

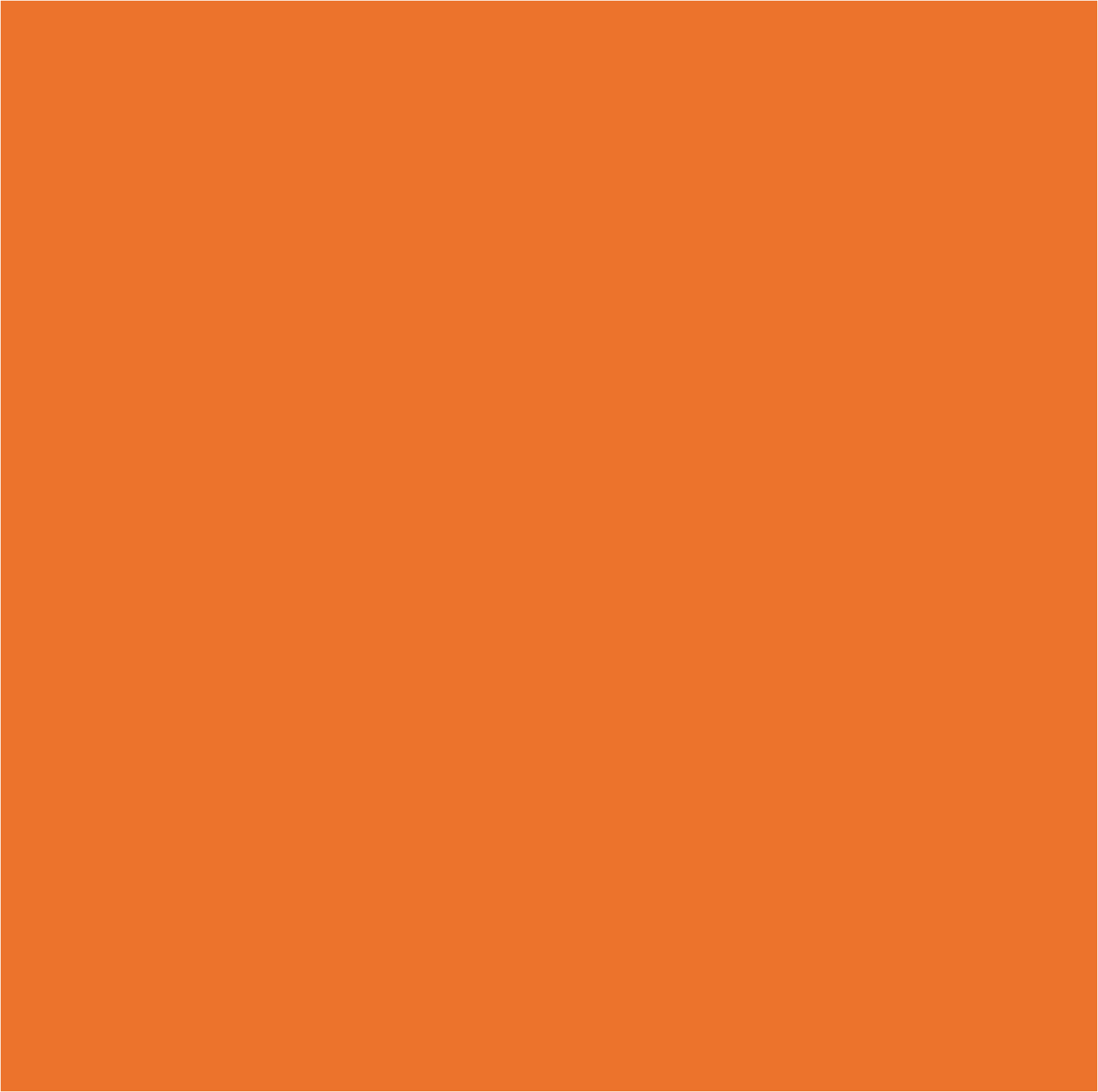
ABENGOA



Activity Report 2009

Innovative Solutions for Sustainability

	pag.
1. Glossary	4
2. Main Figures	7
3. Our Commitment	10
4. Report from the Chairman	12
5. Our Management Model	18
6. Consolidated Analytical Report	20
7. Business Units Activities	44
■ Solar	45
■ Bioenergy	65
■ Environmental Services	91
□ Information Technologies and Services	119
■ Industrial Engineering and Construction	143
8. Abengoa and Innovation	179
9. Organizational Structure & Management Team	222



Glossary

Magnitudes

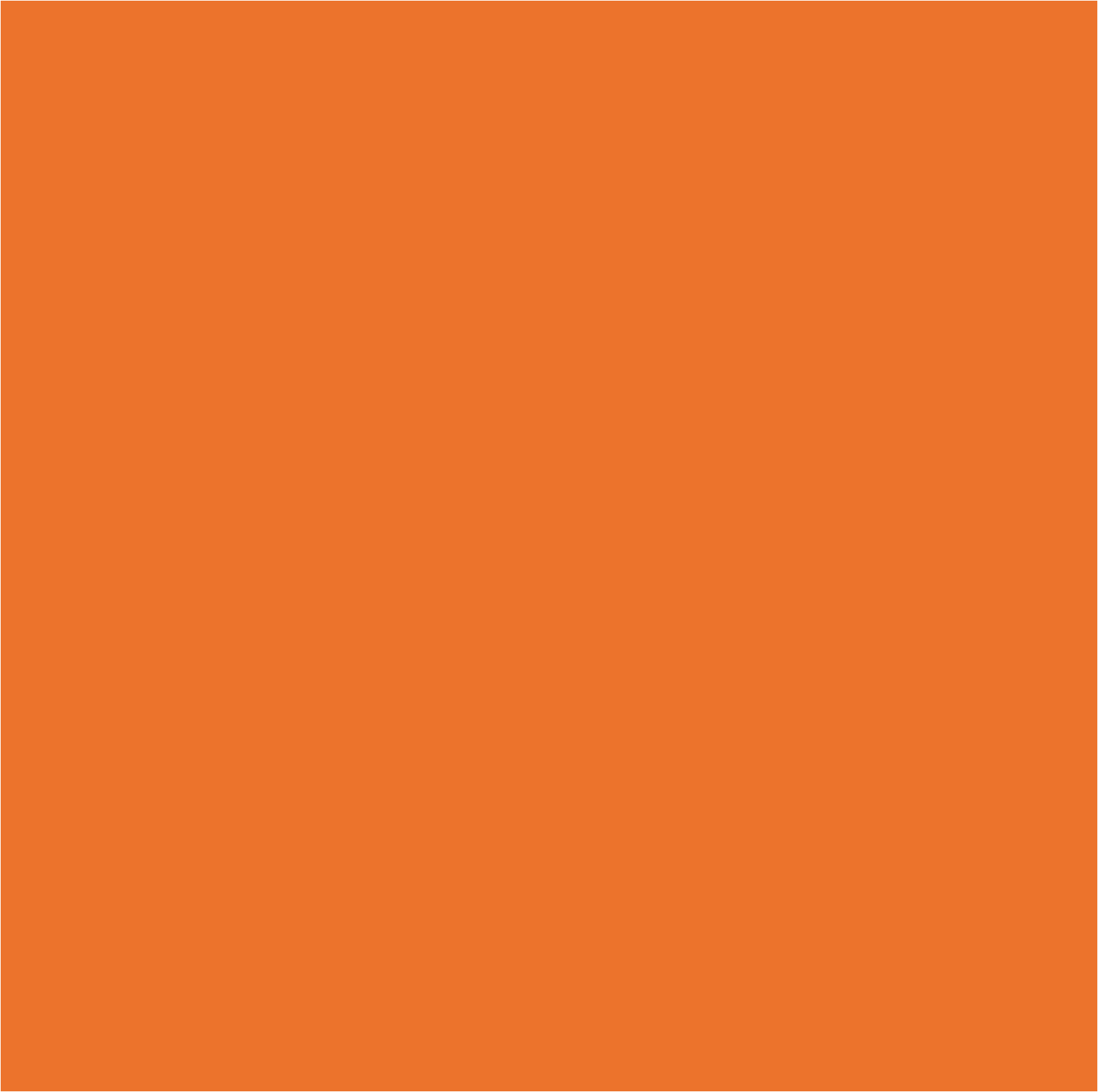
a	Area
A	Ampere
b	Bit
B	Byte
bar	Bar
bsh	Bushel
BTU	British thermal unit
g	Gram
gal	Gallon
h	Hour
Hz	Hertz
J	Joule
km/h	Kilometer per hour
L	Liter
m	Meter
m/s	Meter per second
m ²	Square meter
m ³	Cubic meter
N	Newton
Pa	Pascal
s	Second
t	Metric ton
V	Volt
VA	Volt-ampere
W	Watt
We	Electric watt
Wh	Watt hour
Wth	Thermal watt

Magnitudes (continuation)

m	Mili	10^{-3}
c	Centi	10^{-2}
d	Deci	10^{-1}
h	Hecto	10^2
k	Kilo	10^3
M	Mega	10^6
G	Giga	10^9
T	Tera	10^{12}

Currencies

€	Euro
\$	U. S. Dollar
BRL	Brazilian Real



Economic - Financial Data M€	2009	% Variation (09-08)	2008 ⁽¹⁾	1999	% CAGR (99-09) ⁽²⁾
Profit and Loss Account					
Sales	4,147.3	10.0	3,769.2	866.2	17.0
Gross Cash Flows ⁽³⁾	915.6	46.0	627.2	88.3	26.3
EBITDA ⁽⁴⁾	750.4	38.7	541.2	88.3	23.9
Net Profit	170.3	21.3	140.4	21.9	22.8
Balance Sheet					
Total Assets	12,369.9	26.3	9,794.6	1,197.9	26.3
Equity	1,171.0	86.6	627.5	200.6	19.3
Net Debt (Cash) ex Project Finance	1,257.2	137.3	529.9	-122.3	-
Significant Variables					
Margin (% EBITDA/Sales)	18.1	-	14.4	10.2	-
Return on Equity (ROE) (%) ⁽⁵⁾	17.3	-	26.4	10.9	-
Data per share:					
Earning per Share (€)	1.88	21.3	1.55	0.24	22.8
Dividend per Share (€)	0.19	5.6	0.18	0.09	7.8
Quotation on the last day of the year (€)	22.60	91.5	11.80	6.07	14.0
Capitalisation on the last day of the year	2,044.6	91.5	1,067.5	470.7	15.8
Average daily trading volume	5.9	-29.2	8.3	0.6	24.7

(1) For making consistent comparisons, in 2008 Telvent appears as a continued activity

(2) CAGR: Compound Annual Growth Rate

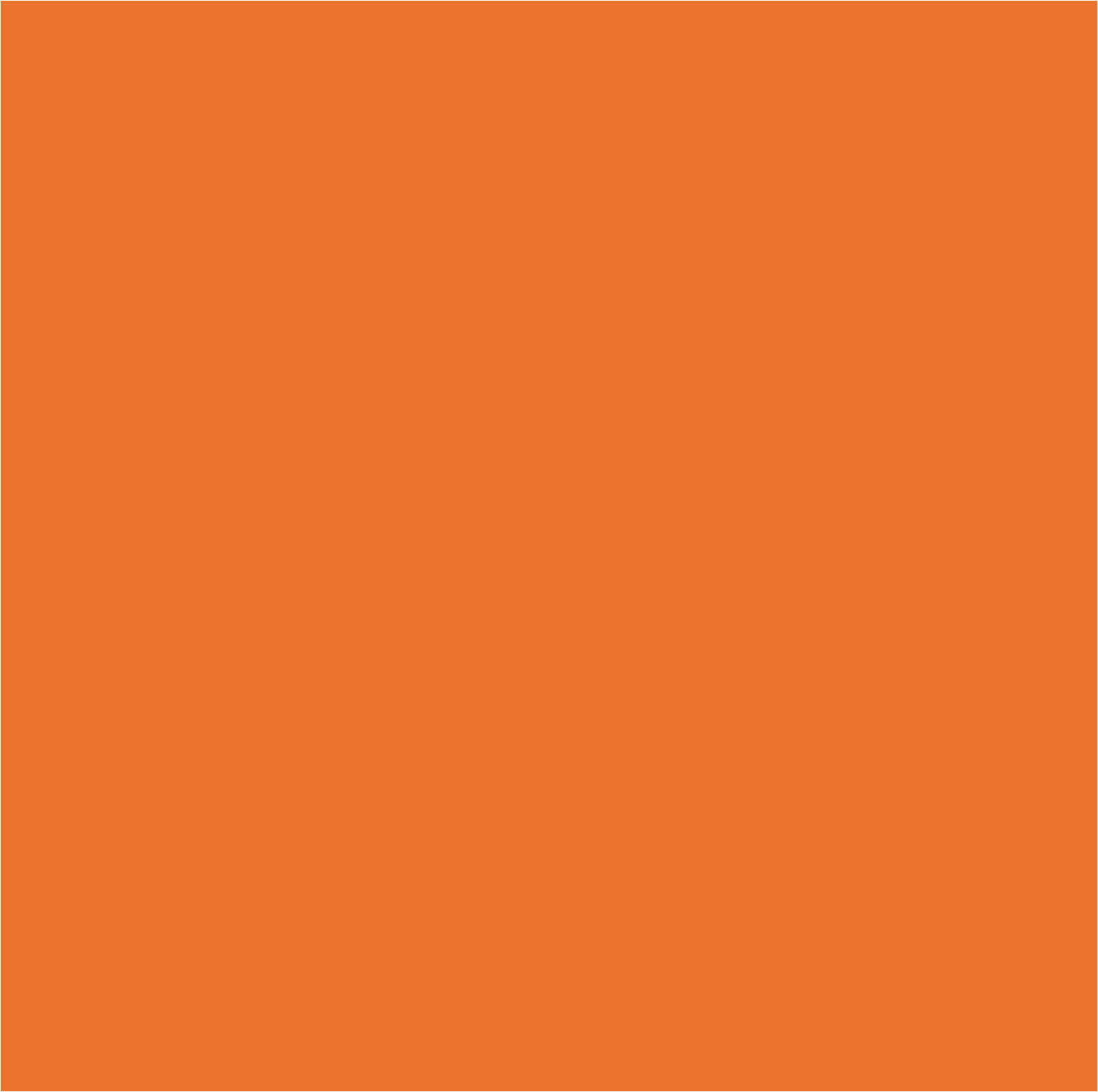
(3) Earnings before interest, tax, depreciation and amortization, adjusted by the works flows done for own fixed assets

(4) Earnings before interest, tax, depreciation and amortization

(5) Net Earnings / Shareholders' funds

Evolution 1999 - 2009	5 Business Units		Engineering Company	
	Business Units	2009		1999
		Sales %	G. C. Flows (*) %	Sales %
Solar	2.8	8.0	-	-
Bioenergy	24.4	20.5	-	-
Environmental Services	17.4	13.0	8.5	5.5
Information Technologies and Services	18.3	18.9	35.4	38.1
Industrial Engineering and Construction	37.1	39.6	56.1	56.4
Consolidated Total	100.0	100.0	100.0	100.0
Geography	%	%	%	%
USA	13.9	14.7	-	-
Latin America	28.4	29.7	40.0	28.8
Europe (excluding Spain)	15.0	15.5	4.9	1.7
Africa	7.9	4.4	1.4	2.1
Asia	3.4	1.1	0.5	0.2
Oceania	0.1	0.1	-	-
Spain	31.3	34.5	53.2	67.2
Consolidated Total	100.0	100.0	100.0	100.0
Types of Activities	%	%	%	%
Concession and recurrent businesses	15.0	36.9	5.8	14.5
Businesses involving commodities risk	29.8	22.6	-	-
Rest of engineering businesses	55.2	40.5	94.2	85.5
Consolidated Total	100.0	100.0	100.0	100.0

(*) Gross Cash Flows: Earnings before interest, tax, depreciation and amortization, adjusted by the works flows done for own fixed assets



Our Commitment

At Abengoa, we believe that the world needs solutions to pave the way for more sustainable development. Scientists tell us that **climate change** is a reality and at Abengoa we believe that now is the time to seek out solutions and put them into practice.

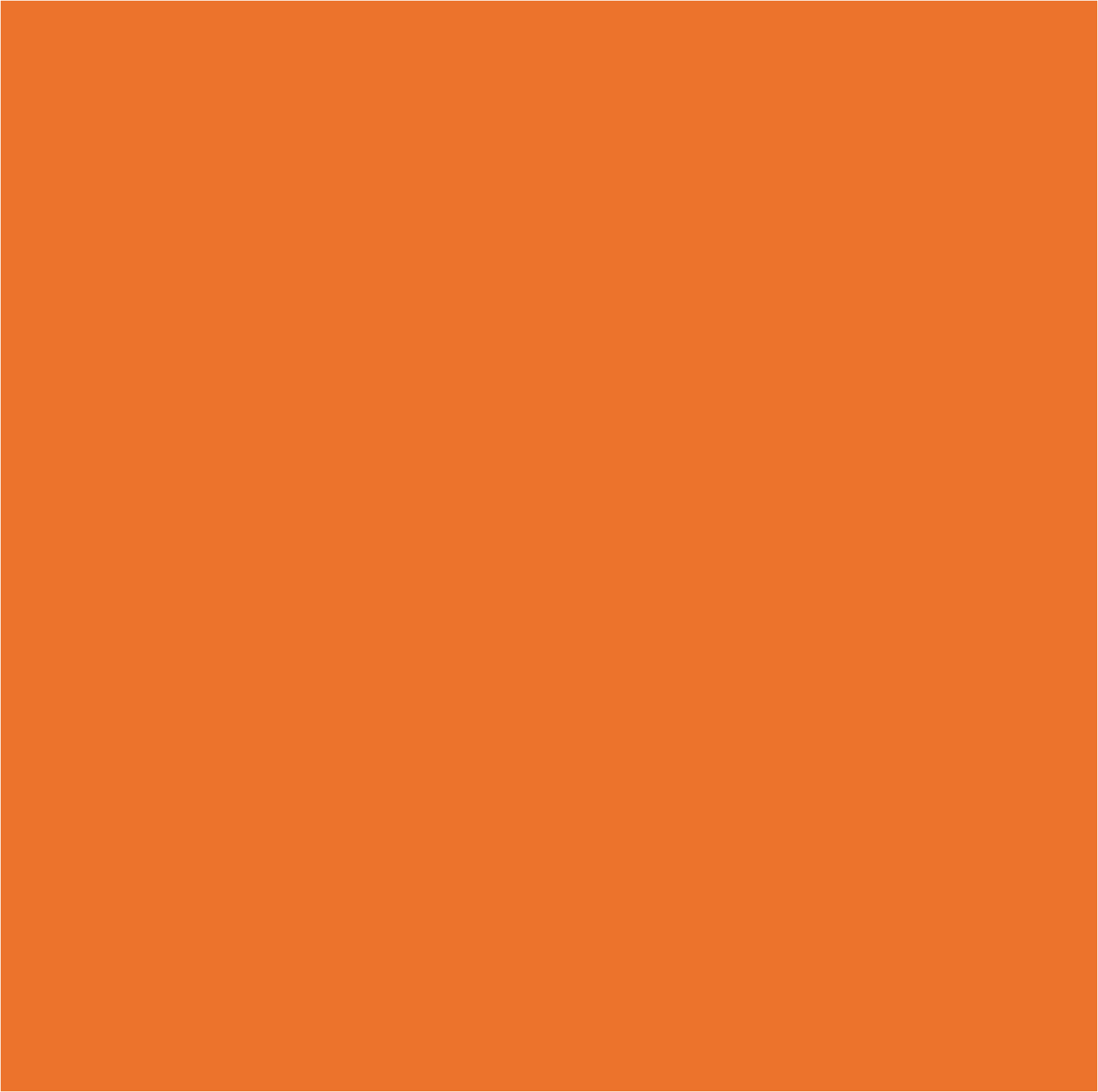
Over ten years ago, Abengoa made the strategic decision to focus its growth on the creation of new technologies geared towards **sustainable development**:

- Generating **energy** from renewable resources.
- Recycling industrial **waste** and generating and managing **water**.
- Creating **infrastructures** that eliminate the need for new investments in assets that generate emissions.
- Creating **information systems** that help to manage existing infrastructures more efficiently.
- Creating **new horizons** for development and innovation.

To this end, we invest in Research, Development and Innovation, R&D&I, **globally** expand those technologies with the greatest potential, and attract and develop the necessary **talent**.

In a similar vein, we channel human and financial resources into the **Focus-Abengoa Foundation** to promote social action policies that champion social and human progress.

By following this approach, we create **long-term value** for our shareholders, ensure the growth of the companies through which we operate and help to make the world a better and more sustainable place for future generations.



Report from the Chairman

In spite of the economic context, 2009 was a good year for Abengoa. Revenues totaled €4,147 M, up 10 % on 2008; gross flows increased 46 %, to €916 M; EBITDA increased 39 %, to €750 M; and net profit rose 21 %, to €170 M.

For the fourteenth year in a row, that is, since Abengoa was listed on the stock exchange, we have achieved a profitable double-digit growth rate as a product of concentrating our efforts on high-growth businesses that offer innovative solutions for sustainability and our focus on geographical diversification. And we are convinced that we will manage to do this again in 2010 in light of the fact that we ended 2009 with our highest backlog ever, totaling €7,655 M, including the construction of solar power plants recently entered into the renewables registry in Spain.

This year we promoted, together with eleven other organizations, the creation of the Desertec Project, the goal of which is to meet 15 % of the demand for electrical power in Europe, as well as a substantial portion of northern Africa and the Middle East, through solar thermal plants and other renewable energy sources by the year 2050. We are also helping to enhance electrical power grid efficiency and security by improving generation, distribution and consumption control (Smart Grid).

Three high-growth businesses related to sustainable development – Solar, Bioenergy, and Water –, together with the main Industrial Engineering and Construction businesses, obtained substantial increases in revenue and profitability with respect to 2008. This has helped to compensate the weaker performance of businesses affected by the drop in industrial activity in Europe, fundamentally in Metal Recycling, and specific Industrial Construction activities in Spain:

- Our Solar business brought in revenues totaling €116 M, up 78 %, and gross cash flows increased 80 %, for a total of €73 M. This business continues to show a high rate of growth with virtually no impact from the present economic situation, witnessing only a delay in starting up certain projects due to a slowdown in reaching financial closure.
- Bioenergy revenues totaled €1010 M, up 22 %, and cash flows from operating activity increased 69 %, with the figure totaling €188 M. Operational start-up of the San Roque (Spain) and Lacq (France) plants, in addition to the gradual margin recovery in the United States and higher sugar prices in Brazil, were the factors contributing to this year's significant improvement in profitability.
- In Environmental Services, revenues dropped 17 % to €722 M, and gross flows showed a 25 % decrease, to €119 M. Excluding capital gain on the sale of land in Spain that took place in 2008, the increase in gross cash flows totals 1 %. Nevertheless, evolution varied considerably by business unit. Metal, aluminum and steel mill dust, recycling activities were markedly affected by the economic crisis in the construction, automobile and capital goods industries in Europe. In contrast, the performance of the water sector business was extremely positive as a result of the process of internationalization involving this activity in recent years. In 2009 we continued to execute four major desalination plants in Algeria and India, and we closed financing for our first desalination plant in China. As a result, revenues deriving from activity in the water sector rose 29 %, to €285 M.
- In 2009, revenues from our IT business totaled €759 M, up 9 %, and gross flows increased 113 % for a total figure of €173 M. These gross flows include the capital gain on the sale of Telvent shares that took place in 2009, which leaves Abengoa with a shareholding interest of 40 %. Through this partial divestiture, we attained additional resources for growth in other areas, while continuing in our commitment to Telvent's progress by seizing synergies with the other businesses.

- In Industrial Engineering and Construction, revenues increased 29 %, to €2,576 M, and gross flows rose by 54 %, for a total of €363 M. The evolution of this business varied quite significantly by geographical area and sector. Renewable power plant construction, for Abengoa as well as for third parties, has continued to show a substantial growth rate. Electrical power line construction and operation in Latin America also showed a favorable evolution as the product of maintenance and growth in the line construction plans in various countries in this region. However, several of the industrial electrical installation construction businesses, particularly in Spain, were affected, just as we anticipated, by the downswing in industrial investment.

By geographical location, we saw tremendous growth of our business in regions such as the United States, Latin America and, with the exception of Spain, Europe, drastically mitigating the moderate drop in the Spanish market. Consequently, in consolidated terms, Spain now represents only 31 % of Abengoa's revenue, whereas the remaining activity is divided among Latin America, 28 %; the United States, 14 %; Europe (excluding Spain), 15 %; and other countries, 12 %.

Attainment of these results, in a year as difficult as 2009, represents, undoubtedly, a tremendous achievement. However, fulfillment of the strategic objectives that had been set for the period was even more important for Abengoa, and this has us positioned to continue growing in a profitable manner in the future:

1. We drove down our costs as planned, especially in Horizon 1 (mature) businesses, some of which have decreased their activity. This has enabled us to improve operating margins in practically all of our businesses, and lower comparable overall expenditure by 3 %. This is what we call "earning the right to grow", by making sure that mature businesses continue to generate cash flow and profits that we may reinvest in other growing businesses.
2. We invested more than €2,000 M in 2009, primarily in Horizon 2 (growing) businesses, utilizing €1,200 M of non-recourse project debt and €800 M in corporate assets. This investment will enable us to grow by starting up projects currently under construction in 2010 and 2011.
3. We stepped up our R&D&I investment with a total of €90 M, up 7 % on 2008. As a result of this investment, Abengoa has applied for 54 new patents in its different businesses, which is a reflection of the success and potential of our new technologies and the importance we attach to Horizon 3 (future) businesses. Specifically, we believe that our forward-looking businesses (new solar technologies, new biofuels, hydrogen, emission management, energy efficiency, and new renewables) will afford us long-term growth.
4. We optimized our cash-flow management, which has enabled us to keep net debt at what we consider to be a reasonable level. Net debt, excluding non-recourse financing, at year-end 2009 totaled €1,257 M, 1.8 times our EBITDA. Total net (recourse and non-recourse) debt, excluding that which is tied to projects that have yet to go operational and which therefore still do not generate EBITDA, totals €1,818 M, 2.4 times our EBITDA.
5. We maintained investment in developing and training our team of professionals through over a million hours of training for the more than 24,000 members of our organization, represents 11 % more than in 2008.
6. We continued our international scholarship program. In 2009, 575 grant holders have had internships in Abengoa's business groups, which represents 7 % more than in 2008.

