity service providers to be more efficient and stop conceiving of consumers as passive recipients of a bulk and undifferentiated product.

The interstate efficiency dimension should not be forgotten either. The goal of the IEM is to finally equalize electricity prices across the EU, which means that the beneficial effects of efficiency can be spread across all consumers, irrespective of where they live. And if it is true that this also means that certain markets, and therefore countries, will then see their prices rise, it is also true that the risk of losing market shares for domestic producers will force them to adapt their practices to those of the most efficient producers. In the long run then, the benefits of the internal market will be equally felt across the EU, even though there will be some initial redistribution, through changes in relative price differences across countries. Consumers' empowerment as also gone hand in hand with that of independent regulators, and it has been shown how difficult it has been for the government to come to terms with the possibility of being questioned in relation to its choices. Sovereignty over the energy mix does not mean an unrestrained power to take decisions that are not informed by sound economic rationale and the fact that independent regulators have started to make their judgments on common criteria developed, for example, within ACER must be considered a beneficial development induced by the EU.

Much has been written over the incoherence of the overlap between negative and positive integration, and how environmental concerns have ended up generating suboptimal outcomes in the other two goals of energy policy, competition and security of supply. This might have been initially the case, but, looking back at the process of decarbonization and the sector, it seems that the promotion of positive technological externalities and the internalization of the costs of pollution have allowed the electricity sector to be at the forefront of the energy transition. The latter means electrification of the economy and it is telling how utilities in the electricity sector have come to back aggressive decarbonization policies as they will be benefiting from the major transformations still to come, such as the phase-out of oil in the transport sector. Having made most forms of renewable electricity already cost-competitive with conventional electricity in so little time is a major feat that outweighs the possible mistakes that the approach has initially had. It is striking how the perception of the costs of the energy transition has changed so rapidly and, although the costs have a cumulative character and consumers will be paying for at least one more decade for the more expansive technology of the past, it seems that new technologies will have a faster ‘decumulative’ effect than it could be imagined. The transformation to which electricity markets have been subject is significant in this respect. The main problem today seems that of avoiding a fall in prices that would make investments in conventional backup generation unprofitable. It would be however incoherent to maintain a type of market organization that is becoming ever more residual rather than accelerating the shift towards a new model. The CEAE, with its demands to increase flexibility for all actors, seems a valid response to the problem, although the marginalist pricing model has not been questioned, or at least entirely. Which brings to the last point, security of supply. It is true that changes in relative technological prices have occurred so quickly that there was probably little time to think of an orderly phase-out of certain technologies, such as coal, when most attention was still directed at making the phase-in of low-carbon technologies happen. But it seems also unlikely that a sort of market or technological ‘fundamentalism’ will impede to manage the phase-out of fossil fuels without engendering security of supply. Here, capacity mechanisms will play a central role and the (relatively) new formula introduced by the CEAE which acknowledges their role but also subjects them to a test that proves their ‘measure of last resort’ character offer the prospective of being another regulatory and efficiency enhancement that the EU will bring into domestic regulations.

Moving to the dynamics of Europeanization analysed in this dissertation, what has certainly stood out is the variety of mechanisms that have been at work. This dissertation has certainly sacrificed the goal of isolating a single mechanism in favour of a broader approach were, over time, different dynamics have created sequences of Europeanization which have sometimes led to stable policy equilibria and sometimes not. It has emerged how, considered on its whole, the Spanish electricity sector has been profoundly Europeanized, with dynamics that reflect the level of adaptational pressure that could be exercised vertically or horizontally. Being a country that had initially embraced liberalization, it is certain that it could have been expected that certain principles would be integrated quicker, as the case of tariff sufficiency has shown. But taking a long-term perspective has permitted to show how, at some point in time, the need has emerged to establish coherence between all the elements of a liberalized market, while picking and choosing can only be a temporary situation. Even if liberalization was only tentative at the beginning, maybe except for the wholesale market, it has progressively moved to the core of the organization of the sector, pushed by both internal inconsistencies and outside pressures. In many ways, the dynamic of the electricity sector has followed the economic curvilinear performance of the country during the last 15 years, with reforms becoming possible only when absolutely necessary. And even so, the country has not stood out for its consensual reform capacity, although difference has been noted between the two political forces that have taking turns at the helm of government in their availability for concertation with the actors involved. Power in the electricity sector is however highly concentrated in the hands of few actors and it is understandable how governments have been cautious when taking a distance from their mediating role between them and consumers. Ex-ante structural reform for enhancing competition, such as forced divestments on the part of some of the dominant actors, would have, in hindsight, a much more efficient solution than taking piecemeal stepwise remedies that have made regulation complex and most of the time also ineffectual. When it comes to positive integration, it must be acknowledged how the Europeanization of the sector has been surprisingly effective and there is little evidence of the problems that the country usually experiences in other policy sectors. It certainly helps, for example, that pollution in the electricity sector is concentrated in few, visible, emission source points and the steering is structurally and institutionally easier than diffuse sources, as the negative experience in reducing emissions from the non-ETS sector show. It is also regrettable how a single but relevant regulatory blunder has caused renewable policy to

