

2001 Environmental Report



Enel's 2001 Environmental Report reviews the activities that the companies of the Enel Group carried out in Italy in 2001. The data refer to the Group's consolidated companies as of December 31, 2001. However, after this date, the Group changed its structure. The new structure of the Group as of July 8, 2002 (shown on the opposite page) does not include Eurogen (which is instead covered in the Environmental Report), since it was sold on May 31, 2002, but includes the following companies, which are active outside Italy or became operational after December 31, 2001: Enel Logistica Combustibili, Electra de Viesgo, CHI Energy, EGL, Camuzzi, Enel Vendita Gas, Enel.Re.

The data reported for the individual companies of the Group refer to the entire year, regardless of whether the companies were acquired or established in the course of the year. Moreover, the data are equal to 100%, independently of Enel's stake in the companies.

The Report describes the environmental features and interactions of the various activities of Enel, without neglecting workplaces, i.e. occupational health and safety aspects.

In the publication, which has the typical format of annual reports, the reader will find a descriptive section, with

- the 2001 environmental highlights;
- the Group's environmental policy;
- the environmental management organization, instruments and economic resources;

followed by the eco-balance, indicators and diagrams.

A special section is dedicated to initiatives and results in the area of occupational health and safety, while individual data sheets give the profile and environmental highlights of each company.

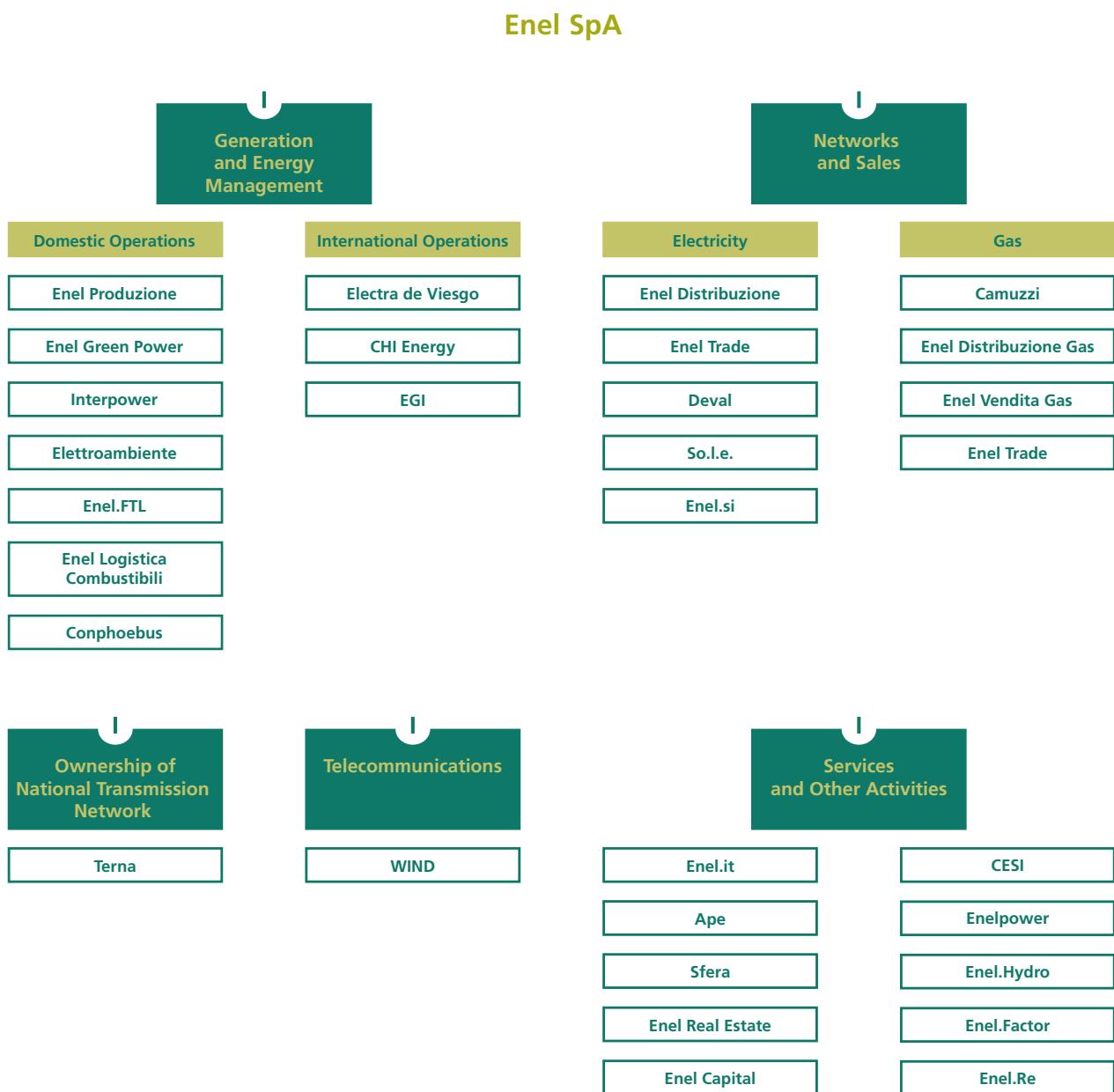
The verifier's statement closes the publication.

**For additional information
on the general content of the
Environmental Report, contact:**

Marcello Coggiatti
Viale Regina Margherita, 137
Tel. no. +39-068509.2755
coggiatti.marcello@enel.it

For the individual companies
of the Group, the contact persons
are indicated in the relevant data sheets.

ENEL GROUP



Organizational Chart as of July 8, 2002

TABLE OF CONTENTS

CEO's message	7
Enel Works for the Environment	9
The Environmental Policy of the Enel Group	23
Environment and Safety within the Enel Group	27
Organization	29
Instruments	30
Voluntary agreements	30
Management schemes	31
Reporting	32
Awareness, training & education	32
Economic Resources	34
Environment	34
Health & safety	35
Eco-Balance	37
Resources	41
Fossil fuels	41
Geothermal steam	41
Water for industrial uses	43
Expendables	43
Product	45
Emissions	47
Emissions into the atmosphere	47
Waste waters	49
Special waste	50
Indicators	51
Occupational Health & Safety	59
Initiatives	62
Protection and promotion of occupational health	63
Injuries	64
Companies of the Enel Group	65
Data sheets of the Group's companies	67
Verifier's Statement	97

With its 6th Environmental Report, Enel continues its long-standing tradition of communicating its environmental initiatives and performance to a wide range of stakeholders.

It is a much-awaited publication, as evidenced by the fast exhaustion of last edition's 5,000 copies and by the high number of visits to the relevant page of Enel's website.

As in previous years, the Report stands out for its comprehensiveness and reader-friendliness: numbers, comparisons and statistical data are accompanied by the environmental highlights of the year and by an up-to-date picture of the Group.

In 2001, our performance was satisfactory, despite the difficulty of going beyond an already good performance.

Emissions of pollutants into the atmosphere declined further. In 2001, specific emissions of SO₂ and NO_x were down by over 4% and by nearly 7%, respectively, on 2000. This result is particularly significant, if it is correlated with the mix of fuels used in our power plants.

Additionally, we went on with the phasing-in of environmental management systems and their certification under the ISO 14001 standard and the EMAS Regulation.

In 2001, we continued to achieve a high percentage (90%) of recovery of waste from our activities and we further slashed our consumption of inland waters for industrial uses.

The year 2002 ushers in a new scenario for sustainable development. The ratification of the Kyoto Protocol by the countries of the European Union and the relevant Italian pledges have major repercussions on the energy sector.

The Government is drafting a proposal for revising the resolution of CIPE (Interministerial Committee on Economic Planning) of November 19, 1998, which will define specific targets and actions.

The companies of the Enel Group are ready to respond to the new challenges and to capture the best business opportunities.

Needless to say, we will stay focused on previously announced programs for enhancing the efficiency of our power plants. The new electronic meter will foster a more rational use of electricity and gas. The development of power generation from renewables, especially wind and biomass, as well as the revamping of hydro power installations will be our commitment in the short term. Within the framework of the Kyoto accords, we plan to catch the opportunities arising from the market of carbon dioxide emissions and to make energy investments in the countries in transition towards market economy, as well as in developing countries.

Enel's Chief Executive Officer

Paolo Scaroni



ENEL WORKS FOR THE ENVIRONMENT

**2001 Environmental
Highlights of the Enel Group**

Enel and the Kyoto Protocol

Strong commitment to CO₂ reduction

Enel is going on with its 2002-2006 program of greenhouse gas (GHG) emission reductions within the framework of a voluntary agreement that it signed with the Ministries of the Environment and of Production Activities. The Group is carrying out reduction activities ahead of the deadlines which are going to be set for the Italian commitments under the recently ratified Kyoto Protocol. Enel's proactive

approach has particular relevance in a scenario that will be strongly affected by the enactment of the European Directive on Emissions Trading and by the revision of the resolution of CIPE of November 1998, which assigns GHG emission reduction targets to the various sectors and outlines the actions needed for their achievement. Enel has already cut its specific CO₂ emissions by 13.5% (attaining its 2002

target earlier) from their 1990 levels. This performance resulted from multiple efforts: improvement of combustion processes; adequate fuel mix; greater reliance on renewables; reduction of distribution losses through construction of new high-, medium- and low-voltage substations; renovation and upgrading of power lines.



As part of a voluntary Pilot Emission Reduction Trading (PERT) program, launched by the Canadian province of Ontario, Enel GreenPower completed one of the most significant CO₂ emission transactions at the international level, selling over 1 million tons of credits.

The company gained the credits by injecting electricity from renewable sources into the grid, thus avoiding the CO₂ emissions that would have

First CO₂ Emission Credits

Enel GreenPower's trading test in Canada

been produced by generating the same amount of electricity from conventional sources. The electricity of renewable origin was

generated by the geothermal plants of Piancastagnaio 4 (province of Siena) and Cornia 2 (province of Pisa).



The RECS Certification System

Europe fosters renewables

Enel is spearheading the development of a reliable and cost-effective certification system for fostering the use of renewable sources in Europe.

Apart from national obligations arising from the "Bersani Decree" (on electricity liberalization), Enel has joined the international initiative called RECS (Renewable Energy Certificate System), which brings together electric operators from about twenty countries. The goals of RECS are: disseminating the use of standard certificates giving evidence of generation of

electricity from renewables; development of a methodology for marketing and using the certificates independently of the physical energy with which they are associated; creation of a renewable electricity market; development of new generating capacity from alternative sources in Europe. Appropriate guidelines (Basic Commitment, Domain Protocol) and tools (software interfacing national databases) have been prepared for ensuring the functioning of the system. After gradual fine-tuning, the pilot

stage of RECS has taken off. During this stage, through the voluntary participation of interested parties, real transactions of certificates will be made. The findings from the pilot stage, to be completed at the end of 2002, will be presented at a special Seminar on RECS, which will be held in Italy in September. At present, RECS is active especially in Norway, Sweden, Finland, Denmark, United Kingdom and Austria. During 2001 and the first half of 2002, about 4.3 million certificates were issued.

Environment, Quality, Health & Safety: Factors of Corporate Excellence

Enel pays close attention to the needs of its shareholders, customers and personnel. In line with evolving EU's trends, the Group is intensifying efforts to introduce environment, quality and safety schemes that comply with the EMAS Regulation and the international ISO 14001, ISO 9000 and OHSAS 18001 standards, taking advantage of their common elements.

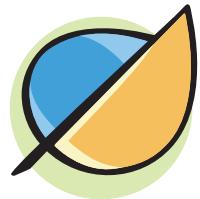
With its latest certifications, the Group now has 16 thermal and hydro power plants that conform to the environmental management ISO 14001 standard or EMAS Regulation. WIND, too, obtained the ISO 14001 certification for the environmental management system of its entire organization. An increasing number of companies of the Group – Enel Produzione, Enel Distribuzione, Terna,



WIND – are putting or have already in place safety management systems in accordance with the international OHSAS 18001 specification.

Clean power has a quality label. Enel GreenPower and APER (the Italian association of power producers from renewables) have developed a label that identifies the power generated from renewable sources, in order to enhance its visibility and increase its demand. The label, called "100% green energy", is currently held and managed by a non-profit foundation (RE-Energy Foundation) and registered in the EU and Canada as a collective logo and in the US as a trademark. The energy sources that may obtain the label are: wind, photovoltaic, solar thermal, geothermal, run-of-river and reservoir hydro (up to 50 MW), tidal, biogas, biomass and biofuels of agriculture and forestry origin. The label identifies producers and consumers of power from the above sources, as well as products

A Quality Label for Electricity



100% green energy

"100% green energy" logo

manufactured by using green power only. Producers will get immediate advantages from the green label: more visibility, greater acceptance of new power plant projects, more public awareness of the environmental value of green power. Customers also will benefit from the label, as their commitment to and their

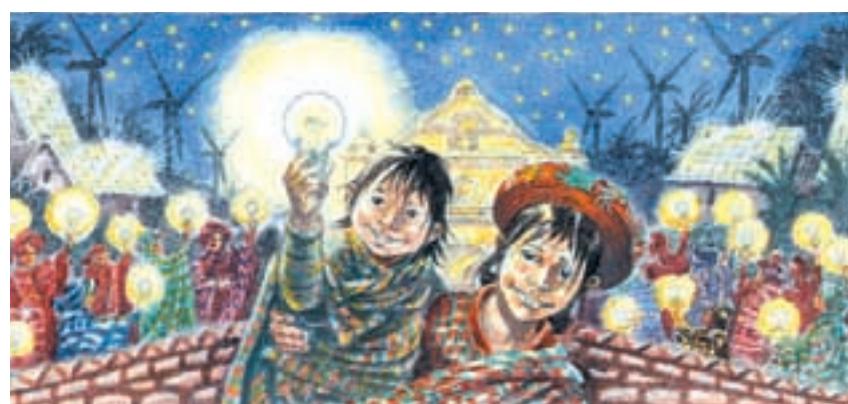
strategies for sustainable development will be more readily identifiable and their activities will be more competitive. CESI will act as a certifying agency. A regulatory commission, composed of environmental associations, consumers and customers, will set out the eligibility criteria for the various renewable sources.

Water and Energy in Guatemala

Enel GreenPower has joined an international initiative of solidarity towards Guatemala, sponsored by the Foundation dedicated to Rigoberta Menchú, 1992 Nobel prizewinner for peace. The initiative follows in the wake of a similar program launched in 2000 ("At Christmas, give renewable energy to give light to the countries that need it...").

The project involves the construction of a solar or wind plant to support the basic needs of Chimel, the native village of the Nobel prizewinner. Enel GreenPower will contribute to the project by providing the technology required for construction of the plant. The power generated by the plant will help supply water to homes, feed first-aid services, a small

handicraft laboratory, the school and a room equipped with Internet access and screens displaying informational videos. The project is expected to lead to the development of a "hybrid" plant that Enel GreenPower plans to optimize and convert into a system which may bring electricity to the numerous villages of developing countries that are not connected to the grid.



Enel GreenPower partnered with numerous municipalities for developing power generation from renewables.

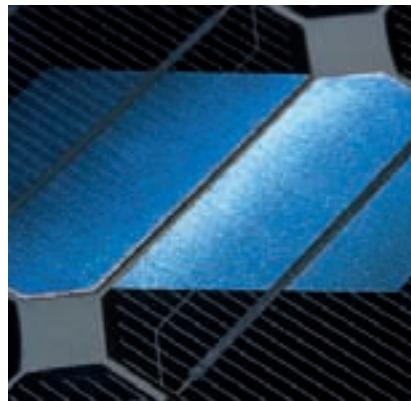
These efforts gave rise to letters of intent and, for the Aeolian islands and the Tuscan archipelago, to special feasibility studies.

The studies, which are funded by the Ministry of the Environment, concern the construction of: wind and photovoltaic plants for electricity generation; solar thermal systems for covering hot water requirements; photovoltaic canopies and posts for recharging electric vehicles in support of sustainable mobility; energy-efficient water desalination systems developed synergistically with Enel.Hydro. Deployment of renewables on minor Italian islands is one of the actions listed in the "Power

Renewables on Minor Italian Islands

Ministry of the Environment's funding of feasibility studies in the Aeolian islands and in the Tuscan archipelago

in natural parks" Memorandum of Understanding signed by Enel, the Italian Federation of Parks and Nature Reserves, Legambiente (an environmental association) and the Ministry of the Environment. The Memorandum is supported by the National Union of Mountain Communities (UNCEM), the Union of Italian Provinces (UPI) and the National Association of the Municipalities of Minor Italian Islands (ANCIM).



Ginostra: the Sun Is Closer

Submission of environmental impact study for solar power facility

Ginostra is getting closer to the target of clean power. Enel GreenPower and Enel Distribuzione have provided the Sicilia regional authority with the environmental impact study for a photovoltaic facility that they designed for the village of Ginostra, on the Stromboli island.

The study, conducted in accordance with regional legislation, assesses the socio-economic implications of the project and its impact in terms of air, water, soil and subsoil pollution, noise, electromagnetic fields, as well as interactions with landscape, flora and fauna. The research was carried out by a task force consisting of

experts in environmental disciplines and in the design and construction of photovoltaic and rural electrification systems. The Ginostra facility, with a power rating of 100 kW, will cover the electricity requirements of more than one hundred households and some commercial premises. It will be fed by a hybrid supply system and equipped with photovoltaic field, storage system, diesel engine and distribution grid. Its storage batteries will accumulate an amount of power that will be sufficient for four days without insolation.

The solar power facility, which will occupy a surface area of about 3,000 m², is planned to be built in the "Timpone del Fuoco" area.



“Ergagía”: renewable power in schools

Green electricity has been included in school curricula. On the wave of growing public attention to this topic, Enel GreenPower has combined its activities of construction of low environmental and visual impact plants with education on renewable sources. “Ergagía” is a program that involves upper secondary schools in the issues related to the management of power plants

and that prompts students to propose solutions. The logo of the program is a firefly, having the symbolic task of enlightening schools on the complexity of the energy issue. The program starts with a visit by a group of students to a power plant. The visit is followed by a meeting with a tutor, who presents the world of renewables to students and teachers and assigns



one problem of the power plant to each work group. Subsequently, the students are called to virtually manage the plant, simulating its organization and tackling real issues. At year's end, a commission including Enel GreenPower's experts and teachers evaluates the projects submitted by the schools of all over Italy and awards a prize to the best one.



“Wind Landscapes”

A new skyline for clean power

Enel GreenPower, Legambiente and the Ministry of the Environment have completed their “Wind Landscapes” program, an international competition for the design of two wind facilities with low impact on the landscape, to be sited at Cinisi (province of Palermo) and Pescopagano (province of Potenza). The theme of the competition was: architectural solutions for more correct integration of wind generators into the landscape. Two were the requirements for the projects: enhancement of landscape value and technical quality. A fascinating challenge for the world of architecture: integrating infrastructures for generating power from renewables into the landscape

and concurrently achieving a balanced relationship between man and the environment. “Wind Landscapes” is the first international competition for the design of wind systems that was launched among European architects and engineers: a combination of landscaping, engineering and industrial design concepts for designing the “windmills” of the third millennium. The winning projects were: “The shadow of wind” (designers P. Vanderquand, A. Jambor, C. Menmier, V. Serafini) for Cinisi and “Trace” (designers D. Moderini, L. Zampieri, G.A. Selano, G. Manenti, N. Paltrinieri, G. Cimino) for Pescopagano.



Environment & Nature on Enel's Website

An important factor of communication and competitiveness for sustainable development

"Environment Channel" and "Nature Channel": these are the two channels of Enel's website that are dedicated to environmental topics. The first is intended for business users, the second for non-business ones: schools, associations, institutions, public bodies, universities, lovers of sports and nature.

The "Environment Channel" (www.enel.it/ambiente) presents insights into such topics as the greenhouse effect and climate change and provides businesses with information on environmental management, as well as on innovative technological solutions for design and maintenance of power plants fed by alternative energy sources.

The channel also features a law section with all applicable regulations (EU, national, regional, provincial, municipal) and the agenda of parliamentary work on environmental matters, as well as a section devoted to the documents of the Enel Group (environmental reports, agreements, etc.) and of other entities.

