RED ELÉCTRICA DE ESPAÑA

ENVIRONMENTAL REPORT 2012
(Environmental Statement)

February 2013

Ref.: MAIP/MA/13-035

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1. WHO IS RED ELÉCTRICA

We are responsible for the technical management of the Spanish electricity system. We are the owners of the Spanish high voltage electricity transmission grid and the only company in Spain specialised in the activity of electrical energy transmission [1].

As operator of the Spanish electricity system (peninsular and extra-peninsular), our main function is to guarantee the continuity and security of the electricity supply and the correct co-ordination of the generation and transmission system. This is achieved by working in cooperation with the operators and agents of the Iberian Market for electrical energy, under the principles of transparency, objectivity and independence.

As manager of the transmission grid, we perform our function as sole transmission agent guaranteeing the expansion and development of the facilities, carrying out their maintenance and improvement following homogeneous and coherent criteria; and managing the flow of electricity between exterior systems which is carried out using the Spanish electricity transmission grid. We provide the operator of any other interconnected grid with sufficient information in order to guarantee a secure functioning and we also guarantee access to the grid by third parties under a regime of equality. Our transmission infrastructure comprises of electricity control systems which manage and supervise the operation of the system, a circuit of 41,229 kilometres of high voltage transmission lines and 5,053 substation bays with a transformer capacity of 78,050 MVA.

Evolution of the facilities	2010	2011	2012
Lines (km of circuit)			
Kilometres of circuit	**38,629**	**40,369**	**41,229**
400 kV	18,792	19,671	20,104
220 kV and less	19,837	20,698	21,125
Substations			
Number of bays	**4,621**	**4,865**	**5,053**
400 kV	1,189	1,253	1,319
220 kV and less	3,432	3,612	3,734
Transformer capacity (MVA)	**71,170**	**73,200**	**78,050**

(*) Data for the last three years revised and updated in 2012.

All the activities we carry out are done so in accordance with a strict environmental policy, from a perspective of an ethical commitment towards society, integrating environmental protection into our business management with the objective of continually creating value. In order to do this, we have an Environmental Management System in accordance with the UNE-EN ISO 14.001:2004 standard, certified since May 1999, and which has been registered in the EU Eco-Management and Audit Scheme (EMAS) under registration number ES-SB-000013 since October 2001.

(1) Clasificación Nacional de Actividad Económica – CNAE (Standard Industrial Classification) 35.12: Electricity transmission

We are the first business group in the Spanish energy sector to hold the comprehensive triple certification: quality, environmental and occupational health and safety for all its companies.

We count upon an Environmental department which in December 2012 was comprised of 17 professionals, with widely varying educational backgrounds and who are experts in environmental matters and actively support all the organisational units in the performance of their daily activities. Additionally, the different territorial areas count on 19 technical professionals whose function is to control, on-site, all the environmental aspects which every Red Eléctrica facility undergoes during each phase: planning, construction and maintenance.

Respect for the environment, contributing to habitat conservation, correct waste management and minimising the consumption of natural resources is the responsibility of all our employees and collaborators in the execution of our daily activities.

The determined effort of Red Eléctrica to become a responsible, efficient and sustainable business model has been recognised by the main sustainability rating agencies. During this year, we have obtained recognition from the main sustainability indexes due to the results obtained within the environmental, social, economic and corporate governance scopes. Noteworthy amongst these are the following:

- Since 2005, Red Eléctrica continues to renew its presence in the Dow Jones Sustainability Index (DJSI). In 2012, the rating obtained was 79 out of 100, an improvement of 3 points on the previous year and rated only 8 points behind the highest ranking company in the energy sector. The DJSI Indexes evaluate social, environmental and economic management through more than fifty general and specific criteria for each sector. In the environmental scope the Company scored 77 points, six more than the previous year, with the sector average being 54 and 89 points the highest score in the sector worldwide.

- In the assessment carried out by SAM (The Sustainable Asset Management), Red Eléctrica received recognition in the Sustainability Yearbook within the "Bronze Class 2012" category. A rating it has maintained over the last four years.

(More information on www.ree.es, Corporate Responsibility section)

2. ENVIRONMENTAL POLICY

The Red Eléctrica Group expresses its commitment to protect the natural environment and undertakes to promote and ensure that each employee in the Group performs their daily work with the utmost respect for the environment. This is achieved through ongoing improvement in the fulfilment of their responsibilities and functions.

The principles of our environmental policy are as follows:

- Guide the Group towards **sustainable development**, seeking to maintain the adequate balance between respect for the environment, the promotion of progress, social well-being and economic interests, with the objective of creating value on an ongoing basis.
- Seek **leadership** in environmental matters in all the companies of the Group within their scope of activity.
- Ensure **compliance with environmental legislation, regulations and laws** applicable to the activities they carry out and adopt those **voluntary commitments** regarding environmental matters which are considered to be of interest.
- Guarantee **continual improvement**, the **prevention of contamination** and the **principle of precaution**, according to the objectives and capacities of the Group.
- Promote **research, development** and the use of new technologies and processes with the objective of preventing or minimising environmental impacts.
- Contribute to a **sustainable energy model**, with a greater presence of energies generated by clean and efficient technologies regarding electricity consumption.
- Develop and maintain a **transmission grid which is compatible with its surroundings**.
- Drive the conservation of **biological diversity** through active collaboration on those initiatives which help reduce their loss.
- Adopt a clear commitment in the fight against **climate change**, promoting energy efficiency as a fundamental pillar.
- Develop and provide ongoing actions regarding **training, awareness and motivation** concerning environmental protection.
- Maintain means and channels of **communication** for informing and communicating with all interested parties regarding environmental related activities whilst promoting **collaboration frameworks** with stakeholder groups.
- Consider environmental requirements as one of the criteria in the selection and evaluation of **suppliers**.

* Fourth Edition approved by the Chairman's Office in October 2010.

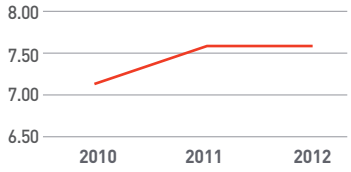
3. INDICATORS

By way of introduction, the following is a numerical representation of the information that is deemed most relevant, and which is detailed throughout this Environmental Report.

Core indicators

Electricity consumption at Head Office

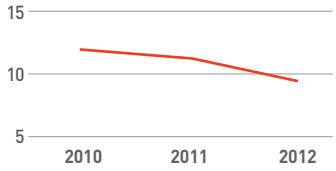
A	MWh consumed		
B	Nº employees at Head Office (*)		
Indicator	A/B		
Year	2010	2011	2012
A	8,456	8,603	8,788
B	1,190	1,133	1,161
Indicator	7.11	7.59	7.57



(*) La Moraleja and Albatros buildings.

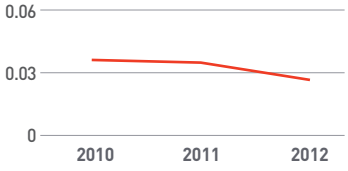
Fuel consumption of vehicles

A	GJ consumed		
B	Total Nº of employees		
Indicator	A/B		
Year	2010	2011	2012
A	23,366	21,612	19,100
B	1,944	1,943	2,002
Indicator	12.02	11.12	9.54



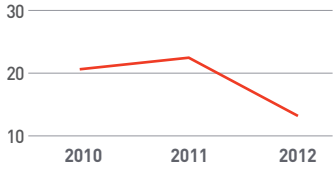
Paper consumption

A	Tonnes (t) consumed		
B	Total Nº of employees		
Indicator	A/B		
Year	2010	2011	2012
A	71,044	67,563	54,318
B	1,944	1,943	2,002
Indicator	0.036	0.035	0.027



Water consumption at Head Office

A	m^3 consumed		
B	Nº of employees at Head Office (*)		
Indicator	A/B		
Year	2010	2011	2012
A	18,083	17,969	10,947
B	888	813	848
Indicator	20.36	22.20	12.91

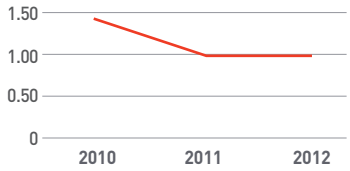


(*) La Moraleja building.

Hazardous waste

A	Tonnes (t) of hazardous waste generated
B	Total Nº of employees
Indicator	A/B

Year	2010	2011	2012
A	2,744.814	2,016.763	2,052.323
B	1,944	1,943	2,002
Indicator	1.41	1.04	1.03



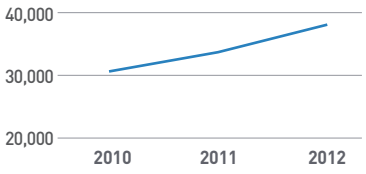
Direct greenhouse gas emissions

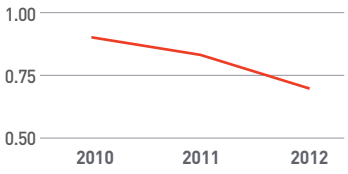
A	Tonnes (t) of CO_2 equivalent
B	Total Nº of employees
Indicator	A/B

	SF_6 (1)			CO_2 (2)		
Year	2010	2011	2012	2010	2011	2012
A	61,500.50	66,741	75,974	1,717	1,583	1,381
B	1,944	1,943	2,002	1,944	1,943	2,002
Indicator	31.6361	34.3495	37.9491	0.8821	0.8147	0.6898

(1) The calculation of this indicator considers direct emissions derived from the activities that are: emissions from SF_6 gas leaks and the emissions derived from the use of fleet vehicles.

(2) The data shown is slightly different to that published in previous years as the emissions associated with the emergency power generators have been excluded, until the collation of all data has been completed.





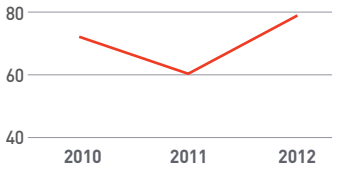
The "B" figures for the "Total Nº of employees" core indicators include own staff as well as collaborators, contracted personnel and interns, of Red Eléctrica as a whole or those specific buildings indicated in each case.

The rest of the core indicators included in the EMAS Regulation are not considered, due to fact they are not applicable to the environmental aspects associated with Red Eléctrica's activity.

Environmental performance indicators regarding activities

Compliance with the Environmental Programme

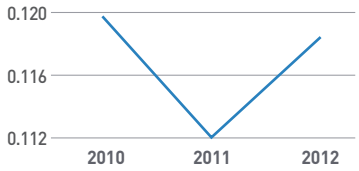
A	Environmental objectives fulfilled		
B	Total number of environmental objectives		
Indicator	A/B x100		
Year	2010	2011	2012
A	71.41	59.40	77.79
B	100	100	100
Indicator	71.41	59.40	77.79

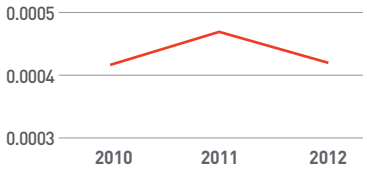


Biodiversity: Area of land occupied

A	Area of land in Red Natura occupied by lines (m^2)	Area of land in Red Natura occupied by substations (m^2)
B	Total area of Red Natura (m^2)	Total area of Red Natura (m^2)
Indicator	A/B x 100	A/B x 100

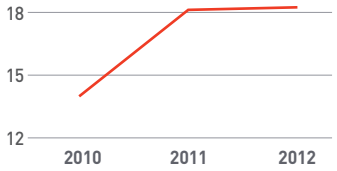
	Lines			Substations		
Year	2010	2011	2012	2010	2011	2012
A	$165.66*10^6$	$170.554*10^6$	$174.779*10^6$	$58*10^4$	$72.1*10^4$	$62.35*10^4$
B	$137,653.18*10^6$	$151,352.27*10^6$	$147,820.73*10^6$	$137,653.18*10^6$	$151,352.27*10^6$	$147,820.73*10^6$
Indicator	0.1203	0.1127	0.1182	$4.217*10^{-4}$	$4.764*10^{-4}$	$4.218*10^{-4}$





Biodiversity: Protection of Birdlife

A	km of lines in SPA's marked with bird flight diverter devices		
B	Total km of lines in SPA's		
Indicator	A/B x 100		
Year	2010	2011	2012
A	412	532	548
B	2949.8	2,929.491	2,971.8
Indicator	13.97	18.16	18.44

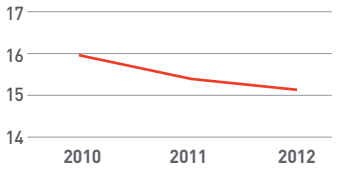


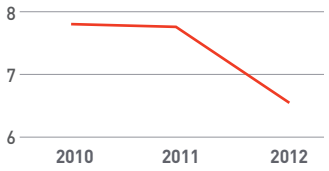
The objective of the indicator is not the marking of 100 % of the lines that cross SPAs (Special Protection Areas) as not all bird species present in these areas are susceptible to colliding with the cables. At this moment the elaboration of an indicator that better reflects the marking is being worked on (for its calculation the areas in which species at risk of collision exist will be taken into account, whether they are in SPAs or not).

Biodiversity: Impact of facilities

	Lines	Substations
A	km of line in Red Natura	Nº of substations in Red Natura
B	Total km of line	Total Nº of substations
Indicator	A/B x 100	A/B x 100

Year	Lines 2010	Lines 2011	Lines 2012	Substations 2010	Substations 2011	Substations 2012
A	4,141.587	4,263.85	4,369.48	37	46	41
B	25,923.538	27,740.55	29,086.65	481	602	624
Indicator	15.97	15.37	15.02	7.7	7.64	6.57





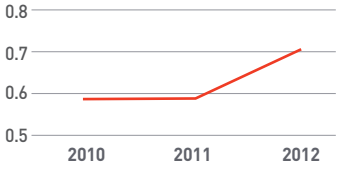
Biodiversity/Relations with interested parties

A Nº of Autonomous Communities (AC) with biodiversity projects

B Total Nº of ACs

Indicator A/B

Year	2010	2011	2012
A	10	10	12
B	17	17	17
Indicator	0.59	0.59	0.71



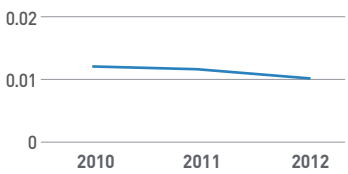
Emissions

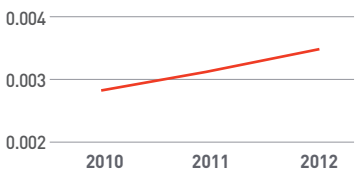
	Emissions SF_6	Emissions derived from losses in the transmission grid
A	SF_6 emissions (t) (*)	Indirect emissions derived from losses in the transmission grid (tonnes of CO_2 equivalent)
B	SF_6 installed (t)	MWh transported
Indicator A/B		

Year	Emissions SF_6 2010	Emissions SF_6 2011	Emissions SF_6 2012	Losses 2010	Losses 2011	Losses 2012
A	2.6970	2.927	3.332	723,540	800,530	875,259
B	211.255	245.415	332.541	263,230,008	255,179,000	251,901,014
Indicator	0.01262	0.01193	0.01002	0.00274	0.00314	0.00347

The most representative emissions related to the activity are the SF_6 emissions (direct) and the emissions derived from the losses in the transmission grid.

(*) In order to evaluate the SF_6 gas emissions in relation to the total SF_6 gas installed, it has been considered more appropriate to use the tonne unit of SF_6 emissions instead of calculating them in tonnes of CO_2 equivalent.





Environmental costs

A	Environmental investment	Environmental expenditure	Environmental R&D+i expenditure
B	Total investment	Total expenditure	Total expenditure on R&D+i
Indicator	A/B x 100	A/B x 100	A/B x 100
	Environmental investment	Environmental expenditure	Environmental R&D+i expenditure

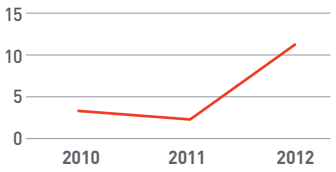
Year	2010	2011	2012	2010	2011	2012	2010	2011	2012
A	6,277,588.17	7,027,748.50	5,154,305.26	18,866,104.90	20,306,267.73	16,380,072.06	618,489	319,172(*)	147,799.26
B	2,286,488,000	818,944,000	671,597,000	725,556,000	829,576,000	907,757,000	5,020,000	7,217,687.96	7,638,254
Indicador	0.27	0.86	0.77	2.60	2.45	1.80	12.30	4.42	1.93

(*) Data corrected with respect to that published in 2011.

Training and awareness

A	Nº of employees who received environmental training		
B	Nº of employees (*)		
Indicator	A/B x 100		

Year	2010	2011	2012
A	48	37	189
B	1,560	1,641	1,649
Indicator	3.07	2.25	11.46

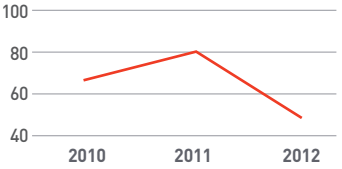


(*) Only REE personnel.

Accidental spillage of hydrocarbons

A	Nº of accidents involving oil or fuel spillages from in-service machinery and equipment		
B	Total Nº of accidents		
Indicator	A/B x 100		

Año	2010	2011	2012(*)
A	18	22	6
B	27	27	12
Indicator	66.66	81.48	50



(*) Implementation of a new classification system for incidents.

4. OBJECTIVES

The Environmental Programme of Red Eléctrica contains the set of environmental improvements which we intend to carry out throughout the term of one year. This Programme describes the environmental objectives which may be annual or multi-year, and includes the goals throughout the year for achieving each of these objectives.

Due to the degree of complexity of the activity carried out by Red Eléctrica, the geographical distribution and the multiplicity of actions, the Environmental Programme defines objectives which are directly linked to the improvement of environmental aspects and other objectives which contribute to environmental improvement of the processes. In the various sections of this Report, information is provided as to how environmental issues are associated to the various activities, as well as the contribution of the objectives to environmental improvement.

The total fulfilment of the Environmental Programme is the result of the completion of the different objectives planned for each year (including multi-year objectives).

The contribution of each objective to the environmental programme is weighted according to its importance based on a total of 100 points.

To achieve each objective, a set of goals are defined. The annual fulfilment of each objective is the sum of the fulfilment of the goals which are foreseen to be carried out in the period of time established.

The global fulfilment of the Environmental Programme 2012 was 77.79 %, representing an increase of 18.4 percentage points with respect to last year.

The following is a table which summarises the objectives addressed during 2012 indicating the contribution of each one of them to the Programme and their level of fulfilment for the year.

ENVIRONMENTAL PROGRAMME 2012

Responsible environmental investment

Aspect group / Associated processes	Scope of environmental improvement	Objectives	Character / term	Weighting	Fulfilment	%	Page (1)
Presence of facilities	Preventing the environment from being affected	Incorporation of landscape integration criteria into the design of new substations	Multi-year (2011-2013)	6	6	100	18
Construction process	Preventing the environment from being affected	Implementation of environmental certificate regarding construction	Multi-year (2011-2012)	7	7	100	26

Climate change, energy efficiency and the saving of resources

Aspect group / Associated processes	Scope of environmental improvement	Objectives	Character / term	Weighting	Fulfilment	%	Page (1)
Emissions	Reduction of greenhouse gas emissions	Conducting an emissions inventory of Red Eléctrica. Definition of specific objectives and the calculation methodology for their monitoring	Multi-year (2011-2013)	14	11	78.57	39
		Reduction of SF_6 gas emissions	Multi-year (2011-2013)	9	2.79	31	40
Energy efficiency	Activities regarding significant environmental aspects	20 % reduction in energy consumption by 2020	Multi-year (2011-2013)	8	8	100	46
		10 % reduction in the consumption of natural resources (2010-2020)	Multi-year (2011-2013)	9	9	100	49

Biodiversity

Aspect group / Associated processes	Scope of environmental improvement	Objectives	Character / term	Weighting	Fulfilment	%	Page (1)
Biodiversity	Preventing the environment from being affected	Reduce the risks of the existing facilities/installations on birdlife	Multi-year (2011-2013)	12	9	75	35
		Establish 17 actions regarding biodiversity matters in the 17 autonomous communities	Multi-year (2011-2013)	7	7	100	35
		Establish agreements to prevent and fight forest fires	Multi-year (2011-2013)	10	0	0	32

Environmental aspect improvement of transmission grid facilities							
Aspect group / Associated processes	**Scope of environmental improvement**	**Objectives**	**Character / term**	**Weighting**	**Fulfilment**	**%**	**Page (1)**
Maintenance process	Preventing the environment from being affected	Incorporation of Red Eléctrica's environmental criteria in the maintenance process of electricity line corridors (in existence at 31/12/10)	Multi-year (2011-2012)	12	12	100	33
Improvement of relations with interested parties							
Aspect group / Associated processes	**Scope of environmental improvement**	**Objectives**	**Character / term**	**Weighting**	**Fulfilment**	**%**	**Page (1)**
Communication / Awareness	Activities regarding other aspects	Dissemination of offsetting measures associated to Red Eléctrica projects	Annual	6	6	100	65
TOTAL FULFILMENT				**100**	**77.79**		

(1) In the different chapters of this report – pages indicated in the right-hand column of the table – reference is made to each objective and its level of fulfilment.