7. Following successful completion of our first greenhouse gas inventory, we continue working in this direction, progressively improving the quantification of our emissions and the implementation of our product labeling.

In addition, with the aim of continued assurance of the reliability of the financial information prepared by the company, we have continued to reinforce our internal control structure, voluntarily adapting it to the requirements specified under the U.S. Sarbanes Oxley (SOX) Act, which is helping us to grow with solvency and security. Once again this year, we sought to submit the internal control system of our entire group on a voluntary basis for independent assessment conducted by external auditors in accordance with the PCAOB Auditing Standard.

We also moved forward in our commitment to transparency and good governance practices; our annual report now includes six independent verification reviews prepared by external auditors on the following: Annual Accounts, SOX Internal Control System, Corporate Social Responsibility Report, Greenhouse Gas Emissions Inventory, Corporate Governance Report, and Design of the Corporate Governance Report, and Design of the Company's Risk Management System.

Finally, we continued to strengthen our commitment to the social and cultural development of the communities where we operate, paying particular attention to people with disabilities and the underprivileged. All of this takes place through the program of Corporate Social Responsibility we conduct through the Focus-Abengoa Foundation, where investment in this area in 2009 totaled more than €8 M, in addition to a €23 M investment in the Velazquez Center.

Our desire to share Abengoa's culture and values with our stakeholders in a receptive and transparent manner and to integrate stakeholder perspectives into the company, has compelled us to develop a procedure enabling us to report on the performance in the realm of corporate social responsibility of the more than one hundred and fifty companies which, through their activity in seventy seven countries, make up Abengoa. This system brings together the company's social, environmental and economic information. Furthermore, all data have been reviewed externally by an independent verifier with a reasonable level of assurance, which thereby authenticates the reliability of the information we disclose.

Our forecasts for 2010 are favorable. We expect to show growth in revenue and profitability in line with the results obtained in recent years. This will be made possible through the optimization of existing businesses, the rollout of investments initiated in the last few years, and start-up of several new projects:

- Our Solar business will bring four power plants into operation in 2010, for a total of 300 MW – three 50-MW parabolic trough technology plants located in Spain, and a gas-solar hybrid plant in Algeria. We also hope to start building several of the ten new 50-MW solar plants that entered into the Compensation Preallocation Registry (solar tariff) in Spain and which, therefore, already have the required construction permits. Work on several of these plants will involve collaboration with business partners, including the multinational electric utility E.ON, with whom we are already building two solar power plants in Écija (Spain).
- Our Bioenergy business will operate the plants we started up in 2009, and the plant located in Holland, as well as the two in the United States, which were under construction until now, will all enter into operation. In addition, we will finalize several significant investments for improving our Brazilian plants. This will result in the culmination of our first-generation biofuel investment plan.

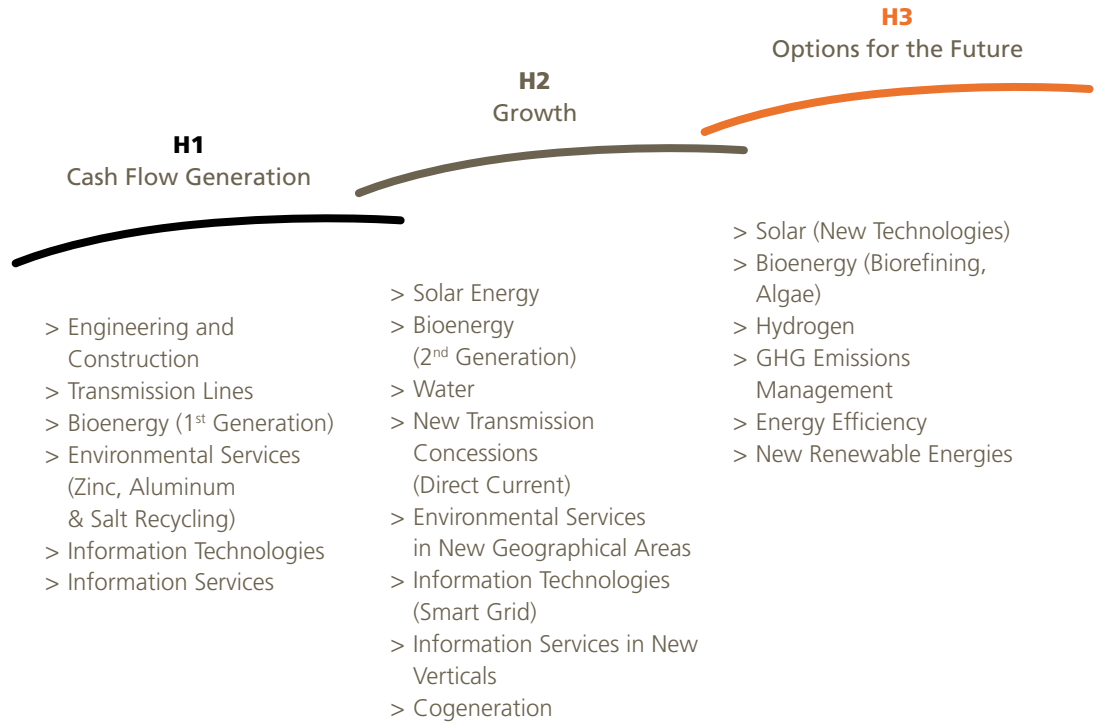
- We expect to see partial recovery in Environmental Services of the recycling businesses that were affected by the downslide in industrial activity in Europe, and we anticipate further growth in the Water sector. In 2010 we will begin operating the desalination plant in Chennai (India), start up the desalinating plant in Tenes (Algeria) and continue building the Qingdao (China) plant.
- In our IT business we anticipate a very favorable evolution in the electricity market, where the products associated with intelligent electrical power grids, or Smart Grids, are proving their tremendous potential. In other sectors investment evolution in major corporations and public administration will be a key factor.
- In Industrial Engineering and Construction we anticipate significant activity deriving from contract wins in 2009 for transmission lines in Latin America, generation plants, and new solar plants. Some of the smaller businesses dependent upon industrial activity in Spain will continue to obtain results falling below the historical trend.

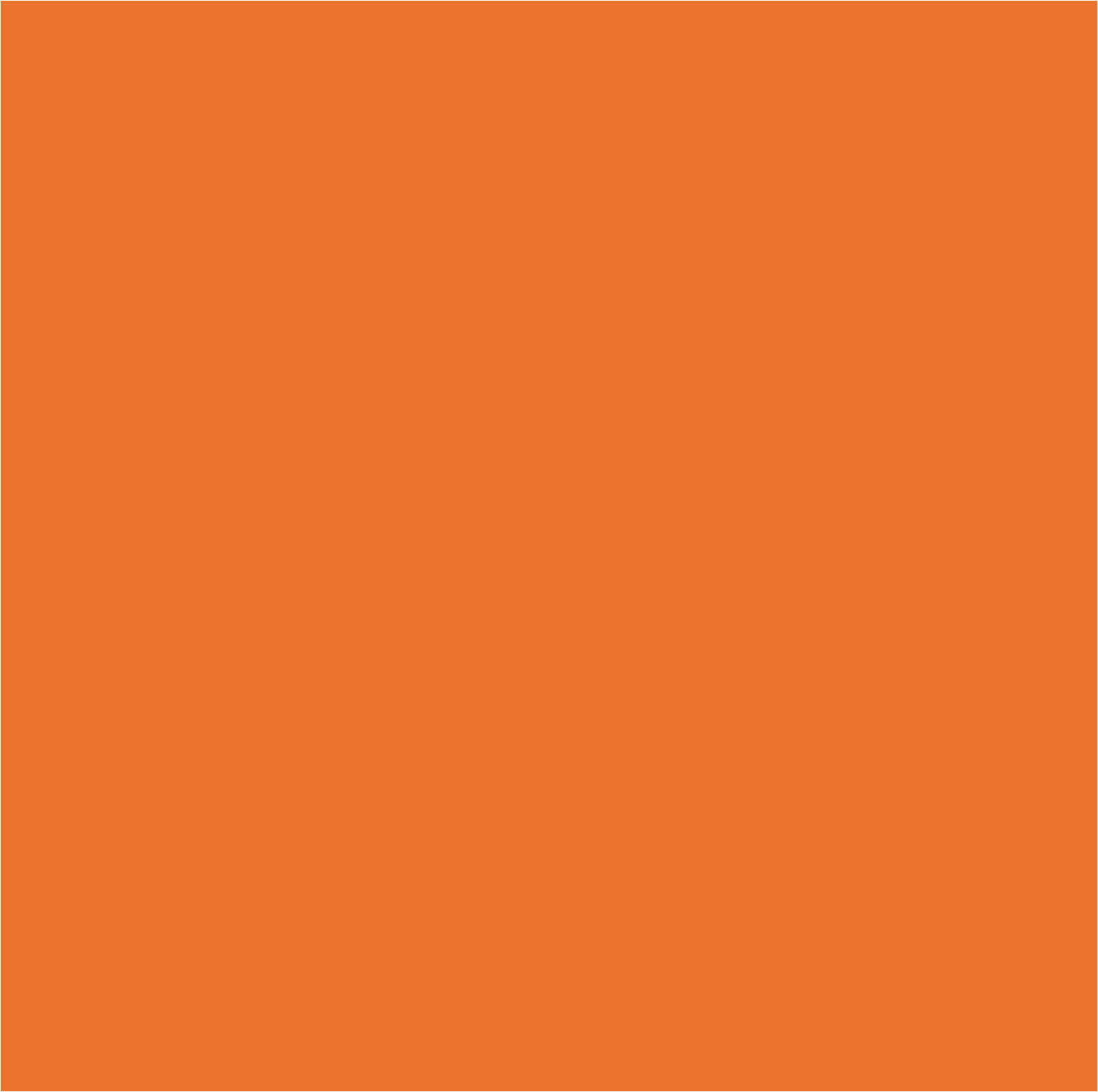
Therefore, our biggest challenge in 2010 will not only be to maintain our activity and profitability, and to design projects geared towards growth, but also to finance the major projects Abengoa has generated. In markets with a tremendous potential, including solar power, biofuels, water and electrical infrastructure, each year we promote countless opportunities that have enabled us to invest billions in a profitable manner. Specifically, in 2009 we won tenders and culminated project promotion that will represent an investment of around €5,000 M, and most of this amount has not yet been reflected in the backlog figure. In 2010 we will thus continue to analyze and execute, assuming conditions are propitious, several financing options that will enable us to keep creating value through these new projects. As these projects are financed over 2010 and 2011, we shall secure profitable growth for the coming years.

For all of the reasons above, we recently issued two types of corporate bonds, thereby demonstrating that Abengoa can gain direct access to capital markets, and we signed partnership agreements to develop projects through joint initiatives undertaken with third parties. Fortunately, we have a considerable number of projects through which we may create value for our shareholders.

In conclusion, 2009 was a year of fulfilled objectives, and 2010 should be another year of profitable growth for Abengoa, even though the macroeconomic context and financial market situation have yet to add their contribution. Our objectives for the new year are straightforward: to continue optimizing mature Horizon 1 businesses (engineering and construction, recycling, information technologies, and first-generation biofuels), to implement new assets under construction, to finance some of the major new projects (primarily Horizon 2, including solar, water and second-generation biofuels), and to uphold our commitment to the future through R&D&I, the training and development of our people, and corporate social responsibility.

A balanced set of activities (2010 vision)





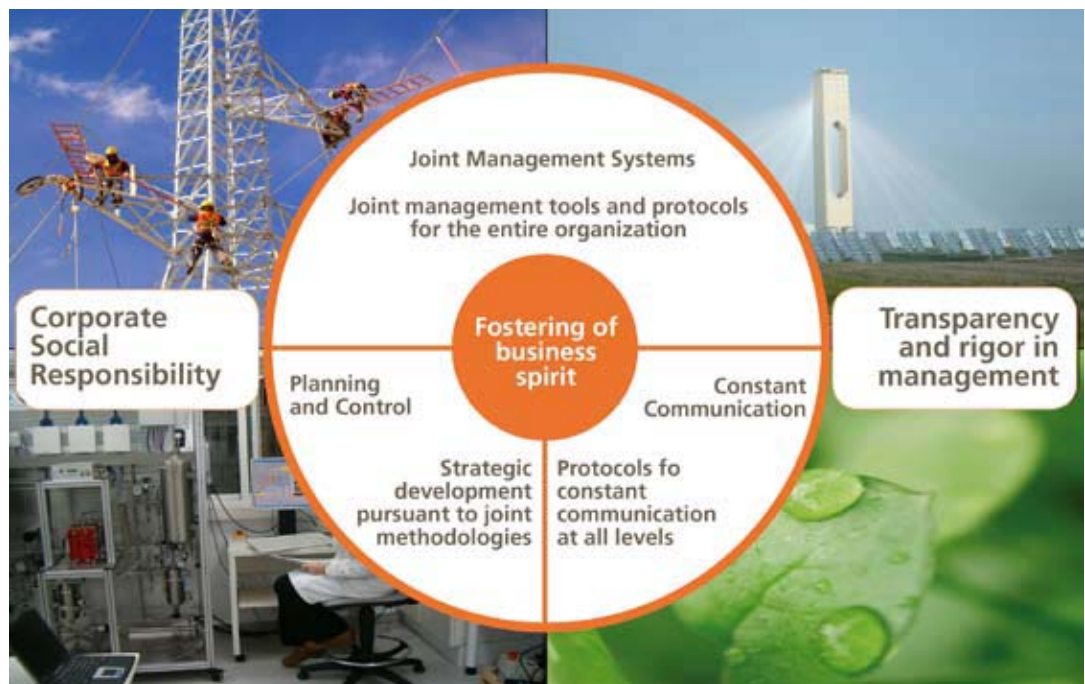
Our Management Model

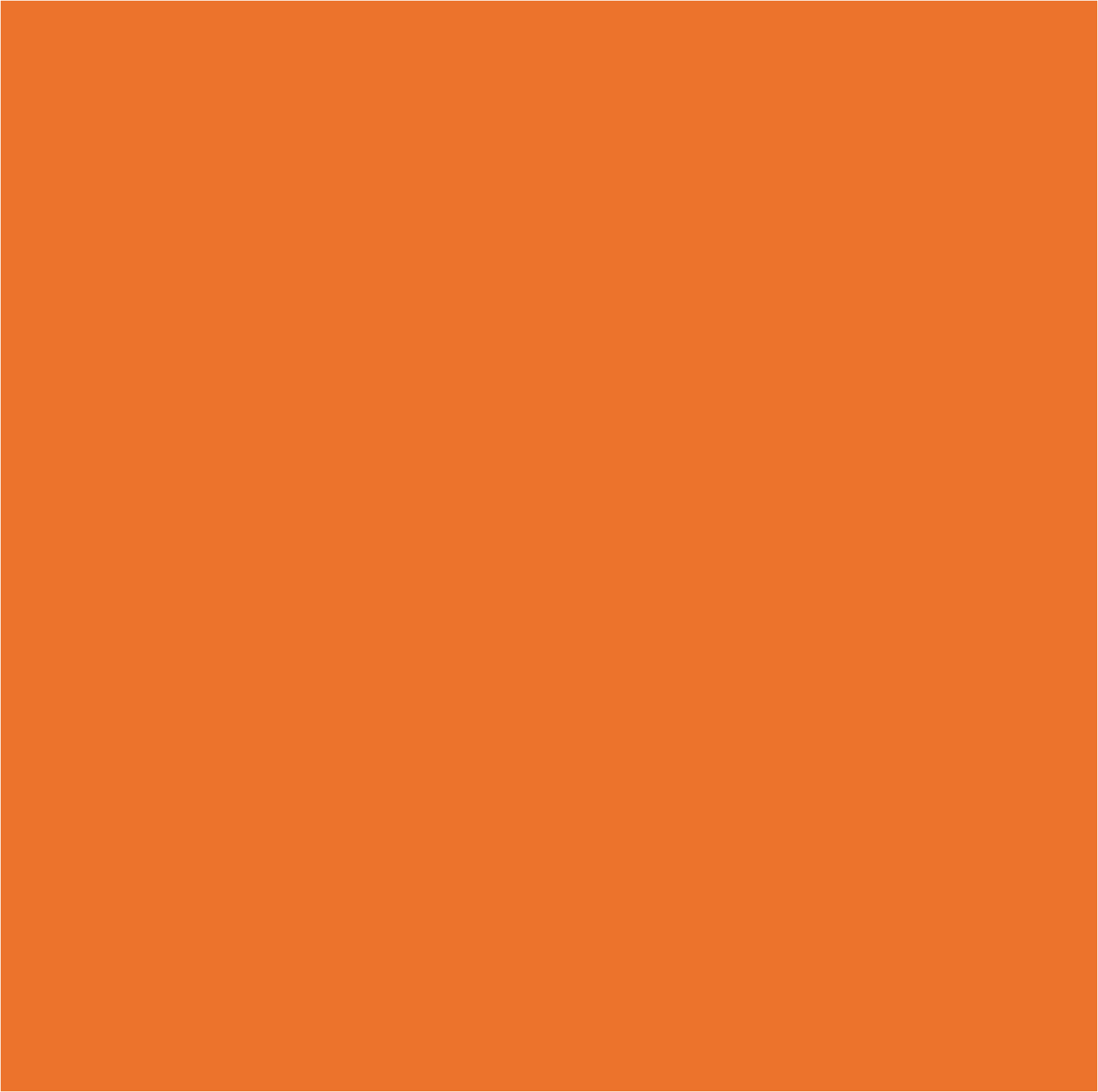
Growth at Abengoa is founded on five strategic cornerstones:

1. Creation of **new businesses** that help combat climate change and foster sustainable development.
2. A dedicated and highly competitive **human team**.
3. Permanent strategy of creating value by generating new options and defining **current and future businesses** through a structured process.
4. **Geographic diversification** in the markets offering the greatest potential.
5. Heavy investment in **research, development and innovation**.

These cornerstones are shaped through a management model based on three core concepts:

1. Corporate social responsibility.
2. Transparency and rigor in management.
3. Fostering of business spirit.





Consolidated Analytical Report

The objective of the analytical information outlined as follows is to provide interested parties with further details of the different Business Units that make up Abengoa. In certain cases, in order to facilitate the detailed internal analysis, the information follows "aggregate" criteria instead of consolidation criteria.

In order to help users understand and make like-for-like comparisons of the financial information in this report, the figures in the balance sheet, income statement and the cash flow statement for 2008 include the Information Technologies business segment in accordance with Note 14 (Assets and non-current liabilities held for sale) of Abengoa's Consolidated Financial Statements.

Main Items

In the 2009 financial year, Abengoa achieved growth in its main items of the Income Statement. Especially significant has been the increase in the EBITDA margin on sales of 18 %.

M€	2009	2008	2007	2006	2005	CAGR (*) 05-09 (%)
Sales	4,147	3,769	3,214	2,677	2,024	20
Gross Cash Flows	916	627	452	288	216	43
EBITDA	750	541	384	288	216	36
Margin (EBITDA / Sales) (%)	18	14	12	11	11	-
Net Income	170	140	120	100	66	27
Total Assets	12,370	9,795	8,110	5,456	3,323	39
Equity	1,171	627	797	541	526	22

(*) CAGR: Compound Annual Growth Rate

Sales

Abengoa's consolidated Sales to 31 December 2009 were €4,147.3 M, a 10.0 % increase on the previous year (€3,769.2 M).

Consolidated Sales (M€)	2009	2008	Var. (09-08) (%)	2007
Solar	115.9	65.0	78.4	17.7
Bioenergy	1,010.0	830.1	21.7	613.7
Environmental Services	721.8	873.4	-17.4	769.7
Information Technologies	759.0	696.9	8.9	597.2
Industrial Engineering and Construction (*)	2,576.2	1,993.5	29.2	1,546.6
Eliminations in Industrial E&C works (**)	-1,035.6	-689.7	n,a,	-330.5
Total Consolidated Sales	4,147.3	3,769.2	10.0	3,214.5

(*) Include corporate activity and consolidation adjustments

(**) Eliminations in Industrial Engineering and Construction for the internal works of non concessional projects

Gross Cash Flows

At 31 December, the Gross Cash Flow from Operating Activities figure was €915.6 M, a 46.0 % increase on the previous year's figure.

Gross Cash Flows (*) (M€)	2009	2008	Var. (09-08) (%)	2007
Solar	73.1	40.6	79.9	9.5
Bioenergy	188.2	111.6	68.7	79.8
Environmental Services	118.7	157.8	-24.7	123.8
Information Technologies	172.7	81.0	113.2	55.9
Industrial Engineering and Construction (**)	362.9	236.3	53.6	183.3
Total Gross Cash Flows	915.6	627.2	46.0	452.4

(*) Earnings before interest, tax, depreciation and amortization, adjusted by the works flows done for own fixed assets

(**) Include corporate activity and consolidation adjustments

EBITDA

EBITDA for 2009 increased by 38.7 % to €750.4 M compared to €541.2 M in 2008.

EBITDA (M€)	2009	2008	Var. (09-08) (%)	2007
Solar	21.6	9.2	133.4	10.1
Bioenergy	123.4	90.7	36.0	54.3
Environmental Services	118.7	157.8	-24.7	123.8
Information Technologies	172.7	81.0	113.2	55.9
Industrial Engineering and Construction (*)	362.9	236.3	53.6	183.3
Eliminations in Industrial E&C works (**)	-48.9	-33.8	n.a.	-43.7
Total EBITDA	750.4	541.2	38.7	383.7

(*) Include corporate activity and consolidation adjustments

(**) Eliminations in Industrial Engineering and Construction for the internal works of non concessional projects

Corporate EBITDA and Non-Recourse EBITDA rose 71.0 % and 9.9 % from 2008.

(M€)	2009	2008	Var. (09-08) (%)
Corporate EBITDA	633.5	370.5	71.0
Non-Recourse EBITDA	282.1	256.8	9.9
Eliminations	-165.2	-86.0	92.0
Total	750.4	541.2	38.7

The contribution of the different Business Units to the formation of the main items of Abengoa's Income Statement is as follows:

	Solar	Bioenergy	Environm. Services	Inform. Tech.	Industrial E&C	Adjust. (*)	Total (%)
Sales (M€)	115.9	1,010.0	721.8	759.0	2,576.2	-1,035.6	4,147.3
Δ % s / 2008	78.4	21.7	-17.4	8.9	29.2	-	10.0
Gross Operating Flows (M€)	73.1	188.2	118.7	172.7	362.9	-	915.6
Δ % o / 2008	79.9	68.7	-24.7	113.2	53.6	-	46.0
% Gross Cash Flows / Sales	63.0	18.6	16.4	22.8	14.1	-	22.1
EBITDA (M€)	21.6	123.4	118.7	172.7	362.9	-48.9	750.4
Δ % o / 2008	133.4	36.0	-24.7	113.2	53.6	-	38.7
% EBITDA s / Sales	18.6	12.2	16.4	22.8	14.1	-	18.1

(*) Eliminations in Industrial Engineering and Construction for the internal works of non concessional projects

Net Income

The earnings after tax attributable to the parent company reached €170.3 M, which is a 21.3 % increase over the previous year's figure of €140.4 M.

Earnings per share for 2009 were 1.88 €/share against 1.55 €/share achieved in 2008.

Backlog

At 31 December 2009, Abengoa's order book of projects pending execution had increased by 86 % to €7,655 M, compared to 2008, equivalent approximately to 26 months of new contract sales.

	Backlog Dec. 2009 (M€)	Backlog Dec. 2008 (M€)	Var. (09-08) (%)	Execution Period
Total Abengoa Backlog	7,665	4,124	86	26 months

Additionally, and not included in the figure above, it should be mentioned that the order book, at the end of 2009 for concession activities totals €30,666 M with an average lifespan of 24 years.

Analysis of the Consolidated Income Statement

A summary of the Consolidated Income Statement of Abengoa at the close of 2009, 2008, and 2007 with the main variations per item, is given below:

Summary of Income Statement (M€)	2009	2008	Var. (09-08) (%)	2007
Net Turnover	4,147.3	3,769.2	10.0	3,214.5
Operantig expenses	-3,793.7	-3,643.2	4.1	-2,655.2
Other operating Income and Expenses	77.4	236.8	-67.3	-273.0
Operating Profit	431.0	362.8	18.8	286.3
Finanacial Profit	-181.4	-313.9	-42.2	-140.5
Participation in Profits of Associated Comp.	11.2	9.2	21.7	4.2
Consolidated Profit Before Tax	260.8	58.1	348.5	150.1
Corporation Tax	-58.1	107.6	-153.9	-14.3
Profit for the year from continuing operations	202.7	165.8	22.3	135.8
Profit for the year from discontinued op.	0.0	0.0	n.a.	0.0
Profit attributable to minority interest	-32.4	-25.4	27.8	-15.4
Profit attributable to Parent Company	170.3	140.4	21.3	120.4
Earnings per share (€)	1.88	1.55	21.3	1.33

The following comments are made concerning the main variations in the income statement:

- A 10.0 % increase in revenues to €4,147.3 M. Significant factors include the start of operations of the PS20 solar power plant, higher Bioenergy volumes from the increase in capacity in Europe (France and Salamanca plants), the construction of high voltage lines in Brazil and Peru, as well as the execution of solar projects for third parties.
- Operating income rose by 18.8 % to €431.0 M compared to €362.8 M the year before, representing a margin on sales of 10.4 % (9.6 % in 2008). It is important to note that the operating income includes investments made by Abengoa in R&D&I, which was recorded as -€61.5 M in the income statement in 2009 (-€51.2 M in research and innovation expenses and -€10.3 M in the depreciation of development assets).