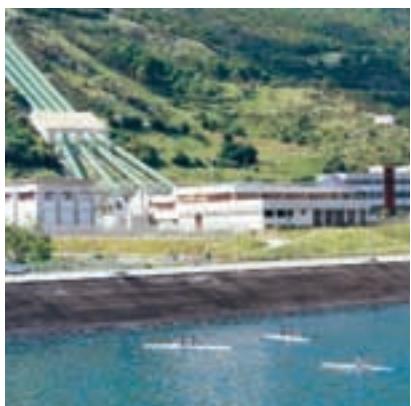
The "Nature Channel" (www.enel.it/natura), instead, describes Enel's "Nature & Land" initiatives in five sectors: parks, nature sanctuaries, "Energy & Nature" trails, cultural itineraries, sports and tourism. Enel's initiatives in these sectors are displayed by geographic area: many regions are already on line and the goal is to soon reach country coverage.

For each area, the page gives a description of the site, information on how to reach it, maps, photos and data on flora and fauna. An iconographic atlas, developed jointly with the Ministry of the Environment (Department of Nature Conservation), enables visitors to discover and get a better

understanding of the mammals and birds of our country. Contributors to the "Nature Channel" are: WWF, Legambiente, LIPU (Italian bird protection association) and ItaliaNostra (an environmental association) for environmental protection, and CAI (Italian Alpine Club) for sports events.



“Nature & Land”: sports in the Presenzano basin



An agreement between Enel Produzione and the Municipality of Presenzano (Caserta) has led to the creation of the Presenzano Water Sports Center. The multi-sports facility was built on a property owned by the company in the proximity of its Presenzano hydro power plant. The facility, consisting of boat racing areas, stands for the public playground, swimming pool and guest-rooms, will offer young

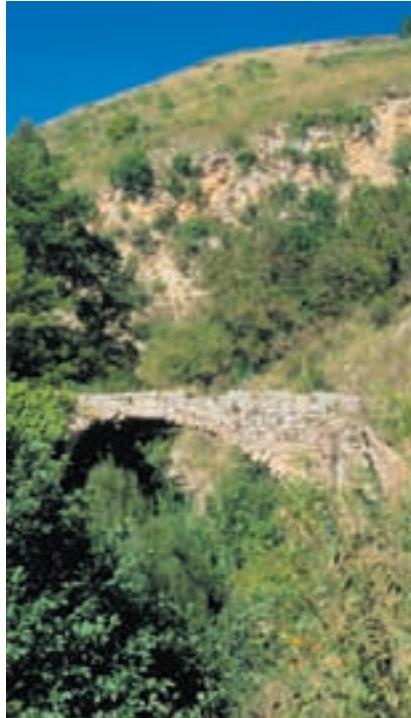
people opportunities to practice sports and organize professional contests using the hydro plant basin for surfing, canoeing, sailing and rowing. A floating wharf, designed by Enel Produzione, will facilitate the enjoyment of the basin and the mooring of boats during the races. The Water Sports Center, run by the Presenzano Sports Association, has become the venue of national and international sports events.

More and More “Energy & Nature” Trails

Enel has made further improvements to its “Energy & Nature” trails, through which visitors can enjoy the natural landscape and, at the same time, gain insight into the functioning of Enel’s power plants located in natural heritage areas. The trails, which are also used by Enel’s personnel in charge of monitoring and maintaining the power plants, are equipped with signs showing not only the major points of interest of the trails, but also the main technical data of the power plants. The trails can also be used for school

visits, including “technological tours” of the power plants and lessons on power generation, or as paths for running, hiking, trekking and mountain bike races. At present, there are about 110 “Energy & Nature” trails in Italy, scattered in Piemonte, Valle d’Aosta, Lombardia, Emilia Romagna, Toscana, Marche and Sardegna and other trails are being created. In the past few years, the trails were outfitted with facilities permitting disabled people to perform sports and guided tours.





“Farfa Educational Farm”

Loan-for-use agreement between Enel Produzione and ItaliaNostra

Among the initiatives of Enel's "Nature & Land" program, the new project for an educational farm at Farfa is aimed at recovering local traditions in an area of outstanding natural value in the province of Rieti. Enel Produzione has gratuitously lent to ItaliaNostra a property located near its Farfa 1 and Farfa 2 power plants. The property, which hosts the ruins of an old watermill, will be used for educational

activities focused on man-nature interaction.

The project is geared to preserve and improve the understanding of the beauty and wealth of the local landscape through historical, archeological and natural itineraries.

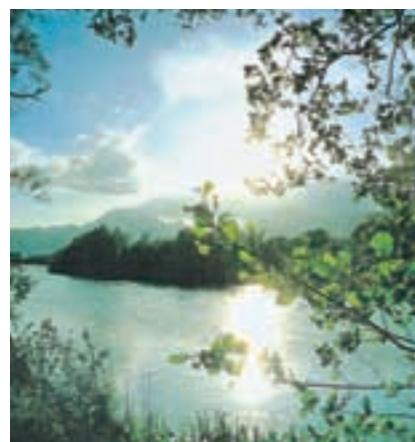
Visitors may walk in the woods, cross fields of organic crops and admire ancient monuments, such as the Farfa abbey, one of the most important of central Italy.

Enel-WWF Alliance for Nature

National festival of nature sanctuaries: spotlight on nature and renewables

Enel participated in WWF's festival of nature sanctuaries, which was celebrated on the World Earth Day. Every year, on the occasion of the festival, WWF uses to open its protected areas to the public. Some of these areas were created as a result of cooperation initiatives between WWF and Enel's "Nature & Land" program, which is targeted to enhance the natural value of the areas accommodating power plants.

Partnering with Enel Produzione and Enel GreenPower, WWF created many nature sanctuaries in valued areas adjoining power plants. Thanks to these efforts, WWF can protect ecosystems that are important for biodiversity conservation, scientific research and environmental education. The nature sanctuaries also have economic and social benefits, since they are used for farming or eco-friendly activities and offer jobs to many young people,



who are engaged, among others, in educational activities for over 500,000 visitors per year. The festival of nature sanctuaries also offered Enel GreenPower and WWF an opportunity to agree on new initiatives for integrating photovoltaic or wind facilities into protected areas.



With its "One hundred cities" initiative, Enel Distribuzione participates in a project launched by municipalities for enhancing the value of and revamping historical centers and places of artistic-monumental or tourist interest. Under the program, Enel

"One Hundred Cities"

Enel Distribuzione revamps historical sites

Distribuzione planned various works on its power grid, such as undergrounding of overhead lines and renovation of medium-voltage/low-voltage substations, to better integrate them into the historical-architectural context. Among the first municipalities selected for the program: Noto and Ancona. With the municipality of Noto (Sicily), Enel Distribuzione signed a memorandum of understanding to restore the original beauty of its baroque monuments, by undergrounding overhead lines in the historical center and

removing all the cables obstructing the view of the façades of its monumental buildings. In Ancona, the company will remove two power lines (12 km of lines and 47 towers), which were built over 30 years ago and which remained embedded into the cityscape. Subsequently, over 11 km of underground high-voltage cables will be built, finally solving the difficult problem of harmonizing power lines with the urban fabric. Enel Distribuzione envisaged similar efforts in at least one hundred municipalities over a three-year period.

"On the Wings of Safety"

Minimizing the risks of migratory bird collision with power lines in the Beigua park

In the municipality of Arenzano (Genova), Terna launched an initiative called "On the wings of safety" jointly with LIPU and the Beigua park authority. The initiative involves a number of efforts for preventing the risk of migratory bird collision with the conductors of overhead lines lying in the southeastern area of the park. The site hosts many migratory birds, namely diurnal raptors and storks, both in Spring and in Autumn.

To prevent bird collision with high-voltage lines, a helicopter placed about 40 plastic marker balls (normally used for signaling power lines to aircraft and helicopter pilots) on the groundwire of the 220 kV Savona-Morigallo line (at Val Lerone). The work was carried out by special personnel of Terna that installed the bird flight diverters without interrupting the electricity service.



As part of its efforts for protection of the avian fauna, namely of its "Nesting on power line towers" project, implemented jointly with the National Health Institute, Enel continues the monitoring of the nest boxes and artificial perches that it installed on its power line towers.



Enel.si, Enel Group's franchising company engaged in the provision of safe, reliable and efficient electrical components and services, teamed up with Conphoebus and Enel GreenPower in the implementation of the "Photovoltaic rooftops" program. The program, sponsored by the Ministry of the Environment, is expected to facilitate the dissemination of this technology and, in accordance with the Kyoto Protocol objectives, to achieve environmental gains,

Enel.si: Energy Efficiency and Clean Power

by avoiding the use of fossil fuels for electricity generation and consequently curbing CO₂ emissions.

Under a ministerial decree of March 2001, regional authorities may issue calls for tenders and select private-sector projects qualifying for energy-efficiency incentives. The incentives are grants that cover up to 75% of the cost of the proposed facility; the remaining 25% of such cost may be paid in installments under arrangements between Enel.si and Banca Intesa BCI.

As many as 100 Enel's franchisees (500 are already active) were trained to: i) provide full support to customers immediately after filing of their application for funding and authorization; and ii) supply, install and maintain the proposed facilities. In 2001, through Enel.si, 225 applications for regional funding (for facilities with a total capacity of 1,100 kW) were submitted. Another 400 applications are awaiting the Ministry's extension of the duration of the program.

Electronic Meters

Revolution in the management of household electricity usage

The electronic meter is a new tool that redesigns the relationship between Enel Distribuzione and its customers in a simple, fast, transparent and flexible way. With the new meter, replacing the old electro-mechanical one, customers can monitor their electricity usage in their current two-monthly billing period, as well as in the previous one, know their current rates, and, at any time, read the actual power consumed by their lighting systems and household appliances. Electricity bills will thus be based

on actual usage and no longer on part-payments and subsequent final payments. Furthermore, customers will be able to quickly activate or change their service contracts by calling the Contact Center of Enel Distribuzione (toll-free number 800 900 800). If they have contracts with a demand of at least 6 kW, they may apply for the two-part hourly rate (UD5) for household uses. Enel Distribuzione is already installing the new meters under a nation-wide replacement plan.



Electrical stations are changing their look. Terna has begun a project of restyling of some of its electrical stations, including Roma Est, Tavernuzze and Carpi. The project is expected to decrease the environmental and visual impact of electrical stations, to communicate their technical data (name of the station, power flows, areas served, etc.) and, where necessary, provide information on the monitoring of electromagnetic emissions. The uniqueness of the project lies in the variety of solutions that are available for refurbishing the stations and their components: paint colors, green spaces, reflecting screens, plastic films for outdoor environments, informational signs.

Restyling of Electrical Stations

Better integration of Enel's power installations into the environment



One Year of Mobility Management

Project of sustainable mobility for Enel Real Estate's employees launched in Rome

Enel's Rome offices with more than 300 employees benefited from a Mobility Manager to learn about the opportunities arising from Enel's participation in the "Together to work" program launched by the municipality. The program is targeted to foster sustainable mobility and help people to switch from private vehicles to mass transit, thus enhancing the livability of the urban environment.

The Mobility Manager effectively communicated these initiatives inside the Group, using the resources made available by the municipality (advertising "totems" and literature) and placed in strategic locations of Enel's offices. Outcome: employees increased their purchases of yearly mass transit subscriptions (Metrebus) at discounted fares. A mobility project was also



developed for Enel Real Estate (the Group's real estate & engineering company). Shuttle buses will carry employees to the new headquarters of the company, located in a suburban area. The project, prepared jointly with STA (the Rome Municipality's mobility agency), was approved by the Ministry of the Environment and Land Management and partially funded (50%) under its "Sustainable Mobility" program.

THE ENVIRONMENTAL POLICY OF THE ENEL GROUP

Under its industrial strategy, the Enel Group manages its activities and investments in line with the principles of sustainable development. In a competitive market, the enforcement of these principles represents a corporate value.

Since 1996, Enel has adopted an environmental policy which is consistent with international guidelines and targets in terms of environmental and climate protection.

Enel's parent company coordinates and ensures the pursuit of these targets by all the companies of the Group, reconciling them with the quality and price requirements of its services and products.

Principles

- Protecting the environment and the health & safety of workers.
- Safeguarding the Group's value.
- Raising the Group's environmental and product quality standards.

Strategic targets

1. Use of processes and technologies which prevent and/or mitigate environmental impacts.
2. Rational and efficient use of energy resources and raw materials.
3. Optimization of waste recovery.
4. Application of international environmental and safety management schemes in the different activities.
5. Optimized integration of power installations into the landscape.
6. Use of the best operating practices.
7. Communication of the Group's environmental performance to the public at large and to institutions.
8. Environmental education, training and awareness of employees.

ENVIRONMENT AND SAFETY WITHIN THE ENEL GROUP

ORGANIZATION

The environmental responsibilities of the Group are vested in the parent company's Public and International Affairs team, having the mission of:

- representing the Group towards the Ministry of the Environment, as well as national and international institutions and entities that are active in the environmental sector;
- steering the Group's environmental and sustainable development policies;
- ensuring that the policies of the operating companies are consistent with the Group's environmental targets.

The team has also the following tasks:

- tracking the process of law-making on environmental matters, at national and EU level;
- identifying indicators, monitoring and controlling the environmental impact of the Group's activities (environmental audits);
- supporting the companies of the Group on environmental matters, such as authorizations, implementation of legislation, green certificates, energy efficiency, greenhouse effect, electromagnetic fields, etc.;
- entering into agreements with institutions and entities in the environmental sector;
- drafting the Group's eco-balance.

Furthermore, depending on the specific issues to be covered, each operating company may have in-house environmental specialists and/or teams.

With regard to its occupational health & safety organization, Enel fulfilled the requirements laid down in Legislative Decree no. 626/94, by identifying the "production units" (Enel's parent company and operating companies), the persons in charge (employer and occupational health & safety managers), as well as the services that they provide (prevention and protection, health surveillance).

INSTRUMENTS

Voluntary agreements

Enel is fully tapping the potential of the instruments planned by the Government for the sharing of environmental responsibilities between institutions and the private sector, namely the resolution of CIPE of November 19, 1998 on national policies and measures for reducing greenhouse gas (GHG) emissions.

Voluntary agreements offer major opportunities to trigger the right synergies between industries, institutions, environmental and trade associations in view of attaining common sustainable development targets.

Voluntary agreement between the Ministries of the Environment & Land Management and of Production Activities and Enel

Enel is continuing its efforts for achieving the GHG emission reduction targets specified in the voluntary agreement that it signed last year with the Government.

In particular, Enel is going on with its programs of:

- conversion of selected plants to combined cycles;
- combustion improvement;
- diversification of the fuel mix (these efforts kept the specific emissions of CO₂ from thermal power plants much below their 1990 levels);
- development of electricity generation from renewables (in 2001, the avoided CO₂ emissions – which would have been produced by generating electricity from fossil fuels – were equal to over 22 million tons);
- construction of new HV/MV and MV/LV substations and renovation and upgrading of MV and LV lines (these efforts reduced power losses on the distribution grid, avoiding the otherwise necessary thermal generation and related CO₂ emissions).

Memorandum of Understanding for deployment of renewables in protected areas

In 2001, a Memorandum of Understanding ("Power in natural parks") was entered into between Enel, the Ministry of the Environment, Legambiente (an Italian environmental association) and the Italian Federation of Parks and Nature Reserves. The purpose of the accord was to foster the development of renewables, preserve and enhance the value of protected areas adjoining power plants and communicate energy efficiency initiatives. The Protocol favors the access to financial resources available at the European level ("Life Natura" and "Life Environment" programs), as well as nationally and regionally (2000-2006 structural funds) for projects of environmental restoration and integration of renewable power plants into the environment.

The implementation of the Protocol has already yielded some important results, e.g.:

- Ministry of the Environment's funding of Enel GreenPower's feasibility studies on increased use of renewables in the Aeolian islands and in the Ponza and Tuscan archipelagos;
- identification of Enel's sites of natural interest where energy-environment initiatives can be implemented with the support of regional funds.

The Protocol thus proves to be an effective instrument for activating, pooling and coordinating the required skills and for focusing them on common projects of social, environmental and economic significance.

Management schemes

To address environment and safety issues in a structured and effective way, the Enel Group is systematically phasing in environmental schemes. The schemes are aimed at improving Enel's performance and organization, by consolidating practices, procedures, roles and responsibilities. After their introduction, the schemes undergo a certification process.

Environmental management

In 2001, Enel continued to put in place environmental management schemes in its industrial sites, in order to certify them under the ISO 14001 standard and, consequently, the EMAS (Eco-Management and Audit Scheme) Regulation.

Strong commitment to environmental management certification of power plants is testified by the fact that Enel planned to achieve the EMAS registration for 100% of its installed capacity by 2005. The sites that have already gained the EMAS logo are the thermal power plants of La Casella, Sulcis, Torrevaldaliga Nord, Torrevaldaliga Sud, Turbigo, and the hydro power plants of the Cordevole valley and the Avisio river.

Furthermore, the thermal power plants of Brindisi Sud, Fusina, Leri Cavour, Montalto di Castro, Porto Marghera, Porto Tolle, Priolo Gargallo, Sermide and Vado Ligure were certified under the ISO standard (and are awaiting the EMAS registration).

About 41% of Enel's overall generating capacity was certified.

Environmental management schemes are also in place in Eletrogen's electricity generating sites, that were transferred to Endesa.

Terna's environmental management scheme

In the course of 2001, Terna began procedures for obtaining the EMAS registration of its infrastructures. At the initial stage, the certification will be limited to the high-voltage power grid comprised between the Torrevaldaliga Nord and Sud power plants (already registered under EMAS) and the electrical stations of Aurelia, Santa Lucia and Roma Sud.

Safety management

Also in the field of occupational safety, Enel intensified its efforts for putting in place management systems with a view to:

- effectively supporting the organization in complying with regulations on occupational health & safety;
- triggering a process of continuous improvement of working conditions and safety, by identifying possible criticalities.

In 2001, Enel Distribuzione completed the phasing-in of its safety management system. On December 14 of the same year, the system was certified under the international OHSAS 18001 (Occupational Health and Safety Assessment Series) standard. The certification closed a process which started at the beginning of 2000 and which involved the headquarters and all the regional offices of the company.

The certification was awarded after the IMQ-CSQ/H&S certifying body audited the system at the headquarters and, on a sample basis, at three regional offices of the company (Piemonte, Emilia Romagna and Sardegna).

In 2001, Enel Produzione and Terna began the revision of their safety management systems to make them compliant with the OHSAS 18001 standard. In particular, Enel Produzione has the goal of integrating its safety management system with its quality and environmental systems, as well as with its system for the security of power installations that are exposed to major-accident hazards.

As regards non-electric activities, it should be recalled that WIND was certified by SGS ICS Srl – International Certification Services – for its prevention and protection system under Legislative Decree no. 626/94 and for the construction and maintenance of its network and facilities. WIND has thus become the first Italian telecoms operator certified under the OHSAS 18001 standard.

Reporting

The reporting system is a key instrument for monitoring the Group's environmental performance.

The system was fine-tuned over time with the introduction of techniques and procedures that ensure data reliability. The formats for data collection were revised both for recording occupational health & safety aspects and for tailoring the reporting system to the Group's diversified businesses and experiences, as well as to evolving legislation.

Data reporting has now become engrained into Enel's environmental management system and its methodology ensures the highest possible homogeneity of the collected data.

Most of the companies of the Group adopted the reporting system, through which they periodically monitor their environmental performance as against targets.

Awareness, training & education

Also in 2001, the Enel Group relied on awareness, training & education programs to communicate its initiatives inside and outside the Group and to improve the skills and know-how of its employees.

In 2001, Enel developed environmental awareness, training & education modules for its environment-dedicated personnel, delivering about 14,000 man-hours of courses.

Enel also activated its "Environment Channel" and "Nature Channel", two thematic sections of Enel's portal (www.enel.it/ambiente and www.enel.it/natura) having the purpose of:

- making the public aware of the relations between industrial settlements, the environment and nature;
- highlight the main environmental issues that stimulate public debate;
- opening a communication channel between the external world and the Enel Group on specific topics of environmental protection and nature conservation.

