# 2013 Annual Report





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# Letter from the Chairman

Dear shareholders:

As Chairman of the Board of Directors of Elecnor, I am pleased to present our 2013 Annual Report. This report contains a summary of our activities, businesses, strategies and corporate policies in the year, the annual financial statements and the directors' report.

2013 was once again a difficult year domestically, but this was offset by our growing international presence, where sales increased by 24%. This satisfactory international performance was based on a larger contribution to turnover from our foreign subsidiaries, particularly wind farms.

International markets now account for 56% of our sales, at EUR 1,864 million, with domestic sales accounting for the remaining 44%.

Our order book tells a similar story. Our orders at year-end 2013 totalled EUR 2,415 million, compared to EUR 2,185 million at the end of 2012, an 11% increase, with foreign orders once again taking the lead: up 18% at EUR 1,969 million, 82% of the total.

However, as I said at the start of this letter, conditions in Spain remain difficult. The effects of the crisis and the need for all levels of government to consolidate their finances have continued, with historically low levels of public investment. This has resulted in there being very few public sector tenders. This in turn has impacted on investment programmes in many parts of the private sector, including the leading service operators with which Elecnor has a strong relationship. But, as in 2012, the key factor has been the effects of the government's electricity reforms on companies that, like Elecnor, rely on a stable regulatory framework for their major investment programmes as developers of renewable energy projects.

There are three aspects to this reform:

- Royal Decree-Law 2/2013, of 1 February, on urgent measures in the electricity system and the financial sector.
- Royal Decree-Law 9/2013, of 13 July, adopting urgent measures to ensure the financial stability of the electricity system.
- Law 24/2013, of 26 December, on the legal and financial framework for renewable, cogeneration and waste energy production, as set out in the Royal Decree to be debated and approved in 2014. The effects of this were set out in the proposed Ministerial Order sent to the National Markets and Competition Commission ("CNMC") by the Government. These regulations set out the methodology for the specific remuneration regime applicable to facilities that do not achieve the minimums required to cover their costs and compete on an equal footing with other technologies whilst making reasonable returns, in reference to the installation type in each case.

As I told you in my letter in the 2012 Annual Report, these changes to the regulatory framework are unquestionably negative in their impact on the legal security of investments in Spain. This is bound to act as a disincentive for investment in these technologies in coming years. For the second year running, the Elecnor Group has had to test its investments in renewable electricity generating plant in Spain affected by these regulations for impairment. As a result of these tests, a total impairment loss of EUR 138 million in 2012 and 2013 has been recognised on the assets of the companies managing the three solar thermal plants in Spain, in which Elecnor has a 55% stake.

As I have said, this impairment is entirely due to the impact of the Government's reforms on the three solar thermal plants operated by the Group in Spain. At 31 December 2013, our other renewable energy assets were not impacted by these changes, as their fair value at that date exceeded their carrying value in the Group's accounts.

These impairment tests assessed the loss of returns on these solar thermal plants resulting from the new regulatory framework. This will limit the useful lives of these plants to 25 years, set a fair pre-tax return for the first three-year period of 7.398% for each installation type, calculated for a theoretical investment of EUR 225 million, and ends indexation of revenues to the consumer price index (CPI). These parameters and factors differ enormously from those considered by the Group when it decided to become involved in development of such facilities in Spain, which prioritised optimum exploitation of the plants based on high construction quality to minimise the risks inherent to these technologies, seeking to optimise the output levels for which they were designed.

This impairment therefore reflects the loss of

future returns. However, to this we also have to add the loss of revenues in 2013 resulting from the rates applicable to the Group's electricity generation plants in Spain from 14 July, which reduced consolidated turnover by around EUR 13.5 million in the second half of 2013. If this effect had applied from the start of the year, the impact would have been some EUR 27 million.

Taken together with other relevant factors (such as the unfavourable Brazilian real-euro exchange rate), this limited consolidated net profit for the year to EUR 53.3 million, compared to EUR 87.6 million in 2012.

Performance in EBITDA terms, which is not influenced by the deterioration of renewable assets, was more positive. Despite being down on 2012, the EUR 220.4 million achieved was 5% up on 2011, the last year not affected by the electricity reforms.

2013 was the final year of our 2011-2013 Strategic Plan. Despite the changes to the regulatory environment for the electricity industry stopping us achieving our sales and net profit targets for the three year period, the Group retained the trust of the stock markets in 2013 through its general performance in this complex situation and the continuity of its shareholder remuneration policy, entirely through cash dividends.

Elecnor shares rose 18.1% in 2013 to EUR 11.18 from EUR 9.47 per share at the end of 2012. The dividend yield was 2.8% in 2013 compared to 2.7% in 2012. The total shareholder return - the sum of the change in the share price and the dividend yield- in 2013 was 20.9%.

Our efforts to maintain a dividend policy in keeping with the expectations of our shareholders, whilst also pursuing the prudence required in today's market, has led the Board of Directors to propose the payment of a second interim dividend out of 2013 profits of EUR 0.1856 per share. If this proposal is approved, the total paid out of 2013 profits (including the interim dividend paid out in January 2013) will be EUR 0.2338 per share.

I believe it is worth mentioning our efforts to maintain the level of dividends distributed, which fell by 10% even though the fall in individual net

L'Érable wind farm (Canada) profit exceeded this. This continues our policy of last year, when the total dividend remained unchanged, despite the decrease in individual net profit. Taken together, the pay-out in 2013 as a result of these decisions was three and a half times that in 2011, at 73%. This fits perfectly with Elecnor's philosophy of seeking to avoid sharp changes in its dividends, pursuing the greatest possible stability.

The development of our new three-year Strategic Plan for 2014-2016 involved deep reflection within the Group on the basis of our medium and long-term development. The approach defined involves seeking maximum efficiency in our investments, at a time of limited resources. Our approach also involves efficient management of our human capital and policies to drive our growth and make us more productive. The Plan also consolidates our asset position, consisting of operating services through investment in wind power, energy transmission systems and other strategic assets, without at any stage overlooking our founding purpose and the heart of our Group today: infrastructure engineering and construction projects and services. Finally, the Plan seeks to consolidate our international expansion, which in practice means developing into a true global corporation.

I invite you to find out more about our activities, business, strategies and corporate policies in 2013 in this Report. You will find there is a common thread throughout all of this: the Elecnor Group's commitment to remaining a flagship in Spain and worldwide for engineering at the service of society, the mission for which we were created 56 years ago.

Yours sincerely,

Frede Amh

Fernando Azaola Chairman



# Board of Directors

# Chairman

Mr. Fernando Azaola Arteche

# **Deputy Chairman**

Mr. Jaime Real de Asúa Arteche

# **Chief Executive Officer**

Mr. Rafael Martín de Bustamante Vega

# **Board Members**

Mr. Gonzalo Cervera Earle The Honourable Sir Mr. Cristóbal González de Aguilar Enrile Mr. Juan Landecho Sarabia Mr. Fernando León Domecq Mr. Miguel Morenés Giles Mr. Gabriel de Oraa y Moyúa Mr. Rafael Prado Aranguren Mr. Juan Prado Rey-Baltar

# Secretary and Director

Mr. Joaquín Gómez de Olea y Mendaro



# Key economic figures

# **Elecnor Group**

At 31 December of each year and in thousands of euros

Results figures	2011	2012	2013
Operating profit	146,279	194,926	141,541
EBITDA	209,297	263,666	220,430
Pre-tax profit	165,356	138,646	109,066
Net profit	115,088	87,593	53,289

## Equity of

parent company	2011	2012	2013
Equity of			
parent company	541,472	516,539	451,373



EBITDA



## FINANCIAL DEBT



Turnover	2011	2012	2013
Sales	1,871,508	1,930,712	1,864,174
National	1,205,238	1,086,735	818,004
International	666,270	843,977	1,046,170

Other figures	2011	2012	2013
Workforce	11,543	12,952	12,637

# SALES



Figures in millions of euros

# SALES BY MARKET

WORKFORCE



# ORDER BOOK





# Balance sheet trends

In thousands of euros

ASSETS	2011	2012	2013
Goodwill	24,829	32,289	32,360
Intangible property	72,363	75,479	70,506
Tangible fixed assets	763,009	1,016,211	1,093,068
Investments accounted for using the equity method	71,624	101,935	92,375
Non current financial assets	564,231	643,857	697,145
Deferred tax assets	82,974	79,867	74,267
Total non-current assets	1,579,030	1,949,638	2,059,721
Non-current assets held for sale	8,675	5,571	4,370
Inventories	70,362	85,816	36,328
Trade and other receivables	999,628	922,802	910,173
Trade receivables from related companies	47,964	1,539	47,525
Tax receivables	45,281	70,932	73,634
Other receivables	15,060	17,788	10,303
Other current assets	2,752	4,062	7,899
Cash and cash equivalents	264,002	532,324	248,674

Total current assets	1,453,724	1,640,834	1,338,906
TOTAL ASSETS	3,032,754	3,590,472	3,398,627



Construction of the Sant Joan de Déu retirement home and day centre in Martorell, Barcelona

In thousands of euros

LIABILITIES	2011	2012	2013
Share capital	8,700	8,700	8,700
Reserves	422,347	424,909	393,577
Profit for the year attributable to	11E 000	97 602	E2 200
	115,000	07,575	55,209
Interim dividend for the year	-4,663	-4,663	-4,193
	541,472	516,539	451,373
Minority interests	48,632	41,663	81,112
Total equity	590,104	558,202	532,485
Deferred income	15,644	16,733	19,238
Provisions for contingencies and charges	36,851	33,696	22,948
Financial debt	748,159	1,232,129	1,096,883
Other non-current liabilities	30,632	33,352	19,454
Deferred tax liabilities	36,659	45,009	61,628
Total non-current liabilities	867,945	1,360,919	1,220,151
Financial debt	179,366	224,557	315,588
Trade payables to associates and related companies	3,529	4,532	3,623
Trade and other payables	1,259,162	1,306,906	1,128,523
Other liabilities	132,648	135,356	198,257
Total current liabilities	1,574,705	1,671,351	1,645,991
TOTAL EQUITY AND LIABILITIES	3,032,754	3,590,472	3,398,627

# Stock market information

# MONTHLY SHARE PRICE PERFORMANCE AND TRADING TRENDS IN 2013

	Monthly						Trading volume		
	Days listed	Maximum	Minimum	Average	Closing	Shares	Cash		
JANUARY	22	10.17	9.18	9.68	9.43	3,309,526	32,038,891.18		
FEBRUARY	20	9.65	8.86	9.18	9.30	214,283	1,968,069.00		
MARCH	20	9.36	8.82	9.04	9.08	158,711	1,434,384.83		
APRIL	21	9.09	8.10	8.49	8.63	513,113	4,355,503.00		
MAY	23	9.45	8.30	7.94	9.37	9,263,006	73,587,392.53		
JUNE	20	10.86	9.23	9.69	10.30	1,406,038	13,626,701.00		
JULY	23	10.49	9.21	9.88	10.32	1,469,466	14,515,206.53		
AUGUST	22	10.90	9.84	10.41	10.74	668,256	6,959,666.60		
SEPTEMBER	21	10.79	10.44	10.66	10.65	207,918	2,215,389.12		
OCTOBER	23	11.17	10.17	10.74	10.79	734,025	7,881,018.35		
NOVEMBER	21	10.99	9.91	10.41	10.57	685,210	7,129,666.06		
DECEMBER	20	11.54	9.75	10.43	11.18	616,394	6,426,673.98		
TOTAL 2013	256	11.54	8.10	8.94	11.18	19,245,946	172,138,562.18		

DIVIDEND PER SHARE	2009	2010	2011	2012	2013
Dividend per share	0.2305	0.2874	0.2598	0.2598	0.2338
Interim	0.0521	0.0526	0.0536	0.0536	0.0482
Final	0.1784	0.1911	0.2062	0.2062	0.1856*
Extraordinary	-	0.0437	-	-	-
Dividend/net profit (Pay-Out) (%)	36.72	17.21	21.77	52.25	73.05

\* Proposal of the Board of Directors to the Shareholders' Meeting

# ANNUAL CHANGE OVER 5 YEARS







# Elecnor worldwide



Australia

South Africa

Algeria Angola Argentina Australia Bangladesh Brazil Cameroon Canada Chile China

Iran

Congo Dominican Republic Ecuador France Germany Ghana Greece Guatemala Haiti Honduras India Iran Italy Mauritania Mexico Morocco Nicaragua Panama Paraguay Peru

China

Bangladesh

India

United Arab Emirates

> Portugal South Africa **Spain** United Arab Emirates United Kingdom United States Uruguay Venezuela



# Businesses

Elecnor is one of the leading global players in engineering and the construction and development of infrastructure projects. The intense diversification undertaken over the last two decades has also led Elecnor to work on development and investment projects in a range of fields, including renewables, energy transmission systems, the environment and space. The combination of all these capacities has shaped a business model that is turning ever more towards international expansion, without forgetting its roots and vocation to retain a presence in in Spain.



Lighting of Madrid's Matadero Contemporary Art Centre

# Elecnor in 2013



# Economic conditions in Elecnor's main markets

# Spain

The Spanish economy followed a weak upwards path in 2013, finally pulling out of the recession it had fallen into in 2011. This happened at a time of reducing tension in financial markets, foreign financial flows returning to normal and incipient improvements in confidence and the labour market. Following third quarter GDP growth of 0.1%, the Spanish economy grew by 0.2%quarter-on-quarter in the fourth quarter. Despite this increase, Spanish GDP was down 1.2% over 2013 as a whole, reflecting lags in the effects of lower activity in late 2012.

This was due to contraction in domestic demand, a trend which reversed over the course of 2013. For example, private consumption started to increase in the third quarter. The negative

contribution of public-sector components to economic activity also reduced following the European Council's June decision to relax the deficit target. For the sixth year running, the impact of the contraction in domestic spending was offset by increased exports, particularly relating to tourism.

However, this recovery was not reflected in the infrastructure sector. Construction fell by 23% in 2013. Despite a 22.9% increase in new tenders for public works projects across all levels of government compared to 2012, effective tender awards were down 38%, according to the SEOPAN construction company association, to one of the lowest levels on record, at EUR 2,751 million.

The Government also reformed the energy market seeking to resolve the structural deficit: this involves a cost adjustment for the system of

EUR 45,000 million, with higher electricity bills and a drastic cut in revenues for renewable energies (refer to chapter 3 for further details).

## Latin America

Latin American countries were affected negatively by a slowdown in world trade, more difficult financing conditions and less favourable commodity markets than in 2012, recording modest growth rates. Only Peru and Colombia bucked this trend of low growth last year, with growth of 5.4% and 4%, respectively.

Following the slowdown in Brazil in 2012, growth in 2013 stood at 2.5%, whilst Mexico grew by 1.3%.

Turning to the energy sector, the rapid growth in Brazil is a highlight, with consumption expected to increase by over 50% in the coming decade. Installed capacity at the end of 2013 stood at 126,700 MW in 3,907 plants, including thermal, wind, nuclear, mini-hydro, large-hydro and solar plants. Hydroelectricity is the predominant source, accounting for 67% of installed capacity, followed by thermal electricity, at 29%. There are now major commitments to wind power, which accounts for just 1.7% of the total, and solar photovoltaic, which is still claiming a foothold.

Wind power accounts for 1,289 MW of installed capacity with 2,460 MW under construction, well short of the region's 40,000 MW potential. Mexico is one of the five most attractive countries in the world for solar energy, as it forms part of the solar belt receiving solar radiation in excess of 5 kW/h per square metre per day; it also has the largest photovoltaic module manufacturing base in Latin America.

Chile maintained its commitment to renewable energies in 2013, with installed capacity



230 kV substation Cascavel Norte, Brazil increasing by 23%. Act 20/25 was approved during the year, setting a 20% target for renewable energy in the country's energy mix by 2025.

Brazil and Mexico were the leading infrastructure investors in Latin America. Including Chile and Colombia, planned infrastructure investment totals EUR 460,000 million.

Brazil is planning EUR 62,500 million of infrastructure investment, of which EUR 36,000 million will be invested in improving its road and rail networks. One of the flagship projects is the Rio-Sao Paolo high-speed rail link. This project has attracted the interest of a number of Spanish companies, who have formed a consortium. Elecnor is a member of this consortium.

Mexico is planning a range of infrastructure tenders, worth EUR 300,000 million to 2018. 35% of this will be invested in transport projects and the remaining 65% in energy infrastructure. This will create many opportunities, such as gas pipelines, roads, the Mexico City-Queretaro high-speed rail link and the Merida-Punta Venado trans-peninsular rail link.

At year-end 2013, Chile had tenders underway worth EUR 2,200 million, including the new Vespucio Oriente urban motorway, the new Santiago international airport, a new bridge and several hospitals. Water is one of the country's main challenges. Its 2010-2025 National Aquifer Resource Strategy prioritises the construction of 16 new dams, increasing the country's water storage capacity by 30%.

## North America

The USA has grown into the largest producer of oil and natural gas in the world, outstripping Russia and Saudi Arabia. This is explained by the volume of hydrocarbons being exploited in Texas and North Dakota, and the natural gas being extracted from porous rock in some East-coast states. The US Department of Energy expects oil production to remain at 10 million barrels per day between 2020 and 2040, whilst it forecasts that liquid fuels will increase to 18 million barrels per day in two and a half decades.

It is noteworthy that this increase in fossil fuel exploitation is not being accompanied by an increase in investment in clean energy, which appeared to be the key to US energy independence until a few years ago. In fact, renewable energy was down 41% in 2013.

The USA experienced the highest infrastructure growth in the last five years, driven by increased private construction projects. Construction spending was up 1%, to an annual USD 934,400 million, the highest level since March 2009, according to figures from the US Department of Commerce.

According to figures from the Global Wind Energy Council, Canada was in ninth place for installed wind energy in early 2013, with installed capacity of 7,800 MW by year end. The market is expected to grow by 1,500 MW per year over coming years, although many Canadian provinces will reach the maximum capacity they can contribute to the existing electricity grid by 2016.

In terms of infrastructure, investment in nonresidential building totalled 12,900 million dollars in the fourth quarter of 2013, 1.1% up on the previous quarter. This was the second consecutive quarterly increase, due mainly to increased spending on commercial building construction.

## Africa

Economic growth in macroeconomic terms in Africa in 2013 is estimated to have been weaker than the previous year, at 2.5%. However, the continent has significant potential for the coming years. For example, economic growth bounced back strongly in 2013 in Sub-Saharan Africa, boosted by strong internal demand. According to World Bank figures, GDP for this part of the continent, –excluding South Africa (which grew by over 6% on its own), increased by around 4.7%.