Some €17.9 M was recorded as a deduction for export activities, against Other Operating income and expenses (compared to €68 M in 2008), in accordance with IAS 12 (for more details see point 20.2 in the Report, Volume III) as well as income of €11.4 M for the valuation of the company's management share plan.

At the end of 2009 provisions for other liabilities and expenses totaling -€16.4 M were recorded against operating income, to provide sufficient coverage for specific

risks associated with the evolution of business primarily outside Spain. Furthermore, provisions of €46.3 M (made in previous years) were applied during the year based on the recommendations of IAS 37 due to their classification as remote contingent liabilities or due to the realization of the risk for which the provisions were made.

Some €121.1 M in revenues were recorded from the sale of a 23.9 % stake of Abengoa's shareholding in Telvent and from the difference between the acquisition cost and the fair value of the net assets acquired by 50 % of the company Biocarburantes Castilla y León and 100 % of the three salt slags recycling and treatment plants in Germany (see Notes 2.2 and 37 of the Report). Conversely, losses of -€118.4 M were recorded after reducing the book values of certain assets related to the solar and Bioenergy activities after evaluating signs of impairment in the value of these assets (see Notes 5 and 8 of the Report).

- In conclusion, the net amount of these headings represents €1.0 M in income and therefore does not significantly affect the company's operating income.
- Financial income went from -€313.9 M in 2008 to -€181.4 M in 2009. In addition to the effect of the fall in interest rates, it is important to note that the appreciation of the Brazilian Real against the US Dollar during the year generated a lower financial book expense (which was not incoming cash), due to the conversion of US Dollar denominated debts into local currency in the transmission lines business, which led to a positive impact on financial income of €54.4 M. Revenues of €57.3 M have also been recorded from the cancellation of various financial exchange rate derivatives in Brazil. In addition to all of the above, non-cash provisions of -€58.5 M were made against financial income, for the negative valuation of financial derivatives on interest rates, exchange rates and commodity prices (see Notes 11 and 16.3 of the Report). Lastly, impairments have been recorded on certain loans and financial assets totaling -€12.4 M.

Summary of Financial Income (M€)	2009	2008	Cash or non-cash effect
Non-cash Fx loss (\$ debt in Brazil)	54.4	-90.0	non-cash
BRL/\$ Fx option profit	57.3	56.3	cash
Non-cash charge for derivatives	-58.5	-64.9	non-cash
Impairment in financial assets	-12.4	-	non-cash
Other Financial Income	-222.2	-215.3	Cash / non cash
Total Financial Income	-181.4	-313.9	

- Consolidated income before tax rose by 348.5 % to €260.8 M compared to €58.1 M the year before.
- Corporation tax in 2009 was a book expense of -€58.1 M compared to income of €107.9 M in 2008. Logically, this result has been impacted by investment and dedication to R&D&I activities, the contribution of income from other countries to Abengoa's profit as well as prevailing tax legislation.
- Profit attributed to the parent company grew by 21.3 % in financial year 2009 to €170.3 M, which means earnings per share of €1.88 (a 21.3 % increase on 2008).

For further information, please see the Consolidated Income Statement and the Notes to the Consolidated Annual Accounts in Volume III.

Analysis of the Consolidated Balance Sheet

A summary of Abengoa's Consolidated Balance Sheet at the end of the 2009, 2008 and 2007 financial years, with the main variations in the Balance Sheet, is shown below:

Summary of Balance Sheet (M€)	2009	2008	Var. (09-08) (%)	2007
Intangible Fixed Assets	1,490.9	1,451.5	2.7	1,227.0
Tangible Fixed Assets	1,864.2	1,100.7	69.4	870.9
Fixed Assets in Projects	3,623.3	2,283.7	58.7	1,638.1
Financial Investments non-currents	1,015.4	815.3	24.5	416.5
Total Non-current Assets	7,993.7	5,651.2	41.5	4,152.5
Total Current Assets	4,376.2	4,143.4	5.6	3,957.6
Total Assets	12,369.9	9,794.6	26.3	8,110.2
Equity	1,171.0	627.5	86.6	797.5
Non-current liabilities	6,157.7	5,076.6	21.3	4,110.1
Current liabilities	5,041.1	4,090.5	23.2	3,202.6
Total Liabilities	12,369.9	9,794.6	26.3	8,110.2

- Non-current assets increased by 41.5 % to €7,993.7 M primarily due to the increase in the fixed assets of projects under construction for the solar business area (Solar plants in Spain and Algeria), Bioenergy (plants in Rotterdam, Indiana and Illinois), power transmission line concessions in Brazil and Peru, and desalination plants in Algeria, India and China, as well as due to the appreciation of the Brazilian Real and the increase in deferred tax assets (DAEX, R&D and tax credits).
- Current assets increased by 5.6 % to €4,376.2 M mainly driven by the increase in accounts receivable (increases in the implementation of Information Technologies and Industrial Engineering and Construction projects) and in cash (bond issues).
- Shareholders' equity has increased by 86.6 % to €1,171.0 M, primarily due to the better results for the year, the positive impact of the exchange rate differences arising from the appreciation of the Brazilian Real, and the increase in external shareholders following the sale of a minority stake in Telvent during the year.
- Non-current liabilities increased by 21.3 % to €6,157.7 M, mainly due to the increase in long term non-recourse financing, which rose from €2,023.9 M in 2008 to €2,748.0 M in 2009 and from the two bond issues carried out by Abengoa in 2009 which had a €442.4 M impact on this heading.
- Current liabilities increased by 23.2 % to €5,041.1 M, driven mainly by the increase in suppliers and other accounts payable related to various engineering projects and due to the increase in debt with credit entities after the maturity of €266.7 M of syndicated loan was reclassified as short-term.

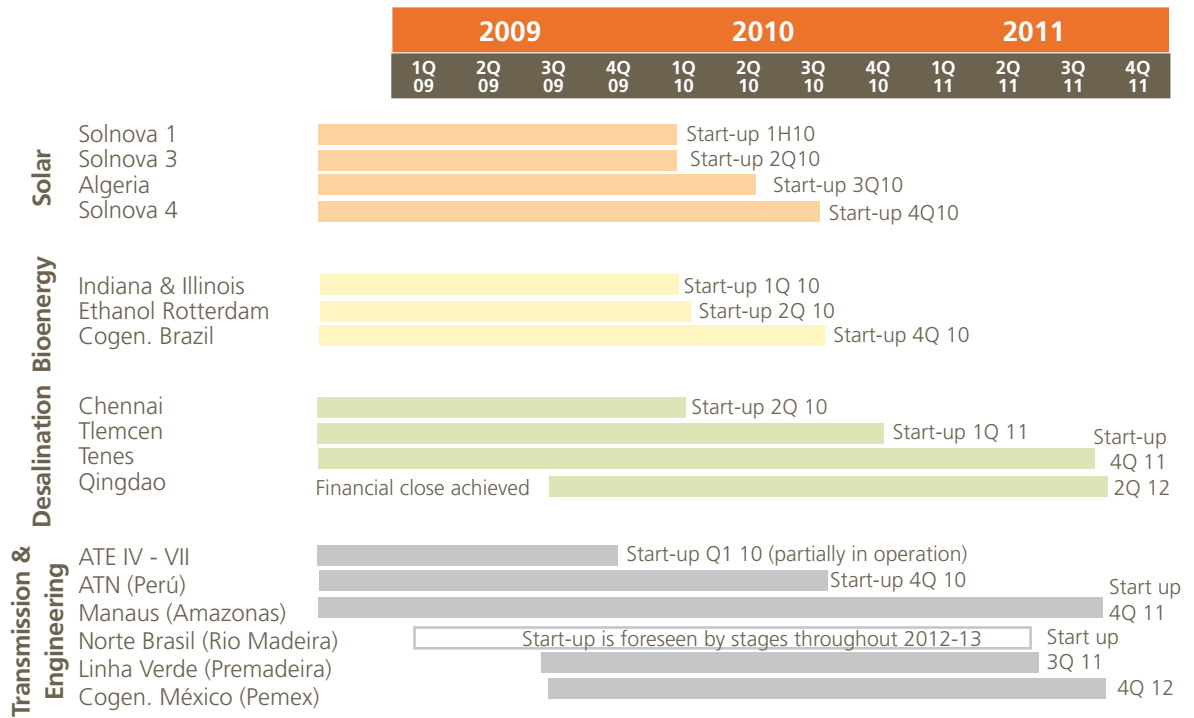
- At consolidated level, Net Debt amounted to €1,257.2 M, compared to a net debt position of €529.9 M in 2008.

Composition of Net Debt (M€)	2009	2008	Var. (09-08) (%)
Net debt (corporate)			
Long-term and Short-term Bank loans	-2,709.9	-2,561.8	5.8
Long-term and Short-term Bank Bonds	-506.0		-
Leasing & other adjustments	-69.7	-57.4	21.4
Financial Investment	482.0	690.7	-30.2
Cash and Cash Equivalents	1,546.4	1,398.7	10.6
Total Net Corporate Debt (Non-Recourse Financing)	-1,257.2	-529.9	137.3
Corparte EBITDA	633.5	370.5	71.0
R+D expense	51.1	41.7	22.6
Corporate EBITDA (ex R+D expense)	684.7	412.2	66.1
Net Corporate Debt / Corporate EBITDA	1.84	1.29	42.8
Non Recourse debt			
Long-term non-recourse financing	-2,748.0	-2,023.9	35.8
Short-term non-recourse financing	-185.4	-278.1	-33.3
Total Non Recourse Debt	-2,933.4	-2,302.0	27.4
Total Net Debt	-4,190.5	-2,831.9	48.0
EBITDA Total	750.4	541.2	38.7
Net debt / EBITDA (Total)	5.58	5.23	6.7
Preoperational Net Debt ⁽¹⁾	2,372.9	1,481.2	60.2
Total Net Debt adjusted for preop. Net Debt	-1,817.6	-1,350.7	34.6
EBITDA adjusted for margin on work done for fixed assets ⁽²⁾	915.6	627.2	46.0
Net Debt Adjusted / EBITDA Adjusted	1.99	2.15	-7.8

(1) Total Net Debt drawn related to projects under construction

(2) Margin on work done for fixed assets: is cash available for debt repayment but is accountingwise eliminated (€136 M)

It is important to take into account that of Abengoa's total net debt (€4,190.5 M), a total of €2,372.9 M relates to debt on projects that are under construction and which will therefore generate cash flows in future years. Excluding this pre-operational debt, the net debt figure for Abengoa would be €1,817.6 M.



For further information, refer to the Consolidated Balance Sheet and the Notes to the Consolidated Annual Accounts.

Analysis of the Consolidated Cash Flow Statement

A summary of the Consolidated Cash Flow Statement of Abengoa at the close of 2009, 2008 and 2007 with the main variations per item, is given below:

Consolidated Cash Flow Statement (M€)	2009	2008	Var. (09-08) (%)	2007
Cash generated by operations	535.3	282.3	89.6	313.1
Variations in Working Capital	268.2	479.3	-44.0	148.1
Net Cash Flow from Operating Activities	803.5	761.5	5.5	461.2
Investments	-2,140.8	-1,907.0	12.3	-1,300.6
Divestments	335.3	193.9	72.9	136.2
Net Cash Flow from Investment Activities	-1,805.5	-1,713.1	5.4	-1,164.4
Net Cash Flow from Financing Activities	1,149.8	652.3	76.3	1,373.1
Net increase / reduction in cash and equivalents	147.8	-299.2	-149.4	669.9
Cash or cash equivalent at the start of the year	1,398.7	1,697.9	-17.6	1,028.0
Cash in Banks at the Close of the Year	1,546.4	1,398.7	10.6	1,697.9

Net cash flows from operations increased by 5.5 % to €803.5 M compared to €761.5 M the year before. It is worth highlighting the increase in cash from operations which totaled €535.3 M in 2009 and the management of working capital which generated €268.2 M in cash.

In terms of net cash flows from investment activities, the most significant investments were in the construction of bioethanol plants in Europe and the USA; in solar thermal plants in Spain; and in the construction of desalination plants in Algeria, India and China and high-voltage lines in Brazil and Peru.

In terms of net cash flows from financing activities, it is worth noting that the Group managed to arrange financing for €1,230.2 M under difficult financing conditions, taking the figure for net cash flows from financing activities to €1,149.8 M. It is worth noting the two bond issues carried out by Abengoa in 2009 which allowed the company to raise €500 M in long-term financing in the capital markets

Analysis of the Global Consolidated Result Statement

A summary table on Abengoa's Global Consolidated Result at the end of 2009 and 2008 is shown below, which includes all the results from those years that directly affected Abengoa's consolidated equity.

Statement of the Global Consolidated Result (M€)	2009	2008	Var. (09-08) (%)
A. Consolidated Result after Taxes	202.7	165.8	22.3
Valuation of Financial assets available for sale	3.4	-3.2	205.3
Valuation of Other Revenues / Expenses	12.6	-27.7	145.4
Valuation of Cash Flow Hedges	-150.3	99.5	-251.0
Exchange differences	284.6	-265.5	207.2
Tax Effect	50.6	-24.9	303.1
Other movements	16.1	-47.5	134.0
I. Income and Expenses directly attribute to Equity	217.0	-269.3	180.6
Valuation of Financial assets available for sale	-3.6	-2.2	-66.8
Valuation of Cash Flow Hedges	4.3	-92.1	104.6
Tax Effect	-0.2	28.3	-100.7
II. Transfers to the Income Staments	0.5	-66.0	100.7
B. Total Recognised Income / Expense (I+II)	217.4	-335.2	164.9
C. Total Global Result (A+B)	420.2	-169.4	348.0
Total Global Result attributable to minority interest	-32.4	-25.4	-27.8
D. Total Global Result attributable to minority interest	387.7	-194.8	299.0

Performance of Business Units

Analysis of the Solar Business Unit Income Statement

In 2009 the Solar Business Unit began commercial operations of the largest tower technology plant in the world. The PS20 plant, as it is called, is located at the Solúcar Platform and incorporates a more efficient receiver as well as improvements in the control, operation and supply system compared to its predecessor, the PS10. Abengoa Solar now has an installed generation capacity using solar thermal and photovoltaic technology of 43 MW in Spain.

Furthermore, work is continuing on the construction of 150 MW of power in three solar thermal plants using parabolic trough technology at the Solúcar Platform in Sanlúcar la Mayor (Seville), as well as the 150 MW gas-solar hybrid plant in Algeria. All of these

plants are expected to come online in 2010.

In addition, construction has begun on two new 50 MW plants in Écija (Seville), both using parabolic trough technology, and on one new 50 MW plant in Logrosán (Caceres), applying the same technology.

With regard to the promotion of new projects, 13 plants (650 MW) have been included in the register created by the Ministry of Industry, Tourism and Trade, which guarantees them the existing regulatory and tariff framework. Abengoa Solar has become the leading company in Spain for its portfolio of solar energy projects. All of the plants will be operational by 2013, although they will be rolled out gradually starting in 2010. The group will then have platforms in Écija (Seville), El Carpio (Córdoba), Logrosán (Cáceres) and Alcázar de San Juan (Ciudad Real), as well as in Sanlúcar la Mayor (Seville).

Internationally, the company has signed a contract in the USA with Pacific, Gas & Electric to supply energy from the future Mojave Solar plant, which will have a net capacity of 250 MW. This project joins the Solana plant in Arizona which is currently obtaining its permits and licenses.

In relation to strategic alliances and agreements, Abengoa Solar is participating as a founding member of the Desertec Industrial Initiative, which under the auspices of the Club of Rome and other institutions, aims to develop the production of renewable energies in the desert regions of North Africa and the Middle East for local consumption and export to Europe. This initiative, which Abengoa Solar is promoting in collaboration with 11 other international companies, aims to supply 15 % of the energy demand in Europe and a substantial part of the electricity requirement in North Africa and the Middle East from solar thermal plants and other sources of renewable energy by 2050.

The Solar Business Unit reported the following results:

Solar (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	115.9	65.0	78.4	17.7
Gross Cash Flows	73.1	40.6	79.9	9.5
Gross Flows / Sales Margin (%)	63.0	62.5		53.7
EBITDA	21.6	9.2	133.4	10.1
EBITDA / Sales Margin (%)	18.6	14.2		57.0

Consolidated sales in this Business Unit correspond to:

- Revenues from electricity generation totaled €23.5 M from the plants in operation with solar thermal and photovoltaic technology.
- Sales of solar technology totaled €54.5 M. The important areas in this field include industrial systems and components for solar plants.
- The solar promotions under development as part of our strategic plan generated revenues of €37.9 M.

In 2009 the workforce grew by nearly 100 new professionals to 388 people as at 31 December (57 % engineers and graduates), of which 20 % work outside Spain, mainly in the USA.

During the year, the Business Unit group has invested more than €300 M in the construction of new plants, as well as participating in projects to develop solar technologies. Revenues from energy sales will grow considerably as these plants currently under construction come online during 2010.

Investment in R&D&I, worth €32.4 M, was also significant as well as a strategy to develop more efficient technologies that reduce existing generation costs. We have therefore been carrying out proprietary projects as well as working in collaboration with other leading institutions and universities in the solar energy sector.

Analysis of the Bioenergy Business Unit Income Statement

Despite the adverse raw materials scenario, Bioenergy improved on the results reported in 2008, with the following figures:

Bioenergy (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	1,010.0	830.1	21.7	613.7
Gross Cash Flows	188.2	111.6	68.7	79.8
Gross Flows / Sales Margin (%)	18.6	13.4		13.0
EBITDA	123.4	90.7	36.0	54.3
EBITDA / Sales Margin (%)	12.2	10.9		8.9

Sales by Abengoa Bioenergy increased by 21.7 % to €1,010.0 M compared to €830.1 M in 2008. The growth in sales is primarily due to higher volumes from the increase in capacity in Europe (France and Salamanca), as well as from higher sugar prices in Brazil.

Gross operating cash flows rose by 68.7 % compared to the previous year, climbing from €111.6 M in 2008 to €188.2 M to date.

EBITDA rose by 36.0 % compared to the previous year, from €90.7 M in 2008 to €123.4 M to date. The improvement was mainly driven by higher production and better margins in Brazil and Europe thanks to the entry into production for the full year of Lacq in France and Salamanca in Spain.

Performance in Europe:

- The volume of bioethanol sold increased to 716.5 ML (45.5 % more than 2008), primarily due to nearly a whole year of operations from Salamanca and the entry into production of the cereals plant in Lacq (France).
- Bioethanol prices fell slightly from €0.602 L in 2008 to €0.538 L due to the fall in oil prices, especially in the latter part of the year.
- However, these effects were offset by the decrease in the cereal price, which in 2009 had an average price of €151.3 t (€172.2 t in 2008).
- Also of note is the effect of the decreases in the cost of natural gas, from €26,8 MWh in 2008 to €22,2 MWh in 2009.
- Construction on a new plant in Holland continues, with an expected annual capacity of 480 ML. In the last quarter of 2009 the new San Roque plant (Cadiz) came into operation, with a planned production of 200,000 t/year of biodiesel and 19,000 t/year of glycerin.

Performance in the United States:

- The volume of bioethanol sold reached 168.6 Mgal, 9.7 % more than in 2008, with the optimization of production in Ravenna and York being the main driver of this significant increase.
- Bioethanol prices were also lower than in 2008, falling from \$2.3 gal in 2008 to \$1.74 gal in 2009.
- The cereal price has decreased a 15.5 %, to \$3.8 bsh in 2009 (\$4.5 bsh in 2008).
- Also of note is the effect of the decreases in the cost of natural gas, from \$7.1 Mbtu in 2008 to \$4.7 Mbtu in 2009.
- Construction on two new plants in the US States of Illinois and Indiana has been completed with an expected capacity of 88 Mgal each, which will start production in early 2010.

Performance in Brazil:

The main product volumes and prices achieved in Brazil were as follows:

- The volume of bioethanol in 2009 fell to 133.6 ML for hydrated bioethanol, from 141 ML in 2008, while dehydrated bioethanol increased to 26.6 ML in 2009 compared to 17.2 ML in 2008.
- The price of hydrated bioethanol increased in 2009 to 0.800 BRL/L compared to 0.730 BRL/L in 2008, echoed by dehydrated bioethanol, which rose to 0.864 BRL/L from 0.850 BRL/L in 2008.
- The volume of sugar in the domestic market in 2009 was 44,600 t compared to 215,000 t in 2008, while the external market recorded a volume of 265,000 t in 2009 compared to 408,200 t in 2008.
- The price of sugar in the domestic market in 2009 rose to 665 BRL/t compared to 454 BRL/t the year before, and in the external market to 710 BRL/t in 2009 versus 530 BRL/t in 2008. Abengoa Bioenergy redirects production to the external market faced with higher prices

Analysis of the Environmental Services Business Unit Income Statement

In financial year 2009, Environmental Services reported.

Environmental Services (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	721.8	873.4	-17.4	769.7
EBITDA	118.7	157.8	-24.7	123.8
EBITDA / Sales Margin (%)	16.4	18.1		16.1

Despite the fact that the markets in which Befesa operates continue to suffer the effects of the economic crisis in general, in the last few months of 2009 a modest improvement was seen in the main economic indicators, which is reflected in the results of the company for 2009, helping to offset the decline in sales compared to previous months.

The economic crisis is reflected in the decline in total sales for the Environmental Services

Business Unit, which fell by 17.4 % from €873.4 M in 2008 to €721.8 M in 2009, while EBITDA fell by 24.7 %, from €157.8 M in 2008 to €118.7 M in 2009. Excluding the effect of extraordinary income in 2008 from the sale of land of Befesa's desulphurization plant in the municipality of Baracaldo (Biscay), there was a 0.8 % increase in 2009 compared to the €117.8 M in 2008.

Nevertheless, EBITDA margin on sales has improved, excluding the effect of extraordinary income from the sale of Befesa land, from 13.5 % in 2008 to 16.4 % in 2009. This improvement in profitability clearly demonstrates the robustness of Befesa's business model, which continues to record good levels of returns despite the overall worsening situation of the industry.

Analyzing the two segments of Befesa's activity shows that sales in the industrial waste recycling business have fallen by 34 % compared to 2008.

By contrast, the water business segment recorded significant growth in 2009, with sales up by 29 % compared to 2008.

Performance by Business Unit is as follows:

- Aluminum Waste Recycling. Accumulated sales during 2009 totaled €132.0 M compared to €252.4 M in 2008. This lower sales figure is primarily due to lower volumes of treated waste as well as lower margins per ton treated.
- Steel Waste Recycling and Galvanization. In 2009, sales amounted to €195.8 M, compared to €253.6 M the previous year. As in the case of aluminum, the decline is primarily due to lower volumes of treated waste caused by the downturn in the industry that it serves.
- Industrial Waste Management. This division reported sales of €95.5 M, compared to €136.9 M the previous year, representing a decrease of 30.2 %. The slump in Spain's industrial production index reflects the downturn in the industry, which is affecting the volume of waste to be treated.
- Water. This division reported a cumulative turnover of €298.5 M in 2009, 29.3 % up on the previous year's €230.8 M, as a result of the execution of the desalination contracts abroad.

One of Befesa's principal achievements in 2009 was the completion of the financing to design, construct and operate the seawater desalination plant in Qingdao, China, for a period of 25 years, with a total investment of €135 M, which will be financed by a syndicate of Chinese banks. This important contract has given Befesa a solid presence in China, one of the strategic markets for the future growth of Befesa Agua.

Furthermore, in June 2009, Befesa acquired a set of production assets for €24 M for treating and recycling salt slags. The assets consist of three production plants in the German city of Hannover and the towns of Lünen and Töging with a combined treatment capacity of 380,000 t of waste per year, equipped with the most advanced technology available in the market.

This acquisition has made Befesa the leading salt slags manager in Europe, a market with a potential of around 1 Mt per year and, thanks to the experience and technological knowledge accumulated over the years, it has significant development potential for new

projects in other markets, such as North America.

Given the situation of the global economy and in the markets in which Befesa operates, and following a criteria of cash accumulation, investments in 2009 were limited to those that are clearly strategic to the future of Befesa. These included the aforementioned investments to acquire the salt slag treatment plants in Germany, made with non-recourse financing.

Analysis of the Information Technologies Business Unit Income Statement

During financial year 2008, our turnover grew by 8.9 % compared to the figure for the previous year. We closed the year with sales of €759.0 M.

Information Technologies (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	759.0	696.9	8.9	597.2
EBITDA	172.7	81.0	113.2	55.9
EBITDA / Sales Margin (%)	22.8	11.6		9.4

This Business Unit has performed excellently during 2009, one of the most difficult years for decades. Furthermore, as well as its continuous growth, it has significantly improved its operating margins, becoming a more profitable and efficient company, while also strengthening the position of the Business Unit in key markets and regions.

The growth in sales has been driven by the strong performance of the energy activity, both in the electricity business and in the oil and gas business, as well as by the boost from the contribution of Telvent DTN.

In 2009 Abengoa sold a 23.9 % stake in the shareholding that it held in Telvent, leaving Abengoa still as the main shareholder with effective control of the company, with 40 % of the share capital. This sale gave rise to a capital gain of €56.3 M, recorded at EBITDA level. Excluding this capital gain, the increase in EBITDA is 43.7 % and EBITDA margin on sales would rise from 11.6 % in 2008 to 15.3 % in 2009, as a result of an improvement in gross margin, improved operating efficiencies being implemented and, in general, due to the better operating profile.

One year on and clients continue to place their trust in Telvent, as shown by the figures for new business and in the order book at the end of the year, which allows us to be confident in 2010 and to continue growing in the future. Telvent has also continued to strengthen its position in every region where it is present, winning new contracts for strategically important projects and positioning itself as one of the leading companies in the Smart Grid market or in intelligent electricity networks.

