

# EMPOWERING SUSTAINABLE ENERGY TRANSITION

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## Foreword



### Dear Readers,

Our energy system is currently experiencing far-reaching upheaval. This entails that many areas are currently being reviewed at RWE. However, we are keeping to one strategic target: Our business must become more sustainable. We are currently talking to our stakeholders to establish precisely what this means for us in concrete terms. We are addressing your expectations and taking account of them in our actions.

Establishing more climate-friendly electricity generation continues to be the biggest challenge. The exit from nuclear energy in Germany will shift the timing of our mitigation path for reducing CO<sub>2</sub> but even under these difficult conditions we are keeping to our established target. By 2020 we want to reduce CO<sub>2</sub> emissions for each megawatt hour of electricity generated at RWE power stations by 20%. We are renewing our conventional power station portfolio in order to achieve this. In 2012, we brought on stream new gas-fired power stations with almost 5,000 MW. At the same time, we are continuing to expand renewable energies. 400 MW of capacity have been added during the year under review.

Energy efficiency is the second important lever for enhanced energy efficiency. Saving energy protects the environment and reduces costs over the long term. This is also an issue where our customers expect responses from us – particularly at this time when electricity prices are continuing to increase as a result of expenses incurred for the expansion of renewable energies.

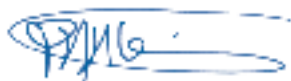
We are adapting our business model in order to fulfil this transition from being a conventional supplier to becoming a partner for our customers. Together with you, RWE wants to develop appropriate and affordable solutions to meet your energy requirement. We advise customers on energy savings and support them with services and products for energy management. At the same time, we are offering our customers the option of establishing stability by offering long-term tariffs with fixed prices as a hedge against changes in price. We are also partners for local authorities and municipal utility companies. We are joining forces to make the distribution grids fit for the energy transition

and to ensure security of supply. RWE remains a company with strong regional roots in its European core markets. This is where we want to restructure our business and make use of the opportunities offered by the energy transition. Our overall customer numbers have remained virtually stable and this demonstrates that our customers trust us – even in a market environment where a lot of new providers are entering the market and competition is becoming more intense.

This confidence provides motivation while at the same time strengthening commitment – this is because our stakeholders also assess the quality of our products by the degree of responsibility we apply when we procure the raw materials. In a globalised economy, procuring fuels is not just confined to the borders of the EU. We source significant amounts of hard coal and biomass from regions where environmental protection and labour rights are not given the same status as here. We are therefore developing our own approaches that will enable us only to work together with responsible business partners. The sector’s “Bettercoal” initiative helps us to enhance transparency in the mining conditions for hard coal. The Group’s own Biomass Policy commits us to sourcing fuels only from sustainable sources for use in generating electricity and heat. This commitment also represents a manifestation of the UN Global Compact which we already committed to in 2004.

We also foster communication in an atmosphere of trust with our internal stakeholders – our team of employees. Their work enhances the sustainable success of our company. Although we are having to contend with difficult economic framework conditions, we are extending the protection of jobs against redundancy until the end of 2014. We want to remain in dialogue with the community on issues like the environment, the marketplace and employees. We also want to talk to you.

Get in touch with us on: [responsibility@rwe.com](mailto:responsibility@rwe.com)



Peter Terium  
CEO and Chief CR Officer

## Group portrait



**RWE is one of Europe's five biggest electricity and gas utilities. Our business activities extend along virtually the entire value chain from lignite mining, biomass, and oil and gas production, through the generation of electricity, to distribution and supply of electricity, gas and heat. Our biggest challenge over the long term is to implement the energy transition in Germany and the effects on the European energy market.**

Europe is our market. Here, RWE produces around 110 million metric t of lignite each year, generates 227.1 billion MWh of electricity and supplies around 16.4 million customers with electricity and some 7.7 million customers with gas. We also supply industrial partners with process heat. Furthermore, RWE offers its customers comprehensive services and advice, and develops innovative concepts for the use of electricity, gas and heat.

### **The challenge of the energy transition**

In 2011, Germany launched a fundamental directional change in relation to the supply of electricity. No other country in Europe has ever implemented a similar change of course at this speed and of this magnitude. We generate more than two thirds of our operating result in Germany. The effects of the energy transition therefore define the entire Group.

After the reactor catastrophe in Fukushima, the German Government announced a significantly accelerated exit from nuclear energy. The first nuclear power stations were already switched off in 2011, including our Biblis power station. At the same time, the supply of electricity from renewable energies, in particular from photovoltaics, increased substantially. The speed of expansion undergone by photovoltaics exerted unexpected impacts on the energy industry and on the Federal Government itself. As a consequence of these developments, the issues of regional availability of electricity, and the stability of electricity grids and energy prices gained a higher profile in the public debate.

The expansion of renewable energies is intended to promote low-carbon electricity generation. The feed-in remuneration rates under the Renewable Energies Act (EEG) have led to an enormous expansion of photovoltaics. As a consequence, gas-fired power plants are being driven out of their traditional market segment, in particular the provision of peak load around midday. Their operating times are often reduced to 1,000 hours a year and less. This means that they are no longer profitable in many cases. The European Union for the Transmission of Electricity is also driving German solar and wind power into the Dutch market. This is also reducing the operating times of our Dutch gas-fired power stations. Building new pumped-storage power stations and the operation of older coal-fired power stations are now often barely profitable.

The expansion of renewable energies means that electricity generation is becoming more decentralised and at the same time more volatile. The burden on the transmission and distribution grids and the need to have sufficient reserve capacities available is increasing significantly. RWE faces two major challenges here. On the one hand, our distribution grid has to accept the additional amounts of electricity from decentralised electricity generation and provide consumers with the required amounts of electricity, meeting their needs with intelligent management and distribution. On the other hand, we need to adapt our generation capacities to the changed circumstances in the electricity market and make the required amounts of electricity available to meet demand, particularly if the renewable energies are not operating at that point.

At the same time, electricity prices for residential customers are rising, particularly due to the feed-in fees for renewable energies. As a result, an intensive discussion about electricity prices has been conducted in Germany since 2012. As a direct partner for customers, we are naturally significantly involved in the discussion about electricity prices.

#### **RWE power station portfolio**

As a result of the exit from nuclear energy adopted by the German Parliament ("Bundestag") in June 2011, part of the low-cost electricity for the base load has been eliminated. The absent generation capacities can currently only be replaced by conventional power stations at reasonable prices.

RWE is in a relatively favourable position. We are able to fall back on large reserves of cost-effective lignite. The reserve licenced for extraction will last for the next 30–40 years. We operate three major opencast mines in Germany (RWE Power) and two smaller mines in Hungary (MATRAI EROMÜ) where we produce around 110 million metric t of lignite each year. 101 million metric t of this lignite are used to generate electricity and the remaining 9.2 million metric t are refined to manufacture lignite products. In 2012, commercial operation of the lignite-fired power station with "Optimised Units" (BoA 2&3) started up with a net output of around 2,100 MW. This is a central part of our power plant renewal programme. The new power station provides cost-effective power generation and can flexibly adjust its output to the prevailing electricity demand and the fluctuating feed-in from renewable energies. By comparison with the existing power stations, which were decommissioned when this plant came on stream, the new power station emits up to 6 million metric t less CO<sub>2</sub> each year at equivalent levels of electricity generation on account of its high level of efficiency. Two coal-fired power stations are currently also being constructed, each with more than 1,500 MW of

output. Overall, RWE had generating capacity amounting to almost 11,100 MW from lignite-fired power stations and around 7,600 MW from coal-fired power stations at the end of 2012, not including contracted power stations.

We are able to significantly reduce our CO<sub>2</sub> emissions by co-combustion of biomass in coal-fired power stations. Substantial quantities of biomass are used in the Amer (Netherlands) and Mátra (Hungary) coal-fired power stations. We have also converted three units to the combustion of biomass at the Tilbury coal-fired power station in the United Kingdom. This means that our capacity for generating electricity from renewable energies also increased significantly in conventional power stations during 2012.

Additionally, we significantly expanded the capacity of our gas-fired power stations in 2012 to a current level of nearly 15,600 MW when the Pembroke power station (United Kingdom, 2,181 MW) and Claus C and Moerdijk 2 (Netherlands, 1,304 MW and 426 MW respectively) came on stream. The fossil-fired power stations were essentially operated by RWE Power, Essent, RWE npower and MATRAI EROMÜ at the close of 2012. Since 1 January 2013, the newly established RWE Generation has been responsible for the construction and operation of our power stations in Germany, the Netherlands, the United Kingdom and Turkey. The lignite-fired opencast mines and power stations, the refinement facilities, and the hydropower plants and nuclear power stations continue to be operated by RWE Power, which is integrated within RWE Generation. After shutting down the Biblis A and B power stations, we still have 3,901 MW capacity of nuclear energy. Following the exit from nuclear energy adopted by the German Parliament ("Bundestag") in June 2011 our last nuclear power station is scheduled to exit from the grid in 2022.

When we established RWE Innogy in 2008, we launched a systematic and rapid expansion of renewable energies. RWE Innogy bundles the expertise and power plants of the RWE Group in the field of renewable energies. Our target market is Europe. One focus of activities is on offshore and onshore wind power projects. However, RWE Innogy is also involved in hydropower plants and biomass. At the same time, we support the development of future technologies, such as biogas plants and solar thermal plants, as well as investing in innovative companies. We support them in their start-up and growth phase and provide pump-priming financial assistance for a limited period of time. At the end of 2012, the entire RWE Group had consolidated generating capacity from renewable energies amounting to 4,133 MW, of which 802 MW was hydropower, 2,165 MW was wind energy and 1,161 MW was biomass.

So far, RWE has only erected a limited number of photovoltaic plants. Our focus in the utilisation of solar energy has been on the development of thermal solar power plants. In Spain, we joined forces with partners in 2011 to operate the solar thermal power plant Andasol 3, which generates an output of 50 MW. In the future, this could form the basis for further projects in North Africa in the context of the Desertec initiative. At the close of 2012, our total power station capacity amounted to 45,354 MW plus an additional 6,623 MW capacity with contracted power stations, with long-term contracts providing us with access to their capacities.

### Production of oil and gas

RWE Dea based in Hamburg engages in international exploration and production of gas and oil. The company has production facilities in Germany, the United Kingdom, Norway, Denmark and Egypt. It also has licences for carrying out exploration in Algeria, Ireland, Libya, Mauritania, Poland, Trinidad and Tobago, and Turkmenistan. In Germany, RWE Dea also has a large underground gas storage facility. RWE Dea is thereby making a contribution to security of supply with energy in markets including our core markets of Germany and the United Kingdom.

### Distribution grids

In 2012, RWE hived off its electricity transmission grid in Germany and now only has a minority shareholding in Amprion. We sold most of our shares in Amprion to comply with the regulatory requirements for separating the distribution grids from the generation of electricity. Our responsibility therefore concentrates on the operation of electricity distribution grids. We operate these mainly in Germany (343,750 km), and in Hungary (46,047 km) and Poland (15,550 km). Our distribution grids play a key role in secure electricity supply. They form the interface between the transmission grids and decentral generation on the one hand, and our customers on the other hand. The energy transition means that the importance of the distribution grids is increasing significantly, because electricity generated from decentral sources is fed almost exclusively into these grids. At the end of 2012, around 250,000 photovoltaic or wind-power plants fed a total output of 15.1 GW of electricity into our German distribution grid. Over the course of the past three years alone, capacities amounting to 5.9 GW have been added. We are working intensively on concepts to establish how renewable energies and decentral generating structures can be integrated intelligently into the electricity grid. Furthermore, we operate extensive gas distribution grids. In Germany, we have a gas distribution grid of 37,050 km, and in the Czech Republic we have a gas distribution grid of 64,500 km and a gas transmission grid of more than 3,600 km. However, this is currently up for sale. We are therefore supplying residential and commercial customers, and major industrial customers and distributors like municipal utilities.

### New areas of business

The changes in the energy industry also yield new market opportunities. There is an increasing demand for services associated with the use of energy. In Germany, the Netherlands, the Czech Republic and Hungary, our companies offer solutions for central and decentralised energy supply. Our packages are directed towards residential households, as well as to local authorities and business customers. They also encompass joint ventures for further expansion of renewable energies. In April 2010, RWE Innogy and 26 municipal utilities established the Green GECCO joint venture. The aim of the company is to jointly develop and carry out projects in the field of renewable energy production. The joint venture covers German and European projects in the areas of wind power, biomass, geothermal power, biogas, hydropower and solar thermal power. The demand for individual control of consumption is increasing. We can perceive opportunities for electromobility here.

Synchronising battery charging with the way the supply of electricity generated from renewable sources fluctuates over time could make an important contribution to stabilisation of the grid. During the course of the business year 2012, we continued to expand the charging infrastructure for electromobility and we have now become one of the biggest operators of charging infrastructure in Europe.



### Energy trading and internal services

RWE Supply & Trading forms the interface between the RWE companies and global trading markets for energy and energy-based raw materials. It forms the hub in the RWE Group for all tradable commodities, e.g. gas, coal, oil and electricity. RWE Supply & Trading engages in trade for these commodities both physically and in the form of derivatives. The trading portfolio also comprises emissions certificates, cargoes, weather hedges and renewables. RWE Supply & Trading is also responsible for economic optimisation of the entire non-regulated gas business of the RWE Group, including all procurement, transport, storage and LNG activities. The Head Office is based in Essen (Germany) with trading floors or branches in the United Kingdom, the Netherlands, Switzerland, the Czech Republic, Singapore and the USA, with a representative office in Turkmenistan. We have integrated services provided across the Group in RWE Service and RWE IT.

### Our contribution to the energy transition

RWE is involved in the energy transition with important company divisions. Construction of our new coal-fired power stations is enabling us to make a major contribution to creating a secure supply of electricity. We are concentrating a significant proportion of our investment drive in new-build projects especially on wind farms. Our distribution grids play a key role in the integration of renewable energies within the supply of electricity. The key focus is on expansion of grid capacities. On the other hand, we are developing intelligent controlling systems for feed-in of renewable energies based on demand. Our consumers are also being integrated in the new concepts. Their consumption behaviour is to be synchronised more effectively with the supply of electricity. We also support our customers in using energy efficiently.

## Value Chain: activities and challenges



### Production of fossil fuels/Purchase of biomass

Areas for action: environmental protection, value chain

Activities	Challenges
Mining of lignite in our own opencast mines	<ul style="list-style-type: none"> <li>- Sustainable reclamation of mining areas</li> <li>- Safeguarding the water resources in the region</li> <li>- Resettlement of residents at socially acceptable conditions</li> <li>- Minimising dust and noise emissions</li> </ul>
Oil and gas exploration and drilling	<ul style="list-style-type: none"> <li>- Environmental protection in very sensitive areas (Wadden Sea, North Sea, North Atlantic)</li> <li>- Handling and disposing of waste from production</li> <li>- Ethical and transparent business dealings in countries with weak governance</li> </ul>
Purchase of biomass	<ul style="list-style-type: none"> <li>- Sustainable production of wood pellets and other forms of biomass</li> </ul>



### Supply and trading

Area for action: supply chain

Activities	Challenges
Supply and trading with hard coal, natural gas, biomass, electricity, CO <sub>2</sub> certificates	<ul style="list-style-type: none"> <li>- Human rights, social standards and environmental protection in the producing countries</li> <li>- Sustainable cultivation of biomass in the supply countries</li> </ul>



**Power and heat generation**

Areas for action: climate protection, environmental protection

Activities	Challenges
Construction and operation of fossil-fired power stations	<ul style="list-style-type: none"> <li>- Reduction in CO<sub>2</sub> emissions</li> <li>- Limiting the emission of pollutants</li> <li>- Acceptance of the new construction of power stations</li> <li>- Treatment and minimisation of the (cooling) water used</li> <li>- Making the generation portfolio more flexible to adjust to the volatile feed-in of renewable energies</li> </ul>
Operation and decommissioning of nuclear power stations	<ul style="list-style-type: none"> <li>- Safe operation of nuclear power stations</li> <li>- Disposal of radioactive waste</li> <li>- Preparation and safe implementation of decommissioning concepts</li> </ul>
Construction and operation of hydropower plants and wind farms	<ul style="list-style-type: none"> <li>- Sustainable water management</li> <li>- Connection to offshore wind farms</li> </ul>
Construction and operation of biomass power stations	<ul style="list-style-type: none"> <li>- Compliance with national and international requirements for the sustainability of the biomass used including the CO<sub>2</sub> footprint and indirect effects on land use</li> </ul>



**Transmission**

Area for action: environmental protection

Activities	Challenges
Construction and operation of the natural-gas transmission grid	<ul style="list-style-type: none"> <li>- Planning of environmentally compatible new-build transmission pipelines</li> </ul>



**Distribution of electricity and gas**

Areas for action: security of supply, innovations, environmental protection

Activities	Challenges
Expansion, operation and maintenance of the electricity distribution grid	<ul style="list-style-type: none"> <li>- Concepts for flexible load distribution and for feed-in of renewable energies</li> <li>- Expansion of suitable storage capacities</li> <li>- Uninterrupted supply with electricity</li> <li>- Bird and nature protection</li> <li>- Acceptance of grid expansion</li> </ul>
Expansion, operation and maintenance of the gas distribution grid	<ul style="list-style-type: none"> <li>- Uninterrupted supply with gas</li> </ul>



**Sales and use of electricity and gas**

Areas for action: marketplace and customers, energy efficiency, innovations

Activities	Challenges
Supply of electricity and gas to residential and business customers	<ul style="list-style-type: none"> <li>- Competitive, individualised and flexible packages</li> <li>- Development of products and services for energy savings</li> <li>- Development of service packages for own consumption and for marketing of renewable energies</li> </ul>
Supply of electricity and gas to industrial customers	<ul style="list-style-type: none"> <li>- Support for customers in energy saving</li> </ul>
Supply of electricity and gas to municipal utilities	<ul style="list-style-type: none"> <li>- Support for local authorities in energy saving</li> </ul>

## Our regions

RWE is an international group which has a workforce of full-time employees in 18 countries. We also send employees to other countries, in particular to North Africa and Central Asia for fixed periods of time.

Total	
Employees	70,208
External revenue in €m.	50,771
Capex in €m.	5,544

Norway	
Employees	88
External revenue in €m.	530
Capex in €m.	202

UK	
Employees	13,604
External revenue in €m.	9,350
Capex in €m.	1,066

Netherlands	
Employees	3,453
External revenue in €m.	4,785
Capex in €m.	639

Poland	
Employees	1,455
External revenue in €m.	676
Capex in €m.	165

Belgium	
Employees	184
External revenue in €m.	611
Capex in €m.	1

Luxembourg	
Employees	65
External revenue in €m.	73
Capex in €m.	49

Germany	
Employees	40,272
External revenue in €m.	27,602
Capex in €m.	2,321

France	
Employees	13
External revenue in €m.	352
Capex in €m.	1

Czech Republic	
Employees	4,933
External revenue in €m.	2,975
Capex in €m.	341

Slovakia	
Employees	373
External revenue in €m.	414
Capex in €m.	0

Spain	
Employees	50
External revenue in €m.	102
Capex in €m.	2

Switzerland	
Employees	134
External revenue in €m.	332
Capex in €m.	0

Hungary	
Employees	5,114
External revenue in €m.	2,245
Capex in €m.	137

Portugal	
Employees	0
External revenue in €m.	1.5
Capex in €m.	0

Italy	
Employees	103
External revenue in €m.	35
Capex in €m.	50

Turkey	
Employees	90
External revenue in €m.	4.3
Capex in €m.	149

USA	
Employees	84
External revenue in €m.	10
Capex in €m.	24

Libya	
Employees	60
External revenue in €m.	0
Capex in €m.	0

Egypt	
Employees	133
External revenue in €m.	302
Capex in €m.	152

Revenues not including gas tax/electricity tax. Capital expenditure (capex) on financial assets and on property, plant and equipment

## Germany

Germany is our most important market, and our historic roots are located here. The registered office of the Group holding company is based here. > [RWE AG](#) manages the RWE Group from Essen. Essen is also the registered office of our European generating company > [RWE Generation](#) which was launched on 1 January 2013. It manages our conventional electricity generation in Germany, the United Kingdom, the Netherlands and from 2013 Turkey as well. RWE Generation is directly responsible for the hard-coal and gas-fired power stations. > [RWE Power](#), a subsidiary of RWE Generation, produces lignite from opencast mines and operates the lignite-fired power stations, the refinement plants, and hydropower and nuclear power stations. > [RWE Technology](#), which is also part of RWE Generation, is responsible across the Group for the construction of new fossil-fired power stations.



> [RWE Deutschland](#) manages our regional sales and distribution companies. The electricity distribution grid comprises around 343,750 km. RWE Deutschland also includes > [RWE Effizienz](#), which develops new products based on the efficient use of energy, including electromobility.

> [RWE Energiedienstleistungen](#) is responsible for our portfolio in the area of decentralised and distributed energy supply with the exception of residential households. The company operates around 30 district heating power stations of varying sizes.



> [RWE Innogy](#) with head office in Essen is responsible for the group-wide expansion of renewable energies. In Germany, RWE Innogy operates approximately 470 MW installed output capacity and is the biggest operator of wind farms among the energy utility companies.



> [RWE Dea](#) manages our national and international activities in the exploration and production of oil and gas from its corporate head office in Hamburg. In Germany, RWE Dea operates oil and gas production sites and storage facilities for natural gas.



> [RWE Supply & Trading](#) is the interface between the Group companies and the global markets for energy and energy-based commodities. The head office in Essen has the biggest and most advanced energy trading floor in Europe.

### Key developments in 2012

During the second half of 2012, RWE Power brought the lignite-fired power station with "Optimised Units" (BoA 2&3) on stream with a capacity of 2,100 MW. In exchange, by the end of 2012 we had decommissioned a total of 16 existing lignite-fired units with a total capacity of 2,089 MW. In 2012, we also completed a modernisation programme for our 600 MW lignite-fired units. Upgrading the control technology and modernisation of the cooling towers increased the flexibility and efficiency of the plants. As an option for the future, we commenced the licencing procedure for the even more efficient lignite-fired power station "Optimised Unit Plus" (BoAplus) with an efficiency of more than 45 % at the Niederaußem site near Cologne, for a new CCPP power station at the Werne site and for a pumped-storage power plant in Atdorf (South West Black Forest). This keeps our options open even if the macro-economic conditions do not permit a positive construction decision at the present moment in time.

By the close of 2012, RWE Deutschland had connected more than 250,000 plants to the distribution grid, which then feed in subsidised electricity to the grid pursuant to the Renewable Energies Act (EEG). We are continuing to drive forward the introduction and use of innovative grid technologies (smart grids) in order to guarantee secure integration of renewable energies and improve the opportunities for grid control. In 2012, RWE Effizienz GmbH installed a further 250 charging points to promote electromobility. RWE is one of the leading providers of intelligent charging infrastructure for electromobility with a total of nearly 1,400 charging points in Germany and around 2,000 in Europe. RWE Dea was privileged to celebrate the 25th anniversary of the Mittelplate drilling and production platform. The Mittelplate production platform is located in the ecologically sensitive Schleswig-Holstein national park located in the Wadden Sea within the German sector of the North Sea. Since production started on the platform, RWE Dea has been operating the rig without any incidents and has not caused any pollution of the Wadden Sea.

In 2012, RWE Innogy brought on stream the Titz-Nord wind farm, with around 21 MW of onshore wind turbines. At the end of August, work commenced on installing the foundations for the offshore wind farm Nordsee Ost (North Sea East) which is designed to generate an output of 295 MW. In April, we received licences from the Federal Maritime and Hydrography Agency for the offshore wind farm Innogy Nordsee 1, which is designed for a capacity of nearly 330 MW, and we signed delivery and reservation contracts for the key components in August 2012.

### Challenges

The implementation of the energy transition is currently shaping our business in Germany. This process creates the following challenges:

- The expansion of renewable energies, particularly photovoltaic power, makes gas-fired power stations and older coal-fired power stations increasingly uneconomic.
- The security of power supply is becoming an even more complex function.
- The expansion of infrastructure for safe electricity generation can only be carried out on the basis of a consensus with the community at large.
- The speed of expansion of renewable energies must be matched by expansion of the grid in the future.
- Electricity prices must remain affordable for industry and business, and for residential customers.
- The level of awareness among consumers must be alerted even more strongly to energy savings and the use of more efficient technologies.

**CR focuses**

RWE wants to play a role in structuring the energy transition. We are intensifying the dialogue with our stakeholders at all levels with the aim of taking well-balanced decisions and enhancing acceptance for our contribution to the energy transition. We are continuously expanding electricity generation from renewable energies. We invest in new efficient, flexible power stations if profitability is guaranteed. We are adjusting our distribution grids to the growing level of feed-in from renewable energies. We are offering tailor-made products for energy savings to our retail, business and local-authority customers.

**Facts and figures for 2012**

Employees	FTEs	40,272
Revenue	€ million	27,602
Capex	€ million	2,321
Customers		
Electricity	thousand	6,678
Gas	thousand	1,292
Power plant capacity		
Lignite	MW	10,331
Hard coal	MW	3,174
Nuclear energy	MW	3,901
Gas (incl. co-generation)	MW	5,209
Biomass	MW	90
Wind onshore	MW	498
Run-of-river	MW	621
Pumped storage	MW	1,023
Distribution of		
Electricity	km	343,750
Gas	km	37,050
Production of		
Oil	thousand m <sup>3</sup>	792
Gas	million m <sup>3</sup>	1,729



## Netherlands, Belgium, Luxembourg



RWE is ranked as one of the leading energy utilities in the Netherlands and supplies electricity, gas, heat and energy services through its subsidiary company > [Essent](#). The hard-coal and gas-fired power stations with a total capacity of 4,746 MW have been managed by RWE Generation since 1 January 2013. Essent is the largest supplier of green electricity in the Netherlands and its focus here is on the use of biomass. The Netherlands and Belgium offer outstanding opportunities for the operation of wind farms. > [RWE Innogy](#) is one of the major investors in wind farms in the Netherlands and Belgium, and its portfolio includes onshore and offshore facilities. At the end of 2012, the company was operating wind turbines with a total capacity of 214 MW. In Luxembourg, RWE Power operates the Vianden pumped-storage plant. This is one of the most powerful pumped-storage power plants in Europe with a capacity of 1,096 MW. The power plant is currently being expanded by an output of 200 MW. The power plant plays a key role in the stabilisation of Europe's electricity grids and in maintaining the balance between feed-in and consumption of electricity.

### Key developments

In 2012, the two gas-fired power plants Claus C (1,304 MW) and Moerdijk 2 (426 MW) went into operation. The 1,560 MW coal-fired power station Eemshaven is still under construction. The world's first 30 turbines of the type Repower 6M, each generating output of 6.15 MW, were erected for the Belgian Thornton Bank offshore wind farm. The wind farm has been designed for a capacity of 325 MW. RWE Innogy has a shareholding of 26.7%. RWE Innogy has also installed two new 6.15 MW wind turbines at the Westereems wind farm in the Netherlands and hence increased its capacity to a total of 168 MW.

### Challenges

The Dutch energy market has been fully deregulated since 2004, while the transmission grid is still firmly in state hands:

- Competition in the residential customer segment of the electricity and gas markets is very fierce. The number of our domestic and business customers has remained virtually constant in the Netherlands, while we have been able to acquire rather more than 100,000 domestic and business customers in Belgium.
- The plan by the year 2020 is to have around 35% of electricity generated from renewable energies, the figure is currently 10%
- As a result of wholesale prices, the euro crisis and generation of solar power in Germany, the Dutch coal-fired and in particular gas-fired power stations are under economic pressure.
- At the beginning of 2013, the Dutch government introduced a coal tax which caused the competitive conditions for gas-fired or coal-fired power stations to deteriorate by comparison with gas-fired power stations and coal-fired power stations abroad.
- The current high level of generation of green electricity produced with the combustion of biomass could tail off in future. At the end of 2015, the current subsidy system runs out. The scope for the continuation of subsidy is not yet clear.

### CR focuses

Essent defined nine areas for action in its CR strategy:

1. Emissions reduction
2. Percentage of renewable energies
3. Energy savings
4. Innovation
5. Health, safety and environment
6. Good working conditions
7. Customer satisfaction
8. Human rights
9. Social engagement

Performance figures and targets have been defined to cover each area for action. They are reported to the Executive Board and CR Advisory Board of Essent each year and submitted for assessment. Essent will revise its CR strategy following on from integration of the power stations in the European generating company RWE Generation. This also includes the areas for action which are to be harmonised even more comprehensively with the group-wide CR strategy. Essent reports on its CR activities in a dedicated CR report.



[> CR Report Essent](#)

### Facts and figures for 2012

		Netherlands	Belgium	Luxembourg
Employees	FTEs	3,453	184	65
Revenue	€ million	4,785	611	73
Capex	€ million	639	1	49
Customers				
Generation	thousand	2,177	283	-
Gas	thousand	1,953	172	-
Power station capacity				
Hard coal	MW	936	-	-
Gas	MW	2,736	133	-
Gas/Oil	MW	610	-	-
Biomass	MW	320	-	-
Wind onshore	MW	214	-	-
Run-of-river	MW	11	-	-
Pumped storage	MW	-	-	1,096

## United Kingdom



The United Kingdom has been our second most important market since 2002. > [RWE npower](#) is the leading electricity utility in the UK and supplier of electricity and gas. The conventional power stations with a total capacity of 13,623 MW were taken over by > [RWE Generation](#) on 1 January 2013. > [RWE npower Renewables](#), a subsidiary company of RWE Innogy, is responsible for expanding renewable energies, particularly in the area of onshore and offshore wind farms. > [RWE Supply & Trading](#) operates energy trading floors in Swindon and London. > [RWE Dea](#) carries out exploration and production operations for oil and natural gas in the British sector of the North Sea and has an exploration licence for the west of Ireland. RWE IT UK supplies internal IT services.

### Key developments

During the years 2011/2012, RWE npower converted the Tilbury power station with a capacity of 742 MW to the combustion of sustainable biomass (wood pellets). This is the first conversion of a coal-fired power station of this size. In September 2012, the Pembroke CCGT power station officially started up operations. It has a net output of 2,181 MW and this makes it the biggest CCGT power station in Europe. It also has the highest level of efficiency. RWE invested around £ 1 billion (€ 1.23 billion) in the power station.

In September 2012, RWE npower announced that the coal-fired Didcot A power station (1,958 MW) and the oil-fired Fawley power station (968 MW) would be taken out of operation under the regulations defined in the "Large Combustion Plant Directive".

RWE has a 50% shareholding in the Greater Gabbard offshore wind farm with a capacity of 504 MW, and pilot operation involving all 140 turbines started up recently. RWE Innogy has also started construction work on the Gwynt y Môr offshore wind farm in North Wales (576 MW). At the end of 2012, 80 "monopiles" (foundations) had been erected for the wind turbines. RWE Innogy has also submitted licence applications for onshore wind turbines with a capacity of 135 MW and the construction of four new onshore wind farms was commenced.

RWE Dea recently started production of natural gas from the Devenick and Clipper South fields which were recently developed.

### Challenges

RWE has four key challenges in the United Kingdom:

- Transferring to a low-carbon economy,
- Maintaining security of supply
- Keeping energy costs at an affordable level and
- Safeguarding the profitability of the company.

We also work together with business and residential customers to enhance energy efficiency. We are well aware of the impacts exerted by rising energy prices on the daily lives of our customers and we are developing products and services which will help them to consume less energy.

**CR focuses**

RWE npower already introduced a comprehensive and systematic CR Management System in 2000. In 2012, RWE npower was listed in the Business in the Community (BitC) CR Index under the Platinum category and the company received the prestigious BitC CommunityMark prize for its Community Investment Programme.

**Facts and figures for 2012**

Employees	FTEs	13,604
Revenue	€ million	9,350
Capex	€ million	1,066
Customers		
Generation	Thousand	3,865
Gas	Thousand	2,648
Power station capacity		
Hard coal	MW	3,512
Gas	MW	6,712
Oil, oil distillates	MW	2,657
Biomass	MW	742
Wind onshore	MW	446
Wind offshore	MW	342
Run-of-river	MW	73
Production of		
Oil	thousand m <sup>3</sup>	22
Gas	million m <sup>3</sup>	431

## Central Eastern and South-eastern Europe/Turkey

The activities of the RWE Group in this region are bundled under the umbrella of RWE East.

> [RWE Hungária](#), > [RWE Polska](#), RWE Transgas (since 1 January 2013 > [RWE Česká republika](#)) and > [RWE Slovensko](#) (since 1 January 2013) distribute and market electricity and gas. Mátrai Erömü is also part of RWE Hungária and operates a lignite-fired power station with its associated opencast mines. > [RWE Turkey](#) is preparing for the market launch in Turkey and is currently setting up a gas-fired power station there. The power station looks set to start up operation from the middle of 2013 and will be managed by RWE Generation.



RWE Innogy develops the generation of electricity from renewable energies in Central and Eastern Europe and the focus is currently on Poland. RWE Dea also carries out exploration for oil and natural gas deposits in Poland. RWE IT maintains subsidiary companies in Poland, the Czech Republic, Hungary and Slovakia. Central IT services are also provided for the RWE Group from Slovakia. RWE Gas Slovensko has been selling gas in the Slovak Republic since 2011.

### Key developments in 2012

In Poland, we are expanding renewable energies. RWE Innogy expanded the wind portfolio in Poland to 152 MW with the takeover of the two onshore wind farms Krzecin and Taciewo in 2012.

