



Environmental
2008 report
synthesis



RED ELÉCTRICA DE ESPAÑA

Important

This document summarises our environmental activities during 2008. The complete version of the report is only published in PDF format and is available on our corporate website: www.ree.es

With this new format we seek a double objective: on one hand, to improve communication with our stakeholders, showing simply and in a summarised form the most relevant environmental activities carried out by Red Eléctrica in the 2008 fiscal year. Also, on the other hand, we are applying our policy to reduce environmental impacts by not publishing the complete report in paper format.



In the attached USB, you will find the complete information regarding the Environmental Report 2008. Amongst this information, the following are noteworthy:

- > the principles adopted in our environmental policy,
- > the key environmental indicators,
- > the anticipated environmental objectives,
- > the most relevant environmental activities of the year,
- > the research and development projects oriented towards the conservation of the biodiversity, and
- > the environmental awareness and communication initiatives carried out.



This USB is reusable and complies with the RoHS 2002/95/EC Directive regarding the restriction of use of certain hazardous substances in electrical and electronic equipment.

The edition in electronic format has meant a saving of approximately 2 tonnes of paper, with an estimated environmental impact reduction of:



28 trees



3.6 tonnes of CO₂ equivalent



95,000 litres of water



“

We apply strict environmental criteria for the sustainable development of our activities, in accordance with the principles set out in our environmental policy.

”

- 1 • We preserve the natural surroundings where our facilities are constructed** [page 4](#)
- 2 • We actively work towards the conservation of the biodiversity** [page 6](#)
- 3 • We prevent contamination and we continuously carry out environmental monitoring** [page 9](#)
- 4 • Encouraging dialogue and environmental awareness** [page 15](#)



Presentation

The factors which nowadays determine the management of companies are more related than ever to values such as ethical behaviour, excellence, transparency and best practices in economic, environmental and social spheres. All these elements acquire a special relevance in the current context, where one of the major challenges of our time, not only for companies but also for society, is the challenge which sustainable development and the fight against climate change represents.

In Red Eléctrica we are conscious of this fact and therefore we work every day with the attitude of orientating our efforts and resources to that end, undertaking commitments which allow us to contribute to a more secure, more efficient and environmentally more sustainable electricity supply.

In this way, our main contribution in meeting this challenge is the firm backing we maintain for the promotion of renewable energies. This is done by investment in networks within the grid which facilitate the evacuation and development of these clean energies and, especially, through the important daily role which our Special Regime Control Centre (CECRE) carries out, by making it possible to integrate, under secure conditions, the maximum production of renewable energy into the system. Thanks to this control centre, it has been possible to increase the role that this type of energy plays in covering the electricity demand and, therefore, reduce the CO₂ emissions derived from the generation of electricity.

This firm commitment which we undertake regarding sustainability shows in other activities oriented towards preserving the natural and social environment where our facilities are located.

One of our objectives is to construct a robust and reliable meshed transmission grid, whose development is carried out in a sustainable way with the maximum respect for the environment. To achieve this, all of our new facility projects are submitted to an environmental evaluation process with the purpose of determining the best locations and routes which represent the least environmental and social impact.

In addition, we actively work to avoid or to reduce the effects that our activities and facilities have on flora and fauna, and we collaborate with specialised organisations in the development of diverse studies and research projects oriented towards conservation of the biodiversity.

Our environmental concern also extends to the prevention of contamination. To this end, we have signed an agreement with the Ministry of the Environment destined to reduce the emissions of sulphur hexafluoride (SF₆) which is used in our facilities and we also attempt to reduce fuel consumption as much as possible in company vehicles.

Additionally, we are working in the implementation of energy saving and efficiency measures with the introduction of initiatives directed to reduce the use of natural resources, especially the reduction in the electricity and paper consumption by employees. These initiatives are complemented with training and environmental awareness campaigns targeted towards employees and collaborators, with the purpose of promoting best environmental practises in the performance of their daily tasks.

All these efforts and activities we dedicate to the protection of the natural environment, not only reiterate but also confirm our commitment to considering environmental activity as a basic activity of our business management, since we understand that respect for the environment must be taken on board as a high-priority objective and assumed as a key corporate value in a responsible, committed and sustainable company as is the case of Red Eléctrica de España.