The "Environment Channel" features the "e-ecology" e-magazine, with technical-scientific papers written by experts. The e-magazine has the purpose of communicating the most authoritative opinions on aspects of power generation, energy efficiency, climate change, land conservation, air quality, etc.

These channels also represent important instruments of information exchange between the Enel Group and institutions. In this connection, Enel entered into an agreement with the Ministry of the Environment and Land Management. Under the Agreement, the Nature Channel will post the data of a major census of the national flora and fauna, carried out by the Nature Conservation Department of the Ministry and published in 2001. These unique data on the characteristics of the numerous animal and vegetal species of Italy will be freely available to Enel's website visitors.

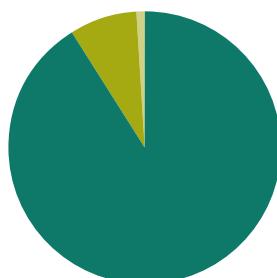
Environmental awareness, training & education courses add to over 630,000 man-hours of training & education on health & safety in workplaces. These courses are designed to train the personnel for the positions referred to in Legislative Decrees no. 626/94 (prevention and protection manager, emergency staff, workers' safety representative) and no. 494/96 on the safety of temporary and mobile construction sites (design coordinator, site management coordinator).

The sharp increase in the hours of training & education with respect to last year is due above all to the need for educating all the operating personnel of Enel Distribuzione and Terna on new internal rules for prevention of electric risks.

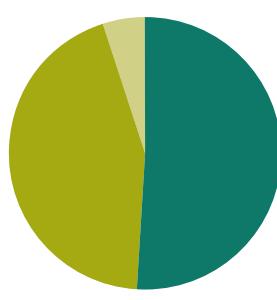
To increase the coverage of these training & education activities, resort was also made to Web TV and distance learning.

ECONOMIC RESOURCES

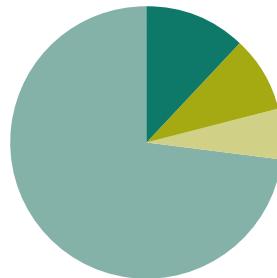
Economic resources by activity



Environmental investments by activity



Items of current expenditure



Environment

Also in 2001, protecting the environment involved considerable investments for the Group, especially in the electricity sector:

- 230 million euro of environmental investments;
- 1,100 million euro of current environmental expenditure.

The sale of Eletrogen and Valgen and of the urban grids of Rome and Turin make it difficult to compare these data to previous years.

On the basis of the guiding principles of Enel's previous environmental reports, the environmental expenditure is defined as the costs incurred for protection of the external environment and of the health of the general population. This expenditure excludes the costs incurred for activities that, albeit beneficial to the environment, are carried out for industrial and economic purposes, for protection of workers (indicated hereafter) and for the safety and security of power installations.

As regards electricity generation, Enel completed most of its planned retrofits of thermal power plants for environmental compliance (1990-2002 plan). Consequently, environmental investments in 2001 dropped significantly with respect to 2000.

At the same time, the sharp increase of overall investments in thermal generation (mostly allocated to conversion of power plants to combined cycles) demonstrates the growing commitment of the Group to increasingly ambitious targets.

Enhanced efficiency of thermal power plants will allow Enel to continuously improve its environmental performance.

The most significant environmental investments were made in the following areas:

- power grid: in the range of 108 million euro, i.e. about 7% of total investments in the grid;
- thermal power plants: retrofits for environmental compliance, in the range of 73 million euro;
- new hydro plants: environmental systems, in the range of 38 million euro.

The current environmental expenditure for 2001 includes:

- costs for the operation of equipment and systems for environmental protection, waste disposal and for Enel's personnel involved in these activities: in the range of 130 million euro;
- costs for implementation of local agreements on environmental matters: in the range of 104 million euro;
- eco-taxes, the most significant of which were the eco-tax on SO₂ and NO_x emissions, the carbon tax on fossil fuels and the tax on geothermal leases: in the range of 70 million euro.

It is worth stressing the captive use – for purposes of environmental protection – of low-sulfur fuels, especially medium, low- and very low-sulfur fuel oil and natural gas in steam generators. The extra costs of fuels incurred in 2001, accounting for the difference between the cost of the fuels used and the cost of the fuels originally planned for each plant, was equal to 800 million euro.

Health & safety

The present system of accounting of occupational health & safety costs – introduced in 2000 – does not yet reflect the investments in renovation and retrofitting of structures and systems that were made to conform to the applicable legislation.

It is indeed very difficult to accurately record all safety & health activities and to associate them with codes uniquely identifying them in the cost accounting system.

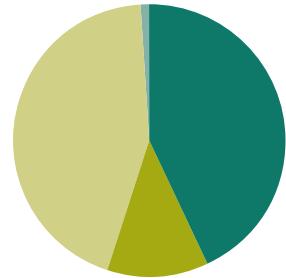
Therefore, also for 2001, only the most significant items of current expenditure were reported, after gathering them into the following macro-categories:

- awareness, training & education;
- health surveillance (appointment of the physician in charge, creation of health facilities, periodical medical examinations, etc.);
- personnel dedicated to occupational safety and related individual protection systems;
- focused studies and research (participation in national and international projects on occupational health & safety, epidemiological studies, analysis of the trend of injuries).

The above categories of expenditure amounted to over 37 million euro.

The "awareness, training & education" category also embodies the activities that are listed in Legislative Decrees no. 626/94 and no. 494/96, i.e. training of workers' safety representatives, prevention and protection manager, emergency staff, design and site management coordinators.

Main items of current expenditure



● awareness, training & education	43%
● health surveillance	12%
● occupational safety personnel	44%
● studies & research	1%

ECO-BALANCE

In the Enel Group, electricity generation, transmission and distribution are the activities, which have the most significant interactions with the environment. It will suffice to say that, in 2001, the remaining industrial activities of the Group (namely in the telecommunications, gas distribution and hydraulic-engineering sectors) involved a consumption of primary energy (electricity and fuels) and a production of waste about 1,000 times lower than electric activities alone.

The eco-balance quantifies the interactions between the Group's electric activities and the environment.

The data of the eco-balance are divided into three sections:

- resources consumed;
- product (electricity): this section provides data on own electricity generation, purchases and sales, giving insight into the scale of the problem considered;
- emissions.

For each item, the eco-balance gives the data for the past five years, specifying their modes of collection and providing comments on their trends.

The data are grouped into homogenous sets of activities, even if they are performed by different companies of the Group: on one hand, the generation activities, conducted by Enel Produzione, Enel GreenPower (new name of Erga), Elettraambiente, Eurogen, Interpower; on the other hand, the transmission activities, carried out by Terna, and the distribution activities, performed by Enel Distribuzione and Deval.

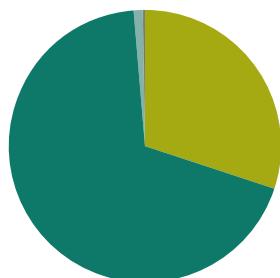
It is worth recalling that the sale of some assets of the Group reduced the size of its activities of hydro and thermal generation, as well as distribution. In 2001, the Group divested: i) the companies Valgen and Elettrogen (whose data are not reported here), totaling about 1,800 MW of hydro capacity and about 4,400 MW of thermal capacity; and ii) the urban power distribution grids of Rome and Turin, with a total of over 1,000,000 customers and a yearly power demand of about 6 billion kWh, which were sold to Acea and AEM Torino. In 2000, the Group had sold the grids of Parma and Trieste.

Both Elettrogen and the above-mentioned distribution grids were sold in accordance with Legislative Decree no. 79 of March 16, 1999. The Decree stipulates that each power producer/importer shall not generate or import more than 50% of the total electricity generated in and imported to Italy. The Decree also contains provisions on rationalization of the electricity distribution business.

As a result of the aforesaid downsizing of the Group's activities, most of the variations appearing in the data at the end of the period are poorly significant or self-evident. Thus, the percentage changes recorded in the same data, over the entire period and in 2001, have been omitted.

Net maximum capacity of power plants

Total (MW) **49,981**



- hydro 30.13%
- thermal 68.70%
- geothermal 1.08%
- wind 0.08%
- solar (photovoltaic) 0.01%

The table below shows the data of the Group's power plants and lines (as of December 31, 2001).

Power plants

	Net maximum capacity (MW)	No.
Total	49,981	658
<i>hydro</i>	15,061	555
<i>thermal</i>	34,336	59
<i>geothermal</i>	540	33
<i>wind</i>	40	6*
<i>solar (photovoltaic)</i>	3.6	5

*in addition to 1 test field

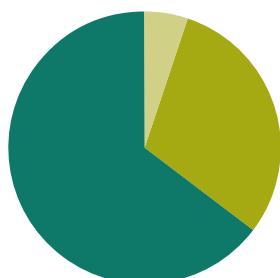
Power lines

	Circuit length (km)
Total	1,097,458
<i>high voltage</i>	57,372
<i>medium voltage</i>	331,181
<i>low voltage</i>	708,905

The missions, features and 2001 highlights of the Group's companies (engaged in electricity and in other lines of business) are described in the data sheets enclosed hereto.

Length of circuits

Total (km) **1,097,458**



- high voltage 5.2%
- medium voltage 30.2%
- low voltage 64.6%

RESOURCES

This section shows the consumption of energy resources (fossil fuels, geothermal steam) and non-energy resources (water for industrial uses, expendables).

Fossil fuels

They represent the energy source for fossil thermal generation.

The consumption of fuel oils is indicated on the basis of their sulfur content (HS = high: >2.5%; MS = medium: >1.3% and \leq 2.5%; LS = low: >0.5% and \leq 1.3%; VLS = very low: \leq 0.5%).

Orimulsion is an emulsion of bitumen in water coming from the Orinoco basin (Venezuela).

Gas-oil, a high-cost fuel, is used on an exceptional basis in gas-turbine power plants that are not connected to the natural gas grid, in diesel-engine power plants (supplying some minor Italian islands), in the start-up of steam-fired thermal power plants, and as an emergency fuel in the other gas-turbine plants. Its maximum sulfur content is specified in the applicable legislation as 0.2%. However, Enel's gas turbines use gas-oil with a sulfur content of 0.05%.

The consumption of natural gas is broken down on the basis of its uses: non-technologically captive (when the use of gas is a corporate choice) and technologically captive (when gas feeds single- and combined-cycle turbines, for which it is the only practicable option).

With the exhaustion of the mines adjoining the Pietrafitta and Santa Barbara power plants, the use of brown coal was discontinued.

Fuel consumption, obtained from data measured and certified in each power plant, is expressed in metric units (thousand tons or million cubic meters). For summing the various contributions, fuel consumption is also expressed in energy potential (thousand tons of oil-equivalent).

With regard to trends, note that, in 2001, coal was the only fuel with a higher consumption value than in 2000, in spite of the sale of Elettrogen: completion of the program of power plant retrofits for environmental compliance made it possible to benefit from a particularly competitive price of coal.

A similar consideration applies to the consumption of natural gas for technologically captive uses: thanks to combined cycles, natural gas was used in more efficient ways.

Geothermal steam

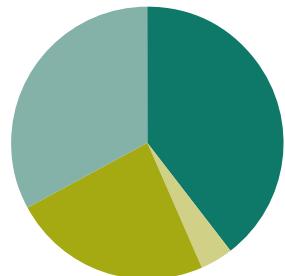
Geothermal steam is the energy source for geothermal generation.

The amount used is measured with special instrumentation.

The progressive growth in the consumption of geothermal steam, recorded over the years, had a drop in 2001 owing to the shutdown of some plants for renovation works.

Fuel consumption

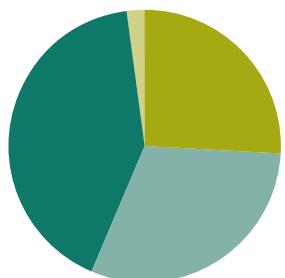
Total (ktoe)	27,022
--------------	--------



fuel oil and gas-oil	39.6%
orimulsion	3.9%
coal	23.7%
natural gas	32.8%

Fuel-oil consumption

Total (kt)	10,708
------------	--------



VLS	25.9%
LS	30.5%
MS	41.5%
HS	2.1%

Resources		1997	1998	1999	2000	2001
Fuels						
fuel oil	thousand t	21,170	19,305	15,420	13,639	10,708
HS	thousand t	173	904	1,176	173	221
MS	thousand t	4,258	7,944	6,514	5,741	4,446
LS	thousand t	13,239	5,237	3,530	4,114	3,266
VLS	thousand t	3,500	5,220	4,201	3,610	2,775
orimulsion	thousand t	1	693	1,689	2,508	1,589
gas-oil	thousand t	62	90	209	136	75
natural gas	million m ³	7,686	8,831	11,302	13,208	10,549
non-technologically captive use	million m ³	6,034	6,414	7,966	9,547	6,452
technologically captive use	million m ³	1,652	2,417	3,336	3,661	4,097
coal	thousand t	7,015	8,176	8,395	9,489	10,425
brown coal	thousand t	176	156	80	19	0
coke-oven gas	million m ³	62	1	0	0	0
Total	thousand toe	31,712	31,880	31,046	32,083	27,022
Geothermal steam for electricity generation						
net of reinjected fluids	thousand t	32,108	34,201	35,339	37,500	35,374
Water for industrial uses						
from rivers	million m ³	11.8	11.1	11.1	10.8	10.7
from wells	million m ³	17.9	15.5	12.9	14.1	11.4
from aqueducts	million m ³	5.3	4.8	5.5	5.8	5.6
Total abstraction from inland waters	million m³	35.0	31.4	29.6	30.7	27.7
from the sea, as-is	million m ³	0.0	2.7	12.2	6.9	5.1
from the sea, desalinated	million m ³	4.0	6.5	8.0	8.7	8.1
from waste waters, recovered & used inside plants	million m ³	1.7	3.1	4.1	3.6	3.2
Total requirements	million m³	40.7	43.7	53.9	49.9	44.1
Expendables						
resins	t	290	117	90	63	81
hydrazine	t	358	114	71	47	35
ammonia	t	2,878	8,969	15,482	18,703	20,455
limestone	t	12,428	178,393	333,275	325,150	302,067
lime	t	6,399	9,034	12,135	14,005	13,541
sodium hypochlorite	t	n.a.	667	1,077	1,071	962
sulfuric & hydrochloric acids	t	16,720	9,359	7,834	8,354	7,440
caustic soda	t	8,318	6,774	6,692	7,728	7,237
bentonite	t	2,060	2,803	1,361	623	1,044
barite	t	441	362	6	8	60
geothermal cement	t	4,185	5,819	2,748	1,545	2,331
other	t	11,881	9,703	6,242	8,915	4,573

n.a. = not available (in 1997, sodium hypochlorite was included in "other" expendables)

The capability of geothermal basins is mostly sustained by the reinjection of fluids into the geothermal reservoir. These fluids consist of: i) the water entrained by steam and separated from it at the well outlet; and ii) the steam that is condensed after its expansion in the turbine, net of the fraction evaporated in the cooling tower. Thanks to reinjection, the geothermal reservoir represents a practically inexhaustible heat resource.

The practice of reinjection of fluids into the subsoil does not jeopardize surface aquifers which, among others, are isolated from the wells by one or more in-series metal pipings, cemented to the soil and between them.

Water for industrial uses

Water for industrial uses is consumed:

- in thermal power plants, mainly to make up for the amounts of water lost in the generation process of steam-turbine plants and in closed-cycle wet cooling tower systems, to carry out clean-up jobs (especially of boilers), and to feed auxiliaries and desulfurizers;
- in geothermal activities, to prepare the drilling slurry (the functioning of cooling towers does not require water, as it is based on re-vaporization of part of the steam condensates discharged by the turbines).

Water requirements do not include the water used for open-cycle cooling of thermal plants, that is returned to the original water body without appreciable physico-chemical changes.

The 1999 peak in water requirements (mostly covered by as-is sea water) is related to the particular requirements of the initial operation of most desulfurizers. In effect, water requirements in 2000 declined significantly.

Expendables

Expendables complete the list of the resources used.

- Resins are used to produce (via ion exchange) the high-purity water which is needed for the thermal cycle of steam-fired power plants.
- Hydrazine deoxygenates the thermal-cycle water and regulates its pH.
- Ammonia is used to regulate the pH of the thermal-cycle water and as a reagent in the flue gas denitrification process.
- Limestone is the reagent for the flue gas desulfurization process.
- Lime is mainly used in waste water treatment, thanks to its neutralizing and flocculating properties.
- Sodium hypochlorite is occasionally added to the cooling waters of steam-fired power plants to prevent deposits and fouling.
- Sulfuric acid, hydrochloric acid and caustic soda are most commonly used in clean-up of equipment. Nevertheless, in geothermal activities, the primary application of soda is as an additive in the slurries used in the drilling of geothermal wells.
- Bentonite is a clay which is used as a slurry for the drilling of geothermal wells.
- Barite is used in some cases to make bentonite slurries heavier, thereby improving their effectiveness upon the drilling of mechanically unstable geological formations.
- Geothermal cement is used for joining the steel walls of wells and as a thickener of drill cuttings, to facilitate their removal.

Geothermal steam consumption

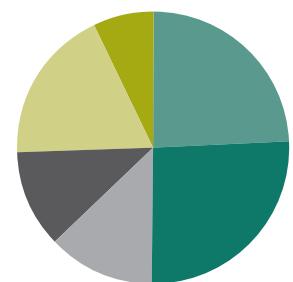
thousand t



Water for industrial uses

Total (million m³)

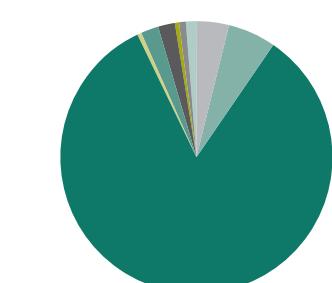
44.1



Expendables

Total (t)

359,828



resins, hydrazine & lime	3.8%
ammonia	5.7%
limestone	83.9%
sodium hypochlorite	0.3%
bentonite & barite	0.3%
geothermal cement	0.6%
other	1.3%

Other expendables include: i) carbohydrazide and chlorine dioxide, which may replace hydrazine and sodium hypochlorite, respectively; ii) magnesium oxide, which is injected into the flue gas circuit of boilers fed with vanadium-containing fuels, to prevent corrosion of heat-transfer surfaces due to the indirect action of vanadium; and iii) ferrous sulfate, which is occasionally added to the cooling waters of steam-fired power plants to protect heat-transfer tube surfaces from corrosion.

The figures shown for expendables are obtained from the accounting records of purchases, which are held in each power installation site. Given the small size of stocks and the high number of power installations surveyed, the amounts purchased are practically equivalent to those consumed.

In the first years of the period, note the strong increase in the use of ammonia, limestone and lime. This increase is connected to the installation of denitrification systems (ammonia) and desulfurizers (limestone) and to the treatment of desulfurizer drains (lime). The consumption of the typical resources used for geothermal activities remains highly variable, depending on the characteristics of the geological formations crossed by the wells.

PRODUCT

The disaggregation of the vertically integrated electric activities of the Enel Group, the transfer of its dispatching assets to GRTN (Gestore della Rete di Trasmissione Nazionale - Italian Independent System Operator), the start of the liberalized market (possibility for "eligible" customers to choose their supplier) have made it necessary to revise the format for the presentation of electricity flows to and from the grid. Consequently, the physical components of the tables presented until 1999 have been mostly replaced with commercial aggregates (own electricity generation, purchases and sales).

As a result of the above developments, the Enel Group has no longer the possibility of measuring grid losses nor, above all, direct control over them. These losses, which have so far been expressed as a percentage of electricity demand and included among the indicators of power system efficiency, have thus been omitted.