We have completed the programme for expanding gas storage facilities in the Czech Republic. Support from the European Union has enabled us to create additional storage capacity of 290 million m<sup>3</sup>. Overall, the gas storage facilities of the RWE Group alone are now able to cover approximately one third of the annual consumption of the Czech Republic. At the end of 2012, we reorganised our Czech companies. Since 2013, RWE Česká republika has been the lead company. RWE Grid Holding will merge the gas distribution grids, which make up around 80 % of the total Czech gas distribution grid and up to now were operated by regional companies. A fund managed by the Macquarie Group is to take a 35 % shareholding in this company.

The companies of RWE Hungária (Mátrai Erömü ELMŰ-ÉMÁSZ Group, Fögáz) published a joint sustainability report for the first time in 2012. (> [CR Report RWE Hungária](#)). The ELMŰ-ÉMÁSZ Group is concentrating on its core business of electricity and gas and sold its shareholding in the Budapest waterworks to the Budapest public utility company in 2012. Mátrai Erömü was able to conclude a long-term delivery contract with its biggest and most important customer, the state energy utility company MVM. This represents an important contribution to the long-term stable operation of the power station.

### Challenges

The intensity of competition is continuously increasing in the energy markets of Central and Eastern Europe. Our aim is to continue maintaining the satisfaction of our customers at a high level and expand our product range for industrial customers. The rise in energy costs impacts negatively on our residential customers. The long-term development of our energy utility companies located in Hungary is being put at risk by government regulations that are difficult to predict and an increasing trend towards political influence. For example, a revenue-based tax was introduced for the utility

companies which is recorded directly upstream of the meters. The “Robin Hood Tax” (tax on the rich) was increased and extended to regulated distribution and sales. At the same time, the regulated consumer prices for electricity and gas were reduced by 10% in order to relieve some of the burden on domestic households. The regulations on CO<sub>2</sub> emissions are being tightened. The Mátra power station therefore has to purchase certificates in order to offset all CO<sub>2</sub> emissions by purchasing certificates from 2013. While the expansion of renewable energies is being encouraged in Poland, the Czech Republic is tending to adopt a conservative position.

### CR focuses

Customer satisfaction forms a focus of our CR activities in Central and Eastern Europa. In Poland, we launched the programme “The customer comes first”. We are analysing the experiences of our customers with RWE. We want to reach the position where our company focuses on the expectations of the customer. RWE Polska has been publishing an annual report on its CR activities for many years.

In Hungary, we are concentrating on the dialogue with our stakeholders, in particular on the efficient use of energy and customer relations, social engagement, employees and environmental protection. We are promoting energy efficiency in our own company and with our customers. We are supporting local authorities where we operate, engaging in work with young people, promoting social and non-profit institutions and making contributions to academic research and training. The focus of activities in the Czech Republic is primarily on sponsoring for film art and safety on the ski slopes.



> [CR Report RWE Polska](#)

### Facts and figures for 2012

		Poland	Czech Republic	Slovakia	Hungary	Turkey
Employees	FTEs	1,455	4,933	373	5,114	90
Revenue	€ million	676	2,975	414	2,245	4.3
Capex	€ million	165	341	0	137	149
Customers						
Generation	Thousand	897	166	-	2,150	-
Gas	Thousand	-	1,594	59	-	-
Power station capacity						
Lignite	MW	-	17	-	763	-
Hard coal	MW	78	-	-	-	-
Gas	MW	-	-	-	152	-
Biomass	MW	-	2	-	-	-
Wind onshore	MW	152	-	-	-	-
Run-of-river	MW	-	-	-	1	-
Distribution of						
Electricity	km	15,550	-	-	46,047	-
Gas	km	-	49,500	-	-	-
Operating area	ha	-	-	-	2,460	-
Opencast mining						

## Western and Southern Europe, Switzerland



RWE is almost exclusively represented in the area of renewable energies in France, Italy, Portugal and Spain. > [RWE Innogy](#) operates wind and hydropower plants in these countries. RWE is also active in the developing and testing of solar power plants in Spain. In Italy, RWE Innogy is erecting a biomass power station that is scheduled to come on stream during the first half of 2013. Overall, we have a total installed output of 514 MW for wind energy and 73 MW for hydropower in France, Italy,



Portugal and Spain. In Switzerland, we have a hydropower plant generating 23 MW. > [RWE Supply & Trading](#) operates a large trading floor in Geneva.

### New developments in 2012

The generating portfolio of RWE Innogy in Western and Southern Europe did not undergo major change in 2012. However, the new Agilde hydropower plant went into operation in Portugal with a capacity of 2 MW. The Enna biomass fired CHP (18.7 MW el) located in Sicily was completed in December 2012. The remaining operations prior to starting up full commercial operation will be carried out in 2013.

### Challenges

The tense position of government finances in Spain, Portugal and Italy is also acting to inhibit investments in renewable energies. The possibility of discontinuing or reducing state subsidies for renewable energies is currently under discussion. Furthermore, an additional tax on generation has also been passed in Spain. The future structure for subsidising renewable energies and the regulatory framework conditions are currently uncertain in a number of countries.

### CR focuses

Our CR activities concentrate on the safe and environmental operation of power stations, particularly the hydropower plants. We will be fuelling the biomass heating station currently being built in Sicily with sustainably harvested wood from local sources.

#### Daten und Fakten 2012

		France	Italy	Portugal	Spain	Switzerland
Employees	FTEs	13	103	0	50	134
Revenue	€ million	352	35	1.5	102	332
Capex	€ million	1	50	0	2	0
Power station capacity						
Wind onshore	MW	-	67	-	447	-
Run-of river	MW	45	-	16	12	23

## Norway



> **RWE Dea** has been operating in Norway for many years, and particularly in the Norwegian sector of the North Sea and the North Atlantic. RWE Dea is involved with different consortia in the exploration and production of oil and natural gas.

### New developments 2012

Exploration work was extremely successful in 2012 and new deposits were discovered in three wells. The development projects in Norway are proceeding according to plan. In the Knarr field, oil production is planned to take place using a specially designed production ship. The oil is to be extracted along vertical pipes and conducted onto the ship. The oil will be stored temporarily on the ship and transported either by ship or along a pipeline. The production ship is currently being equipped for deployment.

### Challenges

Exploration and production of oil and natural gas in the North Sea and in the North Atlantic entail extremely high requirements for safety and environmental protection. The population has developed a very high level of awareness about compliance with the relevant standards. There is also an expectation that companies will make a contribution to the progress and prosperity of the country.

### CR focuses

The safe and environmentally-friendly operation of exploration equipment and drilling rigs is the central focus of all our activities. We engage in intensive communication with representatives of the community. We support cultural life in Norway with a number of initiatives including grants for talented musicians.

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#### Facts and figures for 2012

		Norwegen
Employees	FTEs	88
Revenue	€ million	530
Investments	€ million	202
Production of		
Oil	thousand m <sup>3</sup>	919
Gas	million m <sup>3</sup>	363



## North Africa and Central Asia



> **RWE Dea** produces oil and natural gas in Egypt and carries out exploration and field development in Libya and Turkmenistan. RWE has minority interests in consortia to carry out exploration for oil and gas deposits in Algeria and Mauritania. As part of the first planned reference projects in the Desertec initiative, > **RWE Innogy** initiated a project for combined generation in Morocco, with a capacity of 50 MW solar energy and 50 MW of wind energy.

### New developments for 2012

RWE heads operations at the Disouq field in Egypt and development of the field is making good progress. Conversely, the decision on the site of the land facilities for the major West Nile Delta project has been delayed. However, we are not the operator in this project. In the Algerian Reggane gas project, operations were commenced in 2012. Preparations in Libya to establish a Joint Operation Company with Libyan partners are proceeding. We want to develop a series of viable wells and later start production operations. In Turkmenistan, we successfully completed the seismic measures in the concession there before drilling the planned exploratory well.

### Challenges

Exploration and production of oil and natural gas engender extremely high requirements for safety and environmental protection. An open attitude to the cultural environment is a key prerequisite for acceptance in our host countries. The events and after-effects of the Arab Spring have led to a tense security situation in the region which is discussed and analysed by the management team at RWE Dea on a regular basis.

### CR focuses

The safe and environmentally-friendly operation of exploration equipment and drilling rigs is the central focus of all our activities. The arrangements for personnel management and social benefits take account of the regional conditions and provide for a responsible financial reward and package of social benefits. RWE Dea supports projects to improve school education and the training of skilled workers at local level.

### Facts and figures for 2012

		Egypt	Libya	Turkmenistan
Employees	FTEs	133	60	0
Revenue	€ million	302	0	0
Capex	€ million	152	0	0
Production of				
Oil	thousand m <sup>3</sup>	514	-	-
Gas	million m <sup>3</sup>	56	-	-

## USA



We only engage in significant activities outside Europe and beyond the scope of exploration and production operations relating to oil and natural gas in the USA. > [RWE Innogy](#) operates a plant in the US state of Georgia for manufacturing wood pellets. We supply these pellets to our Tilbury biomass plant in the United Kingdom and to other plants. > [RWE Supply & Trading](#) operates a trading floor in New York and a joint venture with Excelerate Energy in Houston, Texas. Excelerate Energy operates a fleet of liquid gas tankers and specialises in the liquefaction of gas directly on board gas tankers.

### New developments in 2012

After the start-up of the plant in 2011, the first full year of production was completed in 2012 and 600,000 metric t of wood pellets were supplied for our biomass power stations.

### Challenges

National subsidy systems for renewable energies in the United Kingdom and the Netherlands only take account of biomass if there is certificated evidence of sustainable cultivation. Our wood pellets sourced from Georgia in the USA are 100 % certified in conformity with the Green Gold Label and other labels.

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#### Facts and figures 2012

		USA
Employees	FTEs	84
Sales	€ million	10
Capex	€ million	24

## Corporate Responsibility Strategy



**Our Corporate Responsibility (CR) strategy enables us to ensure that we have sustainable corporate governance at RWE. This strategy is based on ten areas for action which we manage using concrete targets and quantifiable parameters.**

We make sustainable corporate governance up to the year 2020 a fixed element in operational controlling of the company. Our roadmap "Sustainable corporate management" presents development since 1998 and our long-term objective.



Our CR Strategy is based on an analysis of the key issues and challenges for our company. We have developed the ten areas for action in our CR Strategy from this analysis.

[> Issues and challenges](#)



We regularly assess the topicality and the relevance of the ten areas for action and then draw up a revised materiality analysis every year.

[> Materiality analysis](#)



We have originated a programme of targets and measures for implementing our CR Strategy. We continue to update the programme every year and take account of development in the areas for action and changes in the boundary conditions and expectations of our stakeholders.

[> CR programme](#)

We consistently pursue this roadroute of making sustainable corporate governance quantifiable and controllable. Part of the variable compensation for the Executive Board is therefore linked to achieving CR goals. The assessment is carried out by the Supervisory Board of RWE AG. The relevant CR aspects are also channelled into the balanced scorecards of the operating companies.

Today, openness, dialogue and participation are the key expectations placed on large companies by the community. We want to live up to this challenge. Large sections of society continue to be very critical of our company when it comes to some issues. We therefore want to expand the dialogue and achieve a high level of acceptance within the community for our actions by the year 2020.

<b>Corporate Responsibility Roadmap</b>					
	<b>Launch (1998–2000)</b>	<b>Structuring (2001–2005)</b>	<b>Implementation (2006–2010)</b>	<b>Role of CR driver (2011–2015)</b>	<b>Best in class (2016–2020)</b>
<b>Strategy</b>	Group Directive environmental management	Group CR guidelines	Review of CR areas for action	Continuous updating of the CR areas for action	CR an integral part of Group strategy
		CR strategy	Embedding of CR in all business areas		
<b>Coordination and management</b>	Permanent staff of environmental officers	Introduction of occupational safety management system	Key performance indicators concept for CR	CR as integral part of agreement on targets	CR an integral part of operations management
	Introduction of Environmental Reporting and Information System	Introduction of Group-wide Code of Conduct	Group-wide CR implementation	Regular reporting on KPIs	
<b>Reporting and dialogue</b>	1 <sup>st</sup> systematic environmental report	Convention on the future of sustainable development	Institutionalised stakeholder dialogue	Industry leader in transparency	High level of acceptance in society
	Inclusion in Dow Jones Sustainability Index	1 <sup>st</sup> CR report	Corporate volunteering		

## Issues and Challenges



We have identified the key issues for sustainable corporate governance in the RWE Group based on an analysis of our value chain. Each part of our value chain has specific challenges ([> Value Chain](#)).

However, our sustainable corporate governance is also determined by the varying requirements in the countries where we are operating. The European Union defines uniform framework conditions on many issues but there are differing political objectives at national level. The expectations of our stakeholders also vary depending on countries and regions. We interpret our stakeholders as being all the individuals and organisations who we already interact with. Stakeholders are also people we engage with in dialogue or who seek dialogue with us. We also regard anyone who is interested in our company as a stakeholder.



The CR Report 2012 includes a detailed description of the countries and regions where we have operations to highlight this initial position and to indicate the differing framework conditions from country to country ([> Countries](#)). We present the dialogue with our stakeholders in a separate section ([> Stakeholder dialogue](#)).

In 2007, we identified ten “areas for action” from the variety of sustainability issues resulting from our value chain and from the countries and regions:

- Climate Protection
- Energy Efficiency
- Innovation
- Security of Supply
- Supply Chain
- Pricing and Marketplace
- Employees and Demographic Change
- Occupational Safety and Healthcare Management
- Environmental Protection
- Community Engagement

We recorded the aspirations of our stakeholders and the internal perspective of our company in a large number of forums and discussions. We then took these views into account when we developed the areas for action. The Group considers the ten areas for action to be the most important sustainability issues for RWE. However, the weightings attributed to the areas for action may well be different in individual countries and regions.

The areas for action mean that we are in a position to present a systematic profile of sustainable development within the RWE Group and continuously track its progress through the target parameters and indicators.

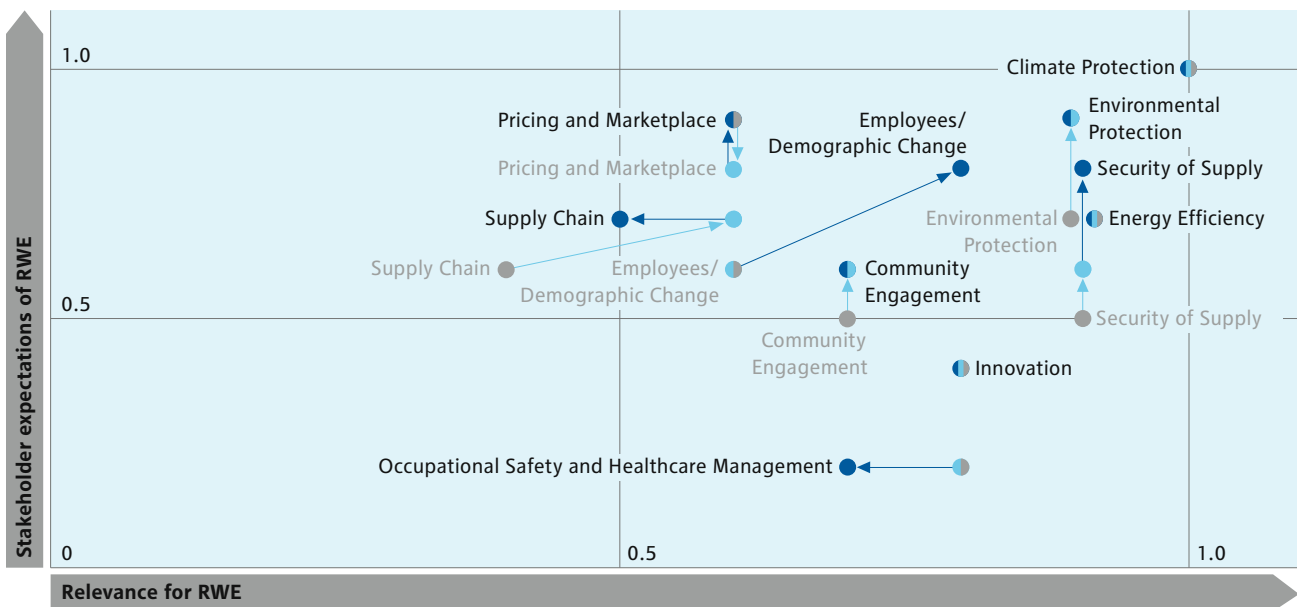
The areas for action underlie a permanent alignment. The weightings attributed to the areas for action are continuously shifting in accordance with the expectations of our stakeholders and the changes that occur within society, business and politics. The section on materiality addresses this in more detail.

Now that some five years have elapsed, we are carrying out a fundamental assessment of the ten areas for action. During the second half of 2012, we launched a process of review for our CR Strategy. We have joined forces with the operating companies in order to review the appropriateness of the areas for action, assess whether they are still fit for purpose and work out focuses for the future of our CR Management. We look set to have completed this process in the second quarter of 2013 and we will then implement the results.

## Materiality analysis 2012

The annual reassessment of the CR areas for action is a fixed element in our CR Management. The Corporate Responsibility Department continuously follows discussions in the public domain and assesses the positions of our stakeholders on all sustainability issues. An evaluation is then carried out using this information to establish whether the relevance of the areas for action have changed from the perspective of the stakeholders and from the viewpoint of the company. If they have changed, we assess how it alters their relevance. This is carried out in a process of intensive communication with colleagues from the various departments and the companies in different countries where we operate.

Material issues 2012 in comparison with the previous years



● 2010 ● 2011 ● 2012

We have shown our assessment in a chart with a relative evaluation for each area from 0 to 1. In 2012, Germany in particular engaged in an intense debate about the energy transition and its consequences. Following on from discussion, the relevance of a number of areas for action changed, in particular for the assessment of stakeholders' aspirations. Climate protection continues to be the most important issue. This theme will remain a major topic on the political agenda. The issue of climate protection also has a very high priority from the perspective of our company due to our high CO<sub>2</sub> emissions (> [Climate Protection](#)).





In 2012, the area for action Security of Supply underwent a significant increase in importance for our stakeholders in Germany. The resilience of the electricity grids and adequate reserve capacities of power stations were the subject of intense discussion. Security of supply has gained a high level of importance from the perspective of RWE, as demonstrated by investments in electricity grids and new, flexible power stations during recent years ([> Security of Supply](#)).



The issue of a cost-effective energy supply has once again become the source of much debate in the public domain. The discussion mainly focuses on the additional financial burdens arising from the subsidies provided for renewable energies, the fair distribution of these negative consequences and the expansion of transmission grids, and to a lesser extent our own pricing policy. We have therefore raised the importance by one point from the perspective of our stakeholders ([> Pricing and Marketplace](#)).



The increasing pressure on costs entailed by the energy transition is exerting a direct effect on our personnel policy. Some prospective personnel shortages emerged over recent years as a result of the demographic change. These are now being overlaid by difficult framework conditions for the energy industry and in some cases the shortages are being overcompensated. This situation has created significant challenges for our employees and for corporate governance ([> Employees and Demographic Change](#)). The importance of this area for action is therefore undergoing a major increase from the viewpoint of stakeholders and from the perspective of the company.



Conversely, we have identified a slight decrease in relevance relating to two areas for action. Occupational Safety and Healthcare Management continue to be core elements of our corporate governance and the important management systems have now been well-established in our company. The focus of activities is now on group-wide implementation and continuous improvement ([> Occupational Safety and Healthcare Management](#)). We have also put the importance of the area for action Supply Chain in context and corrected this area by one point downwards from the perspective of RWE. Taking account of all the aspects of the Supply Chain, we assess the relative relevance for RWE as not as high, for example, as Pricing and Marketplace.

We have not identified any changes in the other areas for action. As far as RWE is concerned, the areas for action continue to be relevant for the operational activities on the scale indicated. Energy efficiency is a key building block to achieve the climate targets in all the countries where we are operating. However, we have not observed any major new initiatives from governments or stakeholders. Innovation continues to play a key role for the future structure of the energy industry and in particular for moving the energy transition forward. Despite the general financial restrictions in the RWE Group, we will keep the level of the R&D budget the same as in the previous year. Equally, the assumption of responsibility for Community Engagement continues to form an absolutely essential platform for acceptance of the company by society. In 2012, we did not observe any significant changes in the expectations of our stakeholders and the assessment by RWE.



## Our CR management

Our Group Centre is responsible for managing the implementation and realisation of Corporate Responsibility. As Coordinator, Chief Executive Officer Peter Terium is responsible for Corporate Responsibility in the RWE Group. On 1 July 2012, the organisational units CR/Environmental Protection, Social Engagement/RWE Foundation and Diversity were grouped together in a new “Corporate Responsibility” Department in order to strengthen sustainability in the RWE Group. The head of the department Marga Edens reports directly to Chief Executive Officer Peter Terium.

The cooperation between the Group Centre and the operating companies is carried out through the team of CR Officers where all the major operating companies are represented. The meetings serve as forums for exchanging ideas and agreeing joint activities. Two meetings of CR Officers were held in 2012.



As part of our CR Management, we cooperate with the Group companies in tracking all key developments in the area of sustainability and assess their relevance for the RWE Group. The dialogue we have with our stakeholders yields important information in this area ([> Materiality Analysis](#)).

We then derive appropriate measures from this process. For example, in 2012 we carried out a more intensive dialogue about sourcing our hard coal. We joined the “Bettercoal” initiative and intensified our dialogue with coal suppliers. We are also addressing other issues such as biodiversity and water consumption so that RWE is able to take up a position in the public debate and if necessary take appropriate measures.



Since 2011, we have been submitting a Declaration of Compliance on the German Sustainability Code with the aim of increasing the transparency of our governance. This is published on the project page of the German Council for Sustainable Development.

[> Declaration of Compliance with the German Sustainability Code](#)

We use ten areas for action to track sustainable development at RWE. Indicators and targets clearly identify our current position and where we want to go. Since 2010, we have supplemented our CR programme with concrete key performance indicators. We use these KPIs to track the development in the areas for action of our CR Strategy.

The demands on the quality of our indicators are increasing at the same pace as the growth in importance of Corporate Responsibility. There are recognised global targets for this, such as the AA 1000 or the guidelines of the Global Reporting Initiative and we want to meet these targets in our CR Management and in our reporting. We have therefore created a Data Recording Manual with the aim of improving the quality of our CR indicators. This manual sets out binding definitions, reporting limits and processes for collecting data on the CR indicators. Drawing up the manual also enables us to comply with the recommendations made by the auditor in the CR Report prepared in 2011.

The areas for action were developed in 2007. After more than five years, we believed that it is necessary to carry out a review of the ten areas for action. To this end, we launched a group-wide process in the second half of 2012. This review is focusing specifically on ascertaining whether the current form of the areas for action continues to correspond with our challenges and how we are able to place more emphasis on Corporate Responsibility in the RWE Group. This strategic process is likely to be concluded at the beginning of the second quarter of 2013 and will then be implemented.

## Other management systems

Corporate Responsibility in the RWE Group covers a broad spectrum of issues. The responsibility for concepts and their implementation on specific areas for action is with the relevant specialist departments of RWE AG or the Group companies. They have developed tailor-made management systems where appropriate.

### Environmental protection

Protection of the environment is a statutory requirement for obtaining an operating licence for the maintenance and continuation of the operating licences to run our plants and facilities. Compliance with stringent regulations covering environmental protection is also a requirement of our stakeholders and exerts a direct influence on the reputation of our company. A guideline applicable across the Group therefore commits the companies within the RWE Group to set up appropriate environmental management systems. Operational implementation of environmental protection is therefore under the remit of the individual companies, in accordance with their specific activities and the statutory regulations. The Group Centre has been carrying out annual audits for more than ten years checking the structure and effectiveness of the management systems at Group companies. On this basis, RWE has set up a stable environmental management system covering 99.6% of the Group. In 2012, RWE AG established its own environmental management system. This means that it is subject to the same requirements which apply to its subsidiary companies. Around 480 employees work at the Group Head Office in Essen. When projects are being developed, one of the central environmental functions within RWE AG is taking account of environmental aspects. The companies in the RWE Group are free to choose whether to have their environmental management systems certified entirely or in parts in conformity with ISO 14001. Virtually all the power stations in the RWE Group are certified in conformity with ISO 14001. The certification level as a function of the number of full-time employees is similar to the percentage of 43.1% in the previous year.

### Occupational health and safety

RWE wants to ensure that our workforce and the employees of subcontractors return home just as healthy at the end of the day as they were when they arrived for work. Group-wide coordination of occupational health and safety is handled by the Occupational Safety and Occupational Medicine/Healthcare Management competence centres set up in 2009. They report directly to the Chief Human Resources Officer at RWE AG.

The strategy and measures taken to improve occupational safety are agreed in an international occupational safety forum. Companies operating in the sectors of oil and gas production, lignite mining, electricity generation and grid operation are particularly demanding with respect to occupational safety, and these have had their occupational safety management inspected and certified in conformity with OHSAS 18001 or comparable standards by independent third parties. The level of certification is 33.9% throughout the Group.

Occupational Healthcare Management has been centrally coordinated for all German companies since 2009. The other companies are responsible for the issues of occupational health and occupational medicine. Since 2012, RWE East has therefore started to establish systematic company healthcare promotion.

### Compliance

RWE does not tolerate any corruption or other breaches of compliance. Incidents involving corruption have the potential to cause the company substantial material damage as well as entailing associated serious reputational risks. We therefore attribute great importance to compliance in all business decisions and we do not enter into business relations if potential suppliers and partners fail to live up to our compliance requirements.

RWE has been building up a group-wide system of Compliance Management since 2009. The main focus is on raising the level of awareness and on prevention. The aim is to prevent corrupt behaviour by employees and executive officers of the company right from the start.

A group-wide reference standard sets out a guidance framework for our employees. The principles for compliant behaviour are described in our > [Code of Conduct](#). Details are included in the Group guidelines on prevention of corruption. They primarily include guidelines relating to dealings with holders of public office, business partners and politicians, expenditure on donations and sponsorship measures, and handling contracts with consultants. Compliance with the guidelines is supported by organisational regulations, e.g. the double-checking principle, separation of functions, authorisation concept and rules for approval.

### Compliance organisation and training sessions

Compliance Management is handled by the Group Centre through the Compliance Department. The Chief Compliance Officer reports directly to the Chief Executive Officer. All the operating companies are integrated in Compliance Management. The companies have appointed their own Compliance Officers who are responsible for ensuring uniform implementation of group-wide compliance principles. We have also appointed an independent external ombudsman. Employees can contact the ombudsman if they have identified breaches of compliance with the Code of Conduct and they do not wish to address these breaches with their supervisor or Compliance Officer. Any inquiries will be treated in strict confidence and will be handled anonymously if requested by the employee. Since the beginning of 2012, the external ombudsman has accepted inquiries from employees of subcontractors, suppliers and other business partners as well as from members of the workforce of the RWE Group. An international law firm is available to all employees of the Group as a contact – supported in some cases by partner law offices – to accept inquiries in the relevant national languages in Germany, the United Kingdom, the Netherlands, Poland, Slovakia, the Czech Republic and Hungary.

Regular communication of information and instructions play a role in raising the awareness of behaviour that conforms to compliance guidelines, as well as the risks to the company and individual employees if compliance is breached. A regular newsletter, articles in our staff newspaper, information events and the group-wide Intranet provide conduits for informing our employees. Our workforce also receives training through a web-based training programme and at presentation events.

Participation is obligatory and calibrated according to the risk of corruption associated with the relevant activity. In 2012, we continued to implement a process of ongoing training for corruption prevention. More than 4,850 employees participated in training sessions during the course of 2012.

### Compliance supervision and monitoring

We set up a group-wide database in 2010 to deliver comprehensive documentation of all compliance-sensitive procedures. This stores all information and documents relating to expenditure on donations and sponsorship, compliance-relevant contracts with consultants, and promotional gifts to holders of public office from a specified amount. The database safeguards the maximum possible transparency within the company for all transactions relevant to compliance. They also offer our employees comprehensive advice and support in processing the defined transactions through help options and links to the relevant Group guidelines. The obligation to use the Compliance IT Tool ensures that statutory regulations and internal guidelines within the Group are complied with. It also provides employees with greater protection against any infringements of the law.

We systematically identify and evaluate the compliance risks that occur for the RWE Group in the area of corruption. The process adopts a two-stage approach. In the first phase, we determined the risk profiles of the Group companies which report directly to RWE AG during the course of 2012 with reference to an internal list of criteria. In a second stage, we will carry out a close analysis of the measures taken by the companies to prevent corruption during the course of 2013.

The Group Audit Department carries out regular preventive Compliance Audits in the Group companies in order to review the effectiveness of our Compliance Management across the Group. The focus of the review includes implementation of compliance-relevant Group guidelines. The Group Audit Department also consistently follows up any information on potential breaches of compliance. If necessary, measures to remedy the situation are subsequently initiated. If personal misconduct is involved, the entire spectrum of measures under employment law may be brought to bear, through to termination of the employment relationship. Notifications of compliance breaches are dealt with by the Compliance Department of RWE AG and the relevant Compliance Officers of the Group companies. The audits carried out by the Group Audit Department for the year 2012 revealed no serious or systematic breaches of our compliance guidelines. However, there were deviations in processes and documentation which have been remedied without delay.

The Executive Board of RWE AG commissioned an audit of the Compliance Management System (CMS) to combat corruption in accordance with the Audit Standard 980 drawn up by the German Institute of Auditors (Institut der Wirtschaftsprüfer) for 2012/2013 in order to ensure independent monitoring of the compliance system. In August 2012, auditors KPMG started to audit the conceptual approach and the appropriateness of the CMS. The audit of the effectiveness will follow in 2013. In November 2012, RWE established the German Institute for Compliance (DICO) together with other major companies. The aim of the institute is to work together with academics on more advanced practical compliance management systems that take international developments into account.



> [German Institute for Compliance \(DICO\)](#)

### Innovation management

Development and application of new technologies, procedures and processes are absolutely essential for the long-term success of our company. Research and development are therefore managed by a dedicated department in the RWE Group which reports to the Chief Commercial Officer. The department draws up concepts outlining the development of future energy supply and defines R&D activities that are necessary to achieve these aims. The department also manages and coordinates the research and development activities in the operating companies as part of the group-wide R&D Strategy. Key criteria for assessing new technologies constitute their contribution to mastering the central challenges of the RWE Group, such as climate protection and security of supply. The development of innovative business models facilitated by new technologies is gaining increased importance, such as the use of CO<sub>2</sub> as a raw material, or electromobility.

### Corporate security

RWE regards protection against criminal actions as a key factor for success, in order to ensure long-term earnings power, stability and the business success of the Group. The security concept of RWE covers the protection of tangible and intangible assets, and protection of employees against criminal actions as a constituent element of business processes. We have established consistent, group-wide structures, reference standards and processes to achieve this end. Individual national statutory regulations vary to some degree but they are the defining factors. Inclusion of employees and the co-determination committees is an important factor for success in security management. We have carried out group-wide and company-specific activities with the objective of raising awareness for security as an issue.

RWE will follow up all criminal actions and will bring prosecutions before the courts in all cases. A group-wide whistle-blower system is available to all employees for this purpose. The departments of Compliance, Auditing and Security (Group Security) will work closely together in any investigation and review of breaches that may be necessary.

RWE also plays a proactive role in a variety of security partnerships with government authorities and within the industry with the aim of achieving a permanent improvement in its preventive measures. For example, in July 2012 RWE joined the security partnership in Germany for combatting metal thefts.

Energy supply and in particular the supply of electricity constitute a vital infrastructure, and supply bottlenecks occur if there are any outages or impairment of the infrastructure. Such problems may have major economic consequences and public security may be significantly compromised. RWE is the biggest operator of the electricity distribution grid in Germany. We are well aware of our social responsibility and we have regular communication with politicians and the responsible government agencies. Representatives of RWE play an active role in the relevant committees and public bodies.

### Travel security

RWE has a duty of care towards its employees, most importantly also including periods when they are on business trips. RWE works together with specialist partners to carry out security assessments of the countries and regions where we send our employees and to draw up security classifications. Security information and explanations are provided for each country. Business travel to high-risk countries requires security clearance by Group Security and involves security measures. The internal Travel Booking System enables RWE to track the destinations of its employees. Appropriate security training can be provided as required to employees and members of their family for long-term secondments.

### Crisis management

We have made comprehensive organisational preparations to overcome crisis and emergency situations. Crisis teams have been appointed at different levels and they are accessible. The information cascade ensures that senior crisis teams are informed at an early stage and appropriate preparations can be made. Manuals, alarm lists or tools, and the necessary technical equipment are available for crisis management. We carry out regular emergency training courses and exercises.

Emergency plans are drawn up at the operational level for different scenarios. The robustness of the approach adopted by RWE was put to the test at the beginning of 2011 when employees and their families were evacuated from Egypt and Libya as part of managing the crisis there.

Restarting business processes after major interruptions is controlled by “Business Continuity Management”.

## Stakeholder dialogue

Honest and constructive stakeholder dialogue is a key element in ensuring the success of the energy transition. In particular, the expansion of renewable energies, the modernisation of the portfolio of conventional power stations and the grids demand early integration of the local residents and communities impacted by these projects. Dialogue is the only way of achieving acceptance in the public domain for the construction measures required. A spin-off comes from engaging in continuous dialogue as this engenders support for our core business in relation to our facilities, sales activities and the relationship with suppliers. Our aim over the long term is also to strengthen trust in our companies in this way and to enhance our acceptance within the local community. We regard this as an important platform for the success of our company.

### Dialogue with the Executive Board

We believe it is important to have a dialogue between our stakeholders and RWE's decision-makers. Since our Chief Executive Officer, Peter Terium, took up his post, he has been holding a series of regular discussions with stakeholders from the community associated with the company, including major environmental conservation groups. These discussions are similar to those held by colleagues in the Management Boards of RWE AG and the operating companies.