All multi-year objectives shall be continued in 2013 with the exception of the following:

- 10 % reduction in the consumption of resources from 2010 to 2020. This objective was expected to be completed in 2020, it is deemed completed due to the fact that the latest measures implemented have meant a reduction in the consumption of resources that has exceeded the 10 % foreseen.

On the other hand, it is expected that the deadline for completion of some objectives that have fallen behind in their execution will be extended.

Regarding the latter, this is detailed throughout this document.

5. ENVIRONMENTAL ACTIVITIES

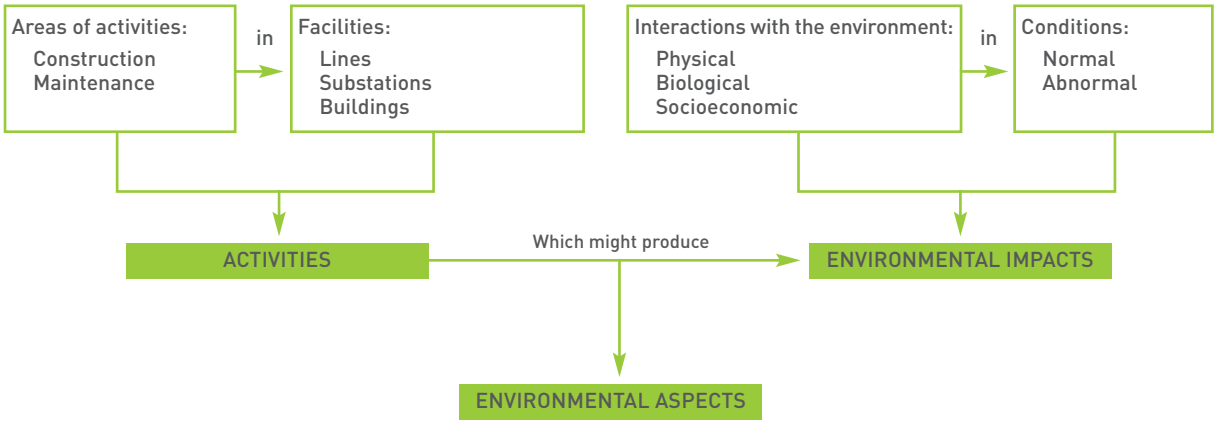
We work with the commitment to integrate environmental protection in the execution of our day to day tasks and activities.

During the planning phase we perform environmental studies on all our facilities and define alternatives, which are technically and economically feasible and have the least possible impact on the environment and society.

During the construction phase we conduct comprehensive environmental monitoring of all the works being executed, both for new facilities as well as for modifications to existing ones.

During the maintenance phase we systematically carry out periodic reviews and audits on the facilities in service which allow us to define and implement preventive and corrective measures, detect potential environmental incidents and verify the effectiveness of the measures put in place during the construction phase.

In all the planning and construction activities, as well as the maintenance activities, conducted on facilities in service, we identify and assess the direct and indirect environmental aspects that could interact with the environment, and which could lead to any type of negative impact, both under normal and abnormal operating conditions.



5.1. ENVIRONMENTAL ACTIVITIES REGARDING FACILITIES IN THE PLANNING PHASE

5.1.1. Planning

The development of the electricity transmission grid is essential to fulfil the European Union 20-20-20 objectives. The planned infrastructure is essential for the integration of new renewable energy, the commissioning of the high speed train lines, improved efficiency of the electricity system and to take full advantage of the existing renewable energy (thanks to grid meshing and international interconnections) and the electrification of the Spanish energy system, which facilitates the utilisation of renewable energy in a greater number of uses.

In addition, in 2012, work continued on the calculation of indicators that allow the evaluation of environmental effects (positive and negative) derived from the execution of the Infrastructures Planning 2008-2016.

Similarly, Red Eléctrica collaborates with several autonomous communities in the development of Regional Electricity Infrastructure Plans that allow the planning of the electricity sector to be configured within the territory by means of reserving those corridors necessary for its development.

5.1.2. Project

During 2012, environmental permitting proceedings for **14 projects** were begun:

	Proceedings initiated			
	2009	2010	2011	2012
Initial document	33	13	17	6
Environmental document	29	14	13	8
Total initiated	**62**	**27**	**30**	**14**

The evolution of the conclusion of the environmental processing of the projects for new facilities in the last four years is as follows:

	Completed proceedings			
	2009	2010	2011	2012
Positive Environmental Impact Statement	12	15	15	20
Administrative Resolution	22	17	6	10
Total	**34**	**32**	**21**	**30**

Environmental authorisation has been obtained for the

Positive Environmental Impact Statement[1]
Andújar-Guadame 220 kV line
Sant Martí 220/66 kV substation Sant Martí-Murterar 220 kV circuit Sant Martí-L/Alcudia-Sa Pobla 66 kV circuit Sant Martí-Alcudia B 66 kV line
Úbeda 220 kV switchyard Andújar-Úbeda 220 kV line
Luminabaso 220/25 kV substation (ADIF) Luminabaso-Abadiano-Basauri 220 kV line
Villallana 220 kV substation Villallana-Pereda-Telledo 220 kV line
Rafal 220 kV substation Rafal-Son Reus-Valldurgent 220 kV line
Alaior 132 kV substation Alaior-Dragonera-Mercadal 132 kV line
Adrall-Frontera Andorra 220 kV line
Campanario 400/25 kV (ADIF) substation Pinilla-Campanario-Ayora 400 kV line Ayora-Cofrentes 400 kV line
La Serna-Magallón 400kV line
Mezquita-Morella 400 kV line
Mudéjar 400 kV substation Mudéjar-Morella 400 kV line Mudéjar line -Aragón-Teruel 400 kV line
Sabinal 220/66 kV substation Sabinal circuit-L/Barranco de Tirajana-Jinámar 220 kV line
Labarces 220 kV substation Labarces - Siero-Puente San Miguel 220 kV line
Güeñes-Itxaso 400 kV line
Torrente 132 kV substation Ibiza-Torrente 132 kV line
Arnero 220 kV substation Enlargement of Cinca 220 kV substation Arnero-L/Mequinenza-Monzón 220 kV line Arnero-Monzón-Riba Roja 220 kV line Arnero-Grado-Monzón 220 kV line Monzón-Cinca 220 kV line
Córdoba 220 kV substation Córdoba-Casillas-Lancha 220 kV line
Manzanares-Romica 400 kV line
Son Noguera 132 kV substation Son Noguera-Llucmajor-Arenal 132 kV line

[1] Authorisation resulting from the complete process of the Environmental Impact Assessment (Environmental Impact Study)

Environmental Resolution [2]
Jalón Entrerríos-Plaza 220 kV line
Repowering of La Roca-Vic 400 kV line
Modification of Tordesillas-Galapagar-Moraleja section of 400 kV line (546-569)
Reconditioning of access routes for Aldeadávila/Arañuelo-Hinojosa/Almaraz 400 kV line Reconditioning of access routes for Arañuelo-Valdecaballeros 400 kV line
Change of voltage Sabinal-La Paterna 220 kV line (6-26 Jinamar-Buenavista 66 kV line)
Repowering of Pont de Suert-Pobla de Segur 220 kV line
Repowering of Moralets-Pont de Suert 220 kV line
Modification of Caparacena-Tajo de la Encantada section of 400 kV line (76-79)
Modification of Maials-Rubí 400 kV line (136)
Onuba- Santiponce-Torrearenillas 220 kV line

[2] Authorisation resulting from the permitting proceeding of an Environmental Document (Environmental Impact Study summary)

Projects exempt from regulated environmental permitting proceedings (after publishing consultation document)
Muruarte 220 kV line - Cordovilla-Orcoyen line
Orcoyen 220 kV substation (integration)
Regoelle 220 kV substation Regoelle 220 kV line - Mazaricos-Vimianzo line Regoelle 220 kV line - Mesón do Vento-Dumbría line
Enlargement of Beniferri 220 kV substation
Change of voltage to 220 kV line 66 kV La Paterna-Sabinal
Maintenance of Artá-Ciutadella 132 kV line
Maintenance of interconnection Eivissa-Formentera I y II 30 kV line
Maintenance of interconnection Mallorca-Menorca 132 kV line
Modification of Olite-Tafalla 220 kV line
Modification of Morella-La Plana 400 kV line

The number of concluded Environmental Impact Studies submitted for administrative approval during the year was 23.

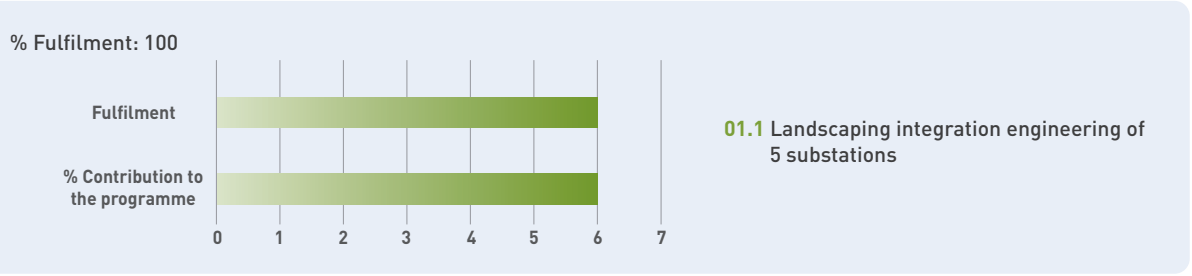
Finalised Environmental Impact Studies

2008	2010	2011	2012
14	36	39	23

At year end, **122 administrative proceedings are at different stages of the environmental permitting process**.

Objectives associated with a responsible environmental investment (project planning phase)

OBJECTIVE 1
Incorporation of landscape integration criteria in the design of new substations



Committed to achieving an environmentally responsible investment in the new facilities of Red Eléctrica, since 2010 work has taken place to establish standard criteria to enable a better integration between substation buildings and features of the local landscape in accordance with the geographical areas where these can be located.

In this sense, this specific objective began in 2011 with the design of landscape integration of 8 substation buildings of specific types. In 2012, landscape integration engineering was performed in 11 buildings of specific types: High mountain GIS (Gas Insulated Switchgear), High mountain open-air; Balearic Islands GIS, Balearic Islands open-air; South Coast GIS, South Coast open-air; Valley GIS, Valley open-air; Canary Islands GIS, Ingenio GIS and Highlands GIS.

To complete the objective, in 2013 the design engineering is planned for the last three models. This design will be implemented in the new projects.

5.2. ENVIRONMENTAL ACTIVITIES IN FACILITIES UNDER CONSTRUCTION

We carry out environmental monitoring of the construction of new electricity lines and substations as well as renovations, upgrading and enlargements of those facilities already in service. This supervision consists mainly of checking the application of preventive and corrective measures defined in the project, verifying their effectiveness and defining new measures, if considered necessary, based on the results obtained.

In 2012, facilities in the construction phase were: 53 substations and 1,123.53 km of line.

With the aim of ensuring the suitable fulfilment of the environmental requirements and verifying the effectiveness of the implemented preventive and corrective measures, throughout the year, environmental supervision was carried out on 103 of the 106 works underway, in other words, 100 % of the construction works in substations and 97.15 % of the works regarding lines (this % also considers works regarding modifications of existing lines). The environmental supervision contracted with the aim of intensifying the control and monitoring, covered 66.98 % of works.

Environmental supervision (new facilities)		2010	2011	2012
SUBSTATIONS	Total number of works supervised	45	50	53
	Permanent environmental supervision (contracted)	23	33	36
	Permanent environmental supervision %	51	66	68
LINES	Total works supervised (km)	1,534.8	1,248.8	1,091.5
	Permanent environmental supervision (contracted) (km)	1,437.7	824.7	877.954
	Permanent environmental supervision %	93.7	66	80.4

Environmental aspects in the construction of facilities

Activities regarding the construction of new lines and substations susceptible to generating environmental aspects are the following:

Activities that generate environmental aspects
Storage and transfer of oils and fuels
Storage and management of waste
Work camps (substations)
Land compacting
Clearing, pruning and felling
Excavation and landfill works
Concreting and cleaning of containers
Hanging/laying of conductor and grounding cables (lines)
Equipment assembly (substations)
Use of machinery

Although the environmental aspects associated to the works of each activity are specifically evaluated, those that generally have a significant impact on the construction of new lines and substations are detailed in the following table:

Significant environmental aspects in the construction of lines and substations	Environmental aspect susceptible to impact	Impact
Affecting fauna [1]	Biological	Altering population behaviour
Affecting flora	Biological	Eliminating vegetation
Affecting ground	Physical	Possible modification of physical characteristics of ground, erosion etc.
Affecting historical and cultural heritage	Socioeconomic	Potential landscaping impact, affecting patrimonial sites, crops, etc.
Risk of fire [1]	Physical/Biological/ Socioeconomic	Potential degradation
Risk of oil and fuel spillage during use of machinery [1]	Physical	Potential contamination of ground and water sources
Risk of oil and fuel spillage during storage and transfer of oils and fuels [1]	Physical	Potential contamination of ground and water sources
Risk of oil spillage during assembly of equipment [1]	Physical	Potential contamination of ground and water sources
Risk of affecting water during land movements [1]	Physical	Potential contamination of ground and water sources
Risk of affecting birdlife [1]	Biological	Potential collisions
Non-hazardous waste	Physical	Potential impact due to inadequate storage
Hazardous waste	Physical	Potential contamination of grounds and water sources due to storage and management

[1] Significant aspects in less than 50 % of works.

Noteworthy preventive and corrective measures in construction

As in previous years, we have applied preventive and corrective measures regarding new lines and substations trying to reduce the effect that the construction of the installation might cause to the environment.

In general, we undertake to carry out all the preventive and corrective measures set out in the Environmental Impact Studies and we assume as requirements those new measures that are included in the Environmental Impact Statements.

In addition we have put in place the necessary measures to avoid or reduce potential impacts that can be detected during the course of work being carried out, although not having been contemplated in prior phases.

Preventive Measures
Storage of topsoil
Hoisting of towers with boom crane / helicopter
Hanging of lines by hand / helicopter
Installation of bird-saving spirals
Archaeological survey
Relocating of nests
Biological stoppages
Signage/marking off of habitats
Increasing height of towers

Corrective measures
Landscaping actions
Relocating of flora species
Regeneration of pathways
Forest repopulation
Restoration of slopes by use of hydroseeding and topsoil

Below the most noteworthy preventive and corrective measures carried out during 2012 are detailed:

Protection of flora: preventative and corrective measures	
Modification of the project design during works	
Trives – Aparecida 400 kV line	Increasing the height of towers to provide adequate clearance of the line above wooded areas
Bernat-Catadau 220 kV line	Modification of access routes in order to reduce the affect on flora
Marking and protection of habitats and areas containing protected species	
Benahadux-Tabernas 220 kV line	Marking off of work areas in zones with a presence of catalogued flora
Fuendetodos-María 220 kV line	Prospecting and marking off accesses and main areas of flora within unique habitats
Salas-Grado 400 kV line	Comprehensive supervision of works to avoid effects on protected flora: Yew (*Taxus baccata*), Oak (*Querqus ilex*) and Butcher's Broom (*Ruscus aculeatus*) and control that the felling and pruning of flora is exclusively adapted to those authorised (sections 8-9 , 12 to 17 and 53 to 55)
Trives-Aparecida 400 kV line	Marking off lush protected areas and protected communities
Hoisting with a boom crane (*)	
Benahadux-Tabernas 220 kV line	Steep zones (Sierra de Gádor and Sierra de Alhamilla)
Trives-Aparecida 400 kV line	Protected zones in order to minimise accesses. (In section 1 all towers are erected by boom crane)
Salas-Grado 400 kV line and I/O Grado substation Soto-Tabiella 400 kV line	All towers of both lines. Prevents damage to the land, roads and paths, gullies crossed and forested areas

(*) Although measures have been classified for the protection of flora, in general they avoid effects on the land, waterways and other elements.

Protection of flora: preventative and corrective measures	
Hanging by helicopter [1]	
Trives-Aparecida 400 kV line	Hanging by helicopter. Various sections (T1, T2 and T3) in protected or sensitive areas, a total of 24.73 km.
Salas-Grado 400 kV line	Transportation of materials by helicopter to avoid opening access routes for tower 29
	Hanging of 18.477 km (sections 5-17, 21-25, 38-58). This avoids felling of protected trees and flora Holm oak (*Quercus ilex*), damage to the land due to line hanging vehicles and over waterways to avoid fording waterways
Manual hanging	
Trives-Aparecida 400 kV line	15.435 km (section 4)
Salas-Grado 400 kV line	1.735 km (section 17 to 21). Avoiding damage to flora, the ground due to the vehicles hanging lines and fording waterways
Planting of trees	
Palencia substation 220 kV I/O line [2]	Accompanying measures not associated to the felling works: planting of 600 Holm oak (*Quercus ilex*) and Stone Pine (*Pinus pinea*), in the municipality of Magán
Galapagar 400/200 kV substation	Compensatory measure due to felling carried out in the enlargement works of the substation: replanting of different tree-like species in 7 ha in Cerro del Paredón and Molino de la Hoz. Species used in reforestation: Holm oak (*Quercus Ilex*), Portuguese oak (*Quercus faginea*) Flax-leaved daphne (*Daphne gnidium*). Prickly Juniper (*Juniperus oxicedrus*), Common Broom (*Cytisus scoparius*), Terebinth (*Pistacea terebinthus*), Wild Asparagus. (*Asparagus acutifolius*) and Butcher's Broom (*Ruscus aculeatus*)

[1] Although measures have been classified for the protection of flora, in general they avoid effects on the land, waterways and other elements.
[2] I/O Incoming line/Outgoing line.