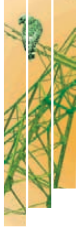
Luis Atienza Serna
Chairman

“

We facilitate the development of clean energies, integrating them into the electricity system under secure conditions.

”





1 We preserve the natural surroundings where our facilities are constructed

“

In order to make the necessary development of the electricity transmission grid compatible with the protection of the natural surroundings, we identify and evaluate, in all stages of our activity, those aspects which may produce some type of environmental impact, defining and applying the appropriate activities to avoid and to reduces the possible effects.

”

THE GRID PLANNING STAGE

Red Eléctrica collaborates actively with the Ministry of Industry, Tourism and Commerce in the strategic environmental evaluation process of the electricity planning. Specifically, during 2008, they have worked collectively in the definition and calculation of indicators that allow the evaluation of the environmental effects derived from the 2008-2016 Infrastructure Plan.

THE PROJECT STAGE

An environmental evaluation is carried out for all new facility projects.

Thanks to this, the best locations and routes for future facilities are established and the corrective and preventive measures to apply in the construction and maintenance stages are defined in advance.

THE CONSTRUCTION AND MAINTENANCE STAGES

In the construction works of new facilities an environmental supervision is carried out to ensure the compliance with environmental requirements and to verify the effectiveness of the corrective and preventive measures implemented.

As part of the maintenance activities of facilities, work criteria are established in accordance with the environmental requirements and supervised by means of inspections and audits that ensure the activities are carried out in compliance with these criteria.



In 2008, environmental authorisation was obtained for 10 projects and another 207 are at different stages of the environmental processing.

100% of the projects are submitted to an environmental evaluation process.





2 We actively work towards the conservation of the biodiversity

“

We carry out the necessary actions to avoid or to minimise the effects of our activities on the flora and fauna. To achieve this, we establish precise working guidelines and we apply corrective and preventive measures oriented towards preserving the biodiversity.

”



Main biodiversity conservation projects

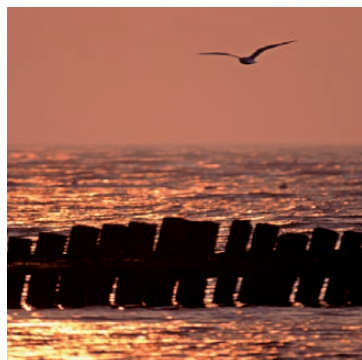
Steppe birds: testing of measures to minimise the impact of the lines on these birds and to improve their habitat.

Programme to reintroduce the black vulture in Catalonia.

Bonelli's Eagle: study of the interaction between this bird and the laying of cable used for electricity transmission.

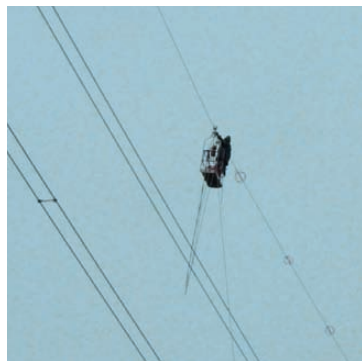
Lesser kestrel: captive breeding of this species and the introduction of specimens in various areas of the Community of Madrid in order to improve the populations.

Posidonia oceánica: studies for the temporary removal of small portions of meadows of oceanic posidonia to be subsequently replanted in its original site.



PROTECTION OF BIRDLIFE

- Interruption of construction works of new facilities during nesting or egg laying periods of sensitive species.
- Marking electricity lines by means of bird-saving devices which increase their visibility.
- Monitoring the nest building of wading and predatory birds in electrical towers.



Installation of bird-saving devices.

Facilities marked with bird-saving devices

	2006	2007	2008
km of line marked	686	783	890
km of line marked / total km	2.9	3.0	3.3



“

We apply diverse measures to protect and to preserve ecosystems and indigenous species.

”

PROTECTION OF FLORA


- Hanging of cables by helicopter and using a boom crane in protected areas.
- Over-elevation of towers to protect wooded areas.
- Restoring indigenous species to those areas affected by construction activities.
- Interruption of works during times of heightened fire risk.
- Landscaping adjustments to reduce the visual impact of the facilities.