As regards *electricity generation*:

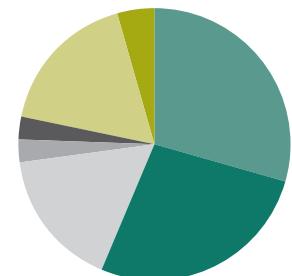
- the contributions are net of the electricity consumed by power plant auxiliaries;
- the consumption of auxiliaries of decommissioned nuclear power plants until 1998 has been subtracted from total consumption;
- the hydro generation from pumped storage is the electricity that is produced, in peak-load hours, through the falling of water pumped from a lower reservoir to an upper reservoir (using thermal generation surpluses in low-load hours). Pumped storage is the only available option for storing significant amounts of electricity, albeit indirectly;
- the available generation is the total net generation, after deducting the electricity consumed for pumped storage;
- in 2001, the drop in hydro generation from natural flows and in thermal generation from fossil fuels is justified by the sale of the companies Valgen and Eletrogen;
- for the contributions of coal and geothermal sources in 2001, the reader is referred to the "Resources" section of the Eco-Balance, which deals with consumption of coal and geothermal steam;
- biogas, a fuel obtained by anaerobic fermentation of the organic fraction (biomass) of municipal solid waste, appears for the first time in 2001 among renewables; biogas feeds the thermal power plants of the company Elettroambiente.

The sharp rise in *electricity purchases* in 2001 depends, among others, upon the procurement of electricity from third parties: Valgen and Eletrogen (companies which were previously owned by Enel) as well as GRTN, to which, since January 1, 2001, the electricity generated by the so-called CIP-6 power plants is to be transferred. These plants, some of which belong to the Enel Group, generate electricity from renewable and "equivalent" sources and are regulated by Resolution no. 6/92 of CIP (Interministerial Committee on Prices).

The drop in *electricity sales* resulting from market liberalization was enhanced by the above-mentioned sale of some urban distribution grids.

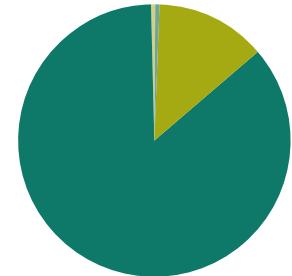
Net electricity generation by source

Total (million kWh) 156,952



Net electricity generation from renewables

Total (million kWh) 31,423



Product

million kWh

	1997	1998	1999	2000	2001
Electricity generation (net)					
thermal from fossil fuels	139,954	141,052	136,946	141,391	118,569
<i>from fuel oil & gas-oil</i>	92,194	84,446	66,987	59,325	46,211
<i>from natural gas</i>	28,964	33,710	43,426	52,147	42,259
<i>from coal & brown coal</i>	18,676	21,016	21,872	23,316	25,883
<i>from coke-oven gas</i>	118	3	0	0	0
<i>from orimulsion</i>	2	1,877	4,661	6,602	4,216
from renewables	32,460	32,459	35,488	34,660	31,423
<i>thermal from biogas</i>	-	-	-	-	25
<i>geothermal</i>	3,672	3,958	4,128	4,415	4,239
<i>hydro from natural flows</i>	28,773	28,480	31,335	30,221	27,129
<i>wind & solar (photovoltaic)</i>	15	21	25	24	29
hydro from pumped storage	4,822	6,006	6,379	6,477	6,961
Total	177,201	179,484	178,813	182,527	156,952
consumption for pumped storage	6,647	8,285	8,800	9,066	9,653
available generation	170,554	171,199	170,013	173,461	147,299
Electricity purchases					
from domestic suppliers and GRTN	-	-	35,978	40,956	54,837
from foreign suppliers	-	-	41,630	25,121	25,088
Total	-	-	77,608	66,077	79,925
Electricity sales					
on captive market	-	-	229,525	201,067	179,046
<i>high voltage</i>	-	-	49,812	27,206	20,229
<i>medium voltage</i>	-	-	79,080	70,612	53,989
<i>low voltage</i>	-	-	100,633	103,249	104,829
on eligible market and to GRTN	-	-	982	21,812	32,306
Total	-	-	230,507	222,879	211,352

EMISSIONS

The tables display the amounts of emissions in the gaseous, liquid and solid form and the quantities recovered, if any.

Emissions into the atmosphere

The most significant emissions into the atmosphere, which are typical of electric activities, are represented by sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulates, hydrogen sulfide (H_2S), carbon dioxide (CO_2) and sulfur hexafluoride (SF_6).

- SO_2 , NO_x and particulates originate from the combustion process in thermal power plants. The amounts shown include both emissions that are yearly reported to the Ministry of the Environment (SO_2 and NO_x from "large combustion plants" and particulates from "steam-fired thermal power plants") and emissions from the other power plants.

Their values are obtained by multiplying their concentrations in the flue gases (generally continuously monitored) by the volumes of the same flue gases. NO_x are expressed in terms of NO_2 -equivalent.

Over the years, these emissions fell significantly, thanks to advanced combustion technologies, continuous tuning of combustion systems, progress in the installation or upgrading of flue gas abatement systems and use of high-grade fuels.

- H_2S is the only potentially polluting substance which is present in significant amounts in geothermal fluid.

Its values are estimated on the basis of periodical monitoring of the composition and flow rate of geothermal steam used by power plants.

The trend of these emissions reflects the trend of geothermal generation. However, they are expected to decline thanks to the gradual installation of abatement systems.

- CO_2 is the typical product of combustion of all fuels. However, it is also contained, albeit in much lower amounts, in the reaction products from the desulfurization process.

The CO_2 from combustion is computed by applying specific emission factors to the consumption of the various fuels. The factors used in the past conformed to the criteria adopted by the Ministry of the Environment: 4.03 t of CO_2 /toe for coal and coal-derived products; 3.27 for oil products; 2.35 for natural gas. These factors have now been replaced by those recommended by the 1996 IPPC (International Panel on Climate Change) Guidelines for national GHG inventories and transposed into the second national report on GHG emissions: 3.24 t of CO_2 /toe for fuel oil; 3.38 for orimulsion; 3.10 for gas-oil; 2.35 for natural gas; 4.02 for coal; 4.24 for brown coal; 2.00 for coke-oven gas. Each of these factors is then multiplied by a correction coefficient which accounts for the typical fraction of unburned carbon: 0.980 for solid fuels; 0.990 for liquid fuels; 0.995 for gaseous fuels. As in the past, the computation considers that the burned carbon fraction – now assumed to lie below 100% – is completely oxidized to CO_2 .

As the application of the new emission factors and of the related correction coefficients was extended to the entire time series, it also modified the time series of specific CO_2 emissions (from fossil-fired thermal generation and total generation) as well as of avoided CO_2 emissions (see next chapter on "Indicators").

The amount of CO_2 from the desulfurization process is computed stoichiometrically from the amount of limestone used.

Reduction of SO_2 emissions from 1980 levels

Year	Regulatory target	Enel's result
1990	-30% ¹	-42%
1993	-30% ²	-57%
1998	-39% ²	-62%
2000	-	-73%
2001	-	-76% ³

¹ Ministerial Decree no. 105/87

² Ministerial Decree of May 8, 1989 (Enel's share)

³ Including Elettron

Results were evaluated with reference to the entire thermal generating mix which was in operation in the years shown, i.e. for aggregates of plants larger than those considered in the target-setting Ministerial Decrees.

Reduction of NO_x emissions from 1980 levels

Year	Regulatory target ¹	Enel's result
1993	-2%	-19%
1998	-30%	-51%
2000	-	-64%
2001	-	-68% ²

¹ Ministerial Decree of May 8, 1989 (Enel's share)

² Including Elettron

Results were evaluated with reference to the entire thermal generating mix which was in operation in the years shown, i.e. for aggregates of plants larger than those considered in the target-setting Ministerial Decrees.

Reduction of CO_2 emissions from 1990 levels

Italian target in 2008-2012	Enel's result in 2000	Enel's result in 2001 ¹
-6,5%	-7%	-11%

¹ Including Elettron

Emissions		source	1997	1998	1999	2000	2001
Emissions into the atmosphere							
SO ₂	fossil-fired thermal generation	thousand t	484	489	404	354	284
NO _x	fossil-fired thermal generation	thousand t	228	178	144	129	101
particulates	fossil-fired thermal generation	thousand t	22	19	16	14	10
CO ₂	fossil-fired thermal generation (from combustion)	million t	99	100	95	98	84
	fossil-fired thermal generation (from desulfurization)	million t	0.005	0.078	0.147	0.143	0.133
	total	million t	99	100	95	98	84
H ₂ S	geothermal generation	thousand t	22	24	25	28	25
SF ₆	generation, transmission & distribution	kg thousand t of CO ₂ -equivalent	n.a.	n.a.	3,447	4,906	4,398
			n.a.	n.a.	82	117	105
Waste waters (discharged into water bodies)							
	thermal generation	million m ³	24.3	22.0	23.0	22.3	20.2
Non-hazardous special waste							
coal bottom ash							
production	thermal generation	t	53,430	41,144	50,542	34,738	63,761
delivery to recovery operators	thermal generation	t	46,511	37,733	50,097	34,265	63,735
coal flyash							
production	thermal generation	t	720,490	842,701	839,411	952,367	1,056,605
delivery to recovery operators	thermal generation	t	827,484	909,582	891,744	958,411	981,465
gypsum from desulfurization							
production	thermal generation	t	11,880	275,651	509,294	562,220	470,240
delivery to recovery operators	thermal generation	t	3,957	240,820	502,325	574,151	428,666
other							
production	generation, transmission & distribution	t	74,423	164,251	116,473	135,950	168,867
		t	95,170	86,694	96,537	87,842	61,598
	total	t	169,592	250,945	213,010	223,791	230,465
delivery to recovery operators	generation, transmission & distribution	t	23,569	50,077	74,706	81,222	116,938
		t	104,256	70,676	86,016	83,074	57,145
	total	t	127,825	120,753	160,721	164,295	174,083
Hazardous special waste							
fuel-oil flyash							
production	thermal generation	t	39,576	55,205	40,520	27,588	14,532
delivery to recovery operators	thermal generation	t	5,857	15,440	16,172	4,393	2,639
other							
production	generation, transmission & distribution	t	9,902	6,186	6,995	6,882	6,298
		t	5,680	9,432	6,222	4,472	6,864
	total	t	15,582	15,618	13,217	11,355	13,162
delivery to recovery operators	generation, transmission & distribution	t	2,518	2,508	2,869	1,699	1,408
		t	4,652	5,742	5,086	2,807	4,417
	total	t	7,170	8,249	7,955	4,506	5,824

n.a.: not available

- The emissions of SF₆ into the atmosphere are due to leaks from the equipment where it is used as an insulant and for electric arc extinction.

SF₆ emissions are determined with a complex procedure which takes into account the amounts replenished. This procedure made it possible to get fairly reliable data on SF₆ emissions released from 1999 on. These data confirm the order of magnitude of the amounts estimated in previous years. The amounts of SF₆ are expressed in weight of SF₆ and in weight of CO₂-equivalent in terms of global warming potential. The values of SF₆ expressed in CO₂-equivalent are very low (about 1/1,000) vs. CO₂ emissions. The variability of SF₆ emissions from one year to the other is largely due to the occasional character of SF₆ replenishment jobs.

In line with the above-mentioned IPCC Guidelines, the following emissions have not been reported:

- emissions of CO₂ from combustion of renewable organic sources, because the CO₂ that is released into the atmosphere practically offsets the CO₂ that is absorbed by biomass during its growth;
- emissions of CO₂ of geothermal origin, which are not regarded as anthropogenic; indeed, the emissions from geothermal power plants are counterbalanced by an equivalent reduction of natural emissions – visible or invisible exhalations – from the soil of geothermal areas.

Waste waters

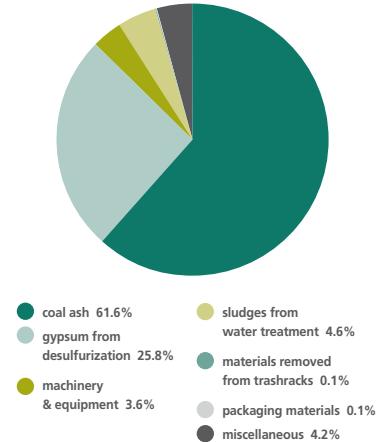
Waste waters include residual process water and meteoric waters collected from the outdoor areas of thermal power plants. After being treated, these waters are in part used inside the plants – thereby contributing to the coverage of water requirements for industrial uses – and in part returned to water bodies.

The volumes of waste waters are estimated by referring to the potential capability of water treatment systems, to their utilization and modes of operation.

As predictable, their trend – even in the case of internal recovery – reflects the trend of water requirements for industrial uses.

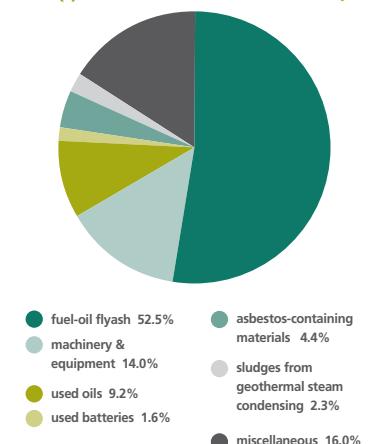
Non-hazardous special waste

Total (t) 1,821,070



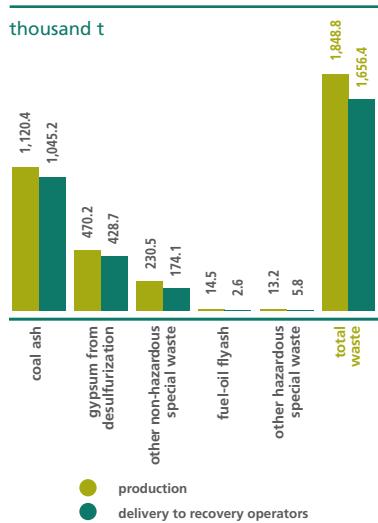
Hazardous special waste

Total (t) 27,694



Main categories of waste

thousand t



Special waste

Special waste represents the refuse from the Group's electric activities. This refuse is regulated by Legislative Decree no. 22 of February 5, 1997, as amended, which classifies it into non-hazardous and hazardous waste.

- The *non-hazardous* waste produced by Enel includes not only coal ash and gypsum from desulfurization, but also fuel-oil bottom ash, orimulsion ash and other materials which are typical of electric activities: machinery & equipment and their parts; supports of power lines; conductors; cables; sludges from water treatment; materials removed from the trashracks of hydro plant intake structures; the part of alluvial sediments that are removed from hydro basins upon desilting and that are not reused locally; etc. This waste also includes materials of a general or exceptional nature (packaging materials, clothing, debris from construction and demolition, etc.).
- *Hazardous* waste comprises fuel-oil flyash, materials which are typical of electric activities (PCB-containing transformers and capacitors, their parts, batteries, used oils, sludges from condensation of geothermal steam, etc.) or of a general or exceptional nature (sludges, asbestos, etc.).

The waste data shown are those yearly reported to the Public Inventory of Waste. These reports are based on the qualitative and quantitative characteristics of the waste, recorded at least on a weekly basis in the books of incoming and outgoing materials.

"Waste production" refers to the amounts of waste recorded as "incoming material" in the books of incoming and outgoing materials.

"Waste delivered to recovery operators" refers to the amounts of waste which is delivered to authorized operators of waste recovery plants (in some cases, the Enel Group itself; for instance, fuel-oil ash is in part used for energy recovery via co-firing with coal).

The following trends emerge from the data:

- the production of ash is generally correlated with fuel consumption and characteristics, but it reflects fluctuations that depend on: i) the frequency of ash removal from flue gas ducts and from the hoppers of boilers and of particulate collectors; ii) the possible addition of water to the ash to prevent the formation of dust during its temporary storage on the plant site; the combustion of flyash in the upper part of boiler furnaces in the case of dual oil-gas firing, etc.;
- the production of "other waste", non-hazardous and hazardous, generally depends on contingent circumstances (e.g. demolition work).

INDICATORS

Indicators are used to analyze Enel's environmental performance over time, regardless of the volume of activities in each year.

The following paragraphs describe the characteristics of the indicators presented in the tables and provide comments, if any, on their trends.

Conservation and quality of resources

- The *net heat rate of fossil-fired thermal generation* defines the average quantity of fossil fuels which are consumed by fossil thermal power plants to generate one kWh net.

The slight increase in the net heat rate of thermal power plants in the past three years is related above all to the growing consumption of electricity by auxiliary systems, which is in turn due to the dissemination of emission abatement systems.

- The *net heat rate of geothermal generation* defines the average quantity of geothermal steam which is used by geothermal power plants to produce one kWh net.

Its trend shows an increasingly efficient utilization of the geothermal resource.

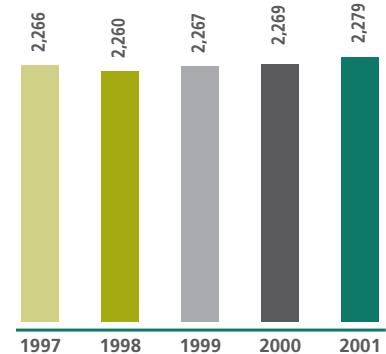
- The *net efficiency of hydro generation from pumped storage* expresses, in percentages, the ratio of the electricity produced by pumped-storage hydro power plants to the electricity consumed for pumping.

- The *net specific requirements of water for industrial uses in thermal generation* express the amount of water consumed per kWh net of thermal generation.

Their increase over the entire period is due to the operation of desulfurizers and is affected by the previously mentioned discontinuity in the 1999 water requirements for industrial uses. However, this increase is minimum, if the contribution of as-is sea water (main source for coverage of the water requirements of desulfurizers) is excluded.

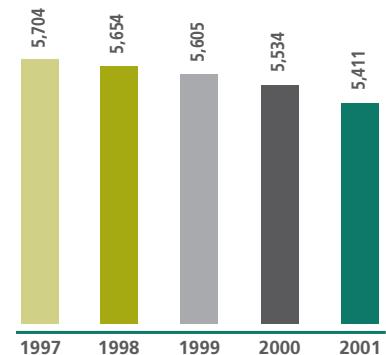
Net heat rate of fossil-fired thermal generation

kcal/kWh



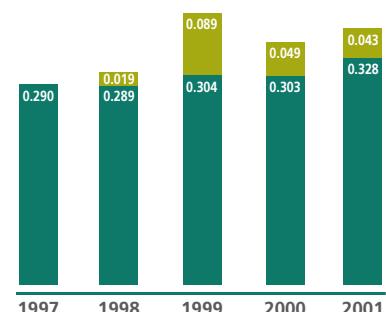
Net heat rate of geothermal generation

kcal/kWh



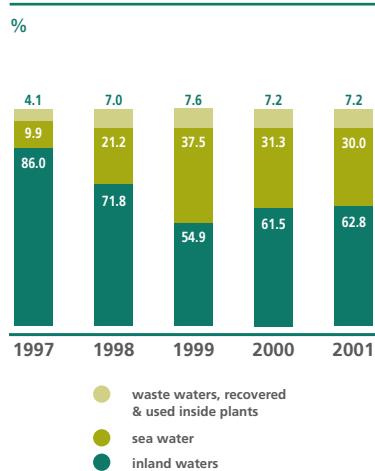
Specific requirements of water for industrial uses in thermal generation

liters/kWh



● contribution of as-is sea water

Coverage of requirements of water for industrial uses

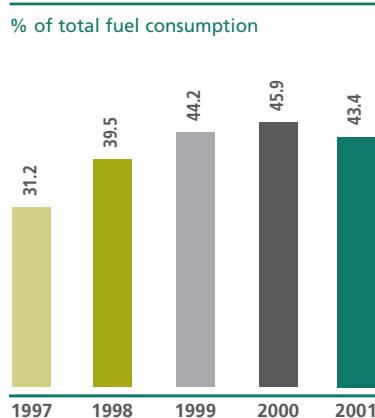


- The percentage contributions to coverage of the requirements of water for industrial uses in 2001 (apart from the 1999 discontinuity) show a generalized decrease of inland waters (rivers, wells and aqueducts) and, by contrast, an increase in sea water and waste water.