Protection of fauna: corrective and preventive measures	
Biological stoppages	
Calamocha-Mezquita 220 kV line	Works stopped from 01/03 to 31/07 due to the presence of Egyptian Vulture (*Neopphron percnopterus*)
Fuendetodos-Maria 220 kV line	Works stopped from 01/02 to 31/07 due to the presence of cliff-nesting birds of prey
Benahadux-Tabernas 220 kV line	Avoid clearing scrub to respect the breeding and rearing in the two areas with the presence of Bonelli's Eagle (*Hieeratus fasciatus*) between towers 1-14 and 36-50. Stoppage 17/04 to 31/05
Almaraz-San Servan-Brovales-Guillena axis	Due to the presence of Black Vulture (*Aegypius monachus*), Griffon Vulture (*Gyps fulvus*), Black Kite (*Milvus migrans*), Golden Eagle (*Aquila chrysaetos*), Egyptian Vulture (*Neopphron percnopterus*), Black Sstork (*Ciconia nigra*), Short-toed Eagle (*Circaetus gallicus*), Common Buzzard (*Buteo buteo*), Little Bustard (*Tetrax tetrax*) and Great Bustard (*Otis tarda*)
Almaraz-San Serván 400 kV line	Various stoppages from 15/02 to 15/06 on different towers along the entire line. (Stoppages affect a total of 50 towers)
San Serván – Brovales 400 kV line	Works stopped for 6 towers from 15/04 to 31/05
Brovales- Guillena 400 kV line	Several stoppages from 01/03 to 31/09 on different towers along the entire line. (Stoppages affect a total of 77 towers)
Installation of nests	
Aparecida-Tordesillas 400 kV line	Installation of 12 Peregrine Falcon nests (*Falco peregrinus*) in 12 towers. (Accompanying/ compensatory measure)
During 2012, **201km of line was marked, from a total of 390.97km of newly constructed line**	

Socioecnomic measures and the landscape

Protection measures of the socioeconomic environment

Special measures

Benahadux-Tabernas 220 kV line	Increasing the height of towers 18 and 19 to safely provide adequate clearance of the line above a recycling plant building in that area
Muniesa 400 kV substation	Modification of the design of collection and channeling of perimeter runoff water, to prevent flooding of adjoining private properties
Santa Engracia 200 kV substation	Modification of platform drainage: Substituting gutter, for channeling the water collected by the platform drainage system, for an underground tube under the embankment to avoid affecting the adjoining private property
Grado 400 kV substation	Modification of drainage (general and substation access). During times of high rainfall, drainage removes a high flow of water that muddies a registered farm road and carries mud into a gully affecting plots further down, affecting protected vegetation. The modification is designed so that water avoids the road and is reincorporated free of environmental impurities

Hanging by boom crane

Bernat-Catadau 220 kV line	Decrease of the effects on croplands (khaki / orange)

Hanging by helicopter

Brazatortas- Manzanares 400 kV line	Effects on a road avoided and two high voltage lines (section 28-29)

Others

Escatrón (enlargement) 400/220 kV substation	Use of ground-penetrating radar and trial pits for the detection and mapping of mains water supply in the municipality of Escatron, to prevent the loss of the water supply due to the fact the enlargement of the foundation affects the main steel lattice structure

Landscape restoration

Substations under construction

Bescanó 400/220 kV substation	Restoration of the slopes of the new access road to the substation. Hydroseeding of 3000 m^2 and planting 3100 plants
Espluga 220 kV substation	Restoration of the slopes of the new access road and perimeter of the substation. Hydroseeding of 2500 m^2 planting 200 plants
Tres Cantos 220 kV substation	Restoration of banks (installation of coconut matting and revegetation)
Galapagar 400/220 kV substation	Restoration of slopes and areas occupied by machinery. Planting of oaks
Sax 400 kV substation	Landscaping. Planting of olive trees, shrubs and laying down gravel of different colours
Santa María Grado 400 kV substation	Laying of topsoil and sowing of embankment slopes
Puertollano 220 kV substation	Environmental restoration of the slope generated by the enlargement of the switchyard. Planting of native species (pine and herbaceous) and sowing of area

Lines under construction

La Cereal-Tres Cantos 220 kV line	Restoration of slope as a result of adapting motorway drainage system

Archaeological heritage

During 2012, archaeological supervision was carried out during works involving the construction of 10 lines (with permanent presence of an archaeologist during the earth movement phase in 9 of these, in the complete section of line, or in a part thereof), and in 5 substations (with permanent presence of an archaeologist during the earth movement phase in 4 of these).

As special actions the following are noteworthy:

Protection of archaeological – ethnological heritage	
I/O Grado,Soto-Tabiella line	Markings off of two Civil War trenches and soundings carried out in land used for lime extraction (machine gun nest). Relocation of the tower
Andújar-Guadame 220 kV line	Modification or relocation of the placement of two towers due to the finding of a Roman road and houses in the vicinity, as well as a wall and bronze age vessels which were recovered
Bernat 220 kV substation	Dismantling and conservation of burial grounds affected by construction: Recovery and inventory of all archaeological materials found and transference to the Archaeological Museum of Alzira. Documenting and 3-D scanning of the burial ground carried out

(*) Not related to the potential or actual impact of the facility, but the actions are focussed on improving the heritage of the surrounding areas of the facilities.

Restoration of affected areas

Restoration works are corrective measures which essentially mitigate the effects produced on the land, waterways, vegetation, socio-economic environment (roads, land enclosures, any other elements of properties) and the landscape.

Restoration of areas affected by the works	
Restoration of areas affected by the works	
Trives – Aparecida 400 kV line	Restoration of platforms and accesses
Soto-Penagos 400 kV line	Modification of access routes in order to reduce the impact on flora
Salas-Grado 400 kV line and I/O Grado substation, Soto –Tabiella 400 kV line	Final environmental restoration. Includes repairing roads, geomorphological recovery of the land, spreading topsoil on platforms and slopes, piping and channeling of blocked waterways/gullies, planting of vines and protected flora - holly *(Ilexaquifolium)*, installation of new enclosures on private plots and closure of newly-opened accesses
Fuendetodos-Mezquita 400 kV line	Geomorphological recovery of the land, removal of surplus material to rubbish tips, sowing, repairing of roads/paths, opening of waterways and repairing of stone walls
Benahadux-Tabernas 220 kV line	Landscape restoration of work sites at 37 towers and restoration of 11 accesses. Supply of topsoil and hydroseeding to avoid erosion in sloped areas
Bernat-Catadau 220 kV line	Adaptation of the land back to the initial conditions, maintaining the state of conservation of the waterway
Carril substation I/O Asomada - Litoral 400 kV line	Restoration of land (platform and slopes. Towers T110, 110-1 and 110-2): mechanical tilling, supply of topsoil and planting of Bridal veil broom *(Retama monosperma)*
Carril substation I/O, Totana/ El Palmar - Litoral 400 kV line (Incoming)	Restoration of land (platform and slopes. Towers T127, T130): mechanical tilling, supply of topsoil and planting of Bridal veil broom *(Retama monosperma)*
	Restoration of the land (slopes, access road to tower T130): Hydroseeding

Restauración de zonas afectadas por los trabajos	
Restauración de zonas afectadas por los trabajos	
Sax I/O Benejama-Rocamora 400 kV line	Slope refinement. Leveling of land at tower T261 to reduce erosion and effect on flora
	Reconditioning of existing roads and ravine to conform to original conditions. Recovery of paths/roads
Xove substation I/O, Aluminio -Boimente 400kv line and Aluminio-Puentes 400 kV line	Restoration of platforms and accesses

Specific actions for an exceptional project: the France-Spain Electricity Interconnection

The construction of a tunnel is one of the activities, linked to linear infrastructures, which has the greatest impact on the natural environment. In addition to the effects seen on the surface, which is general to all the works, this type of works also affects the deep substrate, which could have considerable consequences on the physical environment.

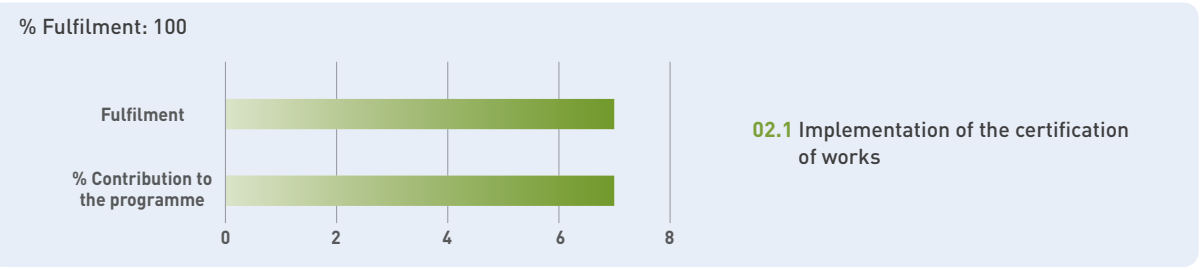
In the France-Spain Electricity Interconnection project, once it was determined that a tunnel would have to be used for the Pyrenees crossing, from that point on a series of preventive and corrective measures were adopted to minimise possible impacts. This resulted in the project being environmentally approved, as was set out in the Environmental Impact Statement (EIS) of the joint installation.

France-Spain Electricity Interconnection	
Noteworthy preventive/corrective measures for important aspects	
Land occupation	Location of the tunnel entrance very close to the tunnel entrances of the high speed train. For this reason, it has not been necessary to have a new location for the platform which is located in an old site. Use of an old, temporary rubbish tip, formerly used by AVE – high speed train, and now used as a storage area for the materials which are to be employed for the final refill of the hillside of the affected mountain.
Surface water	Installation of a closed circuit which reuses the water that circulates through the tunnel boring machine, and which passes through a treatment system allowing for its reuse, in order to avoid the contamination of the river course that passes by the tunnel entrance, the Llobregat del Empordá River, which is a protected area due the presence of fauna of interest. All the surface runoff water, which is loaded with fine silt, passes through the water treatment system so that the water which comes out of the facilities/installations is always clean. The entire perimeter has been provided with a retention barrier to collect fine particulate, so that the runoff of rainwater from the slopes does not wash materials into the river. To reduce the washing away of materials from the slopes of the work platform, they have been covered with a layer of excess topsoil from the Santa Llogaia Convertor Station. This reuse allows for comprehensive management of the excavation materials from all the works. The slopes which have been created and covered with topsoil have been hydroseeded to assure they will endure, to limit surface erosion and to facilitate their visual integration by making their surface more natural.
Waste	A waste management plan has been adopted, with the corresponding segregation by type, and which are managed by authorised contractors. The surpluses from the excavation works are one of the most significant aspects. It is foreseen that 250,000 m^3 of rock will be extracted and which, due to it being crushed, will increase in volume to nearly 400,000 m^3.To manage this, an agreement has been reached with a quarry so that part of the material will be used for the restoration of a gravel pit, while the largest part is being taken to another quarry to be reused.

France-Spain Electricity Interconnection	
Noteworthy preventive/corrective measures for important aspects	
Vegetation	The occupation of forest areas or natural flora in the area has been avoided. It is planned that all the final surfaces be restored, recovering in as far as possible the appearance they had before work commenced on the high-speed train itself.
Protected fauna	The work commenced taking advantage of a period of biological stoppage, so that the changes in the environment would take place at a time when there would be minimum effects of the biological communities. Furthermore, additional protection was adopted for the Mediterranean turtle (*Testudo hermanni*), a protected species present in the area. An initial sweep took place to catch specimens and transport them to a recovery centre. The entire area of operation was fenced off to prevent animals from entering the works.
Social environment	In all the works, where it is feasible, local companies and labour from the area itself are being used.

Objectives associated with a responsible environmental investment (construction phase)

OBJECTIVE 2
Implementation of the environmental certification of works



To intensify the integration of environmental criteria in the construction of new facilities, Red Eléctrica has implemented environmental works certification, a process that has lasted two years.

In 2011, all the documentation and internal regulations associated with this process were reviewed and the associated documentation began to be included in the request for tenders, a channel by which suppliers have been informed of the start of this practice.

In 2012, the implementation of the process was verified, which allows the objective to be completed.

5.3. ENVIRONMENTAL ACTIVITIES IN FACILITIES IN SERVICE

The objective of the transmission grid is to connect the generation points to the areas of consumption, which means that the facilities are distributed countrywide.

To ensure their correct operation these assets require permanent ongoing maintenance, an appropriate renovation as well as the relevant repairs in the case of failure, and these activities must be compatible with the environment in which they are located. It is therefore necessary to be aware of both the existing natural values as well as those elements of the activity that can impede it from being able to act in the most respectful way possible.

Similarly, in its role as transmission agent and electricity system operator Red Eléctrica is oriented towards developing a more sustainable energy model, contributing to reaching the European 20-20-20 objectives, through the integration of renewable energies (developing the transmission grid needed for their evacuation and facilitating their integration into the system) and the activities to increase the energy efficiency of the electricity system. In addition, Red Eléctrica has undertaken to work on reducing its own emissions of greenhouse gases.

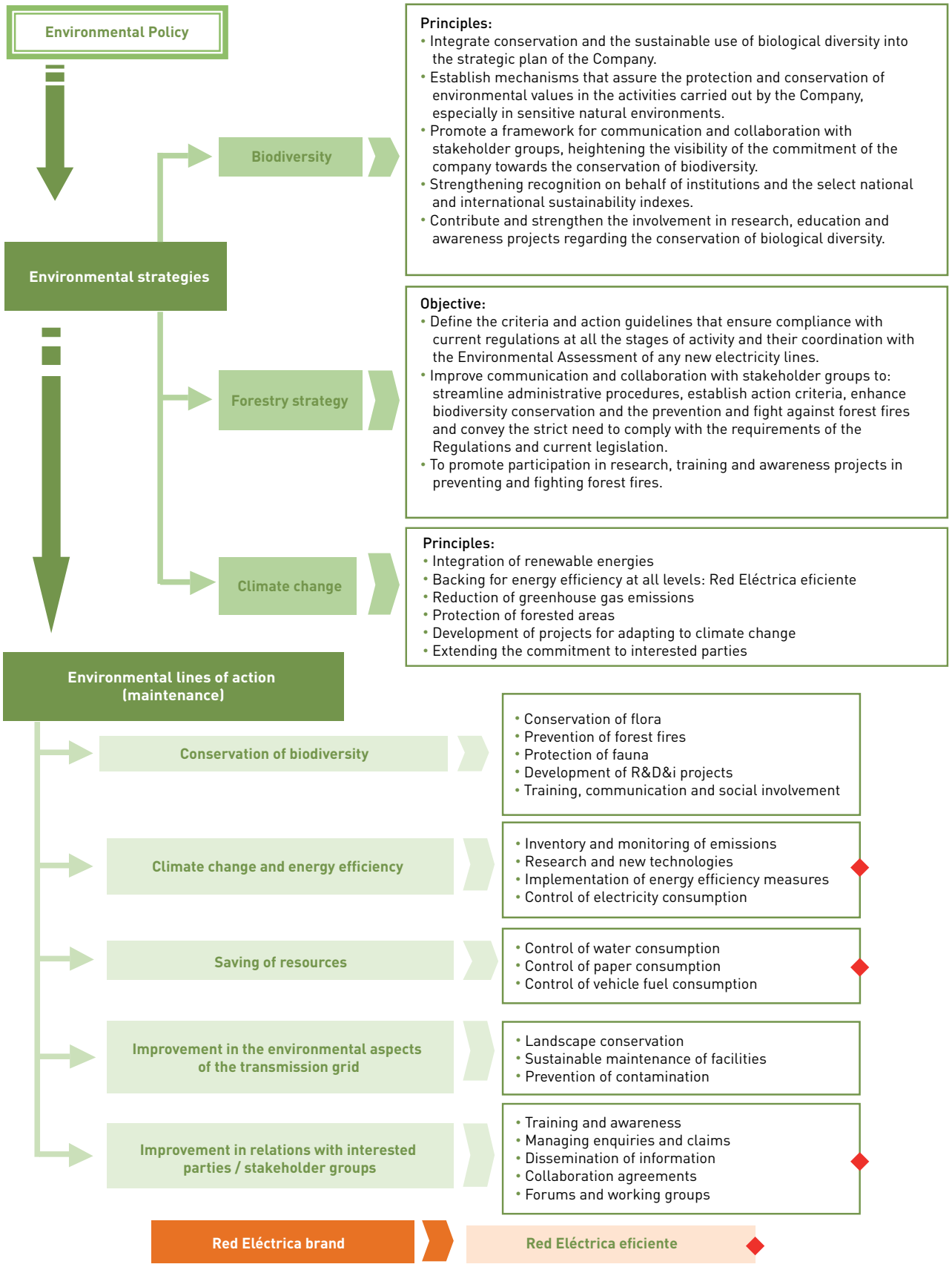
These activities take place within the overall framework of strategies that allow the environmental variable to be integrated internally into all works and contemplate participation and awareness amongst stakeholder groups.

A part of the activities carried out are done so under the "**Red Eléctrica eficiente**" brand, created to raise awareness and promote these initiatives within society and includes their participation.

This brand distinguishes all those actions that promote a better use of energy and resources. Encompassed within the framework of this brand are not only demand-side management initiatives and other technical projects related directly to its activity as operator of the electricity system, but also measures for the reduction of basic consumptions in the daily activities and the carrying out of different awareness and communication campaigns.

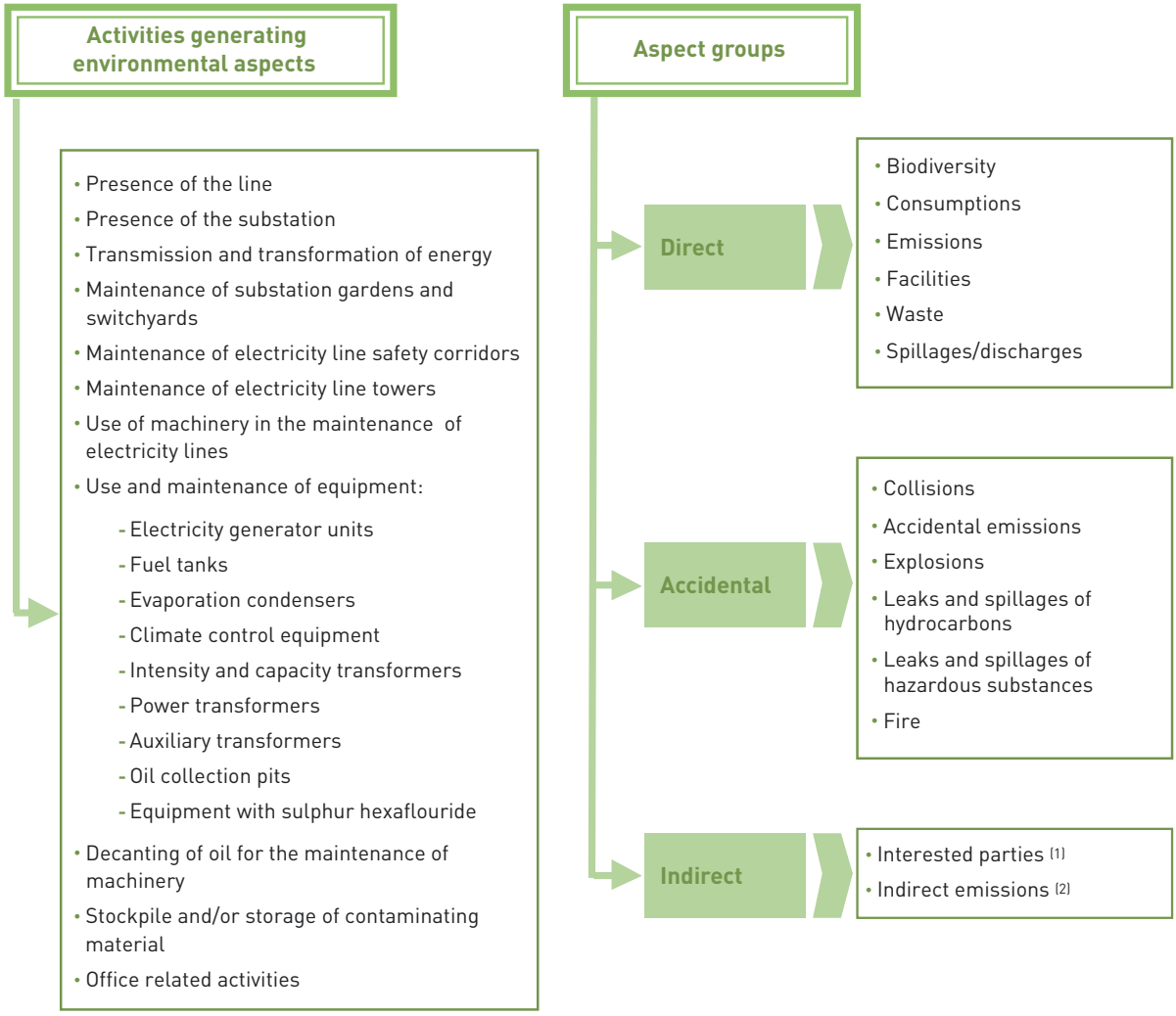
Throughout this section 5.3, the environmental aspects that generate the actions in each of the environmental lines to be considered in the maintenance phase shall be addressed:

- Conservation of biodiversity
- Climate change and energy efficiency
- Saving natural resources
- Improvement of the environmental aspects in the transmission grid facilities
- Improvement in relations with interested parties


Environmental Policy
Biodiversity
Principles:
• Integrate conservation and the sustainable use of biological diversity into the strategic plan of the Company.
• Establish mechanisms that assure the protection and conservation of environmental values in the activities carried out by the Company, especially in sensitive natural environments.
• Promote a framework for communication and collaboration with stakeholder groups, heightening the visibility of the commitment of the company towards the conservation of biodiversity.
• Strengthening recognition on behalf of institutions and the select national and international sustainability indexes.
• Contribute and strengthen the involvement in research, education and awareness projects regarding the conservation of biological diversity.
Environmental strategies
Forestry strategy
Objective:
• Define the criteria and action guidelines that ensure compliance with current regulations at all the stages of activity and their coordination with the Environmental Assessment of any new electricity lines.
• Improve communication and collaboration with stakeholder groups to: streamline administrative procedures, establish action criteria, enhance biodiversity conservation and the prevention and fight against forest fires and convey the strict need to comply with the requirements of the Regulations and current legislation.
• To promote participation in research, training and awareness projects in preventing and fighting forest fires.
Climate change
Principles:
• Integration of renewable energies
• Backing for energy efficiency at all levels: Red Eléctrica eficiente
• Reduction of greenhouse gas emissions
• Protection of forested areas
• Development of projects for adapting to climate change
• Extending the commitment to interested parties
Environmental lines of action (maintenance)
Conservation of biodiversity
• Conservation of flora
• Prevention of forest fires
• Protection of fauna
• Development of R&D&i projects
• Training, communication and social involvement
Climate change and energy efficiency
• Inventory and monitoring of emissions
• Research and new technologies
• Implementation of energy efficiency measures
• Control of electricity consumption
Saving of resources
• Control of water consumption
• Control of paper consumption
• Control of vehicle fuel consumption
Improvement in the environmental aspects of the transmission grid
• Landscape conservation
• Sustainable maintenance of facilities
• Prevention of contamination
Improvement in relations with interested parties / stakeholder groups
• Training and awareness
• Managing enquiries and claims
• Dissemination of information
• Collaboration agreements
• Forums and working groups
Red Eléctrica brand
Red Eléctrica eficiente

5.3.1. Environmental aspects of facilities in service

Below the activities carried out in facilities in service that can generate an environmental aspect are identified:



[1] Collaborations carried out with interested parties (organisations and institutions) on matters linked to the environmental aspects of Red Eléctrica.
[2] Emissions associated with electricity consumption. These result from the activity of the Company, but occur from sources neither owned nor controlled by it.