In addition, REE actively works in collaboration with specialised organisations in the development of diverse studies and research projects oriented to the conservation of the biodiversity (Biological Station of Doñana (CSIC), Spanish Ornithology Society (SEO), Doñana 21 Foundation...).



Hanging cable by helicopter.





3 We prevent contamination and we continuously carry out environmental monitoring

“

Our environmental concern also extends to a continuous pursuit and control of other environmental aspects derived from our corporate activity, with the purpose of avoiding potential risks and of minimising its consequences.

”



“

**31,112 GWh
of wind power energy
integrated into the
system in 2008.**

**Agreement with
the Ministry of
Environment to
reduce emissions
SF₆.**

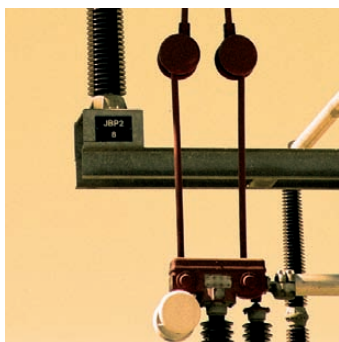
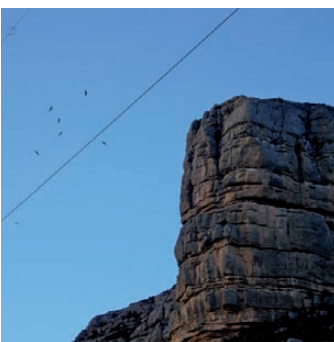
”

THE FIGHT AGAINST CLIMATE CHANGE

Due to the nature of the electricity activities that we carry out, the fight against climate change represents an important challenge for Red Eléctrica. To this end, we have adopted the following commitments:

- Construct a network of electricity infrastructures compatible with the environment and which allows the development of renewable energies, in agreement with the objectives set out in the “Transmission Grid Planning (2007-2016)” as approved by the Spanish government.
- Contribute to a sustainable energy model, integrating into the system the maximum amount of renewable energy and driving initiatives for demand side management, with the aim of promoting efficient energy consumption.
- Maximise the reduction of emissions derived from our activities (use of SF₆ – sulphur hexafluoride and consumption of fuel in company vehicles).
- Implement energy saving and efficiency measures.





MINIMISING THE USE OF NATURAL RESOURCES

In order to reduce the consumption of natural resources and to increase energy efficiency, REE carries out a series of activities amongst which the following are noteworthy:

- > Identification and measurement of direct and indirect consumption.
- > Progressive reduction in the use of paper by means of transferring data to an electronic format.
- > Holding meetings via videoconference.
- > Sustainable mobility promotion amongst employees.
- > Awareness campaigns for employees regarding the efficient use of natural resources.
- > Development of a project for the integration of solar photovoltaic energy in the Company's Head Office.
- > The installation of water cisterns in new substations.
- > Participating in forums and working groups on energy efficiency.

“
21.8 % reduction in the consumption of paper per employee.

Estimated fuel saving of 50,000 litres (owing to videoconferences and use of the company bus).

”



“

We work to ensure that the waste produced in our facilities is separated and managed in an optimum way.

”

WASTE MANAGEMENT

During construction and maintenance activities on facilities different types of waste are generated which we manage in accordance with the legal requirements and contamination prevention criteria.

The main routes to achieve an optimal management of waste are focused on:

- ▶ trying to achieve maximum waste separation,
- ▶ looking for the best management options with our suppliers, and
- ▶ promoting best practises through training and environmental awareness programmes.



ACCIDENT PROTECTION

The most significant environmental accidents which may take place during the development of REE's activities are fires caused by failures in the lines and oil spills. Thanks to the application of corrective and preventive measures, these accidents are scarce and are generally of minor importance.