Last year was also important because of the successful integration of DTN, both in terms of the business and its people, so that it is now a better company with synergies yet to be exploited, which will position the Group well in order to compete in the expanding information services sector. Furthermore, 2009 also saw the acquisition of assets from North Lakes Data Corp., including its TollPro administration software for toll collection, which strengthens the company's position as a leading supplier of electronic toll collection systems around the world. Finally, an agreement was also reached to

acquire the remaining 42 % of the international company Matchmind, which will help consolidate its complete integration two years earlier than expected.

All of these achievements have been recognized by the market. Telvent was ranked 70th in the annual classification of the 100 fastest growing companies in the world, according to America's Fortune magazine, and 15th within technology companies. Telvent has also been selected to form part of the new NASDAQ OMX® Clean Edge® Smart Grid Infrastructure stock index, proof that Telvent is seen as one of the leading companies in the development of intelligent electricity networks.

In 2009, Telvent continued to offer high value added products and solutions in all its business activities while as expanding its presence in key geographical regions, laying the groundwork to create new opportunities and becoming a more diversified company.

- Energy accounted for around 30.8 % of total business in 2008 with sales of €235.1 M, an increase of 13.6 % over the previous year. It is worth highlighting the increase in activity in the USA and Latin America. During 2009 Telvent's customers have expressed great interest in the Smart Grid solutions, which has translated into an increase in new business as well as a larger customer base, winning new strategically important contracts that will act as global references, such as Fortum in Finland, Guizhou Power in China or Progress Energy in the USA.
- Transport was the second most important segment in terms of sales in 2009, accounting for 28.6 % of the activity during the year, despite a slow down in Telvent's business in this area compared to the previous year due to a predicted decline in new business in the international transport division.
- Environment ended the year with sales of more than €61.8 M, a jump of 28.8 % compared to the previous year. Telvent has consolidated its meteorological forecasting and observation services and solutions, strengthening its presence in the USA.
- Agriculture ended the year with sales of €77.5 M, EBITDA margin of around 80 % and nearly 600,000 subscribers. This segment supplies real time information that helps to optimize the production and distribution of agricultural products as well as offering services and information that help to increase the transparency of broker transactions in organized markets for agricultural products. The business is based in the USA and continues to have a subscriber retention rate of more than 90 %.
- Global Services has also recorded growth during the year with sales of €170.8 M, an increase of 2.1 %, despite a decline in business related to public administrations in Spain. This segment serves the technology requirements of customers in all other areas, offering consultancy, outsourcing and systems integration services primarily in Spain.

Analysis of the Industrial Engineering and Construction Business Unit Income Statement

During 2009, the Industrial Construction and Engineering Business Unit continued its growth from previous years with a 29.2 % increase in sales to €2,576.2 M compared to 2008.

The higher sales were driven by the healthy performance of all of Abeinsa's aforementioned business lines. This positive evolution has improved the operating margins of projects, which combined with the coming online of new transmission line concessions in Brazil has allowed the company to improve its EBITDA/Sales ratio to 14.1 %.

Industrial Engineering and Construction (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	2,576.2	1,993.5	29.2	1,485.4
EBITDA	362.9	236.3	53.6	204.0
EBITDA / Sales Margin (%)	14.1	11.9		13.7

In terms of the performance of the Business Unit, important contributions came from the construction of biofuels and solar thermal plants by Abener; an increase in the international activity of Inabensa; and concessions for high voltage lines in Latin America, most notably the start of construction of the Río Madeira direct current line that will be 2,375 km long.

This growth in the business and international development has positioned Abeinsa as one of the global leaders in its sectors. According to the latest data published by the magazine Engineering New Record, Abeinsa is the leading company in the world in terms of international contracts related to the construction of electricity distribution and transmission infrastructures, and is ranked second in terms of energy infrastructure construction.

By divisions:

- In the Energy activity, Abener Energía has performed well thanks to the turn-key construction of plants for Abengoa Bioenergy (bioethanol plant in Holland with the capacity to produce up to 480 ML of bioethanol from corn or wheat, and two bioethanol plants in the USA in Indiana and Illinois, with a capacity of 333 ML each) and for Abengoa Solar (construction of three 50 MW parabolic trough plants).
 - It is also worth highlighting the turn-key construction of the world's first combined cycle-solar hybrid plant with 150 MW (in Hassi-R'Mel, Algeria), as well as the Ain-Beni-Mathar plant (Morocco) with 470 MW of power, which will use combined cycle technology integrated with a solar field of parabolic trough collectors. Both projects represent a combined investment of nearly €800 M.
 - In this international development, Abener Energía, together with Abengoa México, has been awarded the contract to construct and operate for 20 years, a 300 MW co-generation plant in Tabasco (Mexico).
- In Facilities, we consolidated the figures reported in 2008, due to the correct execution of our projects during 2009.
 - The implementation of Lot 2 of the Siepac project (the electrical interconnection system for Central American countries), consists of a 230 kV power transmission line and the simple circuit 400 kV Misurata-Surt-Ras Lanouf-Agdabia line, which is 575 km long.
 - The award of the contract for Lot A4 and Lot A7 of an 800 kV direct current transmission line from Biswanath Chariyali to Agra and from Gorakhpur and the River Gomti. The combined projects will require the construction of 401 km of direct current line in India.
- In Installations, the concessions activity of Inabensa has developed well through participation in the construction of singular buildings and the subsequent management of the concession company. This business line includes the ongoing construction of the new hospital and external consultations building of the Hospital

Costa del Sol in Marbella (Málaga) and construction has begun on the State of Mexico Cultural Centre in Texcoco.

- In Marketing and Ancillary Manufacturing it is worth noting the 100 % increase in sales compared to 2008, which was consistent across all companies in this business line both for sales agents and Eucomsa. Manufacturing for the solar energy parabolic trough collector plants is particularly important for the latter.
- In Telecommunications, Abeinsa has continued to develop its traditional telecommunications network integration and turnkey projects activity during the year.
- In Latin America the activity has grown significantly by 8.6 % compared to 2008. Operations in Brazil included the construction of 3,900 km of high voltage lines. In the transmission line concessions business, Abeinsa recorded annual EBITDA of approximately €120 M.

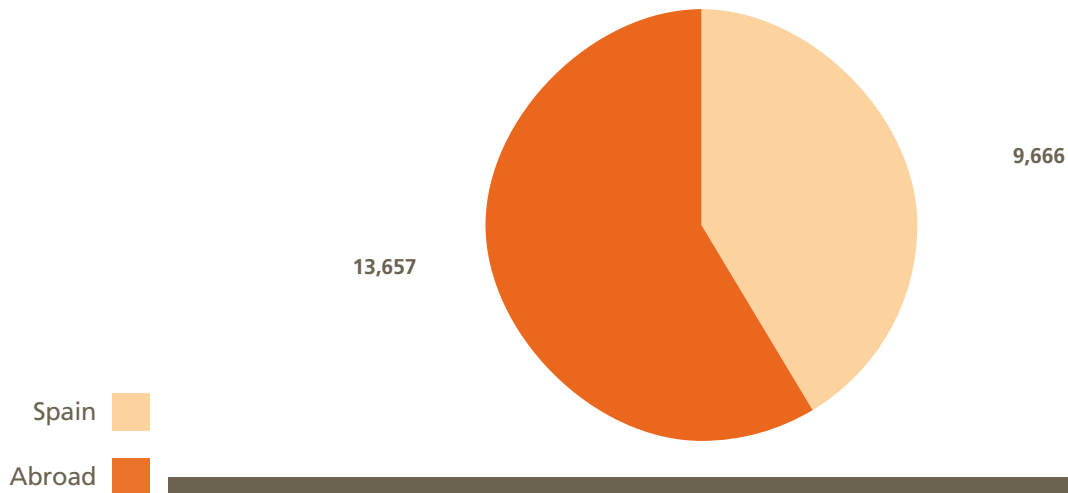
Transmissions Lines (M€)	2009	2008	Var. (09-08) (%)	2007
Consolidated Sales	142.1	130.9	8.6	107.2
EBITDA	120.2	114.7	4.8	91.1
EBITDA / Sales Margin (%)	84.6	87.6		85.0

- In Latin America in 2009, Abeinsa was awarded new concessions for high voltage lines, which consolidates its concession activity in Brazil, Chile and Peru. In Brazil it was awarded the contract for two 230 kV sections of electricity transmission lines with a total length of 1,500 km.
- In Peru, Abeinsa was awarded the concession to operate the 200 kV Carhuamayo-Carhuaquero transmission line over a distance of 670 km.
- The progress of Teyma Uruguay has been very important this year with the establishment of Teyma Internacional and Teyma España, with works in Europe and Africa and its consolidation as the leading Uruguayan construction company.
- In the environment segment, Abeinsa New Horizons has continued to develop its commitment to sustainability, significantly increasing its investment in R&D&I in fuel and hydrogen cells through its subsidiary Hynergreen Technologies, as well as in new energy efficient and renewable energies through the R&D division of Instalaciones Inabensa.
- Zeroemissions Technologies encompasses the carbon “trading” activities and CDM projects associated with the Kyoto protocol. We have signed contracts for carrying out CDM (Clean Development Mechanisms) projects with companies in various countries, such as China and India.

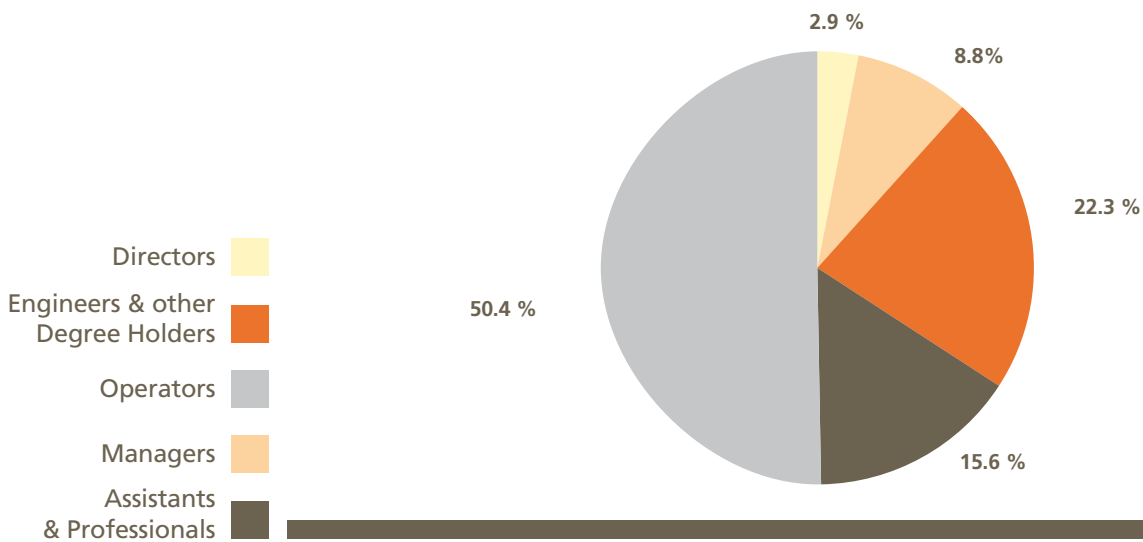
Evolution of the Workforce

The average workforce of Abengoa in 2009 was 23,323, a 0.4 % increase on the previous year (23,234)

Geographical distribution



Professional Groups



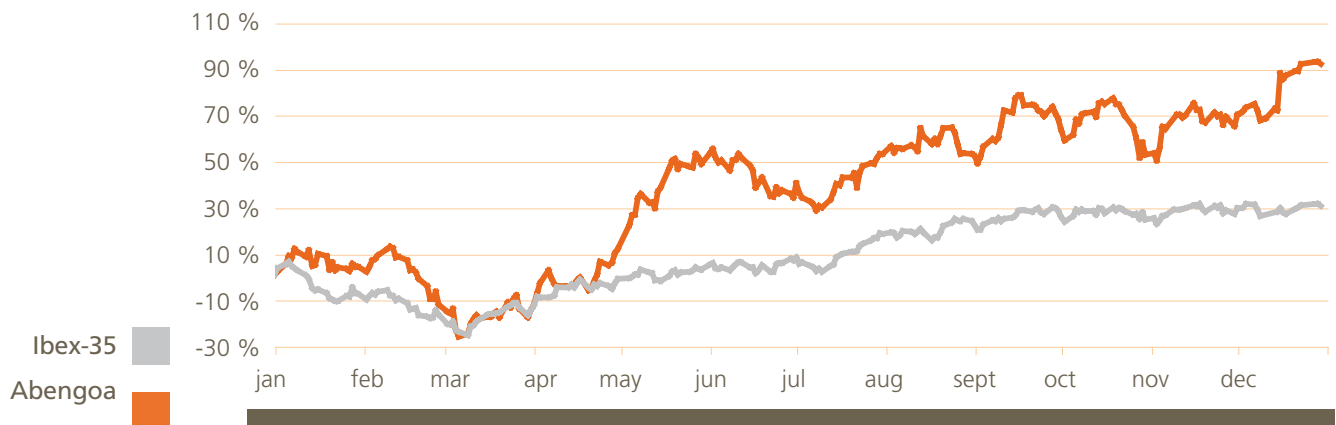
Stock Exchange Evolution

According to the figures supplied to the company by Bolsas y Mercados Españoles, 91,400,098 shares were traded in 2009 equivalent to an average daily volume of 359,842 shares and an average traded cash value of €5.9 M per day.

	2009	2008	2007	2006	2005
Thousands of Shares	90,470	90,470	90,470	90,470	90,470
Earning per share (€)	1.88	1.55	1.33	1.11	0.73
Dividend per share (€)	0.19	0.18	0.17	0.17	0.16
Quotation (€)	22.60	11.80	24.18	27.81	12.41
Capitalisation (M€)	1,792	1,068	2,188	2,516	1,123
Average daily trading volume (M€)	5.9	8.3	14.4	9.4	2.3

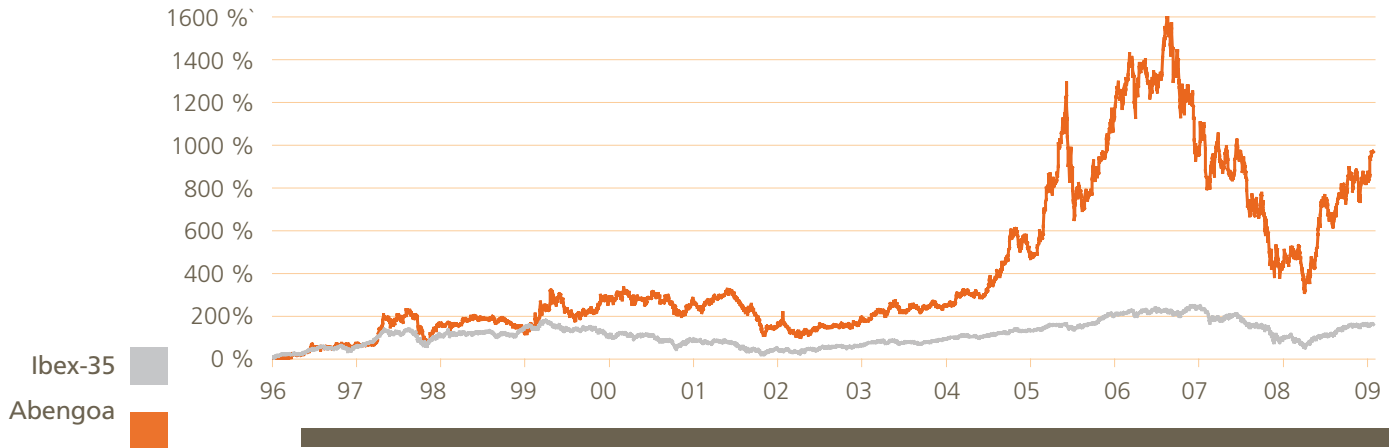
The final listed price of Abengoa's shares in 2009 was €22.60, which is a 91.5 % increase on the closing price for the previous year (€11.80). Minimum, maximum and average listed share prices in 2009 were €8.55 (March 9th), €23.15 (December 28th) and €16.28, respectively.

Evolution on the Stock Exchange 2009



As a historical reference, since Abengoa's Initial Public Offering on November 29, 1996, the company's shares have revalorized 961.7 % which is more than ten times the initial price. During this same period, the select IBEX-35 has revalorized 155.8 %.

Evolution since Abengoa Initial Public Offering (11.29.1996)

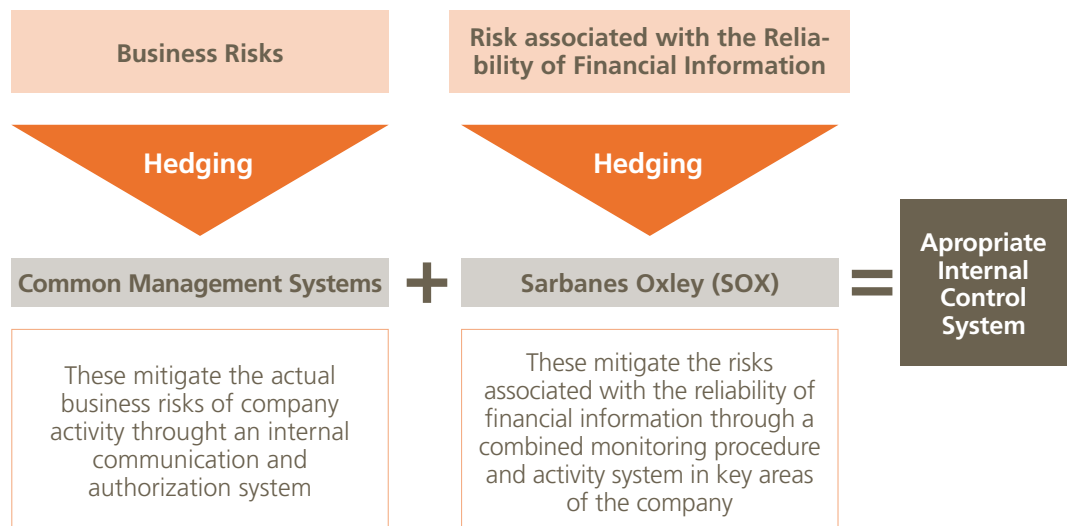


Risk Management in Abengoa

Our environment is defined by the extraordinary acceleration in technology; the speed of social, economic and political change; and the need to create value.

To deal with the threats in the above scenario, as well as to make the most of the opportunities that may arise, Abengoa believes that risk management is an essential activity and function for taking strategic decisions and that it is necessary to have criteria and methodologies to ensure safe the business growth.

Our risk management model comprises two key elements



Both elements comprise an integrated system that allows risks and controls to be appropriately managed at every level of the organization.

This is a dynamic system that undergoes continuous modifications in order to stay up to date with the reality of the business.

Business Risk

Our “Common Management Systems” represent a common culture for Abengoa’s different businesses. They identify the risks, establish the coverage and define the control mechanisms. They are comprised of eleven rules that define how each of the potential risks included in the Abengoa risk model must be managed.

The “Common Management Systems”, which carry out the necessary business and risk management processes in Abengoa, encompass every business group and area of activity and involve the different levels of responsibility. They include specific procedures that cover any action that may generate a risk to the organization, both financial and non-financial.

The people responsible for each of the Rules of the Common Management Systems must verify and certify compliance with these procedures. This annual certification is issued and presented to the Audit Committee in January of the following year.

The risk universe in Abengoa is structured in the following way:

The analysis methodology for these risks is described in one of these Rules and comprises the following phases:

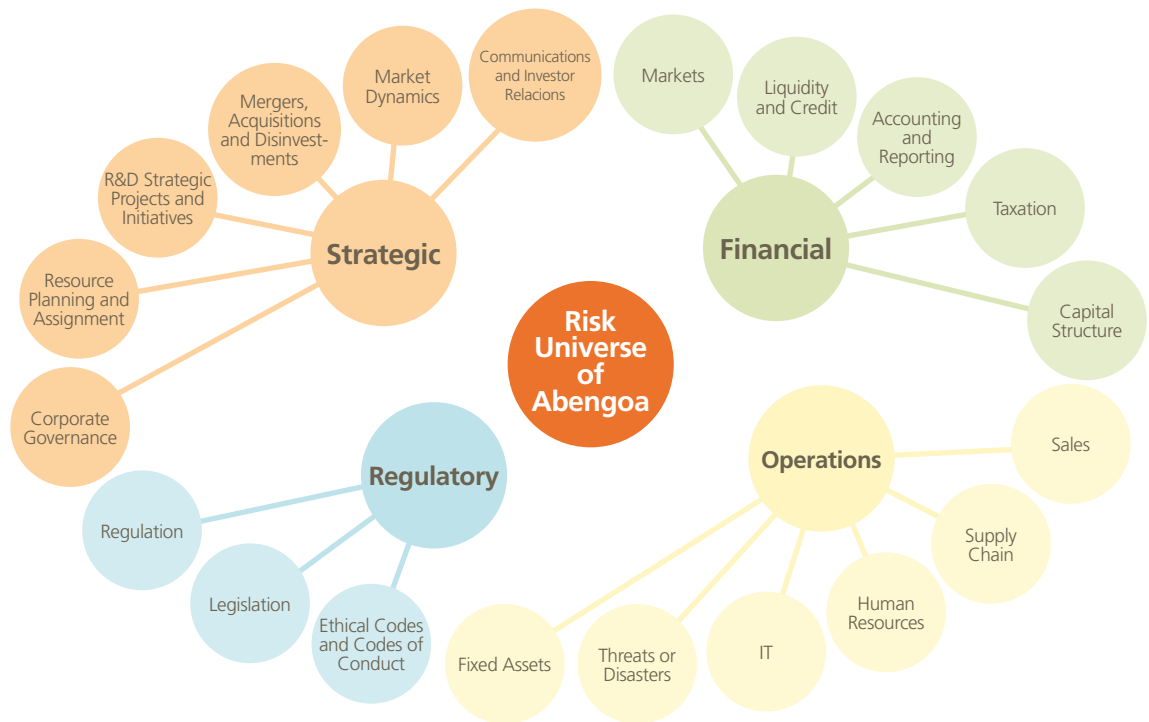
1. Identification of the risks: carried out using the Preliminary Risk Identification document in order to detect the level of risk of a business or project and to determine if it requires a more in-depth risk analysis.
2. Qualitative risk analysis: examines the risks of the business or project that are deemed necessary due to their significance; it indicates the consequences that could arise in the event that they occur; and it determines the coverage to implement.
3. Risk quantification: financially assesses the impact of each risk.

Risks relating to the reliability of financial information

In 2004 Abengoa began a process to adapt its internal control structure for financial information to the requirements of Section 404 of the Sarbanes-Oxley Act (SOX). This process continues to be implemented in new corporate acquisitions.

The SOX Act was passed in the USA in 2002 in order to guarantee transparency in the management, accuracy and reliability of the financial information published by companies listed in the US market (“SEC registrants”). This law requires these companies to subject their internal control systems to a formal audit by their annual accounts auditor, which must also issue an independent opinion.

According to the instructions of the Securities and Exchange Commission (SEC), all listed companies and groups in the North American market must comply with this law. Although only one of Abengoa’s business groups (Information Technology, Telvent) is required to comply with the SOX, Abengoa believes that these requirements should apply to all its companies, including its NASDAQ listed subsidiary, and these requirements are supplementary to the risk control model used by the company.



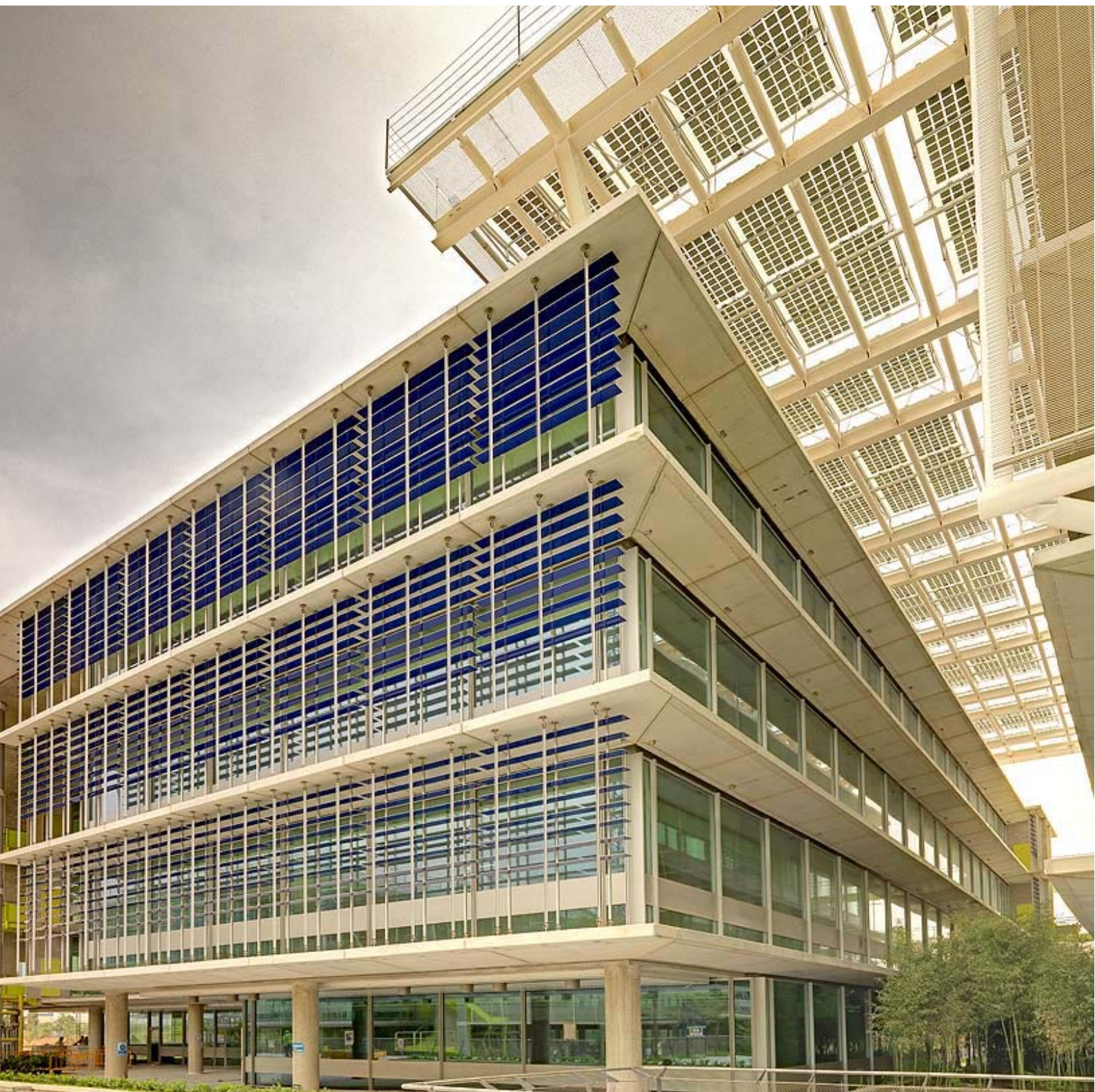
At Abengoa we see this legal requirement as an opportunity for improvement and far from being satisfied with the conditions included in this law, we have tried to further develop our internal control structures, control procedures and the evaluation procedures applied, as much as possible.