The evaluation of aspects is conducted annually. In 2012, this assessment included for the first time the newly acquired insular facilities, the effects considered as two new regional offices, the Balearic Islands and the Canary Islands.

Regarding the evaluation carried out on the environmental aspects during the year, those which proved most **significant** are the following:

Group	Aspect	Type	Significance	Environmental aspect susceptible to impact	Impact
Biodiversity	Clearing, pruning and felling	Direct	(1)	Biological	Elimination of flora
Emissions	Emissions of greenhouse effect gases (SF_6)	Direct	(1)	Physical	Atmospheric contamination
Hazardous waste	Used insulating oil without PCB	Direct	(2)	Physical	Potential contamination of ground and waters due to storage and management
	Equipment contaminated with PCB free oil	Direct	(1)		
	Oil filtres from emergency generators	Direct	(2)		
	Oil-water mix	Direct	(1)		
	Electrical and electronic waste with hazardous components	Direct	(2)		
	Ground contaminated with hydrocarbons	Direct	(1)		
Accidental collisions	Birdlife collisions	Accidental	(1)	Biological	Potential effect on species
Accidental leaks and spillages	Tank and collection pit leaks and spillages	Accidental	(2)	Physical	Potential contamination of ground and water sources

(1) Significant aspects in the maintenance phase or in more than 3 of the regional offices (territorial distribution of facilities) or buildings.
(2) Significant aspects in less than three regional areas or buildings.

Throughout the various sections of this chapter 5.3, the environmental activities carried out during the year are described, as well as the level of fulfilment of the improvement objectives established associated to the aspects of this phase of the activity.

5.3.2. Conservation of biodiversity

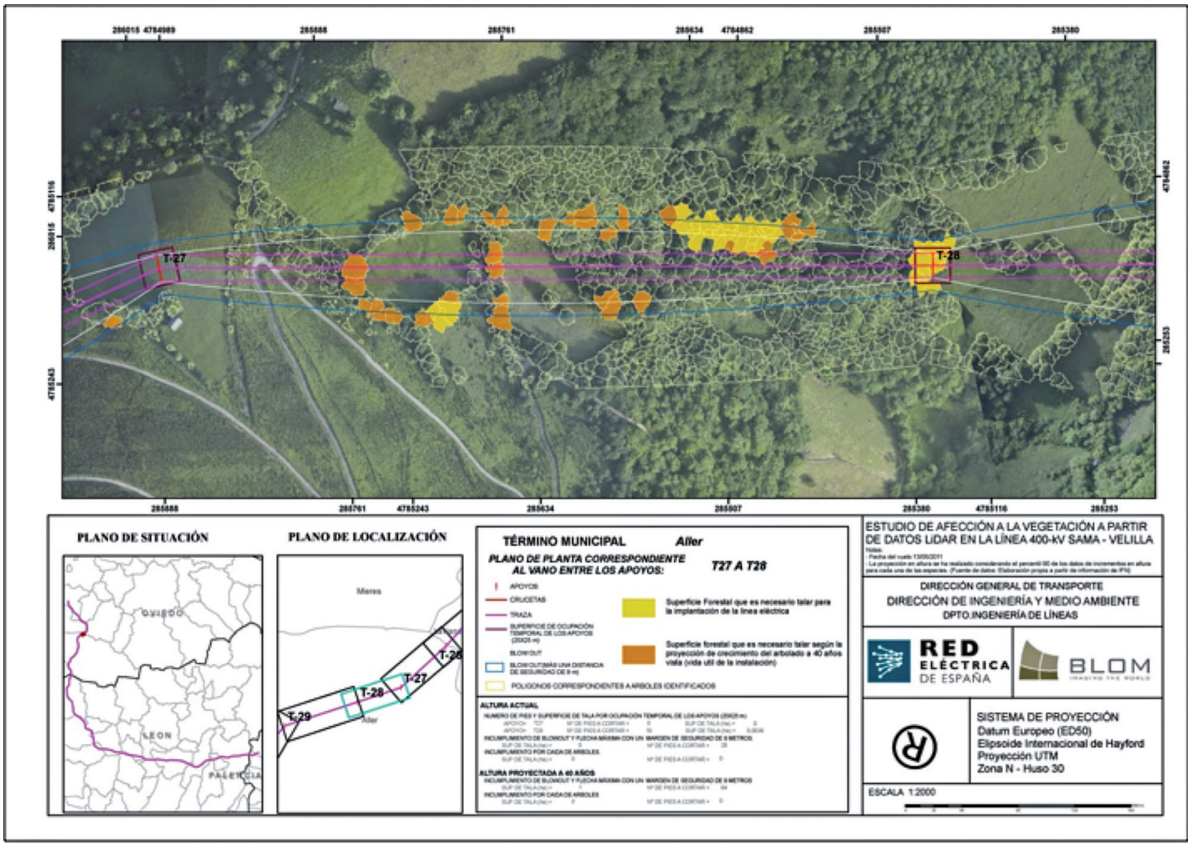
In line with the Biodiversity Strategy approved in 2010 that defined the guidelines and performance criteria to be followed by the Company so that the conservation of biodiversity is integrated into Red Eléctrica's strategy, the work plan for the next four years in this area includes a number of both direct actions on biodiversity as well as dissemination and collaboration.

Actions regarding forestry management

During 2012, Red Eléctrica worked in accordance with their **Forestry Management Policy** applying the criteria established within it and completing the milestones set to assure the fulfilment of the commitments undertaken by Red Eléctrica regarding the conservation of biodiversity and the prevention and fight against forest fires.

Predictive maintenance:

- Detailed studies of flora collected through remote sensing data (optical and LIDAR - Laser Imaging Detection and Ranging)) of the existing lines that cross forested areas.



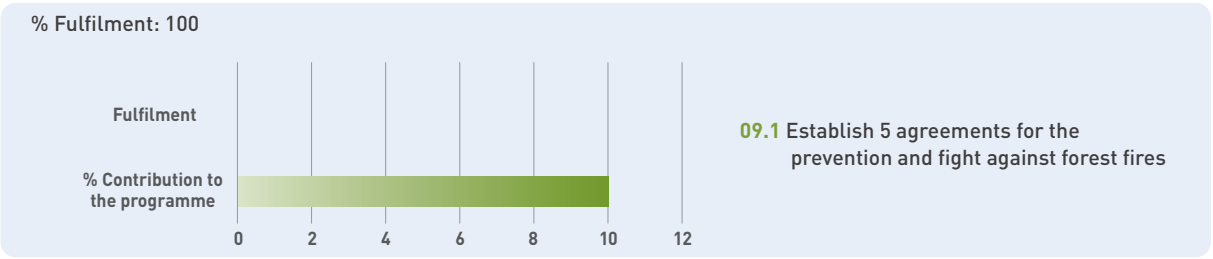
- The following types of inspection and revision are performed annually on all existing facilities:
  - Intensive - on foot (1/8 of the facilities)
  - Normal – on foot (1/8 of the facilities)
  - Intensive – from the air (1/2 of the facilities)
  - Normal – from the air (1/8 of the facilities)
  - Detailed studies of flora collected through remote sensing data (optical and LIDAR) of the existing lines or stretches of line that cross forested areas

Preventive maintenance:

- Preventive tree surgery (clearing land, timely pruning and felling) in which the environmental criteria to follow are:
  - Compliance with safety distances
  - Comply with environmental conditions of the administrative authorisations (periods to carry out the work, etc.)
  - To carry out the activity with the least possible impact
    - Respecting bushland
    - Respecting small and slow growing tree species
    - Carrying out pruning of protected species
    - Replanting of degraded areas
    - Reject the use of chemical methods for treating safety corridors

Objectives for the reduction of potential forest fire risks

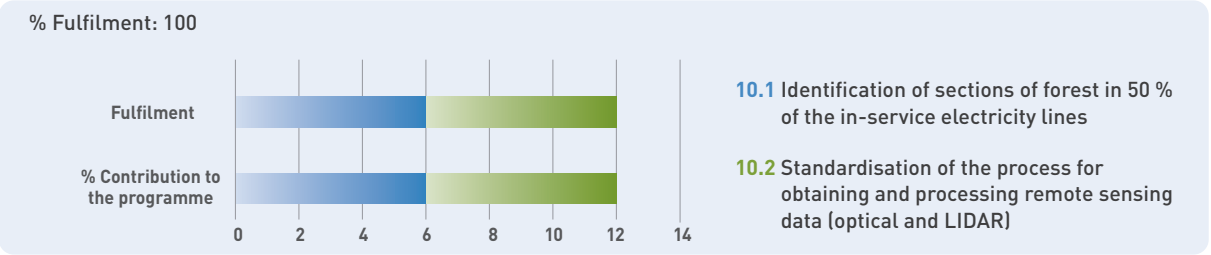
OBJECTIVE 9
Establish agreements regarding the prevention and fight against forest fires



This objective has a significant delay with respect to that forecasted when it began in 2011, the year in which no specific agreement was formalised on prevention and the fight against forest fires. In 2012, it again failed to reach the critical level expected as out of the 5 planned, only one was signed with the Community of Valencia. However, a significant number are at an advanced feedback stage.

Therefore, and given the importance of Red Eléctrica taking action, the goal to extend the objective until 2015 is under consideration.

OBJECTIVE 10
Incorporate Red Eléctrica's environmental criteria in the maintenance process for electricty line safety corridors (in existence at 31/12/2010)



Although the completion of this objective was foreseen for 2012, its continuation until 2013 has been proposed in order to complete the work done so far consisting of the following: the definition of Red Eléctrica's forestry policy including the environmental criteria for maintenance of lines, standardisation of the process for obtaining and processing data obtained via remote sensing (optical and LIDAR flights) and the beginning of the process for the identification of electricity lines within forested areas.

For its completion, in 2013 the definition of the risks and solutions for conflictive sections of electricity lines and the criteria on forestry management regarding facilities/installations on the Islands is to be carried out.

Actions for the conservation of fauna

There are many ongoing projects dedicated to the conservation of fauna, especially focused on birdlife, therefore, the detailed information is available at the following webpage of Red Eléctrica:

www.ree.es/medio_ambiente/biodiversidad.asp

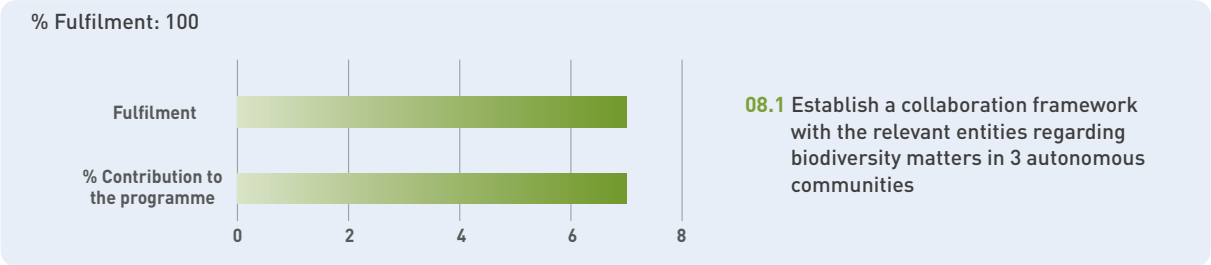
- **Recovery Plan for the Golden Eagle (*Aquila chrysaetos*) in Galicia:** Duration of project: 2011-2015. Collaboration: Xunta de Galicia (Government of Galicia), Autonomous Community of Madrid, Regional government of Castilla-La Mancha, Ecoplanin and GREFA.

- **Reintroduction of Bonelli's Eagle (*Hieraaetus fasciatus*) on the island of Majorca:** Duration 2011-2014. Collaboration: Government of the Balearic Islands.
- **Programme for the reintroduction of the Black Vulture (*Aegypius monachus*) in Catalonia:** Duration 2008-2015. Collaboration: Obra Social Caixa Catalunya, Government of Catalonia, Government of Extremadura (Los Hornos recuperation centre), TRENCA and GREFA.
- **Improvement of Steppe bird habitats in Andalusia:** Began in 2008 and completed in 2012. Collaboration: Doñana Biological Station (CSIC), Fundación Gyapaetus and Finca la Noruela.
- **Use of electricity towers as biodiversity catalysts in Andalusia:** Began in 2008 and completed in 2012. Collaboration: Doñana Biological Station (CSIC), Fundación Gyapaetus.
- **Project LIFE+ Conservation and management in special protection areas for Steppe birds in Andalusia:** Duration 2010-2013. Collaboration Government of Andalusia, ASAJA, COAG, UPA, The association municipalities of Valle del Guadiato, SEO, EGMASA, DAP. ENDESA and Fundación Enresa.
- **Study of the state of the population of the Stone-curlew (Burhinus oedicnemus distinctus) on the island of Gran Canaria and threats to its conservation (2010-2012):** Began in 2010 and completed in 2012. Collaboration Government of the Canary Islands and Inter-island council of Gran Canaria.
- **Census of the Houbara Bustard population (*Chlamydotis undulata*) on the islands of Fuerteventura and Lanzarote in its pre-reproductive, reproductive and post-reproductive phases:** Began in 2011 and completed in 2012. Collaboration: Government of the Canary Islands, the Inter-island council of Fuerteventura, the Inter-island council of Lanzarote and GREFA.
- **Installation of a platform for the Osprey (*Pandion haliaetus*)** on a tower of an electricity line in Andalusia. Project Duration: 2011-2012. Collaboration: Junta de Andalucía (Government of Andalusia) and the Fundación Migres.
- **Installation of nesting boxes for Soprano Pipistrelle bats *(Pipistrelus pygmaeusi):*** in the Parque Natural del Turia in Valencia. Project duration: 2010-2012. Collaboration Government of Valencia.
- **Centre for Migration and Global Change:** Duration: 2011-until end of works. Collaboration: Government of Andalusia, Cadiz Council, Cadiz, Cordoba and Seville universities, Tarifa and Algeciras council, Ministery of Defence and Fundación Migres.
- **Installation of nest boxes for Peregrine Falcons (*Falco peregrinus*):** in the Southeast Regional Park. Duration: 2012. Collaboration: Ministry of Environment and Territorial Planning of the Community of Madrid.

During 2012, 399 km of line have been marked with bird flight diverters of which 198 km corresponded to lines which were in service.

Objectives to reduce possible risks of the facilities on birdlife

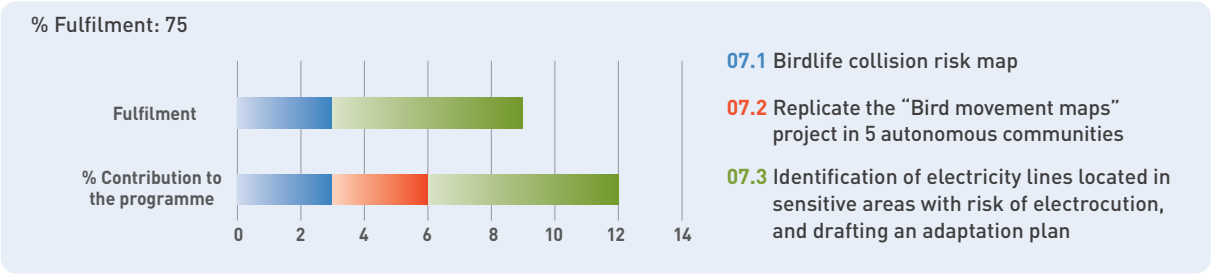
OBJECTIVE 8
Establish 17 actions regarding biodiversity matters in the 17 autonomous communities



Since the objective began in 2011, agreements have been signed, as planned, with the relevant entities regarding biodiversity matters. In 2012, the autonomous communities with which work was carried out were: Catalonia, Murcia, the Basque Country and Valencia.

In order to fulfill the objective, in 2013 work is expected to be carried out with the remaining five autonomous communities: Aragon, Cantabria, Castilla-La Mancha, La Rioja and Navarra, through framework agreements on biodiversity, specific projects or implementation of the "Red Eléctrica Forest".

OBJECTIVE 7
Reduce the risk of existing facilities on birdlife



The objective began in 2011. So far the model of the bird collision risk map has been developed and verified for the autonomous community of Valencia, it is considered to be a useful tool to replicate a risk map for the entire peninsula.

In 2012, the R&D+i project "Bird movement maps: flight paths and corridors", was replicated in two autonomous communities although the critical level expected was not achieved.

The process for identifying electricity lines located in birdlife protection areas as per current legislation (SPAs, priority areas for breeding, feeding, dispersal and concentration) has been completed.

The objective is planned to extended until 2014 to complete the bird movement map project and carry out actions in risk areas as well as marking the conservation areas for the Great Bustard in the Community of Madrid (5 sections) scheduled for 2013.

In addition to the activities indicated, in matters regarding biodiversity a large number of R&D+i projects are underway associated with the protection of birdlife and flora (*see Chapter 6*).

5.3.3. Climate change and energy efficiency

In May 2011 the Climate Change Strategy of Red Eléctrica was approved, which aims to formalise the strategy followed by the Company in this area, describe the main lines of work and establish an action plan which sets out the objectives to be achieved. The first version of the Action Plan was validated in January 2012.

In said strategy, the activities of Red Eléctrica are classified in three main groups: those related to the business (development of the electricity transmission grid, system operation and demand-side management), those related to reducing the carbon footprint of Red Eléctrica and those of participation in initiatives related to climate change.