FIGURES



Projects to improve electricity supply and infrastructure (roads, railways, etc.) are two major pending issues. Some countries, such as Cape Verde, Namibia, Uganda and South Africa are already investing large shares of their budgets in infrastructure.

Angola and Algeria are two of Elecnor's major markets in Africa, and both have reported significant growth rates. GDP in Angola is estimated to have grown by around 6.9% in 2013, with a growing list of opportunities for direct investment and development of public projects in areas such as electricity (generation, transmission and distribution), renewable energy, water and sewage, solid waste processing, hospitals and health, agro-industry and transport equipment.

Although Algeria's growth in 2013 is estimated to have been lower than Angola's (at 2.7%), it continues to offer many opportunities under its current five-year public investment plan for 2010-2014, which is investing 286,000 million dollars in construction, educational and health infrastructure, railways and urban transport (underground and trams), roads, water management and treatment and renewable energy.

# Growing international sales and order book

Elecnor's consolidated sales totalled EUR 1,864 million in 2013. The international market accounted for 56% of the total, after a 24% increase, and the domestic market for the remaining 44%. The figures underscore the Elecnor Group's commitment to international markets as the growth driver for the coming years, without losing sight of the domestic market while it waits for recovery to begin.

Driving revenue in the year were the larger contributions by overseas wind farms and by subsidiaries operating outside Spain. Highlights included:

- Construction of a solar photovoltaic plant in the USA for the corporation PG&E.
- The acquisition on 1 November 2013 of assets and contracts from the US company Hawkeye, which operates on the East coast.
- Construction in Mexico of the Morelos gas

pipeline, which will serve the Mexican Federal Electricity Committee (CFE).

These helped offset lower revenue from power generation projects in which the Group participates and the impact of lower (public and private) investment in sectors in which the Group has operations in Spain.

The order book at 31 December 2013 stood at EUR 2,415 million, compared to EUR 2,185 million at the end of 2012, an increase of EUR 230 million or 11%. By market, the international order book increased by 18% to EUR 1,969 million, 82% of the total. Meanwhile, the domestic backlog decreased by 15%, to EUR 446 million.

# Areas and businesses

Elecnor's operations are structured around three major business lines:

Infrastructure: this is Elecnor's core business, both in terms of its experience and financially. The Group provides end-to-end management of electricity, power generation, telecommunications and systems, installations, gas, construction, maintenance, environmental and water, railway and space projects.

Thanks to its long-standing ties with the leading utilities and gas and telecommunications operators, Elecnor has been an active player in the deployment of key energy and communications infrastructures. In line with its development, and technical and engineering expertise, it can now undertake major generation projects, such as combined cycle plants, solar PV plants and gas pipelines, particularly in overseas markets.

**Renewable energies:** Elecnor is a developer and contractor of turnkey wind power, solar thermal and hydroelectric projects.

Having already participated actively in the development of some of Spain's most important renewable facilities, around a decade ago Elecnor began to look abroad. Major achievements abroad include the development of over 600 MW of wind capacity in Brazil and Canada, and the construction of a large solar PV plant in California. **Concessions and investment:** Investment in renewable energy projects complement other businesses in which Elecnor, as developer of its own projects, operates, normally under concession arrangements. These include electricity infrastructure, gas infrastructure and environmental projects.

The Company's first incursion into concessions started in 2000 in Brazil's electricity transmission line network. By the end of 2012, Elecnor had interests in 11 concessionaires in this country. In Chile, where the Company began operating five years ago, it is working on two projects in this sector.

The contribution by each specific business to the Group's revenue in 2013 was as follows:



ERCAT DE CALAFELL

Construction of Tarragona's Calafell municipal market

# Infrastructure

Outfitting of Porta Firal Tower 3, Iberdrola Inmobiliaria (Barcelona) The infrastructure business is Elecnor's core business, both in terms of its experience and financially. The Group provides end-to-end management and can carry out viability studies, basic and technical engineering, construction, supply, installation and assembly, commissioning and operation and maintenance services. Its main projects are in the electricity, power generation, telecoms and systems, installations, gas, construction, maintenance, environment, water, railways and space sectors.

# Electricity



The Spanish government's electricity sector reforms have had a significant impact on the main utilities, creating a difficult background for companies who -like Elecnor- work on a wide range of programmes for them. Growth abroad, particularly through the acquisition of the US company Hawkeye, and growth in one particular sector -public lighting- established this sector as the main source of the Group's revenue in 2013, accounting for 35.9% of the total.

# Spanish market

In Spain, Elecnor has maintained and extended some of its framework contracts. We have increased our share under the framework medium and low-voltage contract with Iberdrola by 8%, to 35%, whilst the framework contract for substation activity with Iberdrola has been extended until mid-2014.

This was also the case with HC Energía, a customer where we have expanded from working only on the overhead grid to also working on the underground grid, spreading the area of influence from Llanes to Gijón and Avilés, all of which are in Asturias. Elecnor also has the largest share of any contractor with this company, at 41%.

In Endesa's tender for medium and low-voltage activities, concentrators and remote management in all areas, Elecnor was awarded the management of remote services and regulated operations. This partially offset the reduction in volume in the distribution contract resulting from the aforementioned reduced investment by the utilities

There were no changes to the framework contracts with Gas Natural Fenosa and Eon during the year. The framework contract for substation protection and metering systems in Tenerife and preventative and corrective maintenance of telecommunications equipment and infrastructure in Castilla and Leon with REE was also renewed.

Some of the major projects commenced include:

- Cladding of Tranche II of the 400 kV Bescanó-Ramis-Santa Llogaia line
- Laying of Tranche II of the 400 kV Brovales-Guillena line

Elecnor is also involved in the project being run by the Ente Vasco de la Energía (the Government of the Basque Country's Department of Industry and Energy) in Armintza, Vizcaya. This project, known as BIMEP (Biscay Marine Energy Platform), is a global flagship for research, demonstration and operation of wave energy capture systems on the open seas. In 2013, Elecnor began work on laying the submarine cable for the marine infrastructure. This work was completed in 2013, with the exception of protecting the cable by burying it in the seabed at a depth of 0.8 to 1 metre, which is expected to be completed in spring-summer 2014.



# International market

As with its other areas of activity, Elecnor is working on expanding its electricity operations in its international markets. Elecnor's agreement with Willbros of the US to acquire its subsidiary Hawkeye LLC was a major development in this area in 2013. With turnover in excess of USD 80 million, Hawkeye provides engineering, construction and maintenance services to the electricity, natural gas and telecoms industries. This deal strengthen Elecnor's position in the US and will help drive its expansion in this market.

The agreement includes, inter alia, the acquisition of equipment and key contracts for electricity transmission and distribution projects, natural gas, substations, telecoms systems, engineering and construction. Elecnor Hawkeye LLC will provide infrastructure services serving electricity and gas companies in the North East and Mid-Atlantic states, where Hawkeye has a strong track record.

This acquisition complements our 2012 acquisition of. 55% of the Scottish company IQA, which specialises in low voltage supply. Scotland has excellent potential as a market. In 2013, it began working on medium-voltage projects for the first time, one of the strategic objectives established when IQA was incorporated into the Group. This involved two projects for Scottish Power, Iberdrola's subsidiary in Scotland.

We also consolidated our presence in Italy through the framework medium and low-voltage contract agreed in 2012 for the Piedmont area. Turning to other markets:

# South America

In Brazil, in 2013 we continued work on the major electricity transmission projects contracted in 2012, including IMTE, CAIUA and TSLE, which together total around 650 km of 500 kV power lines, 150 km of 220 kV power lines and 8 substations, with a total transformer capacity of almost 1,500 MW. The IMTE and CAIUA projects are being carried out for consortiums in which Elecnor is also an investor, whilst TSLE is for a consortium of two state companies.

In order to consolidate the activities in which we are active and diversify into other sectors, we strengthened our organisation in Brazil to increase opportunities in generation, facilities, energy efficiency and energy transmission in 2013.

In Chile, we continued construction work on the "2x500 kV Ancoa-Alto Jahuel line, laying of first circuit" in 2013. This is expected to come into service in 2014. The project involves 255 kilometres of 500 kV power lines and grid connections for each of the substations.

In 2013, we carried out the design work, and obtained permits and environmental authorisation for the "2x500 kV Charrúa-Ancoa line, laying of first circuit" project. We were awarded the contract for this 196.5 km, 1,400 MVA line in 2012.

In August 2013, Chile's National Energy Commission awarded the upgrading of the 255 km "2x500 kV Ancoa-Alto Jahuel, laying of second circuit" project to Elecnor.

Expansion of the Juana la Avanzadora 230/115 kV/13.8 kV substation (Venezuela) In Argentina, we renewed the contract for voltage-related work in two of the country's main oil producing regions with YPF: the Neuquén and Mendoza fields. We also undertook electricity hook up work between oil wells for YPF. These hook ups were achieved through overhead medium-voltage lines. We also began work on building the 132 kV line linking Caleta Olivia and Santa Cruz Norte, together with the substations at the end of the line in both towns.

In Uruguay, we were awarded the contract for electricity evacuation from a 100 MW wind farm. The project includes the wind farm's internal substation, the connection and measurement point and the 150 kV evacuation line. The first phase of the Montes del Plata 150 kV grid connection project in Uruguay has been completed and the second phase started; this will generate up to 124 MW/hour from waste from cellulose production. The project involves installation of 35 km of 150 kV double ternary lines connecting the Punta Pereira substation with UTE's Colonia substation.

In distribution activity, the electrification projects in the north of Uruguay are noteworthy, involving development of over 150 km of 15 kV lines and over 100 km of 30 and 60 kV lines, together with refurbishment of three 150 kV substations. The construction of the 150 kV Punta del Este GIS substation (UTE) and the 500/150 kV UTE Melo substation is also noteworthy.

# **Central America**

2013 was a difficult year in Central America as a

result of elections in the region, with the resulting restrictions on public investment projects.

Elecnor therefore turned to private customers, taking part in tenders launched prior to these elections, submitting offers for substation and transmission line projects in Guatemala, Honduras and Costa Rica.

We completed a number of projects in the Dominican Republic for ETED (Empresa de Transmisión Eléctrica Dominicana): the "Julio Sauri substation-Pizarrete substation" 138 kV D/C duplex transmission line and the refurbishment projects for the electricity grids of the Corporación de Empresas Eléctricas Estatales (CDEEE) in the Edeeste and Edenorte concession regions. We also completed the 111 km, 230 kV D/C simple transmission line connecting the Quisqueya substation to the Mina de Pueblo Viejo substation.

We were also awarded a number of new contracts in the Dominican Republic, such as the contract signed with Haina in November for a 138 kV interconnection, measuring 800 m in two circuits, one duplex and one triplex. In December we signed two new contracts for 138 kV transmission lines with ETED (Empresa de Transmisión Eléctrica Dominicana): one stretching 53 km in a double circuit connecting the Nagua substation with the Río San Juan substation; and one stretching 36 km in a simple circuit from the San Pedro de Macorís substation to the Hato Mayor substation.

In Guatemala we carried out substation improvement work, whilst in Nicaragua we





FIGURES

Construction of the Dos Bocas drilling fluids plant, Tabasco (Mexico)



# 50 % Councils' public lighting

costs have been slashed by half thanks to Elecnor's energy efficiency measures

64,436 new lights included in

Elecnor's public lighting portfolio in Spain in 2013

107,690 lights managed in this way in Spain at year-end 2013 supplied spare parts for the Centroamérica generating plant in the capital, Managua.

## Mexico

In Mexico, a contract was signed with Pemex Refinación to refurbish the 115 kV SF6 electricity substation at the Bocatoma pumping station at the Minatitlán refinery, in Veracruz. In Venezuela, we signed a contract with the state company Corpoelec for extension of the 230/115/34.5/13.8 kV Juana la Avanzadora substation, which will incorporate 360 MVA and 50 kms of transmission lines into the national grid. We were also involved in several other contracts, such as that for the Juan Manuel Valdez thermoelectric plant.

# Angola

In 2013, we inaugurated two important electricity projects in Angola: the 220 kV Viana Filda transmission system, which is now playing a key role in the electricity supply to the capital, Luanda; and upgrading of the 60 kV Benguela-Cavaco substation, guaranteeing stable electricity supplies in Benguela, the third largest city in Angola and an important centre for tourism and industry.

Work also continued on a number of other major projects. These included the 220 kV Cacuaco Boavista transmission system (including 20 km of 220 kV line through urban areas and the first 220 kV GIS substation in the country), refurbishment of the 220 kV Camama and Viana substations and construction of the 60/15 kV Gika GIS substation.

2014 will be an important year for Elecnor's electricity activity in Angola, with the start of work on the new 400 kV Cambambe-Catete line.

# Public lighting

The rapid growth of towns and cities in Spain has triggered a sharp increase in the amount of energy consumed by municipal facilities. Public lighting represents the greatest expense and energy consumption, accounting for up to 70% of councils' electricity consumption. Elecnor actively participates in public lighting tenders as an energy service company (ESC) and offers town councils the opportunity to implement energy efficiency measures that can help cut these costs by up to 50%.

Elecnor is a certified ESC which means it can develop various energy efficiency projects in public lighting installations in towns as well as in the tertiary and industrial sector. In those public lighting projects where Elecnor is an ESC, it is responsible for the financing, energy management, maintenance and guaranteeing the project over the life of the concession or the mixed supply and service contract.

In 2013, Elecnor won 12 new contracts for 64,436 lighting points contracted as ESCs; together with those already under management, 107,690 lighting points were being operated in this way in Spain at the end of 2013.

Outside Spain, there was a great deal of activity in Chile, where we won 3 new contracts:

- Maintenance, repair and upgrading of public lighting under energy efficiency criteria in the municipality of Vicuña. This involves the repair and maintenance of 3,029 lights in the public lighting system.
- Maintenance, repair and upgrading of public lighting under energy efficiency criteria in the municipality of Peñaflor, involving the repair and maintenance of 5,082 lights in the public lighting system.
- The project to install public lighting in various parts of Colbún in 2013 was awarded by public tender and involves installing and expanding public lighting in Callejón los Naranjos, Sector Bazaes and Villa Sur in the city of Colbún.

Another highlight was the award of our first energy service contract for buildings, for Madrid's Empresa Municipal de Transporte (EMT).



# Electricity infrastructure for a large industrial complex: the new Cartagena lubricants plant

Elecnor is involved in the construction of the group III base lubricants plant in Cartagena, one of the largest industrial investments currently underway in Spain. This will be commissioned in 2014.

The project is being developed by Sksol Lube Base Oils, which is 70% owned by the Korean company SK Lubricants and 30% owned by Repsol Petróleo.

Involving investment of around EUR 250 million, this will be the "largest plant in Europe" for the manufacture of the latest generation of lubricant bases. The Escombreras factory will be able to supply 20% of global and 40% of European consumption of group III lubricants, which improve engine performance, reduce  $CO_2$  emissions and help protect the environment.

PEOPLE

Elecnor is building 66 kV overhead lines for the company and the outdoor facilities and a 66 kV underground subscriber line to power the new plant. Construction of these facilities is following best international engineering practices and complying with the most stringent environmental and safety regulations. Elecnor has undertaken to conduct its activities so as to minimise environmental risks and impacts, achieving a high level of safety in its processes, facilities and services. It is focusing in particular on protecting employees, subcontractors, the customer and the local environment.

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Agua Prieta II combined cycle plant, Mexico
## Power generation

One of Elecnor's traditional distinguishing features is its involvement in large power plants. Today this is based on its technical and engineering capabilities and its experience across a wide range of projects, in Spain, Latin America, North America and Africa.

#### Combined cycle plants

One of Elecnor's major projects in this field is the Agua Prieta II combined cycle plant in Mexico for the country's Federal Electricity Commission (CFE). This includes the design, engineering and supply of equipment and materials (excluding turbo generator equipment), and construction, installation and testing of the plant's safety and efficiency. The plant is located in Mexico's Sonora state, with guaranteed net capacity of 394 MW.

The plant features two Mitsubishi 501F gas turbines, each with its own heat exchanger, a steam turbo-generator, cooling, condensing and feeder systems, and all the auxiliary equipment and systems required, including interconnection to the 230 kV conventional electricity substation.

Provisional acceptance for commissioning is expected in mid-2015.

#### Thermoelectric plants

Elecnor is implementing the EDC-Sur project in Venezuela. This turnkey project involves a 140 MW thermoelectric plant for CORPOELEC (Corporación Eléctrica Nacional de Venezuela), based on twin turbines.

The plant's main features are a  $3,300 \text{ m}^3$  fuel tank, a  $1,000 \text{ m}^3$  filtered fuel tank, a  $3,800 \text{ m}^3$  raw water tank, a  $1,000 \text{ m}^3$  demineralised water tank,

a demineralisation plant, a fuel processing plant and expansion of a 230 kV substation with an breaker-and-a-half configuration and preparation of a substation bay, together with all buildings, supplies and related mechanical, electrical and civil engineering works.

In Venezuela, we also continued the development of the Juan Manuel Valdez thermoelectric plant, consisting of a simple 350 MW cycle. We developed almost all of the basic engineering for the project in 2013, and started the procurement of electrical equipment, such as step-up transformers, generator switches, etc.

Work is currently underway. We have completed earth moving work, provisional roadways for the plant and temporary site facilities, and we have made significant progress on the pedestals for the turbine. Elecnor has installed its own 120 m<sup>3</sup>/h concreteproduction plant on site to ensure concrete is produced correctly for the project.

#### Hydroelectricity

Elecnor's activity in the area of hydroelectric power includes turnkey projects as well as operation and maintenance projects. Elecnor has participated in the development and construction of a number of power plants and thanks to its know-how is able to participate in all stages thereof. 1,003 MW of total accumulated wind capacity

**394**<sub>MW</sub> of guaranteed net capacity at Mexico's Agua Prieta II combined-cycle plant

490 MW

thermoelectric plants in Venezuela

150 MW of solar thermal energy in Spain

#### 309 MW of solar photovoltaic

of solar photovoltaic capacity developed by the Elecnor Group in various countries from when it entered the market and the end of 2013 STRATEGIES

Elecnor builds the Cambambe 2 hydroelectric plant in Angola

Having completed the refurbishment of the Cambambe hydroelectric plant in Angola, one of Elecnor's most singular projects, a new plant - Cambambe 2- is now being built, using the same dam as its predecessor.

Cambambe 2 is a construction, supply and assembly project for a new hydroelectric plant in this African country.