The discussions help both sides to understand the different positions and highlight common ground. This may lead to future cooperative projects in different forms (see below). We regularly issue invitations to events like RWE Talk in Berlin and formats like this offer a platform that allows Executive Managers and Board Members of RWE to engage in regular debates on important current affairs and other topics with politicians, representatives from other companies, journalists, as well as representatives of unions and a range of different interest groups. The focus is on engaging in a lively debate and exchange of ideas.

### Germany

Acceptance by local residents is a critical factor for the success of the energy transition. RWE commissioned an Acceptance Study with the aim of better understanding the conditions and opportunities to facilitate an increased level of acceptance. Citizens are in favour of the energy transition. However, many people believe that they are either not informed or that they have not been informed at a sufficiently early stage. The study shows that honest dialogue at an early stage between companies and the community increases acceptance for projects. There is a demand for companies like RWE to communicate the specifics of projects in a comprehensible way and to adopt an open approach to the attitudes espoused by local people and the proposals they put forward.



[> Acceptance study](#)

At regional level, RWE Deutschland has been holding an "Energierundstisch" (Energy Round Table) since 2011. This format gives local residents a forum for finding out about the latest energy issues. They can also put forward suggestions or concerns about specific projects related to the energy transition.



Another successful initiative at regional level is the “Nachbarschaftsforum” (Neighbourhood Forum) set up by RWE in Niederaußem near Cologne in the Rhineland industrial area. Neighbours, associations and other stakeholders can use this forum to engage in discussion with RWE about issues related to electricity generation and power stations. RWE also engages in regular dialogue in the Rhineland industrial area with politicians in the local community including mayors, district administrators and members of the “Landtag” (regional parliament) across the political spectrum in order to facilitate mutual exchange of views about current developments and decisions. Regular so-called “power station talks” are held at different locations with the same objective.

### United Kingdom



One focus in the United Kingdom is on stakeholder dialogue with customers and consumer protection organisations. These are represented in the Customer Stakeholder Council which met twice to discuss current issues in 2012 ([> Pricing and Marketplace](#)).

### Netherlands

When RWE acquired Essent, it reached an agreement with the existing owner to set up the “Essent Sustainable Development Foundation” (ESDF). The aim of this foundation is support the sustainable development of Essent after the takeover by RWE. The representatives of the local authorities as former owners of Essent and the Executive Board discuss the situation on the energy market, political developments, development at Essent and new initiatives to create a sustainable economy. The Advisory Council met twice in 2012.

Essent has set up a Corporate Responsibility Council comprising five independent experts from politics, academia, business, consumer representatives and environmental protection. The council advises the Executive Board on sustainability issues. In 2012, the Corporate Responsibility Council discussed the use of biomass for generation of electricity and heat, and the cooperation with social organisations directed towards ensuring mutual benefit.



Essent continues to participate in the “Dutch Coal Dialogue”, where issues relating to the import of coal from non-European countries are discussed ([> Supply Chain](#)).

### Central and Eastern Europe

We also engage in dialogue in Central and Eastern Europe. We have been talking to various stakeholders in Hungary for a very long time – with customers ([> Pricing and Marketplace](#)), employees and also with other community groups. We are continuing to work together with students at university involving a debate about issues related to the energy industry and highlighting career perspectives in the sector.

### Joint ventures

We were able to announce the signature of a Memorandum of Understanding between RWE and the International Union for Conservation of Nature ((IUCN) on the protection of species diversity at the World Economic Forum held in Davos during January 2013. The objective of the agreement is to help us to improve our assessment of the impact our actions have on the ecosystem, particularly when undertaking new projects. Initiatives connected with offshore wind farms in the North Sea are one example of the target projects. The joint venture is scheduled to run for three years.



We are working closely together with all the affected stakeholders within the framework of our supplier relationships in order to develop suitable standards and assessment criteria with particular emphasis on imported hard coal and biomass ([> Supply Chain](#)).

## CR Programme

Climate protection					
We are committed ...	KPI	Target	Due	Action	Status 31.12.2012
... to significantly reducing the CO <sub>2</sub> intensity of our generation portfolio.	CO <sub>2</sub> emissions in metric tons per megawatt hour of electricity generated (metric t CO <sub>2</sub> /MWh)	0.62 metric t CO <sub>2</sub> /MWh	2020	- New building of more than 7,200 MW gas-fired, 2,100 MW lignite-fired and 3,088 MW hard-coal power stations plus an additional 4,500 MW from renewables either under construction or in operation until 2014	6,509 MW gas-fired power stations, 2,100 MW highly efficient lignite-fired power stations put into operation; all other newbuilds in progress. 4,133 MW renewables in operation; CO <sub>2</sub> Intensity 0.792 metric t/MWh
Energy efficiency					
We are committed ...	KPI	Target	Due	Action	Status 31.12.2012
... to increasing both our own energy efficiency and that of our customers.	Increase in energy efficiency in %	- RWE power stations: 41.2 % degree of energy use - RWE fleet of vehicles: 20 % by 2012* - RWE real estate: 5 % by 2012* - RWE customer projects: 8 % by 2012*  * Targets are being revised in 2013	2012/ 2015	- Power station modernising programme - Implementation of "Green Car policy" - Energy-conserving modernisation of buildings - Customer advice, smart meters/Smart Home, contracting models with municipal utilities and industry	- 39.2 % degree of energy use - 22 % reduction in fuel consumption of company cars since 2009 - 31 % efficiency increase on real-estate projects in Germany - 13 % energy savings in households through the "Cleverer Kiez" project
Innovation					
We are committed ...	KPI	Target	Due	Action	Status 31.12.2012
... to ensuring the availability of the best solutions for our purposes in our core processes through innovations.	Degree of coverage and communication of strategically relevant questions in %	at least 98 %	2012/ 2015	Sample projects: carbon capture , CO <sub>2</sub> usage, improvements in power station efficiency, offshore wind power, solar thermal power, compressed air energy storage, smart grids, smart meters, SmartHome	Processing and communication of strategically relevant R&D issues; management covers 100 %

<b>Security of supply</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to supplying our customers with the energy they need at all times.	System Availability Interruption Duration Indicator (SAIDI) in minutes per year and customer	- SAIDI < 25 min./ customer (Germany only)	2012	- Approx. €25 billion group-wide for grid renewal, expansion and operation in the period 2009 to 2019	- SAIDI (2011): 18.1 min./ customer per year (Germany only)
<b>Supply Chain</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to avoiding reputational risks by making compliance with internationally recognised social and environmental standards an integral part of our supply contracts.	Supplier management coverage in all procurement areas in %	At least 98 % of annual purchase volume	2012/ 2015	- Adding CR criteria in the general Terms and Conditions of Business (AGB) - Extend dialogue with our stakeholders regarding the purchase of coal and biomass ('Bettercoal', Dutch Coal Dialogue) - Development of CR principles for procurement of goods	- Supplier management coverage 98.6 % - Founding of the sector initiative "Bettercoal" - Principles for the procurement of biomass implemented
<b>Pricing and marketplace</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to having satisfied and hence loyal customers.	Customer Loyalty Index	Customer Loyalty Index of min. 74	2015	- Retention of good service quality - Expansion of energy-based services	- Customer Loyalty Index of 72
<b>Employees and demographic change</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to ensuring the long-term availability of sufficient numbers of suitably qualified personnel.	Demography Index	Demography Index of min. 84	2012 - 2015	- Continue phased-in retirement and redundancy conditions - Implementation of human resources policy geared to different life phases - Increase in number of women in leadership positions	- Demografieindex von 83,9

<b>Occupational health and safety</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to ensuring that all our own and our subcontractors' employees return home just as healthy at the end of the day as they were when they arrived for work.	- Number of accidents leading to the loss of at least one person day per million working hours (LTI <sub>F</sub> : X/1,000,000 h)	- LTI <sub>F</sub> of max. 2.3 by 2014 (including subcontractors)	2011/2014	- Ongoing implementation of "Sicher vorWEg" (the Energy to Lead Safely), safety pass introduced for all construction sites, inclusion of subcontractors' employees in accident statistics	- LTI <sub>F</sub> (own staff and subcontractors), 2.8
... to maintaining our employees' productivity.	- Introduction of the Work Ability Index (WAI) in %	- 15,000 responses to the WAI in Germany	2015	- WAI to be introduced across Germany and the results evaluated	- more than 11,000 responses to the WAI in Germany
<b>Environmental protection</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to operating our plant safely and in compliance with licensing regulations at all times.	- Compliance with licensing requirements in %	100 % compliance	2013	- Monitoring and optimising plant management	- No significant deviations from environmental protection laws and licensing regulations
... to 100 % implementation of our environmental management system to ensure that our plants and grids are operated in compliance with legal requirements at all times.	- Group-wide environmental management coverage in	100 % coverage		- Installation of an environmental management system in all new companies, regular internal audits	- Environmental management covers 99.46 %
<b>Community engagement</b>					
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>	<b>Due</b>	<b>Action</b>	<b>Status 31.12.2012</b>
... to strengthening our regional reputation by making efficient use of resources.	Reputation Index	Best reputation in our peer group	2013	- Systematic development of regional level community engagement - extension of Corporate Volunteering - focussing of activities of foundation	- Best reputation in our peer group

## Climate Protection



We will consistently pursue our efforts directed towards climate protection and play a proactive role in reducing our specific CO<sub>2</sub> emissions. These form part of our responsibility to the community and we have a duty to reduce our CO<sub>2</sub> emissions during electricity generation, which are well above average compared with our competitors. The financial risks of our CO<sub>2</sub> emissions are reflected in our risk management.

The year 2012 was defined by a lively public debate in Germany about the energy transition. This transition is also being closely tracked in other European countries. As a company, we want to play a proactive role in structuring a successful energy transition. If it succeeds, other economies will also be able to use it as a role model. As is the case with European energy policy, the central goal of German policy is to continue significantly reducing the emission of climate gases. Germany also wants to achieve this goal by more intensive development of renewable energies and additionally by phasing out the generation of electricity from nuclear energy. This leads to fundamental and structural changes in the electricity industry involving generation, and transmission and distribution.

### OVERVIEW OF THE MOST IMPORTANT FACTS:



### Climate protection, security of supply and value for money

We welcome the fact that since 2012, security of supply and value for money have been accorded a similar status within the debate in the public domain as climate protection. It has become obvious that climate protection cannot be viewed in isolation from the two other aspects that make up the triangle of energy policy – security of supply and value for money.

Since the 1990s, we have been continuously renewing our power station portfolio with modern, highly efficient power stations and this has also enabled us to reduce the specific CO<sub>2</sub> emissions in our conventional portfolio. Since 2008, we have also been driving forward our investments in renewable energies with RWE Innogy.

We are therefore pursuing the target of reducing our specific CO<sub>2</sub> emissions from the current level of 0.79 metric t/MWh to 0.62 metric t/MWh in 2020. The financial risks of our CO<sub>2</sub> emissions are reflected in our risk management. The hard-coal and gas-fired power-stations currently under construction are expected to be completed in 2014. During the years 2010 to 2014, we will therefore be bringing on stream advanced plants with a total capacity of some 12,500 MW. Overall, we are therefore investing around €12 billion in renewal of our power station portfolio and we are replacing some 25 % of our generating capacity.

In order to continue our programme of power station renewal, we are currently working towards obtaining approval for the 1,100 MW project “Optimised Unit Plus” (BoAplus) of the power station in the Rhineland lignite mining area and for a Combined-Cycle Gas Turbine (CCGT) plant at the Gersteinwerk power station in Werne with a capacity of 1,300 MW. Both processes should open up new-build options for the future. We are also investing in the further expansion of renewable energies over the long term.

### Aspirations of our stakeholders

The field of tension between climate protection, security of supply and value for money defined the public debate in 2012 – this was evident in the talks and discussions with our stakeholders. Above all, environmental organisations and large sections of the political system expect us to pursue ambitious targets for reduction of our greenhouse gas emissions. Some of our stakeholders are also concerned that current challenges like rising prices or security of supply could reduce the importance of climate protection. Conversely, retail customers often harbour considerable concerns about the development of electricity prices. Contrary to the situation in previous years, the consequences of an increase in the price of electricity for low-income households are emerging as the focus of debate. The increase in electricity prices is driven by a number of factors including the levy for promotion of renewable energies, in particular photovoltaics, imposed on retail consumers, and the expansion of transmission grids. Apart from value for money, industrial customers are even more emphatic in calling for grid stability and security of supply. Even short power outages can cause significant loss and damage in industry under certain circumstances. RWE is engaging fully with this multifaceted debate. Our concern in this discussion is to highlight the fact that we are striving to create a well-balanced overall solution which takes account of all the different aspects.

### Political and economic framework conditions

The first phase of the pioneering international Kyoto Protocol on climate protection expired at the end of 2012. A second commitment period of the Kyoto Protocol (Kyoto II) was agreed at the international conference in Doha at the end of 2012. However, the countries involved in this process only represent some 10% of global greenhouse gas emissions. Binding worldwide regulations on climate protection should also be negotiated by 2015 and will apply from 2020.

The EU Emission Trading System has become established in the European Union as a tool for climate protection. It allows the European reduction targets defined at the political level to be achieved with minimum costs in macroeconomic terms. Prices for emission certificates are currently at a low level – compared with our original expectations. This is being criticised by a number of representatives from the political and corporate spheres, and a large number of non-government organisations. They are demanding a reduction in the emissions certificates available in order to create stronger incentives for investments in low-carbon technologies.

Despite the unexpectedly low prices for emissions certificates, the upper thresholds in reduction targets in the emissions trading sector defined by the European Union are being achieved. The economic crisis and the expansion of renewable energies have both contributed to achieving this. As a result of comprehensive efforts directed towards climate protection and due to the weak economic development, CO<sub>2</sub> emissions in the European Union which are not covered by emissions trading have undergone more significant decline than expected.

At European level, the framework conditions for the future structure of emissions trading continue to remain unclear. However, as a result of the relatively low prices for CO<sub>2</sub> emission rights, interventions in the market are not excluded.

### Promotion of renewable energies

The German Renewable Energies Act (Erneuerbare-Energien-Gesetz, EEG) has been widely praised by environmental organisations in particular for its effect in acting as a role model for other countries. However, it is increasingly being criticised by stakeholders from the political and business arenas, as well as by consumer associations due to its effects on the price of electricity. The promotion of photovoltaic generation with feed-in priority and remuneration fostered by statutory regulations has led to a surprisingly robust expansion and has therefore resulted in rising levies under the legislation that have been passed onto consumers. The federal government is currently also planning a further amendment to the promotional instruments. In view of the elections to the German parliament (Bundestag) due for 2013, it is very difficult to assess how the promotional instruments for expanding renewable energies will be structured in the future.

The government debt crisis and the weak economy in many EU countries mean that the systems for financial subsidy of renewable energies are also being placed under increasing scrutiny and some adjustments are being made – not infrequently with a trend towards reducing the level of subsidies for the relevant technologies. There is no harmonised European system of subsidies, rather the promotion of renewable energies is organised by individual countries. Particularly in the southern countries like Spain, Portugal and Italy, where the debt crisis has exerted major impacts, it is much



more difficult to predict the development of energy markets. As a company operating in these target markets we are very carefully monitoring developments at the individual national level and at the European level so that we are equipped to meet the challenges of the future.

Objectives in the area for action Climate Protection

**Target attainment**

We took significant strides in our power-station renewal programme during the course of 2012. Three new combined-cycle gas turbine (CCGT) power stations came on stream simultaneously at Pembroke (United Kingdom), Claus C and Moerdijk 2 (both in the Netherlands) with a total of more than 3,900 MW of power output. During the second half of 2012, we also started up operations in Germany at the lignite-fired power station with optimised plant technology “Optimised Unit” (BoA 2&3) generating 2,100 MW and in exchange shut down a total of 16 existing lignite-fired power-station units with significantly higher CO<sub>2</sub> emissions by the end of 2012. In the area of renewable energies, we brought on stream a total of around 390 MW of new renewables in 2012. This new capacity was divided into 252 MW generated by offshore wind, 130 MW by onshore wind, 8 MW by biomass power stations and 4 MW by hydropower plants. The proportion of renewable energies in the total generating capacity amounted to 8.0% at the end of 2012 while the proportion of electricity generation was 5.5%. Our specific emission factor amounted to 0.79 metric t of CO<sub>2</sub>/MWh and is therefore at the level of the previous year.

Objectives		
We are committed	KPI	Target
... to significantly reducing the CO <sub>2</sub> intensity of our generation portfolio.	CO <sub>2</sub> emissions in metric tons per megawatt hour of electricity generated (metric t CO <sub>2</sub> /MWh)	0.62 metric t CO <sub>2</sub> /MWh by 2020

## Modernisation of the power-station portfolio

RWE is currently in the final phase of the biggest power-station modernisation programme in the history of the company. This programme has also made the biggest contribution to the reduction of greenhouse gas emissions achieved so far.

### Hard-coal and gas-fired power stations

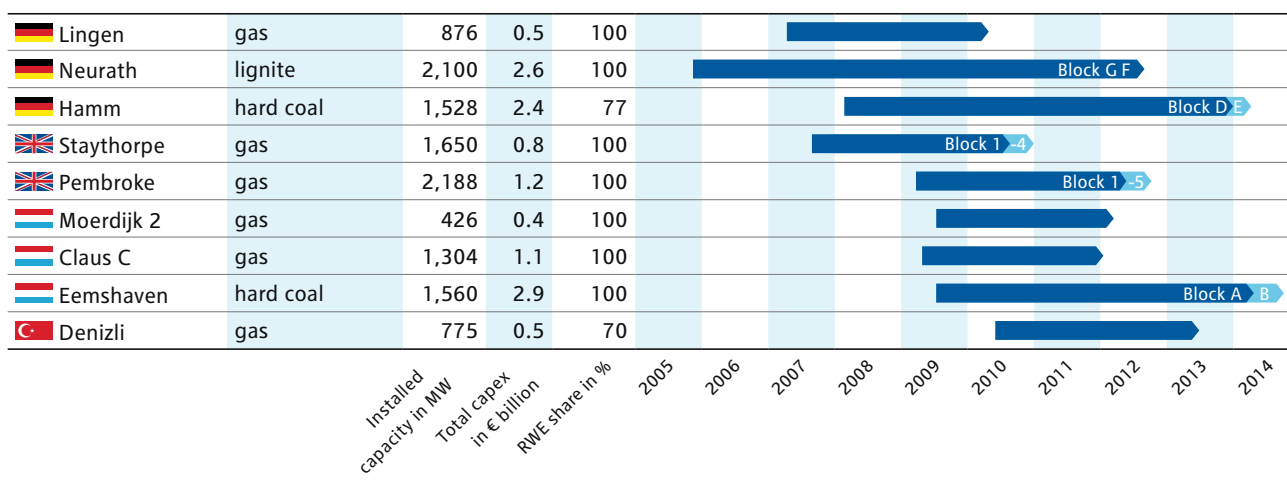
The start-up of the lignite-fired dual-block power station with “Optimised Units” (BoA 2&3) at the Neurath site while simultaneously shutting down 16 old 150 MW power-plant units from the 1960s is annually cutting 6 million metric t of CO<sub>2</sub>. This is equivalent to some 1.2 % of the emission volume which has been defined as the emissions ceiling laid down in Germany for the emissions trading sector. We have invested €2.6 billion in the “Optimised Units” (BoA 2&3). The efficiency was increased by around 30 % to 43 % by comparison with the old plants that have been shut down. The plant has also been designed to compensate flexibly for fluctuating feed-in from renewable energies. The output of the power station can be reduced by 500 MW in just 15 minutes and again increased just as quickly.

Furthermore, we have completed the modernisation programme for our 600 MW units in the Rhineland industrial lignite mining area. The measures included renewal of control technology and an improvement in the cooling system. This enabled the flexibility of the plants to be significantly increased and the CO<sub>2</sub> emissions to be reduced.

We also brought the gas-fired power station at Pembroke in the United Kingdom on stream as one of the most efficient combined-cycle gas turbine (CCGT) power stations in Europe with a capacity of 2,180 MW. The electricity produced at Pembroke can supply around 3.5 million households.

Pembroke Power Station represents an investment of £1 billion (€1.23 bn) by RWE.

### Status of conventional power plant new build programme



In the south of the Netherlands, the combined-cycle gas turbine (CCGT) power station Claus C also came on stream in 2012. The plant has a capacity of 1,300 MW and replaces the existing gas-fired power station Claus B. The efficiency increases to 59 % compared with 38 % at Claus B, the specific CO<sub>2</sub> emissions fall by nearly 40 %.

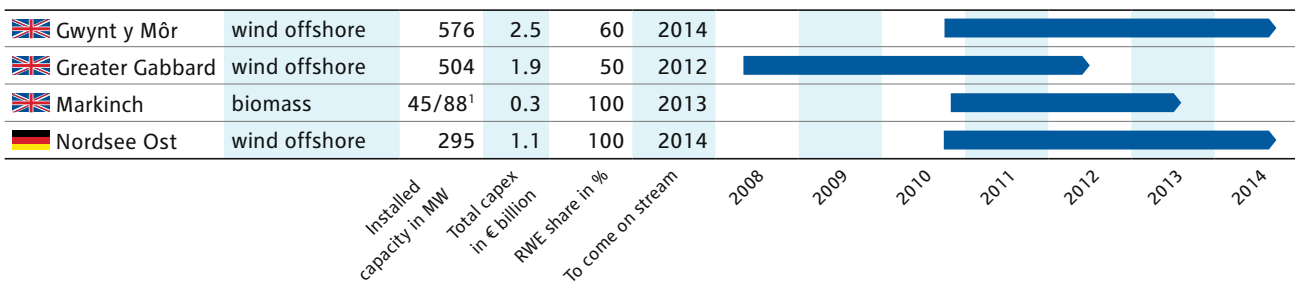
We hope to achieve a tangible contribution to the reduction of our specific CO<sub>2</sub> emissions by bringing the two new CCGT plants on stream. However, the capacity utilisation of these plants leaves much to be desired due to the changed market situation in Continental Europe. Up to now, the use of gas-fired power stations has mainly yielded economic benefits when covering peak loads. This is a role that is increasingly being satisfied by photovoltaic plants around midday. The priority for feed-in of electricity from renewable energies has meanwhile resulted in a temporary surplus supply of electricity in the market since gas-fired power stations can no longer be operated economically at these times.

**Renewable energies**

RWE Innogy is also bundling the competences and power stations in the RWE Group in the area of renewable energies. Since RWE Innogy was established in February 2008, it has more than doubled its generating capacity from 1,100 MW to around 2,800 MW. Some 900 MW of generating capacity are currently being constructed and around 11,000 MW are being developed in additional projects. Within the past five years, RWE Innogy has invested more than €5 billion, including the investments in projects not fully consolidated. One focus of our activities is on onshore and offshore wind-power projects. Over the past two years, we have placed orders valued at around €2 billion with German companies alone in the context of our offshore wind activities. RWE Innogy is also committed to hydropower and biomass. RWE Innogy additionally supports the development of future-oriented technologies, for example in the areas of biogas and solar thermal power. We provide financial support for innovative companies in their phase of establishment or growth, and we give pump-priming financial assistance for a limited period (> [Innovations](#)).



**Status of biggest Renewable Energy projects**



<sup>1</sup> 45 MW<sub>el</sub> / 88 MW<sub>th</sub>

The conversion of several units at the coal-fired power stations in Tilbury (United Kingdom) and Amer (Netherlands) to combustion of wood means that we have further capacity available amounting to nearly 1,040 MW for generating green electricity.

In the area of onshore wind power, we continued to expand our activities in Poland during the course of 2012 by taking over the Taciewo wind farm. It has a capacity of 30 MW and can therefore supply in excess of 32,000 households with electrical energy. The annual CO<sub>2</sub> savings amount to some 65,000 metric t.

In 2012, work in the area of offshore wind continued on our wind farms under construction. One example is the Greater Gabbard wind farm with electrical capacity of 504 MW currently being built off the Suffolk coast in England. This project is a joint venture between RWE Innogy and the British power utility Scottish and Southern Energy. By the end of 2012, the plant was in the final stages of completion and it is scheduled to come on stream in 2013.

The first wind turbine with 6.15 MW – currently the world's most powerful offshore wind turbine – was erected in the second construction phase of the Belgian Thornton Bank wind farm. The second stage of expansion, already fully operational, and the third expansion stage of the wind farm included a total of 48 more wind turbines of this type, with construction of 30 turbines already being completed in 2012. RWE Innogy remains the biggest private investor in Thornton Bank with a share of 26.7%. Start-up is scheduled for 2013. The end of August saw commencement of the installation of foundations for the Nordsee Ost offshore wind farm which has been designed for an output of 295 MW.

The development of our second German offshore wind farm Innogy Nordsee 1 with some 330 MW of installed capacity is progressing. We obtained the necessary approval from the Federal Maritime and Hydrography Agency in April 2012. We then signed delivery and reservation contracts for turbines, foundations, cables and a transformer substation in August 2012. Innogy Nordsee 1 has also been accepted in the NER300 subsidy programme for commercial demonstration projects of climate-friendly and innovative technologies in the EU.

Matched infrastructure is a precondition for constructing large offshore wind farms. We therefore decided to purchase two specialist installation ships for building the offshore wind farm. This type of ship is a world first. The ship is capable of accommodating on board several offshore wind turbines in the multi-megawatt class at the same time and then installing them at the final location. The special aspect of these ships is that satellite technology is then used to position them at sea extremely precisely and within a few centimetres before being placed on extendable "legs". This enables a large number of assembly operations to be carried out independently of the waves and swell. The two ships started up operations in 2012 and they have been deployed in the construction of our offshore wind farms Nordsee Ost and Gwynt y Môr.

## Adaption on climate change

The global increase in emissions of greenhouse gases means that we also have to manage the effects of climate change on our power stations. RWE npower in the United Kingdom joined forces with eight further electricity generators and the British government to look into the impact of climate change on hard-coal and gas-fired power stations. We have established that no weather events are projected over the next 20 years which the technology deployed in the power stations of today will not be able to handle. The perspective was limited to 20 years because a lot of British power stations will have come to the end of their service life within this period. New plants will have to be designed to cope with the extreme climatic conditions predicted to occur at that time.

A significant percentage of our electricity generating capacity in Continental Europe is not sensitive to periods with even very low levels of precipitation. This is because these plants either use pumped water from opencast mines or are cooled by seawater or brackish water.

## Clean Development Mechanism/Joint Implementation (CDM/JI)

In common with efforts to reduce CO<sub>2</sub>, international climate-protection projects under the umbrella of the Climate Convention of the United Nations also make a contribution to the reduction of greenhouse gases. RWE ranks among the trailblazers in this area.

These projects have become more challenging as a result of the comparatively low prices for CO<sub>2</sub> emissions rights prevailing at the present time. This is regrettable because these projects also have an additional social benefit in developing countries and emerging economies alongside their positive effect on global greenhouse gas emissions.

One such example is a fertiliser production facility in Abu Qir (Egypt) where emissions of laughing gas (N<sub>2</sub>O) with an annual CO<sub>2</sub>-equivalent of 1.5 million metric t were avoided. Infrastructure measures, such as refurbishment of school buildings and hospitals, or equipping ambulances with advanced medical equipment were continued in 2012.



[> Climate protection projects](#)

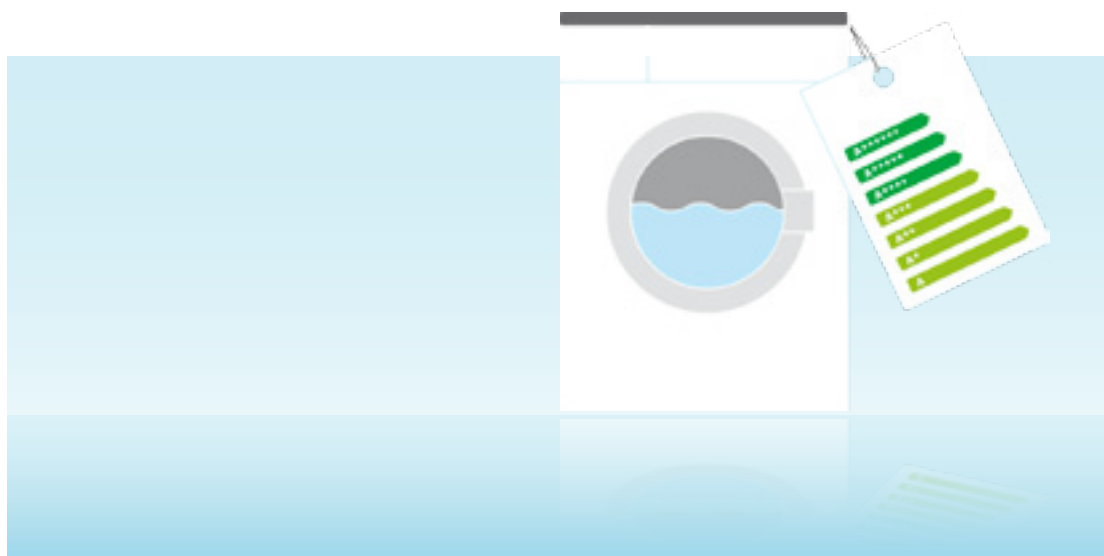
## Climate protection at our customers

The big levers for climate protection are with our power stations. However, we require the broadly based participation of our customers and the population to provide effective climate protection. Our sales companies therefore support a wide range of climate protection measures in their regions. RWE Deutschland awards around 400 climate prizes every year, partly in cooperation with other partners. Private individuals and public institutions in our grid area, such as schools, can submit an application. This is intended to raise the awareness of the population and sensitise people to climate protection. The aim is also to salute local commitment which is on a volunteer basis in some cases. The prize money is between €500 and €5,000 depending on the size of the local community.

Projects like energy contracting can also make contributions to climate protection. We present a comprehensive overview of our services and products that we use to help our customers to save energy – from intelligent energy management to electromobility – in the area for action Energy Efficiency ([> Energy efficiency](#)).



## Energy Efficiency

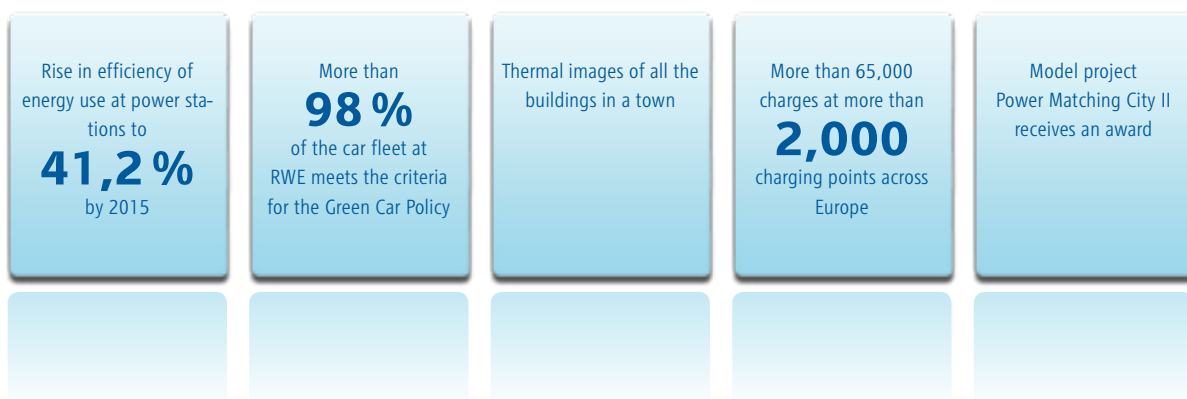


Reduction of energy consumption and enhanced energy efficiency are key elements of the energy transition. We make a contribution towards the objective of achieving the efficiency goals targeted by government through new technologies such as smart meters, and new business models encompassing services focused on energy savings.

The European Union intends to reduce energy consumption by 20 % in 2020 compared with the projected development in Europe (reference path). The EU Energy Efficiency Directive adopted in November 2012 requires member states to put in place measures for generating annual savings amounting to 1.5 % of their annual energy sales.

However, the approach of individual EU states is not regulated uniformly. While a statutory requirement in the United Kingdom is to install 53 million smart meters by 2019, the regulatory framework conditions for smart metering in Germany are as yet not at all clear. However, the installation of Smart Meters is mandatory in Germany for new buildings and from an annual consumption of 6,000 kWh. The expectations of consumers are rising irrespective of the statutory framework conditions. They expect us to offer products and services that will help them to save energy and cut costs, while also increasing their standard of living at the same time. This new situation presents us with innovative business opportunities.

### OVERVIEW OF THE MOST IMPORTANT FACTS:





RWE itself is also confronted with energy efficiency challenges. The efficient use of fuels at our power plants is a key element in our climate strategy (> [Climate Protection](#)). However, we also have to reduce our own energy consumption, for example in our vehicle fleet and in our administrative buildings. The associated CO<sub>2</sub> emissions account for only around 0.1 % of the total emissions we are responsible for emitting, because the biggest percentage is caused by generating electricity. We must act as a good role model in order to boost the credibility of our business.

**Target attainment**

The degree of energy use of the power stations has fallen to 39.2 % compared with the previous year. This is because the highly efficient gas-fired power stations in particular were not used as much. Since the beginning of 2009, we have been continuously procuring new vehicles for our vehicle fleet in accordance with our Green Car Policy. By the end of 2012, this resulted in a 22 % reduction in the specific fuel consumption. During the course of 2012, we continued to track efficiency enhancements for specific real estate and customer projects in Germany as in the previous year. Enhanced efficiency amounted to 31 % for the real-estate sector in Germany and 13 % for tracked customer projects.