suffer a long stop, but, again, this is in line with the boom-and-bust economic performance of the country, whereby governments and regulators have always found it difficult, if not in their interest, to take air out of investment bubbles, only to pay the consequences afterwards. In any case, it is also the case that the feared long-term consequence of a lack of investor interest because of the regulatory uncertainty created by the retroactive measures has not materialized and the current government seems in a comfortable position at the beginning of an investment cycle that needs to mobilize considerable resources. The implementation of the CEAE has been quick under the current government, which has put its weight behind the energy transition as both a lever of economic growth and social progress, to testify the importance of political will in the context of the domestic opportunity structure. The case of self-consumption is, from this perspective, particularly telling, given the rapid reversal of the previous regulation, although it was clear that the latter was simply exercising a bottling effect on a sector that was ready to take off. In other words, veto powers in the electricity sector seems now to be less institutionalized than in the past, also thanks to the rapid technological change and the consequent change in prices and preferences.

A last word will be spent on the issue of interconnections. It is difficult to conceive that after 28 years since their inclusion in the Maastricht Treaty as a EU competence, the regulatory framework for accelerating the construction of Trans-European Networks for electricity lags so much behind the rest of policies, generating an imbalance whose consequences have become evident during the negotiation of the 2030 Framework. When the costs of an interconnection line are compared to other costs items of the energy transition, the shortfall is even more puzzling. The cost of the Biscay Gulf, which is estimated between 1,750-2,000 € billion, pales when confronted with the 7,000 € billions paid for renewable support each year only for Spain, while the costs of the interconnection would be shared (and recovered) between two countries. This comparison is not drawn to insinuate that investments in infrastructures are more necessary or urgent than those in supporting renewables or other costs of the electricity system, but to emphasize as the lack of political will is a relevant explanatory factor more than the economic cost. It has certainly been also stressed as such lack of political will is to be credited to the asymmetrical interests between Member States, but this is one more reason to point to the fact that if EU bargains are to be integrative and coherent, all the different dimensions should be simultaneously considered. In any case, a

second point can be made in relation to the interconnection question, because its value and its necessity might change over time. It is not surprising that the new government has not made the building of interconnections as a pre-condition for engaging in a swift energy transition. First, there is still margin for manoeuvre, in terms of intermittent generation management capacity, before hitting the bottleneck. Second, because future technological developments, chiefly in the field of storage and demand-response, might in fact decrease the need for transmission capacity. On the other hand, it is also true that the estimated potential of renewable generation in the Iberian Peninsula is also considerable and it might become necessary for a cost-effective transition in other countries with less potential. The future of nuclear power in France will be decisive for determining the role of interconnections with the Iberian Peninsula, which might benefit from firm power if France decides to continue with its nuclear-based electricity policy, and for the rest of the EU, if France decides instead to commit to at least a partial nuclear phase-out and might thus have a more symmetrical interest in more robust interconnections with its southern neighbours.