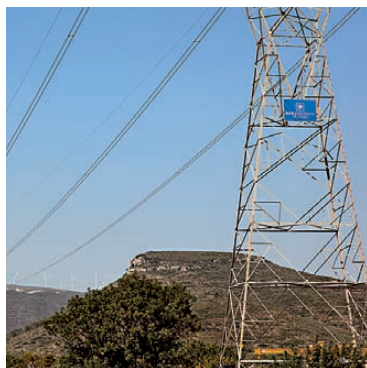
Amongst the diverse measures which were carried out, noteworthy in 2008 were special forest fire prevention days held in 13 cities and designed for forestry agents, Environmental Protection Service agents (SEPRONA), technicians from the Environmental Departments and firemen.

Fire prevention measures

- > Selective felling and pruning of trees and vegetation to clear paths and to maintain safety distances.
- > Collaboration agreements with different autonomous communities for the identification of high risk areas and the establishment of action protocols in the event of forest fires near the electricity lines.

Spillage and leakage prevention measures

- > Preventive maintenance and the adoption of best practises in the handling of equipment containing oil.
- > The existence of a system of spillage containment for equipment containing hazardous substances, as well as availability of absorbent materials, to be used in case of accidents.



“

Within the scope of land conservation, we have reached agreements with various autonomous communities for the prevention of and fight against forest fires.

”





CONTROL OF ELECTRIC AND MAGNETIC FIELDS

We control the values which are generated in our facilities, whose levels are inferior to those established by the European Union. In addition, we actively support research on this matter and remain fully alert to all the new scientific innovations which appear in this field.

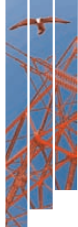
ACTIONS REGARDING NOISE CONTAMINATION

During 2008, work has been carried out regarding the standardisation of the design of substations, in which the requirements have been defined for the installation of acoustic screens next to the transformer banks, should they be necessary.

“

We have in place an **environmental management system**, certified according to the **UNE-EN ISO 14001 standards**, for the development of our activities in a sustainable way.

”