In this chapter we develop on those related to the operation and maintenance of the transmission grid.

Emissions inventory

The emissions inventory of greenhouse gases of Red Eléctrica in the last three years has been as follows:

Greenhouse gas emissions (t CO_2 equivalent)*	2010	2011	2012
SF_6 emissions [1]	61,500	66,741	75,974 [6]
Emissions associated to the use of fleet vehicles	1,690	1,563	1,381
Total direct emissions (Scope 1) [2]	63,190	68,304	77,355
Emissions associated to electrical energy consumption [3]	3,654	4,284 [5]	4,752 [7]
Emissions derived from losses in transmission [4]	723,540	800,530	875,259 [8]
Total indirect emissions (Scope 2)	727,194	804,814	880,011
Totals	**790,384**	**873,118**	**957,366**

Indirect emissions (Scope 3)	2011	2012
Emissions associated with business trips	737.68	826.80
Emissions associated with internal transport of materials (logistics)	869.49	782.33
Emissions associated with the value chain	491,653 [9]	190,858 [10]

Offsetting emissions (t CO_2 equivalent)	2010	2011	2012
Emissions offset through the planting of trees [11]	-30,900	-21,960	-5,397 [12]

(*) The inventory has been conducted using the GHG protocol as a base.

(1) Taking GWP to 100 years: 22,800 (Source IPPC, Intergovernmental Panel on Climate Change: 4th assessment report).

(2) Slight differences exist from the inventory submitted in 2012 as the emissions associated with the emergency generators has been excluded due to the fact that the collation of all data is pending completion.

(3) The peninsular emission factor calculated by REE is used that takes into account the generation mix of every year and associates to each generation technology an emission factor in agreement with the values set out in the Renewable Energies Plan in Spain 2005-2010.

(4) These losses are related to the location of the generation points in relation to those of consumption, with the amount of energy demanded in the year, with the generation mix of the year (percentage of each generation technology in the total energy generated), international exchanges and the shape of the demand curve. Virtually none of these factors are controllable by REE, so therefore it is very difficult to reduce them. Nevertheless, REE works to identify and improve those aspects in which it can have an influence. Nonetheless, we consider it relevant to provide this data although in the case of emissions associated with the consumption of electrical energy, CO_2 is not emitted during REE's activities as it takes place in the different electricity generation points. In order to calculate the losses in CO_2 an emission factor calculated by REE is used.

(5) The data regarding the maintenance centres in the insular systems (regional head offices) has also been included for 2011 and 2012. (This data was not included in last years' report).

(6) The rise in SF_6 emissions is a result of the increase of installed gas due to the commissioning of new facilities. However, the emission rate (gas emitted / gas installed) is lower than in previous years as can be seen throughout this chapter.

(7) Although the total power consumption was reduced by 3.4 % compared to 2011, CO_2 emissions increase. This is due to the increase of the emission factor, mainly due to the higher contribution of coal in the energy mix of the peninsula and low rainfall.

(8) The increase in emissions is due both to increased losses in the transmission grid and the increase of the emission factor.

(9) Analysis carried out for 100 % of suppliers. Corrected data regarding that published in 2012, after having carried out a consultation process and monitoring of the same. The carbon intensity of the value chain resulted in 359 t CO_2/ million euros.

(10) Provisional data regarding a prior analysis of suppliers representing 95 % of the volume of orders in 2012. The figure will be adjusted after the work forecasted for 2013. Provisional carbon intensity is calculated at 300 t CO_2 / million euros. The large reduction in emissions is associated primarily to a significant decrease in the volume of purchase orders compared to 2011.

(11) During the lifetime of the tree. Equivalence used: 1 tree = 300 kg of CO_2; in the case of shrubs/bushes 1 specimen = 50 kg of CO_2, in both cases during its lifetime. The calculation is only approximate because only the new trees planted are taken into account and not the other actions/works for the protection and improvement of the existing vegetation.

(12) During 2012, fewer specimens were planted than had been foreseen due to lack of rainfall. Therefore the planting of trees not carried out in 2012 will take place during 2013.

Projects for the offsetting of emissions

El Bosque de REE (the "Red Eléctrica Forest"): Started in 2009 and of an ongoing nature, the objective of this project is twofold: to offset emissions from Red Eléctrica by the planting of trees and contributing to the conservation of a natural area rich in biodiversity or recuperation of a degraded natural area.

Annually, Red Eléctrica helps create a forest on public lands in a different area of the Spanish territory and contributing, by means of this project, to the development of local economies, as the works are carried out by companies or groups of the area.

"Red Eléctrica Forest" (2009-2012)	
Trees and shrubs planted:	203,520 specimens
Surface area recovered:	410 ha
Emissions offset:	60,677 t of CO_2 eq.
Investment :	625,000 euros

In 2012, work was carried out in three different areas:

- Sierra de Calasparra (Murcia). Restoration of 20 acres of forest in SAC that had burned in 2010. The planting of 21,840 tree and bush specimens: Aleppo Pine, Mastic, Prickly juniper, Kermes Oak, Oleander, Albaida, Black Hawthorn and Rosemary, amongst others. In addition, this project has involved the creation of 765 working days spread across 12 job positions.

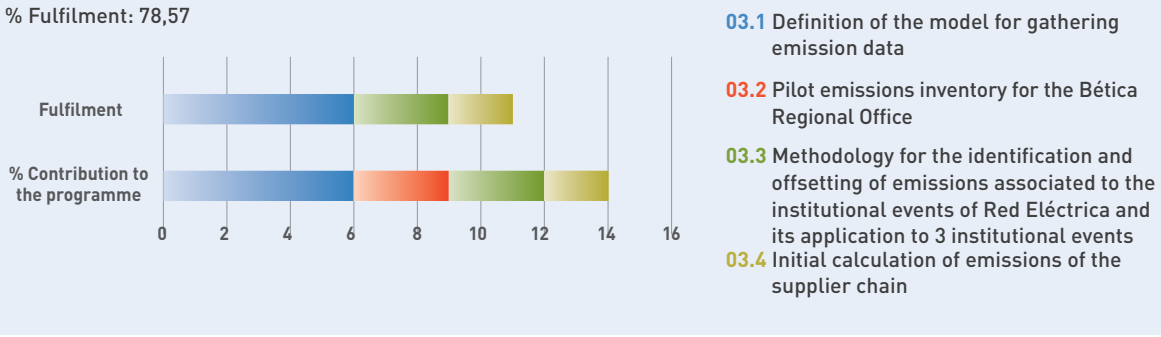
- Calderona Sierra Natural Park (Valencia). Land preparation and hole-digging has taken place for the restoration of 26 acres of burned land. This will be repopulated with Aleppo pine, accompanied by Phoenicean Juniper, Carob, Prickly Juniper, Mediterranean Dwarf Palm and Wild Olive. These works were planned for 2012 but were postponed due to weather conditions.

- Robledal del Remendón, in the Armañón Natural Park (Vizcaya). Work has begun on preparing the ground for the restoration of 22.5 acres with English Oak, European White Birch and other accompanying species.

With this project, REE through its Proyecto Ardilla joins the campaign "Plant for the Planet" sponsored by the UN and promoted to connect the various natural areas of the Spanish peninsula.

Objectives associated to the emissions inventory

OBJECTIVE 3
Carrying out the Red Eléctrica emissions inventory. Definition of the specific objectives and the calculation methodology for its monitoring



The methodology for the calculation of indirect emissions and CO_2 not emitted into the atmosphere, due to the performance of the transmission grid, was defined in 2011. In 2012, the model for the gathering of emission data and the methodology for identifying and offsetting emissions associated with institutional events of Red Eléctrica were developed, the latter was applied to 3 events. Additionally, the initial calculation of emissions of the supplier chain was performed.

The only goal that did not reach the critical level in 2012 was to finalise an emissions inventory for one region, however once all the necessary data is available it can be calculated.

The objective will be completed in 2013 with the validation by a third party of the methodology for calculating emissions, and with the calculation of emissions of the key supplier chain.

SF_6 emissions

In 2008, Red Eléctrica signed a **Voluntary Agreement with the Ministry of the Environment to reduce the sulphur hexafluoride (SF_6) emissions in the electricity sector**, together with the Electrical Manufacturers Association (SERCOBE) and the Spanish Electricity Industry Association (UNESA).

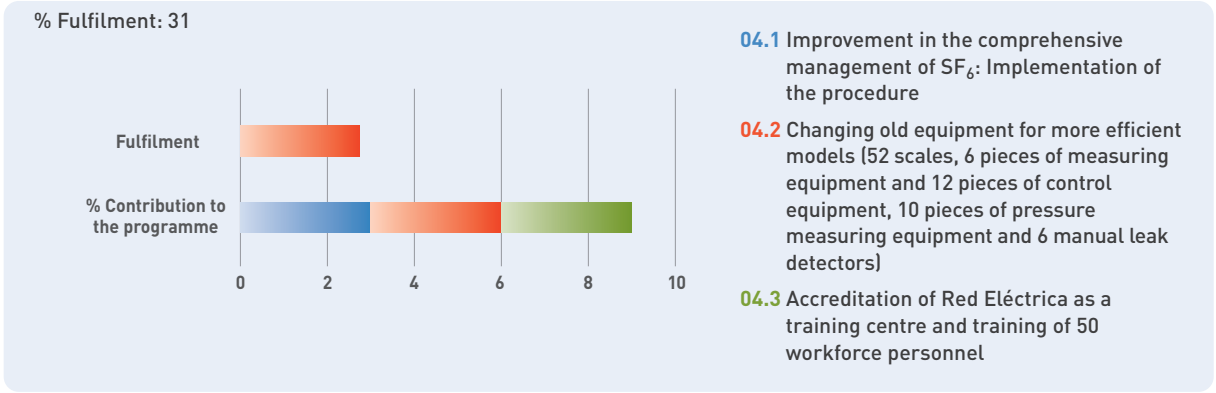
To monitor compliance, annual meetings are held between the signatories in which information is also shared about progress within this area.

Management of SF_6	2010	2011	2012
SF_6 installed (kg)	211,255	245,415	332,541
Emissions of equipment in service (kg) [1]	2,667	2,850	3,301
Average emission rate of in-service equipment (%)	1.262	1.161	0.993
Emissions derived from accidents (kg)	30	76.5	31
Total emissions (kg)	2,697	2,927	3,332
Average emission rate (including accidents) (%)	1.277	1.192	1.002

[1] For the calculation of leaks different emission factors have been applied depending on the age of the equipment installed.

Objectives for the reduction of SF_6 emissions

OBJECTIVE 4
Reduction of SF_6 emissions



The objective started in 2011 has a significant delay with respect to that forecasted.

In 2012, two of the three goals did not reach the critical level for the same reasons as last year. As the process of data collation had not begun, the SF_6 emissions inventory could not be conducted (the inventory currently conducted is based on the application of emission factors, work is being carried out to conduct an inventory based on the data measured); the comprehensive management procedure of the gas is being implemented, and lastly, although Red Eléctrica has obtained the accreditation as a trainer (training company and evaluator regarding SF_6 matters) the training of employees is still pending.

In 2013, the intention is to continue trying to obtain the emission inventory per regions based on the balance of mass, and also to train employees in the use of gas.

The objective will be considered completed if, after the actions taken, the SF_6 emission rate can be reduced to 1 % in 2013.

Energy efficiency

The following summarises the main actions regarding energy efficiency matters. Detailed information on actions taken under the brand Red Eléctrica eficiente can be seen on:

http://www.ree.es/ree_eficiente/iniciativas_proyectos.htm

Research and new technologies [*]

In the field of research and new technologies, the goal is to develop new ideas for achieving a more efficient use of energy, coupled in numerous occasions to the development of new technologies:

- **Projects associated with the electric vehicle:**
  - **Adherence to the Memorandum for the promotion of the electric vehicle**, spearheaded by the Ministry of Industry, Tourism and Trade and endorsed by more than 40 institutions.
  - **Proyecto VERDE (Green Project)** initiative, in conjunction with SEAT, for the development of a prototype electric vehicle which would allow an efficient integration of electricity into the grid (regarding active demand-side management).
  - **DOMOCELL Project.** Creation of a charging system in communal car parking garages that allows not only vehicle charging to be managed, but also the possibility of reintroducing energy back into the grid by means of the electricity stored in the batteries (R&D project).
  - **VLPGO Association** (Very Large Power Grid Operator Operators). Studies the effects of these vehicles on electricity systems.
  - **REVE Project** (Wind power Control through Electric Vehicles). Analyses the technical and economic aspects derived from the contribution of all electric vehicles in use to guaranteeing the evacuation of wind power energy.
  - **MERGE Project** (Mobile Energy Resources in Grids of Electricity). Evaluates the impact of electric vehicles on European electricity systems, in particular, those related to grid planning and operation, as well as to the electricity markets.
- **Project associated to the efficiency of the system as a whole**
  - **AGREGA Project**, led by Red Eléctrica, with the participation of the Basque Energy Entity - Ente Vasco de la Energía (EVE). This project aims to carry out a pilot experience that shows the technical feasibility of having a product to respond to demand through the aggregation of consumption in the medium-sized industry sector and which could be used in an efficient, reliable and simple manner by the system operator, in a competitive market context. It has allowed the generation of knowledge about the technical and economic conditions in which a demand aggregator could serve as an interlocutor for the system operator, with the aim of integrating demand in an aggregate form into the system operation services.

(*) Projects included in "Red Eléctrica eficiente".

Implementation of energy efficiency measures (*)

Within the scope of the implementation of measures, contemplated are the initiatives geared towards the quest for an improvement in facilities and processes of Red Eléctrica in order to achieve a more efficient consumption of energy in the workplace:

- **Actions carried out in work centres**:
  - **Implementation of energy management equipment** to provide instantaneous and cumulative values of electricity and water consumption that help determine possible measures to make savings. During the period 2011-2015, energy control equipment will be installed in the buildings of existing work centres. Newly constructed buildings will be provided with this equipment. In 2012, energy control equipment was installed in 15 existing work centres.
  - **Energy Audit Plan**: In 2012, audits were conducted on 14 buildings. During the period 2012-2015 all Red Eléctrica work centres will be audited.
  - **Newly constructed buildings**: 2 were the buildings classified under the brand "Red Eléctrica eficiente" and in which measures have been implemented. Both have attained a "B" energy rating.
  - **Renovated buildings**: 3 work centres were renovated in which several energy efficiency measures were implemented such as: automatic shut-off of lighting, presence sensors, LED lighting in restrooms and sunlight control film on windows.
  - **Energy certification in the Head Office**: In 2011, Red Eléctrica obtained the Energy Management System Certificate in accordance with UNE 16001 for its Head Office. A Plan for improvement measures for the 2012-2019 horizon has been established, which will represent an annual estimated savings of 355,000 kWh and that will primarily affect lighting, washroom fittings, performance of motors/engines and IT equipment.

- **Actions carried out in substations:** Having identified the energy-consuming equipment of an electricity substation on which you can implement improvement measures (power transformers, climate control and lighting equipment of substation buildings and switchyards), in 2012, work was carried out especially on the lighting of substation switchyards.

  The design criteria document was approved for the lighting of open-air switchyards in Red Eléctrica substations. The design includes permanent shut-off of lighting at substations, remote switch-on control of lighting and optimisation of the lighting equipment installed in switchyards.

  In 2013, this design criteria will be taken as a basis to develop constructive solutions regarding the lighting in substations.

(*) Projects included in "Red Eléctrica eficiente".

- **Actions carried out regarding corporate communication systems:**
  - **Technological renewal of workstations**:
    - The replacement of 17" PC screens for 23" PC screens has continued. The replacement of 146 screens is estimated to have an associated energy saving of 5,475 kWh.
    - A total of 330 out-dated pieces of equipment have been replaced. It is estimated that this action has an associated energy saving of 49,671 kWh.
  - **Replacement of physical servers for virtual servers**: action initiated in 2010 which improves the utilisation of hardware and reduces energy consumption. Currently more than half of the servers that are in the Head Office are virtualised.
  - **IT management system platform for office PC users**: At the end of 2011, the implementation of an infrastructure for the management of all work stations and office servers was started. During 2012, a pilot test for the measurement of consumption and the implementation of energy saving guidelines was carried out and was made extensive in the first phase to 60 % of the end-user IT systems.

    The results to date indicate that these measures (automatic screen shutoff, stand-by mode for idle equipment, etc) are achieving a savings in electricity consumption of about 10 %, with the corresponding improvement in the environmental impact (CO_2 emissions) and economic impact (€) for Red Eléctrica. This percentage will increase over time, once the energy efficiency policies implemented in equipment are adjusted and stabilised, bringing the savings close to 20 %, which was the result of the pilot project previously carried out.

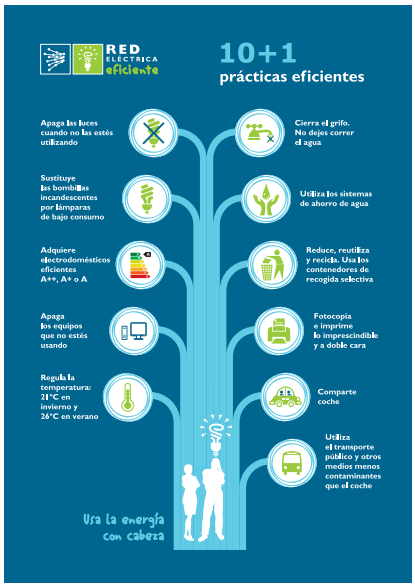
Communication and raising awareness (*)

During 2012, the international year of sustainable energy for everyone, a great many projects and initiatives were carried out, in four specific areas, taking as reference points the following significant dates:

- Energy: World Energy Efficiency Day. March 5.
- Water: World Water Day. March 22.
- Waste: World Recycling Day. May 17.
- Mobility: European Sustainable Mobility Week. September 16-22.

(*) Projects included in "Red Eléctrica eficiente".

- **Energy**: Red Eléctrica annually designs a communication campaign which has the 5th of March, World Energy Efficiency Day, as its cornerstone and is in keeping with the slogan "**Use energy wisely**". This campaign is targeted towards its employees, and its objective is to serve as an informative mechanism to raise awareness concerning energy efficiency and sustainability:
  - Publication and dissemination of the effective practices panel 10 +1.



  - "Bulb for bulb" action: exchange programme of incandescent light bulbs for those of low consumption for each of the 390 employees who took part in the initiative.
  - Guided tour for REE employees of the Fundación Metrópoli's ECOBOX building (building inspired on sustainable architecture concepts and that incorporates bioclimatic equipment/installations).
  - An electric vehicle made available to employees to test drive.
    www.ree.es/operacion/vehiculo_electrico.asp
  - Inauguration of the Casaquemada building. The first Red Eléctrica building with a "B" energy rating.
  - "Energy Sustainability" conference organised with the Official Guild of Architects of Madrid (COAM), to make known the latest developments regarding legislation on sustainability in the construction of buildings.

- **Water**: Publication on the intranet of the report: "A Drop of Water is Important," which shows the United Nations' view on the importance of water for food security.
- **Waste**: The "Oil for Soap" campaign, which consists of giving all employees a bar of soap made with recycled oil used in homes. This oil comes in part from that which was deposited by REE employees in the collection dumpster which the NGO Madre Coraje has installed at the Company's Head Office.
- **Mobility**: Photography contest "How do you get around? Use the transportation that pollutes the least." Sixty-five employees participated. The winners received two electric bicycles.

- **Social commitment actions regarding energy efficiency matters**
  - **Interactive exhibition "A Highway Behind the Wall Socket":** The exhibition counts on three exhibit areas that provide a journey from the physical principles of electricity to the role of the citizen as a protagonist in the electricity supply process. During 2012 it was located in four cities: Las Palmas de Gran Canaria, Valladolid, Logroño and Granada. [*]

Control of electricity consumption in Red Eléctrica's facilities

For the purposes of electricity consumption, only those work centres for which there is historical data of 2 years are considered, these are:

- Head Office: 2 buildings
- Electricity Control Centre building (CECORE) - Tres Cantos: 1 building
- Regional Offices: 4 buildings
- Extra-peninsular electricity systems: 2 buildings
- Regional head offices' work centres: 6 buildings
- Transmission department work centres in insular head offices: 2 [1]

	2011	2012
Work centres (kWh)	15,466,864	16,000,428

[1] Data recalculated due to the inclusion of new insular assets since 2011.