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## 10. ANNEX I

### LIST OF INTERVIEWS

- ***Institutional Actors***

**Mrs. Teresa Ribera**, General Director Spanish Climate Change Office (Ministry of Environment) (2004-2008), Secretary of State for Climate Change (2008-2011). Personal interview, Barcelona, November 2017

**Mr. Ignacio Sánchez**, Spanish Climate Change Office, Director of Emission Trading Unit. Personal Interview, Madrid, December 2015. Telephone interview, October 2017

**Mrs. María José Alonso Moya and Mrs. Marta Hernández Veracruz**, Spanish Climate Change Office, Technical Assistants at Climate Change Action for Diffuse Sectors. Personal Interview, Madrid, December 2015

**Mr. José Aladro Vico**, Spanish Ministry of Economy, Commerce and Industry, Technical Assistant at Industria Sector Policies Unit, Telephone Interview, October 2017

**Mr. Alfonso Olivas**, Spanish Institute for Diversification and Energy Savings (IDAE), Director of Renewable Energy Unit. Telephone Interview, October 2017

**Mr. Jaume Margarit**, Spanish Institute for Diversification and Energy Savings (IDAE), Director of Renewable Energy Unit. Personal Interview, Barcelona October 2017

**Mr. José Antonio Castro**, National Regulatory Agency for Markets and Competition, Technical Assistant at Electricity Unit. Telephone Interview, November 2017

**Ms. Ana Vilá**, Catalan Department of Energy, Head of Law and Regulation Unit, Personal Interview, Barcelona, November 2016

**Mr. Salvador Samitier**, Catalan Office for Climate Change, Director, Personal Interview, Barcelona, October 2016

**Mr. Iñaki Gili**, Catalan Office for Climate Change, Director of the Climate Mitigation Action unit, Personal Interview, Barcelona, October 2016

**Mr. Joan Esteve**, Catalan Energy Institute, Head of Planification Unit, Personal Interview, Barcelona October 2016

**Mr. Josep Tarradellas**, Spokesman European Commission, Directorate General for Energy (), Personal Interview, Barcelona, January 2018

- *Industry Actors*

**Ms. Esther García Gomez and Mr. José Martínez Rodriguez**, Gas Natural, European Regulation Unit. Telephone Interview, December 2017

**Mr. Miguel Ángel Muñoz Rodríguez**, Iberdrola, Head of Climate Policies. Telephone Interview, September 2017

**Mr. Pablo Arguelles Tuñón**, EDP Spain, Head of Regulatory Unit. Telephone Interview, October 2017

**Mr. Fernando Lasheras Garda**, Iberdrola, Director Brussels Office. Telephone Interview, October 2017

**Ms. Lourdes Santiago García**, Red Eléctrica Española (Spanish Transmission System Operator), Regulation Expert. Telephone Interview,

**Mr. Joaquín Giraldez**, Ingebau, Engeeniring Solutions. Telephone Interviews, July 2017

**Mr. Daniel Pérez Rodriguez**, lawyer at Holtrop Transaction & Business Law Firm. Personal Interview, Barcelona, February 2016

- *Interest Group Associations*

**Ms. Cristina Rivero**, UNESA (Spanish Electrity Utilities Association), Head of Environment and Climate Change Unit. Telephone Interview, September 2017

**Mr. Heikki Willstedt**, Spanish Wind Energy Association (Asociación Eólica Española, AEE), Head of Energy Policy and Climate Change Unit, Telephone Interview, February 2018

**Mr. Fernando Soto**, Spanish Association of Energy Intensive Users (AEGE), General Director. Telephone Interview, October 2017

**Mr. Joaquín Muñoz**, APPA Renovables (Spanish Association of Renewable Energy Producers), Communication Director. Telephone Interview, November 2017

**Ms. Aida González**, UNEF (Spanish Photovoltaic Association), Regulation Expert. Telephone Interview, September 2017

**Mr. Ruben Sánchez García**, FACUA- Consumers in Action (Spanish Consumer Rights Association), Telephone Interview, February 2018

**Mr. Carlos Bravo**, Greenpeace, Coordinator of Energy and Climate Change Unit (1991-2012).  
Telephine Interview, November 2017

- *Experts*

**Mr. Carlos Fernández Landa**, Price Waterhouse Cooper, Associate. Telephone Interview, February 2018

**Dr. David Robinson**, Economist, The Oxford Institute of Energy Studies, May 2018