Cambambe 2 is the third hydroelectric plant project carried out by Elecnor in Angola. The others are the Gove facility, which started up in July 2012, and the upgrade of the Cambambe plant, which was completed in December 2012. Encruzo Novo 230 kV power line and 100 MVA Miranda II substation (Brazil)

Elecnor won a number of important projects in Angola (the Cambambe 2 plant) and Congo in 2013. The latter consists of the modernisation of the Inga I hydroelectric plant. This project was put out to tender by the national electricity

It involves the installation of four 178 MW turbines, for a total capacity of 708 MW. This is approximately double Angola's current installed hydroelectric capacity.

Elecnor, as part of a consortium with Voith Hydro, is responsible for the electromechanical aspects, including assembly of the turbine and generator (supplied by Voith) and supply and assembly of the electricity and mechanical BOP, the 15/220 kV 4 x 200 MVA step-up transformers and the 220, 400 and 60 kV substations.





EDC-Sur thermoelectric plant (Venezuela)

supplier, Société Nationale d'Électricité (SNEL), and is being carried out by a consortium consisting of Elecnor and the German company Voith.

In Honduras, we are operating and managing the Nacaome hydroelectric plant, which was built by the Elecnor Group. We also carried out a feasibility and basic engineering study in Honduras for the new El Petacón hydroelectric complex and completed construction of a similar plant, Qulio 2.

#### Wind and solar power

Elecnor has a proven track record in turnkey construction projects for wind, solar thermal and solar PV facilities.

Some of the Group's main projects in 2013 included construction of the first wind farm in Mauritania, its first such project in Africa.

This project is in Nouakchott, the country's capital, and is financed by the Arab Fund for Economic and Social Development, with operating capacity of 31.5 MW.

Elecnor is also developing a 3 MW photovoltaic plant at Zouerate in Mauritania. Elecnor has also competed its first solar photovoltaic plant in the USA, a 20 MW installed capacity facility contracted by the Pacific Gas & Electric Company (PG&E). PG&E is one of the country's leading natural gas and electricity suppliers, with around 15 million in Northern and Central California.

For more information on our global capabilities and projects in these areas, particularly those projects where Elecnor is not just the constructor but also the developer and investor, please see the Renewables section of this Annual Report.





# Telecommunications Systems

Services for large telephony operators are a growing area of infrastructure activity for Elecnor. This includes engineering and design, site location and network planning, trench excavation and auxiliary civil works, installation and connections, operation and maintenance, etc. In addition to these services, the group has developed capabilities to develop and manage telecommunications systems for multiple market requirements.

he main development in the Spanish landline network in 2013 was the general roll out of the FTTH network throughout the country. This was led by Telefónica, which has reached an investment pooling agreement with Jazztel. Faced with this strategic alliance, Orange and Vodafone have also entered into an investment pooling agreement for FTTH. Meanwhile, Ono is rolling out its current HFC network.

In mobile telephony, the main operators in Spain -Telefónica, Vodafone, Orange and Yoigo- are rolling out their own 4<sup>th</sup> generation networks.

Both of these aspects have contributed to increased activity and growing investment in telecommunications infrastructure. However, at the same time, market liberalisation and the current economic crisis have driven down prices.

Against this backdrop, Elecnor continues leading the market in both FTTH and 4<sup>th</sup> generation network equipment. Some specific achievements include:

- Roll out of FTTH with Telefónica in Madrid, Barcelona, Girona, Valencia, Murcia, Bilbao, Pamplona, Valladolid and Las Palmas de Gran Canaria.
- Start of work on the FTTH network in Valladolid, Madrid and Barcelona with Orange.
- Start of work on the FTTH network in

Valladolid, Barcelona, Madrid and Seville with Jazztel.

- In the mobile network, involvement in the roll out of 4<sup>th</sup> generation mobile networks for Telefónica, Orange, Vodafone and Yoigo, working with the equipment manufacturers Huawei and Ericsson, who are Elecnor customers in this segment and in the lead on implementing this equipment.
- Network engineering, works management and technical assistance for roll out of Ono's HFC network nationally.

## Information Technology and Systems

Elecnor pursued a strategy of international expansion in its Information Technology and Systems business in 2013, specialising in development and integration of systems to improve decision making, energy efficiency and customer productivity.

Following this strategy, the Elecnor Deimos Transport Division has developed the Elcano mobile channel, providing passenger information and remote station management systems for ADIF for the main mobile phone systems, iOS, Android and BlackBerry. Elecnor Deimos is also working with ADIF on scientific research, and technological development and innovation for railways, as a result of which it has set up the Railway Technologies Centre demonstration



room in Malaga. This is equipped with Elecnor Deimos's Argos integrated virtual and augmented reality platform, which has been developed by the Internet and Mobility Division. Our agreement with ADIF also includes design and development of a new generation of Elcano applications, providing passengers with services from the start of their journey through to their destinations.

The main systems implemented over recent years include the Automatic Information System (AIS) for RENFE's Cercanías local rail network in Seville and AENA's Public Information System (SIPA), demonstrating that both users and operators of large-scale infrastructure need systems to help improve the services offered.

In the energy sector, we are working on a solar power planning system and production management. Through our GISAL system, developed for Elecnor's energy services unit, we are offering new energy efficiency tools and management models for municipal bodies. These demonstrate some of the increasing synergies in this area among the Group's subsidiaries and divisions.

Our Localisation and Positioning Systems division is continuing to offer solutions for vehicles and people, particularly in Latin America, a natural market for Elecnor's expansion, and for many other engineering and infrastructure companies of all sizes.

Looking to the future, the Elecnor Deimos Systems Unit will continue designing and developing solutions that facilitate the incorporation and adaptation of "Smart Cities" technology into urban environments. This is a field in which the Group's capacities combine with the systems of Elecnor Deimos to provide councils with tools for their budget management, urban mobility and environmental services and communication with the public, helping to improve quality of life for the public in general.

Deimos-2 satellite monitoring, control and receiver antenna Puertollano (Ciudad Real)

#### Maintenance and refurbishment of digital television systems in Castilla y León

The Regional Government of Castilla y León, through its Development and Environment Division, selected Elecnor in 2013 to provide engineering, supply, installation and technical services for its electronic communications infrastructure for national and local digital television.

In 2009 and 2010, the Regional Government of Castilla y León installed digital television transmitters and relay stations throughout its region, to enhance broadcast coverage of local and national channels. There are currently some 651 broadcasting centres throughout the region, including civil infrastructure and electronic and broadcasting resources, ensuring coverage for 2,000 towns.

Elecnor is now responsible for maintaining all of this infrastructure across the region in optimum condition to ensure the quality and continuity of digital television services.

The contract is for two years, with a one-year extension option.



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The Tuenti office facilities in the Gran Vía building (Madrid)



The installations business closely reflects the performance of the construction sector. Despite the ongoing economic difficulties for this sector in Spain, Elecnor has maintained its end-to-end value proposition, ranging from design and start-up to operation and maintenance, in activities covering landmark buildings, cultural and leisure centres, airport terminals, railway stations, buildings of cultural interest and heritage sites. As with its other activities, Elecnor is gradually expanding these services into the export market.

lecnor provides various services for electrical, control and heating/air conditioning installations as well as mechanical and electromechanical assemblies, fire prevention systems, communications, security, solar power and others.

In 2013 it was particularly active in the airport, industrial, refurbishment and remodelling, shopping centre and bank branch segments, and in energy efficiency for buildings.

#### Airport sector

In 2013, Elecnor reaffirmed the strength of its relationship with AENA through the major contracts agreed during the year. To this end, Elecnor reinforced synergies between its subsidiaries and the Group's divisions, particularly its technology division (Elecnor Deimos), to enhance its offer in tenders with significant technological components. This is the case for example with projects featuring ILS navigation systems, a field in which the Group won a major tender in Palma de Mallorca, which it will use as a launch pad for future tenders.

In 2013, we were contracted to undertake a range of work for the Adolfo Suarez Madrid-Barajas airport, including:

- Refurbishment work for the shopping areas of terminals T4 and T4S.
- Renewal of the four contracts for maintenance work on the terminal buildings.
- Improvement and refurbishment work for the ACC building.
- Improvements to lighting on triple walkways in T1 and for modifications to shopping areas in T2.

Contracts at other airports include replacement of the climate control system at Barcelona-El Prat and the project for protection of the terminal roof at Ibiza airport.

#### Industrial sector

In 2013, we were involved in a number of major installations in the industrial sector, including:

- Installations at the Valls, Tarragona premises of the Swedish nappy manufacturer SCA.
- Installations in the new thermal plant for Renault's Valladolid factory.
- Installations for a pizza factory for Campofrío at Ólvega (Soria).
- Low and medium voltage electrical installations for the Siro Group warehouse at Aguilar de Campoo (Palencia).
- Construction of a new winery for Bodegas Miquel Oliver in Palma de Mallorca.

• Refurbishment of climate control and electrical facilities at the HQ of the Catalan pharmaceutical company Griffols.

#### Refurbishment and renovation

In 2013 we were awarded contracts in this area by Telefónica (refurbishment of the Tuenti offices in its historic Gran Vía building in Madrid), Mutua Madrileña, TRAGSA, Barceló Viajes, Enagás, GE Real State and the Regional Government of the Canary Islands.

## Shopping centres and bank branches

Despite the shopping centre sector remaining stuck in the doldrums, in 2013 Elecnor achieved some major successes, such as the municipal market at Gavá (Barcelona). Other successes included:

• Electrical and mechanical installations for the Alameda shopping centre in Pulianas, Granada.

#### Air traffic activities required for certification of Palma de Mallorca airport

In 2013, AENA awarded Elecnor and Elecnor Deimos a joint venture contract for the first stage of refurbishment of the landing systems at Palma de Mallorca airport. This work aims to ensure compliance with the statutory airport certification requirements under Royal Decree 862/2009 set down by AESA (the State Aviation Safety Agency).

The project involves replacement of the ILS/DME landing systems and upgrading to the ILS 2100 and DME 1118A systems manufactured by Selex Systems Integration Inc, for which Elecnor Deimos is the exclusive representative and distributor in Spain.

The installation involves the latest generation of navigational assistance equipment developed by Selex, which has been widely adopted by airports worldwide. This is based on micro-processor subsystems, including an integrated fault detector (BITE). The system also features an RMM (Remote Maintenance Monitoring) unit, enabling remote monitoring of system status and parameters, simplifying and reducing maintenance.

The Elecnor Group's technical team has wide ranging experience in installing air traffic systems, for both civil and military applications, and air and sea monitoring systems.

- Fitting out of the Corte Inglés outlet centre at Teruel.
- Electrical installations for the Primark centre at Roquetas de Mar (Almería).

In the banks and savings banks sector, we were awarded the contract for work on a centre for La Caixa in Cerdanyola del Vallés (Barcelona) and for the comprehensive fitting out of the Cajamar building in the Parque Científico Tecnológico de Almería (PITA).

#### Energy efficiency for buildings

We won a number of contracts to improve the energy efficiency of buildings including that for the cogeneration plant at the Dr. Trueta Hospital in Girona, for Institut Catalá de la Salut. We were also awarded contracts for the Entrevías operations building of Madrid's Empresa Municipal de Transportes (EMT) and also its building in Carabanchel.

#### International market

In 2013 we sought to gradually increase our international Installations activity. One of the most successful recipes for this was working with partners and engineers on projects of mutual interest outside Spain. This was the case with Inveravante, the owner of the company Anfa Plage, with which we contracted two major projects consecutively for electrical and special installations at the 5 star Hotel Anfa Plage, belonging to the Canadian Four Seasons Hotels and Resorts chain, in Casablanca (Morocco).

Another major international contract awarded to us by tender was for the design and rebuilding of the University Hospital of Haiti (HUEH), the largest hospital in the country's capital, Port au Prince. This will be Elecnor's first project in Haiti.

Other international projects in the year included:

- Building on work already done for Gestamp Renovables on its photovoltaic roofing at Renault factories in France, we were awarded the contract for work on the electricity, water and gas supply, fire control and urban development of Renault's new factory in Oran (Algeria).
- Refurbishment of electrical and climate control installations for the San Borja hospital in Santiago de Chile for the country's Ministry of Health.









## Gas

Elecnor has over thirty years experience in the gas industry, making it a market leader in Spain. It is involved in nearly all areas of the gas value chain, from transport to industrial and home distribution. Elecnor is one of the leading players in the segment, being one of the main contractors used by the main gas operators in Spain, Portugal, Brazil and Mexico.



ELECNOR'S GAS ACTIVITY IN PICTURES n 2013, work continued with leading customers in the sector, such as the Gas Natural Group, Enagás, Gas Extremadura, Naturgas (Hidrocantábrico) and MRG (Madrileña Red de Gas). We also continued working with CLH on electrical, instrumentation and mechanical works at gas storage plants.

Below are the main projects Elecnor worked on during the year.

#### Gas Natural Fenosa

In 2013 we consolidated the framework agreement for the construction of new pipelines and the maintenance of networks and connections with 10-bar MOP and the contract to construct steel networks and

connections in Madrid, Barcelona, Lerida, Huelva, Seville, Malaga, Granada, Cordoba, Burgos, Leon, Guadalajara, Cuenca, Pontevedra, Vigo, Navarre, La Rioja, Valencia, Castellón and Alicante. We also enhanced the gas distribution activity we began in Cordoba the previous year.

We also continued our activity on framework maintenance contracts for distribution networks, regulation and metering stations and related infrastructure for the Gas Natural Group in Catalonia, and the framework contract for our regular inspection service of domestic and industrial facilities for gas customers, with 170,000 inspections carried out in 2013 in Catalonia. The framework contract for emergency services was also extended to Huelva, Córdoba and Jaen in Andalusia, and to Vigo in Galicia.

Work carried out in the year included remote control of valves for the Gas Natural control centre, the Salceda de Caselas regulation station in Pontevedra and the metering station for the Malaga CCGT plant.

Elecnor contributed to the expansion of the Gas Natural distribution network through pipeline, commissioning and commercial activities capturing 8,800 new points of supply in towns in Huelva, La Rioja, Castellón, Alicante, Guadalajara and Navarra.

These included:

- Regulation and metering stations for the Marina-Lucense gas pipeline
- Connection to Coterran (León)
- A branch line to Bellver (Alicante)
- Enhancement in the city of Granada

• Polyethylene branch lines in Almeria (El Ejido-Almeria)

#### Enagás

We assembled the structure for the Huelva regasification plant and built Phase II of the Treto gas pipeline from Guriezo-Treto (19 km at 26 inches and 9 km at 12 inches), with positioning of valves in Valdemorillo (Madrid) and a regulation station in Granada.

We were contracted to refurbish the maintenance centre in Huelva and to refurbish the installations at the Bermeo plant in Vizcaya.

We also consolidated the framework contract for maintenance services for power lines and

transformer centres for the basic gas pipeline network.

#### Gas Extremadura

We consolidated the framework contracts for work and maintenance services at distribution facilities in Badajoz, Olivenza and Montijo, and emergency services at the facilities of Gas Extremadura Transportista.

#### EDP Group: Naturgas/Hidrocántabrico

We were awarded the contract for Zone 1 (Asturias) of the framework contract for the extension of the new network and replacement of the existing network (polyethylene/steel) and the retainer contract for repairing the network (polyethylene/steel) and the preventive maintenance and emergency service.

We also supplied and assembled the Santurzi regulation and metering station in Bilbao.

Finally, the agreements for the Funciona service, for technical lighting and gas services and sales teams for in-person campaigns, were consolidated.

#### MRG (Madrileña Red de Gas)

Our main activities included consolidation of the framework contract for the construction of new pipelines and the maintenance of networks and 10-bar MOP connections and the contract to construct steel networks and connections.

Our work with MRG now covers the towns of Fuenlabrada, Majadahonda, San Sebastián de los Reyes, Alcobendas, Villaviciosa de Odón, Paracuellos, Algete and Parla. We are also implementing a distribution and commercialisation network in towns being connected to the gas supply, such as Cubas de la Sagra, Moraleja de Enmedio and El Molar

In 2013, we also carried out our first regular inspections, which are planned to rise to 50,000 in 2014.



#### Repsol

We were involved in contracts relating to safety, electricity and mechanical aspects for the new Sksol plant under construction in Cartagena, involving safety systems, a regulation and metering station and an electricity substation.

We also carried out electricity and maintenance activities in its other oil complexes.

#### International market

In 2013, Elecnor positioned itself as a leading operator in Brazil. In 2013, we were awarded the President Kennedy reinforcement project by CEG (Gas Natural Fenosa), consisting of building and assembling a 20-inch 20 km steel pipeline to reinforce the Rio de Janeiro metropolitan ring main, and to build a regulation and metering station.

We are also carrying out the UTE-Baixada Fluminense branch project for CEG, involving construction of a new natural gas supply network for the UTE-Baixada Fluminense thermoelectric plant in Seropédica, Rio de Janeiro. This will include a 20 inch steel distribution branch pipeline, running for approximately 12 km, and a number of regulation and metering stations in the towns of Japerí, Seropédica and Santa Cruz.

Mexico is also an important market for Elecnor's gas business. We have commissioned three regulation and metering stations for the Federal Electricity Commission (CFE) for the Morelos gas pipeline, which the Elecnor Group is currently building in the country. This pipeline will connect the current gas pipeline network of the Mexican company Pemex Gas Petroquímica Básica in Tlaxcala with a number of electricity generating plants that will be built in Morelos state in the near future.

As part of the Morelos project, a contract was also implemented for natural gas transport services through a system capable of transporting up to 320 million cubic feet of gas per day, with an energy value classified as superior under the Mexican NOM-001-SECRE-2010 "Quality of Natural Gas" standard, in the states of Tlaxcala, Puebla and Morelos.

Morelos gas pipeline, Mexico Construction of the Sant Joan de Déu retirement home and day centre in Martorell, Barcelona



## Construction

Elecnor's construction capabilities enable it to offer specialised services in all stages of civil engineering, industrial and building projects, both in Spain and abroad. Its ability to combine energy efficiency criteria into its activities adds further value to its total quality.

n 2013, Spain's domestic construction market remained in negative territory due to the economic situation, which has caused a substantial reduction in both public and private investment. In general terms, Spain's construction sector was down 23% in the year, the sixth consecutive period of recession, according to figures from ITeC-Euroconstruct to December 2013. Current forecasts suggest that 2014 will be another year of recession, although the rate of decline will slow.

Given this backdrop, Elecnor's construction activity was also down; however, it was still involved in some major developments, such as:

 Construction of the 3,000 square metre Ronald McDonald House in Madrid, in the grounds of the Niño Jesús Hospital. Elecnor was responsible for the design, development and construction of the House, contributing its engineering, renewable energy and energy efficiency experience. This helped it to reduce the building's energy consumption, with overall savings of around 46.5% compared to a house not incorporating these solutions.