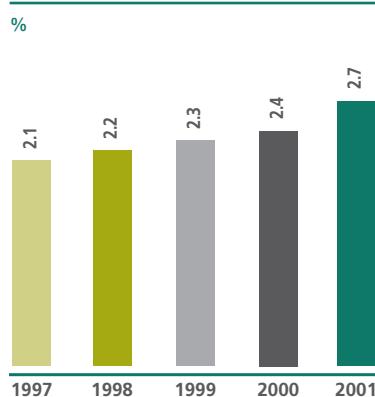
- Fossil fuel consumption* displays a further drop in fuel oil. The contributions of the different types of fuel oils are practically unchanged (the fluctuations of HS fuel oil, whose contribution has become negligible, are insignificant). The consumption of natural gas declined slightly, with a shift towards technologically captive uses (new high-efficiency combined-cycle power plants). The consumption of coal rose sharply thanks to its environmental sustainability (widespread use of advanced technologies for abatement of polluting emissions).

- Electricity generation from renewables*, expressed as a percentage of total electricity generation, shows: the highest overall value in the period; fluctuations which are due above all to the variable contribution of hydro generation; the steady growth of geothermal generation; the appearance of electricity from biogas (see also comments on the "Product" table of the eco-balance).

Consumption of natural gas and VLS fuel oil



Electricity generation from biogas, geothermal, wind & solar (photovoltaic) sources vs. total electricity generation



Indicators			1997	1998	1999	2000	2001	% ('01-'97)/*97	% ('01-'00)/*00
Resource conservation and quality									
net heat rate of fossil-fired thermal generation	kcal/kWh	2,266	2,260	2,267	2,269	2,279	0.6	0.4	
net heat rate of geothermal generation	kcal/kWh	5,704	5,654	5,605	5,534	5,411	-5.1	-2.2	
net efficiency of hydro generation from pumped storage	%	72.5	72.5	72.5	71.4	72.1	-0.6	0.9	
net specific requirements of water for industrial uses in thermal generation including contribution of as-is sea water	liters/kWh	0.290	0.308	0.393	0.352	0.371	28.1	5.7	
including contribution of as-is sea water excluding contribution of as-is sea water	liters/kWh	0.290	0.289	0.304	0.303	0.328	13.3	8.4	
coverage of requirements of water for industrial uses from rivers	% of requirements	29.0	25.4	20.6	21.7	24.2	-16.3	11.7	
from wells	% of requirements	44.0	35.5	24.0	28.2	25.9	-41.3	-8.4	
from aqueducts	% of requirements	13.0	11.0	10.2	11.5	12.7	-2.2	10.5	
from the sea, as is	% of requirements	-	6.2	22.7	13.8	11.6	-	-16.1	
from the sea, desalinated	% of requirements	9.9	15.0	14.8	17.5	18.4	86.7	5.1	
from waste waters, recovered & used inside plants	% of requirements	4.1	7.0	7.6	7.2	7.2	75.1	-0.7	
fossil fuel consumption									
fuel oil	% of total fuel consumption	65.3	59.3	48.5	41.6	38.9	-40.5	-6.6	
orimulsion	% of total fuel consumption	0.003	1.4	3.6	5.1	3.9	122,961.4	-24.2	
gas-oil	% of total fuel consumption	0.2	0.3	0.7	0.4	0.3	44.5	-34.6	
natural gas	% of total fuel consumption	20.3	23.2	30.7	34.6	33.1	63.2	-4.4	
coal	% of total fuel consumption	14.0	15.8	16.5	18.2	23.9	70.1	31.2	
brown coal	% of total fuel consumption	0.07	0.06	0.03	0.01	0.00	-100.0	-100.0	
coke-oven gas	% of total fuel consumption	0.09	0.00	0.00	0.00	0.00	-100.0	-	
HS fuel oil	% of total fuel oil consumption	0.8	4.5	7.5	1.2	2.0	150.5	62.0	
MS fuel oil	% of total fuel oil consumption	19.9	40.7	41.7	41.6	41.1	106.1	-1.1	
LS fuel oil	% of total fuel oil consumption	62.6	27.2	22.9	30.1	30.4	-51.5	1.1	
VLS fuel oil	% of total fuel oil consumption	16.6	27.6	27.9	27.1	26.5	59.3	-2.3	
natural gas, non-technologically captive use	% of total natural gas consumption	78.5	72.4	70.5	72.1	62.5	-20.4	-13.2	
natural gas, technologically captive use	% of total natural gas consumption	21.5	27.6	29.5	27.9	37.5	74.5	34.1	
electricity generation from renewables									
thermal from biogas	% of total generation	-	-	-	-	0.016	-	-	
geothermal	% of total generation	2.1	2.2	2.3	2.4	2.7	30.3	11.7	
hydro from natural flows	% of total generation	16.2	15.9	17.5	16.6	17.3	6.5	4.4	
wind & solar (photovoltaic)	% of total generation	0.008	0.012	0.014	0.013	0.018	116.0	39.1	
Total	% of total generation	18.3	18.1	19.8	19.0	20.0	9.3	5.4	

		1997	1998	1999	2000	2001	% ('01-'97) / '97	% ('01-'00) / '00
Specific emissions into the atmosphere								
SO ₂ /net fossil-fired thermal generation	g/kWh	3.5	3.5	2.9	2.5	2.4	-30.7	-4.3
NO _x /net fossil-fired thermal generation	g/kWh	1.6	1.3	1.1	0.9	0.8	-47.8	-6.7
particulates/net fossil-fired thermal generation	g/kWh	0.16	0.14	0.11	0.10	0.09	-46.3	-12.5
CO ₂ /net fossil-fired thermal generation	g/kWh	710	706	696	692	707	-0.3	2.2
CO ₂ /total net generation	g/kWh	561	555	533	536	534	-4.7	-0.3
H ₂ S/net geothermal generation	g/kWh	6.1	6.0	6.1	6.4	5.9	-2.8	-7.4
Relative emissions of SF ₆	% of SF ₆ in stock or in equipment	n.a.	n.a.	0.7	0.6	0.8	n.a.	28.6
Avoided CO₂ emissions								
hydro generation from natural flows	thousand t	20,425	20,121	21,809	20,917	19,191		
geothermal generation	thousand t	2,607	2,796	2,873	3,056	2,999		
generation from wind & solar	thousand t	11	15	17	17	20		
generation from biogas	thousand t	-	-	-	-	18		
Total	thousand t	23,042	22,932	24,700	23,989	22,228		
Net specific production of waste								
coal ash/net electricity generation from coal	g/kWh	41	42	41	42	43	4.5	2.2
fuel-oil flyash/net electricity generation from fuel oil and gas-oil	g/kWh	0.4	0.7	0.6	0.5	0.3	-26.7	-32.4
Waste recovery								
coal ash	% of production	113	107	106	101	93	-17.4	-7.2
bottom ash	% of production	87	92	99	99	100	14.8	1.3
flyash	% of production	115	108	106	101	93	-19.1	-7.7
gypsum from desulfurization	% of production	33	87	99	102	91	173.7	-10.7
other non-hazardous special waste generation	% of production	32	30	64	60	69	118.7	15.9
transmission & distribution	% of production	110	82	89	95	93	-15.3	-1.9
Total	% of production	75	48	75	73	76	0.2	2.9
fuel-oil flyash	% of production	15	28	40	16	18	22.7	14.0
other hazardous special waste generation	% of production	25	41	41	25	22	-12.1	-9.5
transmission & distribution	% of production	82	61	82	63	64	-21.4	2.5
Total	% of production	46	53	60	40	44	-3.8	11.5
Land								
LV cable lines								
overhead cable (insulated)	% of entire LV grid	49.9	50.1	50.4	50.7	51.5	3.2	1.5
underground cable	% of entire LV grid	27.7	28.5	29.2	29.8	29.7	7.1	-0.5
Total	% of entire LV grid	77.6	78.6	79.6	80.5	81.2	4.6	0.8
MV cable lines								
overhead cable (insulated)	% of entire MV grid	0.31	0.45	0.68	1.12	1.54	396.6	37.5
underground cable	% of entire MV grid	32.5	33.1	33.8	34.8	34.8	7.2	0.2
Total	% of entire MV grid	32.8	33.5	34.5	35.9	36.4	10.9	1.4
double-circuit 380-kV lines	% of total 380-kV lines	8.7	8.4	8.7	8.7	8.6	-1.6	-1.0

n.a.: not available

Net specific emissions into the atmosphere

They express the amounts of substances which are released into the atmosphere per kWh net of electricity generated (fossil thermal, geothermal or total).

Specific emissions represent:

- for SO₂, NO_x and particulates: the cumulative effect of the fossil fuel mix, of the efficiency of thermal power plants and of direct prevention and abatement measures;
- for CO₂: the cumulative effect of the fossil fuel mix and of the efficiency of thermal power plants (the contribution of desulfurizers is definitely marginal);
- for H₂S: the cumulative effect of the composition of geothermal steam and of the efficiency of geothermal power plants.

The trends of specific emissions of SO₂, NO_x and particulates show constant reductions.

After their progressive decline in previous years, in 2001, specific emissions of CO₂ referred to fossil thermal generation increased owing to a higher percentage of coal among the fossil fuels used.

In line with a practice adopted by many electricity companies, specific CO₂ emissions are also determined with reference to total (net) generation of electricity, thereby mirroring also the effect of the mix of energy sources.

Note the positive impact of generation from renewables on overall electricity generation in 2001.

Specific H₂S emissions have a downward trend over the entire period.

Relative emissions of SF₆

These emissions express the ratio of the yearly emissions of SF₆ to the weight of SF₆ contained in in-service and in-stock equipment, and in the bottles used for replenishment.

Although the percentages of SF₆ over the years show fluctuations (due above all to the occasional character of replenishment jobs), they all lie below the typical value indicated in the 1996 IPPC Guidelines for national GHG inventories (1%).

Avoided CO₂ emissions

Avoided CO₂ emissions are an indicator of the environmental benefits induced by the mix of energy sources that are used for electricity generation and by the efficiency of the full cycle, from their utilization to electricity end-uses.

The tables shows the CO₂ emissions which were avoided thanks to electricity generation from renewables, rather than from conventional fuels.

These emissions are determined by multiplying the electricity generation from each renewable source by the average specific CO₂ emissions from fossil-fired thermal generation.

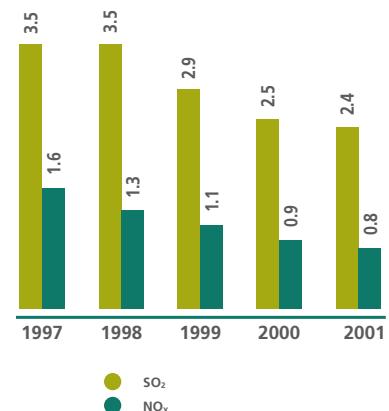
In the case of hydro power, reference is made to generation from natural flows alone, excluding the contribution of pumped-storage power plants.

The reported percentage variations are obviously consistent with the corresponding variations in electricity generation.

In 2001, the generation of electricity from renewables enabled Enel to cut down its CO₂ emissions by over 20%, with respect to the amount expected without the generation from renewables.

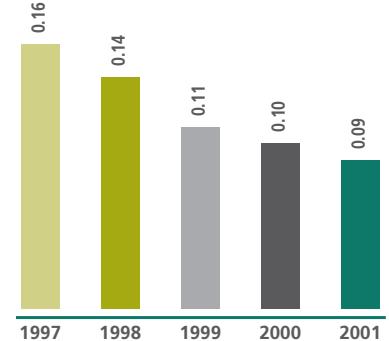
Specific SO₂ and NO_x emissions from fossil-fired thermal generation

g/kWh net



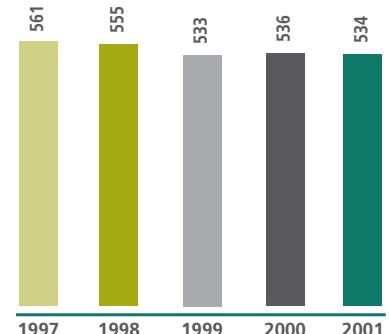
Specific particulate emissions from fossil-fired thermal generation

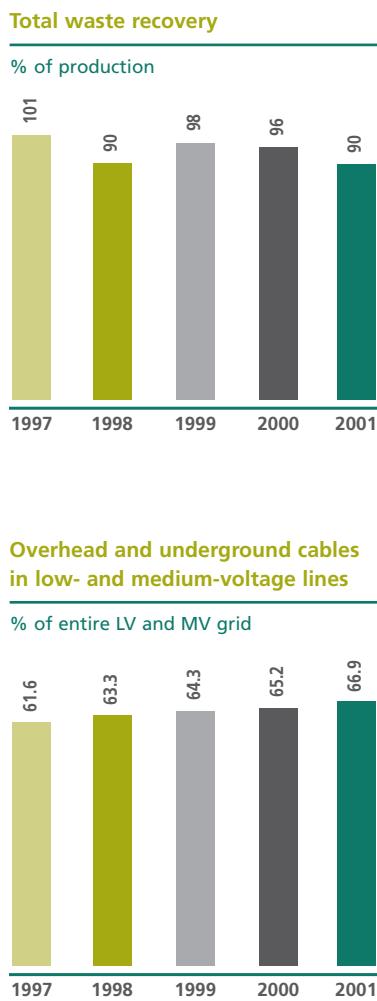
g/kWh net



Specific CO₂ emissions from overall electricity generation

g/kWh net





Specific waste production

Ash is the only waste which has a significant correlation with the volume of activities. As a result, the tables show the production of coal ash (bottom ash and flyash) and of fuel-oil flyash per kWh of the corresponding generation.

The use of better quality fuels (lower production of ash) and the generalized application of advanced particulate collection technologies (higher production of flyash) have opposite effects, but their combination induces a stable trend. These effects are accompanied by fluctuations that depend on contingent circumstances, as previously pointed out with reference to the waste production figures in absolute terms.

Waste recovery

For the main groups of waste, this indicator expresses the ratio of the quantities delivered to recovery operators to the quantities produced.

The trends infer that:

- the reduction in the amount of coal flyash and gypsum delivered to recovery operators in 2001 is due to the fact that, at year's end, significant amounts of this waste were temporarily stored but their delivery to recovery operators was postponed to the next year; nevertheless, full recovery of this waste remains a well-established practice;
- also in 2001, the recovery of fuel-oil ash reflects problems of intake by the markets of recovered materials (heavy metals);
- the recovery of other non-hazardous waste and hazardous waste has appreciable values, albeit with contingent fluctuations.

Land

With regard to landscape and land conservation, note the progressive and generalized increase in the percentage of overhead and underground cables for low- and medium-voltage lines and, consequently, the decreasing percentage of bare conductors.

OCCUPATIONAL HEALTH & SAFETY

For the companies of the Group, occupational health & safety are two mutually dependent and mutually supportive core values. Through relentless and effective initiatives of awareness which have been conducted for many years at all levels of Enel, occupational health & safety have become cultural and strategic assets for the entire Group.

Thus, prevention of and protection from occupational risks are not objectives to be pursued, but an integral part of Enel's industrial policy; all workers and their representatives actively participate in their implementation.

However, Enel set the ambitious target of strengthening the culture of health & safety and launched a wide-ranging project. The project, which is already at an advanced stage, will integrate safety and security aspects into a single process facilitating the identification and management of the different types of risk.

Moreover, with its "Safety Target" program, Enel constantly disseminates knowledge on health & safety (formal education and distance learning, publications, workshops, awareness campaigns via Web TV and its Intranet) among all the members of its personnel. The Group feels that enhancing the skills of human resources is a core value for the constant pursuit of well-being and safety.

INITIATIVES

In 2001, Enel continued its efforts for identifying and assessing risks and putting in place prevention and protection measures, taking into account the organizational changes induced by the diversification of its business.

Among its 2001 initiatives:

- development of a live maintenance training project for Terna's workers: the project uses innovative methods and technologies for virtual reality simulation of high-voltage power line maintenance jobs; this effort enabled Terna's personnel to perform drills in a virtual environment;
- disseminating knowledge of the new "Regulations on prevention of electric risks" (DPRET), in compliance with CEI/EN/50110 and CEI 21/27 standards of good technical practice, among the members of Terna's and Enel Distribuzione's personnel.

PROTECTION AND PROMOTION OF OCCUPATIONAL HEALTH

In 2001, Enel continued to develop safety & health awareness, by encouraging its workers to adopt risk prevention practices and thus meet the strictest European and international standards in this field.

Among the most significant initiatives in 2001:

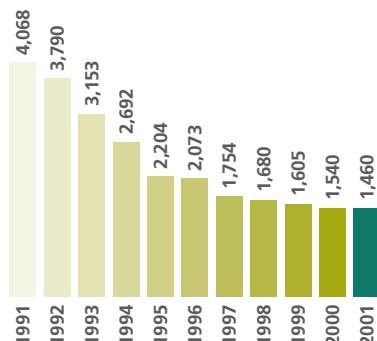
- continuing of efforts for monitoring occupational exposure to polycyclic aromatic hydrocarbons in thermal power plants;
- continuing of efforts under the on-going agreement with EDF (Électricité de France) on the Eurelex research program (European project for identifying methodologies common to electricity companies, to be applied to epidemiological surveys on the working population);
- starting and development of a two-part survey (industrial hygiene and health) for identifying possible diseases due to asbestos exposure among workers who, prior to 1990, have been engaged in maintenance (especially of thermal power plants) for at least 6 months; over 3,000 workers participated in the survey.

Health prevention efforts go beyond the boundaries of the Group, as they encompass initiatives for protecting the populations living in the proximity of power installations or third parties working in the Group's sites. In this connection, it is worth mentioning that, in 2001, Enel Produzione conducted a survey on the health of communities living near its thermal power plants.

INJURIES

Injuries

number of injuries involving at least one day of absence from work



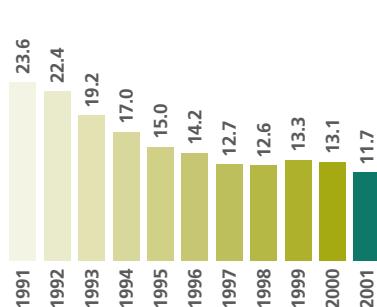
Also in 2001, the absolute number of injuries (events involving at least one day of inability to work) and their frequency (number of injuries per million hours of work) had a downward trend. The improvements on 2000 were equal to 5% and 11%, respectively.

The number of fatal injuries (1 due to a road accident) confirmed the positive trend observed in previous years. This is the best value that Enel has recorded since its setting up.

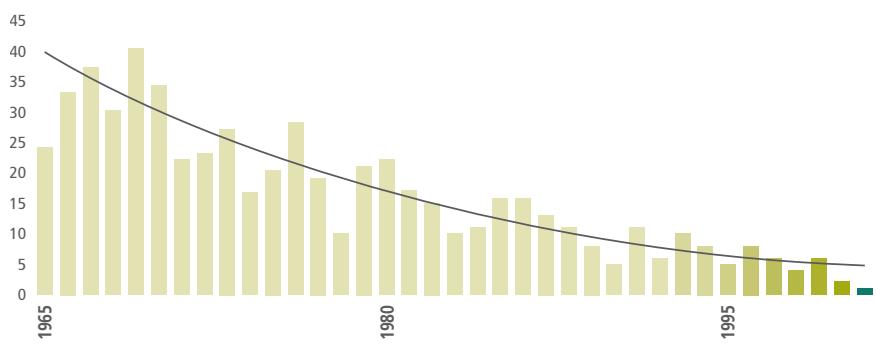
Occupational safety remains a central focus of the Group, in spite of its good performance (no fatal injury for typically occupational reasons, i.e. work on electrical components and at heights). Particular emphasis is placed on developing workers' awareness of the need for adopting correct working practices.

Frequency of injuries

number of injuries per million hours of work



Fatal injuries



COMPANIES OF THE ENEL GROUP

DATA SHEETS OF THE GROUP'S COMPANIES

In line with our tradition, this section of the Report is dedicated to the main companies of the Enel Group. It is a fundamental part of the Report; it gives a picture of the complex configuration of the Group arising from new acquisitions and new lines of business.

The following data sheets describe the missions of the individual companies, their environmental aspects and initiatives, as well as specific data, if any, for 2001.

The data on the companies' status (workforce, number of installations etc.) refer to December 31, 2001.

The image of the Group emerging from the data sheets shows a wide variety of activities, which span generation of electricity, operation of utility grids and provision of high-tech services.

However, the environmental component is always present, albeit to a variable extent.