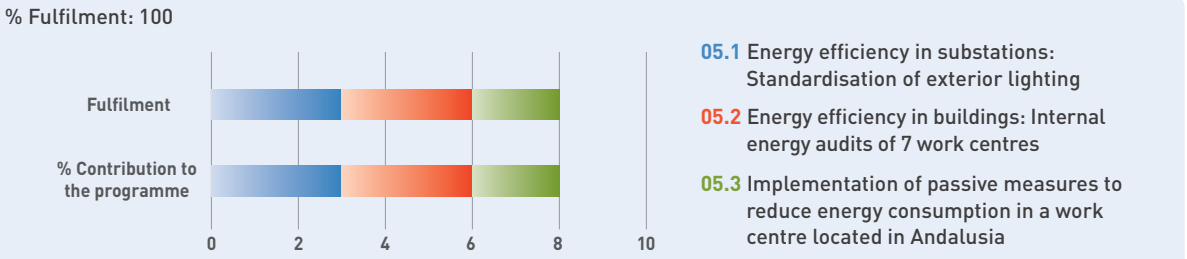
Similarly it must be considered that work centres: Head Office, extra-peninsular systems (Balearic Islands and Canary Islands) and the Electricity Control Centre (CECOEL) are special cases as they have control centres located there, operating continually 24 hours a day 365 days a year and therefore have an increased energy consumption.

In general the measures taken to reduce consumption are being effective. The description of these measures are identified in this report with a "Project included in Red Eléctrica eficiente".

(*) Projects included in "Red Eléctrica eficiente".

Objectives associated with energy efficiency

OBJECTIVE 5
Reduction of energy consumption by 20 % by 2020



This objective, initiated in 2011, has not progressed as expected and it is estimated that it will not be achievable. Although it will continue in 2013, it will be redefined once the action plan regarding Red Eléctrica's Climate Change Strategy is reviewed in the near future.

Since its inception, actions carried out at substations were targeted, on the one hand, at identifying consumption points in substations for improvement (power transformers, lighting and climate control equipment) and on the other hand, at kicking off the standardisation of the lighting criteria that has continued in 2012 and will conclude in 2013.

Energy audits have been carried out at work centres, and the results obtained have given way to the implementation of passive measures. This action will continue in 2013.

Operation of the electricity system

Red Eléctrica works to integrate the maximum production of renewable energy into the electricity system through CECRE (Control Centre for Renewable Energies). The centre was launched in 2006 so that this incorporation would be optimal and safe. Thanks to this control centre it is possible that a large proportion of the electricity demand can be covered with intermittent energy (e.g. wind power) without compromising the quality of supply. In 2012, the contribution of renewable energy to meet demand was 31.9 %.

Adapting to climate change

In accordance with one of the six principles of the Climate Change Strategy, Red Eléctrica has completed the project "Management of new climate risks in electricity transmission infrastructures" that began in 2011.

Its aim was to analyse the potential risks to the electricity infrastructure associated with changes in certain climatic parameters, identify modifications to be made to address these risks and assess the benefits that a proactive policy would represent as opposed to the application of reactive response measures. The works are being carried out with the consultant ERF and the Institut Cerdà. This work has allowed the identification some of the actions to address these risks and has laid the foundation for a future Climate Change Adaptation plan.

5.3.4. Saving of natural resources

In summary, the consumption of natural resources during 2012 was the following:

Water consumption

	2010	2011	2012
Head Office (m^3)	18,083	17,969	10,947
Head Office (m^3/employees)	20.36	22.10	12.91
Work Centres (m^3)	53,159	48,631	41,586
Work Centres (m^3/employees)	54.47	33.33	21.8

Withdrawal by source (%)	2010	2011	2012
Cisterns	1.65	9.32	2.31
Wells	45.66	51.14	23.51
Municipal water mains	52.69	39.36	74.05

Water saving measures

- ***Awareness campaign:*** "Effective practices panel 10 +1" *(see "Projects distinguished under the Red Eléctrica eficiente brand").*
- ***Head Office:*** The remodelling in 2011 of the lawned areas of the Head Office, which consisted of replacing them with indigenous plants and gravel, has allowed a reduction of 38 % in the water consumption necessary to irrigate the gardens. *(Objective 6.1 of the Environmental Programme).*
- ***Collection of rainwater:*** All new substations have a rainwater collection tank for the watering of gardens and as a fire protection system. In 2012, 0.13 % of water was collected in this manner.

Paper consumption

	2010	2011	2012
kg	71,043.8	67,563.21	54,318
kg/employee	36.55	34.77	26.99

During 2012 the consumption of printing paper fell by 19.6 %.

The table below shows the evolution of consumption of paper used in publications in the period 2010-2012.

	2010	2011	2012
kg	64,654	44,203	29,018
% FSC *	42	100	100

* *Ecologically certified paper* in accordance with *Forest Stewardship Council standards.*

During 2012, the consumption of paper used in publications fell by 34.35 %.

Paper-saving measures

- ***Awareness campaign:*** "Effective practices panel 10 +1" *(see "Projects distinguished under the Red Eléctrica eficiente brand").*
- ***Change of printers:*** In the last quarter of the year, 100 % of the printing equipment was replaced. The models provided by the supplier are included within a European environmental programme for offsetting the carbon footprint.
- ***Documentation archive regarding electricity infrastructures:*** Documentation archive regarding electricity infrastructures (ADIR) is the new document system that replaces SGD that had been used to date.

  - More than 2,300,000 documents with their images are currently managed.
  - 500 Red Eléctrica users registered.
  - 72 external companies.

  The new system improves in line with the savings in the use of paper:

  - Viewing and massive download of files.
  - Electronic file in a centralised location.
  - Consult plans/maps/blueprints in PDF.
  - Consult plans/maps/blueprints, make requests and request deliveries from engineering through the external ADIR. (This avoids the need to send CD's and Excel documents to external companies).
  - Sending links to documents to avoid paper copies between users.

  Custody is only held over the Physical Archives of the Facility (AEF) the paper copy of the original documents must be preserved for legal regulations.
- ***The Paperless Classroom:*** This type of training, in which the classrooms are equipped with tablet PCs, has allowed the saving of 390 kg of paper in 2012.

Regarding the training of employees, a total of 224 courses of this type have been given with 1,568 attendees, which has saved approximately 78,000 sheets of paper.

Fleet vehicle fuel consumption

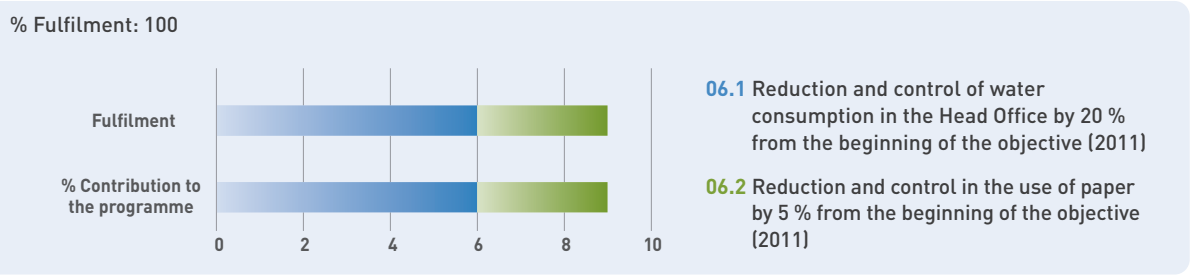
	2010	2011	2012
Fleet vehicles (litres/100 km)	11.12	8.40	8.54

Mobility measures

- ***Awareness campaign:*** "Effective practices panel 10 +1" *(see "Projects distinguished under the Red Eléctrica eficiente brand").*
- ***Company bus:*** Red Eléctrica has company buses available to employees of the Head Office (Madrid) where 52 % of the workforce is located to shuttle them to and from work. The use of a collective transportation method is estimated to have had an annual saving of 28,190 litres of fuel.
- ***Training:*** New employees and those whose work takes place in areas where the use of a vehicle is commonplace receive a safe driving course that includes concepts for efficient driving.
- ***Videoconferencing:*** The percentage of rooms that have this system of communication has gone from 73 % to 87 % in one year.

Objectives geared towards the saving of natural resources

OBJECTIVE 6
Reduction of 10 % in the consumption of resources (2010-2020)



The objective began in 2011 with the establishment of measures that allow the reduction of water consumption in the Head Office as well as that of paper consumption.

With the transformation of part of the garden into outdoor parking and an exhaustive control of the use of irrigation water, in 2012 a reduction in consumption of 38 % was achieved.

Regarding the reduction and control of the use of paper, now that travel requests and some of the payments are computerised and that specific software that includes criteria regarding the efficient use of paper and toner is being used, in 2012 a 19.6 % reduction in paper consumption was achieved.

The objective, which was scheduled for completion in 2020, is considered completed as the latest measures implemented have represented a reduction in the consumption of resources which has exceeded 10 % of what had been forecasted. The figures achieved for Red Eléctrica as a whole since 2011 have been:

- Reduction in water consumption (m^3): .....14 %
- Reduction in paper consumption (kg): .....19,6 %
- Reduction in fuel consumption of vehicles (litres): .....12 %

5.3.5. Environmental improvement aspects in the facilities of the transmission grid

Actions for landscape conservation

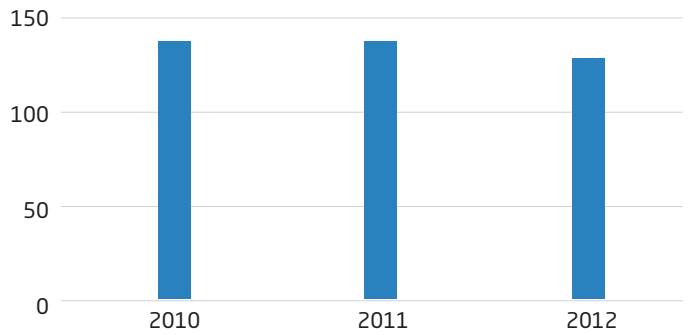
During 2012, the following landscape restorations have taken place in facilities which are in service:

Substations	
Benejama 400 kV substation	Landscaping. Planting of olives, bushes and the laying of gravel of various colours
Arañuelo 400 kV substation	Landscaping.Planting of tree-like and shrub-like conifers, other trees and the laying of gravel of various colours
El Palo 400 kV substation	Installing triple twist hexagonal netting on the west embankment with sowing and addition of mineral fertilizer

Additionally, the adaptation of the slopes of 7 substations in service was performed.

Actions for an environmental improvement of facilities

During the year the environmental maintenance technicians have carried out a total of 130 environmental supervision visits corresponding to 123 substations and of these 42 were facilities not inspected since August 2008, year when this activity was launched.



Currently 76.6 % of the substations currently in service have been visited at least once in the last 5 years.

Following an internal assessment system, at year end environmental risk was identified in less than 5.69 % of the substations supervised (7 of 123). The main reasons were:

- Validity of authorisations: adaptation of septic tanks to the regulations regarding discharging; notification to the government administration of waste production centres.
- Tipping: the need for emptying of septic tanks.
- Grounds: adaptation of containment systems for leaks and spillages of hydrocarbons from power transformers and auxiliary equipment to standard criteria in Red Eléctrica; clean-up of grounds with minor hydrocarbon stains; conditioning of slopes.
- Waste: Conditioning of waste storage areas.

The results of these supervisions have identified environmental improvement actions to be considered in the planning of activities in both the renovation and improvement plans as well as maintenance programmes.

Actions related to noise pollution

During 2012, there have been no complaints from stakeholder groups associated with noise pollution, therefore no type of noise measurements have been carried out by the Environmental Department in any facility.

Actions related to electromagnetic fields

During 2012, at the request of interested parties, measurements were taken of the levels of electric and magnetic fields at:

- The town council of San Antonio de Benagéber requested an analysis of the electric and magnetic fields generated by lines owned by Red Eléctrica de España, S.A.U that cross their municipality (220 kV Eliana - Morvedre B line, 220 kV Eliana - Quart de Poblet line, 400 kV Eliana - La Plana I line and 400 kV Eliana – Gaussa line).
- 220 kV Mesón-Puerto line crossing the Council of Culleredo (A Coruña).
- 220 kV Tordesillas-Otero and Tordesillas-Arroyada (section 44 to 45) lines in the vicinity of the Instituto Alejandría de Tordesillas (Valladolid).

The results of these measurements were correct and all came in below those values recommended by the European Union.

5.3.6. Improvement of the relations with interested parties

Actions regarding conservation of flora

- **Collaboration agreements:** Currently there are agreements signed with Andalusia, Castilla-La Mancha, Aragon and Valencia. The objective for 2013 is to establish collaboration agreements for the prevention and fight against forest fires in autonomous communities where these have not been signed.
- **Training and awareness:** Work which began in 2008 continues in order to improve awareness and communication regarding electricity lines and the prevention and fight against forest fires with forestry agents, SEPRONA and Public Administration technical personnel responsible for the environment.

5.4. WASTE

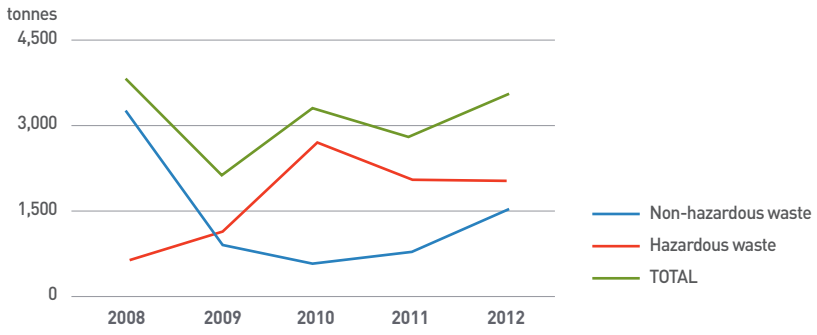
Both in maintenance activities and in the construction of new facilities different types of wastes are generated, these are separated, stored and managed in the most suitable way.

In the in-service facilities, wastes are basically generated by renovation and improvement activities, the execution of preventive and corrective maintenance programmes of machines, equipment and auxiliary services in substations, line maintenance, access corridors for towers and the management of accidents.

We attempt to reduce the amounts of waste we generate to the minimum. This is accomplished through the improvement of our processes and extending the useful life in those cases where it is viable, as is the case with the regeneration of transformer oil. However, due to the characteristics of our activity, it is very difficult to establish criteria or predict waste generation trends and therefore its minimisation.

In addition we work in order to ensure waste management is constantly improved, attempting to separate to the highest possible degree, searching for the best possible options amongst our suppliers and fostering best practices through training and awareness.

In general terms the amount of waste generated in 2012 increased by 784 tonnes with respect to that of 2011. However, the total amount is still maintained below the peak registered five years ago.



With respect to **non-hazardous waste**, the following is worth noting:

- For the third consecutive year, improved management of sludge from septic tanks emptied as a result of the adaptation or replacement campaign launched in 2010 in order to adapt these assets to Red Eléctrica's standards and, in some cases, to the existing legislation. During 2012, a large number of watertight septic tanks were installed replacing existing ones which had to be emptied prior to their substitution.

- Increase in paper and cardboard - due primarily to the incorporation of new waste production centres, and a greater availability of data. Greater effort is being made to obtain factual information regarding amounts managed and removed from centres during the latter part of the year, and that in the past did not arrive in time for it to be included.
- The rest of the non-hazardous waste, generated in non-significant quantities, continues the trend of previous years.

The fundamental changes regarding **hazardous waste** were the following:

- Tremendous decrease in the last two years of transformers, equipment and oil with PCB's owing to the plan completed in 2010 for the elimination/decontamination of auxiliary and power transformers, and equipment containing polychlorinated biphenyls (PCB). The quantities generated nowadays come from the removal of airtight equipment, manufactured before 2000, which ends up contaminated at the end of its useful life.
- Decrease in absorbent material and land contaminated with hydrocarbons, mainly due to the reduction in the number of accidents involving hydrocarbon leaks and spillages, and which were mostly minor, with little or practically no consequences.
- Increase in the volume of oil due primarily to the renovation and improvement works of switches that was carried out on recently acquired insular assets.
- Increase in oil-water mix as of a result of periodic campaigns for the emptying and cleaning of the leak and spillage containment systems for power transformers.
- Increase in material with asbestos due to the campaign for the removal and substitution of the roofing of the substation huts that house fire extinguishers and that are located at substations in the Balearic Islands.
- One off management of hydrocarbon cable which was acquired as material together with the Balearic Islands assets - cable is no longer in use.
- In general terms, the rest of the hazardous waste continues the trend of previous years, with the logical variations resulting from the execution of the corresponding periodic maintenance.

Waste generated during maintenance activities

Non-hazardous waste	Quantities managed (t)			Indicator (t/total nº employees)		
	2010	2011	2012	2010	2011	2012
Septic tank sludge	371.410	413.236	1,118.660	1.9E-01	2.1E-01	5.6E-01
Scrap metal	No data [1]	No data [1]	No data [1]	No data	No data	No data
Inert waste	61.650 [2]	170.970	144.580	3.2E-02	8.8E-02	7.2E-02
Paper and cardboard	68.376	115.747	211.558	3.5E-02	6.0E-02	1.1E-01
Toner [2]	0.066	0.008	0.032	3.4E-05	4.3E-06	1.6E-05

Non-hazardous waste	Quantities managed (t)			Indicator (t/total nº employees)		
	2010	2011	2012	2010	2011	2012
Wood	14.760	30.460	42.231	7.6E-03	1.6E-02	2.1E-02
Vegetable waste [3]	34.030	24.940	34.153	1.8E-02	1.3E-02	1.7E-02
Non-hazardous electrical and electronic waste	35.251	46.413	0.699	1.8E-02	2.4E-02	3.5E-04
Plastics	1.152	3.107	7.535	5.9E-04	1.6E-03	3.8E-03
Glass	No data	0.760	0.075	No data	3.9E-04	3.7E-05
Vegetable cooking oils	4.060	2.040	5.860	2.1E-03	1.0E-03	2.9E-03
Alkaline batteries - 'No Mercury' formula	0.000	0.028	0.000	0.0E+00	1.4E-05	0.0E+00
Total	**556.725**	**782.769**	**1,531.230**	**2.9E-01**	**4.0E-01**	**7.649E-01**

(1) Data not available until the IT application for control and monitoring of scrap metal is implemented. Currently being implemented.

(2) Waste management of toner corresponds to the supplier and maintainer of the printers. Data shown corresponds to only those units purchased directly by Red Eléctrica.

(3) This was not taken into account in calculating the total non-hazardous waste. This is not a representative value, since most of this waste was delivered to the owner or incorporated into the ground. The table includes only the waste delivered to the waste management company.