- Construction of a new air freight terminal at the Rota naval base in Cadiz, which, at 4,624 square metres, is 24 times the size of the current freight facilities. This project aims to set a benchmark for sustainable, modern and functional construction.
- Urban development of the Pedro III el Grande area of Ruzafa, in Valencia, refurbishing and improving its infrastructure.

Área 3, the Group's specialist interior design and equipment company, has diversified into new sectors, such as the fitting out of offices, hospitals and hotels. It has also diversified its customer base, widening its range of public and private customers.

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#### Rebuilding of the largest hospital in the capital of Haiti

In 2013, a consortium led by Elecnor won an international tender by the government of Haiti for the design and reconstruction of the University Hospital of Haiti (HUEH), the largest hospital in the country's capital, Port au Prince. This will be Elecnor Group's first project in Haiti.

The hospital was devastated by the January 2010 earthquake, and the government has classified its rebuilding as a flagship project, being one of the largest projects in the city's recovery programme.

The project budget for the new 22,500 m<sup>2</sup> HUEH is over USD 41 million (around EUR 31.4 million), financed by the US Agency for International Development (USAID) and the French Development Agency (AFC), through Haiti's Economics and Finance Ministry.

The hospital will have over 500 beds, 10 operating theatres and an outpatient service. The project involves 9 blocks around a central boulevard. A secondary building will house all of the Hospital's installations and services, and will be connected to the main building by a passageway. However, the two main features of the project led by Elecnor will be its natural light and ventilation.





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Some of the major projects in which Área 3 was involved in 2013 include: new commercial spaces in Terminal 4 and Terminal 4S of the Adolfo Suárez Madrid-Barajas airport; supply, assembly and installation of furnishings and fittings for the new Central University Hospital of Asturias and for the new HQ of Majadahonda's local police force; refurbishment of the offices of Chávarri & Muñoz Abogados; and fitting out of the new HQ of Finanzauto in Barberá del Vallés.

Adhorna, the Group company dedicated to the development and manufacture of prefabricated concrete and fibreglass reinforced polyester, was very active in 2013, being awarded contracts for a number of REE projects, particularly the San Martí electricity substation in Mallorca.

#### International market

We were very active in construction projects abroad in 2013, continuing work on projects

commenced in previous years. For example, work continued on building R+15 in Nouakchott, Mauritania, for office use, and progress was made on the Dr. Rafael Hernández Hospital in Panama.

Through Montelecnor, in Uruguay Elecnor continued the restoration of the HQ of UTE, the "Palacio de la Luz"; completed turnkey projects for a secondary education facility and a building for the Salto Grande dam; and built 200 homes and the related infrastructure in San Antonio and Jardines de las Torres.

Adhorna also promoted commercial activity for fibreglass reinforced polyester abroad, particularly in Chile, Peru and Morocco. We also carried out our first lighting work: in Peru we were awarded a contract for supply of fibreglass reinforced polyester lampposts used on BT lines; and in Morocco we received our first order for such lampposts.



Construction of Audi Tooling facilities in Sant Esteve Sesrrovires, Barcelona

#### A new image for shops at the Adolfo Suárez Madrid-Barajas airport

Área 3 has begun work on a project for the Adolfo Suárez Madrid-Barajas airport, which aims to be a flagship for a new commercial concept for Spain's airports.

The project was designed by Estudio Lamela and Rogers Stirk Harbour + Partners in collaboration with Área 3, and implemented by the Elecnor Group company.

The project aims to create spaces that will improve the personal experience for passengers in terminals T4 and T4 Satellite. This involves a complete overhaul of the shopping areas, or "plazas", to provide a unique, improved experience.



The project will create an exclusive character and atmosphere for the terminals' shops, whilst ensuring the viability of their manufacture and maintenance. Through this project, the Adolfo Suárez Madrid-Barajas airport is aiming to recover its international prestige as the best terminal in the world, in the opinion of its users.

Severo Ochoa Hospital in angas del Narcea, sturias

## Maintenance



Elecnor provides comprehensive maintenance services and flexible coverage to its customers, ensuring that their facilities and processes are in optimum condition. Our service uses specialist professionals capable of undertaking all activities in every sector.

#### Comprehensive maintenance of the Vossloh factory in Valencia

Elecnor was awarded an end-to-end maintenance contract for Vossloh's factory in Albuixech, Valencia.

This contract is something of a landmark in Elecnor's industrial-sector maintenance activity, because of the unique nature of the services involved. In addition to the usual maintenance activities for standard installations, such as climate control and electricity, in this case it was also awarded the contract for maintenance of production line installations. This includes cleaning of painting and blast-cleaning rooms, mechanical maintenance of a bridge milling machine and mechanisation and robot centres and CNCs (numerical control machines), and servicing of welding robots, weighing stations, hoists and transport equipment.

Vossloh is the global leader in designing and supplying rolling stock and diesel-electric locomotives. It has produced more than 1,300 locomotives for over 20 customers worldwide since 1980.

Elecnor has been awarded the contract for maintenance of its 200,000 m<sup>2</sup> production facility, which includes locomotive and bogie plants, testing spaces, a 3 km testing railway, and training facilities for welders, etc.

lecnor's maintenance activity has been affected by general levels of economic activity in Spain. However, the generalised reduction in both public and private spending has resulted in new services being put out to tender in order to reduce costs and optimise budgets.

There is also a growing trend for customers to contract comprehensive maintenance service providers capable of offering a full outsourcing service. This is the area being pursued by Elecnor.

The portfolio of sectors covered by our maintenance services further diversified in 2013, to include, for example, health, banking, shops, and industry and hotels, whilst consolidating agreement reached in previous years and pursuing new contracts.

In the banking sector, we have been awarded the comprehensive maintenance of BSCH branches



Maintenance of the Carmen Severo Ochoa Hospital in Cangas del Narcea, Asturias

in Galicia, Asturias, Castilla y León and Castilla La Mancha, and Kutxabank branches in Álava and Guipúzcoa.

In the health sector, we have agreed maintenance contracts with Idcsalud Group for its hospitals in Barcelona, Madrid and Castilla La Mancha.

With regards to retail premises, we are responsible for comprehensive maintenance of all Nike shops in Spain, and the Sonae Sierra (La Farga in Barcelona, Plaza Mayor in Malaga and Luz del Tajo in Toledo) and Gentalia (AireSur and Plaza Almazara in Seville, and Parque Almenara in Murcia) shopping centres.

Elecnor also specialises in the telecommunications sector. For example, we are responsible for maintaining ONO's transformer centres nationally; for the climate control and power and energy efficiency of Telefónica's centres in Galicia, Asturias, Castilla y León and Madrid; and for maintenance of Telefónica's real estate at its District "T" facilities in Madrid.

In the industrial sector, we are responsible for maintenance of the cooling units of Renault's engine and assembly plants and central offices in Valladolid; electrical and mechanical maintenance of the production line of the baker Berly in Irún; and the production system of the Saint Gobain Group's Veralia factory in Burgos.

In the renewable energy and power station sectors, we maintain Elecnor's three solar thermal plants, Aste 1A, Aste 1B and Astexol.

In the infrastructure segment, we have renewed various important contracts for AENA's airports: maintenance of the public information system

throughout all the airports, and preservation and maintenance of the control, fire fighting, static signalling and high voltage systems at the Adolfo Suárez Madrid-Barajas airport.

#### Infrastructure preservation

Audeca is a Group company specialising in preserving the environment and maintenance of motorway infrastructure.

This activity has not escaped the axe taken to public spending at every level of government and by infrastructure concession companies. This has led to traditional construction companies diversifying into maintenance, increasing competition considerably at a time of lower activity.

Although Audeca has not been immune to this, its specialisation and professionalism enabled it to win a range of new contracts in 2013. These included, maintenance and operation of the A-5, A-40, TO-21, N-Va and N-430a roads in Toledo province for the Ministry of Public Works; and maintenance of roads in the north of Cordoba province for the Regional Government of Andalusia's Public Works and Housing Department.

#### International market

Commercial maintenance activity has been increasing in some of the countries where Elecnor has a stable presence, such as France, Portugal and Italy. Opportunities have increased through the infrastructure and installations projects in which the Group is involved, with its maintenance services providing significant added value.

## Environment and Water



Elecnor regards environmental protection and development policies, waste processing and water treatment as strategic areas.

n 2013, Audeca, Elecnor's specialist environmental and motorway maintenance subsidiary, took responsibility for the Group's strategic commitment to environmental activity, including both projects that had been underway for several years and new growth opportunities.

In addition to its traditional environmental conservation activities, urban environmental services and comprehensive infrastructure maintenance work, Audeca is also in the lead on water-related activities, such as the construction, operation and maintenance of drinking water treatment (DWTP), waste water treatment (WWTP) and desalination plants.

It is also responsible for activities in the waste sector, such as classification and recovery of solid urban waste, demolition and construction waste, land decontamination, sealing, restoration and energy extraction from landfill sites, etc.

Audeca has enhanced its environmental services, one of the sectors least affected by current economic conditions, as they are considered a basic public need.

In 2013, it was awarded the following major contracts:

- Forestry fire prevention activities in various public mountain areas in Andalusia
- Four fire prevention contracts to improve and preserve habitats of public interest in different parts of Castilla y León
- Forestry fire prevention activities in various public mountain areas in Extremadura

- Establishment of recreation areas on the left bank of the Orellana reservoir in Badajoz for the Confederación Hidrográfica del Guadiana
- Cleaning and maintenance services of green spaces and urban trees in San Vicente del Raspeig
- Cleaning services for ports in the Alicante area (Moraira, Calpe, Benidorm, La Villajoyosa) and the Nao area (Denia, Jávea and Cullera)
- Supply, installation and maintenance of underground waste containers for the Gijón Municipal Environmental Company
- Operating services for twelve fixed recycling stations in Madrid
- Project work for completion of civil engineering and fitting out of the 3rd WWTP line at Quijorna, for Canal de Isabel II
- Collection of solid urban waste and transport to processing plant or landfill site in Callosa D'en Sarria.

Another Elecnor subsidiary involved in environmental activities is Hidroambiente, which specialises in industrial water treatment solutions.

Hidroambiente suffered a decline in activity in the domestic market in 2013, due to productive and infrastructure investment from both the public sector and industrial customers (heavy industry, oil & gas and energy) drying up.

Despite this, the year was saved with solvency remaining in line with the objectives set due to contracts for various projects in the Basque Country and Navarra, including the Leiza drinking water plant and modifications to the Galindo WWTP in Vizcaya.

It also carried out a major project for Renault at

its Palencia factory, with a complete overhaul and modernisation of its water treatment plant using MBR technology.

Hidroambiente also completed R&D projects relating to drinking water; started an ambitious project for the reduction of mixed-liquor consumption in nitrification and redesign of MBBR reactors, with support from the CDTI (Centre for the Development of Industrial Technology); and developed new processing systems for the food and drink sector. The latter resulted in construction of a "de-bittering" plant for orange juice for a major Spanish manufacturer and packager.

#### International market

Given the domestic situation, our environmental and water activity was supported by the award of a number of major contracts in international markets.

In 2013, we began work on water capture, processing, transport and distribution projects in the cities of Waku-Kungo and Andulo in Angola. These unique projects will have significant impact by bringing water supplies to communities that previously did not have access to them.

In Argentina, we were awarded two contracts by the Buenos Aires water and sewage company AYSA to renew its drinking water network and supply new hospitals in Buenos Aires province. These projects will employ the latest generation technology, including the use of intelligent tunnelling machines.

Audeca has promoted the international development of its activities based on the international presence of Elecnor, opening up markets in new areas, such as the Balkans, where it has submitted bids for tenders that will be awarded in 2014. Audeca is currently working on an on-going basis in Ecuador, Mexico and Croatia.

Hidroambiente has increased its international commercial activity considerably, expanding into the Arab world, the USA and south-east Asia. In the field of thermal energy, it has won contracts in Venezuela and the UK; in the steel industry it has been awarded a major contract in the Persian Gulf; and it is making headway in the food and drink sector in Israel and Brazil. WWTP Boecillo (Valladolid)

Road maintenance in north-west Madrid. Puerto de Navacerrada





## Railways

Elecnor's extensive experience in the railway sector enables it to undertake "turnkey" projects in the sector. The projects it has carried out demonstrate its capabilities in developing overhead power lines, substations, signalling and interlocking, communications and remote command and control systems.

013 saw further cuts to domestic public sector investment, further promoting Elecnor's increasing international focus on its railway business.

In the domestic market, and as part of the Group's prominent role in the expansion plans for Spain's high speed rail network (AVE), Elecnor is involved in the work required to ensure the electricity supply for the Utrera-Las Cabezas de San Juan sub-stretch of the Utrera-Jerez airport part of the Seville-Cadiz high speed line. This involves the construction of two new substations at Las Alcantarillas and Las Cabezas de San Juan, and refurbishment of the existing Utrera substation. It is also assembling the ADIF CA-220 overhead contact line, transformable to 25 kV AC, at this location.

The main projects launched in the year include:

- Preventive and corrective maintenance for the Bilbao to Vitoria tramline.
- Maintenance services for the catenary systems

and medium-voltage lines of the Bilbao-Donostia, Donostia–Hendaya and Amorebieta– Bermeo and other rail lines.

• Construction of the fixed catenary systems for the carriages of Barcelona Metro's Line 9 and access control to the Zona Franca on this line, featuring three security layers, two hardware and one software.

#### International market

The slowdown in the domestic market and the Group's increasing international development have led Elecnor to explore new opportunities, mainly relating to railway electrification in other countries, including Israel, Denmark, Norway, the UK, the USA, Chile and Brazil.

One of the year's landmarks for Elecnor was the award of a contract to build a tram line in Ouargla, Algeria, as part of a consortium. This project is being organised by Algeria's Ministry of Transport through the company Enterprise Metro d'Alger.



**-IGURES** 

Refurbishment of overhead power line between La Rua Petín and Monforte de Lemos (Orense-Lugo)

7.5

#### A new tram line in Algeria

In 2013, Elecnor was awarded the contract for construction of a tram line in Algeria worth EUR 196 million, as part of a consortium with Assignia and Rover Alcisa. This is the first tramline in the Algerian city of Ouargla, 700 kilometres south of Algiers. The 12.6 kilometre line will connect the city's old quarter with a university area located in the outskirts.

The project is part of a government plan to build 14 tramlines throughout the country. It includes the construction of five intermodal stations providing connections with other means of transport, and 23 stations equipped with ticket sales areas, information desks and the necessary signalling and communications systems.

The tramline is expected to significantly enhance the city of Ouargla, improving the quality of life and comfort of its inhabitants. The construction will form part of the urban landscape, which itself will be widely remodelled. Additionally, car parking facilities will be built in the outskirts of the city, making it easier for passengers to get around. sp\_4

initiative

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A REAL PROPERTY.

A REAL PROPERTY.

Deimos Castilla-La Mancha clean room in Puertollano (Ciudad Real)

PEOPLE

## Space



Elecnor's technological arm, Elecnor Deimos, specialises in engineering, designing and developing solutions and integrating systems in the aerospace, information systems and telecommunications network sectors. Elecnor Deimos is currently one of the leading players in the European aerospace industry and the leader in developing Earth observation and space surveillance systems.

he main developments for Elecnor Deimos' various business areas in 2013 were as follows:

#### Remote sensing

The remote sensing work carried out by Elecnor Deimos is supported by the products and services of Deimos-1, the first earth-observation satellite launched by the Elecnor Group, which has been in operating orbit since July 2009.

Deimos-1 in 2013:

- Images captured: 4,411, taking the total to a staggering 14,904 since launch.
- Volume of data produced (GBytes): 4,045, bringing the total since launch to 15,612.
- Million km<sup>2</sup> captured: 572. Accumulated total 2,066.
- Number of orbits to year-end 2013: 23.237.
- Number of kilometres travelled to year-end 2013: 1,026,540,000, almost seven times the distance between the Earth and the Sun.

One particularly noteworthy development in the

year was the renewal of the contract with the United States Department of Agriculture (USDA) for a third year. Under the contract, we provide the USDA with images for its Targeted Irrigation Management (TIM) system, with very high customer satisfaction. The images supplied by Deimos-1 are used to analyse vegetation cover and so assess crop irrigation requirements. Key figures for this contract:

- Images captured: 890.
- Area covered: 128 million km<sup>2</sup>, equivalent to 16 times the area of the USA.
- Cloud-free surface area: 101 million km<sup>2</sup> (76% of all images captured).
- Average time between image capture and delivery of final product to the USDA: 32 hours.

In Spain, we have renewed our contract with the IGN (National Geographic Institute) for a National Remote Sensing Plan for the second year. In France, we are continuing to monitor the development of private agriculture under the FARMSTAR programme.

Elecnor Deimos also received a number of awards at the international events it was involved in:

#### **572** million km<sup>2</sup> captured by Deimos-1, equivalent to 4 times the Earth's land surface

**4,411** images

captured by Deimos-1, taking the total to a staggering 14,904 since launch.

## 128 million

km<sup>2</sup> captured under the contract with the US Department of Agriculture, equivalent to 16 times the area of the USA

Image of North Carolina, USA, taken by the Deimos-1 satellite



- Award for the "Newcomer earth-observation operator of the year" at the EO Business Symposium (Paris).
- Recognition for Deimos-1 as the benchmark satellite by Russia's Agriculture Ministry, in Moscow.
- Designation as the main satellite (together with Landsat-8 and Spot-6/7) for the IRD earth observation station in Montpellier, France.

#### Aerospace and Defence

Spain's public aerospace sector has been affected by a reduction in the public contribution from the European Space Agency. Given this backdrop, Elecnor Deimos has developed a strategy to seek out new opportunities in other commercial aerospace markets.

This has led to a number of cooperation agreements, such as joining the consortium led by the company Swiss Space Systems (S3), which is developing an innovative launch system for small satellites using a suborbital SOAR launcher mounted on the roof of an Airbus aircraft. Elecnor Deimos will be responsible for mission engineering and guidance, navigation and control systems (flight dynamics) for the suborbital launcher. The flight arm of Elecnor Deimos is continuing its work on planetary exploration missions, such as EXOMARS and the IXV vehicle. It is also leading the aerospace consortium implementing the PERIGEO R&D and innovation programme for UAV (unmanned aerial vehicles) technology research, financed by the CDTI's INMPRONTA programme.