Workforce 9,162 members



Viale Regina Margherita, 125 00198 Roma

For additional information, contact:
 Maurizio Urbani
 Viale Regina Margherita, 125
 00198 Roma
 Tel. no. +39-068509.4445
 urbani.maurizio@enel.it



Enel Produzione was set up on October 13, 1998 with the mission of making available all the electricity required for covering demand, at the minimum cost and in compliance with regulatory environmental and safety standards.

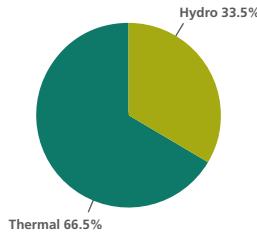
Competitiveness on the free market is the prime target of the company, which intends to respond to the new challenges and capture all market opportunities, optimizing its generating capacity and achieving levels of efficiency comparable to those of major international companies. Enel Produzione has technologically diversified power plants, both thermal (natural gas, fuel oil, coal and orimulsion) and hydro (run-of-river, reservoir and pumped storage), which are distributed throughout Italy. The organization of Enel Produzione over the country relies on three management areas for thermal power plants (coal/orimulsion, fuel-oil/natural gas and combined cycle/gas turbines) and on one management area for hydro power plants, in addition to the self-standing units of Trento and Bolzano for hydro plants. Each management area includes business units. In addition to engineering activities for enhancing the efficiency of its installations, Enel Produzione is going on with the phasing-in of environmental management schemes. The company has already obtained the EMAS registration for its thermal plants of La Casella (Piacenza), Torrevaldaliga Nord (Civitavecchia) and Sulcis (Cagliari), as well as for its hydro plants in the Cordevole valley (Belluno) and on the Avisio river (Trento).

68

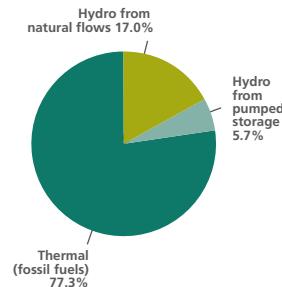
Power installations

	Hydro			Thermal		
	Power plants no.	Head installations no.	Net maximum capacity MW	Power plants no.	Generating units no.	Net maximum capacity MW
Run-of-river	92	1,055		Steam (condensing)	64	15,985
Pondage/reservoir	123	4,365		Steam, repowered with gas turbines	10	5,997
Pure/mixed pumped storage	19	7,431		Combined-cycle gas turbines	5	1,726
	211	234	12,851	Gas turbines	27	1,810
				Diesel	38	19
					45	144
						25,537

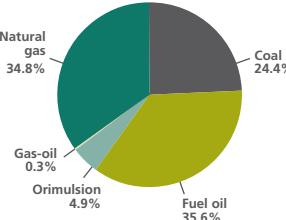
Net maximum capacity



Net electricity generation



Fuel consumption



Total (MW)

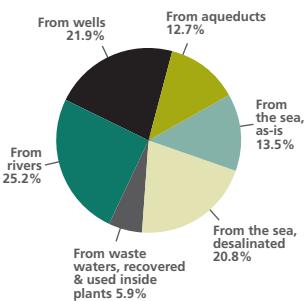
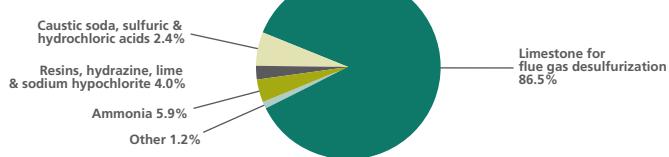
38,388

Hydro from natural flows
 Hydro from pumped storage
 Thermal (fossil fuels)
 Total (million kWh)

20,674
 6,923
 93,886
 121,483

Total (tons of oil-equivalent)

21,286,000

Water for industrial uses**Expendables****Total requirements (m³)**

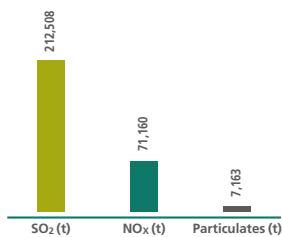
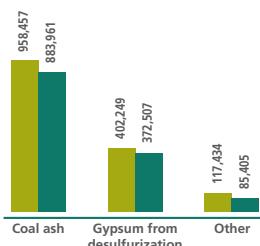
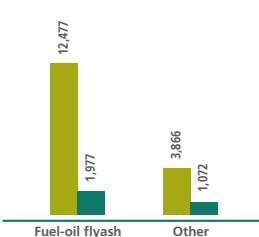
35,667,000

Total (t)

298,219

Total abstraction**from inland waters (m³)**

21,343,000

Emissions into the atmosphere**CO₂ (t)**
from combustion
from desulfurization65,884,000
65,771,000
113,000**SF₆ (kg)**
(tons of CO₂-equivalent)776
18,500Hydro generation from natural flows avoided about
14,625,000 tons of CO₂ emissions from conventional
thermal generation.**Non-hazardous special waste****Hazardous special waste**

● Production (t)
● Delivery to recovery operators (t)

● Production (t)
● Delivery to recovery operators (t)

Waste waters**Discharged into water bodies (m³)** 15,296,000**Used inside plants (m³)** 2,107,000Waste waters include those meteoric waters that are
fed to treatment systems if they come from areas
where they may become polluted.**Other data****Desilted reservoirs****Fish restocking campaigns**

quantity (no.)

7

quantity (no.)

57

alluvial sediments

restocked fish

removed

individuals

and reused locally (t)

1,537,767

in addition to kg

1,069,000

62,300

Fish ladders (no.)

6

Workforce 2,269 members



Via Giovanni Battista Martini, 3 00198 Roma

For additional information,
contact:
Aldo Baldacci
Via Andrea Pisano, 120
56123 Pisa
Tel. no. +39-05053.5969
baldacci.aldo@enel.it



● Regional unit

On December 28, 2001, Enel GreenPower became the new name of Erga, the company of the Enel Group established on May 31, 1999 with the mission of generating electricity from renewable sources. In 2001, the company added 425 MW of new capacity to its Italian portofolio of power plants (hydro plants acquired from Enel Produzione, as well as wind and photovoltaic plants).

Enel GreenPower controls two foreign companies generating electricity from renewables:

- CHI Energy (330 MW from hydro, solar, biomass, biogas and wind power plants in Canada and in the US);
- Energia Global International (140 MW from hydro and wind power plants in Latin America).

As regards geothermal generation, the company renovated 5 of its power plants (Gabbro, Radicondoli, Serrazzano, Monterotondo, Lago, which were provisionally shut down) and built two new plants (Travale 4 and Sesta 1). The company is phasing in environmental management schemes in view of obtaining the ISO 14001 certification and the EMAS registration of its regional units of Feltre (hydro) and Piancastagnaio (geothermal). In 2001, Enel GreenPower commenced its 2001-2006 program of "Environmental Restoration of Geothermal Areas".

In January 2002, the company placed into operation its first system for abatement of hydrogen sulfide and mercury (patented by Enel) on its Bagnore 3 plant.

70

Power installations

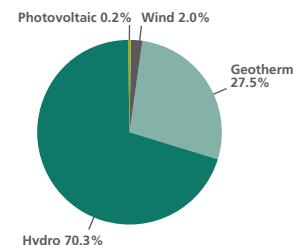
Hydro

	Power plants no.	Head installations no.	Net maximum capacity MW
Run-of-river	223	506.0	
Pondage/reservoir	69	797.0	
Pure/mixed pumped storage	1	78.0	
282	293	1,381.0	

Wind

	Power plants no.	Net maximum capacity MW
Power plants	6	40.0
Test fields	1	0.0
		40.0

Net maximum capacity



Geothermal

	Power plants no.	Generating units no.	Net maximum capacity MW
Condensing	36	535.0	
Atmospheric exhaust	1	5.0	
33	37	540.0	

Photovoltaic

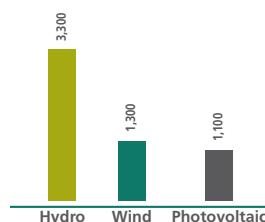
	Power plants no.	Net maximum capacity MW
Power plants	5	3.6
		3.6

Total (MW) 1,965

Net electricity generation

Hydro from natural flows	3,806
Hydro from pumped storage	22
Geothermal	4,239
Wind	26
Photovoltaic	3
Total (million kWh)	8,096

Equivalent hours of utilization*



Consumption of geothermal steam

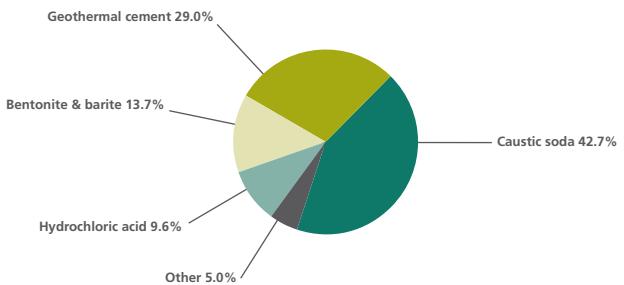
Total (t) 35,374,000
Net of reinjected fluids (t) 20,860,000

*On a statistical basis: capability/capacity ratio (excluding hydro generation from pumped storage)

Water for industrial uses

Abstraction from inland waters
(entirely from rivers, m³) **42,000**

Expendables



Total (t) 8,043

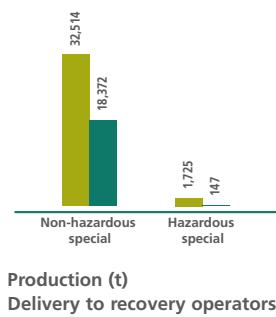
Emissions into the atmosphere

H₂S (geothermal, t) **25,000**
SF₆ (kg)
(t of CO₂-equivalent) **126**
3,000

Avoided CO₂ emissions

Hydro generation from natural flows (t)	2,692,000
Geothermal generation (t)	2,999,000
Wind generation (t)	18,000
Photovoltaic generation (t)	2,000
Total (t)	5,711,000

Waste



- Production (t)
- Delivery to recovery operators (t)

Other data

Hydro generation		Geothermal generation		Wind & photovoltaic generation		
Desilted reservoirs (no.)	0	Drilled wells		Wind systems	Surface area occupied by machines, buildings, and roads (ha)	Total surface area affected by the installations (ha)
Fish ladders (no.)	23	new (no.)	3			
Fish restocking campaigns quantity (no.)	31	deepened (no.)	0			
restocked fish individuals in addition to kg	1,436,000 3,000	rehabilitated (no.)	3			
		Meters drilled	14,068		85	30 to 100 times larger
		In-service wells				
		for steam production (no.)	194			
		for reinjection (no.)	31	Photovoltaic systems	Surface area occupied by modules (ha)	Total surface area affected by the installations (ha)
					7	10

Workforce 934 members



■ Thermal power plant
● Hydro group office



Via Giovanni Battista Martini, 3 00198 Roma

For additional information, contact:
Salvatore Musella
Centro Direzionale - Torre A1
Via G. Porzio, 4 - 80143 Napoli
Tel. no. +39-081782.4179
musella.salvatore@enel.it

Under Legislative Decree no. 79 of March 16, 1999, Enel formulated a plan to sell some of its power plants, after transferring them to three companies: Eletrogen, Eurogen and Interpower. The companies were established on October 1, 1999.

After selling Eletrogen (in 2001) and Eurogen (May 2002), Enel committed to sell Interpower by the end of 2002.

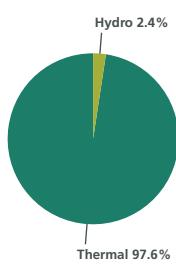
Together with Enel Produzione and other national producers, Interpower has the mission of contributing to coverage of present and future Italian electricity supply requirements. The company takes great care to protect the environment. Preventing pollution by pursuing high quality standards is a constant commitment for Interpower, which is continuing the phasing-in of EMAS environmental management schemes. Its thermal plant of Torrevaldaliga (Civitavecchia) already achieved the EMAS registration, while the plant of Vado Ligure (Savona) completed the preliminary stage and expects registration within 2002.

Moreover, the management of the Vado Ligure plant entered into a "sustainable development pact" with the Municipality of Vado Ligure, already ISO 14001 certified.

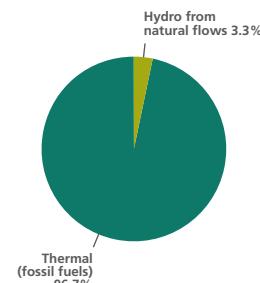
Power installations

	Hydro			Thermal		
	Power plants no.	Head installations no.	Net maximum capacity MW	Power plants no.	Generating units no.	Net maximum capacity MW
Run-of-river	11	27				
Pondage/reservoir	7	36				
	16	18	63		3	11
				Steam (condensing)		2,548

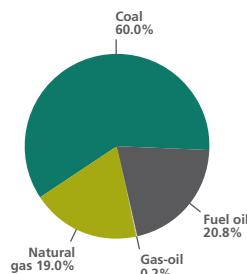
Net electricity generation



Net electricity generation



Fuel consumption



Total (MW)

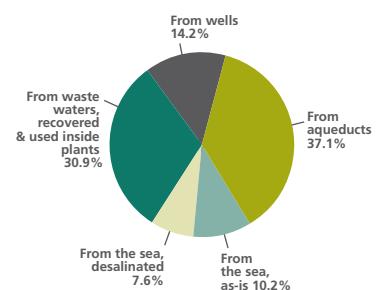
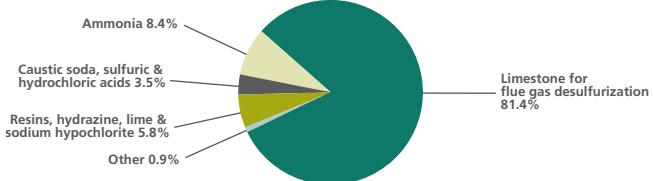
2,611
Hydro from natural flows
Thermal (fossil fuels)

211
6,225
Total (million kWh)

6,436
211
6,225

Total (tons of oil-equivalent)

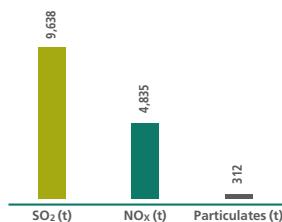
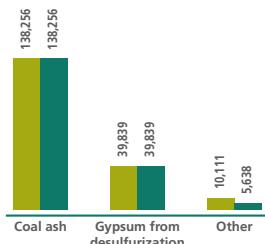
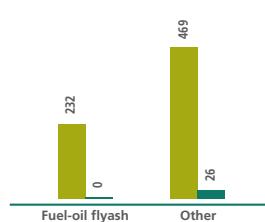
1,538,000

Water for industrial uses**Expendables****Total requirements (m³)****2,808,000****Total (t)****31,826**

Total abstraction

from inland waters (m³)

1,442,000

Emissions into the atmosphere**Non-hazardous special waste****Hazardous special waste****CO₂ (t)**
from combustion
from desulfurization5,367,000
5,356,000
11,000● Production (t)
● Delivery to recovery operators (t)**SF₆ (kg)**
(tons of CO₂-equivalent)121
2,900● Production (t)
● Delivery to recovery operators (t)Hydro generation from natural flows avoided about
149,000 tons of CO₂ emissions from conventional
thermal generation.**Waste waters****Discharged into water bodies (m³)** **2,137,000****Used inside plants (m³)** **867,000**Waste waters include those meteoric waters that are
fed to treatment systems if they come from areas
where they may become polluted.**Other data**

Desilted reservoirs

Fish restocking campaigns

quantity (no.)

quantity (no.)

3

alluvial sediments removed

restocked fish (kg)

800

and reused locally (t)

2,040

Fish ladders (no.)

2

Workforce 1,794 members



For additional information, contact:
 Anna Brogi
 Via G.B. Martini, 3
 00198 Roma
 Tel. no. +39-068509.5618
 brogi.anna@enel.it

Via Giovanni Battista Martini, 3 00198 Roma



■ Thermal power plant
 ● Hydro group office

Under Legislative Decree no. 79 of March 16, 1999, Enel formulated a plan to sell some of its power plants, after transferring them to three companies: Eletrogen, Eurogen and Interpower. The companies were established on October 1, 1999.

Eurogen was sold on 31 May 2002, after the sale of Eletrogen in 2001.

Together with Enel Produzione and other national producers, Eurogen has the mission of contributing to coverage of present and future Italian electricity supply requirements.

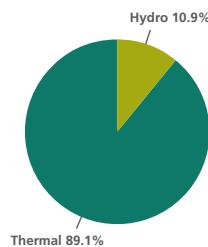
Eurogen is continuing the phasing-in of environmental management schemes and has already achieved the EMAS registration for its thermal plants of Turbigo (Milan) and Sermide (Mantova).

74

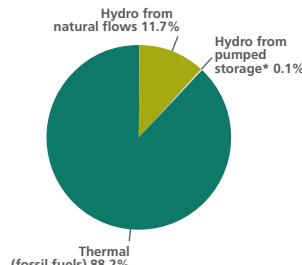
Power installations

	Hydro			Thermal		
	Power plants no.	Head installations no.	maximum capacity MW	Power plants no.	Generating units no.	maximum capacity MW
Run-of-river	37	137		Steam (condensing)	18	5,748
Pondage/reservoir	11	629		Steam, repowered with gas turbines	4	494
	46	48	766		6	22

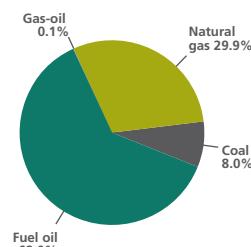
Net maximum capacity



Net electricity generation



Fuel consumption



Hydro from natural flows	2,439
Hydro from pumped storage*	16
Thermal (fossil fuels)	18,458
Total (million kWh)	20,912

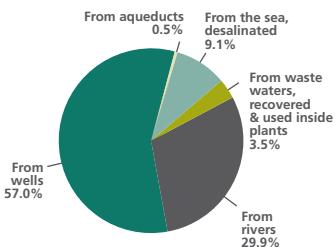
Total (MW)

7,008

* Contributory pumping only

Total (tons of oil-equivalent)

4,198,000

Water for industrial uses**Expendables****Total requirements (m³)**

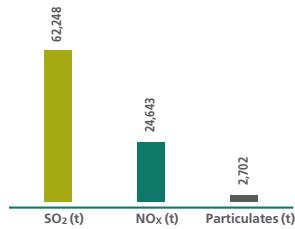
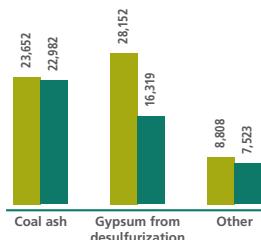
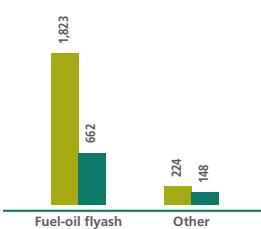
5,576,000

Total (t)

21,740

Total abstractionfrom inland waters (m³)

4,873,000

Emissions into the atmosphere**Non-hazardous special waste****Hazardous special waste****CO₂ (t)**from combustion
from desulfurization12,623,000
12,615,000
8,000
● Production (t)
● Delivery to recovery operators (t)
SF₆ (kg)(tons of CO₂-equivalent)

1,200

Hydro generation from natural flows avoided about 1,725,000 tons of CO₂ emissions from conventional thermal generation.

● Production (t)
● Delivery to recovery operators (t)
Waste waters**Discharged into water bodies (m³)**

2,774,000

Used inside plants (m³)

198,000

Waste waters include those meteoric waters that are fed to treatment systems if they come from areas where they may become polluted.

Other data**Desilted reservoirs****Fish restocking campaigns**

Quantity (no.)	Quantity (no.)
3	8
alluvial sediments removed	restocked fish (individuals)
and reused locally (t)	377,000

Fish ladders (no.)

0

Workforce 95 members



■ Biogas thermal power plant

76

Power installations

Thermal			
	Power plants no.	Generating units no.	Net maximum capacity MW
Internal combustion engines	5	10	8.5
	5	10	8.5

Eletroambiente was established on January 15, 1996 with the mission of recovering energy from waste, so as to contribute to the solution of waste disposal problems and to curb greenhouse gas emissions due to electricity generation from fossil fuels.