<b>Objectives</b>		
<b>We are committed</b>	<b>KPI</b>	<b>Target</b>
... to increasing both our own energy efficiency and that of our customers.	Increase in energy efficiency in %	- RWE power stations: 41.2 % average degree of energy use to 2015 - RWE vehicle fleet: 20 % to 2012 - RWE real estate: 5 % to 2014 - RWE customer projects: 8 % to 2012

## For our customers

We support our customers with comprehensive consultancy and service offerings that help them to save energy and thereby also identify new business models. RWE Effizienz GmbH offers private customers a comprehensive range of advice on saving energy, ranging from the Energy Saving Check in domestic households to energy advice on building or purchasing a home.



[> RWE Effizienz GmbH \(only in German\)](#)

### RWE SmartHome

RWE SmartHome allows us to market a wide range of devices for intelligent home automation. We have been steadily increasing the range since the market launch in 2010. Electrical appliances can be switched on and off using the mobile phone network while customers are on the move, smart electricity meters can provide assistance in visualising electricity consumption, new applications are currently being developed for the entertainment and health sectors.



[> RWE Smart Home](#)

### RWE HomePower Solar

At the beginning of 2013, RWE Effizienz launched RWE HomePower Solar. This product range is targeted at operators of photovoltaic systems and aims to enable them to make more use of the solar electricity they generate for their own consumption. Solar power storage units are available from our partner Varta in different sizes for plants ranging from 3 to 20 kWp. They supply electricity to the customer's own household at night and during periods when the sun is not shining. We are anticipating that a contribution to grid stability will also be made by expansion of local storage units for solar power and an increase in the householder's own use ratio associated with integration within an intelligent network.



[> RWE HomePower Solar \(only in German\)](#)

### Energy advice

We believe that it is important for our customers to be able to identify and evaluate their potential for saving energy. This is why we are currently carrying out a pilot project and supporting the town of Rheinbach in its objective of raising the awareness of local residents to the issue of energy efficiency and upgrades for existing buildings. An aerial sweep of the entire town of Rheinbach was carried out from the air and this forms part of a large-scale information campaign. Thermographic images of the town were obtained using a thermal-imaging camera. The images taken in March 2012 show weak points in the insulation for the roof of the building. We analysed all the images taken and made them available to the owners of the buildings at the beginning of 2013 – under strict compliance with regulations on data protection. RWE Deutschland offers all the local authorities granting concessions aerial thermographic images.

Projects on energy contracting can also make contributions to energy efficiency and climate protection. These projects lead to additional business opportunities for RWE. One such example is provided by our subsidiary company RWE Energiedienstleistungen which implemented this kind of contracting model at the "maritimo" leisure pool in Oer-Erkenschwick (Germany) at the beginning of 2010. An advanced district heating power station supplies heat and electricity with an efficiency of up to 95%.



This measure saves around 480 metric t CO<sub>2</sub> each year. RWE Energiedienstleistungen operates a total of more than 150 customer power plants, including 46 district heating power stations with a total of 50.6 MW of electrical output. 7.2 MW of this power is generated using biomethane.

[> RWE Energiedienstleistungen \(only in German\)](#)

### Energy efficiency services for the UK market

Statutory legislation in the United Kingdom in force until 31 December 2012 required energy utilities to proactively advise their customers on reduction of CO<sub>2</sub> emissions (Carbon Emissions Reduction Target – CERT) and energy saving (Community Energy Saving Programme – CESP). Appropriate savings targets were defined on the basis of the individual customer numbers for a company. The target for 2012 was to carry out 117,531 energy efficiency measures at customers' homes and hence bring about a reduction of 73,500 t CO<sub>2</sub>. Our final performance in 2012 significantly exceeded our target with installation of 466,165 energy efficiency measures and delivering annual CO<sub>2</sub> emissions reduction of 139,509 metric tons.



On 1 January 2013, the Energy Companies Obligation became statutory legislation. Households living in old housing stock with unfavourable energy situations and customers on low incomes can receive financial support to carry out energy efficiency measures. RWE npower is preparing appropriate offers. As in previous years, RWE npower is continuing to offer people whose health is impacted by their living conditions advice and support under the "Health through Warmth" programme ([> Pricing and Marketplace](#)).

### Energy-efficiency services in Central and Eastern Europe

In Hungary, we offer energy efficiency services for residential and business customers. We present individually tailored energy efficiency solutions. ELMŰ and ÉMÁSZ present individually configured energy efficiency solutions in our interactive exhibition room "Energy Point". We assist our customers in optimising their energy consumption through our energy-saving programme entitled "Energy Piggy Bank". We carry out detailed energy audits for our business customers and offer them solutions that take into account renewable energies. FÖGAZ also replaces local heating systems and improves efficiency for medium-sized apartment blocks and institutions, such as retirement and care homes.

In Poland, we launched the "Świadoma" (Energy Awareness) campaign in 2007 and this was carried forward in 2012 with the new campaign for energy saving and conscious energy consumption. The current campaign "5 Minuten Spaß, 365 Tage sparen" (five minutes of fun, 365 days of saving) is focused on small and medium-sized companies. The specially designed Internet portal offers an online game and an informative film about energy saving. We use this site to communicate information to customers and employees about responsible and judicious use of electrical equipment in the office. The players in the online game – individuals or companies – receive points for each energy-saving measure and are entered in a competition for the best energy-saving ideas.

## Smart Meter

Intelligent meters for electricity and in principle also for gas, known as Smart Meters, communicate real-time information to customers on their consumption. The progress in installation of these devices varies across the individual countries in the EU.

### “Mülheim zählt” (Mülheim counts) project

Our pilot project in Germany “Mülheim zählt” (Mülheim counts) has involved us in replacing conventional meters in more than 100,000 households with Smart Meters since the end of 2008. Up to now, customers have been extremely satisfied with the results. Since March 2012, around 700 participants in Mülheim have taken part in the E-DeMa model trial where we carried out a practical test on the perspectives for developing Smart Metering. We use the project to offer our customers tariff models with variable timings and levels of consumption. Some customers even opt for automated connection of appliances and equipment – according to electricity prices and availability of supply. The burgeoning feed-in of renewables-based electricity will increase the necessity for a move to more supply-oriented electricity consumption in future.

### Smart Meter infrastructure in the United Kingdom

The British government has committed to the roll-out of smart meters in Great Britain from autumn 2014. The plan is to complete installation of an estimated 53 million smart meters in some 30 million households and businesses by the end of 2019. This represents one of the biggest infrastructure projects ever carried out in Great Britain. It requires RWE npower to install around 5.5 million smart meters. RWE npower is building up the capacities necessary to install smart meters with the associated technical network in order to guarantee the transition to a “Smart Energy” infrastructure. In particular, RWE npower is adapting its software systems and business processes.

In Hungary, smart meters for supply with electricity, gas and water are to be tested jointly. In cooperation with FÖGAZ and the local district-heating and water utilities Fötav and Budapest Waterworks, the ELMŰ-ÉMÁSZ Group took part in the installation of smart meters throughout the country in a pilot project carried out in 2012 – nearly 7,400 smart meters were installed by ELMŰ-ÉMÁSZ. Our “RWE Smart Energy” project was the first comprehensive pilot project on smart metering to be carried out in Poland. The project involved installing smart meters at selected buildings in Warsaw, running an information campaign for residents and carrying out a study on the behaviour of electricity consumers.

## Intelligent grids and energy management

The electricity generated from renewable energies and fed in from a multitude of decentral plants is subject to substantial fluctuation depending on weather conditions. New, intelligent grid concepts will help to coordinate electricity generation and electricity consumption more flexibly with each other. New line technologies will help minimise transmission losses during power transmission. One example is the “Smart Country” project which uses real-time data to optimise the interaction between the generation from renewable energies and local consumption. Many of the technologies necessary in future are being developed today ([> Innovation](#)).

### Intelligent energy management

The project “PowerMatching City II” in the Dutch village of Hoogkerk/Groningen has been testing the interaction between households, flexible micro-district heating power stations and electric vehicles since September 2011. This smart grid solution links up local energy generation, consumption and temporary storage. 25 households are participating in the project which will provide the initial experiences and conclusions for nationwide application. PowerMatching City II was given an award in June 2012 by Sustainia, an initiative of the UN Global Compact, as an outstanding solution in the area of sustainability. RWE has been using “smart operators” to test the interaction of decentral energy generation and supply-controlled “intelligent” demand over the past two years. 250 test households in two local communities are taking part in the project ([> Innovation](#)).



### Electricity transmission lines from the next generation

In order to be able to operate existing grids more effectively, we are currently installing high-temperature transmission lines on a trial basis. They permit transmission of higher electricity loads and are therefore ideal for increased decentral energy generation ([> Innovation](#)).



In future, underground high-temperature superconductors may be used in urban environments – despite a similar name, this technology is fundamentally different – to contribute to energy efficiency. We are currently running a pilot project to test this technology in the AmpaCity project ([> Innovation](#)).



## Electromobility

The nationwide launch of electromobility will open up a new division for RWE, primarily relating to the marketing and operating of the necessary charging infrastructure. Forecasts assume that around 80% of all charging processes are carried out either at home or at the workplace. RWE provides the relevant technologies and products at these locations ranging from basic charging points with a straightforward standard tariff for domestic garages to intelligent charging infrastructure and individual billing models. In 2012, more than 65,000 charges were carried out across Europe at more than 2,000 charging points. They are linked together through a uniform RWE interface.

A nationwide and publicly accessible network of “Charging Points” is essential for electromobility to succeed. Up to now, we have made the greatest progress in Germany and the Netherlands, where we had already installed respectively 1,370 and 367 charging points by the close of 2012. We provide two models giving interested customers easy access to RWE’s public charging infrastructure in Germany: an e-car electricity contract or a pay-as-you-go alternative operated by SMS. Paying by mobile phone allows drivers to charge their electric car for a specified time. We are also playing a proactive role in our other markets and maintaining charging points in Austria (97), Poland (12), Hungary (23), the United Kingdom (12) and other countries.

We want to work together with Renault in Poland to move forward a campaign promoting electromobility and we are offering interested customers the opportunity to purchase a private charging point for their electric car. In Hungary, ELMŰ continues to be a pioneer in the promotion of electric vehicles and is developing into the leading provider of electromobility. Alongside supplying and installing charging stations, ELMŰ operates the biggest fleet of electric vehicles nationwide.

In September 2012, RWE was awarded the Strategy Prize by management consultants Frost & Sullivan for its comprehensive strategy in electromobility – ranging from the provision of charging points, through software developed in-house, to the tariff model based on green electricity.

## Own energy consumption

We support our customers with a comprehensive package of advice and service relating to energy savings. These offers are also geared to our employees and we offer them special conditions.

### **Business travel and vehicle fleet**

Since the beginning of 2009, we have been continuously purchasing new vehicles for our vehicle fleet in accordance with our Green Company Car Policy. On average, we change our vehicles after four years. This means that more than 98 % of our vehicles are now subject to the Green Company Car Policy. By the end of 2012, this had achieved a reduction in specific fuel consumption of 22 %. It fell by 4 % during the year under review.

In May 2012, the German Automobile Association (ADAC) made its requirements for CO<sub>2</sub> emissions, air pollutants and fine dust more stringent in its EcoTest and included electric vehicles in its assessment. Our fleet consumption will also continue to fall in the future as a result of the application of stricter criteria. Our subsidiary company ELMÜ continued its exchange programme in 2012. Vehicles are exchanged for new ones after three years. The objective here is also to increase efficiency and reduce greenhouse gas emissions.

## Innovation



We are working in around 200 projects to make the energy supply of the future more climate friendly, more efficient and smarter. These projects range from the extraction of raw materials to power generation, distribution and use.

The platform for our high standard of living is provided by a secure, reliable and affordable energy supply. Our objective is to play a role in structuring the energy turnaround to create a carbon-neutral electricity supply while at the same time making preparations to meet the energy needs of the future. If we are to achieve our mission, we need to optimise existing technologies and processes in all areas along the value chain of the energy supply and develop new ones. We are well aware that the development and use of innovative technologies and procedures are key factors in the future success of our company.



[> Map R&D projects](#)

### OVERVIEW OF THE MOST IMPORTANT FACTS:





### Stakeholder expectations and framework conditions

Our stakeholders expect us to make a key contribution to the success of a climate-friendly and secure energy supply through our research and development activities. At the same time, innovations in energy supply are held back by opaque statutory framework conditions and an unwillingness among stakeholders to accept new projects, procedures and technologies. The dialogue with our stakeholders is therefore a key factor for acceptance of our research and development activities. RWE presented the "Acceptance Study" in 2012 that contributes to the debate within society about participation and its significance for Germany as an energy and business centre.



[> Acceptance Study](#)

### Target attainment

We have set up a group-wide innovation management system to coordinate all our research and development (R&D) activities. All relevant RWE companies engaged in research and development are integrated in the standardised processes like R&D planning and reporting. In 2012, the level of compliance with our key performance indicator for innovation management was 100 %.

Objectives		
We are committed	KPI	Target
... to ensuring the availability of the best solution in our core processes through innovations	Extent of coverage and communication of strategically relevant R&D issues in %	At least 98 %

## Renewable electricity generation

RWE is going to invest the lion's share of its available financial resources in expansion of renewable energies. While renewables-based energy primarily sourced from hydropower and onshore wind power already provides a substantial part of the energy supply, additional innovations in wind energy, solar thermal energy and solar energy are needed, however, in order to create sufficient technological options to meet the ambitious targets for the expansion of renewables.



[> Overview of renewable energy plants](#)

### Wind energy

Today, the majority of wind energy is sourced from wind farms which are erected on land (onshore plants). As wind energy is further expanded over the coming years, some of the offshore wind farms coming on stream in the future will exceed the power output installed in a large coal-fired or nuclear power station. Offshore wind farms achieve greater wind yield because the winds are stronger and more uniform on the open sea. They are also constructed a long way from residential districts and this enhances acceptance among the general public. However, the construction of offshore wind farms places high demands on technology and materials. The plants are erected in water up to 40 metres deep. Some of the electricity is generated up to 100 kilometres from the coast and it has to be transmitted to consumers via an appropriate grid connection to the electricity grid. Service and maintenance also presents significant challenges due to the location and the impact of weather conditions.

We are currently carrying out most offshore projects in the United Kingdom and we have consequently been involved in the initiative "Offshore Wind Accelerator" (OWA) of the Carbon Trust since 2008. Nine companies developing offshore wind farms have joined forces in this initiative. RWE Innogy is currently testing innovative buoys designed to take wind measurements. These are located at the Gwynt y Môr offshore wind farm and form part of the "OWA Programme". The aim of the innovative wind measurement buoys is to record local wind conditions as precisely as possible. This information forms an important basis for optimum development of subsequent construction and operation of offshore wind farms.



[> Offshore Wind Accelerator](#)

[> More on wind-based energy projects at RWE Innogy](#)

In the year 2012, the ELMŰ-ÉMÁSZ Group launched a small but complex renewable energies project at a therapeutic riding centre in Fót near Budapest in Hungary. This involved installing solar collectors, photovoltaics, wind turbines and micro-water turbines, as well as using biogas generated from slurry. An energy storage unit was also created. The project is not just intended as a research and development plant, but also as a training centre. A visitor centre will provide information about the use of "green" technologies.

### Other technologies

RWE is also developing technologies, projects and concepts designed to exploit solar energy. RWE is also involved in the visionary “Desertec” project which aims to generate solar electricity in North Africa for supply to Europe. Development work is also being carried out in the area of biogas and new technologies such “Energie auf Halden” (Energy on slag heaps).



- > [Research and development in the RWE Group](#)
- > [New technologies at RWE Innogy](#)

## Grid infrastructure and storage technologies

The energy transition also presents major challenges for our electricity grids. Increasing demands are being placed on distribution grids due to the large number of photovoltaic plants and the wind farms being built. This is particularly the case in rural regions where at times more electricity is being produced than is consumed (> Security of Supply).

Electricity grids must be in a position to accept electricity as necessary despite increasing levels of weather-dependent feed-in to the grid from renewable energy sources and to make electricity available. If we are to achieve this goal, we need to use new technologies to create “smart” balancing mechanisms. The district of Bitburg-Prüm in the Eifel hills was selected as a model region and we have been trialling the Smart Country project there since 2011 to test the interaction between different components such as renewable and conventional generation of electricity, energy storage and grid operation in a smart grid. We are testing newly developed voltage regulators for protecting against voltage fluctuations, recording and communicating real-time production and consumption data, and using a biogas storage unit to compensate for peaks in supply and demand. In May 2012, the project received the Smart Energy Award 2012 from the Hessian State Government.



[> Smart Country \(only in German\)](#)

### Smart Operator project

Smart solutions are increasingly required to facilitate integration of renewable energies into the distribution grid. In August 2012, RWE Deutschland launched the “Smart Operator” project to develop smart grid solutions at low voltage. 250 test households in the local communities of Kisselbach and Wincheringen (Rhineland-Palatinate) and Wertachau (town of Schwabmünchen in Bavaria) will be connected to a smart low-voltage grid over a period of two years. A control box designated as “Smart Operator” records the current grid status and independently optimises the flow of electricity. It also creates a communication interface for the test households. For example, this enables the use of selected “smart” domestic units that can be calibrated to ensure that the maximum amount of surplus electricity from renewable energy sources is used. The aim of the project is to contribute to ensuring that some of the expansion of low-voltage grids is only required at a later date or is rendered completely superfluous.

### Electricity conductors from the next generation

We are committed to development of line infrastructure in order to ensure effective transmission of electricity in the future. We use high-temperature conductors for this purpose. This means that the transmission lines can be heated to higher temperatures than conventional lines and are therefore able to transmit more electricity. They are ideal for upgrading existing distribution grids in rural areas experiencing strong growth in decentral energy generation. They can generally be suspended from existing masts. Hunsrück is a region with strong growth in wind energy, and the test line can transmit twice the amount of electricity over a distance of twelve kilometres compared with conventional lines under otherwise identical environmental conditions. In August 2012, RWE Deutschland set up a high-temperature transmission line on an existing high-voltage line near Argenthal (Rhineland-Palatinate).

In January 2012, “AmpaCity” was added to the large number of projects we are currently running. This project offers new perspectives for operating electricity grids in inner-city areas. The world’s longest high-temperature underground superconducting cable based on the latest technology will be laid in Essen, the location of the headquarters of RWE AG. The materials used for this are able to transmit electricity with negligible losses at very low temperatures of around  $-200^{\circ}\text{C}$ . By contrast with conventional superconductors, which have to be cooled to  $-270^{\circ}\text{C}$ , high-temperature superconductors permit industrial operation and hence facilitate cost-effective application over the medium-term. This system permits the transmission of large amounts of electrical power at low voltage. It also represents space-saving technology. The advantage for local communities is that valuable land in inner-city areas is not required for grid operation and can be used for other purposes. Work on laying the cable started at the beginning of 2013. The project partners are RWE Deutschland, Nexans as manufacturer of cables and cable systems, the Karlsruhe Institute for Technology, and the Jülich Research Centre as project manager.



[> AmpaCity project \(only in German\)](#)

### New energy storage

The sun and wind are not available day and night. The integration of electricity generated from renewables is therefore becoming increasingly important. If only a small amount of electricity generated from renewables is fed into the grid, conventional power plants have to supply additional electricity. By the same token, they have to reduce their output or even shut down power generation altogether when strong winds start to generate a lot of electricity or solar generation increases. Another factor is that the current capacity available on transmission grids in some regions today is reaching its limits when the wind turbines are operating at full power.

Expanding the capacity of electricity storage systems can provide assistance here. However, established pump-storage technology is not adequate because on the one hand pumped storage is only available for a few hours, and on the other hand the potential for expanding pumped-storage power plants is limited. This is why we are developing alternative energy storage.

Since October 2012, a research and development team from RWE Power at the Coal Innovation Centre in Niederaußem has been looking at possibilities for storing electricity with a new pilot plant “Power to Gas”. The aim of this system is to store surplus electricity temporarily as chemical energy in the form of natural gas. Later on, the gas is converted to electricity or supplied to the heating market.

Construction of the “Power to Gas” pilot plant for storage of electricity based on hydrogen also started up in Ibbenbüren in October 2012. From 2013, an innovative technology based on electrolysis from the project partner CERAM HYD will be tested at the plant operated by RWE Germany with a power output of 100 kilowatts. This technology efficiently converts excess electricity generated from renewable energy sources into hydrogen. The hydrogen generated is fed into the regional RWE gas grid and after storage can be converted back to electricity as necessary. RWE Power is developing an adiabatic compressed-air energy storage system in the ADELE project as an additional technology option.

[> More on the “Innovationszentrum Kohle” \(Coal Innovation Centre\)](#)

[> Power to Gas demonstration plant at the Ibbenbüren energy location](#)

[> ADELE project](#)



## Use of carbon dioxide

We are looking into the possibilities of using CO<sub>2</sub> as a source of carbon in order to provide an alternative to petroleum-based products for energy conversion and for chemical intermediates. RWE Power is cooperating with partners from industry and research institutes to further develop various avenues of carbon capture and usage (CCU) of CO<sub>2</sub> with subsequent development of them wherever possible. Alongside further research into conventional power-plant engineering, we have also bundled relevant activities in Germany into our “Innovationszentrum Kohle” (Coal Innovation Centre) at our Niederaußen power plant site near Cologne. In the summer of 2012, this was awarded the title of “Ort des Fortschritts” (Location of Progress) by the State Government of North Rhine-Westphalia. We also started up a plant for separation of CO<sub>2</sub> from flue gas at Aberthaw in Wales.

Another project is the “ZeroCarbFP” Innovation Alliance coordinated by RWE Power, which won a funding tender from the Federal Ministry of Education and Research (BMBF) in June 2012. ZeroCarbFP is looking for new ways of manufacturing valuable products from carbon-rich recycled waste using microorganisms. This type of recycled waste includes flue-gas from coal-fired power stations. Experts from RWE Power and our cooperation partner Brain AG working at the Coal Innovation Centre have already identified a number of microorganisms that are particularly efficient at taking up CO<sub>2</sub> and have outstanding growth potential. There are now 21 companies in the innovation alliance.

Since 2010, we have also been exploring the use of CO<sub>2</sub> as a material for chemical intermediate products in the “CO<sub>2</sub>RRECT” project (CO<sub>2</sub> Reaction using Regenerative Energies and Catalytic Technologies). The project will be completed in autumn 2013.



> [Use of CO<sub>2</sub> at the Coal Innovation Centre](#)

**Venture capital issues**

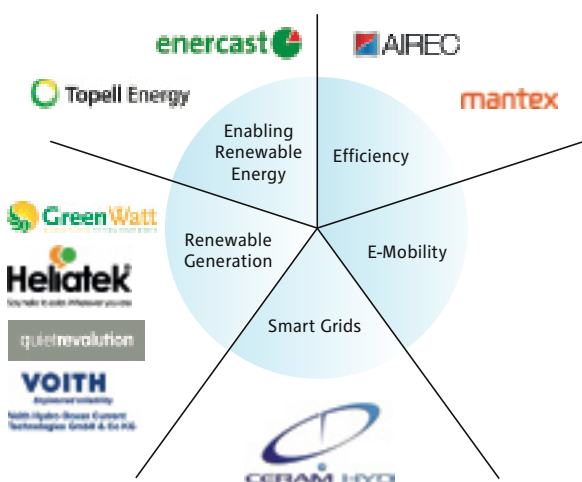
We are therefore investing in carbon-neutral, central and decentral renewables-based energy-generation and storage technologies in Europe through Innogy Venture Capital, a subsidiary company of RWE Innogy. The objective of this investment is to successfully bring innovative technologies from this area to market readiness and enhance the competitiveness of renewable energies compared with conventional energy generation. The continuous and ground-breaking technological innovations offer promising options for investment with above-average earnings potential, even in a future environment where funding levels look set to decline.

The investments are made by the Innogy Renewables Technology Fund which is financed by RWE Innogy and Conetwork Erneuerbare Energien (equity investment company specialising in renewables) with a fund volume of more than € 100 million. The investment strategy has a clear focus on Europe and investments are generally made in the single-digit millions for companies in the start-up and growth phase. Alongside financial assistance, Innogy Venture Capital GmbH also supports companies with advice involving technological expertise, management know-how and strategic market expertise. The portfolio of Innogy Venture Capital includes ten European companies from the areas of renewable energy generation, integration of renewable energies, efficiency and smart grids.

Heliatek is one example of a company funded under this initiative. It is developing transparent, organic solar foils which can be produced at affordable prices in an environmentally friendly process. Another advantage is that these foils can be applied to many different surfaces, including glass substrates and this could help provide photovoltaics with a significant stimulus. At the beginning of 2013, the organic solar cells of Heliatek attained an efficiency of 12% for the first time – a world record. The silicon cells commonly used at present achieve efficiencies between 15 and 20%. This means that organic solar cells are close to market readiness. In 2012, the competition “Germany Land of Ideas” granted Heliatek the award of “Selected Landmark 2012” for its research work.

-  > [Innogy Venture](#)
- > [More on Conetwork Erneuerbare Energien \(CEE\)](#)

**Portfolio diversified across technology sectors**



**Strict European focus as competitive advantage**



## Security of Supply



We want to provide our customers with a reliable and affordable supply of electricity and gas at all times. Our programme of continuous investment in maintaining, expanding and developing our distribution grids and generating plants is directed towards this objective. Our generation mix of renewable-based and fossil-fired power stations helps us to minimise procurement risks. We diversify the procurement of our fuels as far as possible.

The reliable supply of electricity and gas to our customers depends firstly on generation and provision of electricity and gas, and secondly on transmission and distribution. The big challenges currently confronting the electricity industry are in the areas of grids for transmission and distribution. They have resulted from the energy transition and the expansion of renewable energies. Whereas feed-in of electricity from renewable energies into the electricity grid takes precedence over other forms of generation, the supply of electricity undergoes significant fluctuation as a result of the prevailing weather conditions. However, since we are a grid operator, we have to guarantee a secure supply of electricity even under adverse weather conditions.

### OVERVIEW OF THE MOST IMPORTANT FACTS:





We operate electricity distribution grids in Germany, Poland and Hungary with a total length of 405,347 km, and a grid of 343,750 km makes us the biggest operator of distribution grids in Germany. We therefore play a major role in providing a secure supply of electricity. We also operate 37,050 km of gas distribution grids in Germany and 49,500 km in the Czech Republic. We operate a gas transmission grid that is 3,600 km in length in the Czech Republic, which is currently up for sale.



[> Video showing repair of power lines from the air \(only German\)](#)

### Challenge and expectations of our stakeholders

Our stakeholders expect us to play a proactive role in structuring the energy transition. This also includes safeguarding the maintenance of grid stability by using innovative grid technology and intelligent grid management (see also [> Energy Efficiency and > Innovation](#)), and making a contribution to reliable electricity generation from fossil and renewable energy sources. Hard-coal and gas-fired power stations that can be deployed flexibly ([> Climate Protection](#)) can be used to mitigate the fluctuating feed-in from renewable energies and they are an essential prerequisite for uninterrupted electricity supply. Ultimately, we need to take measures to cover the eventuality that there are widespread outages in the power supply despite all our efforts. Power stations therefore have to be used which have their own supply source for energy – these are known as power plants with “cold start-up” capability.



### Target attainment

In 2011, we were able to continue our record of previous years and provide our customers with a largely uninterrupted supply of gas and electricity; data for 2012 were not available at the time when this report went to press. Non-availability in our distribution grid amounted to an average of 18.1 minutes for each customer in Germany (2010: 21.9 minutes). We also succeeded in guaranteeing a largely uninterrupted power supply from the grid operators of the RWE Group in Eastern Europe, even though non-availability was above the values for Germany owing to the national grid structure. Average non-availability in Hungary from 2010 to 2012 was 62.9 minutes (ELMŰ) and 85.2 minutes (ÉMÁSZ). This means that both figures are significantly below the national average. The average non-availability for the gas supply resulting from faults in Germany amounted to 1.3 minutes per customer and year in 2011.

Objectives		
We are committed	KPI	Target
... to supplying our customers with the electricity to meet their needs at all times.	System Average Interruption Duration Indicator (SAIDI) in minutes per year and customer	SAIDI < 25 min./customer (Germany only)

## Reliable grid operation

The distribution grid in Germany has for many years achieved the leading place in the European ranking for availability of electric power. We have played a significant role in this success as Germany's biggest distribution grid operator. This is the result of continuous maintenance and repair, alongside expansion of our grids. We are increasingly laying underground cables with the aim of making the grid less susceptible to adverse conditions. Although these cables are more expensive than conventional cables, they are not affected by storm damage. Furthermore, underground cables do not detract from the beauty of the landscape and they are not a hazard for large birds.

More than 232,700 km of our distribution grid is made up of underground cables, amounting to nearly 70% of the total grid length. We are continually working to develop the infrastructure of our distribution grid. For example, high-temperature transmission lines can expand the capacity of the distribution grid and facilitate feed-in from decentral renewable energies. ([> Innovation](#))



The "Smart Country" project currently being trialled uses intelligent grid management to achieve reliable operation of the distribution grid even though the feed-in of renewables is consistently fluctuating. The use of this innovative grid technology can also make a significant contribution to reducing the requirement to expand the grid ([> Innovation](#))

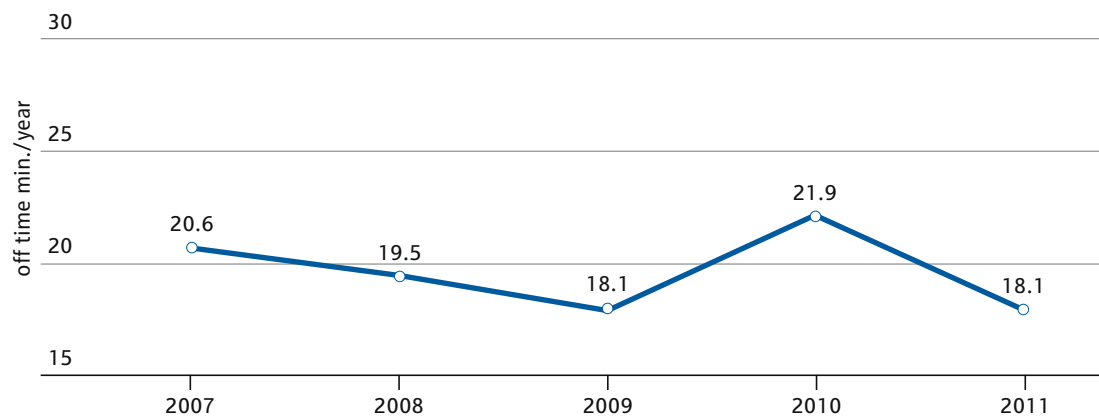


Structural conditions mean that grid losses fluctuate at the distribution level according to region. The aggregated values (high, medium and low voltage) for our grids in Germany are between 5.5% and 7.5%. New technologies hold out the prospect of transmitting electricity with virtually no losses. We are currently carrying out the "AmpaCity" pilot project to test high-temperature superconductors which are able to transmit electricity virtually free of losses and energy efficiently when cooled to "only" -200 degrees celsius ([> Innovation](#)).

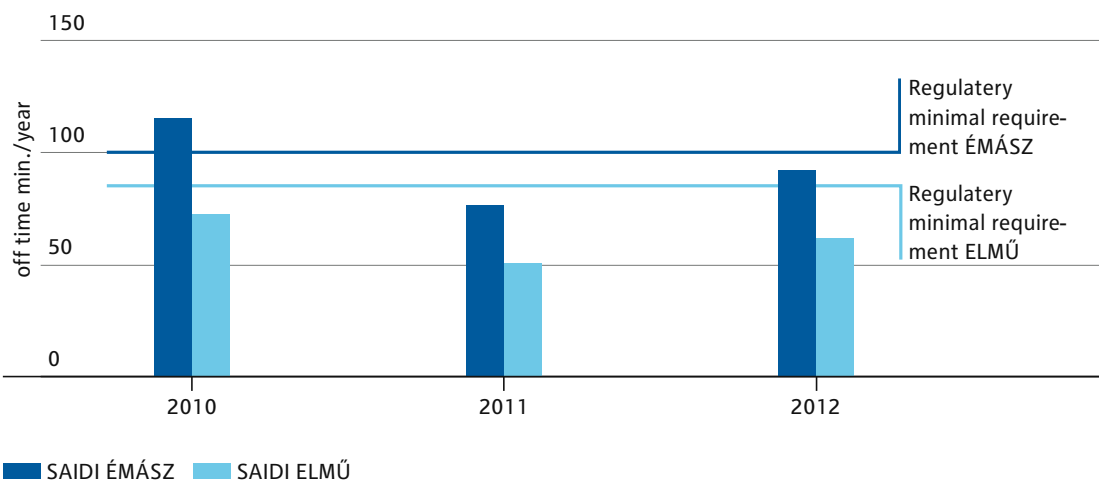


Since 13 February 2013, a phase shifter at Biblis A has also been synchronised with the grid. This provides grid operator Amprion with capacitive and inductive reactive power compensation. This capability is necessary in order to maintain grid stability and therefore makes a major contribution to security of supply.

**System Average Interruption Duration per year and customer (RWE distribution network in Germany)**



**System Average Interruption Duration per year and customer\* (distribution network ELMŰ-ÉMÁSZ in Hungary)**



\* System Average Interruption Duration Indicator (SAIDI)

## Reliable power plant operation

Once again in 2012, the German power plant portfolio also made a major contribution to security of supply with further enhancement compared to the previous year and very good technical availability of around 87%. We also have sufficient “cold start-up” power-plant capacities on standby to restart the grid again at any time in the very unlikely event of a blackout.