Elecnor Deimos is also playing an important role in ESA satellite navigation programmes. Elecnor Deimos Portugal and Spain are developing the navigation message for the receiver for the Galileo European satellite navigation system. It is also developing the European Geostationary Navigation Overlay Service (EGNOS) satellite navigation system, which is accurate to less than two metres.

#### Systems and Networks

In 2013, our Systems and Networks unit (where Elecnor Deimos applies its extensive experience in aerospace projects and development, integration and installation of end-to-end solutions) was responsible for promoting technology transfer, one of the Elecnor Group's key aerospace strategies.

In the Air Navigation Systems segment, we won the tender for the Instrument Landing System (ILS) for Palma de Mallorca airport and refurbishment of the ILS and Distance Measuring Equipment (DME) at the Talavera, Getafe, Morón and Albacete airports. We also installed Remote Monitoring Systems (SMR) at Tenerife airport and implemented AENA's Radio Assistance Integration System (SIRA) for central Spain.

Working with Elecnor Infraestructuras, Elecnor Deimos continued implementation of a Vessel Traffic Service (VTS) for the government of Cameroon. As part of this project, Elecnor Deimos is developing its own maritime monitoring radar system and integrating its new automatic dependent surveillance-broadcast (ADB-S) system at its navigation laboratory in Tres Cantos (Madrid).

In the information systems area, for the second year we carried out preventive and corrective maintenance on AENA's public address system (SIPA), with this contract expanding to include maintenance of digital advertising media at Madrid-Barajas airport and the new Barajas video walls, and management of AENA property. Through the renewal of this contract, the Elecnor Group is reinforcing its maintenance services and establishing a presence in all of Spain's airports. In the Rail Transport sector, Elecnor Deimos has been contracted to develop and implement an Audiovisual Information System (SIA) for Seville's local rail services. It has also renewed its information systems support for local rail services in Barcelona and Valencia.

A number of significant synergies have been achieved between the information systems segment and other Group business areas:

- Development of the information and production management system, output forecasting and invoicing for our wind farms.
- Adaptation of this system for our solar facilities.
- Development of Smart Cities solutions through systems to improve energy, transport and infrastructure efficiency.

Elecnor Deimos is also continuing its work on integrated end-to-end systems, developing earth stations such as VRS (Virtual Receiving Station) and DRS (Direct Receiving Station) for its Deimos-1, Deimos-2 (launch planned in 2014) and other earth-observation missions. This will enable it to enhance the exploitation of satellite systems through its widespread network of image distributors and brokers.



#### Towards the international development of space activity

To compensate for falling activity in its domestic market, Elecnor Deimos pursued an active international expansion strategy in 2013.

This included creating two new subsidiaries: Deimos UK, in Harwell, near Oxford in the UK; and Deimos Rumania in Bucharest. Both of these countries have expanding space programmes. These subsidiaries are pursuing three strategic lines: interplanetary exploration activities; Earth observation; and satellite navigation. As part of this third area, they are seeking to get involved in two main programme types:

- The new generation of Galileo, including inter-satellite link techniques, where Elecnor Deimos has accumulated vast experience and is the leader in Europe.
- Space Situational Awareness (SSA), including all aspects of space waste, the space climate and asteroid-collision study and mitigation activities.

# Renewable energies



In recent years, Elecnor has become a major player in the field of renewable energies in Spain and abroad. More specifically, Elecnor has become a benchmark developer and contractor for turnkey projects in the areas of wind, solar thermal, solar photovoltaic and hydro power. Due to this, Elecnor has moved from contracting supply and assembly packages to becoming a general developer, operator and contractor.



DISCOVER ELECNOR RENOVABLES' GLOBAL CAPABILITIES





FIND OUR MORE ABOUT ENERFÍN

# Wind power

Enerfín, Elecnor's wind power subsidiary, continued to focus on export markets in 2013, particularly Brazil, Canada and Australia. It also studied investment opportunities in South Africa and Mexico.

nerfín has a proven track record in managing all stages of a wind farm project, from development and construction to its operation. It is currently one of the sector's flagship companies both in Spain and in the Americas, boasting a total installed capacity at the end of 2013 of 1,003 MW, 729 MW of which are directly attributable to the Elecnor Group.

The company's increasing focus on the export market is revealed in the breakdown of this total capacity: 358 MW is in operation in Spain and 371 MW in the international market. The main developments in the year were all in the external market.

#### Brazil

In 2013, the Brazilian government continued to promote the energy auction system (leilões) launched in 2009, seeking to decrease Brazil's dependency on thermal power stations during periods of low hydro supply.

In 2013, the Brazilian government contracted 4,710.4 MW of wind power in three leilões, at an average price of R\$ 117.3 MWh, 25% higher than the average price in 2012.

This price increase was largely due to a new requirement introduced for two of the three leilões, under which operators can only take part if they have a connection point to the grid and

L'Érable wind farm (Canada) FIGURES

 they ber the infrastructure costs of connecting
 Canada

to this point. As a result of this requirement, many operators could not take part, reducing competition. Given this background, public subsidiaries of Eletrobras (the Brazilian government body responsible for electricity generation and distribution) were the main winners (2,000 MW out of the 4,710.4 contracted in the three leilões).

The higher electricity prices in the 2013 leilões were also in part due to the Brazilian Development Bank (BNDES) stiffening the nationalisation conditions to be met by a project's wind turbines to qualify for finance.

Given this situation, Enerfín has intensified its development activity -concentrating in the Rio Grande do Sul province- to exploit its presence, economies of scale and recognition by government. Despite the more stringent project requirements for participation in the 2013 leilões, Enerfín won tenders for 80.5 new MW in Palmares do Sul, also being awarded a further 124.2 additional MW.

Looking to the future, the Brazilian government is planning to award some 12 GW of wind, small hydro and biomass plants in leilões between 2014 and 2019, at an annual rate of around 2 GW. Given this outlook, Enerfín is developing 500 MW of new projects in Rio Grande do Sul state. The growth in wind power in Canada over the last decade has been staggering, with installed capacity increasing from 300 MW in 2003 to almost 8,000 MW at the end of 2013.

This growth has been based on provincial renewable energy targets, implemented through tenders by the main utilities and energy acquisition programmes at regulated prices.

A further 4,500 MW of wind power are expected to come on-stream in 2014-2015 for which PPAs have already been awarded, and tenders have been announced in Quebec (450 MW) and Ontario (600 MW), although there is some uncertainty over the development of wind power from 2016.

Both of these tenders include measures to maximise the involvement of local communities, a particularly important aspect in the development of wind power in Canada.

In 2013, Enerfín concentrated its efforts in Canada on the commissioning of the 100 MW L'Erable wind farm in Quebec, which came onstream in November 2013. It also promoted a number of greenfield projects at sites in Quebec so as be eligible to take part in tenders in the province. 1,003 MW of total accumulated wind capacity

729 MW attributable to the Group

357 MW attributable in Spain

272 MW

100 MW attributable in Canada

#### Australia

Australia's September 2013 federal elections resulted in a change of Government. This has led to regulatory uncertainty in the renewable energy sector, as the new government intends to review renewable energy objectives in 2014 and to eliminate the Carbon Tax (penalties for carbon emissions), if it takes control of the Senate at July's elections.

Enerfín gained a foothold in Australia in May 2013 through the acquisition of the Bulgana Wind Farm company, which owns the rights to the 150 MW Bulgana wind farm 225 km to the north west of Melbourne.

Enerfín is continuing the development process for this wind farm as it awaits information on the scope of the aforementioned energy reforms.

#### Mexico

The Mexican government amended the Constitution in late 2013 to enable energy reform, opening up the generating market to competition and permitting individuals to get involved; this will favour renewable energy.

At the end of the year, the Federal Electricity

Commission (CFE) announced it would hold a tender for 300 MW of wind power in the state of Baja California in the first half of 2014.

Enerfín is alert to these opportunities and has commenced the appropriate planning.

#### South Africa

There was a 27% fall in the price of PPAs awarded in South Africa in 2013, compared to 2012. This was mainly due to increased competition and international developers entering the market, financing their projects with corporate guarantees.

The local currency, the rand, also fell by 23% against the euro in 2013, increasing uncertainty about investing in the country.

Despite these conditions, Enerfín will continue to assess opportunities as they arise.

#### Spain

Against a backdrop of regulatory uncertainty in Spain, with an outlook of drastic reductions in wind farm revenues, Enerfín is considering how to maximise its wind farm revenues and minimise their costs.

#### The first MW generated in North America

Enerfín commissioned its 100 MW L'Érable wind farm in Quebec in November 2013, the Elecnor Group's first investment project in North America.

Energy from the project will be sold to Hydro Québec, a public electricity generating and transmission company, for 20 years at an initial price of CAD\$ 132.3 MWh.

Located between Montreal and Quebec, the L'Érable wind farm has 50 wind turbine generators of 2 MW each. The state-of-the-art Enercon technology used increases the efficiency and useful life of the facilities, while reducing their environmental impact. The farm will power some 30,000 households and prevent the emission of 60,000 tonnes of CO<sub>2</sub> a year.

With an investment of EUR 260 million, this is Elecnor's first wind farm in Canada. More than 1,200 professionals worked on the various stages of construction.



CONSTRUCTION OF THE L'ERABLE WIND FARM Meanwhile, it has continued processing the projects awarded in Galicia, the Valencia region and Aragon to achieve the required administrative authorisations, in the hope of an improved remuneration outlook, whilst also studying the repowering, refurbishment and relocation of some facilities to improve exploitation of wind resources and increase their efficiency.



A VISIT TO THE OSÓRIO WIND FARMS



Osório wind farms, Brazil

STRATEGIES

#### 564 MW in Brazil

Enerfín was awarded 80.5 new MW in the tender organised by the Brazilian government in August. This is distributed among four wind farms in the state of Rio Grande do Sul: Granja Vargas 2 (18.4 MW), Granja Vargas 3 (16.1), Cabo Verde 4 (29.9 MW) and Cabo Verde 5 (16.1 MW).

The average sale price of the electricity from these wind farms is R\$ 114.93 MW. They are planned to come on-stream in September 2015.

With the award of these new wind farms, Elecnor now has 564 MW of wind power in the state of Rio Grande do Sul. Of this total, 300 MW are already in operation with the remainder at various stages of construction and development, further cementing Elecnor's status as a sector leader in the country.

In 2013, Enerfín completed installation of an additional 22.5 MW in Rio Grande do Sul, through increases to the unit output of the wind turbines of the Palmares, Ventos da Lagoa and Ventos do Litoral wind farms. These are planned to come on stream in 2014.

**BUSINESSES - RENEWABLE EN** 



# Solar thermal

Elecnor made a strong entry into the solar thermal market in 2010 when it began building three solar thermal plants simultaneously in Spain. These showed that the Company had the technical and economic abilities required to undertake the design, supply, construction, start-up, operation and maintenance of solar thermal plants based on parabolic trough collector technology.

144,000

of solar thermal energy in

150 MW

Spain

tonnes of CO<sub>2</sub> emissions prevented with the three solar thermal plants in operation

90,000 households provided with clean electricity



THE ASTEXOL 2 SOLAR THERMAL PLANT, IN PICTURES

2013 was the first full year of activity at the Astexol-2 plant in Badajoz and the Aste 1A and Aste 1B plants in Ciudad Real, all of which came on-stream the previous year. The total investment in these three plants was EUR 750 million.

The regulatory changes introduced by Law 15/2012, Royal Decree-Law 2/2013 and Ministerial Order 221/2013 have resulted in an estimated 37% reduction in remuneration for Spain's solar thermal sector. We are awaiting publication of a new Royal Decree and its implementing provisions regulating production from renewable sources, cogeneration and waste.

A control centre has been established at the

Madrid offices of Celeo, the Group company specialising in the management of its concession assets. This centre will be responsible for monitoring and optimising the operation of these three plants. The measures introduced have decreased the costs of deviations from planned generation levels in the daily market, increased remuneration for the reactive energy component and minimised water, gas and electricity consumption, improving plant performance. This has resulted in significant increases in net production and revenue from the plants.

The gas and electricity supply contracts have also been adapted to the real operating parameters and conditions of the three plants, resulting in significant cost savings in all three cases.









## 309 MW

of solar photovoltaic capacity developed by the Elecnor Group up to the end of 2013

## **98** MW

developed abroad in this period, in the United States, France, Italy, Portugal, Argentina, Mauritania and Abu Dhabi

5.5 MW operated by the Group itself

75% of Atersa's 2013 sales were abroad in 2013, up from 57% in 2012

# Solar photovoltaic

By the end of 2013, the Elecnor Group had been involved in the development of a total of 309 MW of solar photovoltaic energy. This has been developed through the parent company and its subsidiary Atersa. These have created their own design and construction style for large photovoltaic facilities, and have built up the production capabilities needed for all the components and equipment required to configure any solar electricity system, whether stand-alone or connected to the grid.

f these 309 MW of solar photovoltaic energy, 275 MW are ground-based and the remaining 34 MW are roof-top installations. 211 MW are in Spain (5.5 MW of which are operated by the Group itself) and 98 MW are abroad, in the United States, France, Italy, Portugal, Argentina, Mauritania and Abu Dhabi.

Some of the most important projects in which the Group has been involved over recent years in Spain include the solar farms of Las Magasconas (Trujillo, Cáceres), Hoya de los Vicentes (Jumilla, Murcia); Olmedilla (Olmedilla de Alarcón, Cuenca), Guadarranque (Cadiz), Arroyo de San Serván (San Serván, Badajoz), Lorca (Murcia) and Zuera (Zaragoza). Some of the major projects abroad include the 26 MW plant completed in 2013 for the Pacific Gas & Electric Company in California, and the roof-top installations for two Renault motor company factories in France, with total capacity of 21.2 MW.

#### The general situation in 2013

The Group's solar photovoltaic performance in 2013 can be considered satisfactory, despite the crisis in the global photovoltaic industry and the difficult conditions for renewable energy in Spain following recent energy reforms.

The new regulatory framework for renewable energy has made the industry unviable in Spain in the short term. This is particularly true for the solar photovoltaic segment, which has suffered the implementation of administrative, technical and economic conditions to forms of electricity supply including "on-site" consumption that seriously damage the segment, in addition to cuts in remuneration.

Consumers with generation facilities for on-site use connected to the grid that have not been registered as production plants can no longer sell electricity to the system. Consumers associated
with production facilities that have been registered, and that are connected to the grid or through a direct line, with facilities that have feed-in tariffs, can sell electricity at the pool price or receive the feed-in tariff on the excess, whilst paying the generation toll.

#### Atersa's response

In keeping with the dynamism of the sector and its increasing international development Atersa, Elecnor's photovoltaic subsidiary, changed its business strategy in the last quarter of the year, taking a more active role in the sale of services, engineering, supply and construction. This involved a major workforce restructuring to bring the structure into line with a market that will mainly be international.

In 2013, 75% of Atersa's turnover was generated abroad, compared to 57% in 2012.

Changes in the main areas of activity included:

**Professional and engineering clients:** clients in this segment are mostly affected by the lack of legislation applicable to installations connected to the electricity grid in Spain, both for the sale of energy and for on-site consumption. This has resulted in there being almost no activity in this market. The publication of new energy saving regulations on 10 September 2013 as part of the Technical Building Code implied a reduction in peak potential to be installed, and the type of buildings susceptible to such installations.

These factors have resulted in closure of many companies that consume photovoltaic products and almost all Spanish manufacturers ceasing such activities.

Only medium and large companies have been able to continue their business, transferring their know-how to new markets, such as Rumania, Chile, Puerto Rico, the UK and South Africa.

At the same time, leading Asian manufacturers have cornered the Spanish market through "dumping" strategies, as demonstrated by a European Commission investigation. This was mitigated somewhat by publication of EU antidumping regulation 182/2013, which established a minimum sale price for photovoltaic modules in the EU. However, there have been frequent breaches of this regulation in operations of a certain scale.

Atersa is focussing its efforts on technology and engineering companies with operations worldwide needing autonomous electricity supplies for their systems and equipment. This has enabled it exploit opportunities to sell

Solar panels for direct water pumping system at El Totoral, in Chile's Atacama desert

PEOPLE



compete autonomous systems (modules, regulator, battery, etc.) and to reach countries in which it does not have a commercial presence.

It has also contacted leading Spanish companies that supply large installations worldwide, and is continuing its work on the design and implementation of tenders for material supply and "turnkey" installations subject to the

### Two unique projects in the United States and Mauritania

In 2013, Elecnor completed two particularly noteworthy photovoltaic plants, one in California and one in Mauritania.

In California, it completed a 26 MW installed capacity plant for the Californian company Pacific Gas & Electric Company. This 59-hectare facility is in Hanford in California's Central Valley. This facility will have an estimated output of 52,000 MWh/year and prevent the emission of 45,000 tonnes of CO<sub>2</sub> per annum.

Pacific Gas & Electric Company is one of the country's leading natural gas and electricity suppliers, with around 15 million customers in Northern and Central California.

The Mauritania facility is on the southern outskirts of Zouerate, the largest city in the north of the country and capital of the Tiris Zemmour region. It had a population of around 38,000 in 2005 and focused on the area's mining activity. The Mauritania rail line to Nouadhibou passes to the west. The city is one of the places where the iron mineral mined in F'dérik is deposited.

The plant covers approximately  $78,500 \text{ m}^2$ , including the support structures, panels and inverter, transformer and control centres. The area is fenced off with perimeter lighting.

The facility converts solar energy into a low-voltage 330 V three-phase AC current. The plant has three 1 MW transformer centres, each housing a 1250 kVA transformer, stepping up the electricity generated to 33 kV. The three transformer centres are connected to a switching centre with the cabins needed for connection to the evacuation centre, which transmits the electricity generated into the existing electricity grid.

The APVM-285P modules were manufactured at Atersa's Nouakchott factory, which commenced operating on 29 April 2013.

Technical Building Code (CTE), the only current standard in Spain setting out the minimum photovoltaic electricity contribution for some new and refurbished buildings.

As a result, its sales in this area in 2013 were similar to those in 2012. However, although over half of the capacity sold in the year was for international installations, in previous years almost 90% of supplies were for plants in Spain.

It is also offering major supplies for large plants (CSP connection boxes and modules), although such projects often take a long time to come to fruition. In addition to sales of modules and other equipment, three CTE-compliant "turnkey" installations are also under way.

The main developments in the year include the ending of the regional government of Aragon's SODEMASA project, carried out in a joint venture with Electria. This involved supply and "turnkey" installation of 37 roof-top installations in 6 areas of Aragon connected to the grid and 144 PV streetlights. Installations connected to the grid were also installed at the new HQ of BBVA in Madrid, the HQ of 3M in Madrid and the Hipercor-Puerto Venecia shopping centre in Zaragoza.