Eletroambiente is expected to operate in the following fields:

- treatment & disposal of and energy recovery from municipal solid waste;
- management of the cycle of vegetal biomass (residues from crop growing and processing of agricultural produce, wood, etc.);
- use of biogas obtained from exhausted landfills;
- treatment of non-hazardous and hazardous special waste.

Eletroambiente capitalizes on the know-how and experience of the Enel Group to identify and test new concepts and to design, build and operate technologically advanced and low environmental impact facilities, in Italy and abroad.

At present, the company runs plants for generating electricity from biogas.

In partnership with the Marcegaglia Group, the company built a 16.5 MW vegetal biomass plant at Cutro (Crotone). The plant is planned to generate about 105 million kWh per year starting in 2003.

Net electricity generation

Thermal generation from biogas (million kWh)	25

Biogas consumption

Total (tons of oil-equivalent)	7,115

This biogas is "landfill gas", obtained from anaerobic fermentation of the organic fraction (biomass) of municipal solid waste.

The energy of biogas is provided by methane, which accounts for 39-55% of the biogas used by Eletroambiente.

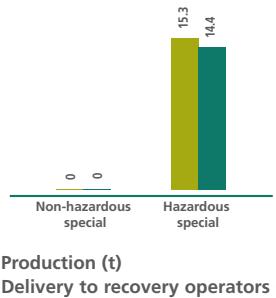
Carbon dioxide is the other main constituent of biogas.

Emissions into the atmosphere

The emissions of CO₂, both naturally contained in biogas and produced by methane combustion, do not contribute to the greenhouse effect, because the CO₂ that is released into the atmosphere offsets the CO₂ that is absorbed during biomass growth.

Moreover, electricity generation from biogas avoided about 18,000 tons of CO₂ emissions from conventional thermal generation.

Waste



Used oils, delivered to a special consortium.



Viale Regina Margherita, 125 00198 Roma

For additional information, contact:
Antonello Irace
Viale Regina Margherita, 125
00198 Roma
Tel. +39-068509.5982
irace.antonello@enel.it

Workforce 120 members

Enel.FTL (Fuels, Trading and Logistics), established on December 30, 1999, is the company of the Group that deals in energy raw materials, such as gas, oil and oil products, coal, petroleum coke, orimulsion, etc.

Enel.FTL has the goal of becoming a qualified operator in this sector, by drawing on its significant weight on the market and on Enel's long-standing know-how and experience. In particular, Enel.FTL's mission consists of:

- supplying fuels to the companies of the Group at the best prices;
- trading hydrocarbons and coal, nationally and internationally, and providing the related logistic services;
- hedging the price risk via adequate mechanisms;
- streamlining and optimizing the use of Enel's fuel facilities and storage areas and tapping their spare capacity, in order to supply integrated logistic services to third parties.



Enel.FTL places emphasis on environmental protection and safety. Among its efforts:

- *managing a fuel portfolio that minimizes the environmental impact; Enel.FTL manages significant amounts of very low sulfur fuel oil, other low environmental impact fuel oils, as well as high-grade coal from Indonesia and other countries; furthermore, Enel.FTL is the second natural gas operator in Italy, with about 13 billion m³ handled in 2001;*
- *determining the quality levels of the tankers that it uses for maritime transport (both those directly chartered and those proposed by its suppliers); to this end, in 2001, the company initiated a program of screening of the quality of tankers used in its system;*
- *actively participating in national and international bodies for the safety of maritime transport;*
- *complying with all safety standards in the treatment and handling of fuels in its storage areas.*

Finally, in 2001, Enel.FTL gave a major contribution to marine protection in the Strait of Bonifacio (between Corsica and Sardinia), by renewing its requirement that chartered ships (or ships carrying its cargo) do not use the Strait. Furthermore, for the transport of orimulsion, the company only uses double-hull ships, i.e. the best currently available option in terms of safety and quality.

Workforce 38 members



Conphoebus has been part of the Enel Group since 1980. The company operates in the fields of rational energy use and renewables. Its activities include:

- design, installation, maintenance and monitoring of renewable power plants;
- supply and maintenance of hybrid systems (wind, solar thermal and photovoltaic);
- identification of sites suitable for installation of renewable power plants and wind characterization of areas of interest;
- feasibility studies on and promotion of renewables, including conversion of agricultural and forestry refuse and biomass into energy;
- energy efficiency in buildings;
- design of low energy-consuming buildings and energy management of existing buildings;
- bio-architecture, design of advanced plants & systems and energy characterization of building components;
- consulting services for optimized energy management of office and residential buildings;
- energy audits in large buildings and in the industrial sector;
- energy and land management plans.

The company works synergistically with Enel GreenPower and Enel.si in the provision of services to the Group and to third parties.

In 2001, the main environmental initiatives of Conphoebus were:

- promotion of renewables in the province of Benevento;
- continuing of its feasibility study on and development of guidelines for improving air quality, temperature and humidity in residential and commercial buildings through the application of electrotechnologies, namely heat pumps;
- completion of its "SMART WINDOWS" project for development of innovative and energy-efficient solutions for the building envelope;
- continuing of the concerted Mediterranean action for the use of renewables and the efficient management of water resources (MEDPOL);
- development of a software program (for Enel Distribuzione) for assessing the opportunities offered by the installation of heat pumps in residential buildings;
- support to identification of wind sites, final engineering, screening and environmental impact assessment of wind facilities;
- installation of photovoltaic systems for public agencies and individuals and provision of other installation services to individuals, leading to the signature of preliminary contracts for over 1,000 kW.

Enel Distribuzione, established on May 31, 1999, has the mission of operating its distribution grid and of selling electricity to "captive" customers, delivering its service at competitive costs and complying with the quality standards that are set by the Electricity & Gas Regulator. Enel Distribuzione provides a public-interest service to about 30 million residential, industrial, commercial and agricultural customers scattered all over Italy, from large towns to rural areas.

To achieve these goals, Enel Distribuzione initiated a wide-ranging program of reorganization of its processes, supported by major technological innovations. These innovations (e.g. Contact Center and new electronic meter) are expected to yield significant quality-of-service improvements.

In 2001, in accordance with Legislative Decree no. 79/99 (Bersani Decree), Enel Distribuzione continued its program of rationalization of electricity distribution in municipal areas, with

- the sale of its grids and assets in the Municipalities of Rome and Formello to ACEA SpA;
- the sale of its grids and assets in the Municipality of Turin to AEM Torino SpA;
- arrangements for the sale of its grids and assets in 18 small municipalities and for the purchase of grids and assets in 39 other municipalities.



● REGIONAL HEAD OFFICE and location

General data

Regional head offices (no.)	14
Operation centers (no.)	74
Zones (no.)	293
Surface area served (km ²)	295,602
Municipalities served	7,978
Customers connected to Enel Distribuzione grid (no.)	29,954,927
of which:	
- supplied by Enel Distribuzione	29,945,296
- only using its wheeling service	9,631
Electricity sales (million kWh)	178,607

Power installations

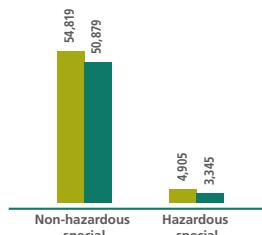
Substations		Lines (km)	
	no.	Installed transforming capacity MVA	
HV/MV	1,906	86,687	
Satellite substations and MV units	482	613	
MV/LV	341,444	63,899	
MV/MV	62,430	1,606	
	406,262	152,805	

	Overhead bare conductors	Overhead cables	Underground cables	Total
HV	19,742	-	356	20,098
MV	209,861	5,079	114,910	329,850
LV	133,351	363,366	209,470	706,187
	362,954	368,445	324,736	1,056,135

Emissions into the atmosphere

SF ₆ (kg) (tons of CO ₂ -equivalent)	1,697 40,600
---------------------------------------------------------------	-----------------

Waste



● Production (t)
● Delivery to recovery operators (t)

Workforce 167 members



Via San Giovanni sul Muro, 9 20121 Milano

For additional information, contact:
 Sara Barone
 Via Ombrone, 2
 00198 Roma
 Tel. no. +39-068509.8881
 barone.sara@enel.it



● Headquarters
 ■ Regional office

Enel Trade was created on May 31, 1999, with the mission of providing industrial customers with the best energy solutions available on the "eligible" market of electricity and gas, ensuring top-level quality and service in Italy and abroad.

After over two years since the start of electricity liberalization, Enel Trade succeeded in retaining its leadership and developed a portfolio of customer-focused products, also in the expectation of the launch of the Power Exchange.

Furthermore, Enel Trade leveraged the opportunities arising from the opening-up of the gas market, initiating a process of expansion into such sector in 2001 and acquiring a market share of 0.7%. The company's goal is to become the second Italian gas operator beginning in 2002-2003.

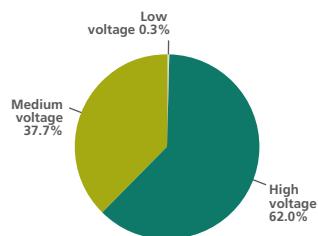
The business of Enel Trade has environmental relevance only to the extent that electricity is one of the factors that contribute to sustainable development.

80

General data

Electricity sales (million kWh)	26,909	Natural gas sales (million m ³)	336	Industrial sites served (no.)	3,329*
of which:					
- High voltage	16,692				
- Medium voltage	10,141				
- Low voltage	76				

* of which 2,364 belonging to consortia



Deval SpA was established on June 1, 2001. The company originates from the divestiture of Enel Distribuzione's branch of the Valle d'Aosta region, which had been transferred to Valdis in 2000. The company is owned by Enel SpA (51%) and by the regional holding company FinAosta (49%). Its mission is to operate the distribution grid and sell electricity to the captive customers of Valle d'Aosta.

Deval provides a public-interest service in a dominantly mountainous area, with parks and natural reserves; 80% of this area is protected by special laws.

Jointly with local governments, Deval has already developed many projects of rural electrification, after approval by the Fine Arts Authority.

After the flood that hit Valle d'Aosta in October 2000, Deval participated in reconstruction works, fully complying with hydrogeological protection laws.



General data

Surface area served (km ²)	3,264
Municipalities served	71
Customers connected to Deval grid (no.)	119,346
of which:	
- supplied by Deval	119,273
- only using its wheeling service	73
Electricity sales (million kWh)	439

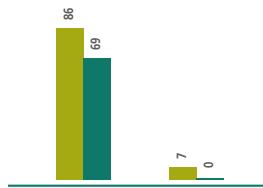
Power installations

Substations	Lines (km)					
	no.	Installed transforming capacity MVA	Overhead bare conductors	Overhead cables	Underground cables	Total
HV/MV	13	382				
Satellite substations and MV units	4	22	HV	56	-	0
MV/LV	1,298	224	MV	842	19	470
MV/MV	200	30	LV	168	1,694	857
	1,515	658		1,066	1,712	1,327
						4,106

Emissions into the atmosphere

SF ₆ (kg)	35
(tons of CO ₂ -equivalent)	800

Waste



● Production (t)
 ● Delivery to recovery operators (t)



Via Tagliamento, 46 00198 Roma

For additional information, contact:
Maria Gabriella Formicola
Via Tagliamento, 46
00198 Roma
Tel. no. +39-068509.7699
formicola.mariagabriella@enel.it

Workforce 300 members



So.I.E. was created on July 28, 1998 with the mission of designing, building and operating public and artistic lighting systems.

In few years, So.I.E. has become the largest lighting company in Europe. The company operates about 1,600,000 lighting points in Italy and serves 60% of Italian municipalities. So.I.E. offers a wide spectrum of customized products and services (including consulting services) based on technological innovation, environmental protection, safety and security concepts. In particular, So.I.E. offers services which range from master plans for public lighting to construction and operation of public and artistic-monumental lighting, interior lighting and environmental monitoring.

For improving the urban environment, So.I.E. designed and patented technologically advanced products, such as the "Lanterna della Comunicazione" (communication lamp post) and the "Webtower". The "Lanterna" (in its Duo and Archetria options) is an innovative product, equipped with a LED screen that displays public-interest information, updatable in real time via a remote control system. The strategic positioning and networking of these lamp posts give rise to a highly communicative video system. The Webtower is an innovative-design lighthouse/tower of integrated services: its top contains radio base stations for mobile telephony, while its bottom houses multimedia services for the public.



Via della Bufalotta, 255 00139 Roma

For additional information, contact:
toll free number 800901515
servizioclienti.enelsi@enel.it

Workforce 151 members

Enel.si, operational since 2001, offers services of installation and maintenance of electrical systems to households and businesses, paying attention to safety, comfort and energy saving aspects.

The company's key areas of business are design, construction, maintenance and operation of electrical systems, with innovative products and services that ensure high efficiency, reliability and safety of use.

Enel.si serves its mass market (residential, commercial and small business customers) through a network of highly professional and reliable franchisees (about 500 shops at the end of 2001, but their number is expected to reach 2,500 by 2004) and its business customers through a direct centrally managed commercial organization.

The activities of Enel.si have environmental relevance only to the extent that correct policies of construction and operation of beyond-the-meter systems and deployment of efficient electrotechnologies and renewable energy systems foster a safe and wasteless use of electricity.



● Headquarters
■ Regional sales office

Since 2001, Enel.si has been designing and operating solutions for enhancing the energy efficiency and safety of electrical systems. Its eco-friendly offerings include:

- *installation of cooling/heating systems based on power-driven heat pumps;*
- *installation of systems for power factor correction;*
- *installation of fluorescent lighting fixtures with electronic reactors, replacing conventional ferromagnetic reactors;*
- *development of systems for monitoring electricity usage (energy management);*
- *design, development and operation of CHP plants;*
- *installation and maintenance of photovoltaic systems;*
- *installation of security & safety systems in workplaces and homes.*

Workforce 517 members



Viale Regina Margherita, 125 00198 Roma

For additional information, contact:
 Alessandro Cornati
 Piazza della Lega Lombarda, 3
 23900 Lecco
 Tel. no. +39-0341366057
 cornati.alessandro@enel.it



In 2001, Enel SpA acquired a considerable number of local operators in the natural gas distribution sector, establishing a new company, Enel Distribuzione Gas. The company also took over Colombo Gas, which Enel had acquired on March 14, 2000.

Enel Distribuzione Gas is active in the gas distribution sector, directly and through controlled companies, in various regions (Abruzzo, Basilicata, Calabria, Campania, Emilia Romagna, Friuli, Lazio, Lombardia, Molise, Piemonte, Sicilia, Toscana, Trentino, Umbria and Veneto). The company operates, monitors, controls and maintains its installations in compliance with the applicable legislation and with the most stringent technical and quality standards.

To this end, the company launched programs of monitoring and improvement going well beyond those specified in the applicable legislation, namely:

- periodical monitoring of the distribution system, so as to reduce gas emissions into the atmosphere and guarantee the safety of its installations;
- increase in the number of technological innovation projects for improving gas installations via automatic monitoring & control systems, reducing risks to customers.

84

General data

Municipalities served	370
Customers connected to Enel Distribuzione Gas grid (no.)	608,350
of which:	
- supplied by Enel Distribuzione Gas	608,344
- only using its wheeling service	6
Natural gas sales (million m ³)	1,185

Installations

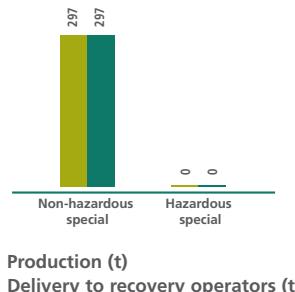
Pipelines (km)	9,847
HP/MP stations (no.)	343
MP/LP stations (no.)	2,968

Own consumption of natural gas*

Total (toe)	583
equal to about m ³	690,000

* Used for heating: before being distributed to customers, natural gas is heated in order to prevent it from freezing upon depressurization.

Waste



● Production (t)
 ● Delivery to recovery operators (t)

Terna, which was set up on May 31, 1999, owns 95% of the national high- and extra-high voltage power transmission grid.

Terna carries out activities of design, construction, remote monitoring & control, operation and maintenance of power transmission installations, under appropriate arrangements with GRTN (Gestore della Rete di Trasmissione Nazionale – Italian Independent System Operator). In particular, Terna

- operates, maintains and renovates its installations;
- operates and extends the high- and extra-high voltage power grid (all the 380 and 220 kV lines and part of the 150, 130 and 120 kV lines).

Terna's mission is to deliver an excellent power transmission service, ensuring the reliable, safe and secure operation of its installations and of the power system.

Terna has also the goal of capitalizing on its wide-ranging expertise, in particular in the provision of specialist high-voltage services to third parties.

Terna intends to become a leader in utility grid services and technologies.

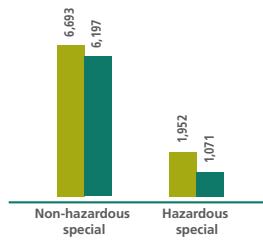

● Field unit

Power installations

Electrical stations			Lines (km)		
	no.	Installed transforming capacity MVA		Circuits	Lines
380 kV	118	72,923	380 kV	9,761	8,991
220 kV	108	23,673	220 kV	9,294	7,722
<220 kV	42	2,909	<220 kV	17,304	16,327
	268	99,505	220 kV d.c.	859	540
				37,218	33,580

Emissions into the atmosphere

SF ₆ (kg)	(tons of CO ₂ -equivalent)
1,594	38,100

Waste

● Production (t)

● Delivery to recovery operators (t)

Workforce 4,992 members



Via Cesare Giulio Viola, 48 00148 Roma

For additional information, contact:
 Roberto Zanotti
 Via Cesare Giulio Viola, 48
 00148 Roma
 Tel. no. +39-068311.5059
 Roberto.Zanotti@mail.wind.it



WIND Telecomunicazioni, established on November 25, 1997, is owned by Enel (73.4%) and France Télécom (26.6%). It obtained fixed & mobile telephony and Internet licenses in July 1998. In December of the same year, it launched its long-distance telephony service for the business market. On March 1, 1999, WIND entered the consumer market with its fixed & mobile telephony services.

In July 1999, WIND acquired Itnet, an Internet Service Provider dedicated to the business community. In November 1999, it inaugurated its Internet service.

In January 2000, WIND was the first alternative telecoms' operator to offer fixed telephony services also for local calls and, after one year only, it completed country coverage with the same service. In 2001, WIND merged with Infostrada. The deal resulted into the creation of the main alternative telecommunications group, with the widest national fiber-optic transmission network, connected to the European network (250 European cities in 16 countries).

In the Internet world, WIND operates Libero, the largest Italian portal arising from the merger of ItaliaOnLine and Inwind.

At the end of 2001, WIND gained the OHSAS 18001 certification for its safety management system, after getting the ISO 14001 certification for its environmental management system at the end of 2000.

86

General data

Fixed telephony customers (million)	7.0
Mobile telephony customers (million)	7.9
Population coverage by mobile network (%)	94
Internet customers (million)	8.9

Installations

Fiber-optic networks (km)	17,500	Radio base stations (telephony aerials) (no.)	5,655
Local loops (km)	2,100	Points of Presence (POPs) and IP POPs (no.)	266
Fixed telephony switches (no.)	55		
Mobile telephony switches (no.)	47		

Electricity consumption*

Total (million kWh)

26.3

Gas-oil consumption*

Total (toe)

10.9

*Electricity is used for telecommunications systems and gas-oil for their emergency generating sets.

Enel.it is the Information and Telecommunications Technology company of the Enel Group. The company, which was set up on October 15, 1999, has information technology, telecommunications and multimedia skills.

Enel.it serves companies that operate public-interest services, local governments, industrial and service companies and small and medium businesses, offering a wide array of customized solutions. In particular, Enel.it provides customer support for designing, implementing, managing and monitoring applications, proposing state-of-the-art information technology solutions and supervising the maintenance of infrastructures for management, monitoring & control of business processes.

In the area of infosecurity, Enel.it offers projects, technologies and services for public-key security infrastructures, helping customers to network their services with the highest levels of security.

Furthermore, through the ASP (Application Service Provider) technology, the company delivers vertically-integrated, updated and continuously evolving solutions to meet the needs of the various sectors.