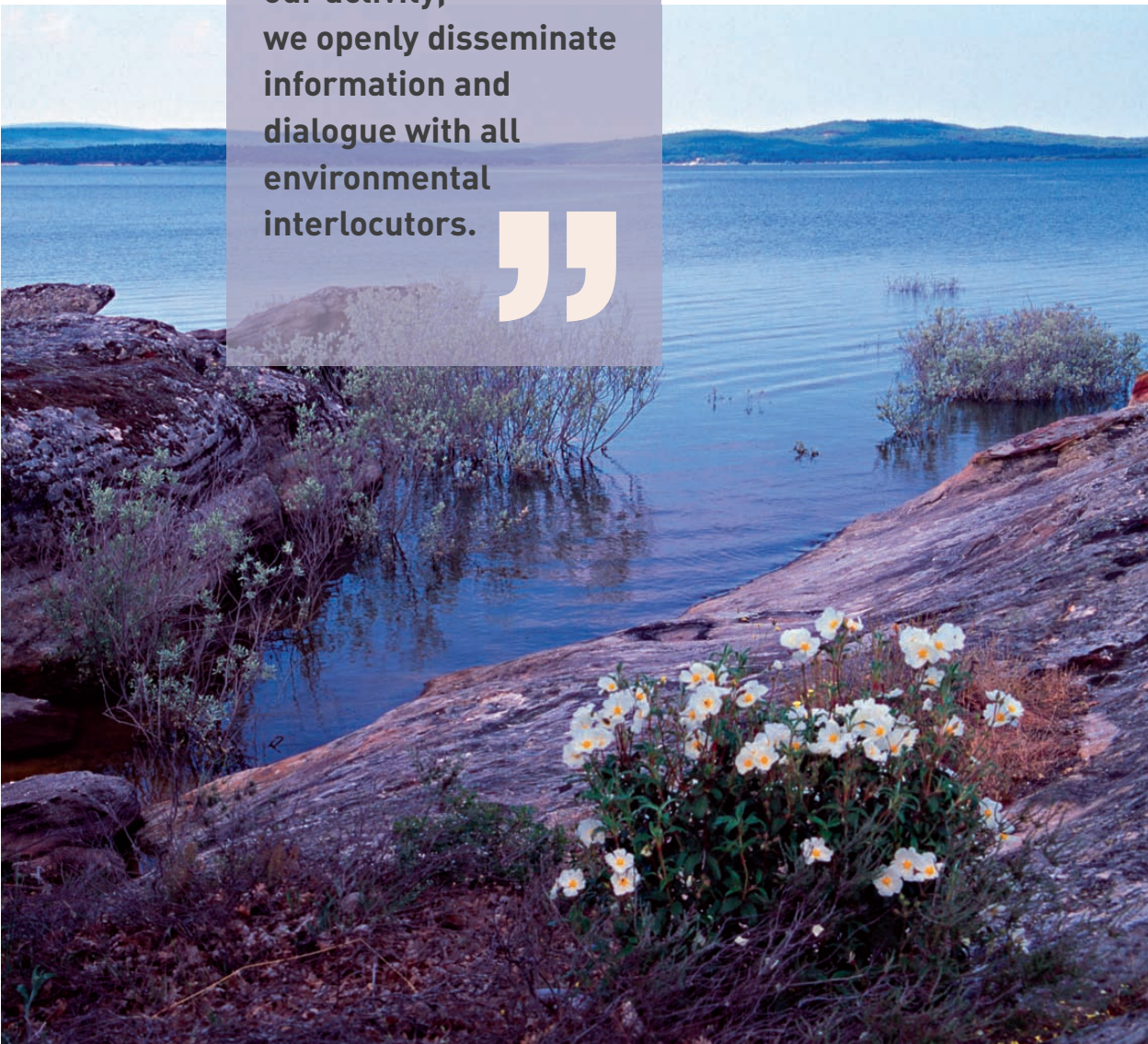


4 Encouraging dialogue and environmental awareness

“

Conscious of the social interest in our activity, we openly disseminate information and dialogue with all environmental interlocutors.

”



“
2,277 hours
of environmental
training to
employees.
 ”

INTERNAL COMMUNICATION

- ▶ Continuous environmental awareness and training given to employees.
- ▶ Existence of a “Green Suggestion Box” to channel proposals regarding sustainable practises.

EXTERNAL COMMUNICATION

- ▶ Participation in working groups, congresses and debate forums and collaboration with prestigious entities which work in environmental protection and awareness.
- ▶ Environmental qualification of suppliers.
- ▶ Specific environmental section on the Corporate website (www.ree.es).
- ▶ Public enquiries and complaints via the new “DIGAME” service or via electronic mail, mambiente@ree.es.

Key environmental indicators	2006	2007	2008
Km of lines in SAC / total km of lines (%)	12.4	14.3	13.5
Km of lines in SPAs / total km of lines (%)	9.3	11.6	10.8
Km of lines marked with bird-saving devices	668	783	890
Direct or indirect emissions (tn of CO ₂ equivalent)	63,565	84,127	91,245
Consumption of paper per employee (kg)	63.0	48.0	37.5
Kg of waste generated (non-hazardous)	1,169,371	2,195,197	3,286,559
Kg of waste generated (hazardous)	248,643	765,846	605,167
Fuel and oil spillages (No. of accidents)	20	16	5
Environmental investment / Total investment (%)	1.22	0.35	0.82
Environmental costs / Total operating costs (%)	2.03	2.11	2.77



Published by:

RED ELÉCTRICA DE ESPAÑA
Paseo del Conde de los Gaitanes, 177
28109 Alcobendas (Madrid)
Tel. +34 91 650 85 00
Fax. +34 91 640 45 42

Coordination:

Communication and Corporate Image Department of
RED ELÉCTRICA

Technical Management:

Environmental Department of RED ELÉCTRICA
mambiente@ree.es

Graphic design and layout:

www.zen.es

Photographs:

Image archive of RED ELÉCTRICA

Professional photographers:

Fernando Moreno: page 3
Manuel Juan: pages 5, 10, 11 (left), 13, 14 and 15

Other publishing data:

Date Published: June 2009
Printing: TF Artes Gráficas

Legal Deposit:

M-27736-2009

Recycled ECF paper, chlorine free.



The USB memory which accompanies this document is certified in accordance with the European Directive RoHS 2002/95/EC regarding the restriction of use of certain hazardous substances in electrical and electronic equipment.



RED ELÉCTRICA
DE ESPAÑA

P.º del Conde de los Gaitanes, 177
28109 Alcobendas (Madrid)
www.ree.es