A portfolio of power stations that can be deployed flexibly is absolutely essential for the success of the energy turnaround. When the electricity fed into the grid system from renewables fluctuates, the flexible portfolio can supply electricity to meet increased demand, ensure reliable grid operation and hence deliver electricity on days when there is no wind or sunshine (see power-station projects in the area for action > [Climate Protection](#)).



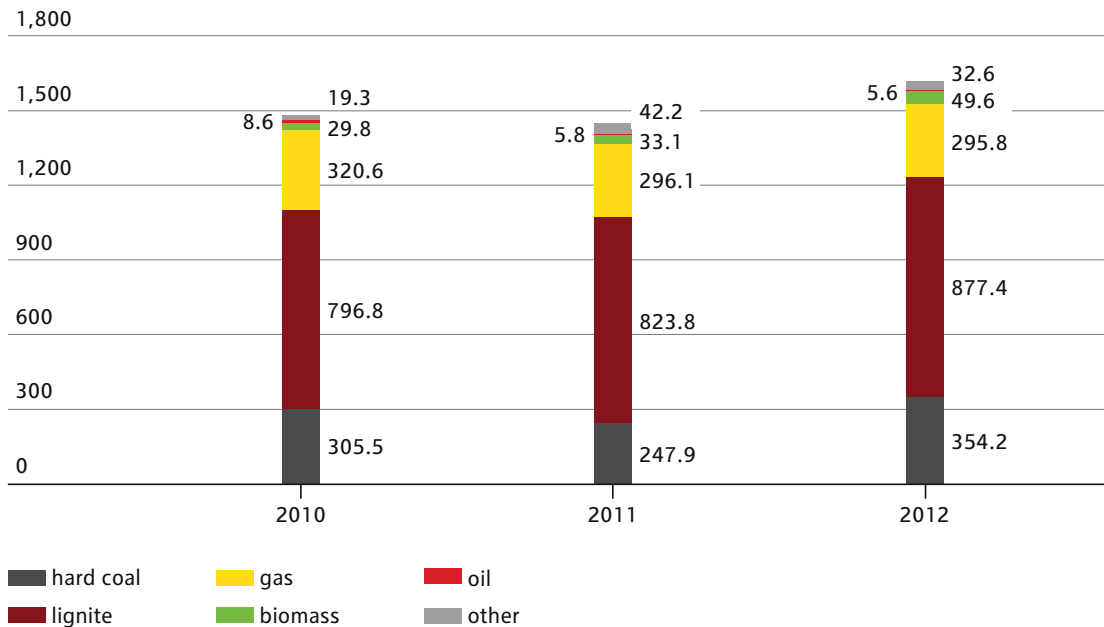
## Fuel availability

RWE is committed to using a broadly based mix of fuels – lignite and hard coal, natural gas, nuclear fuel and biomass. It is also committed to the procurement of fuels being diversified by region and over time. Our assessment is that the supply of fuels over the short and medium term is associated with a comparatively low level of risk. Lignite in particular is not subject to any availability risks over the long term because we source all our lignite supplies from our own opencast mines located near to our power plants.

Forward-looking management of the licencing process involves transparent involvement of politicians, local residents and other stakeholders. This approach forms the platform for our operational activities, combining with continuous improvement in technologies for extracting raw materials and for environmental protection, and a well-developed sense of responsibility for people and the natural environment. The basis created in this way provides a long-term guarantee for acceptance and planning security of our mining and production activities – at opencast mines and for oil and gas production alike. We also regard securing long-term supplies as part of our core functions with other sources of energy.

### Primary energy consumption

in Petajoule



### Gas supply

RWE used to conclude long-term supply contracts linked to prices of crude oil. The aim was to secure the supply of natural gas. However, the price of natural gas freely negotiated on the energy trading exchanges has been uncoupled from crude oil prices in recent years. We are unable to pass the higher procurement prices on to our customers and this has exerted a major negative impact on our net income during recent years. In 2011, we therefore embarked on a process of contract renegotiations.

In 2012, we recorded our first success. At the beginning of October, an arbitration tribunal handed down a ruling in our favour following proceedings involving our Czech subsidiary company RWE Transgas and gas supplier Gazprom. This legal dispute revolved around the issue of whether RWE Transgas was entitled to reduce the minimum purchase quantities defined in the contract with Gazprom under certain conditions. The positive outcome of this proceeding means that we have been able to trigger a risk provision with retrospective effect from 30 September 2012. The tribunal was not involved in ruling on the link between our gas purchases from Gazprom and the oil price. A separate arbitration proceeding is being held on this issue and the process is likely to be completed in 2013 ([> Pricing and Marketplace](#)).



We are also pursuing a policy of expanding extraction and transport of gas. In February 2012, RWE Dea started production at the Clipper South gas field in the British sector of the North Sea. In October 2012, production came on stream at Devenick. In May 2012, we started drilling wells in the Breagh Field development project. Breagh is one of the biggest natural gas fields remaining in the southern sector of the North Atlantic belonging to the United Kingdom. Production of the first gas from this field is expected in the first half of 2013. Production from these natural gas fields makes a substantial contribution to securing the supply of natural gas for the United Kingdom. RWE Dea has also expanded its activities in the North Sea off the Norwegian coast. RWE Dea continues to be involved in projects for the exploration and production of natural gas and oil in North Africa, on the Caspian Sea and in the Caribbean.



[> Activities RWE Dea](#)

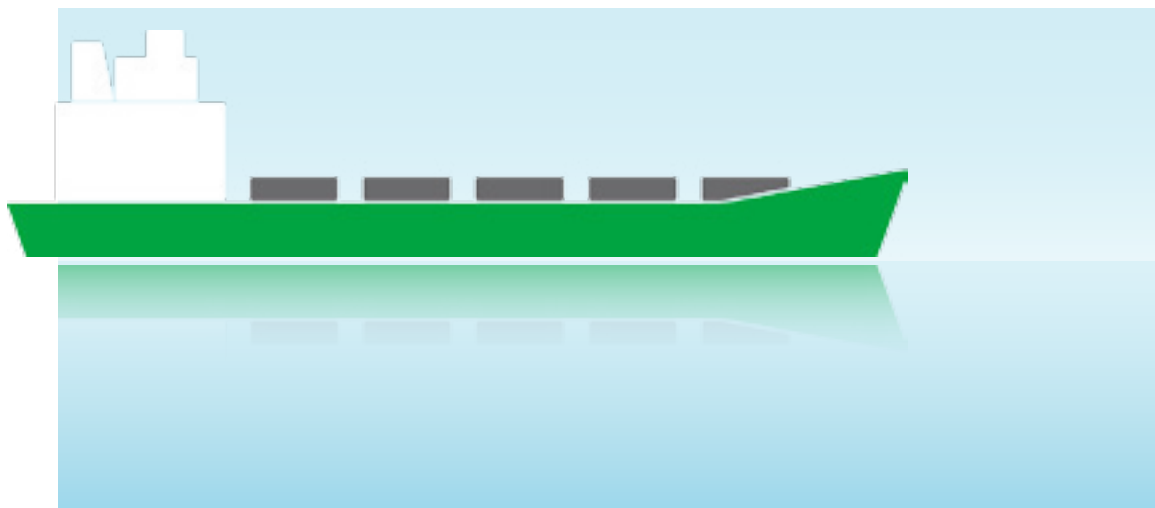
Alongside production, transmission also plays an important role in securing the supply of natural gas. NET4GAS is our independent Czech gas grid operator and it opened the 166 km GAZELLE pipeline in January 2013. This pipeline will carry gas across the Czech Republic. It will connect the OPAL pipeline to the Nord Stream pipeline in the Baltic Sea, which started operating at the end of 2011, and the MEGAL pipeline grid. This will supply Southern Germany and Western Europe with natural gas. It will also supply the Czech Republic and Slovakia with gas. Security of supply in large parts of Europe will be increased as a result. Liquidity in the markets will be improved at the same time.

### Biomass

RWE is increasing the generation of electricity from biomass. The CO<sub>2</sub> footprint is more favourable than is the case with conventional fuels. In 2011, RWE Innogy brought a wood pellet plant on stream in Georgia (USA) with an annual capacity of 750,000 metric tons of wood pellets produced sustainably ([> Supply Chain](#)). In 2012, we used a total of 3.3 metric tons of solid biomass, of which more than 600,000 metric t came from our wood-pellet production plant in Georgia.



## Supply Chain



We are challenged more than in the past to take responsibility for complying with social and environmental standards in the supply chain. For example, increased stakeholder expectations were defined in the revised OECD Guidelines for Multinational Enterprises of 2011. In the same year, the final report of the UN Special Representative on Human Rights and Transnational Corporations and Other Business Enterprises clearly defines the enhanced expectations.

We are confronted by specific challenges in the procurement of fuels. We import around 52 % of the hard coal we need for our power stations from countries outside the OECD. Important countries of origin for the supply of coal are emerging economies or developing countries where compliance with acceptable social and environmental standards cannot always be taken for granted.

We want to make a substantial contribution to reducing our CO<sub>2</sub> emissions by using biomass. When we purchase biomass, we need to ensure that this is not at the cost of loss of biodiversity in valuable natural habitats or degradation of the soil.

### OVERVIEW OF THE MOST IMPORTANT FACTS:



Sustainability aspects also need to be taken into account when sourcing components for power stations and standard products. Occupational health and safety management play an important role here with contractors and partner companies, particularly at the construction sites for our power stations.

**Target attainment**

We have comprehensively based our procurement of fuels, goods and services, as well as plant components on our Code of Conduct. Where necessary we have defined further detailed requirements for areas such as occupational safety and safe handling of hazardous materials. This means that appropriate processes and verifications are available nationwide for 98.6 % of the purchasing volume amounting to €18.2 billion. During the coming years, we aim to identify specific requirements guided by the expectations of our stakeholders.

<b>Objectives</b>		
<b>We are committed</b>	<b>KPI</b>	<b>Target</b>
... to avoiding reputational risks by making compliance with internationally recognised social and environmental standards an integral part of our supply contracts.	Supplier management coverage in all procurement areas in %	At minimum % of the purchasing volume



## Hard coal

In 2012, we used 13.7 million metric t of hard coal at power stations in Germany, the United Kingdom, the Netherlands and Poland. A total of around 52 % originated from countries outside the OECD. The expectations of our stakeholders are increasing when it comes to transparency and ensuring acceptable conditions in the supply chain for hard coal. We were one of the co-founders involved in establishing the “Bettercoal” initiative in February 2012 as we pursued the objective of meeting the challenge posed by these demands. Members of the initiative include European operators of coal-fired power stations and operators of coal mines and non-government organisations in an advisory role. The initiative has developed in a Code of Practice being drawn up for coal mining.

An initial phase for public comment and consultation ran from September to December 2012. Round-table meetings for discussing the Code of Practice have been held in three of four key export countries for hard coal – Columbia, Russia and South Africa. A second comment phase on the Code of Conduct and the Guidelines was carried out in the first quarter of 2013. An Assessment Protocol was developed on the basis of the code covering the inspection of coal mines at the mining site. The coal mines being selected for assessment in the pilot phase are currently being identified. The pilot phase is scheduled to start in mid-2013.



[> More on “Bettercoal”](#)

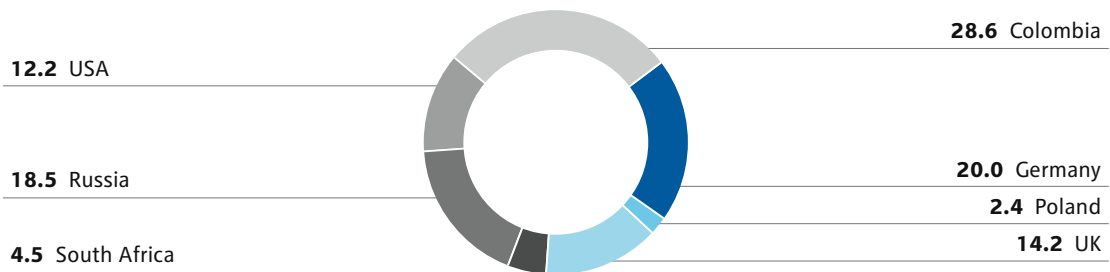
In the Netherlands, Essent is involved in the “Dutch Coal Dialogue”. This is a multi-stakeholder initiative between the major Dutch coal users from the energy and steel sectors, three coal-mining companies, two trade unions, four non-government organisations and the Dutch Ministry of Economic Affairs. In August 2012, all the participating Dutch energy utilities submitted a report on their coal procurement, categorised by supplier country and the main coal mines. Three Colombian mines emerge as the most important sources of hard coal for the Netherlands, supplying around half the hard coal required in 2011, followed by two Russian mines accounting for 13 % of imported coal.

As a next step, an independent auditing company was commissioned by the “Dutch Coal Dialogue” at the beginning of 2013 to carry out the first inspections of mines using an Assessment Form developed in the course of 2012. Preparatory talks are currently ongoing. The results of the assessment and potential agreements on improvement measures are expected in the first half of 2013 and they will be shared with the “Bettercoal initiative” to avoid duplication of effort and parallel structures.

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**Hard Coal by country of origin 2012**

in %



## Biomass

In 2012, we used a total of 3.3 million metric t of solid biomass to generate electricity and heat in our power stations or decentral plants mainly in Germany, the United Kingdom, the Netherlands and Hungary. Large-scale use of biomass receives government subsidies in the United Kingdom and the Netherlands for co-combustion in conventional power stations or for plants converted to biomass. Requirements for the sustainability of biomass used as fuel are being developed in these countries and at European level. Evidence of compliance has to be provided by means of certificates or some other form of verification. Since we primarily use wood pellets there, we are also committed to further developing appropriate certification systems for the supply chain of wood pellets.

### Use of biomass 2012 (total: 3.3 Mio. t)

in %

0.6 RWE Power

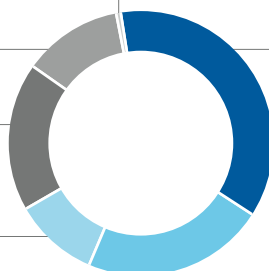
12.0 RWE Germany

18.2 RWE Innogy

10.2 RWE Hungaria

36.6 RWE npower

22.5 Essent



### Certification

A large proportion of the solid biomass used by RWE npower and Essent are wood pellets. These are procured by RWE Supply & Trading from international sources – around 2.4 million metric t in 2012. 98% of these imported wood pellets were certified in accordance with the Green Gold Label or comparable standards during the reporting year. The remaining amount was local biomass sourced from the Netherlands.

RWE essentially uses the Green Gold Label established by Essent in 2002, a track and trace system and a certification programme for assurance of sustainable biomass sourcing. The Label is now registered through the independent Green Gold Label Foundation. The Foundation is also responsible for the criteria used and for communication with the stakeholders. To this end, the foundation was established in the year under review, a new multi-stakeholder governance structure was developed and contact was made with potential new members for the Advisory Board. In 2012, important US producer Enviva agreed to join as a representative of sector. Additional representatives, e.g. environmental protection groups, are likely to be welcomed as new members in 2013.

The sustainability criteria of the Green Gold Label are in complete conformity with EU biomass sustainability criteria and in May 2012 the Foundation applied for EU recognition of the label as an approved sustainability system under the Renewal Energy Directive. A similar recognition was granted to Green Gold Label by the UK's energy regulator Ofgem at the beginning of 2012.



[> More on the Green Gold Label](#)

As a member of the Initiative of Wood Pellet Buyers (IWPB), RWE is also working on achieving standardisation in trade relations for the global wood pellet trade. Integration of sustainability requirements represents a special challenge. The member companies of the initiative include a substantial proportion of the European sales market for imported wood pellets. The aim of the initiative is to create prerequisites for a liquid global market for sustainable biomass. The initiative has developed standard solutions for contracts, technical specifications and sustainability criteria. The Green Gold Label and the certification systems used by other power companies will be integrated and adapted to the IWPB initiative during the course of 2013. The aim is to have an independent certification system with multi-stakeholder governance and supported by all the major European wood pellet users ready for use at the end of 2014.

#### **Biomass and CO<sub>2</sub> footprint**

Most of the imported biomass originates from South-east USA and the Canadian province of British Columbia. RWE commissioned the German Biomass Research Centre and Utrecht University to prepare CO<sub>2</sub> footprints for these two regions of origin.

The studies revealed the results set out here. Calculated over the whole life-cycle and supply chain, including for example emissions from drying, from fertilizer production and for transport across the Atlantic Ocean, the studies showed that biomass used to replace coal in advanced power stations in Western Europe led to a reduction in CO<sub>2</sub> emissions of around 80%. The reduction was 70% compared with the European average for fossil-fired power production. The results are based on a method of calculation recommended by the European Commission.

Scientists and environmental protection groups believe that locking up CO<sub>2</sub> by replanting to replace the trees used must occur quickly enough in order to exert a short-term effect for climate protection. According to the study by the University of Utrecht, the geographic and climatic conditions in the south of the USA encourage comparatively fast tree growth and therefore permit rapid resorption of the CO<sub>2</sub> released by generating electricity from biomass. The wood pellets from British Columbia are made from timber-industry residues and logging remains from forests which would otherwise have been burned to avoid uncontrolled forest fires. Wood also comes from dead trees in forests severely affected by the mountain pine beetle epidemic. The study showed that in all three cases, use as wood pellets for combustion in West European coal-fired power stations exerts a direct and substantial positive impact on the CO<sub>2</sub> footprint.

A study also looked at sustainability risks in other geographical regions around the world. The comparison shows that the South-eastern USA and British Columbia have adequate government regulation and a forestry industry with a tradition of high standards, making them both good regions for sourcing biomass.

#### **Biomass from regional sources**

We are operating and setting up a number of small-scale biomass district-heating power plants in Germany, the United Kingdom and Italy which source their fuel as waste wood and as virgin wood from regional forestry and agriculture. Regions with an intensive livestock industry, such as Münsterland (Germany) are ideal for the generation of biogas to be used in combined heat and power plants and also for feed-in to the local gas grid. RWE Innogy uses manure and slurry and this ensures that there is no competition with food production. In Germany, the Netherlands and Hungary we use biogenic fuels from regional sources as well biomass for co-combustion at large-scale power stations.



[> More on the biogas plant Münsterland \(only in German\)](#)

[> More on biomass procurement in Germany](#)

#### **Biomass from own production sources**

We are also taking steps to safeguard electricity generation from biomass and in 2010 we set up our own wood-pellet plant in the US state of Georgia. In 2012, the plant supplied more than 600,000 metric t of wood pellets to Europe. Pellet quality has been increased. The sustainability of the pellets produced was certified by the Green Gold Label and by accredited forestry standards, for example FSC Controlled Wood and SFI Fiber Sourcing. The wood-pellet plant plays an important role in securing the supply of pellets for the converted power station at Tilbury in the United Kingdom and the Amer power station in the Netherlands.

## Goods and services

The purchasing volume of the RWE Group for standard products, services and power-plant components was around €9.0 billion in 2012. By comparison with the procurement of fuels, we assess that the risk of breaching environmental and social standards in the area of standard products, services and power-plant components is low. We procure virtually all our standard products and services from Europe.

Nevertheless, we also need to comply with our duty of care in these product groups and intensify the scrutiny of sustainability aspects at our suppliers. Specific requirements for suppliers are defined in the Guidelines for Group Purchasing and in the General Terms and Conditions of Business.

We also communicate our expectations proactively to our suppliers. Occupational Healthcare Management, the Group CR strategy and the RWE Companius Corporate Volunteering Programme were therefore among the topics discussed during the course of this year's supplier conference held at RWE.

In 2012, representatives of RWE Service GmbH took part in various joint working groups run by the Forum for Sustainable Development of German Business – econsense – and the Federal Association of Materials Management, Purchasing and Logistics with the aim of developing a uniform reporting framework for supply surveys and supplier developments on the subject of sustainability in the supplier chain.

In 2012, RWE Technology defined an international standard in the area of new-build measures covering the process of supplier preselection for the procurement of power plants and components. This standard applies to all first and second tier suppliers. The focus is on self-assessment and individual random samples on the ground, aside from quality also looking at the issues of occupational safety and healthcare management, international labour standards and anticorruption. The findings and results of the on-site inspections form a constituent element of subsequent contracts. In 2012, Essent developed tools to support sustainable procurement, supplementing the check of potential suppliers against the World Bank Listing of ineligible suppliers. These tools comprise a Product Impact Matrix to assist procurement teams in analysing potential ecological and social impacts, as well as listing lower impact options on people and the environment. A questionnaire was also developed for the identification of risks for sustainability, and health and safety at potential suppliers.

## Pricing and Marketplace



RWE sells electricity and gas in several European countries. Each of these countries has its own market conditions. The marketplace in Germany is undergoing major changes as a result of the energy transition. Even when times are changing, we want to offer our customers electricity, gas and services at fair and affordable prices.

The energy transition in Germany is influencing electricity markets throughout Europe – wholesale and retail business alike. In 2012, Germany exported an estimated 23 million MWh of electricity to other European countries and this was more than ever before – despite the shutdown of almost 8,422 MW of nuclear power-plant capacity. The rapid expansion of photovoltaic power has accelerated this development and the framework conditions of the energy industry are changing.

At the close of 2012, we were supplying around 16.4 million residential households and small commercial businesses in Europe with electricity and nearly 7.2 million households with gas. Compared with the previous year, this means we have a total of some 200,000 fewer residential and commercial customers, while the number of our gas customers in this segment has remained virtually unchanged.



> [Energy markets](#)

### OVERVIEW OF THE MOST IMPORTANT FACTS:

<p>Customer Loyalty Index fallen by 1 point to</p> <p><b>72</b></p>	<p>Rising prices caused by taxes and charges in the consumer markets</p>	<p>Green electricity for electric cars in the United Kingdom</p>	<p>Award for good product and customer services in Hungary</p>	<p>Special tariffs for people with disabilities in the Czech Republic</p>

### Challenges for the markets

In Germany, the prices for wholesale and consumer markets have been uncoupled and they now operate independently of each other. The prices on wholesale markets for electricity fell in 2012, whereas electricity is becoming more and more expensive for most consumers. The wholesale market reflects the economic crisis in Europe and the fast increasing feed-in of electricity from subsidised renewable energies. After a short-term interim high at €50/MWh in mid-August 2012, the prices of forward contracts for the calendar years 2013 and 2014 eased consistently. The forward contract for a base load in the calendar year 2013 was negotiated below the level of €45.50/MWh in mid-December 2012.

In contrast to this situation, electricity prices for consumers in Germany rose markedly in 2012. The rather lower procurement costs of the sales organisations have largely over-compensated for the additional financial burdens in the form of increased taxes and deductions – including costs for the expansion of renewable energies and the electricity grids. Last year, the rise in electricity prices for domestic households led to a wide-ranging public debate about the equitable distribution of the additional financial burdens and the social compatibility of the energy transition.

Contrary to the situation in Germany, wholesale prices in the United Kingdom rose by around 5 % in the year 2012. The costs to deliver the energy efficiency programmes launched by the government (CERT / CESP) virtually doubled. Energy suppliers in the United Kingdom have been obliged to provide support for residential households on low incomes in paying their energy bills for some time now.

Statutory regulations in Poland have also resulted in additional costs. The energy utilities have to purchase "White Certificates" which are intended to promote energy savings. They also have to purchase additional certificates for electricity generated from renewable energies and from highly efficient gas-fired cogeneration plants.

A development is emerging in the Czech Republic similar to that in Germany. Wholesale and consumer prices are also drifting apart there. Wholesale prices fell by around 5 %, while prices for consumers increased by around 4 % compared with the previous year. This increase was fuelled by a number of factors including increased grid fees which also cover the costs for subsidising photovoltaics.



### Target Attainment

Our target is for our customers to remain loyal over the long term. The loyalty of our customers is the benchmark of our area for action "Pricing and Marketplace". We measure success by their willingness to remain customers of RWE over the long term, their interest in additional products and services, and their readiness to recommend RWE to other people. We have been producing the Customer Loyalty Index uniformly for all sales companies in Germany since 2009. Our status with our electricity customers in Germany has deteriorated by one point at 72 points compared with 2011, but we are in the upper field of our comparable competitors. We are planning to reach a value of 73 in 2013.

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#### Objectives

We are committed	KPI	Target
... to having satisfied and hence loyal customers.	Customer Loyalty Index*	Customer Loyalty Index of at least 73 in the year 2013

\* The Customer Loyalty Index is based on surveys conducted among residential and commercial customers. They are asked to score RWE on a scale of 0 to 100 points. Satisfaction is rated low for scores of 70 or less, moderate for scores of 70 to 79, and high for scores of 80 and over.

## Electricity prices and tariffs

Particularly against the background of increased statutory deductions, we increased the prices for basic supply to our residential customers in Germany by around 6.5 % in 2012. In the United Kingdom, we increased our electricity prices by 9.1 % in the winter of 2012 and gas prices by 8.8 %.

The rates at which private consumers switch supplier vary considerably between different countries. While up to 13 % of customers in the United Kingdom switch suppliers, we have observed rates in the low single-digit percentage range in Central and Eastern European markets. Analysis of the change in tariff shows us that many customers want to hedge their bets with fixed-price packages if they are expecting energy prices to rise. We therefore offer fixed-price packages with different terms. In 2012, around 97,000 customers alone at RWE Vertrieb in Germany, our biggest sales company, decided to opt for a fixed-price package. 152,000 customers in the United Kingdom took the same decision over the same period of time.

Prices for residential customers in Poland are set by the government regulator so that as yet there is no price competition. Like the other energy companies based there, RWE adjusted its energy prices for residential customers in 2012. New funding instruments for energy efficiency and renewable energies from the Polish government are responsible for this adjustment. In Hungary, gas and electricity markets have been completely deregulated since 2007 and 2009 respectively. However, customers are free to decide for themselves whether they want to continue to stay in the regulated market. The government has ordered a reduction of 10 % in electricity and gas prices in the regulated market in an attempt to reduce energy costs for domestic households.

The energy market in the Czech Republic is completely deregulated. The prices for RWE customers have risen by an average of around 4 % compared with 2011 as a result of increased grid fees. In the Czech Republic, long-term fixed-price packages also play a major role in decisions taken by customers – there is a big demand for such offers from customers. We regularly adjust our offers to match the individual market situation. The large market players also supply other products which have monthly or quarterly price adjustments.

### Green electricity tariffs

The interest of German consumers in green electricity products declined slightly in 2012 compared with 2011. Conversely, the number of contracts concluded for green electricity with our subsidiary company eprimo has developed positively. Every second or third customer of eprimo is currently opting for the green electricity tariff. The number of customers purchasing green electricity currently amounts to nearly 200,000. There is also a great deal of interest in tariffs for green electricity in the Netherlands.

In the United Kingdom, we also offer the tariff “npower Juice” which has been accredited by the Green Energy Supply Certification Scheme. For every customer who takes npower juice, a financial contribution will be invested by npower on our Juice customers’ behalf, to support community based renewable energy projects. RWE npower has also launched the first green tariff designed for people with electric vehicles. The “juice-e” tariff offers a cheaper unit rate for off-peak usage, to reduce the cost of charging an electric car over this time period.

In Poland, RWE Polska has been offering the green electricity tariff “Wind Power Energy” (Energia z Wiatraków) since 2011. Customers decide for themselves on the proportion of electricity from renewable sources that forms part of their overall consumption. The green electricity comes from wind farms operated by RWE Innogy. The origin is certified by the German Technical Inspectorate (TÜV). Our electricity tariff “Energy from Wind Farms” encountered high levels of demand with our business customers in 2012. We sold all the electricity generated from wind power at our Polish wind farms totalling 318 GWh. Customers have already been identified for the lion’s share of electricity scheduled for production in 2013.

ELMŰ, a sales company of RWE Hungária, has been offering its residential and business customers green electricity tariffs for several years. The electricity is derived entirely from renewables. ELMŰ is also promoting the installation and use of heat pumps with a special tariff.

## Gas market

The framework conditions in the gas market are also changing. The majority of European gas imports were previously based on long-term contracts where the purchase price was geared to the price of oil. Over recent years, the availability of gas traded freely in Europe has undergone a sharp increase, particularly due to the increased extraction of shale gas in the USA. As a result of this, gas prices in the key European trading exchanges fell below the price level of oil-indexed sales contracts. This led to competition becoming more intense. Energy utilities with no long-term gas purchase contracts are now able to procure gas on the spot market and sell this at more favourable conditions than utilities with oil-indexed purchase contracts. We have also observed consequences in the Central European markets. We recorded a decline in our market share on the Czech market from 72 % in 2008 to 44 % in 2012. This is the result of a strong competitive environment with annual growth rates of some 10%.

## Credibility and customer satisfaction

In 2012, the issue of electricity prices gained a much higher profile compared with 2011. The debate in Germany has focused on how the additional costs for expansion of renewables can be financed while providing for socially acceptable conditions.

### Germany

The readiness of customers in Germany to switch suppliers declined in 2012. We are offering new products like Smart Home in combination with electricity supply contracts to attract new customers. The issue of energy management continues to gain increasing importance. Almost three quarters of residential customers would like to receive their energy supply, energy advice and energy management from a single source. Our regional companies are offering energy controlling systems, initially for business customers.

### United Kingdom

Competition continues to increase in the UK market, with small suppliers growing their share of the market during 2012. The latest Customer Satisfaction survey for domestic customers released by consumer champion "Which?" showed a drop of 2 percentage points in the score of RWE npower to 39%. All the Big Six major suppliers in the United Kingdom are at the lower end of the energy table with RWE npower at the bottom. However, RWE is implementing a new internal programme to deliver changes across the business. The goal is to become number one in customer satisfaction by 2015.

Whilst complaints from domestic customers increased in 2012, our £200 million (€246 million) investment programme in frontline customer service is well under way, with the aim of helping to answer customer queries quicker and more effectively, and we hope to see complaints levels reduce as the new programme comes to fruition.

RWE npower's Customer Stakeholder Council continues to meet twice a year with representatives from a wide range of consumer protection organisations. The Customer Stakeholder Council discussed issues ranging from our customer transformation programme, starting with our investment programme in customer satisfaction, to the impacts of the Retail Market Review involving proposals by the regulator on reform of the customer market.

### Central and Eastern Europe

RWE continues to have a good reputation in Central and Eastern Europe. People in these countries associate us with security of supply and efficiency as a major private company. In the countries where energy prices are set by national regulators, competition is confined to service packages. This situation indeed makes the status of customer satisfaction all the more critical for the success of our business.

In Poland, the number of our customers has increased slightly by 1.2% compared with 2011. We collect data on a regular basis to assess the satisfaction of our customers in Hungary. The surveyed data relates to a number of issues including service quality, billing, complaints management and the

information policy of the company. These data serve as starting points for improvements. We also established a loyalty programme in 2012. Customers who pay their bills regularly each month receive vouchers with special offers for products and services.

In 2012, the Mátra power station received the "Super Brand" award for the fourth time. Mátra and the sales companies ELMŰ and ÉMÁSZ were awarded the title of "Hungarian Brand" for good products and customer services.

### Transparency

As a large energy company, we have an obligation to the antitrust authorities, other government agencies and the general public to demonstrate our commitment to fair market conduct. This is why we launched our transparency offensive as early as 2008. All market data relevant to electricity generation and to the availability of our power stations are published promptly. The transparency offensive meanwhile covers our electricity production in Germany, the Netherlands and the United Kingdom, as well as from renewable energies. This is how we ensure that all market players have access to the same information. Investigations carried out by the antitrust authorities in 2012 revealed no evidence of manipulation in the market by RWE.

On 23 August 2012, the Federal Antitrust Office announced in its closing report for the year that it was instituting a price abuse proceeding to investigate the district-heating sector against utilities unknown at the time. The proceeding commenced on 6 March 2013 against energy utilities including RWE Energiedienstleistungen GmbH. The outcome of the proceeding is not yet known.

## Fuel poverty

Fuel poverty is defined as households having to spend more than 10% of their total income on energy needs. Key contributory factors are low income, increasing energy prices, as well as high energy costs due to poorly insulated and inefficiently heated homes. There are differences in the approach taken to address fuel poverty and the scope of the measures implemented in the United Kingdom compared to Continental Europe.

### United Kingdom

The issue of fuel poverty has been the cause of public concern for many years in the United Kingdom. The first programmes to combat fuel poverty were already being set up in the 1990s. In April 2011, the Government launched the "Warm House Discount Scheme", a new programme to combat fuel poverty. The energy utilities are obliged to grant vulnerable customers a discount on their energy costs. In the year 2012, the amount was around £29 million (€35.8 million) and is projected to increase to £35 million (€43 million) in 2015.

In 2012, RWE npower also invested more than £3 million (€3.7 million) to support vulnerable customers in a variety of programmes. RWE npower's "Health Through Warmth Scheme" is targeted at people living in cold and damp homes. RWE npower provides support for these people by modernising the heating and insulation of their home. Any vulnerable people do not need to be npower customers to access help.

### Continental Europe

In Continental Europe, the basic supply of energy to vulnerable households is primarily carried out as the function of state social services. Up to now, companies have therefore been less involved in direct support for households. Rising energy prices significantly raised the profile of energy poverty in the year 2012. A variety of models exist in Germany for effectively acting to reverse energy poverty. RWE already established and promoted the > "Cleverer Kiez" or Smart Neighbourhood project in 2009 in order to gain experience of options leading to solutions. The specific objective is to bring about a change in behaviour with regard to energy consumption in the affected households. We trained people who were currently unemployed as energy consultants. At the same time, this opened up a career perspective for them. Personal support on the ground was a key perspective for the success of the programme. The costs saved on energy and water in some 1,000 of the supported households totalled around than €60,000. In mid-2013, we will hold a national conference where we will exchange experiences with other organisations and programmes.