Enel.it gives an indirect contribution to environmental protection to the extent that telecommunications networks help reduce people mobility.



● Headquarters
 ■ Local office

General data

Fiber-optic network (km)	11,000
Servers (no.)	4,000

Waste



Workforce 934 members



Viale Regina Margherita, 125 00198 Roma

For additional information, contact:
 Vincenzo Negri
 Lungarno Colombo, 54
 50136 Firenze
 Tel. no. +39-055655.3644
 negri.vincenzo@enel.it



Ape Gruppo Enel SpA, established on 1 January 2001, inherited the assets of the personnel administration department (CESAP), which was part of the Personnel, Organization and Services Function of Enel's parent company.

Ape operates the personnel administration service for the Enel Group. Its activities range from the computation of pays to the keeping of compulsory records, legal consulting services, management of relations with external bodies, issuing of magnetic badges, communication of orders of payment to the banking system, assistance with all travel formalities (issuing of tickets and accounting), computation of all the variable components of pays, issuing of payslips, administration of canteens, certification of final personnel administration accounts, budgeting and completion of tax returns (forms no. 730 and 770). Ape is also developing other payroll services.

The company, which currently provides services also to third parties, has the strategic goal of becoming one of the leading players in the personnel administration business.

The company, which is headquartered in Rome, relies on one central office and on 14 local offices. Over the country, APE has a total of 150 work sites.

Ape's business has poor environmental relevance. However, in line with the Group's environmental sustainability policy, APE adopted the following practices:

- giving priority to the use of lower environmental impact products/materials;
- contributing to the environmental policies (e.g. separate collection of waste) of the companies which manage the buildings where its offices are located.

Finally, as part of its reorganization of work methods and processes, Ape's growing commitment to Information and Communications Technology has positive environmental effects. The planned introduction of its "electronic employee file" system is a case in point. The system will enable the employees of Ape's client companies to use the Intranet or the Internet to access the files of their payslips. The system will make it unnecessary to monthly print and deliver these documents throughout Italy and to physically store them.

Sfera, established in 1999, is the company that is dedicated to education & training of the employees of the Enel Group and to development of their skills.

For the Enel Group, Sfera developed and operates the Enel Distance Learning System (EDLS). The system allows over 50,000 employees, connected to the company's Intranet, to access e-learning courses and services, integrated in a single platform.

Since January 1, 2002, Sfera has acquired Enel's School of Special Training (ADS school). The school is internationally recognized as one of the main centers of excellence for developing skills in development, operation, monitoring & control, as well as maintenance of thermal and hydro power plants.

Leveraging the know-how of the Group and its experience in formal and distance learning, Sfera provides the external market with an exclusive range of contents that are certified by internationally renowned education & training institutions.

In 2001, Sfera designed and delivered formal and distance learning & training courses focused on environmental topics, namely on legislative framework, systems for measuring pollutants, waste management and preventive control technologies.



● Headquarters
■ Field office

Workforce 1,250 members

Viale di Tor di Quinto, 47 00191 Roma



Enel Real Estate is the new name of Sei, the company which was created in February 1993 to manage the Group's residential and office buildings.

Enel Real Estate has the mission of developing real estate and engineering activities, enhancing the value of Enel's real estate, and of providing services (facility management, security guards, catering, renting of vehicles and handling of materials) to the Group's companies and to third parties. To this end, Enel Real Estate formed a joint venture (Immobiliare Foro Bonaparte) with American Continental Properties and then established two real estate companies (Immobiliare Progetto Ostiense SpA and Immobiliare Porta Volta SpA) with the same partner.

Enel Real Estate has a significant presence also on the global service market, where it created a joint venture (Conphoebus Technology Service) with Mitsubishi Electric Europe and is exploring other business opportunities on the national market.

Enel Real Estate transferred all of its vehicle rental assets to Leasys SpA, a joint venture recently established with FIDIS (Fiat Group), with the goal of acquiring leadership in the field of long-term renting of corporate fleets.

Today, Enel Real Estate is among the leading real estate and service operators in Europe, in terms of property managed, volume of activities and geographic coverage.

In 2001, Enel Real Estate went on with its programs of:

- *renovation of buildings in large urban areas, converting traditional offices into open-space offices; this choice involved not only the replacement of their old furniture with new ergonomic furniture in compliance with the most advanced European standards, but also the replacement of their cooling/heating systems with high energy-efficient ones (especially heat pumps), with consequent significant energy savings;*
- *reduction, renovation and rationalization of the vehicle fleet. The fleet dropped from 35,000 owned vehicles to 24,000 long-term rental vehicles, while the special vehicle fleet dropped from 6,000 to 4,000 vehicles. This rationalization initiative enabled the Enel Group to reduce the operating costs of its fleet from 160 to 88 million euro/year and gave a positive contribution to environmental protection;*
- *in the area of handling of materials, reduction in the number of "platforms" from 80 to 11; the platforms are now managed as a single "logical warehouse". Thanks to the new methodologies, the company streamlined and integrated processes and systems and optimized the handling of materials, with benefits to the environment.*



Via Porlezza, 12 20123 Milano

For additional information, contact:
Sergio Buonanno
Via Porlezza, 12
20123 Milano
Tel. no. +39-0272244502
buonanno.sergio@enel.it

Workforce 8 members

Founded in November 2000, Enel Capital is the advisory company for the corporate venture capital activities of the Enel Group.

The mission of the company is to invest in venture capital of companies developing innovative products and services, which may be of strategic value to the Enel Group.

Enel Capital has a financial and research strategy. Its goal is to stimulate, follow up and manage all aspects of innovation, including the financial resources and international strategic alliances that are required to successfully compete on the global market.

Its investments are focused on utility-related technologies and services, telecommunications and information technology. Indeed, Enel Capital plans to boost the development of new services and products which may bring competitive advantages to the Enel Group.

The companies in its portfolio are active in various lines of business, such as smart homes (domotics), Internet services and solutions, computer security systems, infomobility and telecommunications and authorization technologies.

Enel Capital's activities have poor environmental relevance. However, the company places emphasis on the environment and is exploring various opportunities of investment in power-generating technologies with low environmental impact, in ecological fuels and renewables.



In February 2002, Enel Capital formed a strategic alliance with the Camfin Group for joint development of technologies for the environment and renewables.

Under the agreement, Enel Capital will hold 10% of the capital stock of Cam Tecnologie SpA, controlled by Camfin SpA.

Cam Tecnologie is a world leader in the development and marketing of emulsified fuels: "Gecam-il gasolio bianco™" (white diesel-oil), patented by Cam Tecnologie, represents the fastest and most effective response to pollution caused by diesel engines and residential boilers. The product sharply reduces the emissions of fine particulates without requiring vehicle engine or boiler burner retrofits.

Furthermore, a 50/50 joint venture will be created between Enel GreenPower and Cam Tecnologie. Activities planned in the area of power generation from renewables and related technologies are as follows:

- *between 2003 and 2004, construction of two wind farms of over 42 MW in Molise and Basilicata;*
- *construction of a factory of photovoltaic modules (for generating 5 MWe per year) based on the technology of amorphous silicon, capable of cutting the kWh cost by 50% vs. the cost of conventional crystalline silicon;*
- *installation of small wind systems in sites where connection to the grid is hardly practicable;*
- *construction of mini-hydro plants.*

Workforce 860 members

CESI

Via Rubattino, 54 20134 Milano

For additional information, contact:
 Alberto Pigini
 Via Rubattino, 54
 20134 Milano
 Tel. no. +39-022125.8432
 pigini@cesi.it



CESI was created in 1956 as a center specializing in system tests and studies in view of the unification of the national power system. Since then, CESI has widened its skills and know-how to all the stages of the electricity cycle (generation, transmission and distribution), to industrial plants and to environmental protection.

CESI accumulated a wealth of experiences and innovations, which place it among the most qualified providers of innovative solutions for improving competitiveness and presence on the market:

- power system studies;
- diagnostics of electrical and thermal-mechanical components;
- improvement of quality of the electricity service;
- automation of power installations and of electrical and generation processes;
- testing and certification of electrical and electronic components;
- certification of quality and environmental management systems;
- analysis of materials;
- studies, consulting services, environmental sustainability assessments;
- supply of testing and special instrumentation laboratories;
- meteorology.

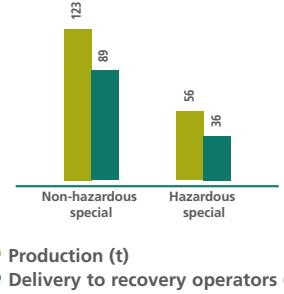
Electricity consumption

Total (million kWh) 15.0

Water consumption for industrial uses

Total (m³) 176,000

Waste



● Production (t)
 ● Delivery to recovery operators (t)



Via Giosuè Carducci, 1/3 20123 Milano

For additional information, contact:
Angelo Benanti
Largo L. Loria, 3
00147 Roma
Tel. no. +39-068509.8071
benanti.angelo@nel.it

Workforce 1,009 members

Enelpower was established on April 27, 1999. It has become fully operational since January 1, 2000, when it inherited the assets and personnel of Enel's Engineering and Construction Unit (design, construction and commissioning of power plants, power lines and transforming stations).

Since its creation, the company has not only carried out activities for the other companies of the Group, but also strengthened its position on the national market, as an Engineering, Procurement and Construction (EPC) Contractor and as a Power System Developer, and on the international market, by acquiring holdings in new companies for construction of power installations and developing Build, Operate and Own (BOO) and Build, Operate and Transfer (BOT) initiatives.

Focusing on market areas with the best investment opportunities (Mediterranean countries, Africa, Latin America, etc.), Enelpower succeeded in winning contracts for:

- construction of 5 thermal power plants (130 MW, Saudi Arabia; 430 MW, Oman; 800 MW, Qatar; 850 MW, Dubai Emirate; 600 MW, Libya);
- construction of high-voltage lines (500 kV) in Brazil (about 1,000 km between Serra de Mesa and Gobernador Mangabeira and about 1,300 km between the north and south of the country).



● Headquarters
■ Local office

Enelpower's environmental, health & safety policy translates into:

- *raising the awareness of environmental, health & safety issues among its designers, so that environmental considerations may become critical elements of their design choices;*
- *continuously updating its technical knowledge, so as to provide internal/external clients with innovative processes and technologies for mitigating environmental impacts;*
- *undertaking studies and analyses in order to optimize the integration of power installations into the environment and the landscape.*

The specific environmental activities that Enelpower carries out for its internal client arise from contracts under which the Group's generation, transmission and distribution companies entrust Enelpower with design & construction of power installations or their retrofitting for environmental compliance purposes.

In 2001, to serve its internal and external clients, Enelpower conducted environmental impact studies (one thermal power plant and three 380 kV electrical stations), retrofitted four thermal generating units for environmental compliance, initiated the conversion of six plants to combined cycles. Furthermore, on behalf of Elettraambiente, Enelpower is completing the construction of a plant for energy recovery from biomass at Cutro (Crotone).

Workforce 358 members



Via Pastrengo, 9 24068 Seriate (Bergamo)

For additional information, contact:
 Antonio Messina
 Via Pastrengo, 9
 24068 Seriate (Bergamo)
 Tel. no. +39-035377.211
 messina.antonio@enel.it



Enel.Hydro, set up on February 18, 2000, inherited Enel's assets and know-how in hydro power generation and water management and ISMES skills in water structure design & engineering support services.

In the Group's diversification strategy, Enel.Hydro has the mission of developing business in design, construction and operation of systems for storage, conveyance and distribution of water for drinking as well as industrial uses.

Enel.Hydro's integrated water management services are supported by its consolidated expertise in structural engineering and environmental protection. Integration of services enables Enel.Hydro to tackle complex problems with significant strengths in environmental conservation and protection.

Jointly with its controlled company CTIDA, Enel.Hydro is active in the area of waste water recovery, where the innovative and efficient application of available technologies can result into rational use of water resources and lower environmental impact. Enel.Hydro is a leading company in the sector of land conservation and environmental protection. In this sector, its business unit ISMES acquired a fifty-year-old experience, with successful projects implemented for private and public clients, including the UN, the World Bank, the European Union and, in Italy, the other companies of the Enel Group, utilities, industrial firms and the Electricity & Gas Regulator.

94

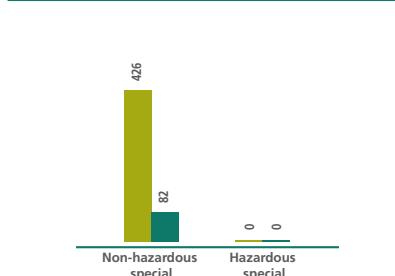
Electricity consumption*

Total (million kWh) 5.2

Water consumption for industrial uses*

Total (m³) 10,500

Waste*



* Electricity & water consumption and waste production refer to the activities of Enel.Hydro's laboratories.

Enel.Hydro takes a multidisciplinary approach to quality and safety of the environment, using leading-edge technologies and providing the following services:

- *water resource conservation and management;*
- *soil protection and land conservation;*
- *safe custody and remediation of polluted sites;*
- *safety of existing structures.*

Among its 2001 highlights:

- *development of innovative digital models for assessing the impact of heat releases into the aquatic ecosystem;*
- *development of theoretical and experimental methodologies to support the study of hydro reservoir silting processes;*
- *physico-chemical, hydraulic and geotechnical characterization of polluted soils.*



Viale Regina Margherita, 137 00198 Roma

For additional information, contact:
Andrea Scolaro
Viale Regina Margherita, 137
00198 Roma
Tel. no. +39-068509.9250
scolaro.andrea@enel.it

Workforce 8 members

Enel.Factor, established on May 31, 2000, is the factoring company of the Enel Group. Its mission is to facilitate credit management, as well as debt mobilization and collection.

Enel.Factor has continuing relations with companies that it assists in administrative, organizational and financial functions concerning credit management.

It provides an extensive spectrum of combined or separate services:

- financial planning;
- factoring "pro soluto" (without recourse) with certification;
- factoring "pro solvendo" (with recourse).

The activities of Enel.Factor have no environmental relevance. However, Enel.Factor is aware of the importance that the Enel Group attaches to environmental care. Consequently, it does not exclude the future possibility of establishing priority relations with enterprises that provide specific services for enhancing environmental performance in all fields of activity.



VERIFIER'S STATEMENT



The IT Group Infrastructure & Environmental Italia Srl

Piazza Duca d'Aosta 12
20124 Milano
Tel. 02/673.390.1 (centralino)
Fax 02/673.390.99



Cod. Fisc. 01893960136 Part. IVA 10195280150
Cap. Sociale € 49.400 int. vers. - C.C.I.A.A. 1351553 - Registro Imprese 310526 Milano

Rome, July 22, 2002

Verification of Enel SpA's 2001 Environmental Report

Enel SpA asked The IT Group Infrastructure & Environmental Italia Srl to verify its Environmental Report for 2001. The following statement provides the reader with the results of such verification.

Our approach to the verification activity was largely based on the guidelines issued by the "Forum on certification of environmental reports", which was held at Fondazione Eni Enrico Mattei.

We reviewed the Report, as well as the activities and procedures for collection and aggregation of the reported data, in order to determine whether:

- the Report was complete and included all the aspects and significant impacts of Enel Group's activities;
- the Report was understandable and clear;
- the system used for data collection and aggregation was adequate and reliable;
- appropriate evidence was available that the individual companies of the Group had gathered and reported the data in homogeneous and correct ways.

Our verification covered all the parts and contents of the Report, as well as the modes of collection and aggregation of the data, from data supply by single companies of the Group - and their peripheral sites - to final data representation in the Report.

We sample-checked the reported data by conducting audits at:

1 - Enel Produzione

- Business unit, thermal power plants, LA CASELLA (thermal plant of La Casella);
- Business unit, thermal power plants, MONTALTO DI CASTRO (thermal plant of Montalto di Castro);
- Business unit, thermal power plants, PIETRAFITTA (thermal plants of Pietrafitta and Bastardo);
- Business unit, thermal power plants, PIOMBINO (thermal plants of Piombino and Livorno);
- Business unit, thermal power plants, ROSSANO (thermal plant of Rossano);
- Business unit, thermal power plants, SULCIS (thermal plants of Sulcis and Portoscuso);
- Business unit, thermal power plants, TORREVALDALIGA NORD (thermal plant of Torrevaldaliga Nord);
- Business unit, hydro power plants, BRESCIA;
- Business unit, hydro power plants, DOMODOSSOLA;
- Business unit, hydro power plants, SONDRIO.

2 - Enel Distribuzione

- Lombardia regional head office

3 - Enel Green Power

- Environment, Quality and Safety unit, Pisa
- Regional unit, Larderello
- Regional unit, Feltre

4 - Interpower

- Napoli power plant
- Torrevaldaliga power plant

5 - Terna

- Field unit, Naples.

At the central level, i.e. at the Holding Company which is responsible for the preparation of the Report, we carried out general verifications on data management, by sample-checking the data coming from the various companies and assessing the reliability of the data collection system. We also sample-checked the reliability and consistency of the data.

Uffici operativi:

Roma - Via Iris Versari, 270 - 00144 (RM) Tel. 06/507.979.85 Fax 06/508.282.80
Catania - Via Teseo, 2 Palazzina B - 95126 (CT) Tel. 095/495.080 - 495.051 Fax 095/403.195.1

At the peripheral sites of the various companies, we conducted our audits in accordance with ASTM (E 1527 – 97) standards, involving document analyses, interviews with personnel in charge of the various activities of interest and visual evidence gathered during the visit.

The data are gathered in a uniform way throughout the Group, according to a standard format where the data to be reported are grouped by line of business.

This data collection system enabled Enel to review and compare the data of the individual companies, assessing their consistency and consolidating their Health, Safety and Environment aspects.

The system of data collection and management proved to be reliable and accurate in consolidating the data of the different companies, enabling us to check their consistency and facilitating our work.

This system, which represents the actual Information System of the Group for accounting Health, Safety and Environment data, automatizes the data flow, making the related outputs reliable and verifiable.

However, for the future, we recommend:

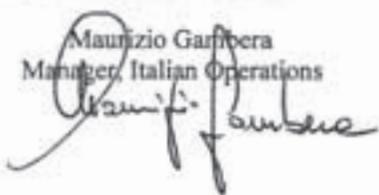
1. to place more emphasis on the results obtained in the area of education & training;
2. to expand waste water quality aspects in the Report;
3. to speed up the introduction and certification of environmental management systems – already at a fairly advanced stage - into all the operating sites of the Group; indeed, these systems are largely demonstrated to facilitate the day-to-day management of environmental issues, making the implementation of the Group's policies more effective and easing the collection of the data that are required for the preparation of the Environmental Report;
4. to extend the environmental data and performance management information system to all the levels of the Group; moreover, the collection of data by the individual companies or departments should be continuous and systematic and rely on the use of a comprehensive information system affording :
 - a. communication between the Enel Holding Company's system and the individual companies' systems;
 - b. continuous monitoring of HSE performance.

This is important not only to accelerate the preparation of the Report, but above all to place environmental issues on the same level as the other issues that are constantly monitored by the management of the companies.

The format of the Report is clear and reader-friendly and we can state that it is gradually becoming aligned with the most advanced and innovative international standards in this area.

The Report is complete, clear and understandable. The performance indicators and the data are correctly reported.

In our opinion, Enel SpA's 2001 Environmental Report is complete, understandable and reliable.


Maurizio Garibera
Manager, Italian Operations


Gianfranco Zanoni
Manager, Environmental Management

Graphic design
Imaginali - Roma
Photographs
Sie, Enel's files
Publishing service
GI Grafica Internazionale - Roma
coordination:
Francesco Valerio Bocci
Translation
Stefania Saraceni
Proof-reading
postScriptum di Paola Urbani
Printed by
Primaprint - Viterbo

Printed in December 2002
on ecological
Fedrigoni Freelite Cento paper



Publication not for sale

Enel
Società per azioni
Registered office in Rome
137, Viale Regina Margherita
Share Capital
Euro 6,063,075,189
fully paid-in
Tax I.D. and Companies' Register
of Rome no. 00811720580
R.E.A. of Rome no. 756032
VAT Code no. 00934061003