Zouerate solar PV plant (Mauritania)

National and international distribution customers: There were significant changes to tariffs for grid-connection systems in European markets in 2013, due to the lower costs of the technology and the deep crisis being experienced by the continent. The most important changes were it France, Belgium, Italy and Germany. The market for new installations in Germany fell by 50% in 2013 compared to 2012, whilst there was also a fall in the number of preallocation registrations in France and Italy. Meanwhile, the market in Belgium seized up entirely.

The UK was the only European market to remain strong, with growth continuing due to renewable energy tariffs.

Elsewhere, the strongest growth was in the United States (5 GW), Japan (4.5 GW) and China (8 GW).

Given this situation, in 2013 Atersa decided to address new markets, such as the UK, Holland, Denmark and Switzerland, whilst sales in Italy remained similar to the previous year.

Atersa provides its 30-plus representatives in over 20 countries in Latin America, Africa and

Asia with electricity solutions for areas isolated from the conventional electricity grid. Working closely with Elecnor and drawing on the various forms of finance available from international institutions, the company is competing in the most demanding international tenders.

#### Plants in operation

Elecnor achieved its output and revenue targets for its photovoltaic installations in 2013.

Even so, net remuneration was down as a result of the new electricity regulations introduced by the Government.

In February 2013, the THT Antequera plant, with nominal capacity of 2 MW, was included in the CHP/Renewables register (RAIPRE). This photovoltaic facility has been installed on the roof of the Puertas THT factory in the Antequera Logistics Centre, Malaga.

Seven other photovoltaic plants were in operation at the end of 2013: Siberia Solar (10 MW), AASCV Alginet (1 MW), AASCV2 Alginet (1 MW), ELC Murcia (610 kW), HAE Alacant (520 kW), Helios Almussafes I (100 kW) and Helios Almussafes II (97.5 kW).

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Concessions and investment

230 kV Encruzo Novo-Miranda power line, Brazil

Elecnor began operating concessions related to its business areas 15 years ago, building on its experience in infrastructure construction and operation and its financial wherewithal. The focus has been mainly on power transmission systems, gas and the environment, although the Company is now undertaking investment projects in renewable energies and space.

## Electricity infrastructure



Elecnor is among the leading developers of electricity transmission projects, under concession arrangements, in Brazil and Chile. It was involved in 11 concession in Brazil at year-end 2013. The Group was awarded its first project in Chile, the 255 km, 500 km Ancoa-Alto Jahuel transmission line, in 2009. A second line was added to this in 2012.

eleo Concesiones e Inversiones the company through which Elecnor invests, operates and exploits its investment project assets, with the exception of wind farms- is involved in 11 electricity transmission concession companies in Brazil, totalling 3,734 km of transmission lines and 9,340 MVA. All of these are 30-year operation and maintenance contracts put out to tender by the energy regulator, Agencia Nacional de Energía Eléctrica (ANEEL).

The Corumbá Transmission Line project came into commercial operation in Brazil in late-September 2013 in the west of the state of Mato Grosso do Sul. It consists of 295 kilometres of 230 kV doublecircuit transmission line, with a 200 MVA substation.

Construction work continued on projects awarded in 2011, which are planned for completion in 2014:

- Integração Maranhense Transmissora de Energía, consisting of 365 kilometres of 500 kV transmission line in Maranhão state.
- Caiuá Transmissora de Energía, consisting of 136 kilometres of 230 kV line and two substations, totalling 400 MVA, in Paraná state.

Work also started on design and construction of the Brilhante II Transmissora de Energía project awarded in 2012, involving a 200 MVA substation in the state of Mato Grosso do Sul.

### Chile

The Group operates two electricity transmission companies in Chile totalling 451.5 km of lines.

In 2103, work continued on the "2x500 kV Ancoa-Alto Jahuel line, laying of first circuit" project, which is expected to come into service in 2014. The project involves 255 kilometres of 500 kV power lines and grid connections for each of the substations.

In 2013, we carried out the design work, and obtained permits and environmental authorisation for the "2x500 kV Charrúa-Ancoa line, laying of first circuit" project. We were awarded the contract for this 196.5 km, 1,400 MVA line in 2012.

In August 2013, Chile's National Energy Commission awarded the upgrading of the 255 km "2x500 kV Ancoa-Alto Jahuel, laying of second circuit" project to Elecnor, valued at USD 92 million.

### 1 new

concession began operating in Brazil, the Corumbá Transmission Line

### 11 concessions

in total in Brazil at the end of the year, totalling 3,734 km of transmission lines and 9,340 MVA

### new

tender won in Chile: extension of the Ancoa – Alto Jahuel line, with laying of a second 255 km circuit









### Gas infrastructure

Elecnor boasts vast experience and a strong track record in gas infrastructure development, both in Spain and in several markets in Latin America. In 2011, the Group took a giant leap forward in this business and in the concession business when the Mexican electricity regulator, the Federal Electricity Commission (CFE), awarded it a natural gas transport service tender, initially for 25 years but renewable.

he contract involves constructing, operating and maintaining Elecnor's first gas pipeline in Mexico, called Morelos, which will also serve other customers. An investment of USD 270 million was earmarked for the project. The pipeline is approximately 160 km long and runs through the Mexican states of Tlaxcala, Puebla and Morelos, linking the current gas pipeline system owned by the Mexican company Pemex Gas Petroquímica Básica in Tlaxcala to several power plants to be developed in Morelos in the future. Construction work on this infrastructure began in December 2013 and is planned to be completed in 2014 with commissioning of the first phase. Before work started, Elecnor was actively involved in obtaining planning rights, helping out the CFE, which was responsible for this task.

Enagás was a strategic partner in the project, with a 50% holding. This alliance has significant potential for future tenders in this sector, both in Mexico and in other countries.



An ambitious programme of energy reform came into effect in Mexico on 21 December 2013, after receiving parliamentary approval. This included a statement that underground solid, liquid and gaseous hydrocarbons are the property of the nation, and that no concessions will be granted for them. In order to generate revenue, the government will carry out exploration and extraction activities for oil and other hydrocarbons by assignment to state production companies, or through contracts with such companies or individuals.

The reforms also include an objective to modernise and strengthen, but not privatise, Pemex and the Federal Electricity Commission (CFE), as production companies 100% owned by the Mexican government. Another objective is for the government to have exclusive responsibility for planning and control of the national electricity system. The reform also seeks to attract investment for Mexico's energy sector, and to reduce financial, geological and environmental risks relating to oil and gas exploration and extraction.

Among other benefits, the reform is expected to result in lower electricity and gas prices and to increase oil production from 2.5 million barrels today to 3.0 million barrels in 2018 and 3.5 million barrels in 2025. It also seeks to increase natural gas production from 5,700 million cubic feet per day at present to 8,999 million in 2018 and 10,000 million in 2025. More generally, the reforms are expected to add an extra percentage point to economic growth in 2018 and around 2 percentage points in 2025.

The reform also plans to promote the pipeline sector. The Federal Electricity Commission (CFE) will develop a network of 16 gas pipelines stretching 10,000 kilometres with private companies over the next four years. This will involve investment of around USD 50,000 million, of which around USD 23,000 million will be private, with the remainder contributed by the Federal Government.

Morelos gas pipeline, Mexico FIGURES









**39** water treatment plants in operation in Aragon

**7,600,000** m<sup>3</sup> of water treated

### Environment

In 2013, environmental activities continued to represent 3% of the investment assets of Celeo, the Elecnor Group's main vehicle for investing in, developing and operating concessions. Specifically, these activities entailed three water treatment concessions (SADAR, SADEP and SAPIR) all located in Aragon in north-eastern Spain.

### SADAR

This concession involves 10 waste water treatment plants for various municipalities in the Cinco Villas and Zaragoza regions.

The concession agreement covers one-and-a-half years of construction and 20 years of operation, with a total budget of around EUR 111 million. All the plants have been operating since 2009.

Around 3.400,000  $\mbox{m}^3$  of water were treated in 2013.

#### SADEP

This concession involves the treatment of waste water for various municipalities in the Zaragoza and Valle del Ebro districts. It entails nine WWTPs and three collectors, which are remunerated at WWTP rates.

The concession agreement covers one-and-a-half years of construction and 20 years of operation, with a budget of around EUR 75 million. The plants under this concession have been operating since their commissioning, coming on stream gradually between 2009 and 2010.

Around 3,000,000  $\mbox{m}^3$  of water were treated in 2013.

### **SAPIR**

This concession includes a total of 58 treatment projects in the area of the Pyrenees called 'P2' along the Gallego River basin.

There are currently 20 WWTPs in operation, all of which were completed in 2012. Noteworthy is the Biescas-Gavín WWPT, which is designed to treat 12,000 pop.eq (population equivalent). Other WWTPs include Yebra de Basa, Hoz de Jaca, Yesero, Acumuer, Senegüe, Ara, Aso de Sobremonte, Escuer and Yosa de Sobremonte, all "nest head" types, and Binué, Javierre del Obispo, Larrede, Navasilla, Olivan, Oros Alto, Oros Bajo, Osán and Sobas, which all run off the Biescas-Gavin WWTP. Combined, they can treat a 45,540 pop.eq flow of waste water.

The concession agreement covers two years of construction and 20 years of operation, with a total budget of approximately EUR 91 million.

Around 1,200,000  $\ensuremath{\text{m}}^3$  of water were treated in 2013.



**BUSINESSES - CONCESSIONS AND INVESTMENT - Environmen** 



### Space

Elecnor Deimos completed one of the Elecnor Group's most significant investment projects of recent years in 2013: commissioning of its Satellite Integration and Operations Centre in Puertollano (Ciudad Real), harnessing the knowhow of Elecnor's technical units in satellite development, construction, launch and operations. Working closely with the Centre, further progress was also made on the Deimos-2 project, the second earth-observation satellite invested in by Elecnor, following the launch of Deimos-1 in July 2009.

8 million euros of direct investment in the Puertollano Centre

**4,000** m<sup>2</sup> of surface area at the Puertollano centre for satellite control and monitoring

**100 million** euros total investment planned in the development and working life of Deimos-2

150,000

km<sup>2</sup> of high-resolution images captured by Deimos-2 daily once fully operational

14 times around the Earth each day naugurated in October 2013, the Puertollano Satellite Integration and Operations Centre is an advanced complex dedicated to satellite control and integration. It is one of the most ambitious projects in the European aerospace industry. The project will create about one hundred highly qualified jobs, with investment of around EUR 60 million leading up to the launch of Deimos-2. Total investment over the satellite's useful life of around 7 years is expected to be around EUR 100 million.

The Puertollano Centre completes Elecnor Deimos' presence throughout the value chain for space missions. Almost 8 million euros have been invested in these facilities, which have been under development for two years. The Centre is divided into three sections: the Flight Section, the Earth Section and the User Section.

The Flight section will focus on satellite integration, for which a 400 m<sup>2</sup> clean room has been developed to meet the most exacting environmental parameters. This clean room was used for the integration of the Deimos-2 satellite, with a multidisciplinary team of specialists working for more than one and a half years on

the various elements in the satellite system.

The Earth section could be considered the brains of the mission. This features a control centre for monitoring, manoeuvring, calibration and correction of the satellite once it is in orbit. The control centre is also responsible for receiving and processing the images captured by the satellite, using sophisticated software (gs4EO) developed by Elecnor Deimos. The Earth section also includes an earth station with a 50 tonnes, 10.2 metre diameter antenna. This is located in a plot next to the building, and is responsible for communications between Deimos-2 and the control centre, enabling data to be received from Deimos-2 and from other satellites.

Finally, the User section provides earthobservation products and services, enabling Elecnor Deimos to meet the needs of its customers for high quality images captured by Deimos-2 for intelligence work and analysis of details.

The Elecnor Deimos Satellite Integration and Operations Centre boasts the latest technology, including in-house image processing software that can process and deliver an image to a customer within two hours of downloading, through a



payload processing centre with 96 central processor units and 80 TB of initial storage capacity, which can be expanded virtually limitlessly.

#### Deimos-2: high technology at the service of society

The new Deimos-2 satellite is much more powerful and advanced than Deimos-1, capable of producing earth images with a resolution up to 400 times sharper than its predecessor. Its main applications will include agriculture, urban planning, cartography, security and intelligence, civil protection and the environment.

Deimos-2 has taken around three and a half years to develop. It weights 300 kg and measures 2 x 1.5 m (with its panels folded). It will orbit the earth at an altitude of over 600 km, and will be able to cover an area of over 150,000 km<sup>2</sup> every day. The satellite's most important feature is a panchromatic and multi-spectral camera which can provide images with a resolution of up to 75 cm. In addition to this high capacity, the satellite is extremely flexible, allowing it to be pointed in all directions, and enabling it to capture extremely precise and detailed images.



The Puertollano Centre is presented to society

The Puertollano Satellite Integration and Operations Centre was inaugurated on 8 October 2013, in the presence of the President of the Autonomous Community of Castilla La Mancha, María Dolores de Cospedal, who led a distinguished official delegation. Elecnor was represented by its Chairman, Fernando Azaola, and its Deputy Chairman, Jaime Real de Asúa.

The event showed the support for a project conceived as an investment in the future that will seek tangible returns.

The ceremony featured the unveiling of a commemorative plaque by María Dolores de Cospedal, followed by a tour of the Centre. As Elecnor's Chairman said in his address, this project demonstrates the Group's strategic faith in Castilla La Mancha, with projects and investments that, in his words, "have a common characteristic: a definite commitment to the sustainability of the continuity and stability of our assets and the potential for investment, mostly in sectors closely linked to the economic and social progress of the communities in which we operate".

The opening ceremony was brought to an end by María Dolores de Cospedal, describing the Centre and the Deimos-2 project as "flagships that are setting a global benchmark".

# Innovation

Vision Creativity

Solution

Support

ement

UMMU

# Strategies and corporate policies

Elecnor has launched a new three-year Strategic Plan for 2014-2016, reaffirming its commitment to the policies that have proved most effective over recent years: financial solvency and prudent risk management, internationalisation and increasing integration, and quality, environment, R&D and innovation, energy management and OHS policies.

# Financial solvency and risk management

Elecnor regards prudent financial management as being of the utmost strategic importance. It bases its financial management policy on three key principles: financial risk management, arranging favourable condition for funding and a balanced and sustainable debt structure.

#### Financial risk management

Elecnor is exposed to a range of financial risks, which it manages by grouping together risk identification, measurement, concentration limits and oversight systems. Financial risk management and limitation is managed by the Corporate Department, in coordination with the Group's business units and subsidiaries. Financial risk management activities are approved at the highest decision-making level, pursuant to established regulations, policies and procedures.

The major risk for Elecnor is market risk, basically due to exchange rate risk resulting from the Group's business activities in international markets. Some of the Group's revenues and procurement costs are denominated in currencies other than the euro. There is therefore a risk that the Group's profits could be impacted by exchange rate movements.

Elecnor manages and minimises this risk through hedging strategies, with the objective of making profits only through its ordinary activities, not on exchange rate speculation. This hedging basically involves debt instruments referenced to the contract currency, exchange rate insurance and financial swaps, through which Elecnor and a financial institution exchange flows on a loan in euros for flows on a loan in the other currency, and the use of a basket of currencies to cover mixed financing indexed to various currencies.

Exchange rate movements change the fair value of assets and liabilities that accrue fixed-

rate interest, and future flows on assets and liabilities referenced to a variable interest rate. Elecnor has access to external funding for its operations, basically relating to the development, construction and operation of wind farms, solar-thermal projects and electricity infrastructure tenders, through project financing. This type of financing requires interest rate risk to be hedged contractually through interest-rate hedges. With both project and corporate finance, borrowings are arranged at variable rates and the Group uses hedges to minimize the interest-rate risk on the borrowings.

The hedging instruments are assigned to specific debt instruments and have a maximum value equal to the nominal values of, and with the same maturity dates as, the hedged items. These are basically interest rate swaps (IRS), which establish fixed interest costs for funding originally arranged at variable rates. Interest rate hedges are contracted subject to accounting efficiency criteria.

Liquidity risk is mitigated by a policy of maintaining a highly liquid treasury position, holding non-speculative short-term instruments, such as treasury bills in nonoptional reverse repurchase agreements and very short-term US dollar deposits at leading banks. to ensure we can meet our obligations. We also contract credit facilities with a suitable limit and terms to meet projected needs.

Our main credit risk relates to counterparties or

FIGURES

customers not meeting their contractual obligations with regard to accounts receivable for commercial transactions. We minimise this risk by working with customers with a sound credit history. The sector and activity in which we are involved ensures that Elecnor's customers have high credit ratings. However, for international sales to non-recurring customers, we use mechanisms such as irrevocable letters of credit and take out credit insurance policies. We also analyse the financial solvency of the customer, stipulating specific contract conditions to ensure collection of monies due.

Under the current regulatory framework, the electricity generated by our wind farms is sold into the Iberian Electricity Market (MIBEL) and we collect revenues from the market operator, OMIE, subject to a payment-guarantees system, and the National Energy Commission (CNE), the Spanish energy-market regulator, which reports to the Ministry of Industry. Ventos do Sul Energía, S.A., Parques Eólicos Palmares, Ltda., Ventos da Lagoa, S.A. and Ventos do Litoral Energía, S.A. (Brazil) have signed 20-year electricity sale contracts for their output with the Brazilian electricity distribution company. Likewise, our Brazilian electricity infrastructure concessionaires have signed electricity distribution contracts with customers with high ratings, which, together with the restrictions imposed by the transmission system, ensure that there will be no insolvencies.

In today's economic climate, Elecnor is more concerned about credit risk than other financial

risks. Faced with this situation, it is continuing to take measures to offset these risks, reviewing its credit risk exposure regularly and recognising provisions as appropriate.

Elecnor pays close attention to regulatory risks, particularly with regard to renewable energies, so as to monitor potential impacts on its income statement.

In December, Elecnor recovered all amounts overdue in full, totalling EUR 6.9 million, pursuant to Royal Decree-law 8/2013, on supplier payments by local authorities. The EUR 14 million balance pending from the Autonomous Communities was recovered in February 2014.

### Liquidity and debt

The robustness of Elecnor's financial position is demonstrated by its strong treasury position at the end of December 2013, excluding project treasury, totalling EUR 169 million. Including its undrawn credit facilities of EUR 273 million, its total funds available amounted to EUR 442 million, of which only EUR 57 million matures in 2014.