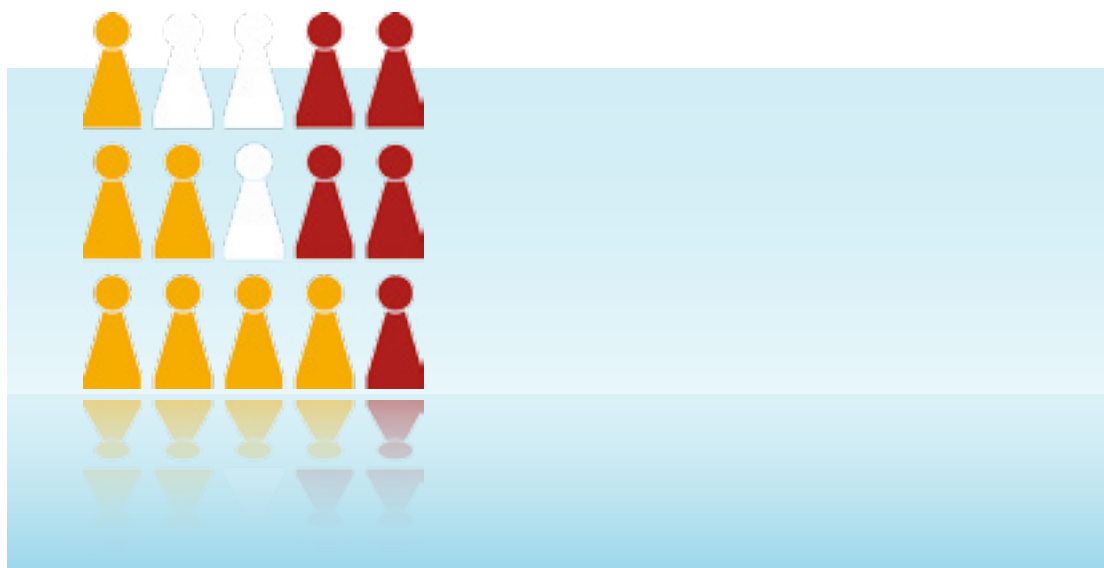
Programmes have also been launched to address fuel poverty through our companies in Central and Eastern Europe over recent years.

Our Hungarian subsidiary Mátra assists families affected by fuel poverty in the region. In 2012, almost 131 metric t of lignite were provided free of charge and 3,495 metric t of lignite were made available at half price to local government agencies for distribution to vulnerable families. The ELMŰ-ÉMÁSZ Group also combats fuel poverty. In 2012, 12,000 prepaid electricity meters were installed in order to provide the affected customers with improved control over their electricity costs.

In the Czech Republic, we are talking to our customers who are having problems with settling their energy bills. We offer them solutions tailored to the individual situation, e.g. payment plans or the adjustment of advanced payments. We also offer a discount for people who are incapacitated. Customers who hold a disability pass receive a discount of CZK20/MWh on their tariff. 5,000 customers are currently given this discount.



## Employees and Demographic Change



In future, our employees will need to be more flexible in their approach to company and functional boundaries. Our traditional markets are changing. The level of political interventions is increasing and the regulated part of the market is burgeoning whereas the competitive element of the market is losing ground. We need to respond to the changes in the marketplace by shifting the core functions of employees. We are taking on the challenges of the energy transition and we want to be part of the solution.

RWE therefore needs to ensure that its personnel are in a position to meet the challenges of a tougher and more competitive world. We need to become leaner, more flexible and closer to the market. A lot of our internal processes are still too complex, not transparent enough and take up the time of too many people. If we are to increase our efficiency, we need to avoid duplicated functions and optimise interfaces. This is one of the areas for action in our "RWE 2015" programme which we are using to make RWE fit for the future. Higher levels of flexibility will be required from our employees than in the past. We have to carry our employees and managers with us on this journey.

### OVERVIEW OF THE MOST IMPORTANT FACTS:



**Challenges**

The changed market conditions present our company and our employees with some major challenges. The core objective of the “RWE 2015” programme is to achieve a further improvement in earnings amounting to €1 billion by the end of 2014. We are also aiming to use this programme to create the platform for additional efficiency improvements after 2014. We will only succeed in our objectives if we take our employees and managers with us as we engage in future changes and we remain attractive as an employer in the process.

If the core functions shift within the Group as a result of market conditions, employees also need to be prepared to take on new activities. The long-term opportunities at RWE will increase for staff who become more flexible, both in geographical and functional terms. For example, career development of employees may also be linked to changing their location. Just as we have always done in the past, we will see what is feasible for our employees.

Over the long term, we can only secure our competitive position if cost awareness becomes a fixed element in our everyday working routine and we achieve operational excellence in the course of our cooperation between individual areas. This involves being even more careful when dealing with costs and investments. We would like to initiate rolling improvements in this area. All our employees need to contribute to the initiative and this should be a priority for them. Every employee can play their part, for example, by helping the individual Group companies to create a more flexible structure for fixed costs.

**Target attainment**

Up to now, the core challenge of this area for action has been managing the demographic change. The main target was to create a balanced age structure and to achieve a high level of planning certainty. The core challenge has now been postponed. If we are to ensure that we remain fit for the future, we will have to be leaner, more flexible and closer to the market. We have not yet been able to develop an appropriate indicator (KPI) that will allow us to measure our fitness for the future.

In 2010, we established a parameter in the form of the Demography Index (DEX) in order to measure a balanced age structure as the basis for our operational capability. The age distribution improves as the DEX value approaches 100. Since 2010, the DEX has changed from 83.8 to 83.9 in 2012 and is therefore minimally below our target of 84 for 2012. Other large German companies have similar values.

<b>Objective</b>		
<b>We are committed</b>	<b>KPI</b>	<b>Target</b>
... to ensuring the long-term availability of sufficient numbers of suitably qualified personnel.	Demography Index	Demography Index of at least 84

## Fit for the future

The changed framework conditions prevailing in the energy industry require strict budgetary discipline with future investments and a reduction in running costs. During the coming years, we will only be able to implement a few important projects, particularly in the area of electricity generation. This means that jobs will be lost in those areas affected. Our primary aim is to address this situation through more flexibility from our employees. However, we also need to implement job reductions over the coming years. We are planning to cut 3,700 jobs during the years 2013 and 2014. In view of the changes we have described, we will continue to reduce the number of people employed during the course of 2014.

### Employee relations in the context of restructuring

We do not want to operate a top-down approach for implementation of the challenges described. Our aim is to join forces with employee representatives and structure the journey to increased efficiency with socially acceptable conditions.

On 11 July 2012, RWE provided official notification to employee representatives in Germany about the plans covered by the "RWE 2015" project. The presentation to the Group Business Committee (GBC) and the Group Works Council (GWC) initiated the involvement of the co-determination committees in accordance with statutory regulations. This had been preceded by discussions on an informal basis.

### Cultural change with RWE 2015

"RWE 2015" is not simply a programme for cost cutting. "RWE 2015" entails much more of a broadly based approach and comprises four areas for action. An important area for action is implementation of a cultural change in the RWE Group. This is intended to support development towards a stronger performance culture. The continuous improvement of processes, structures and workflows should not take place in one-off projects but should be structured as a continuous process in the course of day-to-day, routine business.

If we are to develop into a high-performance organisation, all the players in the Group need to fully understand the need for these changes and they have to make a commitment to them. As far as we are concerned, this entails having an open attitude to new processes or different working methods. We also need to enhance our focus on customers, the market and our competitors and promote our commitment to performance. This approach will only succeed on the basis of motivation and trust. Our corporate strategy will need to be clearly communicated to the Group companies and our employees will need to be informed of the contributions they can and should make to the process of implementation. This communication requires clarity and transparency in leadership style.

However, a survey of around 300 managers carried out in spring 2012 highlighted concerns about managers' readiness to embrace change. The Organisational Health Index (OHI) was used to survey around 90 individual categories and skills. This index indicated that the majority of managers were aware of the necessity to make changes. However, there are uncertainties surrounding implementation of the changes. These changes are not simply about issuing instructions. They have to be introduced by the individual supervisors who have an important part to play as a role model. We are working on this issue.

### Personnel strategy

Despite the changes occurring in the energy industry and the resulting consequences for RWE, the goals for the personnel strategy remain:

- Activation of employees with the aim of structuring the change together
- Establishment of a performance culture throughout the Group
- Enhancing productivity and efficiency in existing and new areas of business
- Sustainable business success through staff with the right talents
- Dedication and commitment of managers to leadership

These goals will generate new measures focused on the current changes. They will be integrated in the "RWE 2015" programme and implemented within the programme.

### Internal Group Job Market

The Internal Group Job Market (IGJM) is intended to promote the mobility of our employees across company, interdisciplinary and national boundaries. The objective is to create an internal job market that presents attractive options to employees who are looking for new challenges. It is also hoped that a bigger and more transparent range of job offers will also enhance the appeal of RWE as an employer. Employees wanting to embark on new challenges will be approached selectively through a professional intermediary network. The IGJM creates transparency for the personnel requirement and the imbalances based on changes in the energy market. It supports personnel management in solving employment problems.

Implementation of the IGJM started in January 2011 and has been successfully implemented in German companies. In 2012, an online tool was also developed and introduced (IGJM: one:n) in which employees can input their interests and skills, and test themselves. On this basis, the employee can then get advice on how their career could develop further.

### Comparable pay structures

We have decided to make the pay for our non-pay-scale employees more transparent and more accountable. This will make it easier for employees to change positions within the company. In 2012, we embarked on drawing up an objective and transparent classification of non-pay-scale functions and restructuring the non-pay-scale groups in order to harmonise the classification and pay structures of non-pay-scale employees throughout Germany. The HAY System was selected for assessing functions since this methodology has already been used in the RWE Group since 2004 for evaluating management functions within Germany and in some foreign subsidiary companies also for non-management functions. RWE AG and RWE Innogy were the pilot companies and we worked together with the co-determination committees to assess the non-pay-scale function. The non-pay-scale structures established in this pilot study will form the platform for drawing up a uniform structure for classification of the non-pay-scale functions and the pay structures for all German companies by 2014.

Every employee needs to be aware of the targets that have to be achieved and precisely what his or her position is. In order to achieve this, we require honest feedback and a nuanced assessment of performance. "RWE 2015" is therefore currently being used for a review to make the performance processes transparent and uniform for all the employees in the Group. The objective is to create a challenging and supportive performance culture which yields differentiated results and leads to consistent follow-up measures.

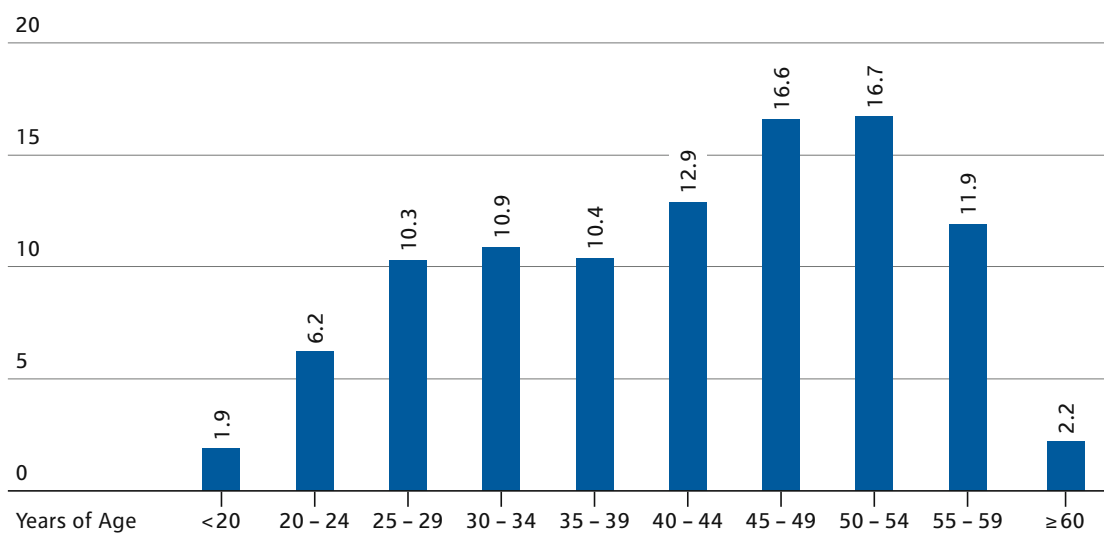
## Staff Structure

Our goal is to achieve a well-balanced age structure which we measure using the Demography Index (DEX). We deploy the “Long-term Workforce Structure” tool (LWS) for strategic analysis and planning to achieve this balanced structure. We use it to assess the development of the future needs and requirements for our workforce. Analyses provide us with key information, for example information on personnel development required for specific individuals or on the personnel that need to be recruited. Nearly half the workforce is older than 44 years of age, the percentage working in RWE companies located in Germany is 55%. 14.1% of the employees are older than 54 across the Group with 14.8% being older than 55 in Germany. More than one third of the current workforce in Germany will leave the company over the next ten years with an average pensionable age of more than 60 years and without taking account of the planned reductions in personnel.

Irrespective of the planned personnel reductions, age-related retirement of employees presents us with significant challenges against the background of skills shortages in specific areas. The additional requirements arising from the energy transition and our efficiency enhancement programme “RWE 2015” bring about a further increase in complexity. Precise analysis of developments in our labour pool relating in particular to qualifications and location demonstrate that the age-related departures are not distributed evenly over time and they are not balanced evenly across the company, its departments and divisions. There are peaks among employees of the same age in some operational areas who then leave the company in cohorts – and the know-how they have built up over many years then leaves the company with them. The imminent shutdown of our nuclear power plants and the age-related employee departures are not mutually compensating.

**Age structure at RWE 2012**

in %



The LWS tool allows us to obtain a nuanced analysis of the employee capacities required at present and in the future based on a number of factors including qualifications and locations. Depending on the situation prevailing in an organisational unit (adaptation to a new strategy, modified market requirements, technical and/or process innovations), a range of different measures can be initiated in the light of this analysis. For example, personnel requirements in operational areas which might have shortfalls in human resources in the future can be covered by redeploying employees from other organisational units. Personnel requirements can also be identified in other areas which can only be addressed through appropriate new recruitment.

## Personnel development

As an energy group, we offer challenging jobs for a wide variety of different qualifications and specialist skills. We require competent and committed employees to meet the challenges brought about by the changed framework conditions in the energy industry and to take RWE forward with the energy to lead. We believe that it is important for RWE to have a profile as an attractive employer with school children, students, graduates and professionals – and that we continue to remain attractive as an employer for members of our workforce.

### Employer branding

We regularly visit universities to present RWE as an employer. The “Meet’n Speed Tour” enables us to present our company and empowers the participating students to address their own personal challenges. We coached 126 selected students in different application situations at ten locations.



[> More on the Meet’n Speed-Tour](#)

The “RWE Bewerberakademie” (RWE Applicant Academy) offers input for your personal and career development online and free of charge. Tips on making applications, competence tests, ebooks on specialist and management issues, and the online magazine “KarriereEnergie” (Career Energy), which already has more than 2,000 subscribers, facilitate a multifaceted and interactive dialogue. School children can explore online the content of a wide range of different training vocations through interactive and career-oriented games.



[> More on the “Bewerberakademie” \(RWE Applicant Academy\)](#)

In 2012, we presented the “RWE Zukunftspreis” (RWE Future Award) for the third time. This is an award for outstanding academic work in the context of developing renewable energies. A distinguished jury with representatives from academia and business will assess the applications received for the award, and the prize worth a total of 35,000 euros will be presented in 2013. Applications for the prize can be submitted up to April 2013.



[> More on the “RWE Zukunftspreis” \(RWE Future Award\)](#)

We present our Group as an attractive employer through the scholarship programme RWE Fellows. Since 2008, we have been awarding a monthly grant to a total of 32 undergraduate students and selected doctoral candidates each year. Around 25 % of the fellows join one of RWE’s Group companies once they have completed their studies and this is a clear indicator for the success of the programme.

Our Group subsidiary company VSE located in the Slovak Republic is also putting the scholarship programme into practice. Last year, the company provided support for eight fellows who have now all been given positions as trainees there. Our Hungarian company, the ELMŰ-ÉMÁSZ Group, is also committed to making contact with talented students at an early stage. The ELMŰ-ÉMÁSZ Academy is present at three universities and offers students the opportunity to have advanced training on issues relating to the energy industry. The project on Employer Branding was launched in 2011.



### Development of young talent

If possible, we would like to develop our future managers from our own pool of talented employees. We do this in a wide range of different programmes. For example, we have been able to recruit a total of 45 external trainee managers to our International Graduate Programme – our group-wide trainee programme for high-flying graduates – and develop their talents. 37 of these trainees are still working in the Group and six of them are managers.

The graduate programmes in Hungary have been successfully implemented for many years. In the year 2012, we accepted eight new participants in the programme. In previous years, we have taken on a total of eight participants as full-time employees.

> [More on the International Graduate Programme](#)

Experiences along the entire value chain, within networks and in cooperation across companies and over national borders are all becoming increasingly important. The participants in our Corporate Talent Programme have an opportunity to learn about career paths outside their individual companies and specialist areas in a job rotation programme.

### Training with RWE

The classic vocational-training route continues to be a high priority at RWE. At the end of 2012, a total of some 2,800 young people were being trained in more than 30 vocations at 60 RWE sites. In September 2012, around 800 new apprentices started their training at RWE. The percentage of female apprentices amounted to 23 %.

We have been training more apprentices than we actually require for many years. This involves us in shouldering our responsibility as an employer and offering young people a sound training in industrial, technical, commercial or other vocations with aim of giving them good prospects in the employment market. The fact that we train more people than we actually need for our own requirements constitutes part of our social commitment. We use our initiative "Ich pack' das!" (I can do this!) to give around 100 disadvantaged young people a second chance every year. These people spend one year doing a foundation course. Since 2004, RWE has invested a total of €10 million in the programme. 80 % of the trainees in 2012 obtained a vocational training contract. This is a very high success rate.



> [More on the RWE initiative "Ich pack' das!" \(I can do this!\)](#)

### RWE Learning

Career training and qualification are key factors for enhancing the employability and flexibility of our employees. We launched a new learning architecture for the RWE Group with "RWE Learning" in the middle of 2012. This supports independent planning of career-training measures. The learning portal "RWE Learning" was set up by the RWE Development Centre and there are initially versions in German and English, with translations into other languages currently at the planning stage. Personalised access gives employees an overview of all the training packages available in the RWE Group and they have their own personal "Learning Account". This shows the training history of the employee and supports individuals and their line managers in planning and defining development targets. All

career training packages run by the RWE Development Centre and the relevant RWE company can be booked here. “RWE Learning” increases the transparency of career training in the RWE Group, integrates managers more intensively within the process of career training and also makes a contribution to ensuring that RWE and its workforce are fit for the future.

## Career and family

A family-friendly approach plays a key role for many employees in their appraisal of whether RWE is regarded as an attractive employee. We support our employees with flexible working hours and childcare facilities at various day-care nurseries. During the period under review, we offered more than 150 nursery places at our sites in Essen, Dortmund and Hamburg. In the year 2012, we started making preparations for a further two Lumiland childcare centres located close to the company. In January 2013, the "Europa-Kita Lumiland" nursery opened as an on-site childcare centre operated by VSE AG in Saarbrücken with 60 places for children from birth to the age of six. In September 2010, the foundation stone was laid for the Lumiland nursery located at the head office of RWE Power in the Lindenthal district of Cologne and the nursery is scheduled to open in September 2013. 56 nursery places are planned.

In Hungary, our subsidiary company ELMŰ is continuing to build up the number of jobs with flexible working times and teleworking jobs wherever the operational workflows permit this. The "Young Mothers" programme is a way of the company maintaining contact with mothers who have taken parental leave and this helps them when they return to their career.

## Diversity

We regard diversity as an opportunity to recruit the broadest possible range of skills and talents for our company and to develop them for our needs. One focus of our diversity activities is the promotion of equal opportunities for women. In October 2011, we made a commitment to the German government to increase the percentage of women in management positions throughout the RWE Group to 22 % by 2018. In 2012, the percentage of women in the entire workforce was 27.5 % (2011: 27.1 %) and the percentage in senior management positions was 12.3 % (2011: 11.3 %). There are no women on the Executive Board of RWE AG. Three women are currently members of the 24-strong Supervisory Board of RWE, two of these are employee representatives.

The Executive Mentoring Programme gives female managers the opportunity to engage in regular communication with their mentors and plan their careers on an individual basis. The mentors support them in their role as experienced managers. The programme was carried out for the fourth time in 2012. Since the launch in 2007, a total of 79 mentees have been through an Executive Mentoring Programme.

The "Communication for Female Leaders" seminar was piloted at an event in 2010 and it has been offered several times a year since then. It is directed towards managers and junior managers who are due to take on a specific management function in the near future. This training is intended to enable the participants to learn about enhancing their own profile for communication purposes. So far, a total of 40 managers and junior managers have taken part in this training.

The "Senior Women's Network" serves as a communication and network platform for women. Around 300 women in management positions and female junior managers took part in the annual meeting in 2012. The meeting was held in Cardiff (United Kingdom) and it was hosted by RWE npower and RWE Innogy UK.

As a matter of principle, RWE pays women the same salary as men in equivalent positions. The salary is calculated exclusively on the basis of qualification. The employee representatives ensure that equality is maintained in this area. Around 73 % of our employees are paid on the basis of a collective pay-scale agreement. The allocation to a particular pay-scale or salary group is linked to the job profile and is independent of gender. No information is available for a more nuanced assessment which also takes account of career development and promotion options.

### Internationality

RWE operates throughout Europe and internationalisation is also an extremely important factor for diversity management. In June 2012, the RWE Executive Board decided to take enhanced measures to promote the internationalisation of the Group and its workforce. The focus is on internationalisation of the executive management and the management team of newly established companies. The aim of "RWE 2015" is also to enhance the mobility of the workforce across national borders. Furthermore, targets are also to be agreed with the Group companies and cultural measures are going to be integrated within the ongoing "Cultural Change" project.



> [Internationality and cultural diversity at RWE](#)

## Employees outside Europe

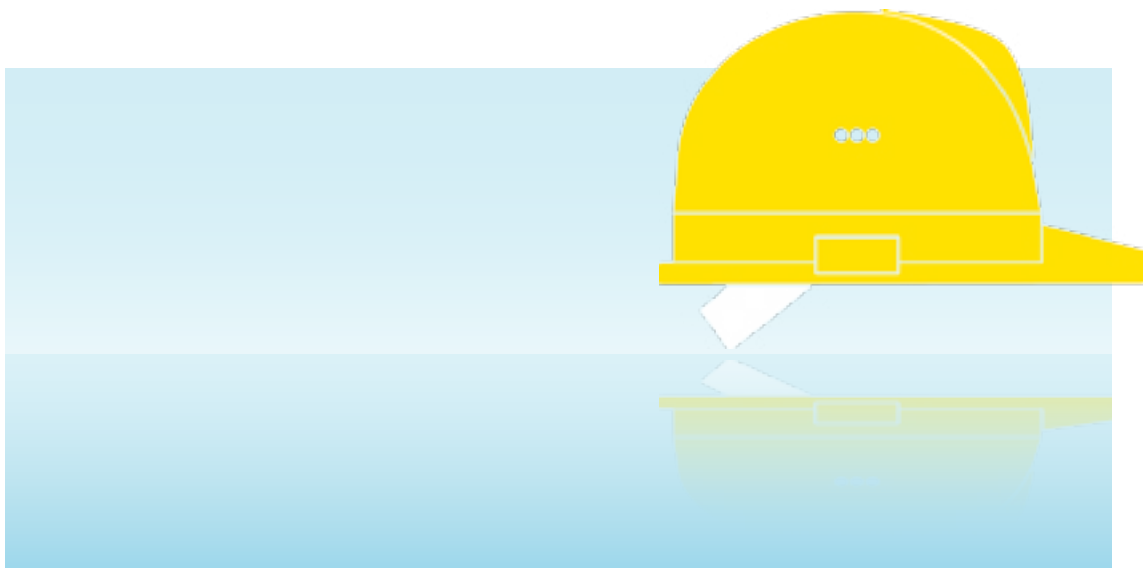
The majority of our employees (99.7 %) work in European countries. However, RWE DEA is also operating in Egypt, Libya and Turkmenistan. We have a representative office in Azerbaijan and we employ local workers in these countries but the workforce also includes international specialists who make up around 20 % in Egypt, around 13 % in Libya and some 18 % of the workforce in Turkmenistan. We have less than 100 employees in North America. We don't employ people in any other region.

Our companies outside Europe offer attractive and competitive employment conditions. These include appropriate remuneration and a corresponding level of social security. In particular, RWE Dea operates outside Europe. If the employees of RWE Dea are ill, the company offers them support that extends beyond the statutory benefits provided in the individual countries. We also offer higher retirement benefits than those provided under statutory regulations. In Egypt, we have introduced a private retirement plan and our employees in Turkmenistan can take out an additional voluntary retirement plan.

We also foster open, two-way communication in an atmosphere of trust with our employees at locations outside Europe and we adopt the same practices as in Germany. This enables us to take appropriate account of the demands of our employees, even if their representation is not organised in unions to the same extent as in Europe. Our colleagues in Egypt, Libya and Turkmenistan also take part in the group-wide staff survey.

Our non-European sites present specific challenges for the safety of our employees. The uncertain political situation meant that we had to evacuate our international employees and their families from Egypt and Libya in 2011. All our employees have now been able to return to Egypt with their families. Our international employees have also been able to restart their work in Libya but we initially decided to send our employees back without their families due to the security situation. We have created flexible options to enable our international members of staff to return frequently to their families.

# Occupational Safety and Healthcare Management



We want both our own workforce as well as the employees of our subcontractor partners to return home just as healthy at the end of the day as they were when they arrived for work. Our goal is to achieve this objective through our Occupational Safety Management System. The aim of our Occupational Healthcare Management is to maintain and promote the workability of our workforce.

Our own employees and the employees of our partner companies often carry out work in workplaces that present specific challenges to health and safety, for example in opencast mines, at power stations, on transmission lines and offshore wind turbines. The avoidance of all industrial accidents, in particular serious or even fatal industrial accidents is an absolute priority at RWE. We are committed to giving equal treatment to our own and external employees in our occupational safety and healthcare policy.

The challenges that are encountered by our company through the energy transition demand maximum workability and commitment from our employees across all age ranges. We are therefore continuing to develop our Occupational Healthcare Management and we integrate it into our operating processes.

## OVERVIEW OF THE MOST IMPORTANT FACTS:



### Target Attainment

Our aim is to avoid all industrial accidents, in particular serious and fatal accidents, because each industrial accident is one too many. Five years ago, we defined our goal as achieving an LTI<sub>F</sub> value (number of accidents with at least one lost day of work for every million hours worked;  $LTI_F = X/1,000,000 \text{ h}$ ) of less than three for our in-house employees. We already achieved this goal in 2011. For the year 2012, we extended our goal and for the first time included industrial accidents involving our partner subcontractors in the goal agreement on occupational safety. Even when we included the employees of our partner subcontractors, we were able to beat the target we had set ourselves. The LTI<sub>F</sub> rate amounted to 2.8 after 3.3 in the previous year.

At the moment, the Work Ability Index (WAI) is only applied in Germany. By the end of 2012, 70% of the workforce in our German companies had access to the WAI. This is the same percentage as the value from the previous year. Since 2010, this index has provided us with a record showing the fitness of the members of the workforce to carry out their work today and in the future. By the end of 2012, more than 11,000 questionnaires had been completed.

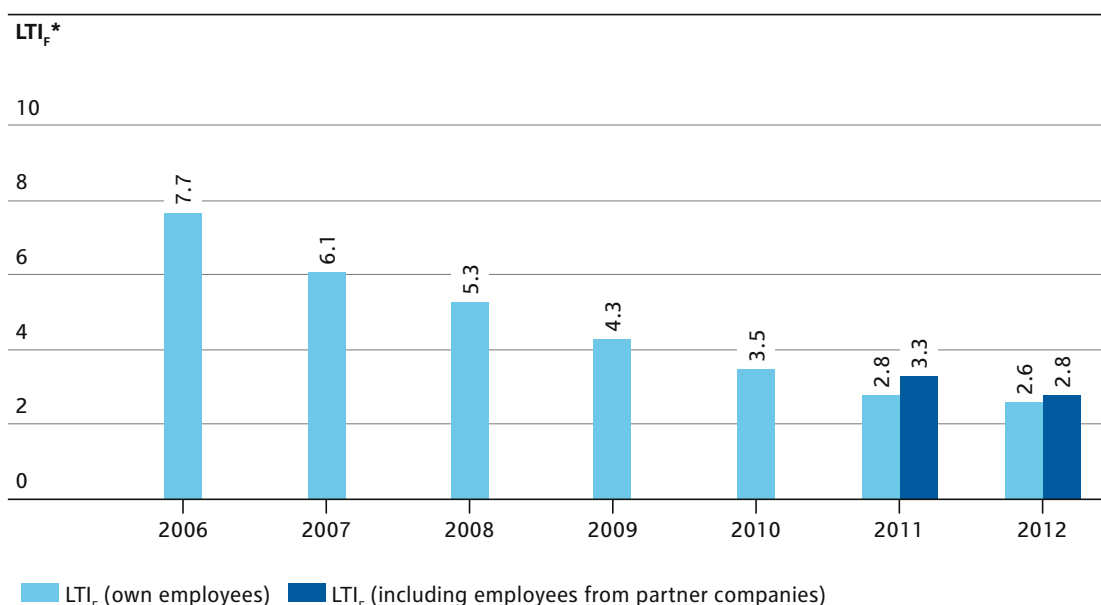
Objectives		
We are committed ...	KPI	Target
... to ensuring that our own and our subcontractors' employees return home just as healthy at the end of the day as they were when they arrived for work	Number of accidents leading to the loss of at least one person per day per million working hours ( $LTI_F = X/1,000,000 \text{ h}$ )	LTI <sub>F</sub> of max. 2.3 in 2014
... to maintaining our employees' health and workability.	Introduction of the Work Ability Index (WAI) in %	15,000 responses for the WAI in Germany



## Occupational safety

The group-wide accident rate has fallen on average across the Group by around 18% over the past eight years. This is significantly lower than the sector average. We were able to achieve this positive development through the consistent implementation of our health and safety programme “sicher vorWEg” (The Energy to Lead Safely) by including our own employees and colleagues from partner companies in the programme.

Despite all the improvements that have already been achieved in safety at work, four fatal industrial accidents occurred in 2012. Three fatal accidents occurred in 2011 and one fatality in 2010. No specific black spots could be identified among the circumstances surrounding the fatal accidents. The industrial accidents occurred while the employees were carrying out different activities and in different countries. However, it is conspicuous that three of the four fatalities related to employees from partner companies. This highlights the necessity to work at continuously improving safety at work and the occupational safety culture. It is also essential to include partner companies throughout the Group in occupational safety.



\* Lost Time Incident Frequency (Number of accidents with at least one lost day of work for every million hours worked)

### Improving occupational safety

Careful and ongoing accident analysis creates the fundamental platform for developing Occupational Safety Management at RWE. During the year under review in 2012, we progressed our methodology for accident analysis and provided a more streamlined structure with five process stages. The objective of every accident analysis is to identify the precise causes of accidents with the aim of being able to define specific countermeasures. In 2013, we want to deploy this tool throughout the Group.

The focus of the measures is improving occupational safety in partner companies. We continued to improve the partner company management that we introduced in 2010 and we use this system in our selection of partner companies. In March 2012, Group Purchasing informed 7,000 partner companies in Germany about the requirement to obtain certification in conformity with their individual Occupational Safety Management System. Since August 2012, all partner companies of RWE must make a commitment to comply with the "Allgemeine Zusatzbedingungen Arbeitssicherheit" (AZB-AS, General Supplementary Conditions on Occupational Safety). This requirement standardised the conditions and requirements for occupational health and safety throughout the Group.

We are continuing to raise the awareness of partner companies and their employees. Since partner company management was launched in 2010, we have held 66 occupational safety workshops with more than 900 managers of subcontractors including behaviour-oriented tours of inspection. We use "easyInstruct" to provide information to subcontractors' employees in their own language. These terminals give information about the principles of occupational health and safety at RWE. During the year under review, RWE Technology has also introduced "easyInstruct" at the Denizli (Turkey) and Enna (Sicily) power stations currently under construction.

#### Strengthening occupational safety culture

The level of safety engineering and the standards for occupational safety at RWE are high. Technical and organisational protective measures have attained a level such that no further significant contribution to accident avoidance can be expected. The promotion of an occupational safety culture and raising the awareness of occupational safety by managers are therefore the key factors driving the ongoing development of occupational safety. We use the programme "sicher vorWEg" (The Energy to Lead Safely) to support our managers in creating clearly defined framework conditions at all levels when dealing with inappropriate behaviour. This includes an explanation of the role played by managers in occupational safety and the functions they carry out. It also involves advising employees about the practical application of occupational safety tools.

During the year 2012, we continued to develop behaviour-oriented tours of inspection, for example through personal coaching, workshops for employee representatives and follow-up work in process organisation. We want our employees to be more intensively integrated in the ongoing development of our occupational safety culture. A working group addressed this issue and developed more extensive measures, such as regular communication on occupational safety at the executive board level, development of joint targets with members of the co-determination committees and joint safety circles with partner companies. In 2013, we are planning a group-wide safety day with participation of the safety managers from all the Group companies. The launch of the RWE Occupational Safety Partner Company Awards is intended to salute contributions made by our subcontractors to improving occupational safety at work.