Hazardous waste	Quantities managed (t)			Indicator (t/total nº employees)		
	2010	2011	2012	2010	2011	2012
Used oil	187.758	152.256	433.156	9.7E-02	7.8E-02	2.2E-01
Oils with PCBs	66.675	0	0.426	3.4E-02	0.0E+00	2.1E-04
Oil/water mix	533.863	240.673	466.030	2.7E-01	1.2E-01	2.3E-01
Diesel/water mix	2.120	0.705	0	1.1E-03	3.6E-04	0.0E+00
Transformers and equipment with PCBs	180.655	45.205	19.906	9.3E-02	2.3E-02	9.9E-03
Hazardous electrical and electronic waste: equipment containing oil	1,219.789	716.708	353.745	6.3E-01	3.7E-01	1.8E-01
Hazardous electrical and electronic waste: Other	12.579	78.487	49.070	6.5E-03	4.0E-02	2.5E-02
Nickel/cadmium accumulators	44.723	100.355	105.866	2.3E-02	5.2E-02	5.3E-02
Lead batteries	1.468	3.805	1.703	7.6E-04	2.0E-03	8.5E-04
Earth impregnated with hydrocarbons	478.864	648.138	504.032	2.5E-01	3.3E-01	2.5E-01
Recipients that have contained hazardous substances	5.785	8.217	7.620	3.0E-03	4.2E-03	3.8E-03
Absorbent materials, filtering materials, cleaning rags/cloths and protective clothing contaminated with hazardous substances	2.728	16.630	9.379	1.4E-03	8.6E-03	4.7E-03

Hazardous waste	Quantities managed (t)			Indicator (t/total nº employees)		
	2010	2011	2012	2010	2011	2012
Silica gel and other inorganic chemical products	3.196	0.489	0.000	1.6E-03	2.5E-04	0.0E+00
Non-halogenated solvents	0.069	0.000	0.134	3.5E-05	0.0E+00	6.7E-05
Halogenated solvents	0.016	0.000	0.005	8.2E-06	0.0E+00	2.5E-06
Water-based cleaning liquids	0.000	0.114	0.085	0.0E+00	5.9E-05	4.2E-05
Paint waste	0.043	0.201	0.843	2.2E-05	1.0E-04	4.2E-04
Insulation material (with or without asbestos)	0.045	2.439	9.656	2.3E-05	1.3E-03	4.8E-03
Laboratory chemical products containing hazardous substances	0.050	0.437	0.974	2.6E-05	2.2E-04	4.9E-04
Gases in pressurised containers	4.078	0.126	0.592	2.1E-03	6.5E-05	3.0E-04
Waxes and used grease	0.009	0.000	0.000	4.6E-06	0.0E+00	0.0E+00
Anti-freeze containing hazardous substances	0.000	1.055	0.301	0.0E+00	5.4E-04	1.5E-04
Florescent tubes	0.297	0.702	0.459	1.5E-04	3.6E-04	2.3E-04
Batteries	0.005	0.021	0.096	2.6E-06	1.1E-05	4.8E-05
Fuel oil and diesel	0.000	0.000	1.065	0.0E+00	0.0E+00	5.3E-04
Cables with hydrocarbons	0.000	0.000	87.180	0.0E+00	0.0E+00	4.4E-02
Total	**2,744.814**	**2,016.763**	**2,052.323**	**1.4E+00**	**1.0E+00**	**1.025E+00**

Types of Management

Types of Management	
Septic tank sludge	Treatment/recycling
Scrap metal	Recycling
Inert waste	Controlled elimination
Paper and cardboard	Recycling
Toner	Recycling
Wood	Recycling
Vegetable waste	Recycling
Non-hazardous electrical and electronic waste	Recycling
Plastics	Recycling
Glass	Recycling
Vegetable cooking oils	Regeneration
Alkaline batteries - 'No Mercury' formula	Recycling

Hazardous waste	
Used oil	Regeneration/Valuation
Oils with PCBs	Valuation/Controlled elimination
Oil/water mix	Valuation
Diesel/water mix	Valuation
Transformers and equipment with PCBs	Valuation/Controlled elimination
Hazardous electrical and electronic waste: equipment containing oil	Valuation
Hazardous electrical and electronic waste: Other	Valuation
Nickel/cadmium accumulators	Recycling
Lead batteries	Recycling
Earth impregnated with hydrocarbons	Controlled elimination
Recipients that have contained hazardous substances	Valuation
Absorbent materials, filtering materials, cleaning rags/cloths and protective clothing contaminated with hazardous substances	Valuation
Silica gel and other inorganic chemical products	Valuation
Non-halogenated solvents	Valuation
Halogenated solvents	Valuation
Water-based cleaning liquids	Valuation
Paint waste	Valuation
Insulation material (with or without asbestos)	Valuation/Controlled elimination
Laboratory chemical products containing hazardous substances	Valuation
Gases in pressurised containers	Valuation
Waxes and used grease	Valuation
Anti-freeze containing hazardous substances	Valuation
Florescent tubes	Reciclaje
Batteries	Controlled elimination

In the activities regarding the **construction** of new facilities or modifications to existing ones, waste is managed by the contractors. By means of the environmental specifications, the requirements regarding their separation, storage and final management are communicated. The fulfilment of the requirements is reviewed during the work supervision visits and through the control of the pertinent documentation.

Waste generated during construction activities

Non-hazardous waste
Excavation surpluses
Concrete surpluses
Flora/Forestry waste
Paper and cardboard
Plastics
Wood
Scrap metal waste
Solid urban waste
Septic tank sludge

Hazardous waste
Paint waste
Absorbent matter and cloths contaminated with hazardous substances
Earth impregnated with hydrocarbons
Containers that have contained hazardous substances

5.5. ENVIRONMENTAL ACCIDENTS

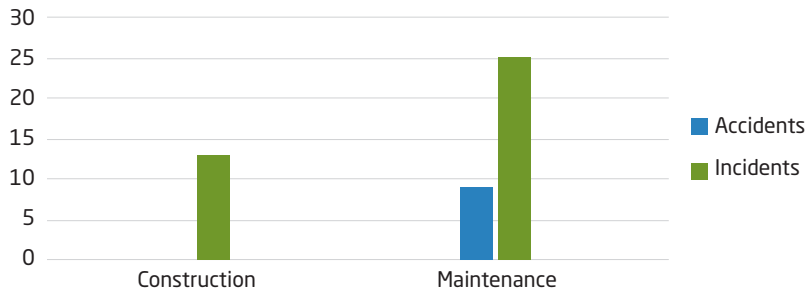
We are well aware of the consequences that an accident may have on the environment, and for this reason, we apply preventive measures to reduce the likelihood of them happening, or in the event they might occur; minimise the impact on the environment. Thanks to the application of these measures, the consequences of the accidents which have occurred in our facilities have only been of minor importance.

To date, all the events that have been formally reported, regardless of their seriousness, have been counted together. In 2012, criteria was established to enable a better classification, according to whether they were accidents or incidents, and this makes it possible to evaluate the consequences of each one of the events categorised as accidents.

Incidents notified	2010	2011	2012	
			Accidents	Incidents
Construction activities	**4**	**40**	**0**	**9**
Fires due to line discharges	0	1	0	0
Fires resulting from a fault in substations	0	0	0	0
Leaks and spillages of oil due to error in the filling of transformers	0	0	0	0
Leaks and spillages of oil and hydrocarbons due to minor breakdowns during the use of machinery during construction works	4	39	0	9
Maintenance activities (*)	**23**	**27**	**12**	**25**
Fires due to line discharges	0	2	1	0
Fires due to fault in substations	2	1	1	0
Towers brought down due to severe weather conditions	0	0	0	0
Leaks and spillages of oil and hydrocarbons during the use and maintenance of substation equipment	18	22	6	24
Oil leaks in lines	0	0	0	1
Floods	0	0	0	0
SF_6 leaks due to explosion of equipment or other accidents	3	2	4	0

(*) Birdlife collisions with in-service electricity lines are addressed separately from the data included.

Accidents / Incidents 2012



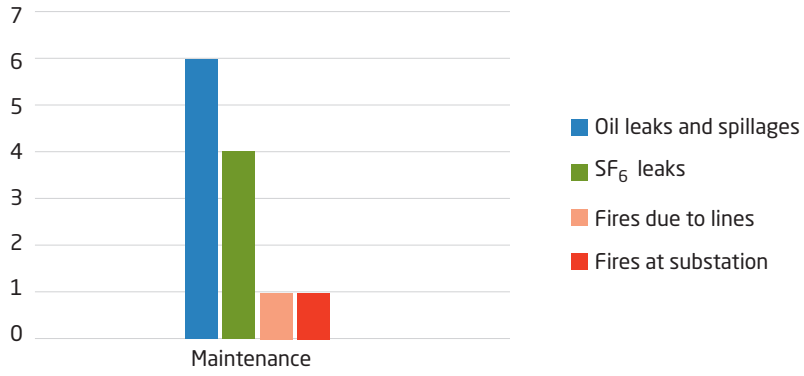
Accidents by type and phase in 2012

	Oil leaks and spillages	Fuel leaks and spillages	SF_6 leaks	Fires due to lines	Fires at substations	Total
CONSTRUCTION	0	0	0	0	0	**0**
MAINTENANCE [*]	6	0	4	1	1	**12**
Total	**6**	**0**	**4**	**1**	**1**	**12**

[*] Birdlife collisions with in-service electricity lines are addressed separately from the data included.

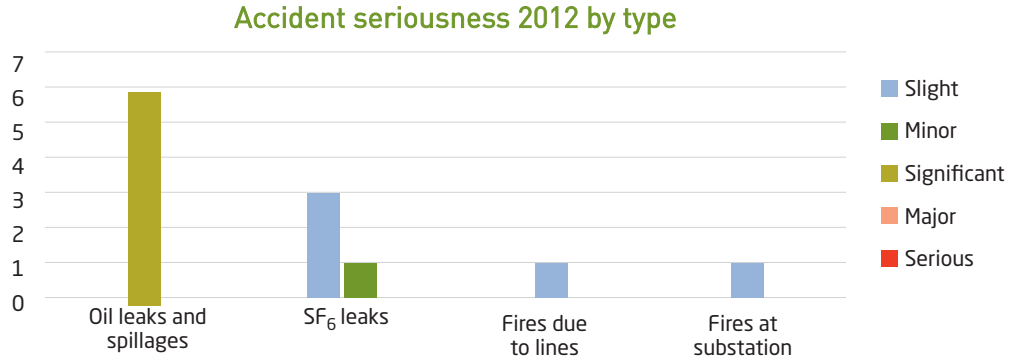
All reported incidents that have reached the status of accidents have occurred in the maintenance phase.

Accidents reported by type



The results of the evaluation of the consequences of the 12 incidents examined indicate that no accident surpassed the average degree of seriousness. Half of the accidents, all of which were associated with leaks and spillages of hydrocarbons, have reached the significant level (the intermediate level on a scale of 5) because, although the amounts in no case were high, they involved potentially polluting substances, which have affected a surface area of ground in the substation of more than 10 m^2. None of the substations where the accidents happened are located in areas of ecological value. All these incidents have been closed with the corresponding cleanup of the land and surfaces affected.

The consequences of the rest of the accidents are at the lowest levels: 41 % are slight and 8.3 %, minor.



In the electricity lines with a voltage higher than 220 kV, birdlife collision accidents are recorded. It is virtually impossible for an electrocution to take place, because the distances between the voltage points and the metallic structures of the towers are greater than the wingspan of any bird species existing in Spain.

During the construction phase of new lines, tracking of birdlife takes place linked to the programmes of environmental monitoring. The monitoring of the line takes place in those line sections in which anti-collision measures have been installed: spirals and/or other bird-flight diverter devices.

On some occasions, the new lines pass through areas which are home to species susceptible to collision accidents. For this reason, the monitoring of the lines is not limited to the marked sections, therefore more exhaustive monitoring is done, in order to detect possible previously undetected accident black spots and to act immediately by installing corrective measures: spirals and/or other bird-flight diverter devices.

During 2012, through the environmental monitoring programme for recently-commissioned electricity lines, a total of 66 incidents involving the collision of birds were detected, amongst them four Great Bustards *(Otis tarda)* and two Common Redstarts *(Phoenicurusphoenicurus)*, both of them vulnerable species.

The electricity lines that have been in service for more than three years have a lower number of accidents. Monitoring studies corroborate this, and agree that it could be because the birds become accustomed to the presence of the line. Even so, the risk of accidents continues to exist, and is accentuated by adverse weather conditions which reduce the visibility of the cables/lines. Moreover, depending on the type of bird and its behaviour, certain birdlife species are more susceptible to having this type of accident.

Specifically, during 2012, 16 birds which died as a result of a collision with lines were detected on a total of 11 different electricity lines. Of these, eight were Great bustards (Otis tarda) and two, Stone Curlews *(Burhinusoedicnemus)*.

The accidents confirmed are analysed, corrective measures to be put in place are defined and are included in the annual Plan for Maintenance of Installations in order to ensure that these measures are taken.

Specifically, during the 2013-2014 period, in the Community of Madrid, a plan will be carried out for the marking of electricity lines included in the areas where the Great Bustard lives or can be found.

6. RESEARCH AND DEVELOPMENT

In regard to research, development and innovation, we work with prestigious research teams and achieve objectives and results that add value to our business activities.

During 2012, the expenditure on R&D+i spearheaded by the Environmental Department reached 147,799.26 euros. This amount represents 1.93 % of the total expenditure on R&D+i.

With the collaboration of all the areas involved, the following R&D+i projects were carried out:

Prevention and fighting of forest fires and the protection of flora

- **"Modelling of the growth of forest masses" project.** The work is carried out in collaboration with Altran Technologies and the School of Engineering and Mountain Science of the Universidad Politécnica de Madrid. The project began in November 2010 and is expected to be completed in January 2013. The objective of the project is to obtain a forest growth simulation model to prevent possible incidents with high voltage lines, with the aim of being able to ensure that the safety distance between the trees and the lines is not exceeded. The project originates from the need to count on a tool to predict the necessity for tree surgery in the proximity of the high voltage overhead lines and therefore continue improving in matters related to the prevention and fighting of forest fires.

Birdlife

- **Bird movement maps: flight paths and corridors:** Carried out through Asistencias Técnicas CLAVE with the collaboration with the Doñana Biological Station (CSIC). Began in September 2010, its conclusion is foreseen for 2014. Its objective is to identify and map the bird flight paths of those birds which are more prone to collide with electricity lines. The process involves identifying the areas and paths more frequented and used by birds in their daily displacement, which are those that are more highly associated to the potential risk of collision with the lines.

  The project is divided into the following phases:

  - Identification of focal species.
  - Collation of relevant information.
  - Analysis and processing of information compiled.
  - Development of the prototype geographic information system.

The final product is a geographic information system for the peninsular and insular autonomous communities. In 2012, this has already been made available for Andalusia, Extremadura, Valencia and the Canary Islands.

In 2013-2014, it is foreseen that the rest of the autonomous communities will be incorporated into the geographic information system in order for it to cover all the national territory.

- **Predictive model of risk areas for bird collisions with high voltage electricity lines in the Community of Valencia.** Conducted in collaboration with the University Miguel Hernández de Elche and the Government of Valencia. The project began in 2011 and was completed in 2012. It has been part of the Environmental Programme of both years. Its objective is the design and development of a model to assess the probability of collision of birds with power lines. Once the preliminary studies were reviewed and the historical data regarding bird collision accidents was analysed; a selection of focal species was made and maps were drafted to show their areas of concentration, breeding and feeding as well as their main flight paths giving way to the identification of areas with high mortality and the drafting of a field methodology. The project has enabled a map of the risk areas for bird collisions in the region of Valencia to be obtained.

- **Design of a collision detector prototype system:** Carried out in collaboration with the Fundación Migres and the Research Foundation of the University of Seville. Began in September 2008, its finalisation has been extended to 2013. Its objective is the design of an impact detection device, to be installed on high voltage grounding cables and that would allow real-time detection of possible collisions transmitting this data to a computer and sending a signal to a mobile device in order to act swiftly. In this way, it would be possible to get to the area where the impact occurred, locate the bird concerned and if possible take it to a specialised bird recuperation centre. During 2012, electric and magnetic field tests were performed to ensure compatibility of equipment with electricity lines. The installation of the equipment in Andalusia is foreseen for the first quarter of 2013.

- **Testing a nesting and roosting deterrent model for the White Stork *(Ciconia ciconia)*:** Project carried out in collaboration with Asistencias Técnicas CLAVE, and the participation of the CSIC. The objective of the project is the design of a prototype device that deters White Storks from nesting and roosting on the electricity line towers. Until now, three different types of deterrent devices have been installed on 18 towers of two electricity lines located in Andalusia and Castilla-Leon. Monitoring of the effectiveness of the deterrent system was carried out and a proposal for its improvement has been presented. The project was concluded in 2012, although without conclusive data.

7. TRAINING AND AWARENESS

We consider environmental training as strategic in order to create a team which is increasingly concerned about environmental protection. The training provided goes a step beyond the mere professional scope, with the aim of contributing to the improvement of environmental habits in the daily work and family life of every employee.

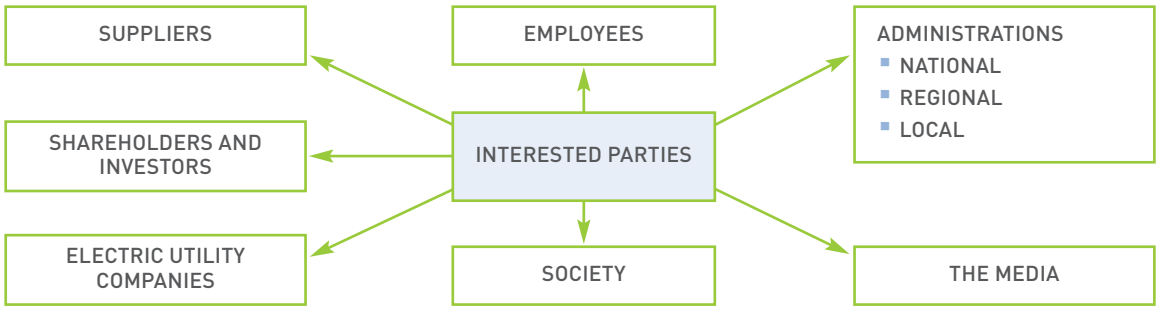
In 2012, 11.46 % of Red Eléctrica's staff received environmental training (in contrast to 2.25 % in 2011) with a total of 2,936 hours of training (in contrast to 3,926.25 hours in 2011).

Although the number of hours dropped during 2012, the percentage of employees receiving training rose by 9.21 percentage points.

Areas of environmental training
The Electricity Sector and the Environment
Iberian Flora and Fauna
Forest fires
Design of accesses
The Handling of SF_6 gas
Climate Change
Environmental Assessment and Urban Planning
Renewable Energies
Restoration of degraded areas
Contaminated soils
Felling and pruning works

8. COMMUNICATION AND RELATIONS WITH STAKEHOLDER GROUPS

Conscious of the social interest in the activities we carry out, we provide constant information to, and maintain dialogue with, all stakeholders.

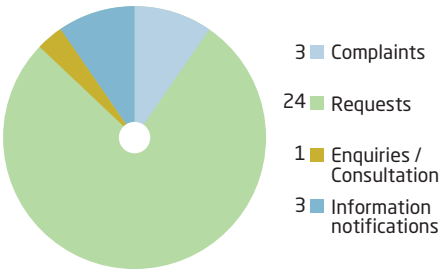


8.1. STAKEHOLDER ATTENTION – ENQUIRIES AND CLAIMS

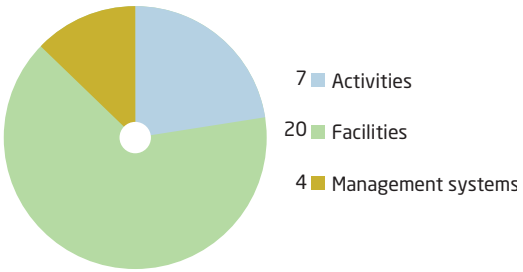
We monitor and attend to all stakeholder enquiries and claims of an environmental nature which are sent to us by interested parties via electronic mail or the DÍGAME service (Stakeholder Attention Centre) specifically provided for this purpose on our website www.ree.es.

During 2012, the Environmental Department received 31 enquiries of an environmental nature through the DÍGAME service classified as follows:

By category:



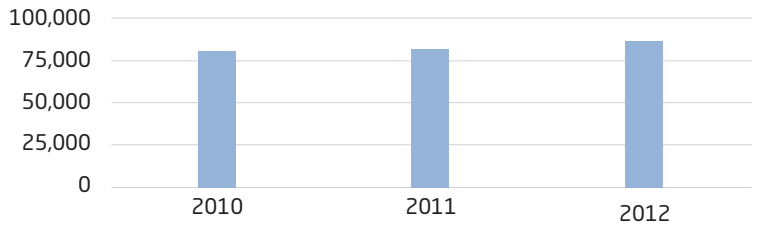
By typology:



8.2. DISSEMENATION OF INFORMATION

The number of registered visits to the environmental section of the corporate website (www.ree.es) was 86,003 (as compared to 81,231 in 2011) and the number of publications distributed in electronic format was 38,617 (as compared to 31,021 in 2011).