This initiative has arisen in response to the rapid expansion of the group over the last few years and its expectations for future growth, in order to be able to continue guaranteeing our investors precise, timely and comprehensive financial reports.

In order to comply with the requirements of Section 404 of the SOX, Abengoa has redefined its internal control structure following a top-down approach that involves the initial identification of the important risk areas and an evaluation of the controls that the company has for them, beginning with those carried out at the highest level (corporate and supervision controls) and proceeding to evaluate the operational controls in each process.

Some 53 different processes have been identified that could have a potential impact on the generation of the company's financial information. There are more than 400 essential control activities in total, which are subjected to continuous supervision by the Group's internal audit teams.

Furthermore, our internal control system is evaluated by our external auditors, who issue an opinion on it based on the PCAOB (Public Company Accounting Oversight Board) auditing standards applicable to listed companies in the United States (SEC registrants).



Activity Report 2009
ABENGOA

7

Business Units Activities



Activity Report 2009
ABENGOA

7.1 Solar

Abengoa Solar develops and applies solar power technologies in order to combat climate change and ensure sustainability through the use of proprietary Concentrating Solar Power (CSP) and photovoltaic technologies.

www.abengoasolar.com

International Presence



Key figures 2009

Revenue (M€)	116
Gross Cash Flows (M€)	73
Capacity of plants in operation and under construction (MW)	493
Capacity in advanced development (MW)	1,500
Patents requested since December 2007	55
Average number of employees	358
Hours of training	39,094

Our Business

In 2009, the solar electricity generation market continued to grow in many territories worldwide despite the gloomy economic backdrop:

- Various key markets introduced or bolstered existing regulations on the use of renewable energy, particularly solar. Prime examples of this trend are the United States, in which the new administration unveiled legislative changes, Spain, which introduced reforms relating to solar thermal energy; as well as markets with future potential, such as India and Australia.
- Construction of solar plants worldwide has reached around 6.8 GW in photovoltaic and 1 GW in concentrating solar power.

Although the financial crisis has delayed the start of new construction projects worldwide, there has been an improvement over recent months following the introduction of economic stimulus schemes, which should enable the sector to grow significantly in 2010.

Abengoa is convinced that solar energy can meet a significant part of society's demand for clean and efficient energy sources. Each year, the sun casts down on the earth enough energy to surpass the energy needs of our planet many times over, and there are proven commercial technologies available today with the capability of harnessing a portion of this energy in an efficient way. With this in mind, the mission of Abengoa Solar is to develop technologies and apply them to solar plants in order to generate clean solar power at prices that prove competitive with fossil fuels, bearing in mind the cost of emissions.



Abengoa Solar believes that solar energy can change the world and is committed to the following goals:

- Contributing to ensure that up to a 50 % of electricity comes from renewable sources in the countries where Abengoa Solar operates, by offering clean, efficient and manageable solutions.
- Developing the most efficient and easy to manage in a grid solar technologies.
- Efficiently operating a geographically and technologically diversified global portfolio of solar power assets.
- Attracting the very best in human talent.

Abengoa Solar is involved in five core activities:

- Plant operation and management.
- Plant engineering and construction through the use of proprietary technologies and always with the backing of a specialized construction company.
- Development of solar plants and installations, requiring the company to identify suitable sites, obtain the necessary licenses and finance the corresponding projects.
- Development of efficient technologies for generating solar energy, for which the company has its own R&D teams both in Spain and the U.S. and collaborates with leading research centers from around the world.
- Manufacture and supply of key components for plants in certain cases.

Abengoa Solar is committed to becoming a global company with local presence in those markets offering the greatest solar resource and potential for future growth. The company is currently organized around three key geographical areas:

- Spain.
- United States.
- International, particularly North Africa, the Middle East, India, China and Australia.

Abengoa Solar operates in a rapidly growing global market that promises to continue expanding by catering to the widespread need for clean energy solutions aimed at combating climate change and increased energy independence. This arises from the toll of the CO₂ emissions generated by fossil fuels, and the volatility and rising cost of, oil and gas.

Abengoa Solar customers are essentially electric utilities, public administrations, large companies that require technology or installations, and society in general as an energy consumer. With regard to the development, construction and operation of solar power plants, in certain countries, the customer is often an electric utility with which Abengoa Solar signs a long-term electricity supply agreement. In others, the customer is the local government and the network operator, or an electric company when different tariffs for solar power sales are in place.



The Abengoa Solar team has grown rapidly since the start of operations. This sharp jump is largely due to an increase in business and the consolidation and expansion of the company's project portfolio in various countries. During this period, Abengoa Solar sought to attract and develop the skills of the best human talent. In this regard, Abengoa Solar has implemented an integral and integrated management system composed of individuals charged with meeting the needs of both the employees and the company:

- Integral, in that it covers all human resource processes: identification, description and classification of jobs; selection process to attract the best professionals to be found in the market; training and development, including career plans, assessments, performance management and remuneration, all geared towards retaining talent; and also internal communication and social action.
- Integrated, in that it extends not only to interrelated processes, but also to the global nature of Abengoa Solar as a whole, encompassing numerous companies unrelated by sector, territory or business line. The human resources policy has been shaped from the mission, vision and values of Abengoa Solar, from the company's strategic objectives, and from implementation of its strategic plan.

Abengoa Solar has a risk analysis and management system that is used in each of its lines of business, and which hedges against five kinds of risk:

- Business.
- Regulatory.
- Financial.
- Credit.
- Operational.

Risk control at Abengoa Solar is based on two core priorities: corporate management systems and internal audit services.

The corporate management systems develop the internal rules governing Abengoa Solar and its chosen approach to assessing and controlling risk. The systems cover the entire organization at all levels of responsibility and for all kinds of operations.

The Internal Audit Services are in place to prevent the risks to which the different companies are exposed, and to control the application of the appropriate management procedures in accordance with the corporate management systems.

For a company such as Abengoa Solar, which is founded on the notion of sustainable development, the task of managing relations with the following stakeholders is of paramount importance:

- The local communities located in the vicinity of Abengoa Solar's electrical power plants. The company makes every effort to prevent any possible negative impact from its operations on such communities.
- Partners with whom the company collaborates on many of its projects.
- Customers and suppliers, who are required to bring their sustainability policies in line with those of Abengoa Solar. For example, all suppliers must calculate the emissions generated by the products and services they supply to Abengoa Solar. This information is, in fact, an important variable in the decision-making process.

During 2010, Abengoa Solar will continue to consolidate the strategy it has pursued in recent years, a process that will be key to implementation of the company's growth plan. The strategy will therefore continue to be founded on the cornerstones underpinning business at Abengoa Solar:

- Global presence, with special emphasis on the United States and Spain, but with ventures into other international markets which are already beginning to bear fruit.
- Bolstering the strategy of striking up alliances in plan development and operation.
- Controlled technological diversification as a platform to ensure the company's future capacity to compete effectively in terms of costs and its ability to offer a portfolio of solutions tailored to existing demand.
- Constant innovation, particularly for those technologies that Abengoa Solar has identified as key. This will be achieved through the company's own teams and via agreements with leading R&D institutions.

2010 is set to be a key year for the implementation of this strategy and for Abengoa Solar's expectations of further growth. The company's main objectives are as follows:

- To make Abengoa Solar the world's only solar energy company to be successfully operating both power tower technology and parabolic trough plants. This will become a reality following the start-up of the first Solnova plants at the Solúcar Platform.
- To expand operations on the international stage.
- To consolidate its leadership in those concentrating solar power and photovoltaic technologies that the company considers key.

2009 in Review



2009 was another key year in terms of business performance, with Abengoa Solar laying the foundations for healthy, sustained and global growth throughout all its business lines.

- The world's second power tower technology plant, PS20 (20 MW), was brought into operation
- Construction continued on the three 50 MW parabolic trough plants, located at the Solúcar Platform.
- Construction work got underway in Écija (Seville) on two 50 MW parabolic trough plants, Helioenergy 1 and Helioenergy 2 and in Extremadura on one 50 MW parabolic trough plant, Solabén 3.
- In the field of photovoltaic energy, the first 1.2 MW plant, Sevilla PV, has now completed its third year in commercial production, thereby demonstrating the commercial viability of the low concentration technology it utilizes. The 1 MW Copero plant in Seville is also in operation, as does the 1.9 MW Casaquemada PV plant in Sanlúcar la Mayor (Seville), the 1.9 MW Linares PV plant in Linares (Jaén) and the 5.7 MW Las Cabezas PV plant in Las Cabezas de San Juan (Seville), all of which reached expected levels of performance.



- On the international stage, Abengoa Solar made progress, along with Abengoa's industrial engineering and construction business units, on the construction of the world's first two Integrated Solar Combined Cycle (ISCC) power plants to incorporate a natural gas combined cycle with a parabolic trough field. These two plants are located in Algeria and Morocco.
- In the United States, the company continued to obtain the licenses needed to begin construction on a 250 MW (net) parabolic trough plant, which will be the world's largest. The plant, called Solana, will sell all the electricity it generates under a power purchase agreement to Arizona Public Service (APS), an electric utility.
- Another solar power supply agreement was signed in 2009 with California's Pacific Gas and Electric Company (PG&E), marking the start of the Mojave Solar Project, a 250 MW (net) plant featuring parabolic trough technology.
- The year also included various new projects for industrial solar energy installations to supply heat and steam to industrial customers, including a project at a coal power plant owned by Xcel Energy, Colorado's largest electric utility, and another project for the U.S. Department of Energy (DOE) at its facilities in Arizona.
- 2009 saw the company enhance its capacity in Spain to simultaneously operate and manage next year the two power towers currently in operation, the first parabolic trough plants and its photovoltaic plants.
- In R&D the Solúcar Platform consolidated its standing during 2009 as one of the world's leading centers in solar energy research. The platform currently features various groundbreaking and fully operational research facilities, including a high temperature power tower plant, a parabolic trough plant for direct steam generation, a heat accumulation demonstration project utilizing molten salt storage, a Stirling dish facility, various high concentration photovoltaic installations and a photovoltaic laboratory.
- Abengoa Solar has been using its two parabolic trough assembly factories to supply the entire solar field for the Solnova 1, Solnova 3 and Solnova 4 plants, each of which is 50 MW in capacity, and located at the Solúcar Platform in Spain.
- Abengoa Solar has signed an agreement to adhere to the Desertec Industrial Initiative project as a founding partner. The project has been designed to increase production of renewable energy in the desert regions of North Africa and the Middle East for local consumption and exportation to Europe.

Our Activities

Abengoa Solar possesses both know-how and technology in relation to power tower plants, parabolic trough plants, industrial heat and steam production facilities, photovoltaic solar power plants, with and without concentration, and in the manufacturing of key components.

Abengoa Solar is engaged in five core lines of business:

- Plant operation and management.
- Plant engineering and construction through the use of proprietary technologies and always with the unwavering backing of a specialized construction company.
- Development of solar plants and installations, requiring the company to identify suitable sites, obtain the necessary licenses and finance the corresponding projects.

- Development of efficient technologies for generating solar energy, for which the company has its own R&D teams in both Spain and the U.S. and collaborates with leading research centers from around the world.
- Manufacture and supply of key components for plants in certain cases.

MW	Spain	USA	International	Total
In operation	43	-	-	43
Under construction	300	-	150	450
Advanced development	1,000	500	-	1,500
Total	1,343	500	150	1,993

Abengoa Solar currently has a significant number of projects in each of its lines of business.

Plant Operation

Abengoa Solar currently operates roughly 43 MW in Spain.

PS10

The solar field has 624 heliostats, each spanning 120 m². The heliostats concentrate solar radiation onto a receiver located at the top of a 120 m tower to generate steam and power a turbine paired to an electrical generator connected to the electricity grid.

The plant generates enough clean energy to meet the needs of 5,500 households while cutting yearly CO₂ emissions by 6,700 t. The plant also boasts an energy storage system of nearly one hour in duration, enabling it to manage sporadic cloudy spells without having to shut down and then restart the plant. It is the world's first solar power plant to incorporate a power storage system.

In June 2007, the plant successfully underwent its first operational testing and continued to operate successfully in 2008 and 2009. Ever since its start-up, PS10 has borne witness to the viability of power tower technology, while acting as a learning tool to improve future plants built with the same technology.

PS20

This plant has benefitted from the extensive experience of Abengoa Solar in constructing and operating this type of plant and incorporates numerous design improvements, making it more efficient than PS10. These enhancements include a more efficient receiver and numerous improvements to the control and operation systems and the thermal energy storage system. The plant was constructed by Abener, the Abengoa group company that specializes in "turn-key" contracts.

With 20 MW of capacity, the PS20 plant supplies 10,000 households and slashes yearly CO₂ emissions by 12,100 t. The Solúcar Platform's second power tower plant incorporates 1,255 heliostats designed by Abengoa Solar. Each heliostat measures 120 m² and reflects the solar radiation it receives onto a receptor located on the 165-m high tower, thereby enabling the plant to produce the steam required to generate electricity in the turbine.



Sevilla PV

The world's first commercial plant to feature low-concentration photovoltaic technology. With a capacity of 1.2 MW, the plant is located at the Solúcar Platform in Sanlúcar la Mayor, Spain.

Sevilla PV has 154 solar trackers on a plot of land spanning 30 acres.

The plant is able to generate 2.1 GWh of clean energy per year, enough to supply approximately 650 households and curb yearly CO₂ emissions by 1,800 t.



Copero PV

This plant is effectively a series of ten photovoltaic installations with a combined capacity of 1 MW, all located on the site of Emasesa's Wastewater Treatment Plant (WWTP) at the El Copero site, within the municipal district of Dos Hermanas (Seville). Emasesa and Abengoa Solar are each 50 % owners of the plant.

Las Cabezas PV

5.7 MW photovoltaic plant with one-axis trackers located in an area of high solar radiation in the province of Seville.

Casaquemada PV

A 1.9 MW plant employing two-axis photovoltaic tracking technology situated at the Solúcar Platform. It includes a 100 kW high-concentration installation with latest generation technology.



Linares PV

1.9 MW photovoltaic plant with two-axis trackers located in Jaén.

Plant Construction

Abengoa Solar currently has seven plants under construction with a total capacity of 450 MW.

Solnova 1, Solnova 3 and Solnova 4 plants at the Solúcar Platform

During 2009, Abengoa Solar made further progress in constructing the first three parabolic trough plants at the Solúcar Platform (Seville): Solnova 1, Solnova 3 and Solnova 4, each with 50 MW of capacity. The construction companies for all three plants are Abener and Teyma.

The chosen technology concentrates solar radiation through high precision curved mirrors onto a heat absorbing tube containing a fluid that is heated to high temperatures. The fluid allows the plant to generate steam, which is then sent to a turbine generator, where it is used to produce energy.

Each plant boasts 54,000 m of collectors. One collector has 6 m of aperture and a surface area of close to 150 m². Each plant takes up an area spanning 300 acres and is able to generate enough energy to supply roughly 26,000 households, while cutting yearly CO₂ emissions by roughly 31,000 t.

Solnova 1 is currently going through its start up following completion of the construction work.

Significant progress has been made on the construction of Solnova 3 and Solnova 4, which will begin operating during 2010.



Helioenergy 1 and 2 plants at the Écija Platform

50 MW concentrating solar power plants with parabolic trough technology under construction within the municipal district of Écija (Seville).

When the plants are brought into operation, each will be able to supply approximately 26,000 households while curbing yearly CO₂ emissions by 31,000 t.

To construct and operate both plants, Abengoa Solar forged an alliance with E.ON Climate and Renewables, which will invest approximately €550 M in the two plants. start-up is scheduled for 2011 and 2012 respectively.

Solabén 3 at the Extremadura Platform

50 MW concentrating solar power plant with parabolic trough technology under construction within the municipal district of Logrosán (Extremadura).

The World's First Integrated Solar Combined Cycle Solar Plant in Algeria

During 2009, Abengoa Solar continued work on the parabolic trough plant at Hassi-Rímel. The Industrial Engineering and Construction business unit, Abengoa Solar and Neal (New Energy Algerie) are all involved in this particular project.

The project includes the design, construction and operation of a 150 MW hybrid combined cycle plant, 20 MW of which will be provided by a solar field of over 180,000 m² of reflective area.

Development of Solar Power Plants

Abengoa Solar has hundreds of MW under development around the world.

Development in Spain

Over recent years, Abengoa Solar has channeled much of its time and resources into developing solar power plants in Spain. As a result, it currently has a portfolio of roughly 1,000 MW in different stages of development, 350 MW of which have already been filed with the "power register" (registro de potencia) of the Spanish Ministry of Industry, Tourism and Trade, therefore, have all the licenses required to commence construction.

Ciudad Real Platform (100 MW)

Abengoa Solar has two 50 MW concentrating solar power plants in the province of Ciudad Real (Castilla-La Mancha), both equipped with parabolic trough technology. Both projects are duly included in the Spanish power registry and Abengoa Solar plans to begin construction in 2010.

When they are brought into service, each plant will be able to supply approximately 26,000 households, while curbing yearly CO₂ emissions by 31,000 t.

Córdoba Platform (100 MW)

The Córdoba Platform includes two 50 MW concentrating solar power plants utilizing parabolic trough technology. Abengoa Solar hopes to begin construction during 2010, as both are already filed with the Spanish power registry.

Extremadura Platform (150 MW) + 50 MW

Four concentrating solar power plants are under development in the province of Cáceres and have already been recorded with the Spanish power registry, allowing the company to begin construction work in 2010 and 2011. We are beginning the construction of the first plant.

The other 650 MW under development are at different stages of completion, and encompass both concentrating solar power and photovoltaic technologies. Most of these remaining plants will be built following the introduction of the new regulatory framework in 2012.

Development in the United States

Abengoa Solar has an 80-person team working out of the four company offices located in the United States, where the company has been developing projects since 2006.

Solana - 250 MW

Concentrating solar power plant under development in Arizona, with parabolic trough technology, 280 MW (gross) and 250 MW (net) of capacity and thermal storage.

Abengoa Solar signed a power purchase agreement in 2008 with Arizona Public Service (APS), Arizona's largest electric utility.

When it begins operation, Solana will be capable of supplying energy to 70,000 households while preventing the emission of roughly 400,000 t of CO₂.



Mojave Solar - 250 MW

250 MW (net) concentrating solar power plant equipped with parabolic trough technology under development in California.

Abengoa Solar signed a power purchase agreement in 2009 with the electric utility, Pacific Gas & Electric Company (PG&E).

When it is brought on line, Mojave Solar will be able to supply energy to 90,000 households, while cutting yearly greenhouse gas emissions (GHG) by 431,000 t.



Industrial Projects

Abengoa Solar develops, designs and constructs small and large-scale customized installations.



Industrial solar thermal installations employ parabolic trough technology, which not only produces electricity but is also ideal for generating thermal energy (heat and steam) for industrial processes. The main advantage that this technology offers is that it can be adapted to different needs, while also helping to cut CO₂ emissions, given that industry is one of the primary sources of these gases.

Following are two industrial solar thermal installation projects performed by Abengoa Solar during 2009:

- The industrial solar thermal installation integrated into a coal power plant owned by Xcel Energy (Colorado). The project, which will begin construction in 2010 at the Cameo coal power plant (Colorado), will demonstrate that the heat produced by a solar power installation can actually enhance the efficiency of a conventional power plant while reducing its CO₂ emissions.
- The industrial solar thermal installation under development for the U.S. (DOE) in Arizona. The purpose of the facility, which was brought into operation in January 2009, is to produce additional heat to replace coal-generated heat. This is then used to treat the water contaminated by an old uranium processing plant.

International Development

Outside Spain and the United States, Abengoa Solar has teams able to offer the best possible energy solution to every need in those markets it considers attractive due to their high levels of solar radiation and regulatory control. Abengoa Solar currently has a number of projects under development in various countries and regions, including North Africa, the Middle East, India, China and Australia.



Development of New Technologies

For Abengoa Solar, developing and making improvements to new solar technologies is a priority. The company's overriding objective is to offer technologies capable of generating clean energy at prices that prove competitive with fossil fuels, after considering the cost of their emissions. To make this a reality, Abengoa Solar has rolled out an ambitious research and development plan and channels its activities through a team of over 80 people belonging to the company Abengoa Solar New Technologies, with research centers in Seville, Madrid and Denver (Colorado). The Abengoa Solar team is involved in the two key technologies: high-temperature concentrating solar power and photovoltaic.

During 2009, Abengoa Solar continued to grow and hone its abilities in the main areas of research, while forging collaborations and alliances with leading universities and institutes worldwide (Ciemat, Centro de Investigaciones Energéticas, Medio Ambientales y Tecnológicas, in Spain, NREL, National Renewable Energy Laboratory, in the U.S., DLR, Deutschland für Luft-und Raumfahrt and Franhoufer in Germany and Cnrs Centre national de la recherche scientifique, in France) and constructing pilot facilities to test new technologies under real operating conditions. During 2009, Abengoa Solar conducted various R&D projects with the backing of the U.S. Department of Energy, while also continuing work on a project within the seventh framework program of the European Union and on the ConSOLI+Da project against the backdrop of the Cenit (Consortios Estratégicos Nacionales en Investigación Técnica) programs in Spain. These projects will allow Abengoa Solar to enhance its knowledge of new technologies and make improvements to existing technology.

Abengoa Solar's approach to R&D involves four stages:

- Stage 1, the project is defined and preliminary research work conducted.
- Stage 2, the solution is analyzed and modeled from a theoretical standpoint.
- Stage 3, a prototype or demonstration plant is constructed.
- Stage 4, the demonstration system is analyzed and validated before moving on to the commercial stage.

Our teams of researchers focus on five priorities:

- Improving existing parabolic trough technology by developing new collectors, using new fluids and improving site operations.
- Developing new solar power tower technologies.
- Developing new energy storage technologies.
- Developing and testing concentrating photovoltaic technologies.
- Developing certain thin-film photovoltaic technologies.



Abengoa Solar currently has various pilot plants in operation at the Solúcar Platform:

- Parabolic trough pilot plant in service since 2007, which was used in 2009 to test various improvements to the control and operating systems of the commercial plants. The facility has enabled the company to optimize the technology being used at the Solnova 1 and 3 plants and to be used in future plants, and to pinpoint possible improvements to the optics and components, including structures, supports, mirrors, ball joints, flexible joints and tubing. The company has also been designing, testing and validating new parabolic trough collectors, including the ASTRØ collector in Spain, allowing for significant reductions in costs and manufacture time, simplifying transportation, and facilitating and reducing on-site assembly costs. Meanwhile, in the United States, Abengoa Solar has been developing new collector designs in collaboration with National Renewable Energy Laboratory (NREL).

- Parabolic trough plant that uses water instead of oil as its fluid. Construction was completed and the plant was started up and tested during 2009. This new technology enable the company to cut construction costs and increase system efficiency in comparison to the oil-based technology in current use.
- Second generation superheated steam power tower. Construction was completed toward the beginning of 2009 and testing has continued since then on the initial receiver and superheated steam. The power tower, which benefits from the knowledge acquired from PS10 and PS20, will enable Abengoa Solar to test its second generation of power towers, which generate superheated steam and are set to become significantly more efficient when the technology becomes commercial.
- Demonstration Stirling dish facility, with which Abengoa Solar expects to acquire direct knowledge in designing, constructing and operating this kind of technology with a view to assessing its future potential. The Stirling dishes have the advantage of their modularity and the fact that they can be used for distributed generation, as no turbine is required. The downside is that their associated costs are currently much higher than those of other technologies.
- Thermal storage plant with molten salt technology in operation, underwent testing in 2009 to test various technological improvements. Storage is key to increasing the availability of concentrating solar power. High-temperature concentrating solar power enjoys a considerable advantage over other renewables in that it is manageable, either via hybridization with other energy sources or through the use of storage systems.

In the field of photovoltaics, Abengoa Solar also has a number of installations incorporating new technologies at the Solúcar Platform:

- High concentration photovoltaic demonstration installations. Photovoltaic technology is a highly efficient means of meeting certain generation needs. It is therefore crucial for Abengoa Solar to develop efficient photovoltaic technologies, and for this reason the company is continuing work on numerous concentration systems.
- Photovoltaic laboratory, where Abengoa Solar measures, characterizes and analyzes modules of all the different technologies under real operating conditions with and without solar tracking. The purpose of this project is to create an experimental tool with which to analyze the energy production costs of different technologies and configurations, prevent and troubleshoot problems over the life of the photovoltaic systems and pinpoint the optimum technology and configuration for different types of installations. The photovoltaic laboratory has the facilities and equipment required to measure and characterize photovoltaic devices and systems.

