

A photograph of two children sitting on wooden chairs in a forest, painting on a large wooden easel. The child on the left is wearing a floral hat and a colorful striped sweater, and is using a brush to paint on the left panel of the easel. The child on the right is wearing a blue denim hat and is looking at the right panel of the easel. The easel has two white panels. The right panel has the text "On the road to sustainable energy" written on it in colorful markers. The background is a dense forest with many trees and green foliage. The ground is covered with dry leaves and twigs.

Environmental Report 2011

Summary Document



RED ELÉCTRICA DE ESPAÑA

Respect for the natural environment, the conservation of biodiversity and the implementation of good environmental practices when carrying out our work are key elements of our business management.

Certification
ISO 14001
for all
our activities
and
facilities



Global challenges

- ◆ Make facilities compatible with their surroundings.
- ◆ Assure the protection and conservation of biodiversity.
- ◆ Contribute to the fight against climate change.
- ◆ Foster energy saving and efficiency.
- ◆ Establish measures for the prevention of contamination.

For this reason, all our activities are carried out in conformance with **strict environmental criteria**, in agreement with the principles established in our environmental policy.

Main actions of Red Eléctrica

- ◆ Selecting routes and locations for facilities of least impact.
- ◆ Establishing preventive and corrective measures.
- ◆ Development of a biodiversity strategy: protection of flora and fauna, fire prevention and conservation projects.
- ◆ Definition of the Climate Change Strategy and the action plan for the reduction of emissions.
- ◆ Establishment of efficiency and reduction measures for basic consumptions.
- ◆ Establishment of preventive measures against spillages of dangerous substances and the suitable management of waste.



Complete Version:

This document is a summary of the complete version of the Environmental Report which is available in PDF format at:

www.ree.es

Caring for the natural environment where our facilities are located

In Red Eléctrica we make a significant effort to avoid or minimise the possible impacts that some of the aspects derived from our activities may have on the environment.

Within the framework of our environmental management system, we evaluate all aspects arising from our activities and establish an annual environmental programme to define specific actions for improvement.

To minimise the possible effects of our facilities, we apply strict environmental criteria in all development phases of the transmission grid.

Environmental supervision of
100 %
of construction works of new facilities

Grid planning phase

- ◆ Environmental revision of future projects before being included in the infrastructures planning.
- ◆ Collaboration with the Ministry of Industry on the strategic environmental evaluation process of the Electricity Infrastructure Plan, in which interested parties are involved.
- ◆ Collaboration with the Autonomous Communities in the development of the regional electricity infrastructure plans.

Project phase

- ◆ Environmental evaluation of all projects for new facilities.
- ◆ Definition of locations or routes of least environmental impact.
- ◆ Consideration of the opinions and comments from interested parties.
- ◆ Definition of the preventive and corrective measures.

Construction phase

- ◆ Supervision of the fulfilment of environmental requirements.
- ◆ Implementation of environmental supervision programmes to verify the effectiveness of the preventive and corrective measures.

Maintenance phase

- ◆ Definition and application of environmental requirements in maintenance tasks.
- ◆ Periodic inspections carried out on facilities.
- ◆ Application of environmental improvement actions.



Red Eléctrica's facilities and Biodiversity

The conservation of biodiversity is integrated into the Company's strategic plan through the biodiversity strategy and action guide which establish the criteria for prevention and action in this matter.

One of our priorities when defining the location of new facilities is to avoid areas rich in biodiversity. When it is not possible to avoid sensitive areas, we implement the necessary preventive and corrective measures to minimise the impact during the construction and maintenance phases.

Protection of fauna

- ◆ Interruption of works during periods of nest building and the raising of young birds and other species.
- ◆ Behavioural studies regarding species that may collide with lines: mapping bird flight paths and migratory routes.
- ◆ Marking of electricity lines through the use of bird-saving devices to alert birds to the presence of the lines in order to reduce the risk of collisions. Also, the design of a bird-collision detector was worked on.
- ◆ Light pollution studies.

Habitat protection

- ◆ Elaboration of prior studies to determine the presence of sensitive species.
- ◆ Signage and marking off of habitats so as to ensure they are not affected.
- ◆ Establishing specific accompanying measures in the case where protected areas may be affected.

Protection of flora and the prevention of forest fires

- ◆ Hanging cables by hand or by helicopter and construction of electricity towers using a boom crane.
- ◆ Use of special construction techniques in specific cases.
- ◆ Relocation of species of environmental value to other areas not affected by works.
- ◆ Restoration of areas affected by construction activities with the planting of indigenous species.
- ◆ Appropriate definition and maintenance of safety corridors for lines and the use of non-chemical methods in the treatment process of vegetation.
- ◆ Collaboration with the areas of the Administration responsible for the development of fire prevention measures.
- ◆ Development of research projects for the prevention of fires, such as the Vulcano Project. Completed in 2011.