We want to make occupational safety culture quantifiable. The working group "Indicators and Parameters for Occupational Safety Culture Development" is currently developing appropriate parameters for identifying an indicator which executives and managers can use to assess and manage the status of occupational safety culture in their specific area of responsibility. The aim is to conclude the development in the years 2013/14, including testing and optimisation.

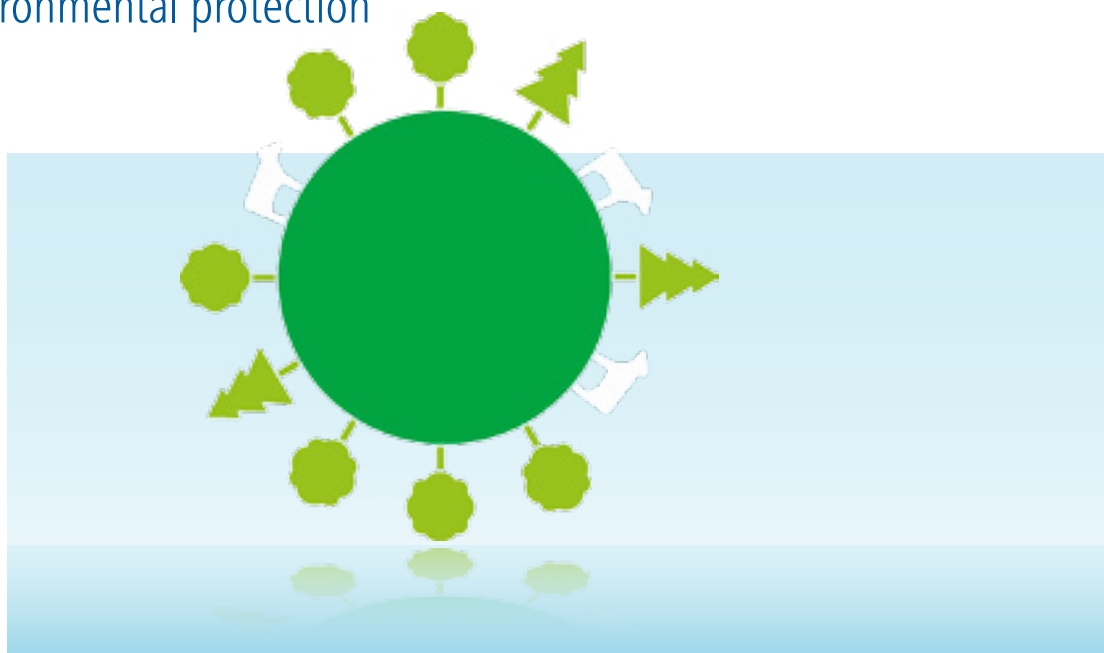
## Occupational healthcare management

A platform for developing Occupational Healthcare Management (OHM) is formed by the information from around 11,000 completed questionnaires on the Work Ability Index (ABI) which were available at the end of 2012. Naturally, the data were evaluated anonymously and then processed further. Alongside the questionnaire on Work Ability, Occupational Healthcare Management also developed four health questions to be included in the Staff Survey in 2012. This survey was initially carried out with around 50% of our employees in Germany.

The Occupational Medicine/OHM competence centre launched the OHM principles programme "Sustainably Positive Influence of the Health Ratios". This programme encompasses 13 basic measures, such as the orientation of an event "gesund vorWEg gehen" (The Energy to Lead Healthily) and incorporation of the issue of health into structured employee meetings. The programme is scheduled for introduction at the other RWE companies in Germany in 2013.

In 2012, RWE East started to record and analyse the current measures in existence for promoting occupational healthcare. The Occupational Medicine/OHM competence centre assisted in analysing company-specific framework conditions and developing individual programmes for the companies.

## Environmental protection



Environmental protection is extensively governed by statutory regulations. Compliance with the statutory regulations is our top priority for this issue. The grant and retention of operating licences and our reputation in the public domain depend on compliance with these statutory regulations. We also take comprehensive, voluntary measures to improve environmental protection.

Key elements in our value chain – production of lignite, oil and gas, generation of electricity and distribution of electricity and gas – are partly associated with significant impacts on the environment. RWE has developed its experience with the organisation of operational environmental protection over many decades. This is a fixed component of our operating business. It includes the launch of new developments at an early stage which are directed towards the public domain and which are addressed in particular by our stakeholders. Over the past business year, we have adopted an in-depth approach to issues of biodiversity and water use which exceed the scope of statutory regulations.

### OVERVIEW OF THE MOST IMPORTANT FACTS:



### Target Attainment



During the reporting year, one environmentally relevant event occurred in the RWE Group which exerted a significant impact on the environment. A benzene escape into the soil and groundwater was discovered during the course of onshore oil production at the Völkersen gas field (Germany) at the end of 2011. We have made significant progress in a clean-up operation with comprehensive public participation during the course of the year under review ([> Plant operations: oil and gas production](#)).

We developed our environmental management system further with particular emphasis on internal audits and thereby made a contribution to a conduct compliant with statutory regulations and a continuous improvement process within our company.

<b>Objectives</b>		
<b>We are committed ...</b>	<b>KPI</b>	<b>Target</b>
... to operating our plants safely and in compliance with licensing regulations at all times..	Compliance with licensing requirements in %	100 % compliance
... to the 100% implementation of our environmental management system to ensure that our plants and grids are operated in compliance with legal requirements at all times.	Group-wide environmental management coverage in %	100 % compliance

## Environmental management

All Group companies have to comply with a directive requiring them to set up and maintain an appropriate environmental management system. The requirements are based on the ISO 14001 international standard. The annual audit carried out by the Group Centre monitors compliance. In 2012, the extent of coverage of our environmental management was 99.6% measured on the basis of full-time equivalents of our employees.

In 2012, the focus of internal environmental management audits was on evaluation of environmental aspects. We analysed the expectations of our stakeholders for each Group company and carried out materiality analyses for environmental protection. This also raised the level of awareness for the importance of environmental protection, beyond the scope of statutory requirements. Our companies used the results of analyses to set up or expand their environmental programmes.

In 2012, we also introduced a dedicated environmental management system for the Group Centre – RWE AG. It was audited by experts from RWE Technology. Systematic risk assessment for environmental protection and group-wide, uniform reference standards and their documentation were highlighted as options for improvement. We included improvement measures in the goal agreements for environmental management at RWE AG.

The companies of the RWE Group have the option of obtaining external certification of the management systems in conformity with ISO 14001. Virtually all our power stations, RWE Dea and a number of regional companies are certified in conformity with ISO 14001. The extent of coverage has remained virtually unchanged overall at 43%. The formal requirements of ISO 50001 for a management system on energy efficiency are integrated in the existing ISO 14001 management system.

## Plant operations

In 2012, we operated the plants in the RWE Group largely without any breakdowns. We also ensured that all our power stations complied with the statutory emission limits virtually without exception. Any breaches of these emission limits were restricted to individual cases and were minimal. They did not result in any offences and no harm was caused to humans or the environment. The most significant event in 2012 was a fire at the Tilbury power station operated by RWE npower in the United Kingdom. (> see below).



### Operation of our nuclear power stations

Independently of the cuts caused by shortening the service lives for nuclear power stations in Germany under the 13th amendment of the German Atomic Energy Act, we are making the safety of our nuclear plants stations a top priority. This applies to the three power stations currently in operation at the Gundremmingen and Emsland and the two Biblis units which have lost their licence to generate power with the shortening of their service life. The stable platform for safety assessments is based on the results of operational monitoring, the routine cyclical inspections (including several thousand inspections of safety systems carried out on each unit every year) and the measures involved in preventive maintenance at our plants. The maintenance and expansion of a high level of safety is assisted by the assessment of events in other German plants and in the nuclear power plants across the world for transferability and relating to potential for optimisation. This high level of safety was confirmed for our plants following the result of the national safety review by the Reactor Safety Commission and within the international framework in the so-called EU stress test that was carried out in the wake of the Fukushima reactor catastrophe.

The Federal Ministry for the Environment and the states established new safety requirements for the operation of nuclear power plants in November 2012. We will cooperate closely together with the responsible state authorities to review whether this nuclear regulatory framework requires further effective safety optimisation action to be taken for the plants still in operation that are reasonable in the light of the service lives. We will also examine what form any such optimisation should take. The regulatory framework also takes account of the experiences after the reactor accident at Fukushima. For example, we carried out optimisations on the operating plants to further improve the emergency electricity supply when experiencing extreme impacts due to natural conditions.

In 2012, we registered 24 events notifiable to the authorities, whereas there were 28 such events in the previous year. These events were at the lowest level on the international Nuclear and Radiological Event Scale (INES). INES 0 represents an event without or with minimum importance in safety and engineering terms. There were no incidents with a higher classification. The officially approved, derived values and the dose limits defined in the Radiation Protection Directive for all employees exposed to radiation in the course of their work were complied with at all the nuclear power stations in the year under review 2012.

### Shutdown and radioactive waste

After the decision to phase out nuclear power, the Biblis A and B units were immediately switched off and applications to shut down and dismantle the units were submitted to the Hessian licensing authority in August 2012. An environmental impact assessment forms part of the licensing procedure. On 22 January 2013, we consulted with the government agencies and associations involved at a scoping meeting and defined the scope of the inspections required. The effects resulting from dismantling the units will be analysed with particular reference to the impacts on the environment. The Biblis nuclear power station will continue to be operated safely during the post-operational phase and preparations will be made for shutdown.

Decommissioning of the shutdown nuclear reactor at Mülheim-Kärlich continued according to plan in 2012. The Rhineland Palatinate held a public information event in 2012 in relation to a further dismantling licence. We expect a licence to be granted during the course of 2013. We held talks with potential investors in 2012 relating to industrial downstream use of parts of the site. The first approvals for use of some of the land under the atomic regulatory framework have already been granted or are currently passing through a licensing process. The Lingen nuclear power station shut down in 1977 has already entered so-called "safe confinement". The dismantling of the plant is due to be started when the licence is granted under atomic legislation in the course of 2013.

The disposal of radioactive operating waste (low-grade and medium-grade radioactive waste) and interim storage of the spent fuel rods (highly radioactive waste) is carried out under the supervision of the responsible authorities. Radioactive operating waste is transported to the officially licensed storage site at the sites themselves or at other central storage locations. The authorities are informed about the quantities of waste and the location of radioactive operating waste every year. At present, the Federal Republic of Germany still has no final repository ready to accept low and intermediate level radioactive waste. We are assuming that the Konrad final repository currently being constructed for disposal of low and intermediate level waste will be available at the end of this decade. We are basing plans for all decommissioning projects on this assumption.

Spent nuclear fuel rods from current plant operations initially remain in cooling ponds before being stored safely over the medium term in Castor storage containers in conformity with nuclear regulations on the site of the power station until a final repository has been provided.

In 2012, we used a total of 64.1 metric tons of nuclear fuel in our three nuclear power stations, whereas 77 metric tons were used in the previous year. The importance of uranium as an energy source is declining with the decision by the German government to exit nuclear power. The supply for our nuclear power stations is guaranteed until the shutdown dates defined by the government.



### Fossil-fired power stations

Our fossil-fired power stations operated without any significant operational breakdowns in 2012. However, a major fire occurred at the Tilbury power station (United Kingdom). The coal-fired power station was previously converted to combustion of biomass (wood pellets). On 27 February 2012, twelve weeks after operation started up, a major fire broke out in the wood-pellet bunker for boilers 9 and 10. This was brought under control on the same day. The emergency plans for the site proved to be very effective and were appropriate. Nobody was injured. The fire also resulted in no breaches of wastewater threshold limits or other consequential damage to the environment.

We operate our conventional power stations within the framework of the statutory emission values which are defined by the European Directive on Large Combustion Plants. This directive permits much higher emissions for old plants in the United Kingdom, which only have a limited operating period, than for other plants. In the United Kingdom, we have therefore generated twice as much electricity from hard coal in accordance with the market conditions compared with the previous year. This included the old power plant Didcot A which is scheduled to be shut down at the end of March 2013. Within the framework of a general increase in electricity generation from fossil fuels, this contributed significantly to an increase in emissions ([> key data tool](#)). The Industrial Emissions Directive (IED) of the European Union was enacted in 2011 and will be important for the future operation of our thermal power stations. Most of the emission limits under this directive will have to be complied with from 1 January 2016. The IED regulates a number of issues including the emission limits of SO<sub>2</sub>, NO<sub>x</sub> and dust emissions. The goal of the directive is to achieve greater standardisation in Europe and align the industry with the best available technology in each case. The directive is currently being implemented nationally in the relevant member states. RWE will implement the tougher requirements defined by the IED with state-specific reference to the individual power stations.



In Germany and the United Kingdom, we have cooperated with government agencies in implementing three specific aspects of the IED: compliance with emission limit values and limited life operation (opt-out) and the transitional national plans for the new IED.

Upgrades at most of our German power stations are not necessary, because our plants are generally speaking already able to comply safely with the values introduced with implementation of the IED in the Bundesimmissionsschutzrecht (Federal Air Pollution Protection Act).

The British government intends to implement the Directive fully in the United Kingdom, and to provide power-plant operators with the options either to comply with stricter emission limit values, to operate for a limited life (opt out) or to participate in the Transitional National Plan. However, the Government does not intend to go beyond the requirements of the Directive. RWE is continuing to work with Government and Regulators to reach a decision about the compliance options in terms of shutdown or upgrade for each of our power stations before the directive comes into force.

We have a modern power-station portfolio in the Netherlands. Our plants also meet the stricter Dutch IED requirements that come into force from 2016. We only have to upgrade two smaller power stations there in order to meet the stricter emission limits for NO<sub>x</sub> emissions from 2016. The requirements of the IED Directive are also complied with in Hungary.

### Hydroelectric generation

RWE Innogy operates 46 hydroelectric stations in Germany with installed power of 377 MW. Some of the weirs constructed in rivers have to be adapted to accommodate various species of migratory fish such as eels or salmon. We have therefore made our contribution towards protecting the fish population at 76% of our run-of-river power plants and created passages for the fish in the form of semi-natural bypass streams or alternatively technical fish-ladder systems to allow the fish to swim around the barriers without incurring any hazard.

RWE Innogy is carrying out further technical innovations and R&D projects. Examples of this are basic research into the migration habits of fish at hydropower stations (project "EtWas", for a period of three years, project volume €420,000, part financed by RWE Innogy, part-financed by the state of North Rhine-Westphalia at 65%), and the creation of an innovative and patented passage through sediment to solve the problem of sedimentation and to improve watercourse ecology. The findings from these projects will enable us to carry out further environmental protection measures at our plants in the future.

### Wind energy

The installation phase for the "North Sea East" offshore project was launched in autumn 2012. Various noise-abatement measures for protecting marine species are used in order to collect experience on the optimum technology. The use of an appropriately dimensioned pile driver and a large bubble curtain are combined and overseen by an efficiency monitoring system. Alongside sound measurement, this monitoring also includes an online-based real-time recording system that detects porpoises when they are approached. Using this recording system we are able to determine at which point we have to adopt selective protective measures in order to reduce the impact on porpoises to a minimum during the course of installation activities.

We are unable to reliably maintain the target emission limit of 160 decibels at a distance of 750 metres from the sound source when carrying out heavy pile-driving activities. However, the tests performed and the research carried out using this data create a valuable platform for achieving this ambitious objective.

### Grid operations

We continued to protect birds at our transmission lines in 2012. Apart from collision protection markings in the sections of lines carrying high voltages, most of the masts supporting medium-voltage lines are fitted with electric-shock circuit breakers through prevention of bridging across transmission lines. We had implemented all the key measures in Germany by the end of 2012. In Hungary, we also concluded the national "Clear Sky Agreement" in 2008. Our aim is to equip all our distribution grids there with measures to protect birds by 2020.

We want to supplement passive protection of birds by building up the populations of large endangered species. Our companies in Germany and Hungary are focusing on establishing nesting sites for storks, as well as sites for birds of prey.

We are passing on our knowledge about proven technologies to an international forum in a project with UNEP and AEWB (international environmental and bird protection organisations). These include, for example, using helicopters to install bird protection markings on transmission lines. During the past two years, we also presented our experience in protecting birds at two international conferences in Bergen (Norway) and in La Rochelle (France). Marking measures have already been instituted in the Netherlands and we have received a concrete inquiry from Israel on this issue. Nature conservation projects have a long tradition in our business.

- > [Major nature conservation project in the Donauwald region – hydropower plants operated by the Bavarian electricity company BEW \(only in German\)](#)
- > [Various nature conservation projects – enviaM \(only in German\)](#)



The operation of our distribution networks also requires comprehensive preventive measures to protect the soil against contamination from the primary hazard caused by leakage of transformer oil. The storage containers (e.g. oil and petrol tanks) all have double walls and our relevant operating materials are therefore equipped with appropriate collector trays which are monitored and regularly serviced.

Malicious damage perpetrated on transformer stations is a problem in Hungary, particularly in connection with metal theft. We have always carried out a comprehensive clean-up operation to eliminate any resulting contamination. However, we are attempting to limit the number of incidents by cooperating with the police and technical protection measures and reduce the damage over the long term.

### Oil and gas production

Water and soil conservation are the key environmental aspects in oil and gas production. We operate the Mittelplate drilling and production platform in Germany surrounded by the Wadden Sea. This is a World Natural Heritage site and subject to special environmental protection. Overall, 7.1 hectares of areas operated by RWE Dea are located directly in conservation areas. A further 2.7 hectares are adjacent to conservation areas.

For the past 25 years, we have been extracting oil in the German Wadden Sea without any incidents, an area which was declared a World Natural Heritage site in 2009. We have been carrying out work to preserve stability around the Mittelplate over recent years in order to be able to continue safeguarding smooth-running operation with no incidents in future. This necessitated work on building up the tidal flats with so-called scour protection (protection against erosion). The aim is to restore the habitats in the bordering coastal areas with the aim of mitigating this intervention following significant changes caused by human impacts. The effectiveness of the restoration measures will be



monitored over a period of several years by a programme agreed with the authorities:

[> Mittelplate drilling and production platform](#)

The clean-up measures for the soil contamination discovered in 2011 at the natural-gas field in Völkersen, Lower Saxony, were continued in 2012. As a precaution, we immediately shut down the entire pipeline system used for conveying water at the storage facility (around 22 km) and completely emptied it.

The findings up to May 2012 indicated that there was no hazard to the human population or to animals at any time and this continues to be the case. Virtually no contamination with benzene occurred in the air, surface waters and soil, though there was minor pollution in a few isolated cases. Some benzene concentrations occurred in the groundwater close to the surface in specific sections of the pipeline where the soil was saturated with groundwater (some 8 km), and a clean-up operation was required here.

As a result, we first started to dismantle the entire pipeline in September 2012. This measure will be completed in 2013. Secondly, a clean-up operation for the groundwater has been ongoing since May 2012 involving the injection of air using the air-sparging procedure that has been successfully applied in other clean-up operations, and the situation is being continually monitored. We are continuing to keep the affected residents informed about the background situation and latest developments through direct communication and on a dedicated website.



[> Citizen's information portal Völkersen \(only in German\)](#)

## Water use

Our stakeholders are entering into an increasingly intense debate about the global use of water and its shortage. We need large quantities of water for the cooling of our power stations. Depending on local conditions, we use water drained from opencast mines, surface water, or seawater and brackish water (salt water at a lower concentration than seawater). We only use comparatively low amounts of drinking water for our operations. We make strenuous efforts to conserve water resources by recycling, internal reprocessing and the use of collected rainwater.

Most of the water removed is returned to the ecosystems. In 2012, the amount of water removed came down significantly compared with previous years because the Biblis nuclear power station ceased operation. This power station was operated with continuous-flow cooling and therefore had a high requirement for cooling water.

We treat contaminated water in dedicated treatment plants at the power station or conduct the water to sewage treatment plants. These procedures are monitored by government authorities. This ensures that no pollutants from the wastewater are able to enter the river systems. Once again, no water pollution was caused by operation of our power plants in 2012.

The analysis we have initiated covers activities at the plants operated by the Group companies relevant to water and also takes account of "water-stressed areas". These areas are either affected by a shortage of water or high risks of flooding and we want to record these areas and map them in a further stage of analysis during the course of 2013.

## Waste

Dealing with waste has been integrated in all business processes at RWE and waste is treated in conformity with the statutory regulations currently applicable. The ash from our power stations accounts for the lion's share of the waste produced by RWE. We attempt to recycle most of the ash, for example as certified fly ash for building materials or as aggregates for constructing roads and footpaths. Ash from lignite power stations is used to fill abandoned opencast mines even though government agencies have no longer classified this as recycling since 2011. This has brought about an alteration in the recycling ratio even though the fundamental situation has not changed.

We have a long track record of using most of the gypsum produced by our flue-gas desulphurisation systems for recycling in the building materials industry. Gypsum is therefore not disposed of as waste but is graded as a by-product of power stations. All by-products from power stations are subject to ongoing quality assurance for safe compliance with the specified levels of substances.



[> Key data tool](#)

## Biodiversity

The maintenance and promotion of biological diversity is one of the most important functions in the area of environmental protection – not just in the context of extracting primary energy sources but also in the production of electricity and the distribution of electricity and gas. We are engaged in the protection of ecosystems beyond the requirements of statutory regulations.

In cooperation with German environment organisation “Deutsche Umwelthilfe”, the Heinz-Sielmann Foundation and the Federal Agency for Nature Conservation (BfN), we launched the project “Ökologisches Trassenmanagement” (Ecological Line Management), in Berlin in 2012. The project gains expertise through more than twenty years of RWE’s experience in biotope management around electricity transmission lines .

The objective is to introduce a conceptual transmission line maintenance procedure throughout Germany based on our role model. The Federal Agency for Nature Conservation and the Heinz-Sielmann Foundation believe that our system should be implemented with other grid providers. The first step consisted of drawing up a project outline for the Rhineland-Palatinate. This mapped the areas where our transmission lines passed through conservation areas.



[> Bird protection in grid operation \(only in German\)](#)

### Opencast mining and recultivation

Since the start of lignite mining in Germany, RWE has recultivated 20,000 hectares of landscape. Right from the beginning of mining activities, the promotion of biodiversity has been a constituent element of extraction plans and has included the reinstatement of old opencast mines. Around half of the former mining area is now agricultural land and a further 8,000 hectares are forests and grassland. Another 800 hectares of new water area have been created. Around 8,600 hectares of mining areas in the Rhineland industrial region are located in nature conservation areas or directly next to such areas.

RWE set up the Forschungsstelle Rekultivierung (Recultivation Research Centre) with the objective of making the landscape more diverse in the course of recultivation and increasing the number of animal and plant species compared with the time before mining operations commenced. This research centre cooperates with experts from independent institutes and a large number of volunteer initiatives to carry out research to support this work in ecological studies. The result of this research makes an important contribution to continuously developing the recultivation know-how of RWE. Around 3,100 animal and plant species have so far been identified in the recultivated areas of the Rhineland mining region. Over the past five years alone, more than 300 new plant species have been recorded as growing in these areas. Many of the species were on the Red List of endangered species drawn up by the International Union for the Conservation of Nature (IUCN), including species that are under threat of immediate extinction in the Lower Rhine Basin.



[> Research centre for recultivation \(only German\)](#)

Alongside recultivation of old mining areas, we also carry out measures to enhance the ecological value of other areas. We therefore developed a comprehensive concept for the measures necessary to continue opencast mining at Hambach. The initiative involved networking the old-growth forests

in the region by creating corridors to new breeding and hunting habitats for the rare species living in the mining area. Alongside Bechstein's bat, around 250 species of bird and numerous amphibians are benefitting from significantly improved living conditions.

Around the Inden opencast mine, RWE invested around €1.5 million in ecologically sustainable relocation of the River Schlichbach to a new semi-natural stream bed. Over a section of about four kilometres, the stream now flows so that a wide expanse of water meadow can be developed where a new habitat for threatened animal and plant species is being established. This development is similar to the successful ecological relocation of the River Inde.

We also take steps to ensure that the wetlands around opencast mines are preserved. We have to pump large volumes of groundwater out of opencast mines in order to keep the production area dry. We compensate the removal of groundwater in ecologically important areas by returning a large proportion of this water to surrounding lakes and rivers or through a drainage system into the soil, particularly in an environment of wetland areas that need conserving. We monitor the success of these measures at around 3,900 test stations, with sampling stations located in 350 wetland areas. Recultivated areas are also an integral element of lignite production in two Hungarian opencast mines in Mátra. To date, a total surface area of 2,570 hectares has been identified as an area to be recultivated for agricultural and forestry use. This includes more than 900 hectares of land that has already been recultivated, with around 20 – 25 hectares being reclaimed each year. A total of nearly 5.8 million saplings have been planted in the recultivation programme. We have also created a lake measuring 3.5 hectares.

#### Cooperation with IUCN

We are joining forces with the International Union for the Conservation of Nature (IUCN) with the objective of defining biodiversity criteria for investment projects financed by RWE. The aim is to work together with project developers and IUCN to identify projects where a joint venture can bring about improvements and "best practice" in biodiversity reporting and management can be piloted. Potential fields of cooperation are in the area of offshore technology and solar power plants in North Africa.

#### Nature conservation in Hungary

The most important project for the ELMŰ-ÉMÁSZ Group in the area of nature conservation and protection of water resources is mapping natural areas with major ecological significance in the environment surrounding mining areas, transformer stations and substations. Employees on the ground are supposed to support detailed mapping by taking account of biodiversity aspects. The data surveying is initially taking place in a small trial area in the Aggtelek National Park. The results of the pilot project will then guide the decision on expanding the project.



# Community Engagement



We want to make a positive contribution to the regions and the local communities where we operate. We know that our long-term success also depends on our acceptance and reputation at local level and on the ideas from the community that we bring back into our company.

The energy transition in Germany is a combined challenge for politicians, business and consumers. Our aim is to be part of the solution. If we are to achieve this goal, we need to expand renewable energies (> [Climate Protection](#)), integrate them into the grid (> [Security of Supply](#)) and enhance energy efficiency (> [Energy Efficiency](#)) in parallel. We also need to gain the trust and acceptance of the community, in particular the residents and local communities around our locations. Our aim is also to engage in dialogue more intensively with people (> [Stakeholder Dialogue](#)) and move the regions forward with them.



Our social activities empower us to achieve a profile that creates a positive effect. This might be expressed in terms of enhanced customer loyalty, acceptance of infrastructure projects or opinion-forming within the public domain. We also gain an advantage within the company when we are considering investment projects, new products and packages or potential joint ventures.

## OVERVIEW OF THE MOST IMPORTANT FACTS:



**Target Attainment**



We continued to intensify our contacts and cooperation at local and regional level in 2012. Particularly in the wake of the energy transition in Germany, we have noticed an increased readiness among our contacts at local level to work together and identify joint solutions. RWE is developing into an accepted and respected partner for dialogue at this level. This was also confirmed by the acceptance study published in November 2012, which compared the positions and interests of our stakeholders and invited stakeholders to engage in a follow-up process geared towards developing constructive debate (> [Stakeholder Dialogue](#)). Against this background, we also carried out our annual reputational study. The results were published in December 2012 and they show that our reputation had remained constant compared with 2011. In a comparison with our major competitors, the marginal lead we enjoyed last year improved slightly so that we also achieved our objective this year.

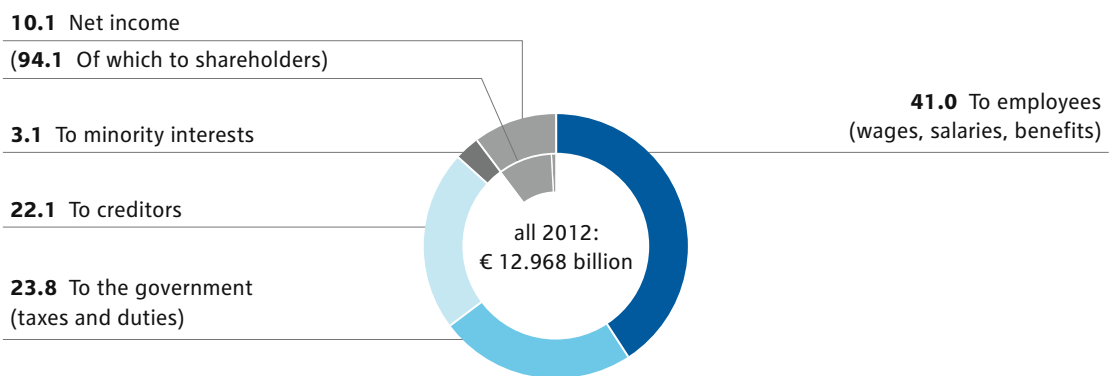
<b>Objectives</b>		
<b>We are committed</b>	<b>KPI</b>	<b>Target</b>
... to strengthening our regional reputation by making efficient use of resources.	Reputation Index	Best reputation in our peer group

## Strengthening the region

At our locations, we generate a profit for the company and we strengthen economic power in the regions where we are operating. The value generated particularly includes wage and salary payments, but also taxes and concession fees. Investment projects and plant operation mean that substantial shares of these activities are also carried out as orders placed within the local community. We continue to work together with local communities to develop operating sites that are no longer required. Over the past ten years, work of this nature has created more than 3,000 new jobs through commercial and industrial business parks in the Rhineland industrial region.

### Distribution value added

in %



Traditionally, RWE Power has been a major economic force in the local community. In 2012, orders worth more than €1 billion were awarded to companies in the Rhineland industrial area. In October 2012, RWE Power joined forces with the Chamber of Industry and Commerce for North Rhine-Westphalia for the third time to implement the campaign for awarding contracts on a regional basis entitled "Revier im Fokus" (Region in Focus). The objective is to enhance the contribution made to the local economy. If all safety and quality standards are complied with, local companies should have preference when awarding contracts.



[> Local procurement at RWE Power](#)

The expansion of offshore wind power creates new stimuli in regions with weak economic conditions. RWE Innogy is investing some €10 million in the construction and operation of the North Sea East offshore wind farm in Helgoland. The company is also building 30 apartments to provide accommodation for service employees. Jobs are also being created at other sites, for example at Bremerhaven as a German base port, where 28 of our own employees start out on their duties and a further 78 employees from contractors are employed. There is also the Gwynt y Môr offshore wind farm off the Welsh coast which provides work for 38 of our employees and 103 workers employed by contractors.



[> More on the Helgoland offshore location](#)

### Consequences of the exit from nuclear energy

The consequences of exiting from nuclear energy does not only have positive impact on the regional economy. The exit from nuclear power meant that the Biblis nuclear power station lost its authorisation to generate electric power in August 2011. Shutting down the power plant presents the operating team, which amounted to 635 full-time posts shortly after the resolutions on the energy transition were passed, and the local economy with some significant challenges. We are making attempts to find alternative positions in the Group for staff members who no longer have a function at this location, or we are developing proposals for them to leave the company with a social compensation package. However, this represents job losses within the region itself. The local economy is also losing out on orders and local councils will suffer a reduction in trade tax revenues. RWE Power wants to provide sustainable support for the Biblis community and its residents during the course of a long-term structural change. That's why the company donates to the "Bürger Stiftung Biblis" (Citizens' Biblis Foundation) in 2012 with endowed funds amounting to €500,000.



> [More on the Biblis location](#)

## Social commitment

We are assuming that social commitment by companies will play an increasingly important role in the smooth-running operation and development of our society. The objective of our commitment is to play a proactive role in the regions and local communities where we are operating. At the same time, the importance of the role played by volunteer commitment is increasing – a development that we are fostering under the umbrella of RWE Companius.

We want to structure the future of energy supply and particularly engage young people in our endeavours. Our national initiative in Germany “3malE – Bildung mit Energy” (3timesE – Education with Energy) is going to communicate the knowledge required for this. We also believe we have a responsibility to analyse the concrete need on the ground and therefore provide support for non-profit project organisations in the regions. The RWE Foundation complements the social engagement of RWE with projects that go beyond the strict confines of the company and address the entire spectrum of the topic of energy.

### RWE Companius

RWE Companius has been the group-wide umbrella brand for promoting volunteer commitment by employees since 2007. Because members of the workforce are free to decide within the criteria of the sponsorship framework where they want to make a commitment, there is a wide range of volunteering activities from the areas of education and training, energy, culture, social issues, sport, environmental protection and nature conservation. We also sponsored 30 projects dealing with energy through a special fund.

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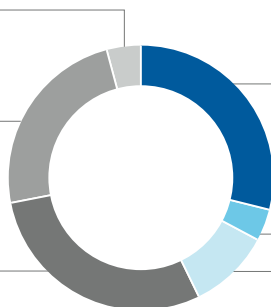
#### Thematic apportionment RWE Companius project 2012

in %

4 Environment and nature conservation

24 Sport

29 Social



29 Education

4 Energy

10 Culture

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Joined-up team initiatives mediated through RWE Companius are enjoying increased popularity. A total of 65 teams made a commitment to volunteer projects in 2012 (2011: 32 teams), including members of the Executive Board: In December 2012, Peter Terium, the Chief Executive Officer of RWE AG, and his colleague Dr Johannes Lambertz from RWE Power and Dr Arndt Neuhaus from RWE Deutschland installed solar-powered lamps at the St Gereon children’s home in Bergheim near Cologne.