2009 proved to be a critical year in which Abengoa Solar underscored its commitment to R&D in solar energy by bolstering its human teams, capacities, collaborations and alliances. 2010 will also be a key year in which the company intends to make further progress in its new priorities to guarantee a future of clean and efficient solar energy.

Supply of Key Components

Ensuring a reliable supply of high-quality key components is essential for Abengoa Solar. This often takes the form of framework supply agreements through which the company is able to showcase its sharp purchasing skills, while at other times the company actually manufactures the key components itself, either at its own facilities or with partners.

For power tower plants, Abengoa Solar designs its own heliostats and manufactures them at proprietary or third-party facilities. As for the receivers, it collaborates with specialist companies to manufacture the designs required for each of its plants.

For parabolic trough solar power plants, Abengoa Solar designs its collectors, which are manufactured by its subsidiary companies. They are then assembled at the assembly facilities located on site at the plants.

The parabolic trough mirrors are manufactured by the company Rioglass Solar, with which Abengoa Solar signed a commercial agreement for the supply of this key component, the quality of which far outstrips that of other mirrors available on the market. This has effectively led to lower assembly costs and fewer breakages on site.

On a final note, in 2009, Abengoa Solar was able to secure a large part of its future receiver tubing needs for its projects in Spain.



Activity Report 2009
ABENGOA

7.2 Bioenergy

The Bioenergy business unit is spearheaded by the company Abengoa Bioenergy, which produces and develops biofuels for transportation (including bioethanol and biodiesel) that employ biomass (cereal, cellulosic biomass, and oleaginous seeds) as raw material. Biofuels are used for ETBE (a gasoline additive) production, or for direct blending with gasoline or diesel. Being renewable energy sources, biofuels help to lower CO₂ emissions and enhance the security and diversification of the energy supply, while reducing dependency on fossil fuels in the transportation sector, and helping to reach compliance with the Kyoto Protocol.

www.abengoabioenergy.com

International Presence



Key figures 2009

Revenue (M€)	1,010
Gross Cash Flows (M€)	188
Installed capacity (Mgal)	496
Investment in R&D (M€)	23.8
Average number of employees	4,224
Hours of training	200,533

Our Business

The price of bioethanol fell away over the first half of 2009 due to lower demand for gasoline and slumping crude oil prices. Yet prices rallied over the second half of the year on the back of strong demand for bioethanol, coupled with reduced imports from third party countries, with the increase amounting to as much as 25 % at year-end in comparison to the market prices seen at the start of the period.

Moreover, gasoline, crude and sugar, the commodities associated with bioethanol, all experienced sharp growth, with forecasts for next year far outstripping those for 2009.

In Brazil, the ethanol market is largely driven by local supply and demand, with a small volume destined for exports and no imports whatsoever. As a result, demand is greatly influenced by the demand of ethanol-powered vehicles for hydrated ethanol. Ethanol consumption by this type of vehicles along with those that use gasoline blended with anhydrous ethanol exceeds domestic production. This is directly driving up prices to new highs. Forecasts for this market are also promising, since estimates show that sales of flex-fuel cars will continue to climb at existing rates over the years to come. To cover this demand, Brazil is facing the major challenge of having to commission 25 production plants in the short to mid-term.

The economic crisis of 2008 dragged down crude oil prices and led to an exodus of speculative investment from the commodities markets and a drop in commodities prices towards the end of 2008. Following the improvements in economic projections and a fresh injection of capital into the commodities exchanges and markets at the start of 2009, grain and crude oil prices started to rally to eventually hit the new highs experienced in the middle of 2009, at which time the arrival on the market of the northern hemisphere's excellent 2009 grain harvests, coupled with the publication of less than favorable macroeconomic data, prompted price adjustments of grain futures. Over the final quarter, prices made back some ground as signs of global economic recovery were finally confirmed.

The DGS market (distiller's grains and solubles) also reported gains over the first half of the year, although by the third quarter, similar factors to those that affected the price of commodities also brought DGS prices slightly down.

Over 2009, Abengoa Bioenergy remained one of the leading biofuel producers in Europe (270 Mgal of annual production capacity), the United States (196 Mgal) and Brazil (30 Mgal). The company will also have a further 316 Mgal in the near future (currently in final construction), thereby bringing its total installed capacity to 812 Mgal from the first quarter of 2010 onward. Abengoa Bioenergy is therefore ideally suited to:

- To contribute to the sustainable development of the vehicle fuels market and the bio-based chemicals products market by utilizing renewable energy (biofuels) and environmentally friendly technologies that reduce carbon emissions.
- To develop innovative technological solutions through continuous investment in research and development, resulting in more efficient production processes and distinctive and high-value feed coproducts.
- To create value for our shareholders.
- To contribute to the professional and personal development of our employees by providing continuous training, and by establishing and monitoring individualized goals and development plans.

With this in mind, Abengoa Bioenergy works on a daily basis to attain the following goals:

- To be recognized as a world-wide leader in the production and commercialization of bioethanol from bio-renewable resources.
- To be recognized as a world leader in research and development, known for technological innovation in the conversion of biomass to bioethanol.
- To provide a superior work environment in order to attract the best possible employees and to maintain excellence in operations.
- To attract the interest and respect of the financial community by means of sustained growth and technological innovation.

In order to reach these lofty targets while honoring the principles of integrity and ethics, Abengoa Bioenergy bases its actions on the following core values:

- Honesty in relationships with clients, shareholders, associates and co-workers.
- Respect for all people under all circumstances.
- Focus on teamwork by utilizing corporate tools that favor the sharing of information.
- Promote flexibility and mental attitude necessary to adapt to continuous change.
- Protection, defense and improvement of the environment.

The company's activities can be grouped into five main areas:

- Procurement of raw materials.
- Bioethanol origination.
- Production.
- Marketing of bioethanol, DGS and sugar.
- New technologies.

Abengoa Bioenergy, with operations in seven countries on three different continents, currently owns ten plants for producing bioethanol and other co-products, along with a biodiesel production plant, distributed as follows:

- Europe: Spain and France.
- North America: United States.
- Brazil.

These plants are able to meet the demands of global bioethanol markets from practically any corner of the world. Most sales stem from current producer countries, as well as Sweden.

Abengoa Bioenergy also has four bioethanol production plant under construction or ramp-up phase projects underway in the United States and the Netherlands, which, due to their location, will enable the company to increase its presence in all markets, wherever they may be.

Abengoa Bioenergy's winning combination of international marketing capacities with cellulosic bioethanol technology, coupled with agricultural, productive and local marketing capacities, gives rise to synergies that will enable the company to post significant growth in the global ethanol market while obtaining the technology to cut the cost per liter of ethanol.

The integrated management systems have highlighted the need to implement mechanisms to gauge customer satisfaction and analyze their needs and expectations. The company therefore conducts periodic satisfaction surveys, which are managed by the plants' quality assurance departments. The analysis ultimately results in specific objectives and action plans to meet expectations and heighten satisfaction.

Abengoa Bioenergy attaches great importance to communication with customers and their privacy. The company considers service excellence to be of paramount importance and has therefore set up direct communication channels between the technical and commercial departments and their customers, the aim being to forge close relations with customers and receive their comments and feedback.

Abengoa Bioenergy adheres to Abengoa criteria and systems when it comes to customer privacy. Abengoa ensures the validity, integrity and security of all the information it handles, particularly the personal data of its customers. In order to guarantee the security measures relating to communications and information systems, there is a security policy statement that extends to all Abengoa companies and organizations. This statement provides information on the implementation of an Information Security Management System as a means of attaining the security objectives, with security encompassing confidentiality, integrity and availability.

One of the most important assets underpinning the reputation and growth of Abengoa Bioenergy is its employees, the cornerstones of the company's dominance. For this reason, the company channels much time and resources into ensuring their professional and personal development. To achieve this, it has implemented ambitious training plans in concordance with the current competency plan.



Furthermore, Abengoa Bioenergy integrates into its working practices, and likewise ensures that the conduct of its employees complies with the United Nations Universal Declaration of Human Rights and associated protocols and with other international treaties and agreements on social rights.

Abengoa Bioenergy strives to stay one step ahead of adverse situations and to anticipate potential risks stemming from the prevailing economic climate and those inherent in the transportation biofuels sector. The Bioenergy business unit ensures that all its business is subject to strict control policies and risk management processes so as to minimize the impact of such risks on company business, including among others:

- **Market risks:** Those arising from fluctuations in the prices of the commodities, i.e. cereal grain, which is directly pegged to the price of crude oil. The company anticipates this risk by managing it sufficiently in advance to guard against possible price variations. The market price of biofuels and co-products depends on a number of variables, such as the price of crude, public awareness and supporting legislation. Geographic diversification in the markets where the company operates ensures demand and the value of the products.
- **Legislative risks:** The future of the company's business largely depends on the legislation in force in the areas where it operates and on whether the relevant authorities favor and approve laws that foster biofuels and the infrastructures needed to make them more available to society, thereby helping to combat climate change and environmental decay. Abengoa Bioenergy is constantly striving to raise awareness of the sustainability and environmental returns (the resulting reduction in greenhouse gas emissions) of biofuels.
- **Financial risks:** The gloomy global economic climate has made it difficult to inject any kind of financial security into the markets from which to launch new projects or execute current projects effectively. Corporate procedures ensure that these risks are mitigated to the fullest extent possible.
- **Operational risks:** As with all industrial activity, there are risks inherent in productive processes that can affect company assets. By following its established procedures, Abengoa Bioenergy has hedged itself against practically all of these risks and similarly has contingency and mitigation plans in place to tackle them should they arise.

Abengoa Bioenergy is fully aware of the important effect that all stakeholders have on its business and growth. For this reason, the company not only offers them continuous, transparent and accurate information on its business activities, but also attempts to encourage dialogue with all of them through different channels of communication tailored to their unique characteristics, while also developing new channels as a response to what must be a dynamic and enriching process for all parties.

Abengoa Bioenergy's main stakeholders sit on the Board of Directors of the business unit, or are otherwise its employees, customers, suppliers, shareholders or the community in general. All their expectations are mirrored in the course of business and in the company's strategic plan, which addresses the trends and challenges of the sector and reflects the company's path towards sustainable development and the fight against climate change. The plan defines the risks and opportunities for each of Abengoa Bioenergy's products and services in all its territories and markets, as well as the expected results. It explores the impact that sustainability can have on the company, based on the information provided by market reports or internal reports.

The economic crisis will continue to linger over 2010, but the recent political changes taken by the world's main economic powers and their willingness to embrace renewable

energies have heralded a change of approach and vision, a change geared towards the sustainability of the energy sectors and the fight against climate change. Abengoa Bioenergy will continue to conduct all its business by following the best practices in terms of cost control and process efficiency, while making sustainability the absolute priority. The company remains optimistic and sees the future as a place full of challenges and opportunities for further growth.

Over 2010, the company will focus on consolidating productive and marketing activities, while continuing to develop production technologies for second generation biofuels (lignocellulosic ethanol). Once the three new production plants currently nearing completion are brought into operation (scheduled for the first quarter of 2010), Abengoa Bioenergy will become one of the world's leading producers, with operations in the most important production and consumption markets worldwide.

Sustainability has underpinned all the activities of Abengoa Bioenergy and one of the company's key priorities is to implement the necessary processes and make the necessary continuous improvements to increase the social and environmental sustainability of all its products and obtain official recognition of this milestone.

2009 in Review

The Bioenergy business unit is currently reporting excellent levels of business, given its consolidation as one of the world's leading bioethanol producers and marketers. Production in existing plants is matching our most optimistic expectations and is being spurred on by an increase in Trading business, resulting in improved control and management in accordance with the company's strategy.

There is now a clear need for a change of practices and policies and various governments have already acted accordingly. Business performance depends largely on favorable legislation that facilitates the development of new technologies while enabling biofuel culture to expand and combat the obvious signs of climate change. 2009 turned out to be a very fruitful year in this respect.

In Europe, the EU approved the Renewable Energies Directive in December 2008, compelling member states to deliver 10 % of renewable energy in the transport sector by 2020. This directive is extremely important and finally provides official confirmation that biofuels are the most effective and economically viable solution for attaining this target. Moreover, the Fuel Quality Directive (2009/30/EC) dictates that oil companies must ensure a 10 % reduction in greenhouse gas emissions from fuels by 2020, while also permitting bioethanol blends in gasoline of up to 10 % in volume. This second directive guarantees the viability of bioethanol as a real and necessary solution for meeting the fuel quality target.

The United States has also witnessed important political changes. Following the 2008 elections, legislative control passed to the Democratic Party in both the Senate and the Congress. The democrats won various key positions in both assemblies and now enjoy their strongest majority since the mid-70s. This has brought about a change in legislative priorities and ushers in a more liberal slant to law-making, including the policies on renewable energies and climate change. Hundreds of millions of dollars have been channeled into subsidies and loans for fostering renewable energies, technologies for producing bioethanol from biomass and new projects to increase the use of bioethanol in the transportation sector.

Surrounded by this wealth of opportunities, Abengoa Bioenergy has successfully overcome the global economic crisis that started in 2008 and will be able to implement

its expansion plans during 2010 by completing the bioethanol and biodiesel projects initiated in previous years in Spain, the Netherlands, the United States and Brazil. In a similar vein, the company has initiated new cogeneration projects in Brazil, which will increase the overall performance of the plants it has in the country.

Over its ten years of existence, the Abengoa Bioenergy Business Unit has advanced from an initial installed production capacity of 40 Mgal to over 800 Mgal in 2010.

For Abengoa Bioenergy, 2009 was a year of consolidation and growth in the United States, Europe and Brazil. In spite of the inevitable constraints imposed by the global crisis, which has been felt in all aspects of group business, 2009 was a year brimming with success stories:

- Start of operations at the biodiesel plant in San Roque, Cádiz (Spain), with a production capacity of 60 Mgal per year.
- Start-up of the Babilafuente biomass plant in Salamanca, with a production capacity of 1.3 Mgal of second generation bioethanol per year.
- Promotion and expansion of the network of biofuel service stations in Spain and Germany, with over 20 directly supplied service points in each country.
- Opening of new corporate offices in São Paulo, Brazil.
- Incorporation of Abengoa Bioenergia Trading Brasil, specifically entrusted with the task of managing the commercialization of the bioethanol and sugar produced in the country.
- Implementation of the Competitiveness Plan within the Brazilian companies.
- Acquisition of the remaining 50 % in the company Biocarburantes de Castilla y León, previously half-owned by the Ebro-Puleva group.
- Staging of the VIII World Biofuels Conference.
- Celebrations to mark the tenth anniversary of the Ecocarburantes Españoles plant in Cartagena.
- Official inauguration of the Abengoa Bioenergy France plant.
- Construction of the Rotterdam plant in the Netherlands, capable of producing 127 Mgal of bioethanol per year.
- Construction of the Madison plant in Illinois, with an annual bioethanol production capacity of 88 Mgal.
- Construction of the Mount Vernon plant in Indiana, with an annual bioethanol production capacity of 88 Mgal.
- Beginning of the execution of the Hugoton project, in Kansas, with an annual cellulosic bioethanol production capacity of 13 Mgal.
- Construction of cogeneration facilities at the company's 70 MW bioethanol plants in Brazil.
- Abengoa Bioenergy Corporation has been awarded the Greater St. Louis Top 50 Award for the third year in a row.
- Abengoa Bioenergy Corporation receives the Top Bioenergy Company Award.
- Abengoa Bioenergy of Nebraska receives the Agriculture Award.
- Abengoa Bioenergy Operations receives the Chemical Safety Excellence Award.
- Abengoa Bioenergia Brasil receives the MasterCana Social Award.
- Abengoa Bioenergy Corporation secures the OHSAS 18001:2007 standard.
- Abengoa Bioenergy France obtains the ISO 9001, ISO 14001 and OHSAS 18001 quality standards.



Our Activities

Abengoa Bioenergy remains a benchmark company in the development of new technologies for the production of biofuels and the sustainability of raw materials, channeling a tremendous amount of resources into research to this end. Its Trading division means that the company is also a service provider capable of offering global solutions, with an impressive capacity for marketing and managing commodities, reliably backed by its global production and raw material procurement capacities and highly efficient operations – cornerstones that afford reliability and critical mass, which are key to optimum business development.

Abengoa Bioenergy contributes to sustainable development by marketing fuel compounds obtained from renewable sources (biofuels) through the use of environmentally-friendly technologies that help to bring about a net reduction in polluting emissions, for use in public transportation and private vehicles.

Abengoa Bioenergy develops innovative technological solutions through continuous R&D investment. These solutions are put into practice in production processes, allowing the company to enjoy the same production costs as for conventional fossil fuels, while affording our DGS co-product a competitive edge.

Abengoa Bioenergy upholds its commitment to shareholders of creating value, and likewise contributes to the personal and professional development of its employees through continuous training and by implementing and following up on personalized plans.

Abengoa Bioenergy creates new opportunities for sustainable rural development as it encourages energy crops and the creation of farming industries, thus helping to maintain employment and income levels in rural areas.

Bioethanol and biodiesel are renewable and clean energy sources which, for some time now, have proved to be a reliable and effective replacement for gasoline and diesel fuel in vehicle engines, while helping to diversify and improve the security of the energy supply. Their use, either in a pure state or blended with fossil fuels, reduces CO₂ emissions, slows down climate change, and reduces the emission of polluting agents into the environment.

The company's activities can be grouped into five major areas:

- Raw material procurement.
- Bioethanol origination.
- Production.
- Bioethanol, DGS and sugar trading.
- New technologies.

Raw Material Procurement

One of the driving forces behind the positive business results reported by the Bioenergy Business Unit is the procurement of raw materials for producing the biofuels.

The most important grain cereals for the production of bioethanol at Abengoa Bioenergy's plants are currently wheat, barley, corn and sorghum, not only because of their alcohol yield, but also their significant protein yield (DGS), highly valued in the livestock feed sector. As for biodiesel production, the most frequently used oils are soybean and palm.

Since it began operations, Abengoa Bioenergy has managed to build up a wealth of experience in both the supply and logistics of commodities. It has displayed great prowess and versatility on the international stage and when purchasing within the domestic market, and has also secured direct supply agreements with farmers, thus ensuring that the group's plants have the volume of materials they require. Similarly, the company has in-depth knowledge of the applicable regulations for operating in the European Union and the United States.

Abengoa Bioenergia Brasil grows sugarcane while preserving sustainable rural development, biodiversity, and regional economic growth. Its subsidiary company, Abengoa Bioenergia Agrícola, ensures that the company's production plants are properly supplied by signing contracts with landowners, carrying out the necessary tasks for combined use of the land, and with farmers, by providing the necessary resources and advice in order start production.

Bioethanol Origination

In addition to Abengoa Bioenergy's bioethanol production capacity, which is marketed by the trading companies, the latter also carry out bioethanol origination from third-party producers to add this product to the pool, thus allowing for greater flexibility and competitiveness in terms of the customer portfolio.

Production

Bioethanol is produced in plants across Europe, the United States and Brazil. Bioethanol is obtained from cereal grains or sugarcane through chemical processes and treatment, to produce either ETBE (a component of all types of gasoline), or for direct blending with gasoline to obtain biofuels, either e85 (a mixture of 15 % gasoline and 85 % bioethanol) or e10 (90 % gasoline and 10 % bioethanol). The co-product DGS is also obtained

from the bioethanol production process. This high-protein compound results from the extraction of starch from cereal grains and is ideal for producing livestock feed.

The production of bioethanol from sugarcane also returns sugar as a by-product. This sugar is processed to make it suitable for human consumption and for further use in producing other food products.

Bioethanol, DGS and Sugar Trading

Abengoa Bioenergy has operations in key locations for worldwide bioethanol trading and export: In Rotterdam (the Netherlands), with immediate access to Europoort; in St. Louis, Missouri (U.S.), in the heart of the country's main cereal production and cattle breeding region; and in São Paulo (Brazil), the birthplace of bioethanol-from-sugarcane production. Through all these facilities, Abengoa Bioenergy is able to meet the bioethanol, DGS and sugar demand of the European, American, and Brazilian markets.

Market fluctuations, political conditions throughout the different territories and other factors affecting company activities, in terms of acquiring raw materials and producing the products to be commercialized, are all carefully analyzed from a global standpoint in order to afford us a better vision of the global markets. Meticulous analysis and risk management improve the performance of corporate processes, always within the scope of sustainable development, and respect for the environment, human rights and the community remains one of the company's guiding principles. Abengoa Bioenergy is therefore able to offer its customers the option of selecting the solution best tailored to their needs by providing the necessary reliability and flexibility throughout its bioethanol supply process.

New Technologies

Abengoa Bioenergy fully intends to become a leading figure within the bioenergy sector and a worldwide producer of biofuels. Its mission is to develop innovative technological processes for producing bioethanol and associated co-products. To this end, it works to develop production and processing technologies, with unbeatable and highly efficient operational practices.

The human team of engineers and scientists, who coordinate their work with other R&D centers, universities and industrial partners, develops innovative processes in order to increase the performance of grain-based bioethanol, develop new co-products, improve the quality of existing products and develop lignocellulosic biomass technology for bioethanol production. As part of its business strategy, it creates and registers intellectual property to provide technology to third parties under management agreements.

In 2008, the U.S. Department of Energy granted the company a government subsidy to develop, construct and operate North America's first commercial bioethanol from cellulosic biomass plant in the state of Kansas, thereby illustrating the trust the U.S. government places in the company on account of its excellent business performance and unflinching commitment to quality and sustainable development.

Main Projects and Achievements in each Geographical Area

Europe

Abengoa Bioenergy is the European leader in the production of bioethanol for use as a biofuel, and currently operates three plants in Spain: Ecocarburantes Españoles, in Cartagena (Murcia); Bioetanol Galicia, in Teixeira (A Coruña); and

Biocarburantes Castilla y León, in Babilafuente (Salamanca), with a total installed capacity of 40, 52 and 53 Mgal a year, respectively.

In addition, Abengoa Bioenergy, through Abengoa Bioenergy France, has now consolidated operations in its fourth plant in Europe, with a production capacity of 66 Mgal a year and which utilizes corn and low-quality vegetable alcohols as raw materials.

In September, an agreement was closed to acquire 50 % of the shares in the company Biocarburantes de Castilla y León, S.A. from Ebro Puleva. The full integration of this plant, along with the other plants in Europe, will generate considerable logistic and operational synergies and will position Abengoa Bioenergy as Europe's leading producer, with direct control over an installed production capacity of approximately 210 Mgal a year in Europe alone.

Construction work was completed on a second generation bioethanol demonstration plant, with an annual production capacity of 1.3 Mgal of bioethanol from biomass. The plant was brought into operation in September of 2009 and is the world's first plant to utilize this technology on such a scale. The facility will be used to improve the design of the commercial plants to be constructed in years to come, while assessing operational costs, identifying bottlenecks and streamlining operations.

The biomass plant is located within Biocarburantes de Castilla y León's plant in the municipality of Babilafuente, which produces 53 Mgal of bioethanol a year from grain, effectively meaning that both facilities share services and process chains. The company believes that the quickest way of developing technology for producing second generation biofuels is through "hybrid plants", which combine first and second generation installations to cut the cost of implementing new technologies and harness the advantages offered by economies of scale.

Abengoa Bioenergía San Roque manages the biodiesel production plant of the same name commissioned in February, which supplied its first batch of biodiesel in March 2009. It is designed to operate with different types of vegetable oil - soybean, rapeseed and palm - and does not therefore depend on one sole supply source. At start-up, the plant operated with blends of soybean oil, crude palm oil and refined palm oil, reaching up to 80 % of palmitic acid in the blend. The plant will produce 200,000 t of biodiesel, which will meet the quality parameters prescribed by European biodiesel standard EN 14214. It will also produce 20,000 t of glycerin with 85 % purity. With this new plant now in operation, Abengoa Bioenergy has the necessary biodiesel market knowledge and production technologies, thus confirming its leading role in forging a global biofuel market for the transportation industry.

Construction on a fifth plant in Rotterdam (the Netherlands), which started in 2008 and continued during 2009, is now in its final stage and the plant is expected to begin production in early 2010. It is set to be Europe's largest bioethanol plant and one of the biggest in the world, with a projected bioethanol production capacity of 127 Mgal per year.

Thanks to its marketing initiatives launched across Europe in 2009, coupled with its experience in the sector, the company has become one of Europe's leading bioethanol managers and suppliers.

In addition to marketing bioethanol, Abengoa Bioenergy worked over 2009 to develop a bioethanol supply network in Europe, primarily in Spain and Germany, with over 20 directly supplied points in each country. This network is key to expanding the reach of bioethanol, and although the project is still in its early stages, it promises to

become an undisputed reality within the next few years, capable of supplying biofuels to consumers across Europe.

May witnessed the World Biofuels 2009 8th annual conference in Seville, which, for three days, brought together over 120 representatives of biofuel producing companies and associations, government and official representatives of the European Union and the United States, oil operators, car manufacturers, investment banks, producers of commodities and consultants. The conference tackled, among other subjects, the growth of over 30 % in worldwide demand for biofuels, the new regulations intended to champion biofuels and the need to comply with strict sustainability requirements. The event also included a financial analysis of the prevailing situation affecting the sector and the projected availability of financing for operations and investments within the biofuel industry.

In September, the company held the official opening ceremony for Abengoa Bioenergy France's plant in Lacq. The event, which was attended by leading figures from Abengoa Bioenergy and from the Spanish and French governments, stressed the excellent business opportunities presented by the region and also underscored the positive impact the company's business has already had on the area.

To mark the tenth anniversary of the Ecocarburantes Españoles plant in Cartagena (1999-2009), a ceremony was staged in November to celebrate the milestone. An open doors working day was organized for company workers and their families, along with a range of other activities.