Other projects that contribute to biodiversity conservation

For Red Eléctrica it is essential to collaborate with the different government administrations and with prestigious organisations on environmental matters. Therefore, the Company:

- ◆ Participates in projects of common interest aimed at the conservation and improvement of biodiversity.
- ◆ Develops environmental projects with local communities through the Company's Sustainability Laboratory.
- ◆ Conducts training and awareness activities both within the Company and outside of the Company.

Biodiversity related projects

In 2011, multiple projects were carried out, some examples are:

- ◆ Reintroduction of Bonelli's Eagle (threatened species) on the Island of Majorca.
- ◆ Participation in the "LIFE+ Project": conservation and management of special protection areas for Steppe birds in Andalusia.
- ◆ "The Red Eléctrica Forest": restoration of 144 acres through reforestation of the highland areas of the Los Alcornocales Natural Park in Cadiz.

**11 NEW
COLLABORATION
AGREEMENTS**
in 2011
regarding
biodiversity
matters

Marking of facilities with bird-saving devices



■ km of lines marked
— % over the total lines



Bird-saving devices



Working towards achieving a sustainable energy future that contributes to the fight against climate change

Aware of the importance of our contribution, as transmission agent and operator of the Spanish electricity system, to the development of a more sustainable energy model, in 2011 we adopted the **Climate Change Strategy** and the project for the management of new climate risks associated to electricity transmission infrastructures was commenced.

According to this strategy, our main lines of work are aimed at achieving the sustainability objectives regarding energy matters as established in the European 20/20/20 commitment. In this way, the key actions are focused on:

- ◆ Contributing to the increased participation of power generation from renewable origin in the demand coverage. In order to do this, we develop the necessary transmission infrastructures that facilitate the evacuation of these clean energies and we implement new technical operation solutions, through our Control Centre of Renewable Energies (CECRE), with the aim of maximising the integration of renewable energy into the electricity system in a secure way.
- ◆ The promotion of demand-side management initiatives aimed at achieving greater flexibility of the electricity demand, increasing energy efficiency and promoting a more intelligent use of energy.
- ◆ The reduction of emissions derived from our activities, with the aim of reducing these by 20 % by 2020. For this, we inventory and reduce emissions of SF₆ gas, apply energy efficiency measures and offset part of our emissions by planting trees through the project "The Red Eléctrica Forest".

More than
1,700 km
of electricity
line circuit
commissioned
in 2011

33%
of the
annual demand
covered with
renewable
energies
in 2011

32%
of direct
emissions
offset
through the
planting
of trees



Other environmental management and control actions

In addition to working to improve energy efficiency, we consider it essential to reduce basic consumption as well as to carry out other important actions regarding environmental management and control.

Key measures implemented in 2011

- ◆ **Water saving:** replacing the lawn of the Head Office with gravel and indigenous plants.
- ◆ **Paper saving:** modification of the documentation filing system and the use of tablets in training activities.

Waste Management

The waste generated during our activities is separated, stored, managed and when possible, reutilised in accordance with legal requirements and the criteria of contamination prevention.

Protection against leaks and spillages

Thanks to the application of preventive measures, best practices when carrying out our activities and the equipment spillage containment systems, accidents are infrequent and there is no impact either on soil or ground water.

Archaeological supervision of construction works for 25 lines and 7 substations



Protection of the socioeconomic environment and the landscape

Conscious of the relevance of the visual impact of our facilities on the landscape, we make a concerted effort to restore the zones affected by construction works of facilities and we carry out landscape integration projects of our substations. Similarly, during the construction phase of our facilities, we carry out archaeological and paleontological supervision in all the projects which require it.

Control of electric and magnetic fields

The preventive measures applied in the design of facilities allow the electric and magnetic field values to be below those recommended by the European Union. Nonetheless, we keep up to date with scientific advances and we develop research projects in this field.

Energy efficiency

Initiatives promoted by the Company regarding energy efficiency matters are encompassed under the brand "Red Eléctrica eficiente".



RED ELÉCTRICA
eficiente

Key actions 2011

- ◆ Reduction of electricity consumption in substations: improvements in transformers, in climate control equipment and in the lighting of buildings.
- ◆ Reduction of electricity consumption in the work centres: planning for the implementation of the energy management system in all buildings (2011-2015) and carrying out of energy audits.
- ◆ Implementation of efficiency measures in IT systems.
- ◆ Mobility measures: acquisition of more efficient fleet vehicles.
- ◆ Awareness campaigns on energy efficiency and responsible consumption both at an internal and external level.

Energy Management System Certificate for the Head Office in 2011 according to the UNE 16001 standard

Measures implemented in the construction of maintenance buildings

(Cártama. Mesón. Casaquemada and Zamora):

- ◆ Control system for lighting.
- ◆ Dual flush cisterns and aerator taps.
- ◆ Charging points for electric vehicles.
- ◆ Insulation in buildings.
- ◆ Solar thermal energy for sanitary hot water.
- ◆ Electricity and water consumption meters in real-time.



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