Webpage visits (Environmental section)



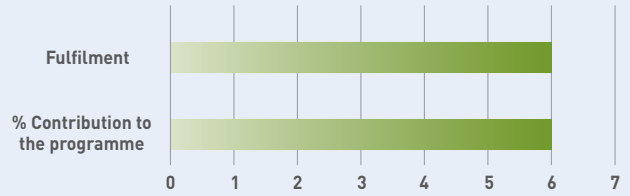
The main publications in 2012 were:

- Environmental Report 2011
- Corporate Responsibility Report 2011

Objectives for the improvement of relations with interested parties

OBJECTIVE 11
Dissemination of compensatory measures of Red Eléctrica's projects

% Fulfilment: 100



11.1 Drafting of a guide regarding the compensatory measures of Red Eléctrica's projects and their social impact

As planned in 2012, a guide was drafted regarding compensatory measures of Red Eléctrica's projects and their social impact, which reflects the current view of the infrastructure integration processes in the environment and uses the example of linear infrastructures (mainly highways and electricity lines). Its main objective is to raise awareness regarding the importance of compensatory measures for the preservation of the environment that is affected by the construction of an electricity facility/infrastructure.

8.3. COLLABORATION AGREEMENTS

Through collaboration agreements, we work with institutions to carry out R&D+i projects or activities related to the environment and sustainable development, of interest to both parties.

Collaborations with the Public Administration

Public organisations / entities	Collaboration / Agreements
Autonomous Government of Andalusia *(Department of Environment)*	*Acuerdo Life* agreement for the conservation and management of special protection areas for Steppe birds in Andalusia
	Collaboration agreement for the prevention and fighting of forest fires
	Framework agreement. Development and maintenance of the electricity transmission grid
	Collaboration agreement for the fight against climate change by means of voluntarily reducing the carbon footprint and adherence to the Andalusian system for offsetting of greenhouse gas emissions
Autonomous Government of Castilla and León *(Department of Environment)*	Framework agreement
Autonomous Government of Aragón *(Department of Environment)*	Collaboration agreement for the prevention and fighting of forest fires
Autonomous Government of the Balearic Islands *(Department of Environment)*	Specific agreement. Reintroduction of Bonelli's Eagle in Majorca
Ministry of Industry and Employment of the Autonomous Government of Castilla-La Mancha	Collaboration agreement for the prevention and fighting of forest fires
Ministry of Environment, Water, Urban development & Housing of the Autonomous Government of Valencia	Framework agreement. Coordination of actions, research studies and projects that contribute to improving the natural areas, habitats and wild flora species in the Community of Valencia
	Collaboration agreement for the prevention and fighting of forest fires
Autonomous Government of Valencia *(Department of Infrastructure, Territory and the Environment)*	"Red Eléctrica Forest"
Autonomous Government of Catalonia *(Department of Environment)*	Collaboration agreement for the definition of corridors and zones of least impact for locating future electricity facilities
Regional Government of Extremadura	Protocol for the coordination of actions/activities associated with the transmission grid
President's Office of the Government of the Region of Murcia	"Red Eléctrica Forest"
Department of Agricultura of the Council of Vizcaya *(Biscay)*	"Red Eléctrica Forest"

Collaborations with research centres and universities

Organisations / Institutions	Collaborations / Agreements
CSIC	Framework agreement for collaboration
CSIC. Biological Station of Doñana	Testing of measures on electricity transmission lines to minimise the possible impact on pseudo-Steppe birdlife. Pilot project
CSIC. Natural Science Museum (Canary Islands)	Advisory service for the census of the Houbara Bustard in Fuerteventura and Lanzarote
University of La Laguna	Framework agreement for the development of joint action programmes in academic and research areas. University Master's regarding Renewable Energies
University Miguel Hernández (Elche)	Predictive model of risk areas for bird collisions with high voltage electricity lines in the Community of Valencia

Collaborations with other organisations

Organisations / Institutions	Collaborations / Agreements
APIA (Association of Environmental Journalists)	Collaboration agreement on environmental information
Fundación Entorno	Agreement by which Red Eléctrica forms part of the companies that collaborate with the Fundación Entorno, Sustainable Development and Business
Fundación Gypaetus	Project for the selection, creation and management of improved habitat areas for the Great Bustard and other Steppe species
Fundación Migres	Bird collision detector on electricity lines. Pilot project.
	Collaboration agreement between Red Eléctrica and the Fundación Migres
	Specific agreement: Effect of light pollution on the migratory routes of invertebrates in the area of the Strait of Gibraltar
	Compensatory measures book
GREFA (Group for the rehabilitation of indigenous fauna and its habitat)	Framework agreement for collaboration
	Reintroduction of the Black Vulture in Catalonia
	Increasing of the Golden Eagle population in Galicia
	Census of the Houbara Bustard in Fuerteventura and Lanzarote
Let's plant for the planet	Collaboration agreement in Murcia and Valencia
SEO (Spanish Ornithological Society)	Framework agreement for Collaboration
TRENCA (Association of friends of the Vallcalent wildlife recovery centre)	Conservation of the Lesser Grey Shrike in Spain

Collaborations with education and communication centres

Organisations / Institutions	Collaborations / Agreements
Association to the Red Life magazine	Sponsoring of the Great Bustard and the Lesser Kestrel
Rural Studies Foundation	Collaboration agreement
Fundación CONAMA	Collaboration agreement
Informative session on the electric vehicle	Sponsorship
Informative sessions "Challenges of environmental journalism in the 21st Century"	Sponsorship

Participation in working groups

In 2012, the Company actively participated in working groups, conferences and debate forums organised by prestigious agencies, entities and associations.

Working groups	Organised by
WG C3.04: "Communication strategies in sustainable development"	CIGRÉ
WG C3.08: "Internalization of external cost for Power Lines"	
WG C3.09 : "Corridor Management"	
WG C3.12: "Methodologies for Greenhouse gas inventory and reporting for tranmission & distribution utilities"	
Working Group "Electric Vehicle"	
Subgroup "Environmental Impact Evaluation"	ENTSO-E
Environmental committee	AEC
Working group on electromagnetic fields	UNESA
Environmental working group on distribution	
Working group on climate change and energy. CO_2 action programme	Fundación entorno
Joint project on plug-in electric vehicles	Very Large Power Grid Operators (VLPGO)
Working group "Flexilwatts" (greater demand flexibility)	
Working group "Storage" (possibilities of storing energy)	

WG - Working Group

9. COLLABORATORS

We consider our suppliers and contractors to be an essential link in the development of our activities, and therefore our commitment to the environment extends to each and every one of them as an integral part of our work team.

In this sense, Red Eléctrica has identified suppliers whose contracted activity could generate a direct impact on the environment. These correspond to construction activities, the treatment of flora and the maintenance of equipment in substations. In 2012, the suppliers of equipment and components whose manufacturing is relevant from an environmental perspective (use of raw materials, water consumption, emissions) have also been contemplated.

In total, 666 providers have been identified regarding environmental risk for which the establishment of a documented Management System is required and / or which must be certified by a third party. The requirement is met by 38 %, a figure which will increase as the successive revisions of contracts for services and supplies are carried out.

Furthermore, in the contractual documentation for the development of the activities the environmental requirements to be met are included (in terms of training and execution of works), and a comprehensive monitoring is carried out to ensure that these are met. In this regard, for construction activities (which may generate an environmental impact), the environmental certification process of works has been launched, as indicated in the first section of this chapter.

Supplier contribution to the carbon footprint

In 2011, a project was started to determine the carbon and water footprint associated to suppliers of goods and services. During that same year a preliminary study was carried out by means of surveys performed on different providers and the analysis of information obtained. During 2013, works will focus on those sectors that contribute to a greater extent to the footprint, such as the manufacturing of equipment and components and the construction of facilities. As 66 % of the total footprint associated with the value chain corresponds to only 10 companies, specific actions will be carried out to improve the information coming from these suppliers, to help determine areas for improvement.

10. LEGAL COMPLIANCE EVALUATION

In order to identify and evaluate the relevant legal requirements, Red Eléctrica has in place a process that systematically covers all the phases of the activity; planning/project, construction and maintenance, and considers not only the requirements originating from European, national, autonomous and local regulations but also those obligations derived from the Environmental Impact Statement and other administrative authorisations.

The evaluation of the annual legal compliance carried out shows there is no breach of legal requirements, and additionally actions are being carried out to comply with requirements associated with the following environmental aspects:

Construction phase	
Requirements	Actions carried out
Waste: In some demolition or renovation works that require it, the study regarding the waste management of construction and demolition is not included in the corresponding execution project.	Increase of the supervision regarding the project documentation by the units responsible.

Maintenance phase	
Requirements in process of being fulfilled	Actions carried out
Waste: Some centres that generate waste are either in the process of sending the corresponding communication to the Administration, in compliance with the new Waste Act in substitution of the authorisation procedure, or if the communication was sent, are waiting for the corresponding administrative resolution.	Frequent meetings or discussions are being held with the various areas of the governments of the autonomous communities responsible for waste matters to learn more about how the new Waste Act is being applied.
Land: Preliminary reports are presented regarding land being considered for new facilities (to be commissioned, or acquired within a period of under two years), or otherwise most autonomous communities are awaiting resolution regarding the preliminary reports concerning land which were submitted in previous years.	Discussions are being held with the various areas of the governments of the autonomous communities to check on the status of proceedings, and response is being given to the resolutions within the established deadlines.
Dumping and water withdrawal: Some wells and septic tanks that have been adapted are pending administrative approval.	**Dumping:** The plan for the replacement of leaking septic tanks for watertight ones (152 replacements) was completed. The adaptation requirements for those septic tanks that require administrative authorisation are being presented to the corresponding authorities (5 of 8 pending). **Water withdrawal:** The plan for the closure of wells and their replacement with water tanks as a water withdrawal source has been completed. Currently pending to be received from the corresponding authorities is the revision of the conditioning factors related to the volume of flow of the wells that are still in use.
Emissions into the atmosphere: existen equipos de refrigeración instalados que utilizan gases que agotan la capa de ozono.	There is some refrigeration equipment installed that uses gas that affects the ozone layer. The plan to replace refrigeration equipment with R-22 is underway and is expected to conclude before 2015. The plan includes an inventory, and labelling of equipment containing fluorinated gases.

11. SANCTIONS AND FINES

The following table details the type of infringement committed and the total cost of the same in sanctions requiring the payment of fines in the period 2010-2012.

Infringement committed	2010 (€)	2011 (€)	2012 (€)
Lack of maintenance of flora / felling and pruning / Abandonment of material / Fire risk	200 [1]	2,014 [2]	90
Unauthorised felling and pruning	1,067 [1]	16,875	300
Fire due to line discharge	13,923 [3]	3,848 [1]	---
Unauthorised works in police area / Obstruction of water way	300	3,100 [1]	---
Activities with high probability of ground contamination	1,050 [4]	---	---
Total Cost €	**16,540**	**25,837**	**390**

(1) The amount corresponds to 2 cases

(2) The amount corresponds to 7 cases

(3) The amount corresponds to 3 cases

(4) The amount corresponds to 5 cases

This data is reviewed annually to include those cases/claims initiated in previous years and that were resolved in 2012.

As a result, the figures affected by cases resolved in 2012 are shown in red.

12. ENVIRONMENTAL EXPENDITURE

During 2012, **5,154,305.26** euros in environmental investments have been made in new facilities, equating to 0.77 % of the total investments carried out in the transmission grid. These investments correspond to the execution of Environmental Impact Studies of all projects, implementation of preventive and corrective measures, environmental supervision of electricity facilities under construction and the application of compensatory measures related to environmental aspects.

Similarly, during 2012 expenditure totalling **16,380,072.06** euros was made in environmental protection and improvement, representing 1.80 % of the total operating costs.

The evolution of environmental expenditure over the last three years can be seen in the following table:

	2010 (€)	2011 (€)	2012 (€)
INVESTMENTS	**6,277,588.17**	**7,027,748.50**	**5,154,305.26**
Engineering and construction of facilities	6,277,588.17	7,027,748.50	5,154,305.26
EXPENDITURE	**18,866,104.90**	**20,306,267.75**	**16,380,072.06**
Development of methodology and systems	**325,885.50**	**45,085.71**	**25,152.97**
Environmental studies and analyses	**112,382.5**	**142,121.00**	**200,429.21**
Environmental actions in facilities in service	**16,079,833.74**	**18,183,847.34**	**14,053,007.55**
Prevention of contamination	870,686.43	727,891.69	1,890,198.13
Protection of biodiversity/Landscaping/Prevention of fires	13,969,816.55	15,851,286.25	11,187,670.49
Climate change	171,677.43	786,070.48	475,359.58
Energy efficiency and saving of resources	111,038.70	181,086.03	236,042.74
Waste reduction and management	956,614.63	637,512.89	263,736.61
Research and development	**618,488.95**	**319,172.00**	**147,799.26**
Training and communication	**575,263.95**	**416,752.75**	**402,004.37**
Environmental training and awareness programmes	18,782.47	27,743.46	11,590.55
Communication	556,481.48	389,009.29	390,413.82
Environmental taxes and levies	**18,139.04**	**23,185.72**	**117,392.14**
Expenditure of personnel dedicated to environmental activities	**1,136,111.22**	**1,176,103.23**	**1,434,286.56**

The following table shows the evolution of the environmental expenditure and investments in environmental aspects as a percentage of the total expenditure and the investment in the transmission grid, respectively:

Percentage of investment and expenditure on the environment		2010	2011	2012
% of investment on the environment (*)	Environmental investment / Total investment in the transmission grid	0.27	0.85	0.77
% of expenditure on the environment	Environmental expenditure / Total operating costs	2.60	2.44	1.80

In addition to the costs indicated above, Red Eléctrica pays out a significant amount of money in environmental taxes due to the presence of our electricity transmission facilities in the autonomous communities of Asturias, Castilla y Leon, Catalonia and Extremadura.

Environmental Taxes	2010 (€)	2011 (€)	2012 (€)
	1,606,728.22	1,454,552.02	6,422,683.58

13. FREQUENCY OF THE ENVIRONMENTAL IMPACT STATEMENT

This Environmental Report which is published annually acts as an Environmental Statement and its purpose is to provide information to all stakeholders concerning Red Eléctrica's environmental behaviour regarding those activities carried out during 2012.

The Spanish Association of Standardisation and Certification (AENOR), with Head Offices at Génova 6 - 28004 Madrid, and Accredited Certifying Body Number E-V-0001, is the entity that certifies that the Red Eléctrica Environmental Statement complies with the requirements set forth in Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community Eco-management and Audit Scheme (EMAS).

The next Statement will be presented and published during the first half of 2014.

GLOSSARY OF TERMS

BIRD-SAVING DEVICES OR "SPIRALS"	A white or orange spiral made of polypropylene (PVC) in the shape of a spiral, measuring 30-35 centimetres in diameter and with a length of 1 metre, which is coiled around the grounding cable or conductor to mark it and alert birds to the presence of the lines in order to reduce the risk of collisions. *(Own definition REE).*
ELECTRIC FIELD:	In a point in space, the force exerted on a static load located at that point. Expressed in volts per metre (V/m). *(50 Hz. Electrical and Magnetic fields REE and UNESA, 1998).*
ENVIRONMENTAL ASPECT:	An element of the activities, products or services of an organisation having or which may an impact on the environment. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
ENVIRONMENTAL BEHAVIOUR INDICATOR:	Specific performance indicators providing information on an organisation's environmental behaviour. *(Standard UNE-EN ISO 14031 Environmental management. General Guidelines).*
ENVIRONMENTAL IMPACT:	Any change in the environment, either adverse or beneficial, that is caused in full or in part by the activity, products or services of any organisation. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
ENVIRONMENTAL MANAGEMENT SYSTEM:	That part of the general management system that includes the organisational structure, planning of activities, responsibilities, good practices, procedures, processes and resources to develop, apply, achieve, revise and maintain the environmental policy and manage the environmental aspects. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
ENVIRONMENTAL OBJECTIVE:	A general environmental objective, which originates from the Environmental Policy and is set out as a goal to be fulfilled by the organisation and which, insofar as is possible, is measured. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
ENVIRONMETAL POLICY:	The general management and intentions of an organisation with respect to its environmental behaviour, put forward officially by its management teams, including the compliance with all the regulatory provisions applicable to environmental matters, as well as the commitment to continuously improve environmental behaviour. It constitutes a framework for the company's actions and for establishing environmental targets and objectives. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
MAGNETIC FIELD:	In a point in space, the force exerted on a live element located at that point. Expressed in amperes per metre (A/m). The international measuring unit is Tesla (T) or any fraction thereof, and in particular the microtesla (μT). *(50 Hz. Electrical and Magnetic fields. REE and UNESA, 1998).*

NESTING DETERRENT:	A device comprised of several elements made of galvanised steel, and of different sizes, that deters birds from nesting or perching in the places where it is installed or on the actual device itself. *(Own definition of REE).*
RED NATURA 2000	The European Natura 2000 Ecological Network is a coherent environmental network comprised of Sites of Community Importance whose management shall take into account the economic, social and cultural requirements, as well as the special regional and local characteristics. These sites are later designated as either Special Areas of Conservation (SACs) or Special Protection Areas (SPAs) for Birdlife. *(Law 42/2007 of 13 December, on Natural Heritage and Biodiversity).*
SIGNIFICANT ENVIRONMENTAL ASPECT:	An environmental aspect that has, or which may have, a significant impact on the environment. *(Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)).*
SPECIAL AREA OF CONSERVATION (SAC):	An area which, based on the biogeographic region or regions to which it belongs, contributes greatly to maintaining or restoring a type of natural habitat (...) in a favourable state of conservation so that it can help considerably in establishing the cohesion of Natura 2000 (...) and/or contributes noticeably to maintaining biological diversity in the biogeographic region or regions in question. For the animal species occupying large areas, the special areas of conservation will usually correspond to specific locations inside the area in which that species is naturally distributed, presenting the physical or biological elements that are essential for them to live and reproduce. *(Directive 92/43/EC, of May 21, on the Conservation of Natural Habitats and Wild Fauna and Flora).*
SPECIAL PROTECTION AREA (SPA) FOR BIRDLIFE:	An area of community interest for the protection of bird species listed in Annex I of the Council Directive 79/409/EEC of 2 April 1979, on the conservation of wild birds.
VISUAL SIMULATION:	An infographic technique (based on computer applications for graphic representation) applied in order to obtain a visual representation of a project, providing an approximate idea of what it will truly look like once completed, and showing the elements that it is comprised of, as well as its integration into its environment. *(Own definition REE).*
WASTE:	Any substance or object belonging to any of the categories established in the appendix to the Waste Act, in which the owner disposes of or has the intention/obligation to dispose of. In all cases, the items listed in the European Waste Catalogue (EWC) will be classified as such. *(Law 10/1998, 2 April, on Waste).*

VALIDATION

DECLARACIÓN MEDIOAMBIENTAL VALIDADA POR

AENOR Asociación Española de Normalización y Certificación

DE ACUERDO CON EL REGLAMENTO (CE) Nº 1221/2009

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Avelino BRITO MARQUINA
Director General de AENOR

Published by:
Red Eléctrica
P.º Conde de los Gaitanes, 177
28109 Alcobendas - Madrid
www.ree.es

Coordination:
Departamento de Comunicación e Imagen Corporativa de RED ELÉCTRICA

Technical Department:
Departamento de Medio Ambiente de RED ELÉCTRICA
mambiente@ree.es

Graphic design, image processing and layout:
breu comunicación - breu@breu.es

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English Translation by:
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