Over 2009, Abengoa Bioenergy France was awarded the corresponding ISO 9001, ISO 14001 and OHSAS 18001 standards of quality following implementation of its Integrated Management System (IMS). The company has therefore reiterated its commitment to quality, the environment and occupational risk prevention. The existence of these certificates not only heightens customer loyalty, but also the loyalty and trust of its employees, thereby improving the working environment and speeding up the flow of information and decision-making throughout all levels of the organization, part of the company's move towards continuous and sustainable improvement of its processes.

Ecocarburantes Españoles

- Owned by Abengoa Bioenergy (95 %) and IDAE (5 %).
- Installed capacity of 40 Mgal of bioethanol per year.
- Annual DGS production capacity of 110,000 t.
- Electrical power production capacity of 135,000 MWh per year.
- Annual grain consumption of 300,000 t.



The company Ecocarburantes Españoles, S.A. owns a bioethanol production plant in the Valle de Escombreras in Cartagena, Spain. Abengoa Bioenergía, S.A. owns 95 % of the company, while the Spanish Institute for Energy Diversification and Savings (Instituto para la Diversificación y Ahorro de la Energía, or IDAE) owns 5 %.

Part of the CO₂ produced during the grain-to-ethanol transformation process is sold to installations close to the plant, thereby eliminating the need for these companies to produce their own additional CO₂ and, therefore, taking even greater advantage of the bioethanol production process and reducing carbon dioxide emissions into the atmosphere. Similarly, electricity is generated during the production process, which provides power for the entire plant, with the surplus being returned to the national power grid.

Bioetanol Galicia

- Owned by Abengoa Bioenergy (90 %) and Xes Galicia (10 %).
- Installed capacity of 52 Mgal of bioethanol per year.
- Annual DGS production capacity of 120,000 t.
- Electrical power production capacity of 165,000 MWh per year.
- Annual grain consumption of 340,000 t.



The plant, which is owned by Bioetanol Galicia, S.A., is currently in operation in Teixeira (A Coruña) and boasts a yearly bioethanol production capacity of 52 Mgal. The company is 90 % owned by Abengoa Bioenergy and 10 % by Xes Galicia.

The surplus electricity generated during bioethanol production, which greatly outstrips actual plant consumption, is returned to the national power grid and accounts for part of the profits from the process.

Biocarburantes de Castilla y León

- 100 % owned by Abengoa Bioenergy.
- Installed capacity of 53 Mgal of bioethanol per year.
- Annual DGS production capacity of 120,000 t.
- Electrical power production capacity of 139,000 MWh per year.
- Annual grain consumption of 585,000 t.



The plant, owned by the company Biocarburantes de Castilla y León, S. A., is located in Babilafuente, Salamanca, and has a yearly production capacity of 53 Mgal. In September 2009, Abengoa Bioenergy acquired the remaining 50 % of the company Biocarburantes de Castilla y León, previously owned by Ebro Puleva.

As with the other Spanish plants and in accordance with applicable law, plant-generated electricity that is not employed in bioethanol production is returned to the power grid.

Abengoa Bioenergy France

- Owned by Abengoa Bioenergy (69 %) and Oceol (31 %).
- Final installed capacity of 66 Mgal of bioethanol per year.
- Annual DGS production of approximately 145,000 t.
- Estimated cereal (corn) consumption of roughly 500,000 t per year.
- Estimated annual consumption of wine and sundry alcohol of roughly 13 Mgal.



Abengoa Bioenergy France owns the fourth Abengoa Bioenergy plant in Europe (the first outside Spain) for bioethanol production. It is 69 % owned by Abengoa Bioenergy and 31 % by Oceol, an association of the region's main agricultural cooperatives and industries.

This plant employs corn and low-quality vegetable alcohols as raw materials and is located at the Petrochemical Platform of Lacq, Pyrénées-Atlantiques (France). Projected total annual production capacity amounts to 64 Mgal of bioethanol, broken down into 55 Mgal using corn as the raw material, and 13 Mgal produced from the distillation of low-quality vegetable alcohols.

Abengoa Bioenergy Netherlands

- 100 % owned by Abengoa Bioenergy.
- Projected annual bioethanol production capacity of 127 Mgal.
- Projected annual DGS production capacity of 380,000 t.
- Annual grain consumption of 1.2 Mt.



Abengoa Bioenergy Netherlands first started construction on the plant, located in Europoort, Rotterdam, in September 2007 and the company plans to bring the 127 Mgal plant into service during the first quarter of 2010. The plant will generate 75 direct jobs.

Abengoa Bioenergía San Roque

- 100 % owned by Abengoa Bioenergy.
- Annual biodiesel production capacity of 59 Mgal.
- Crude glycerin production capacity of 22,000 t per year.
- Estimated vegetable oil consumption of 205,000 t per year.



The Abengoa Bioenergía San Roque plant is located on a site annexed to the Gibraltar Refinery on the Palmones de San Roque industrial estate (Cádiz, Spain). It was started up in February 2009 and started supplying the refinery in March.

It has been designed to operate with different kinds of vegetable oil - soybean, rapeseed and palm - and does not therefore depend on just one supply source. The plant has a capability of 200,000 t of biodiesel per year, which is utilized in 5 % blends with diesel at the Cepsa refinery. The plant also has a capacity of 20,000 t yearly of glycerin with 85 % purity.

The plant directly employs 45 highly qualified workers.

Biomass Plant

- 100 % owned by Abengoa Bioenergy.
- Bioethanol production capacity of 1.3 Mgal per year.



Managed by Abengoa Bioenergía Nuevas Tecnologías, the biomass plant was completed in December 2008 and has been fully operational since September 2009. It is the world's first plant to utilize this technology on such a scale. It is located within the Biocarburantes de Castilla y León plant, meaning that both facilities share common services and process chains. The ethanol it produces is distilled to 42 % and then concentrated and dehydrated.

This plant will be used to improve the design of the commercial plants to be constructed over the coming years, assess operating costs, identify bottlenecks and streamline operations.

United States

Abengoa Bioenergy is one of the largest bioethanol producers in the United States. After starting production at the Ravenna plant back in 2007, the company currently has an installed annual production capacity of approximately 196 Mgal at four plants in Nebraska, Kansas and New Mexico. Abengoa Bioenergy is similarly one of the

largest traders of ethanol and DGS for animal feed and its customer base includes the likes of Shell, Exxon-Mobil, Total, Valero and BP. Most of the ethanol is marketed in the form of e10, although sales in e85 have been increasing steadily. Over 2009, construction work ended on two major 88 Mgal plants similar in scale to the Ravenna plant, the first in Madison, Illinois, and the other in Mount Vernon, Indiana, which will start the operation early 2010. With these two new facilities, total annual production capacity in the U.S. will climb to over 372 Mgal, boosting the company's ability to meet the demands of the entire American Midwest.

The group's three longest standing plants continue to operate under the control of Abengoa Bioenergy Corporation in Colwich, Kansas; in Portales, New Mexico; and in York, Nebraska. However, different companies have been incorporated for new projects, including the new plants in Indiana and Illinois, the now operational plant in Ravenna, Nebraska, and the future commercial biomass plant in Hugoton, Kansas. Similarly, separate companies have been created for marketing, engineering and construction activities.

The company strives to implement the best practices in order to streamline all its processes, improve performance and minimize risk within the production, marketing and R&D areas. Illustrating the success in this field is the official recognition that the different North American group companies received in 2009.

For the third year in a row, the Regional Chamber of St. Louis included Abengoa Bioenergy Corporation, the parent of the Business Unit's North American companies, within the "Greater St. Louis Top 50" ranking at the start of 2009, in recognition of its leadership in the region, its vocation towards sustainable development, its role in creating new jobs and its start-up of new facilities in the Greater St. Louis area and its head offices in Chesterfield.

Furthermore, the American Society of Agricultural and Biological Engineers (ASABE) and the American Society of Civil Engineers (ASCE), in collaboration with other engineering organizations, awarded the company the first Bioenergy Company of the Year Award on occasion of the multi-disciplinary Bioenergy Engineering Conference 2009, which recognizes companies capable of producing biofuels that are sustainable in terms of energy and the environment, technically efficient and economically profitable.

CSX Transportation, one of the leading U.S. transportation firms, providing rail and intermodal services for the transportation of goods, awarded the company Abengoa Bioenergy Operations the annual Chemical Safety Excellence award for its operating facilities, an accolade that reflects the company's commitment to maintaining and promoting the safety of motor vehicles and its continuous safety processes when loading tank cars.

On a final note, Abengoa Bioenergy of Nebraska, which operates the Ravenna plant, has contributed enormously to the local community and to many of its organizations, in keeping with the company's approach to corporate social responsibility. It is also heavily involved in supporting research and development of alternative energies at local universities and supports the Department of Economic Development in generating business opportunities in the region for cooperatives and local farmers. The company has been awarded the Agriculture Award in recognition of its contributions to the farming industry. The accolade was granted by Ravenna Chamber of Commerce, in collaboration with the City Council, the Office of Economic Development and the local community to promote and increase economic activity in Ravenna and the surrounding area.

All Abengoa Bioenergy plants in North America have integrated OHSAS certification with the ISO 9001:2000, 14001:2004 and 18001:2001 standards, underscoring

the commitment of Abengoa Bioenergy Operations to quality, safety and the environment. This set of rules is a verifiable health and safety system and was sought to reflect the company's desire to have a standardized occupational health and safety system in place that can be used for the purposes of certification and registration.

Abengoa Bioenergy Corporation – Colwich

- 100 % owned by Abengoa Bioenergy Corporation.
- Installed bioethanol production capacity of 25 Mgal per year.
- Installed DGS production capacity of 70,000 t per year.
- Combined annual consumption of corn and sorghum of 240,000 t.



One of the three operational plants fully owned by Abengoa Bioenergy Corporation in North America. The plant currently operates at 100 % capacity and continues to report excellent efficiency and consistent operations. Production capacity amounts to 25 Mgal per year, achieved through continuous batch cooking and fermentation processes. The CO₂ generated is captured and refined by an on-site client and the plant currently employs 48 highly qualified workers.

The plant is one of the oldest dry mill bioethanol facilities in the United States, having been operating non-stop for the last 25 years. The DGS it produces is not dried in the process and 100 % of the co-product is sold in its natural state. The plant can utilize corn and sorghum at the same time and 50 % of its energy requirements are covered with methane from a municipal solid waste landfill.

Abengoa Bioenergy Corporation – Portales

- 100 % owned by Abengoa Bioenergy Corporation.
- Installed bioethanol production capacity of 27 Mgal per year.
- Installed DGS production capacity of 75,000 t per year.
- Annual sorghum consumption of 260,000 t.



Expansion work was completed in 2006 to double production capacity by utilizing batch cooking and fermentation processes, with two separate distillation and dehydration stages. The DGS produced is not dried in the process and 100 % of the co-product is sold in its natural state. The plant can operate with corn and sorghum simultaneously. Bioethanol production capacity stands at 27 Mgal per year and the plant currently employs 48 highly qualified workers.

Abengoa Bioenergy Corporation – York

- 100 % owned by Abengoa Bioenergy Corporation.
- Installed bioethanol production capacity of 56 Mgal per year.
- Installed DGS production capacity of 145,000 t per year.
- Annual corn consumption of 520,000 t.



The plant currently operates at 100 % capacity and continues to report excellent levels of efficiency and consistent operations. Over 50 % of the produced CO₂ is captured and refined by an on-site client. The facilities also provide services and logistical support to Abengoa Bioenergy New Technologies' adjacent pilot biomass plant. Production capacity stands at 56 Mgal per year, achieved through continuous batch cooking and fermentation processes. The plant current employs 48 highly qualified workers.

Abengoa Bioenergy of Nebraska

- 100 % owned by Abengoa Bioenergy.
- Installed bioethanol production capacity of 88 Mgal per year.
- Installed DGS production capacity of 230,000 t per year.
- Annual corn consumption of 825,000 t.



The subsidiary company Abengoa Bioenergy of Nebraska is charged with managing the plant in Ravenna, Nebraska (United States). The company is fully owned by Abengoa Bioenergy. Construction on the plant got underway in 2005 and was completed in 2007. The plant is currently operating at 100 % capacity according to specifications and boasts an installed bioethanol capacity of 88 Mgal per year, achieved through continuous fermentation. It employs 60 highly qualified workers. The facility is Abengoa Bioenergy's largest to date, and is the first in North America to employ continuous fermentation technology. The project includes a double railway circuit for simultaneous loading and shipment of 2,7 Mgal of bioethanol in 95 tank train carriages.

The plant is designed to recycle all process water, which is then treated and made ready for reuse. The plant therefore consumes less water, produces minimal pollution and thus has a minimum possible impact on the ecosystem.

Abengoa Bioenergy of Indiana

- 100 % owned by Abengoa Bioenergy.
- Installed bioethanol production capacity of 88 Mgal per year.

- Installed DGS production capacity of 230,000 t per year.
- Annual corn consumption of 825,000 t.



Construction got underway in 2007. Two Abengoa subsidiaries, Abener and Abencs, designed and constructed the plant, which was commissioned towards the end of 2009 and will begin commercial operations in early 2010. Once operational, the plant will employ 63 workers.

The plant will have the capacity to dry all or part of the DGS it produces and will be located next to the Ohio River, which provides access to practically the entire American Midwest and to export markets worldwide.

The facilities will employ continuous fermentation technology and are a replica of the Nebraska plant.

Abengoa Bioenergy of Illinois

- 100 % owned by Abengoa Bioenergy.
- Installed bioethanol production capacity of 88 Mgal per year.
- Installed DGS production capacity of 230,000 t per year.
- Annual corn consumption of 825,000 t.



Abengoa Bioenergy of Illinois was incorporated in 2007 and started construction on its plant towards the end of the same year. Abener and Abencs designed and constructed the facility, with start of operations provisionally scheduled for early 2010. Once operational, it will employ 63 workers.

The plant will produce bioethanol and DGS from corn. It will likewise have the capacity to dry all or part of the DGS it produces and will be located next to the Mississippi River, providing access to practically the entire American Midwest and to export markets worldwide.

The facilities of Abengoa Bioenergy of Illinois will employ continuous fermentation technology and are a replica of the Nebraska and Indiana plants.

Abengoa Bioenergy Biomass of Kansas.

- 100 % owned by Abengoa Bioenergy.
- Annual bioethanol from biomass production capacity of 13 Mgal.
- Daily biomass consumption of 930 t.

Abengoa Bioenergy Biomass of Kansas is a project to build a production plant of 13 Mgal of cellulosic bioethanol and 120 MW of renewable power from biomass (a mix of agricultural residues, dedicated non-food energy crops, and wood waste). The plant will be located to the west of Hugoton, in the state of Kansas, and will create 170 jobs. It is expected to reduce 1 Mt CO₂ equivalent emissions. The company expects to start the operation at the end of 2011.

Brazil

Brazil is one of the world's largest markets for bioethanol and bioethanol production and is expected to continue growing sharply thanks to the success of flex-fuel vehicles, which currently account for nearly 90 % of vehicles sold in Brazil and which can run on either gasoline or bioethanol.

Abengoa Bioenergy is the only company worldwide that operates in the world's three largest bioethanol markets: Europe, the United States and Brazil. Following its market integration, the company is starting to report significant production growth at its existing plants in Brazil. It is also looking into the possibility of constructing a new plant and is now marketing its Brazilian production abroad more efficiently, based on the commercial networks it has in place. Moreover, the company intends to adapt cellulosic ethanol technology to sugarcane bagasse so as to increase production in the mid-term and cut costs efficiently.

The company, through its subsidiaries in Brazil, operates two sugarcane bioethanol plants with a total annual installed capacity of approximately 30 Mgal and annual sugarcane consumption of 530,000 t.

Following the incorporation of a new company called Abengoa Bioenergia Trading Brasil, 2009 witnessed the start of bioethanol exports from Brazil to both Europe and the United States. Having taken this important step forward, the company is now coordinating efforts with the companies Abengoa Bioenergy Trading Europe and Abengoa Bioenergy Trading US to trade bioethanol on the most important markets worldwide, while also exploring new markets and opportunities. This move strengthens the company's standing worldwide, with production facilities and trading presence in the world's three top bioethanol markets. The new company

was incorporated in the city of São Paulo, close to the production facilities, and new offices have also been opened to centralize operations and other corporate services. As part of its commitment to sustainable development, Abengoa Bioenergia Brasil continued construction work on two state-of-the-art energy cogeneration units in 2009, each with an installed capacity of 70 MW, which can be increased to 140 MW. The plants use sugarcane bagasse as raw material to fuel the boilers, which produce steam to generate electricity and power the production processes. The cogeneration plants are located in the state of São Paulo, one at Abengoa Bioenergia São Luiz, in the city of Pirassununga, and the other at Abengoa Bioenergia São João, in the city of São João da Boa Vista. Both units are expected to be brought into service in April of 2010, to coincide with the start of the harvest season.

In October 2009, Abengoa Bioenergia Brasil was awarded the MasterCana Social accolade in the Environmental category thanks to its project "Abengoa Bioenergia Brasil: Inventário de Gases de Efeito Estufa no setor Sucoenergético", singled out from a total of 40 projects from Brazil's most prominent companies. The prize is awarded by the magazine *Jornal Cana*, Brazil's leading specialized publication on biofuels, and was awarded in recognition of Abengoa Bioenergia Brasil's leadership in sustainability and the major impact that its Greenhouse Gas Inventory initiative is having on the Brazilian biofuel industry.

One of the agreed measures following the acquisition of the Dedini Agro group was to roll out a Competitiveness Plan, the aim being to transform the company into a reference point in the Brazilian market. The plan got underway in 2009 with the following objectives:

1. Implementation of a Human Resources Development policy.
2. Professionalization of company structure.
3. Outsourcing of services.
4. Restructuring of relations with collaborators and sugarcane suppliers.
5. Standardization of processes.
6. Reduction of costs.
7. Increase in efficiency by adopting best business practices.
8. Investment to extend and modernize the industries of existing plants.
9. Investment to construct two electrical power cogeneration facilities with sugarcane bagasse technology on site at the company's existing plants.

Abengoa Bioenergia São Luiz



- 100 % owned by Abengoa Bioenergy.
- Installed bioethanol production capacity of 18 Mgal per year.
- Annual sugar production of roughly 285,000 t.
- Annual sugarcane consumption of 3 Mt.

Abengoa Bioenergia São João

- 100 % owned by Abengoa Bioenergy.
- Installed bioethanol production capacity of 12.5 Mgal per year.
- Annual sugar production of roughly 245,000 t.
- Annual sugarcane consumption of 2.4 Mt.



In addition to the preceding projects, the company started construction on two 70 MW cogeneration plants in Brazil, which are annexed to existing sugar and bioethanol production facilities in the state of São Paulo.



Activity Report 2009
ABENGOA

7.3 Environmental Services

Befesa is an international company that specializes in the integral management and recycling of industrial waste and in water management and generation, with full awareness of its social responsibility to help create a sustainable world.

www.befesa.com

International Presence



Key figures 2009

Revenue (M€)	722
Gross Cash Flows (M€)	119
Desalination capacity (Mm ³ /day)	1.2
Waste managed (Mt)	1.8
Average number of employees	2,698
Hours of training	92,149

Our Business

The industrial waste treatment and recycling market's main growth vectors are the rapidly expanding world population and increased pressure from environmental laws and regulations.

These two macro trends are governing the development and evolution of the market in which Befesa carries out its industrial waste treatment and recycling activities. However, there is still considerable divide between the environmental laws and policies in different regions of the world: Europe is the area facing the greatest pressure from environmental legislation, whereas in Asia such laws and policies are still in their infancy, with the United States and Latin America standing somewhere in between.

As these regions gradually adopt stricter regulatory policies, the market for industrial waste treatment and recycling will slowly open up. In 2009, the global economic situation had a widespread impact on the markets in which Befesa operates, such as the automotive industry directly related to the aluminum recycling business.

Yet in spite of the prevailing gloom, Befesa has been able to take advantage of opportunities to improve its competitive standing in the markets in which it operates. An example of this is to be found in its acquisition of three salt slag recycling plants in Germany, which will enable Befesa to become a European market leader in that industry.

At Befesa we have taken the necessary steps to bring our business volume in line with current market levels. Coupled with the management policies which have been in place for some time, this move has allowed Befesa's industrial waste treatment and recycling units to report notably better results than the markets they serve.



Befesa's other line of business is the management and generation of the integral water cycle.

The water generation and transport market – and particularly the global desalination market – is currently experiencing sharp growth, which is set to continue for the next few years. This growth is mainly due to two global-scale events: on the one hand, the planet's growing population and, on the other, its scarce water resources, both exacerbated by global warming.

Befesa enjoys a dominant position in the main markets in which desalination is due to grow most significantly in coming years, such as Asia-Pacific, the Middle East, North Africa and the United States.

Having always been at the forefront of seawater desalination plant engineering and technology, Befesa leads the way in the Spanish water desalination market and is one of the providers of reference on the international stage. Thanks to this position of leadership, Befesa currently enjoys an unrivalled position for future growth on a global scale.



In short, Befesa carries out four different activities encompassed within two divisions: industrial waste management and water. These four activities are: salt slag and aluminum waste recycling, steel and galvanization waste recycling, industrial waste management and water. Befesa manages over 1.8 Mt of waste, allocating over 1 Mt to the production of new materials through recycling and preventing 0.6 Mt of CO₂ emissions per year. Befesa can desalinate over 1.2 Mm³ of water per day, equivalent to supplying 6 M people.

And this is how the company defines its mission: Befesa provides viable innovative solutions for industrial waste treatment and management and water generation and transport, the aim being to become a world reference in the sectors in which it operates, while helping to forge a more sustainable world. This commitment is reflected in Befesa's lines of business:

- Befesa recycles aluminum waste without generating more waste in the process, thus fully completing the cycle.
- Befesa manages ordinary steel and stainless steel waste, as well as waste from the galvanization process by recycling a variety of metals and, therefore, preventing their dumping and minimizing the need for further mining.
- Befesa designs and builds infrastructures for safe, efficient and environmentally friendly waste management.
- Befesa manages, transports, treats and temporarily stores hazardous and non-hazardous industrial waste for valorization, recovery, reuse or eventual controlled disposal.
- Befesa generates water using seawater desalination technologies, reusing urban wastewater and modernizing irrigation systems to reduce consumption.
- Befesa protects rivers and coastlines by purifying urban and industrial wastewater.
- Befesa contributes to social and financial development by making water drinkable and providing the rural and agricultural communities with irrigation systems.
- Befesa develops technologies to improve the efficiency of the integral water cycle.



Befesa aspires to become a world leader in integral industrial waste management and water generation, management and transport, thus contributing to sustainable development.

One of the main levers supporting Befesa in the pursuit of this goal is research, development and innovation (R&D&I). Befesa operates in areas in which technology plays a key role. Because of this, its strategic R&D&I plan aims to coordinate and manage actions in this area, focusing on the creation of value and generating returns from investments. In order to achieve this aim, Befesa has a new R&D&I center in the province of Seville (Spain), as well as a variety of strategic partnerships and external collaborations with universities, institutions and research centers, enabling it to stay abreast of the most recent developments and make more efficient use of resources.

Befesa has a significant worldwide presence, with offices in twenty countries in four of the five continents. In Europe, our salt slag and aluminum waste recycling activity and

steel and galvanization waste recycling activity are carried out in treatment plants located in Spain, Germany, France, Sweden and the United Kingdom. The industrial waste management business has a significant presence throughout Spain and Latin America. With regard to the water business, Befesa boasts a prominent global presence, with important projects in China, India, Algeria, the Maghreb, the Middle East, the United States and Latin America.

Befesa has an ambitious strategic plan in place to continue growing organically in the markets in which it operates. It intends to do so by building facilities to boost its market share (especially in China, the United States, India and Algeria) and by entering new markets in which the company does not currently operate and where it can use its technological knowledge as a tactic for development.

Befesa has a diversified customer portfolio, ranging from both regional and national public bodies to large companies in important industries, such as the steel, automotive and chemical sectors.

Recruiting and retaining talent is one of the main pillars on which Befesa's future growth strategy is based. This is because the nature of the company's activities, in which technological leadership plays a fundamental role, means that attracting and retaining both technical and commercial talent is key to ensuring future success.

The company's business is based on sustainable development, around which its activities and strategies revolve. Because of this, Befesa's mission, vision and values reflect its firm commitment to financial and social progress, preservation of the environment and respect for fundamental rights. Through this business model, Befesa's activities are aimed at:

- Creating long-term value for shareholders.
- Providing service to customers.
- The professional and human development of its employees.
- The growth of the societies in which it carries out its activities.
- Developing sustainable solutions for the management of industrial waste and the integral water cycle while fully respecting and preserving the environment.

2009 in Review

The year 2009, an intense one for Befesa, was largely characterized by two different factors: On the one hand, the global financial climate had a widespread impact on the markets in which Befesa's industrial waste recycling lines operate, with a knock-on effect for the company's business. On the other, the international water business made great progress and laid the foundations for future growth.

In 2009, Befesa acquired the production assets of the German companies Aluminium-Salzschlacke Aufbereitungs GmbH and Alsa Süd GmbH. These companies are fully-owned subsidiaries of Agor AG and specialize in salt slag treatment and recycling. The assets acquired comprise three production plants located in the German towns of Hannover, Lünen and Töging and featuring the most advanced technology in the market, with a combined treatment capacity of 380,000 t of waste per year and with a replacement value of over €100 M. This acquisition makes Befesa the European leader in salt slag recycling, with five production plants strategically distributed across Europe.



In the water business, Befesa carries out its international activities through subsidiaries created in other countries to perform specific projects and sustained work in “target” markets. Befesa is already operating in the Chinese and Indian local markets through the companies Befesa Infrastructure India, Pvt. Ltd. and Qingdao BCTA Desalination Co., Ltd, and through its liaison office in Beijing. In the North American market, it operates through NRS Consulting Engineers and Befesa WaterBuild. In other countries in which it wasn’t necessary to create a new company, it operates through the permanent establishments or branches of Befesa Agua.