Elecnor's net corporate financial debt at year-end 2013 totalled EUR 359 million. The EBITDA/net financial debt ratio was 2.47, below the 2.75 maximum in the covenants of the syndicated credit facility. This syndicated credit facility also places a limit on net financial debt of 95% of capital and reserves. This stood at 68% at year-end 2013.

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The current situation in the financial markets is favourable, both in terms of bank lending capacity and capital market liquidity. Following the difficulties of the last few years, it is now clear that there are finally some well founded grounds for optimism in the recovery of Spain's economic indicators. The financial markets are reflecting this clearly. There is evidence that the financial markets have confidence in the Group, so current market conditions make this a favourable time to pursue the objective of maintaining stable longterm funding sources.

#### **Obtaining funding**

Against this new backdrop, Elecnor has started analysing alternatives for diversifying its funding sources, complementing bank finance so as to reduce dependence and also seeking to extend maturities and reduce average financing costs.

The Group was involved in the following international non-recourse project financing transactions in 2013:

- In the electricity transmission sector in Chile: funding agreements for the Alto Jahuel project were signed in January, with significant interest from Chilean banks and Spanish banks operating in the country. The funding totalled EUR 167 million, of which EUR 100 million was in the local currency.
- The Morelos gas pipeline in Mexico: a covenant was signed in 2013 with the banks, who played a key role in the funding. The arrangements were completed in June 2013, when the first disbursement, amounting to USD 66 million, was made, from the total USD 200 million approved.
- The electricity transmission sector in Brazil: infrastructure bonds totalling BRL 39 million (approximately EUR 12 million) were issued in July 2013. These funds were raised to partially finance the Jauru Transmisora de Energía concession project, together with debt from the BNDES (Brazilian Development Bank). These bonds have a grace period until December 2017, maturing in December 2030.

24 % growth in foreign sales in 2013

56 % contribution of foreign sales to total sales in 2013

40 countries contributed to the Group's revenue in 2013

10 countries are now stable markets for Elecnor

EUR1,407 million allocated to investment projects abroad, 73% of the total

**5,833** employees abroad (46% of the total headcount)

# Internationalisation

The Elecnor Group made further progress in its international expansion in 2013, with EUR 1,930 million allocated to investment in the three-year period 2011-2013. Elecnor's commitment to international expansion has received a further boost.

n 2013, Elecnor's sales in foreign markets grew by 24%, to EUR 1,046 million, accounting for 56% of total sales. A similar pattern is evident in the project pipeline, which grew by 11% overall to EUR 1.969 million, due to the contribution of international markets, which were up 18%.

Together with diversification, international expansion is one of the key aspects of Elecnor's development, and has been particularly important over recent years.



#### Brazil

Brazil is Elecnor's second largest market, behind Spain, contributing EUR 307 million to the Group's 2013 revenues. It was also the main destination for investment in 2013, at EUR 740 million.

Elecnor has been active in Brazil for more than thirty years, growing and consolidating its leading position in the electricity transmission systems, renewable energy and gas sectors.

In 2013, Elecnor continued developing a number of major transmission line and substation projects that commenced the previous year, increasing its gas sector portfolio with a number of new contracts, enhancing its wind generation capacity and maintaining its 11 electricity transmission system concessions, cementing its position as a leading operator.

Whilst consolidating its activities in key sectors, last year Elecnor also beefed up its organisation in Brazil in line with the Group's diversification strategy, focusing on areas offering potential for growth, such as generation, installations, energy efficiency and electricity transmission.

In addition to Spain, the Group has built up a solid and stable presence in 10 other markets: Brazil, Venezuela, Angola, Mexico, the Dominican Republic, Argentina, Uruguay, Chile, Ecuador and Honduras. Elecnor obtained sales in another 29 countries in 2013, with a total of 40 countries contributing to its revenue.

The international business was employing 5,833 people at year-end 2013, 46% of the total headcount.

### Expansion in North America and a foothold in Australia

Major developments in the year in the international sphere include the agreement with the US Willbros Group to purchase the assets of its subsidiary Hawkeye LLC, which provides engineering, construction and maintenance solutions in the electricity, natural gas and telecommunications sectors. This deal strengthen Elecnor's position in the US and will help drive its expansion in this market.

This USD 20 million agreement includes, inter alia, the acquisition of equipment and key contracts for electric transmission and distribution projects, natural gas, substations, telecoms systems, engineering and construction.

#### Mexico

Elecnor has always had a strong presence in the electricity and oil and gas infrastructure sectors in Mexico, where it is the leading supplier for a number of services related to these activities.

In 2013, a number of reforms began to take shape affecting all of these areas, including the energy market. This has slowed the public tender process in anticipation of the new regulations and how they will affect energy strategy.

Against this backdrop, and with new companies entering the market and increasing competition, Elecnor is continuing to explore new business opportunities in order to expand its market and continue the growth that has continued since it became active in the country over twenty years ago.

Meanwhile, projects commenced in previous years continued as normal. These included the Morelos pipeline for the Mexican Federal Electricity Committee, the Agua Prieta II combined-cycle plant and various implementations for Pemex.

FIGURES

Elecnor Hawkeye LLC will provide infrastructure services serving electricity and gas companies in the North East and Mid-Atlantic states, where Hawkeye has a strong track record.

We also created the company Elecnor Australia in 2013 to promote investment projects in areas such as renewable energies.

#### Investment efforts

Among the main strengths Elecnor can apply to carve out a position in foreign markets are its investment capabilities and expertise in the concession business, two aspects that have enabled it to enter and gain a foothold in the transmission line markets in Brazil and Chile, the wind power markets in Canada and Brazil and the gas transport service market in Mexico. EUR 208 million was allocated to investment projects in 2013, taking the total for 2011-2013 to EUR 1,930 million, of which EUR 1,407 million was invested internationally. The main destination for investment in 2011-2013 was Brazil, at EUR 740 million, followed by Spain, at EUR 523 million, and Canada, at EUR 278 million.

#### Angola

Elecnor has been active in Angola since 1991. It has maintained a stable and sustained presence in the country ever since, developing energy and water infrastructure, and playing an active part in building up all sectors of the country.

Elecnor is now one of the leaders in hydroelectric power, electricity and water. Its 600-strong headcount applies the Group's capabilities and qualities to all the sectors in which it is active, seeking new business opportunities to expand its activities to other developing sectors.

Elecnor is involved in some major projects in Angola, with a number of new landmarks in 2014, such as the start of work on the Cambambe hydroelectric plant and construction of the new 400 kV Cambambe-Catete line. The main areas of investment were wind projects, at EUR 589 million in 2011-2013, practically the same as transmission lines. Solar projects were in third place at EUR 515 million.

INVESTMENTS BY PROJECT TYPE 2011-2013



**INVESTMENT BY COUNTRY 2011-2013** 



### Diversification

Elecnor is also assisted in its international expansion by its broad ranges of skills, credentials and experience in some of the fastest growing and most promising sectors in its markets, from large electricity generation plants (combined cycle plants, solar thermal plants, hydroelectric stations, and wind and solar PV farms) to electricity, gas and telecommunications infrastructure, railway electrification, building construction, energy efficiency and water treatment.



Chile

Elecnor has been active in Chile for more than 15 years, and now plays a leading role in developing the country's energy supply, generation and distribution capacity, its non-conventional renewable energy and the application of energy saving measures.

Chile's Renewable Energy Act 20/25 was approved in 2013, doubling the target for non-conventional renewable energy from 10% in 2024 to 20% in 2025, with the setting up of new tender processes for these energy sources. A combination of various legal, technical and market factors has created the conditions needed for the non-conventional renewable energy industry to have already installed over 1 GW of capacity, with further capacity totalling 70% of existing capacity now being built.

The Electricity Concessions Act 20.701 also went through the parliamentary process in 2013, aiming to streamline the planning process and timescale associated with electricity concessions, so as to incentivise investment and competition in Chile's electricity market.

Elecnor's strategy in Chile continued along the same lines, culminating in the award of two new concession projects and with it becoming the lead manager of non-conventional renewable energy projects, offering engineering, procurement and construction (EPC) contracts.

Elecnor's values in Chile include innovation, solvency and quality, offering its customers a unique professional service.

# Corporate integration

1:



ELECNOR 2013 ANNUAL REPORT 95

Refurbishment of the Segura de la Sierra council building in

# **Quality Management**

Quality has been part of Elecnor's culture from the outset, focusing on customer satisfaction, continuous improvement, professional commitment and strict compliance with current legislation.

range of activities and initiatives were carried out in 2013 with the aim of strengthening quality management. These included:

- Enhanced integration of distribution activity into the integrated management system. To this end, production procedures for this activity were updated and improved and implemented across the business divisions.
- Internal audits were performed at each of Elecnor's companies and system monitoring committees were set up.
- Raising the awareness of new personnel continued through the integrated management system and under the induction programme.

During the year, AENOR conducted the following audits to renew the UNE-EN ISO 9001:2008 quality management systems certification of various departments and units, with satisfactory results.

- Energy Unit: ER-0096/1995
- Major Networks Unit: ER-0711/1996
- Northern Regional Office: ER-0360/1995
- Eastern Regional Office: ER-0175/1995
- Central Regional Office: ER-0313/1995

- North East Regional Office: ER-0700/1996
- Southern Regional Office: ER-1766/2002
- Elecnor Environment: ER-0122/2004

The following Group subsidiaries were also successfully audited:

- Ehisa Construcciones y Obras: ER-2042/2004
- Elecnor Seguridad: ER-1887/2007
- Área 3, Equipamiento, Diseño e Interiorismo: ER-1383/2010
- Aplicaciones Técnicas de la Energía: ER-0979/1997
- Audeca: ER-0990/1999
- Deimos: ES 028047-2
- Hidroambiente: SGI 1201167/11
- Adhorna Prefabricación: ER-0076/1997

In order to continue improving, efforts will be made in 2014 to optimise production procedures for high-voltage line assembly activities, highvoltage substations, facilities and telecommunications.

Also, as Elecnor becomes increasingly global, the groundwork is being put in place to facilitate the implementation of the integrated management system internationally.

# Environmental Management

Elecnor is committed to protecting the environment and efficient consumption of energy resources in its activities. It is well aware of its potential environmental impact, and its integrated management system therefore sets out and applies the most appropriate control mechanisms to minimise these.

lecnor's environmental management system is certified under the UNE-EN-ISO 14001:2004 standard. This offers a number of additional benefits:

- Reduced environmental risks, thereby improving the Group's environmental management in line with its commitment to protecting the environment.
- Leveraging of synergies between businesses and the improvement of internal tools resulting in a simplification of procedures.
- Improved training and environmental awareness of employees.
- Promotion and development of activities to improve energy management efficiency.

The Group's commitment to environmental responsibility was reinforced last year with the implementation of its energy management system and its ISO 50001 certification.

Audits were also conducted by AENOR to renew the UNE-EN ISO 14001:2004 certification of its environmental management systems. The following departments and business units successfully completed these audits.

- Energy Unit: GA-2000/0294
- Major Networks Unit: GA-2000/0295
- Northern Regional Office: GA-2002/0183
- Eastern Regional Office: GA-2002/0225
- Central Regional Office: GA-2003/0220
- North East Regional Office: GA-2004/0031
- Southern Regional Office: GA-2004/0273
- Elecnor Environment: GA-2004/0030

The following Group subsidiaries were also successfully audited:

- Ehisa Construcciones y Obras: GA-2006/0131
- Elecnor Seguridad: GA-2007/0649
- Área 3, Equipamiento, Diseño e Interiorismo: GA-2010/0752
- Aplicaciones Técnicas de la Energía: GA-2009/0396
- Audeca: GA-1999/0134
- Deimos: ES 028048-2
- Hidroambiente: SGI 1201167/12
- Enerfín: GA-2003/0360 and GA-2003/0416

The environmental management system was also successfully implemented and certified in Adhorna Prefabricación (GA-2014/0003).



### Energy management

Elecnor enhanced its integrated management system in 2013 with the addition of energy management. The inclusion of this new area was soon recognised with the award of UNE-EN ISO 50.001:2011 Energy Management certification.

he energy management system complements the four components that were already in place in Elecnor's integrated management system (SAQP): environmental management, quality, occupational health and safety and R&D and innovation. This development is reflected in the integrated management system policy, a document combining the general principles of the SAQP with the specific principles for each of the five areas.

Elecnor bases its energy management policy on an understanding of energy usage and consumption in its own facilities and projects, its ongoing drive for profitability and energy efficiency in procurement of energy and products, and the design of its facilities. It also pays particular attention to raising awareness among employees and suppliers about the importance of efficient and responsible energy usage and consumption.

The following procedures have been incorporated into the integrated management system to implement this policy:

- Energy review: establishing systems to identify energy usage and consumption, determining significant sources, prioritising opportunities for improvement and defining objectives.
- Energy performance: a methodology for identifying appropriate indicators of significant energy usage and consumption in Elecnor's projects and facilities subject to its energy efficiency management and the methodology for establishing the guidelines associated with these.



- Design of energy-efficient facilities: establishing a system for implementing opportunities to improve energy performance and operational control in the design of new, modified and refurbished facilities offering a significant impact on the energy performance of our projects and facilities covered by the system.
- Monitoring and measurement: putting in place a system to monitor and measure the key characteristics of operations and activities that might have significant energy management impact, verifying that energy is used in accordance with legal and other requirements.

Through the application of these procedures, the integrated management system (SAQP) meets UNE-EN ISO 50.001:2011 requirements, as certified by AENOR with reference GE-033-2013, for the following activities:

- Provision of comprehensive maintenance and energy efficiency services in all types of facilities, buildings and premises belonging to itself and others, on a managed basis. Management of electricity and fuel production and supply. Repair and replacement of facilities converting this energy into warm and cold air, hot and cold water and lighting.
- Provision of comprehensive maintenance and energy efficiency services for rail infrastructure and urban lighting, on a managed basis. This has been implemented in the HQ of our Central Regional Office and in the municipal buildings and public lighting for Villanueva de Perales council, in Madrid.

BUSINESSES



Maintenance of the Carmen y Severo Ochoa Hospital in Cangas del Narcea, Asturias

## Occupational Health and Safety

Prevention of occupational risks is one of the distinctive features of Elecnor, and is deeply ingrained in its corporate culture and philosophy. We are not satisfied with complying with applicable legal standards. We go further, setting ourselves the most demanding targets as our permanent objectives: zero accidents and zero tolerance of failure to comply with our risk prevention measures.

> ur main occupational health and safety activities in 2013 included:

- On-going integration of subsidiary companies into our joint prevention service, offering a better service than offered by the OHS companies previously contracted. 15 Group companies in Spain belonged to our joint prevention service at year-end 2013.
- External OHSAS 18.001 certification monitoring audits by AENOR of two Units, five Departments, the activities of Elecnor Environment and our subsidiary Ehisa, all with satisfactory results. Our subsidiary Audeca also received OHSAS 18.001 certification.

- Enhancement and extension of Internal Audit's OHS oversight of our projects, with 976 audits in the year.
- 23,889 safety inspections in Spain to monitor actual working conditions. These inspections resulted in 10,176 corrective measures being implemented to improve safety. A further 10,942 working condition checks were carried out by line managers to monitor conditions in their projects.
- Implementation and control of safety inspections abroad. 5,701 inspections took place and 3,613 corrective measures were put in place.
- Planned training and information activities for the workforce continued, involving 9,000 people, most of whom were involved in more than one training event. There were 35,280

the accident frequency rate for 2013, the best in our recorded history

12.5 the overall accident frequency index (national and international) BUSINESSES

### 23,889

safety inspections and 10,176 corrective measures in Spain

5,701 safety inspections and 3,613 corrective measures abroad

35,280 accident prevention training hours

Maintenance of the Carmen y Severo Ochoa Hospital in Cangas del Narcea, Asturias hours of occupational health and safety training in the year, not including OHS aspects of technological and management training, such as electrical qualifications, equipment operators, etc.

- Special activities for the World Day for Safety and Health at Work, 28 April 2013.
- On-going monitoring of the activities of subcontractors, including managing the inspections of many of these and coordination and information meetings.
- In addition to continuing to compile indices for our subsidiaries and branches abroad, we encouraged greater integration with the activities carried out in Spain. This included a series of visits to various countries to provide training to both local and expatriate staff to

promote the development of a shared Group culture, increasing their commitment to prevention and enhancing their knowledge of specific health and safety topics, such as working at height and in confined spaces, and electricity risk. 190 people were involved in 13 training activities.

These activities were part of the Elecnor Group's on-going commitment to continue improving safety conditions for its workers. These efforts were rewarded in 2013 by our best accident frequency index in Spain since 1967, when we started preparing these statistics. In 2012 we obtained an accident frequency of 14.2, the best on record. In 2013, we further improved this, with an accident frequency of 13.

Including figures for the foreign market, our overall accident frequency index was 12.5.



#### 2013 World Day for Safety and Health at Work Campaign

Elecnor once again held a wide-ranging internal campaign to mark the World Day for Safety and Health at Work, 28 April 2013. This included an art competition for the children and direct family members of Group workers, entitled "Safety at work for mummy and daddy".

In addition to promoting creativity, this competition aimed to encourage discussion in the home about the importance of safety at work. Prizes were awarded to the six winners (two for each of the competition's three age categories) and their families at an event attended by representatives of customers, Madrid Council's Regional Health and Safety at Work Institute (the head of which officiated at the event) and unions.

The campaign ended with a workshop in which the workers took an anonymous test on "How safe am I in my work?". The test results were then analysed and a video was shown in which three accident victims from previous years described how their lives had been changed by their accidents. The video was translated into English, French, Italian, Portuguese and Brazilian Portuguese, and was distributed throughout the Group and screened in small groups.

elecnor

Repairs to the roof and heating production room in the Mutua Madrileña building, Madrid

# R&D and innovation

33 major R&D and innovation projects across the entire Group

40 proposals submitted to the internal Focus R&D and innovation 2013 competition

6 projects submited to Focus R&D and innovation 2013 were selected

### 800,000

euros were budgeted to finance Focus projects in 2013

4 certifications under UNE 166002:2006: Elecnor, Audeca, Atersa and Elecnor Deimos



FULL DESCRIPTION OF THE MAIN R&D AND INNOVATION PROJECTS IN 2013 Elecnor is committed to innovation. In 2013, we took significant steps to extend R&D and innovation as a driver of our progress and a guarantee of our future throughout the group.

lecnor gears its R&D and innovation activities towards areas that add value and help the Company to differentiate itself from its competitors. Technological areas of interest include energy, the environment and sustainability, infrastructure and ICT.