**Facts and Figures on RWE Companius  
(status 31.12.2012)**

Funded projects (since 2007)	9,552
Funded corporate volunteering projects (2012)	1,842
Total funds (since 2007)	€12.7 million
Total funds (2012)	€2.4 million
Engaged employees (2012)	4,033

Volunteer engagement is supported in all our Group companies and in all the countries where we are operating. One example is the programme “Aktiv vor Ort” (Active Local) run by RWE Deutschland, which highlighted local engagement on the ground under the umbrella of RWE Companius this year with more than 744 employees. Employees at RWE Power carried out a total of 134 projects during the year under review. Ten of these projects were team projects and a total of 155 employees were engaged in these projects during the course of 2012.

A total of 172 employees participated in volunteer engagement in the Czech Republic last year – the total number of volunteers has been 349 since 2008. Five team projects were carried out including the first team project with the involvement of executive management. RWE Companius in Poland organised a joint project with 14 volunteers for the organisation SOS Children’s Villages. In addition, the foundation also provided funds for eight team projects involving 75 volunteers. Team efforts are also becoming increasingly popular in Hungary where several hundred employees including the top management are engaged in projects.

In December 2012, RWE Companius was awarded the “Deutsche Engagementpreis 2012” (German Engagement Prize 2012) in the business category and RWE received the HR Excellence Award 2012 in the category employee commitment (Groups). This demonstrates external recognition for the high level of quality and creativity we use to support the commitment of our employees.

RWE Companius has meanwhile become established as one element of human resource development within the Group. Learning through voluntary commitment forms an element in the promotion programmes for our future managers, trainees and apprentices. However, this is also true for every engaged employee. Each RWE employee therefore receives an individual certificate for their volunteer commitment. The certification process guarantees that the voluntary engagement automatically becomes part of the employee’s training history.



[> More on RWE Companius](#)

**3maE – Bildung mit Energie**

The initiative across Germany “3maE – Bildung mit Energie” (3timesE – Education with Energy) was launched in October 2012. 3maE stands for “Energie entdecken, erforschen und erleben” (exploring, exploiting and experiencing energy). The new initiative bundles all the activities associated with energy and training at RWE companies in Germany and manages the programmes and initiatives of



enviaM, KEVAG, LEW, RWE Deutschland, RWE Innogy, RWE Power, SÜWAG and VSE. The online portal > [www.3malE.de](http://www.3malE.de) is the core of the training initiative. All the packages and campaigns are posted on this portal.

3malE is available to nurseries, elementary schools, secondary and vocational schools, universities of applied science and universities as a training partner and the aim is to educate children, school children and students about the concrete work carried out in the energy industry today and in the future.

School children and teachers can access lots of information, downloads and films, one example being material for preparing a presentation or for carrying out an experiment. Excursions, plant tours, free teaching units on the subject of "Energy", experiment kits, teaching materials relevant to school curriculums and advanced materials are provided that allow teachers to refresh their own energy and management knowledge. Children have the opportunity to engage with their own ideas – for example in the school competition "Energie mit Köpfchen" (energy with heads). Students and lecturers have access to lots of prepared, interdisciplinary material about the energy transition. The "RWE MINTALENTS" project allows students learn about the areas RWE operates in.

Employees also have the opportunity to become involved in educating young people about the energy industry. For example, the employees working in the "Energy Ambassador" programme deliver teaching units on energy subjects in schools. 250 employees have already registered for this programme.



> [More on the education initiative "3malE" \(3timesE\)](#)

### Other social and cultural projects

A substantial part of our social and cultural commitment is initiated by the Group companies in the area where they are operating. We sponsor other projects with direct action through local partners dealing with local issues to suite the social and economic conditions on the ground and the expectations of our stakeholders.

In Hungary, we supported the work carried out by more than 60 different non-profit and social organisations. These include the Hungarian Interchurch Aid and the Hungarian Maltese Order. We are also a major sponsor of the Miskolc Cultural Association. In 2012, the amount donated for cultural and social purposes totalled some HUF 70 million (around €240,000). RWE works together with four major foundations in the Czech Republic to help children, pensioners and people suffering from the impact of significant health challenges. RWE also plays an active role in the cultural arena by sponsoring the traditional film culture in the Czech Republic and the Prague Spring international music festival. In Poland, RWE became a partner of the Copernicus Science Centre, one of the most recent European institutions to sponsor science. The cooperation follows the mission of the RWE Foundation which has been engaged in educational projects for children and local communities over the past six years. RWE and the Copernicus Science Centre will join forces to offer an education programme for children in elementary schools.

In the Rhineland lignite-mining area, RWE supports the regional structural development programmes being carried out by the government of North Rhine-Westphalia. The current focus is on the terra nova project around the Hambach opencast mine. The company is joining forces with local communities and agriculture to create a recreational area over the coming years which will also include a legacy lake after opencast mining has finished. As part of this project, RWE Power participated in establishing the "Forum terra nova" workshop in the year 2012. Looking after groups of visitors coming to the different locations also forms part of the ongoing functions. In 2012, more than 3,600 groups with a total of 130,000 visitors went on tours of our locations.

RWE Deutschland promotes volunteering engagement in its grid region. Since 2012, the company has been supporting people through project "RWE Ehrensache" (RWE Volunteering) who are engaged in volunteering activities in their region. Other ongoing engagements were continued during the course of this year. RWE Deutschland has been promoting volunteering as a co-organiser of the RUHRDAX fair project. The RUHRDAX programme is a contact platform that brings social organisations and businesses together each year at a fair to encourage volunteer work. RWE Deutschland is also committed to inclusion of people with disabilities. Since 2005, RWE Deutschland has been the main sponsor supporting the IntegraTour organised by the "Landschaftsverband Rheinland" (Rhineland regional association). This event is based on the Olympic relay race and school children with and without disabilities carry the LVR-Integra Banner from town to town advertising the social inclusion of people with disabilities.



[> More on IntegraTour](#)

RWE npower's Health Through Warmth scheme, which aims to improve levels of warmth and quality of life for vulnerable people with cold-related illnesses, has successfully helped over 70,000 vulnerable people since it was set up in 2000. RWE npower's scheme achieved external recognition in 2012 by winning an Energy Institute Award. RWE npower's partnership with Macmillan Cancer Support in the United Kingdom continued in 2012, with the total contribution made by the company to Macmillan now valued at £6 million (€7.4 million). A number of community programmes have been developed to support RWE npower's sponsorship of the Football League and increase participation in the sport. A number of work experience placements have also been provided for young people in order to provide an insight into careers within the football industry.



[> Health Through Warmth](#)

RWE Innogy promotes regional activities in many areas, for example in Wales, with focuses on sport and advanced training. For example, RWE npower renewables, the British subsidiary of RWE Innogy, was the main sponsor of the Ospreys Rugby Team in Wales which has enjoyed success on national and international playing fields. More than 3,000 children at 60 schools in Neath and Swansea in South Wales also benefit, for example, from the Ospreys Training Programme by taking part in training workshops as part of the current National Rugby League (NRL) sponsorship package of RWE. The children in these schools find out more about the topics of renewable energies, sustainability and communications skills, and they are taught with particular emphasis on mathematics, literature, sport and health.



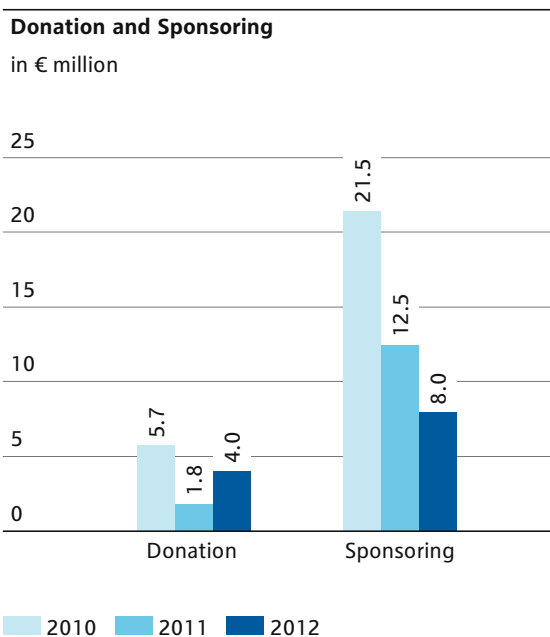
In Germany, RWE Innogy has also been providing support for organising the competition to award the “Deutsche Waldpädagogikpreis” (German Forestry Education Prize) since 2009. The prize worth €5,000 is awarded for innovative and pioneering projects in the area of environmental teaching and forestry education.

In the Netherlands, Essent supported a number of projects in 2012, including a seal breeding station. RWE Dea promotes social and cultural projects in regions where the company is involved in production activities – from cultural projects in Norway, through the promotion of sport and music for socially disadvantaged children in the United Kingdom, to aid projects in Turkmenistan and Egypt. Young women there are given lessons in reading and writing. They are also given information on health issues for their families. Up to now, 9,000 women in Egypt have benefitted from our programme. We have also created 600 teaching jobs. In Germany, in cooperation with the media launched a donation campaign to celebrate “25 Jahre Erdölförderung Mittelplate” (25 years of oil production on the Mittelplate drilling platform) in the Friedrichskoog region. RWE Dea received a total of 50 proposals from local people and social institutions for distribution of the money donated. An independent jury decided on distributing the money that had been donated.

In 2012, RWE supported the “Farbenrausch” (colour rapture) exhibition at the Museum Folkwang in Essen. The exhibition brought famous Expressionist artists to a wide audience. A total of 219,000 visitors came to the exhibition. This cultural engagement also involved educational tours for schools. The expenses for donations in Germany amounted to a total of €4 million and for sponsoring to €8 during the course of 2012. All expenses for donations and sponsoring are recorded centrally by the Compliance Department. These expenses are audited to ensure that they comply with our guidelines and the Code of Conduct.



[> More on social engagement in the regions](#)



## RWE Foundation

Since its foundation in 2009, the RWE Foundation has concentrated on supporting three main areas. The educational focus of the foundation has been on raising the profile of know-how about energy and establishing this knowledge base more firmly in classroom situations. The focus is not exclusively on the scientific and technical dimension of energy but also takes into account the social and non-technical dimension. Work in the area of culture is about the promotion of perspectives and artistic innovations that exert a positive influence on the ability of a society to change in a positive direction – not least also an element of the energy transition. Our approach on social issues is to assist young people from disadvantaged environments in strengthening their skills and enhancing the perspectives open to them, so that they can put more energy into taking on life's challenges.

In 2012, we approved a total of 19 new projects. We have made a total of €1.1 million available for sponsoring existing projects. The projects carried out by the foundation are sponsored for a maximum of three years.

The project work of the foundation is continuously developed in an evidence-based approach. We want to develop other projects in the sponsorship area of education based on the RWE Energy Education Study. The RWE Foundation commissioned the Leibniz Institute for Education in Natural Sciences and Mathematics to carry out this study involving a survey of around 500 teachers and some 1,000 young people during the autumn of 2012. The results of the study were available at the beginning of 2013 and they are intended to form the basis for developing recommendations for action at the RWE Foundation.



[> RWE Foundation](#)

## Evaluation

Our objective is to make a positive contribution to the regions and local communities where we are operating. We have joined a number of corporate initiatives both in the United Kingdom and in Germany which work out qualitative and quantitative assessment methods that allow the success of social commitment. RWE npower has been a member of the London Benchmarking Group since 2003 and uses processes and independent audits to measure the contribution made by its engagement for the community. This year, RWE npower has again succeeded in achieving the “Community Mark” for a further two years as an award for long-term and effective engagement. We are involved in the business network “W.I.E. – Wirtschaft. Initiative. Engagement.” in Germany which has 15 major companies operating in Germany as network members. In December, W.I.E. presented draft guidelines for reporting on social engagement to a specialist audience with an interest in this area at a conference organised by the German Federal Ministry for Family Affairs. The aim of the guidelines is to contribute to establishing the engagement landscape on more objective principles.



> [Website of W.I.E.](#)

## About this Report



### Report profile

This report entitled “Our Responsibility.Report 2012” is aimed at analysts and investors, non-governmental organisations (NGOs), our workforce, customers and suppliers, policymakers, government agencies and the people living in the regions where we do business. It describes the most important social, environmental and economic challenges facing our core business, the conflicting aims that can arise, and the corporate responsibility (CR) strategy we have developed in response.

Since the reporting year 2011, the CR Report has only been published online. A [PDF](#) file has also been created for printouts and archiving. This report was audited in its entirety by the accountancy firm Pricewaterhouse Coopers (PwC), which assessed it against compliance with the Accountability Standard AA1000-AccountAbility ([Certificate for independent assurance report](#)). The CR Report includes an overview of all the important [Indicators](#). We provide detailed indicators for the years 2006 to 2012 interactively with the [Indicator tool](#) and as [Excel download](#).



### Approach

We developed our CR strategy on the basis of the challenges posed by our business and taking account of the general conditions prevailing in individual regions. We present a detailed profile of these in the [Country portraits](#). They are included at the beginning of the report together with the [Portrait of the RWE Group](#). The report is based on the [Ten Areas for Action](#) of the CR strategy. We assess the relevance of the individual Areas for Action and the expectations of the stakeholders for our company in a [Materiality analysis](#). The report also serves as our progress report for the Global Compact of the United Nations ([Progress Report UN Global Compact](#)).



### Basic principles

The report is based on our CR strategy and developed out of our ongoing dialogue with stakeholders. The relevant data are presented in line with the latest guidelines of the Global Reporting Initiative (GRI) to allow our readers to compare our performance with that of other companies. We explain how we have implemented these guidelines and the requirements of the CRI Sector Supple-



ment Electric Utilities dated October 2007 in the [> GRI Index](#). Our self-assessment of the level of compliance with the GRI guidelines (Version 3.0) is A+. This assessment was confirmed by the GRI ([> GRI Level Check Statement](#)).

#### Data



The period under review is fiscal 2012, which began on 1 January and ended on 31 December. The data provided in this report relate to all [> affiliated companies](#) of the RWE Group which are included in the consolidated financial statements. Any deviations from this are clearly stated. The financial data were taken from the [> RWE Annual Report 2012](#). We present financial data denominated in the relevant national currency and have converted these based on the average annual values for 2012 (1 US dollar = € 0.77 €, 1 UK pound sterling = € 1.23, 100 Czech crowns = € 3.98, 100 Hungarian forints = € 0.35, 1 Polish zloty = € 0.24).

#### For reference



This online report is published in German and English. The Executive Board of RWE AG has approved the report for publication. The editorial deadline was 28 February 2013. This report continues our policy of annual reporting ([> Report Archive](#)). The next report will be published in the spring of 2014. The term "employee" refers to male and female employees.

#### Forward-looking statements

This online report contains forward-looking statements regarding the future development of the RWE Group and its companies as well as economic and political developments. These statements are assessments that we have made based on information available at the time this report was drawn up. In the event that the underlying assumptions do not materialise or additional risks arise, actual performance may deviate from the performance expected at present. We are therefore unable to assume any responsibility whatsoever for the accuracy of these statements.

## Independent Assurance Report

### To RWE AG, Essen

PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft has performed a moderate assurance<sup>1</sup> engagement on the German version of the Corporate Responsibility Report and issued an independent assurance report, authoritative in German language, which has been translated as follows:

We have been engaged by RWE AG, Essen, to perform an independent assurance engagement to attain moderate assurance<sup>1</sup> in respect of observing the AA1000 AccountAbility principles and regarding selected sustainability information in the Corporate Responsibility Report "Die Energiewende nachhaltig gestalten. Corporate Responsibility-Bericht 2012" for the business year 2012 of RWE AG, Essen, as well as additional data from the key data tool (the "CR-Report"). The Corporate Responsibility Report is published as online version on [www.rwe.com/cr-report](http://www.rwe.com/cr-report).

### Responsibility of the legal representatives

It is the responsibility of the legal representatives of the Company

- to comply with the principles of inclusivity, materiality and responsiveness as defined in the AccountAbility Principles Standard (2008) (the "AA1000 AccountAbility Principles"), and
- to prepare the sustainability information in the CR-Report in accordance with the criteria set out in the Sustainability Reporting Guidelines Vol. 3.0 (pages 7 to 17) of the Global Reporting Initiative (GRI).

This responsibility includes the conception, implementation and maintenance of systems and processes for ensuring compliance with the AA1000 AccountAbility Principles and the preparation of the CR-Report using assumptions and estimations that are appropriate under the given circumstances.

### Responsibility of the auditor

Our responsibility is to form an opinion, based on our assurance procedures, on whether facts have come to our attention which would lead us to assume that in all material respects

- the systems and processes installed by the Company are not appropriate for compliance with the AA1000 AccountAbility Principles of inclusivity, materiality and responsiveness; or
- the selected quantitative sustainability information set out in the CR-Report has not been prepared in compliance with the criteria set out in the Sustainability Reporting Guidelines Vol. 3.0 (p. 7 to p.17) of the Global Reporting Initiative (GRI).

We were engaged to provide recommendations for the further development of sustainability management and CR-Reporting on the basis of the results of our independent assurance engagement.

The sustainability data presented on websites to the online version of the CR-Report chosen by the Company and evaluated by us are marked as "Reviewed 2012". Our engagement refers to the German version of the CR-Report. Data linked from these websites were not part of our independent assurance engagement.

<sup>1</sup> "Moderate assurance" as specified by AA1000AS (2008) is equivalent to "limited assurance" as specified by IS AE 3000.

We conducted our independent assurance engagement in accordance with AA1000 Assurance Standard (AA1000AS) 2008 and also in accordance with International Standard on Assurance Engagements (ISAE) 3000.

These standards require that we fulfill our professional duties and plan and conduct the engagement in accordance with the principle of materiality so that we can form an opinion with moderate assurance<sup>1</sup>, which is the degree of assurance that was required by RWE AG. We are independent as defined by Section 3.2 of AA1000AS (2008).

Due to our expertise and experience with non-financial assessments, sustainability management as well as social and ecological issues, we have the competencies required to conduct this independent assurance engagement.

An independent assurance engagement performed to obtain moderate assurance<sup>1</sup> is less substantial in scope than an independent assurance engagement performed to obtain high assurance<sup>2</sup>, with the result that a corresponding lower level of assurance is obtained. The audit activities to be performed are selected by the auditor after a due assessment of the circumstances.

We conducted our examination procedures at the level of the headquarters – RWE AG, Essen, and local audits, particularly at RWE Power AG, Essen, RWE Deutschland AG, Essen, VSE AG, Saarbrücken (enviaM), ELMŰ-ÉMÁSZ and Sinergy, Budapest (Hungary) and RWE npower, Swindon (UK).

With regard to compliance with the AccountAbility Principles, our examination procedures included the following:

- obtaining a fundamental understanding of the application of the AA1000 AccountAbility Principles by interviewing responsibilities for stakeholder management at the Group headquarter and at selected subsidiaries;
- collecting and evaluating the documentation regarding stakeholder dialogue, further communication with stakeholders as well as evaluation for the respective subsidiaries of RWE AG;
- obtaining an understanding of the relevant documentation concerning determination and prioritization of sustainability topics as well as realization of the specific CR areas for action.
- Gathering evidences on randomly chosen projects regarding to sustainability and stakeholder management, which prove the compliance of the AccountAbility Principles.

With regard to the selected sustainability information in the CR-Report, our work included the following examination procedures:

- interviews with the employees responsible for reporting of sustainability information;
- examination of the systems and processes for data collection, calculation and reporting of sustainability information;
- examination of the implemented sustainability reporting software;
- Functional examination of selected controls for the data quality storage;
- assessing as to whether the information regarding the GRI G3-Content Index are correct and complete in accordance with the information presented in the CR-Report
- Analytical assessment of the sustainability data.

<sup>1</sup> “Moderate assurance” as specified by AA1000AS (2008) is equivalent to “limited assurance” as specified by IS AE 3000.

<sup>2</sup> “High assurance” as specified by AA1000AS (2008) is equivalent to “reasonable assurance” as specified by ISAE 3000.

### Material findings and judgments

Findings with regard to the AA1000 AccountAbility Principle of **inclusivity**:

- Internal and external stakeholders are involved in various dialogue formats to discuss current issues.
- Supraregional stakeholder dialogues are organized and controlled at group level by central CR management and the responsible departments, regional stakeholder dialogues organized and controlled by the operating subsidiaries. According to the intern group-guidelines for cooperation, coordination for group-wide issues is managed by central CR management.
- Between the responsible departments and central CR management a regular exchange is established.
- For further consolidation of cooperation of essential company subsidiaries, especially for a transparent involvement of stakeholders a work stream "stakeholder management" has been set up in 2012 which should be completed in 2013.

Findings with regard to the AA1000 AccountAbility Principle of **materiality**:

- In context with the so-called issue radar stakeholders' concerns and expectations are gathered and evaluated.
- This issue radar is part of the materiality analysis, which takes place annually and by which since 2006 the CR areas for action are subject to a revolving assessment and new issues are added, if necessary.
- The results of this analysis are systematically included – concerning content and structure – in the CR management, in detail for CR projects and CR reporting.

Findings with regard to the AA1000 AccountAbility Principle of **responsiveness**:

- Communication with fundamental stakeholders takes generally place in a comprehensive manner via various communication channels and it is thematically balanced.
- The processes of reaction are coordinated within the group.

On the basis of our moderate assurance engagement to obtain moderate degree of assurance, nothing has come to our attention that causes us to believe that, in all material respects the systems and processes implemented by the Company are not suitable for observing the AccountAbility Principles of inclusivity, materiality and responsiveness.

Furthermore, nothing has come to our attention that causes us to believe that, in all material respects, the selected sustainability information of the Corporate Responsibility Report 2012 has not been prepared in accordance with the criteria of the Sustainability Reporting Guidelines Vol. 3.0 (p. 7 to p. 17) of the GRI.



### Recommendations

Without qualifying our conclusions stated above, we make the following recommendations concerning further development of the sustainability management and CR-Reporting:

- Continuance of the work stream “Stakeholder Management” to intensify the cooperation of essential subsidiaries for stakeholder involvement.
- Further improvement of data ascertainment and the control environment within individual subsidiaries and under the perspective of the new group organization to acquire data consistency in all systems and forms of reporting.
- Further intensification regarding the application of new software for the sustainability reporting in every subsidiary and the adequate continuation of the process documentation.

Berlin, 20. March 2013

PricewaterhouseCoopers  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft

Michael Werner

ppa. Juliane von Clausbruch



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EU25	Number of injuries and fatalities to the public	Internet
PR3	Principles/measures related to product information/ labeling	Internet
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AR = Annual Report 2012  
 PR = Personnel Report 2012  
 CRR2011 = CR Report 2011  
 \* = Status: partially reported  
 \*\* = not reported

All core indicators are presented. Some of the numbers have been skipped because the additional GRI indicators are not recorded in the index.



A detailed > [GRI Index](#) including information and explanations in case of reporting partially is available on the Internet. A self-assessment we have carried out estimates that the level of compliance with the GRI G3 guidelines is A+. We had this self-assessment checked by the GRI and it was confirmed.

## GRI Level Check Statement



### Statement GRI Application Level Check

GRI hereby states that **RWE AG** has presented its report "Our Responsibility. Report 2012" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see [www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf](http://www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf)

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 20 March 2013

A handwritten signature in blue ink, appearing to read "Nelmara Arbex".

Nelmara Arbex  
 Deputy Chief Executive  
 Global Reporting Initiative



The "+" has been added to this Application Level because RWE AG has submitted (part of) this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

*The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)*

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 12 March 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

## Global Compact Progress Report 2012

RWE supports the United Nations Global Compact and wants to help with the worldwide implementation of its ten principles, which have been adopted word for word in the RWE Code of Conduct. The following chart identifies the guidelines, programmes and management systems which we have also introduced within our sphere of influence. The table also highlights the measures that have been taken during the period under review and the specific results obtained.

Principle	Systems	Measures	Results
<b>Principle 1:</b> Support of human rights	Social Charter and minimum standards for restructuring operations carried out for the European companies in the RWE Group, covering 99.7 % of the workforce  Principles of personnel policy for employees in Egypt and Libya  ILO core standards are defined in the Social Charter  Supplier management (p. 79)	Restructuring with social compensation scheme in cooperation with employee representatives (p. 103)  Institutionalised dialogue with employees outside Europe (p. 111 f.)  Assessment and review of suppliers (p. 44, 79 ff.)  Co-founder of "Bettercoal" initiative, development of a Code of Practice for coal mining. Participation in "Dutch Coal Dialogue" (p. 80 f.)	Compliance with principles 1 – 5 assured through national legislation in Europe, cooperation with the unions and RWE's own principles which apply to employees of the companies
<b>Principle 2:</b> Elimination of human rights violations			Above-average pay and social benefits
<b>Principle 3:</b> Ensuring freedom of association			
<b>Principle 4:</b> Abolition of all forms of forced labour			
<b>Principle 5:</b> Abolition of child labour			
<b>Principle 6:</b> Elimination of discrimination	Diversity management (p. 33)	Commitment 2011 to the German Government to increase the proportion of women in management positions (p. 108)  Mentor programmes for women in management positions, Senior Women's Network and Seminar "Communication for Female Leaders"	Percentage of women in management positions increased to 12.3 % (p. 108)
			Percentage of people with severe disabilities constant at 6.0 % in Germany
<b>Principle 7:</b> Precautionary environmental protection	Environmental management (p. 35, 118)  Strategy to reduce the CO <sub>2</sub> emission factors, also as key element of risk management (p. 46)	Climate protection, energy efficiency and environmental protection as part of the CR Programme (p. 43, 45)  Materiality analyses for environment protection (p. 118)	Survey of areas located in or near conservation regions (p. 124), high recycling rates for gypsum (p. 126)
<b>Principle 8:</b> Initiatives to promote greater environmental responsibility			Consultancy and services for intelligent use of energy with residential and business customers (p. 58 f.)

Principle	Systems	Measures	Results
<b>Principle 9:</b> Development and diffusion of environmentally friendly technologies	Strategy to reduce the CO <sub>2</sub> emission factors, also as key element of risk management (p. 46) Innovation management (p. 38)	Research in renewables-based electricity generation (p. 66 f) Research in the Coal Innovation Centre (p. 70)	Modernisation of the power plant portfolio (p. 50 f.) Expansion of renewable energies (p. 51 f.) CO <sub>2</sub> use (p. 70) Promotion of innovative technologies for carbon-neutral, central and decentral renewables-based generation and storage technologies in Europe (p. 71)
<b>Principle 10:</b> Anti-corruption measures	RWE Code of Conduct and Group guidelines for prevention of corruption and organisational regulations (p. 36)	External contact partner also receives information from external third parties (suppliers, other business partners) (p. 36) Training of the workforce with an Intranet-based training programme and on-site training (p.37) Review of the Compliance Management System (CMS) for anti-corruption commissioned in accordance with the German Institute of Auditors (IDW Audit) Standard 980 for 2012/2013	No court proceedings against members of RWE's workforce are pending in relation to alleged bribery offences

## Key Figures at a Glance

Field	Performance indicator		2012	2011	2010	2009	2008
<b>Economy</b>	External electricity sales volume	billion kWh	277.8	294.6	311.2	282.8	317.1
	External gas sales volume	billion kWh	306.8	322.2	395.4	332.0	327.8
	Electricity customers	million	16.4	16.6	16.2	16.5	14.4
	Gas customers	million	7.7	7.8	7.9	8.0	6.2
	External revenue	€million	53,227	51,686	53,320	47,741	48,950
	Share of the RWE Group's revenue earned in countries with a high or very high risk of corruption <sup>1</sup>	%	13.7	12.4	12.0	12.7	12.9
	Net income	€million	1,306	1,806	3,308	3,571	2,558
	Value added	€million	1,589	1,286	2,876	3,177	3,453
	Capital expenditure	€million	5,544	7,072	6,643	15,637	5,693
	<b>Environment</b>	Power plant capacity	MW	51,977	49,238	52,214	49,582
NO <sub>x</sub> emissions Particulate emissions		g/kWh	0.69	0.60	0.58	0.67	0.67
SO <sub>2</sub> emissions		g/kWh	0.4	0.31	0.29	0.34	0.39
Particulate emissions		g/kWh	0.025	0.021	0.019	0.024	0.028
Primary energy consumption		billion kWh	435.7	390.6	403.0	368.2	396.0
Water consumption <sup>2</sup>		m <sup>3</sup> /MWh	1.56	1.62	1.41	1.70	1.49
Specific CO <sub>2</sub> emissions		t/MWh	0.792	0.787	0.732	0.796	0.768
Scope 1 CO <sub>2</sub> emissions <sup>3</sup>		million metric t	181.7	163.8	167.1	151.3	174.5
Scope 2 CO <sub>2</sub> emissions <sup>4</sup>		million metric t	1.9	2.4	3.1	3.5	3.8
Scope 3 CO <sub>2</sub> emissions <sup>5</sup>		million metric t	105.2	121.0	135.7	128.1	127.0
Share of the Group's electricity generation accounted for by renewables		%	5.5	4.3	4.06	3.5	2.4
Employees <sup>6</sup>			70,208	72,068	70,856	70,726	65,908
<b>Society</b>	Share of women in the company	%	27.5	27.1	26.2	26.1	25.6
	Share of women in executive positions <sup>7</sup>	%	12.3	11.3	10.8	9.0	8.9
	Fluctuation rate	%	10.8	10.1	8.3	8.7	8.8
	Health ratio	%	95.5	95.8	95.6	95.4	95.4
	Lost-time incident frequency	LTI <sub>f</sub> <sup>8</sup>	2.8	2.8	3.5	4.3	5.3
	Fatal work-related accidents <sup>9</sup>		4	3	1	5	12

1 Countries rated lower than 60 on a scale of zero to 100 in the 2012 Corruption Perceptions Index by the anti-corruption organisation Transparency International, with 100 corresponding to the lowest risk of corruption.

2 Difference between power plant water withdrawals and returns to rivers and other surface waters; excluding power plants with seawater cooling

3 Scope 1: direct CO<sub>2</sub> emissions from in-house sources (oil and gas production, gas transmission & electricity generation).

4 Scope 2: indirect CO<sub>2</sub> emissions from the transmission and distribution of electricity purchased from third parties.

5 Scope 3: indirect CO<sub>2</sub> emissions that do not fall under scope 1 or 2, produced through the generation of electricity procured from third parties, the transmission and distribution of electricity in third-party networks, the production and transmission of used fuel, as well as the consumption of gas sold to customers.

6 Converted to full-time employees

7 2009 excluding Essent.

8 Lost Time Incident Frequency (Number of accidents leading to the loss of at least one person day per million working hours); until 2011 excluding employees of contractors, from on 2012 including employees of contractors.

9 Including employees of third-party companies.



## Commentaries to the figures

The following commentaries are specific annotations to the figures. Those are assorted corresponding to the categories in the data tool. Commentaries to the same category are displayed among each other.

Category	Commentaries
Power Generation	Including electricity procured from power plants not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. In fiscal 2012, it amounted to 25.2 billion kWh, of which 22.4 billion kWh were generated from hard coal.
Power plant capacity	Including capacities of power stations not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. As of 31 December 2012, these capacities amounted to 6,623 MW, of which 4,458 MW were based on hard coal.
CO <sub>2</sub> emissions	<p>Includes power stations not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. In the year under review, they produced 21.1 million metric t of CO<sub>2</sub> and were allocated certificates for 18.9 million metric t.</p> <p>Based on the electricity production, not including emissions from biogenic fuels.</p> <p><b>Scope 1:</b> direct CO<sub>2</sub> emissions from in-house sources (oil and gas production, gas transmission &amp; electricity generation).  <b>Scope 2:</b> indirect CO<sub>2</sub> emissions from the transmission and distribution of electricity purchased from third parties.  <b>Scope 3:</b> indirect CO<sub>2</sub> emissions that do not fall under scope 1 or 2, produced through the generation of electricity procured from third parties, the transmission and distribution of electricity in third-party networks, the production and transmission of used fuel, as well as the consumption of gas sold to customers.</p>
Pollutant emissions	Not included plant fired by gas from blast furnaces.
Fuels	<p>Fiscal 2007 adjusted since "Our Responsibility.Report 2007".</p> <p>Fossil fuels used, without biomass</p>
Waste	Owing to a change in the rules the use of ash to refill disused opencast mines no longer counts as recycling as of 2010.
Water	Difference between power plant water withdrawals and returns to rivers and other surface waters excluding power plants with sea water cooling.
Reportable nuclear incidents at our nuclear power stations (INES)	INES: International Nuclear Event Scale.
Workforce	FTE = Full-Time Equivalent: Converted to full-time positions. 2009 excluding Essent
Occupational Health and Safety	Lost Time Incident Frequency (Number of accidents leading to the loss of at least one person day per million working hours); from on 2012 including employees of partner companies.



Category	Commentaries
Customers	Not included minority stakes.
External electricity & gas sales volume	<p>2011 including gas trading</p> <p>Including sales of the Renewables Division and of companies stated under "Other, consolidation".</p>
Financial figures	<p>RWE Innogy was established in February 2008.</p> <p>Countries rated lower than 60 on a scale of zero to 100 in the Corruption Perceptions Index by the anti-corruption organisation Transparency International, with 100 corresponding to the lowest risk of corruption.</p> <p>Since 2008, EBITDA has also included operating income from investments.</p>
Dividend/dividend payment	Dividend proposal for RWE AG's 2012 fiscal year, subject to approval by the 18 April 2013 Annual General Meeting.
Value added	<p>2007 adjusted as per the Annual Report 2008, 2006 excluding discontinued operations (American Water).</p> <p>Only the taxes actually paid are included, not tax expenditure 2007 adjusted as per the Annual Report 2008, 2006 excluding discontinued operations (American Water).</p> <p>2008 adjusted as per the Annual Report 2009, 2007 adjusted as per the Annual Report 2008, 2006 excluding discontinued operations (American Water), 2012 proposed dividend.</p>

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