Over the course of 2013, Elecnor worked to consolidate and continuously improve its R&D and innovation management system, particularly through the following:

- Systemisation of the end-to-end R&D and innovation process in accordance with UNE 166.002:2006, putting in place a set of processes and procedures covering everything from initial project ideas through to assessment of the results of completed projects.
- Definition of strategic R&D and innovation areas so as to focus on areas of interest to the Group and ensure future projects address the Group's business needs.
- Launch of a new round of the Focus R&D and innovation internal project financing competition, this year emphasising the importance of projects fitting into the Group's strategic R&D and innovation approach, with a clearer focus on results. 40 proposals were submitted, of which the R&D and innovation committee chose 6.
- Development of a new Innomarket experts workshop. As in previous years, Elecnor's experts met to discuss the projects underway in each business unit and subsidiary and to pool their creativity. For the first time, there were also presentations on the latest technological developments, with a workshop on the development of business models for innovative projects.

Looking to the future, the major challenge is to integrate Elecnor's R&D and innovation management system into its strategic plan so as to support the development of new businesses identified as being priorities.

### Other major aspirations include:

- The start of the international development of R&D and innovation through a system for integration of foreign subsidiaries into the Focus programmes.
- Specialisation of Innomarket workshops with themed events on specific areas, to promote synergies and generate project ideas.

### Certification

Following an audit by AENOR, Elecnor's R&D and innovation management system received UNE 166002:2006 certification in 2013; this applies across the company with the following scope:

- Railway electrification technology.
- Non-conventional energy technology.
- Computer software science for electricity and railway infrastructure simulation and management.
- Electricity transmission and distribution engineering and technology.
- Business process management services.

The R&D and innovation management systems of Audeca, Atersa and Elecnor Deimos were also audited by AENOR, retaining their certification.





Three major R&D and innovation projects: "H<sub>2</sub>OME", "EasySun Pump" and "gs4EO"

The Group's many R&D and innovation projects in 2013 included: H<sub>2</sub>OME, a sustainable, multifunction module providing a versatile and efficient way of supplying drinking water in developing countries; EasySun Pump, offering connection and control of an independent water pump powered by solar energy; and complete development of the ground segment of the planned second Elecnor Deimos satellite, Deimos-2, based on the gs4EO product suite.

The first H<sub>2</sub>OME prototype developed is in Ayerbe, Huesca. Elecnor developed this using shipping containers that were no longer in use, recycling them to create an adaptable mobile structure that is easy to transport and install anywhere.

The first prototype uses four 20 and 40-foot containers on three levels. The lower container houses a drinking water treatment plant (DWTP) capable of producing 4,000 litres/hour of water fit for human consumption.

The EasySun Pump system has been developed by our photovoltaic subsidiary Atersa. It could be used, for example, for livestock and agricultural farming, and can be powered by either a generator or photovoltaic power. It is compatible with all pump manufacturers, so that the best equipment on the market in terms of quality, price and service can be used. It can also be used with the existing pump of a well.

Finally, in preparation for the launch of the second Elecnor Deimos earth-observation satellite, Deimos-2, Elecnor Deimos has taken responsibility for the development of the ground segment using the gs4EO product suite. This is based on more than ten years work by the European Space Agency, and has been designed to offer the maximum flexibility and scalability for small earth-observations missions. Some of the components are already in use in various ESA GMES and Spanish missions.

Its modular design means it can be combined with other gs4EO products in various configurations, customising the ground segment to meet the needs of the client. This flexibility enables the implementation of virtual or direct Deimos-2 receiver stations for satellite data acquisition and receipt -directly through its own antenna in the case of the direct station- and local data processing and storage.

The modular nature of gs4EO means it can be integrated with the ground segment of other earth observation missions through its multi-mission capabilities and integration of Deimos-2 components with the ground segments of other bodies.


## **N** People

Elecnor's corporate culture has been built up by the contributions of generations of employees and professionals over its 56 year history. It is distinguished by reliability, commitment and effort, customer focus, solvency and innovation. Elecnor's commitment to people is not just restricted to our employees, we are also helping disadvantaged communities in the countries in which we operate, and are committed to personnel development and recruiting talented graduates.

## Seeking the best

Some of the values we look for in the new talent that joins Elecnor include team work, innovation and commitment. These values are intrinsic to the Group and everyone in its team, both domestically and internationally.

1,291 new Group employees

23,180 candidates registered on Elecnor's employment portal

453 job offers published

129,027 applications for the offers published

412 hiring

276 hiring

s in other parts of the company, Elecnor's international outlook is also reflected in its recruitment activities. There was a significant increase in international recruitment in 2013.

The launch of recent projects and new tender awards have increased our international workforce, and we have sought both local employees and Spanish staff who have taken responsibility for local hiring.

We have been recruiting in countries including Italy, France, Germany and Croatia in Europe, and Peru, Mexico, Angola and Chile.

The characteristics that we seek most have, as in recent years, been languages, technical specialities and international mobility. And whilst we continue to value technical and managerial competences, the ability to work in a team, a commitment to service, innovation and longterm commitment are becoming ever more important. These will guide Elecnor's recruitment activities in 2014.

We started 412 recruitment processes in 2013. In total, 276 of these processes led to posts being filled – 39% of new hires were engineers while 28% held professional training or higher education qualifications. In addition to its central recruitment mission, the personnel recruitment team also carried out other initiatives during the year:

• Collaboration and active participation with universities and professional training centres to recruit students and graduates. We have maintained these links by introducing innovative recruitment activities in certain schools and by taking part in employment forums and informative events in universities and training centres.

For example, we took part in the 1st Recruitment Fair organised by Madrid's Polytechnic University's Higher Industrial Engineering Faculty, through which we hired various candidates who are now working in Elecnor in junior posts and as interns.

- Sponsorship and involvement in the first "Prepárate" professional and personal training event for people with disabilities seeking employment.
- We also took part in Madrid's **Employment and Disability Fair for the first time**, where Elecnor's stand highlighted our commitment to employment opportunities for people with disabilities.



# The value of training

Elecnor regards training and its commitment to professional development as cornerstones of its strategy. We enhance the talent in all our areas of activity and in all our markets by continuously expanding, refreshing and diversifying the knowledge in our organisation.



16,174

ast year we held our eighth Executive Development programme for senior executives, production centre managers and similar. This followed on from the programmes of previous years, continuing to hone the skills and working practices of all site managers and officials.

The general training undertaken by university graduates as part of the initial phase of their professional development also again formed part of the programme. This involves training in project management, managing people and teams and negotiating with owners.

Specialist programmes were held for the generating and renewable energies areas, power distribution, telecommunications, gas, maintenance and railway activities, high-voltage work and vehicle operators to provide, maintain and refine the technical qualifications required by Elecnor personnel for their activities across the company's business areas.

In keeping with Elecnor's Occupational Health and Safety commitment to achieving zeroaccidents, intensified practical training was provided to line managers and operators on the risks of electric shocks and working at height and in confined spaces. They also received further training in risk prevention duties essential for the "Proper Discharge of Occupational Health and Safety Duties".

In the area of R&D and innovation, and following on from the 2013 edition of Focus R&D and innovation, another Innomarket experts conference was organised. During this event there was a particular focus on "Leveraging the results of innovation".

In light of its growing international presence, Elecnor is adapting its training programme to reflect the training needs in the international business. Accordingly, a number of training events were staged overseas in 2013. In Ecuador, Venezuela, Brazil and Chile trainees received instruction on Occupational Health and Safety in the Assembly of Power Transmission Lines while in Angola, Honduras, Argentina, Uruguay and Chile Preventative Risk Awareness training took place.

#### New training initiatives

One of the major milestones last year was the development of a Project Management Process Manual. This manual aims to improve management of every process, thereby creating a single workplace culture with common criteria,

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3rd Risk Prevention Conference, Chile

#### Training at the service of international expansion

Our Joint Prevention Service carried out a programme of visits to five countries in 2013: Angola, Honduras, Argentina, Uruguay and Chile.

In addition to site visits to assess occupational health and safety, these events also included training and development to improve safety awareness and accident prevention in these countries. There were three parts to this training:

- Presentation of the Elecnor Group, to enhance knowledge among staff at subsidiaries and increase their involvement.
- Basic accident prevention concepts: the need for accident prevention; the Group's policy, objectives and indicators; and the basis of the management system, etc.
- A technical section relating to the most important aspects of the three main risks that lead to serious accidents: electric shocks, and working at height and in confined spaces.

13 training events were held with 190 participants in these five countries.

#### Training areas

By major business line, the breakdown for

and to standardise, as far as possible, the tasks common to all EPC projects. The first training

courses were used to introduce the manual and

Also noteworthy were the session on the new Energy Management System (ISO 50001); the

"Airport Security Awareness" training, mandatory

for the accreditation of personnel accessing

airports for more than 30 days; and the "Health

and Safety Passport", which must be held by

people involved in work at service stations.

training initiatives in 2013 was as follows:

enhance its introduction.

Training areas

Training areas	Participants		Hours
Management	•	1,037	12,360
Technological	•	4,410	57,337
Π	•	49	1,617
Languages	•	558	18,531
Quality, Environment, R&D and innovation and Energy Efficiency	•	258	2,869
Occupational Health and Safety	•	9,862	44,342
Total	►	16,174	137,056

## Working as a team

Managing people is a central plank in Elecnor's human resources policy, which we regard as a management task. In fact, managing people is one of the main responsibilities of our business unit and corporate managers. Internal communication plays a key role in managing people, enabling us to share the challenges and objectives Elecnor sets itself in a spirit of transparency and cooperation.



ransparency is a key driver for inspiring the performance of the Group's teams. We make particular efforts to share our objectives and results with everyone in the organisation. Internal communication is the key tool for making this commitment to openness and transparency a reality, promoting involvement and commitment to our corporate goals.

Elecnor uses a range of tools in its internal communication, prioritising in-person dialogue through a range of everyday and special actions, such as managerial visits and meetings to explain our objectives. Our Intranet is the cornerstone of our internal written communication, providing everyone in the Group with practical technical and organisational information, particularly with regard to occupational health and safety, quality, training, R&D and innovation, and commercial policies and methodologies.

Our Intranet is also a display window for weekly news on Elecnor, providing employees with information on new contracts, the activities of the Elecnor Foundation, international expansion and specific professional positions.

There were 145,954 visits to the Intranet in 2013, a 16% increase on 2012.

We also use our e+ internal magazine to report

on important issues, such as the Group's new organisational structure.

Elecnor runs internal campaigns to raise awareness of strategic aspects of the Group's life. The most important of these in 2013 was, once again, the World Day for Safety and Health at Work, for which we organised a range of activities to raise employee awareness of occupational health and safety in their everyday work.





Madrid's Ronald McDonald House providing accommodation for families with children in hospital

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RONALD MCDONALD HOUSE, MADRID

550 families may benefit from the House every year

52.45

tonnes of CO<sub>2</sub> equivalent emissions saved each year -equivalent to planting 8,700 trees- by building the House using energy saving and efficiency criteria

### Corporate Responsibility

Elecnor has had a strong culture of corporate responsibility (CR) throughout its 50 year existence. This is based on a firm commitment to ethical, social and environmental issues, particularly in the areas and countries where the Group operates.

lecnor's CR policy is based on its corporate values, which in turn reflect the Group's soul. This philosophy has remained largely unchanged since the Group was founded in the late 1950s. Today we implement our CR strategy through a range of instruments that translate our philosophical principles and values into reality throughout our organisation. These include our Code of Ethics, to which all our employees are committed.

The Elecnor Foundation also plays an important role in our CR policy, revealing the human side of engineering through projects and initiatives to overcome obstacles blocking access to basic necessities, such as power and drinking water, whilst encouraging young talent through training.

#### Corporate values

Our corporate values are evident in all the activities of the Elecnor group, and in the actions of all of our employees.

- Reliability: Elecnor guarantees commitment and safety for its customers, shareholders, employees and suppliers, based on its history, corporate governance and day-to-day activities.
- Commitment and effort: All Elecnor employees are fully committed to our business objectives, demonstrating their professional loyalty and dedication to their jobs.
- Customer focus: Elecnor anticipates the needs of its customers to ensure all their needs and expectations are met and exceeded.

- Solvency: Elecnor boasts a proven track record of applying the most efficient and advanced technology to all areas of activity. It has highlyqualified employees and is constantly undertaking technical improvements to offer very competitive solutions in terms of quality, costs, time, efficiency and sustainability.
- Innovation: Elecnor regards investment in R&D and innovation as a strategic commitment, driving our progress and guaranteeing our future. The Company's enterprising spirit drives us on to always beat our targets and has shaped our diversification strategy in all the sectors in which we are present.

#### **Elecnor's Code of Ethics**

Elecnor has prepared a Code of Ethics to ensure that the Elecnor Group's corporate values inform all of the company's activities and are reflected in the actions of all of its employees. This aims to ensure that the conduct of all Elecnor Group employees always complies with our ethical expectations, reflecting our ethical guidelines and principles.

These principles include zero tolerance of poor ethical practices and lack of professional integrity. Elecnor's annual employee appraisals assess compliance with the Code.

#### **The Elecnor Foundation**

Since its creation six years ago, the Elecnor Foundation has established itself as a pillar of the Group's CR policy. The Foundation reflects Elecnor's commitment to the sustainable development of society, particularly in the countries where it operates.

It has two purposes: firstly, it aims to exploit the human side of engineering, through social infrastructure projects that help reduce the energy gap and eradicate obstacles to access to basic resources, such as power and drinking water; and to contribute to the development of society and young talent by promoting training.

We were involved in major projects in both of these areas in 2013, and also established the basis for various new initiatives that will be implemented in 2014.

#### Social infrastructure

In 2013, Elecnor completed various projects to improve the quality of life of people living in isolated areas of Chile, Uruguay and Ghana where it is difficult to access basic resources, such as power and water. It also contributed its engineering and renewable-energy experience to social and energy efficiency projects in Spain.

For example, recently launched projects in South America include the "Sinergia" project at Totoral in Chile, in collaboration with the Chilean Agriculture Ministry's Institute of Agricultural Development (INDAP). This project has brought the basic resources of power and water to 40 families living in this region in the middle of the Atacama desert. It involves two photovoltaic facilities, one of which powers a drinking water plant, the electricity grid for homes, the school and church, and four photovoltaic lamps in the town square. The second powers a 1,000 m<sup>3</sup> water storage system for irrigation of the 15 hectares of cultivatable land in Totoral.

Clean and sustainable energy is now available to the town, improving daily life and safety, whilst boosting its socio-economic development and quality of life for its inhabitants. With technical assistance from INDAP, agricultural production will also be more efficient, both through irrigation and lower fuel costs.

The Elecnor Foundation has also launched the "Luces para Aprender Uruguay" programme in South America, in collaboration with the Organization of Ibero-American States. This project is bringing electricity and connectivity to some 90 rural state schools in the region, improving quality of life and educational conditions for children. The project involves installation of photovoltaic systems to meet the schools' lighting and electricity needs, increasing the life chances of the children through access to technology such as computers.

In Africa, the Foundation has been promoting the "Solar Back-up Systems" project in Ghana. This has brought electricity supply stability and security to six hospitals and three clinics managed by the Sisters Hospitalier of the Sacred Heart of Jesus and the Sisters of Charity of Saint Anne congregations and the Ghanaian Ministry of Health.



THE "LUCES PARA APRENDER PROJECT" IN URUGUAY

#### 90 rural

state schools will receive the Internet and electricity in 2014, with Uruguay becoming the first country in Latin America to successfully complete the Luces para Aprender programme

1,000 children and 200 teachers and teaching assistants will benefit directly FIGURES



#### THE "SOLAR BACK-UP SYSTEMS" PROJECT IN GHANA

SINERGIA PROJECT, CHILE

312 photovoltaic panels

43 power supplies in homes and the school and church

15 hectares

These hospitals and clinics already had a power supply, but this was erratic and low quality, meaning that key areas-such as operating theatres, maternity and emergency units, laboratories and administration- could not be guaranteed to run smoothly. A stable and safe energy supply has now been guaranteed by installing back-up systems with solar batteries and inverter-chargers, boosted by solar panels, benefiting the 500,000 patients who use these health centres and the 7,000 operations carried out annually.

Our 2013 social infrastructure activities also included a collaboration with the Ronald McDonald Children's Foundation, in Spain. The "Ronald McDonald House in Madrid" project offers a "home-away-from-home" for families with children undergoing long-term inpatient treatment at Madrid's Niño Jesús children's hospital. Elecnor is contributing its engineering and renewable energy experience to the construction of the first energy efficient and sustainable Ronald McDonald House. The Elecnor Foundation is also donating EUR 300,000 to the project, the average annual running costs of a Ronald McDonald House.

At the end of 2013, the 3,000 m<sup>2</sup> home was in the final phase of construction. Once completed, it will have 23 en-suite rooms with private terraces, and communal areas such as dining rooms, games rooms, libraries, etc. The House has been designed to the most exacting energy efficiency criteria. It features solar thermal hot water production technology, heating using geothermal heat pumps and electricity generation from solar panels. Together, these measures will reduce energy consumption by around 46.5%. Philips has also helped with the lighting system, using LED lamps and a control system to further improve energy efficiency.



#### Training

Training is another cornerstone of the Elecnor Foundation's activities. It aims to improve collaboration between the worlds of education and employment, manage the talent of young people and enhance knowledge in the areas in which Elecnor is involved, such as engineering, renewable energy and energy efficiency.

In 2013, the Foundation organised a new edition of the Elecnor Foundation Renewable Energy and Energy Efficiency Chair conference. We have been holding these events annually for over four years with the Higher Technical School of Industrial Engineering of the Polytechnic University of Madrid (UPM). They aim to create a discussion forum for universities and companies bring together everyone involved in the sector, both public and private, enhancing university education in renewable energy and energy efficiency, and promoting R&D and innovation projects.

We also successfully completed the first vocational training course developed by the Elecnor Foundation as part of its collaboration with the Colegio Salesianos Deusto (Bilbao). The first "Specialist Course in Medium- and High-Voltage Electrical Installations" helped vocational training students complete their courses whilst being better prepared for future employment in the electricity sector.

The Elecnor Foundation continues to develop programmes, agreements and university chairs that allow students to improve their knowledge and skills and then put these into practice in the workplace. These activities also help raise Elecnor's profile among future employees.

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THE FIRST VOCATIONAL TRAINING COURSE DEVELOPED BY THE ELECNOR FOUNDATION IN COLLABORATION WITH THE COLEGIO SALESIANOS DEUSTO

26 students trained

150 hours of theoretical training and workshop classes FIGURES

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Solar Back-Up Systems project to ensure electricity supply in Ghana

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