2009 saw the completion of the construction and launch of the Skikda desalination plant (northern Algeria), which has now entered the production stage. Using reverse osmosis, the plant will produce 100,000 m³ of drinking water per day, with capacity to supply a population of 500,000. The expected income over 25 years for the company licensed to sell the water is estimated at over \$564 M. With regard to Befesa’s other projects in Algeria, 2009 witnessed the commencement of construction work on the Tenes desalination plant (Chlef region) and continued progress on the Tlemcem-Honaine desalination plant. Each plant will have a daily water production capacity of 200,000 m³.

On a separate matter, a financing deal was struck in July to design, construct and operate for 25 years the Qingdao seawater desalination plant in China. The project, which will

require a total investment of €135 M, will have a desalination capacity of 100,000 m³/day, with the capacity to supply a population of 500,000 with drinking water. It is estimated that the plant will generate revenues of over €654 M from the sale of water during its working life.

2009 also heralded an agreement with the Sri Lankan government for the first phase of the project to supply the city of Ratnapura and its surrounding area with drinking water. Among other actions, this project involves building a treatment plant in Muwagama, with a capacity of 13,000 m³/day and an investment value of almost €26 M.

During 2009, Global Water Intelligence (GWI), the prestigious international publication specializing in water, awarded Befesa Agua its best desalination company of the year accolade for its outstanding contribution to the desalination industry in 2008. The award was granted in recognition of Befesa's outstanding performance during the year, having secured its fourth contract in Algeria, namely the Tenes desalination plant; having created a joint venture in Qingdao to start work under the BOOT (Build, Own, Operate and Transfer) model, which will be the first desalination concession built and operated under this model in China; having penetrated the North American market through its acquisition of the Texan companies NRS and WaterBuild, which have extensive experience in desalinating sea and brackish water and conducting tests for the Texan public service; and, finally, having made considerable advances in relation to the Skikda plants (Algeria) and the construction of the Chennai desalination plant (India).

In the field of R&D&I, Befesa completed work on its new R&D&I center in Dos Hermanas, Seville (Spain), where it has already begun research on water generation and waste management. The facilities, which can house 70 researchers, have a total of 3,000 m² of floor space, used primarily for testing, laboratories, offices, control room, exhibition room and multi-use room.



Our Activities

The aluminum waste recycling area provides collection and treatment services for aluminum-containing waste, manufactures and markets aluminum alloys and designs, builds and assembles equipment relating to aluminum recycling. This line of business is particularly effective in reducing CO₂ emissions as compared with the primary aluminum

sector. It also recycles salt slag and hazardous toxic waste generated by the aluminum waste recycling process. Recovering salt slag is the alternative to dumping and its aim is to separate metallic aluminum, salt and aluminum oxide for subsequent reuse. This activity enables us to fully close the recycling cycle and use all aluminum-containing waste.

The steel and galvanization waste recycling line focuses on the treatment and recycling of waste resulting from the manufacture of ordinary and stainless steel and of waste produced in the steel galvanization process. Befesa has eight production plants in Europe to carry out such activities. These play a fundamental role in the zinc recovery cycle, avoiding the pointless loss of tons of this material by cutting down on dumping and helping reduce the need to mine zinc, nickel and chrome. Befesa is the European leader in the treatment and valorization of steel dust and the only company in Spain to offer an integral steel dust collection and treatment service for valorization.

The industrial waste management division carries out integral waste management in industry. It is involved in all stages of the industrial waste management cycle, ranging from transport, temporary storage, treatment and valorization to final recovery and disposal of the waste in a controlled and safe manner, in accordance with both Spanish and European environmental law. It also provides a broad range of high value-added industrial cleaning services to most industrial sectors. In addition, it has an area that provides effective solutions for the collection, transport and removal of PCB-contaminated materials, transformers and condensers, as well as in relation to the recycling of film used to cover greenhouses. This unit also performs desulfurization work to produce sulfuric acid from residual sulfur, while generating electricity, which is then sold and returned to the grid. Finally, it provides integral soil decontamination solutions.

Befesa Agua's activities include the production, management and transportation of water through new technologies, and the design, construction and operation of infrastructures. Befesa Agua specializes in the construction of large desalination plants that employ reverse osmosis technology and is widely considered to be one of the world leaders in this field. Other product lines include wastewater and industrial water treatment, hydraulic works and management of hydraulic infrastructures. Befesa thus operates throughout the integral water cycle.

Aluminum Waste Recycling

Befesa is the current European leader in aluminum waste and salt slag recycling. In addition, it is the only recycling company that carries out both sides of the aluminum waste recycling process.

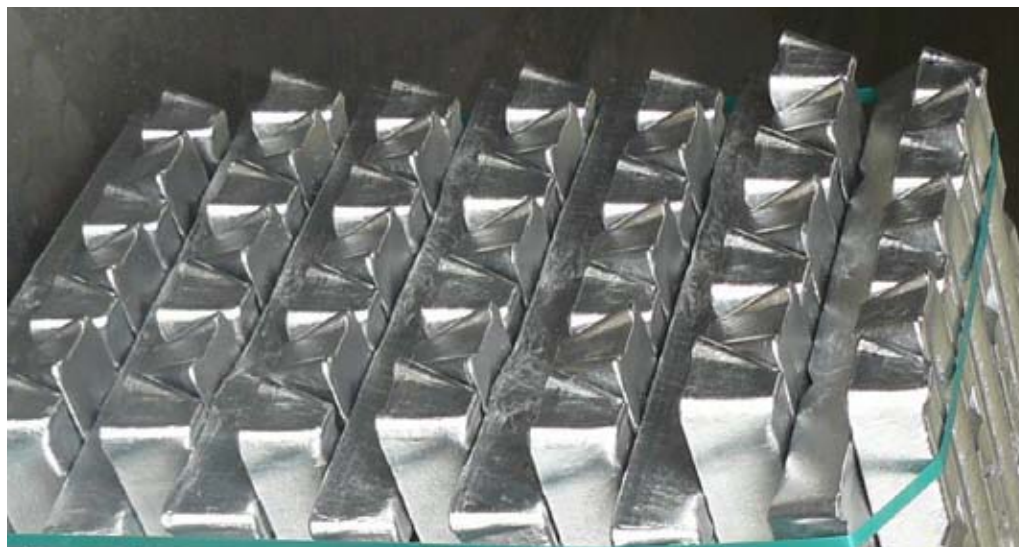


Befesa's current growth strategy in this area contemplates organic growth in the aluminum recycling business in Central Europe, as well as international expansion in the salt slag business, thus promoting the company from its current status as European leader to a position of worldwide dominance.

The main competitive edges underpinning Befesa's goal of continued sustainable growth include an in-depth knowledge of the processes and technologies involved in aluminum waste recycling, a broad range of products derived from secondary aluminum and excellent commercial relations with customers and suppliers of raw materials.

Aluminum Waste Recycling

The Aluminum Waste Recycling business unit recovers aluminum contained in various types of waste and scrap metal. Befesa carries out this activity by collecting and transporting waste and aluminum scrap metal, carrying out its integral recovery and producing and marketing secondary aluminum alloys. The main use of recycled aluminum waste is the production of alloys and their sale to the automotive industry for the manufacture of components, as well as to the construction industry. It is worth noting that this line of business is particularly effective at reducing CO₂ emissions as compared with the primary sector. Befesa carries out these activities at three plants – Vizcaya, Valladolid and Barcelona (Spain).



2009 was dominated by a deep global recession and therefore witnessed a sharp downturn in both sales and prices, which plummeted to all-time lows. Despite this situation, Befesa remained a market leader and a key player not only in Spain – where its leadership is unquestionable – but also in Europe. June saw the successful completion and integration of the merger between the three secondary alloy production companies, Aluminio Catalán, S. L., Befesa Aluminio Bilbao, S. L. and Befesa Aluminio Valladolid, S. L., allowing us to streamline structural costs and improve the company's administrative management. All the actions undertaken during the year were intended to increase the productivity of our various plants, reduce energy costs and improve the service provided to our customers.

Thus, in 2009 Befesa Aluminio recycled around 89,100 t of various types of aluminum waste, leading to 68,300 t of alloy production and sales and avoiding the equivalent of 683,400 t of direct CO₂ emissions.



Salt Slag Recycling

Befesa's aluminum waste recycling system encompasses the recovery and integral valorization of all the waste generated in the aluminum industry, including both the primary and the secondary industries, as well as the goods produced with aluminum at the end of its life cycle. It is precisely the Salt Slag Recycling business line that brings this process round full circle and gives it its meaning.

As is also the case with the manufacture of parts and other products, oxides and other impurities are incorporated along the aluminum production value chain. The valorization of these is more costly, both because of the technical difficulties involved in the industrial process and because of the lower financial value of the products which can be recovered. Befesa has developed proprietary technology to increase the sustainability of an industry that deals with a metal with a particularly important role in reducing greenhouse gases in the transportation sector. It is worth remembering that one of the defining properties of this metal is its lightness in comparison with the alternatives.

Salt slag valorization plants are also designed to recover other types of waste from the aluminum industry, such as gas filtering dust from smelting furnaces and the dust obtained from milling and grinding aluminum sludge.

In 2009, Befesa acquired three salt recovery plants in Germany, thus becoming Europe's main salt slag management company. In addition, its technological knowledge will enable it to expand towards other geographical markets, such as the United States, the Persian Gulf and others.

Befesa is thus contributing to sustainable development through five plants specifically designed to treat this type of waste. The plants are located in Valladolid (Spain), Whitchurch (United Kingdom) and Lünen, Hannover and Töging (Germany) and have a combined capacity of 630,000 t. This is in addition to the management of smaller amounts of other by-products of the primary and secondary aluminum industries. A total of 238,400 t of waste was treated in 2009. This is down on the previous year, due to a slump in business within the aluminum industry. All this waste is fully converted into raw materials that can be used by the industry (aluminum, melting salts and aluminum oxide). Our salt slag recycling activity has eliminated the need to mine 267,100 t of non-renewable raw materials (mineral oxides and salts) and to dump 224,200 t of hazardous waste.

Our strategic goals and business processes are in line with the commitments assumed by the aluminum industry: To eliminate, in the mid-term, the dumping of solid waste directly and indirectly generated by the industry. Befesa is working to include innovative treatment technologies to valorize other types of waste, thereby helping the industry to move forward in a sustainable manner. A prime and practical example of this policy is the commissioning of a gas filtration dust treatment demonstration plant in Valladolid, based on one of the company's own projects. Also in 2009, a new process designed and patented by Befesa started running in the United Kingdom. The process aims to recover all the waste from used electrolytic cells, more commonly known as spent potlining (SPL), a hazardous waste generated by the primary aluminum industry. Each ton of aluminum produced generates around 24 kg of waste. Until now, it was only partially reused in some cases, with the remainder being dumped.



Sales of Machinery and Technology

The Machinery and Technology Sales division provides technical support to the aluminum waste recycling plants. It is also engaged in the design, construction, assembly and start-up of installations for the aluminum and zinc industries. It boasts an extensive portfolio of more than 100 installations in 40 countries. Its main products are automated lines used for the production of 5-25 kg aluminum ingots, casting wheels, rotary furnaces and sludge cooling and treatment facilities.

The most important projects carried out during this period include the design and construction of two 22 kg ingot casting lines for the company Emal (United Arab Emirates); the design and manufacture of three molding lines for Qatalum (Qatar); the design and manufacture of four molding lines with trailer-loader for Vedanta (India); and the design and supply of the last sludge cooler for the Almahdi plant (Iran). In spite of the difficulties arising from the widespread drop in investment, this business unit has completed all its projects and its portfolio levels are sufficient to practically guarantee work for the next twelve months.

Steel and Galvanization Waste Recycling

Befesa is the current European leader in iron and steel waste recycling. Through its steel and galvanization waste recycling unit, it provides high value-added environmental services to the steel industry. These involve the treatment and valorization of the residual dust generated from both ordinary and special steel manufacturing processes, as well as other waste with zinc content produced by the galvanization sector. Befesa employs eight production plants to carry these activities: Befesa Zinc Duisburg GmbH and Befesa Zinc Freiberg GmbH (Germany), together with Recytech S. A. (France) and Befesa Zinc Aser S. A. (Spain), operate manufacturing facilities to recycle steel dust from smelting and electric arc furnaces, whereas Befesa Valera S. A. S. (France) and Befesa ScanDust AB, in Landskrona (Sweden) recover and treat stainless steel waste. Lastly, the Befesa Zinc Sondika, S. A. and Befesa Zinc Amorebieta, S. A. (Spain) factories recycle the zinc and zinc alloy waste generated by the galvanization, metal injection and construction industries.

Befesa is currently Europe's leading recycler of steel waste, with a market share far above that of its competitors in the sector. The strategic distribution of its plants enables it to be close to customers and suppliers alike, affording it one of its main competitive edges. Other characteristics that differentiate Befesa from its competitors include its extensive knowledge of recycling processes and the technology it utilizes, and the fact that its commercial relations with customers are based on long-term collaboration agreements.

Growth in the steel recycling business has focused on organic growth in Europe and inorganic growth in other strategic locations.



The international steel waste recycling market continues to grow as regulatory pressure to protect the environment increases. This pressure has reached different maturity levels in different parts of the world, with Europe being the most advanced.

With regard to the market, this fell by approximately 19,7 % in comparison to 2008 as a direct result of the unavoidable underuse of some of the plants' installed production capacity. This was due to a lack of available raw materials, itself caused by a drastic fall in demand for steel in Europe and, therefore, in steel production. This slump in demand was caused mainly by the crisis in the automotive and construction industries as a result of the deep recession affecting the principal western economies over the period in question.



Furthermore, the positive impact on results due to the gradual recovery of the price of zinc in the international market (London Metal Exchange, or LME) over recent months has benefitted the companies operating in this line of business by offsetting most of the losses incurred from settling existing metal price hedging agreements.

During 2009, the plants in the steel waste recycling division treated a total of 502,500 dry tons of iron and steel dust with zinc content. Of this, 407,500 t of residual dust came from the production of ordinary steel, sidestepping the need to mine around 180,300 t of zinc and channeling 99,200 t of this metal back into the production cycle. In addition, a further 95,000 t of dust from the manufacture of stainless steel were valorized, and their content used to recover valuable and highly-sought-after metals, such as nickel and chrome. Both cases have led to major energy savings and reductions in CO₂ (greenhouse gas) emissions as compared with the cost of obtaining these products via primary treatments.

The above treatments resulted in 148,600 dry tons of waelz oxide, down on production for 2008. That said, overall production of the treated product (D-L.W.O.®) climbed to reach 105,400 t. In addition, the stainless steel dust recycling plants also produced 47,500 t of nickel alloys and other metals with a high market value, down on figures for 2008, and 42,800 MWh of electricity were self-generated at the Swedish production facility.



In relation to galvanization waste treatment, by the close of 2009 the Sondika and Amorebieta plants in Vizcaya (Spain) had together recycled 11,700 t of various types of zinc waste, down on the volume reported for 2008. The total product and by-product production of the two facilities stood at 11,200 t, with roughly half of this comprising zinc oxide (ZnO) produced at Sondika and the rest comprising the products obtained at the Amorebieta plant, primarily zinc ore ingots, electrolytic zinc ingots and fine zinc ashes. In addition, total sales for both Befesa Zinc Sondika and Amorebieta during this period amounted to 12,000 t, equivalent to 7 % over the two plants' global production volume. Both companies concluded raw material purchase agreements with both local and international suppliers.

Industrial Waste Management

Befesa is the leading company in Spain when it comes to managing industrial waste per volume treated. Befesa is also a relevant player in the Latin American countries in which it operates (Argentina, Chile, Mexico and Peru).

Befesa's main competitive advantage is the fact that it operates across the integral industrial waste management cycle, obtaining significant synergies between the various links in the chain.

Through its centers and offices around Spain, Befesa aims to provide its customers with an integral waste management service, minimizing or reducing potential environmental impact through adequate management.

Befesa's growth strategy in the area of industrial waste management is based on achieving organic growth in the management of non-hazardous waste in the countries in which it operates and on penetrating new territories with high potential.

The industrial waste recycling market will continue to grow, spurred on by increasingly heavy legislative and environmental pressure not only on production companies but also with regard to the treatments required.

Demand for Befesa's industrial waste management services flows in from small and medium-sized companies with a strong local component, and also from the environmental divisions of large industrial companies generally associated with the construction industry.

The current economic crisis affecting the automotive, steel, chemical, petrochemical and construction industries has led to a significant drop in waste generation. This is due to low levels of industrial activity, which have had a negative impact on the company's business.

Industrial Waste

Befesa manages, recycles, valorizes and reuses waste, integrating the latest technologies under the triple-R rule – Reduction, Reuse and Recycling, based on the premise that the best waste is no waste. This way, materials that can be put to subsequent use are recovered, thereby curbing consumption of new raw materials. The company accomplishes this through its network of more than 15 centers distributed throughout Spain, which treat waste to reduce the associated contamination, and also through its transfer centers, at which waste is separated, classified and sent off for recovery, recycling and/or valorization, thus reducing the consumption of natural raw materials. Finally, it has a safety storage deposit for the controlled disposal of waste that cannot undergo any further form of treatment.

Befesa maintained its prominent position in this sector during 2009. At the start of the year, it acquired the Derivados de la Pintura S. A. plant, located in the Spanish region of Catalonia, which specializes in the treatment and recycling of solvents and other industrial waste. In all, Befesa managed 860,000 t of industrial waste, 40 % of which was classified as hazardous. This represents a 32 % decrease on figures for 2008. Work also continued during the year to remodel the physicochemical treatment plant to enable it to treat third-party industrial waters, thus extending the management services offered to customers. The rainwater, potentially contaminated water and clean rainwater network at the Nerva center was also remodeled.



Industrial Cleaning

The Industrial Cleaning division's activities contribute to the sustainable development of the industries it serves, combining the goals of minimizing production and recovering waste with the reuse of raw materials on the one hand, with more efficient equipment on the other, thus leading to lower energy consumption. Its wide range of services includes mechanical and high pressure hydrodynamic cleaning processes, ultra-pressure hydrodemolitions and hydrocutting; chemical cleaning and steam blowing; air through circuits and boilers; changes of catalyst beds; cleaning of refinery tanks and oil installations, both manually and with automated systems; on-site waste treatment by means of mobile and fixed plants, and cleaning of exchangers.

In 2009, the division accomplished its objective of entering the market for pre-operational chemical cleaning at thermal and solar thermal power plants, securing contracts for cleaning work at Enel's combined cycle thermal power plant in Algeciras and for Abengoa Solar's Eureka and PS20 solar power plants. The company continued to expand overseas, where it carried out automatic cleaning of tanks, catalysts and heat exchangers in France, Switzerland and Italy, and bidding for work to be carried out in 2010. It also made its first commercial contacts in the Near East, where the construction of large petrochemical installations will provide the company with opportunities for further work, mainly in tank and catalyst cleaning.



Plastics

Befesa Plásticos manufactures low density polyethylene special pellets by recycling the film used for covering greenhouses. The sold pellets are then used for a variety of applications, such as manufacturing films for the construction industry (waterproofing and protection), sacks and bags, irrigation pipes and electrical and telecommunications ducts. They can also be injected to create pots or otherwise used to obtain modified asphalts. As the only Spanish company capable of carrying out the complete recycling cycle from collection to product manufacturing, Befesa is the European leader in this particular field.

Over 2009, Befesa recycled 11,700 t of film and used irrigation pipes, and likewise produced 9,000 t of polyethylene pellets, thus maintaining its position as market leader in the low density polyethylene recycling business, a field in which it operates in all the major regions of cultivation under plastic in Spain: Alicante, Murcia, Andalusia and Extremadura.

PCB

Befesa Gestión de PCB is located in Cartagena (Spain) and specializes in the provision of effective solutions for the collection, transport and elimination of transformers, condensers and materials contaminated with PCB. Using cutting-edge technology, the company recovers all reusable materials while eliminating all contaminated materials for good.

More than 4,000 t of PCB-contaminated devices and materials were treated by the company during 2009, confirming its leadership in Spain. This makes Befesa Gestión de PCB the company of reference for PCB treatment in the electricity industry.

Soil Decontamination

This division provides integral technical solutions to the problem of soil contamination. Over the last year, the company carried out numerous investigation and diagnostic projects relating to contaminated soil for top-tier customers within the

petrochemical, steel, real estate construction, energy and chemical industries, among others, as well as a host of soil decontamination activities, such as bioremediation treatments, on-site treatments, excavation and management.



In 2009, the division established itself as a leading provider of soil classification and decontamination services, offering an immediate and fully comprehensive service for the study and rectification of contaminated soil-related problems.

With regard to development, a new mobile on-site soil decontamination plant utilizing soil washing technology started operating in early 2009. This state-of-the-art plant was designed to resolve the problems arising from the wide range of contaminants that can be present in soil. The new plant has reported impressive production levels (35-45 t/h) and remediation performance.

Desulfurization

Befesa Desulfuración produces sulfuric acid and oleum (a compound rich in SO_3) using the residual sulfur recovered from petrochemical plants. It owns a plant that enables it to resolve the environmental problems associated with oil plants by applying the cleanest and safest processes.



During 2009, 218,100 t of equivalent acid were produced, with an associated electricity generation of 49,900 MWh, which, after deducting self-consumption, resulted in sales of 28,600 MWh of surplus electricity.

It is worth noting that in May 2008 the land on which the desulfurization plant is located was sold pursuant to the town of Baracaldo's (Vizcaya) Sefanitro Special Interior Reform Plan (Plan Especial de Reforma Interior Sefanitro). The plant is currently operating and the land will be handed over within a timeframe to guarantee that the business can be transferred to the new location.

Water

Befesa Agua is an international technology company specializing in water generation and management. It designs, builds and operates infrastructures to ensure an integral water cycle.

This enables the company to:

- Generate water by desalinating seawater, reusing urban wastewater and modernizing irrigation systems to reduce consumption.
- Protect rivers and coastlines by treating urban and industrial wastewater.
- Prevent emissions with renewable energies from its hydraulic power plants.
- Contribute to social development by making water drinkable and modernizing the rural and agricultural world with irrigation systems.
- Use systems that help make decisions leading to the sustainable management of the integral water cycle.

The water generation and transport market – and particularly the world desalination market – is currently experiencing huge growth. This is mainly the result of two global circumstances: the planet's growing population and its scarce water resources.

Befesa is the Spanish market water desalination leader and one of the main references in the international sphere. This company has been at the forefront of seawater desalination plant engineering and technology for years, investing heavily in R&D&I programs that have led to its current position of leadership.

Befesa's strategy to continue expanding in the desalination market involves growing organically in the main regions and markets in which it is already established (mainly China, the United States, India and Algeria) and entering new previously unexplored markets.



Befesa's main competitors in the water business are primarily large international companies within industrial groups.

The Spanish regulatory framework includes a number of plans, including the A.G.U.A. program (Actuaciones para la Gestión y la Utilización del Agua – Water Use and Management Actions), the Reuse Plan (Plan de Reutilización) and the National Water Quality Plan (Plan Nacional de Calidad de las Aguas), all of which will regulate the actions to be carried out over the next few years. We would also highlight the enactment of Royal Decree 1620/2007 of December 7th of 2007, which established the legal system governing the reuse of treated water.

The company has competitors overseas in the fields of desalination, hydraulics and water treatment, in addition to the large Spanish construction companies belonging to SEOPAN (the Association of Nationwide Public Works Companies) and technology companies in the water industry. Our Spanish competitors are mainly technology companies belonging to ATTA (the Spanish Technological Water Treatment Association) and those registered with SEOPAN.

For less specialized or technological work, however, our main competitors are mid-size construction companies operating in Spain and registered with the Spanish National Association of Independent Construction Companies (ANCI) or regional companies working on other hydraulic works.

Befesa Agua is one of the five largest companies in the world when it comes to the construction and ownership of desalination concessions or assets and is also the Spanish market leader in water treatment and hydraulic infrastructure construction.

Befesa Agua has five product lines:

- Desalination: Seawater and brackish water desalination. Befesa's facilities around the world produce over 1.2 Mm³ of desalinated water every day.
- Water treatment: Water potabilization, treatment and reuse. The company's facilities supply or treat water for over 8 M inhabitants.
- Industrial water: Treatment of process water, service water and wastewater, sludge treatment and water reuse and recycling. Over 200 important projects.
- Hydraulic works: Supply, treatment, pressurized pipelines, modernization of irrigation systems, hydroelectric power plants. Over 500,000 ha irrigated and over 200 projects.
- Hydrological and hydraulic infrastructure management: SAIH (Automatic Hydrological Information System), SAICA (Automatic Water Quality Information System), dynamic regulation of canals, control of irrigation areas, water supply and treatment control systems.

Milestone projects carried out in 2009 include:

- Award of the contract for the Arequipa (Peru) potable water treatment plant (PWTP). The mining company Cerro Verde awarded the Alto Cayma Consortium, which includes Befesa Agua, a €55 M contract to build the La Tomilla II PWTP in the city of Arequipa, Peru. The aim of the project is to extend and improve the drinking water system supplying the metropolitan area of Arequipa, Peru's second most populated city behind Lima. The project will involve collecting raw water from the Chili River and piping it approximately 11 km to the potable water treatment plant, where it will undergo physicochemical treatment, followed by filtering, disinfection, pH adjustment and chlorination. The plant will have a production capacity of 130,000 m³ of water per day, enough to supply roughly 850,000 inhabitants. The contract also includes the operation and maintenance of the infrastructures for three years.



- Completion of financing for the project to construct and operate the Qingdao (China) desalination plant. In 2009, the company closed the financing agreement to design, construct and operate the Qingdao (China) seawater desalination plant for 25 years. The plant, which will involve a total investment of €135 M, will have a desalination capacity of 100,000 m³/day and will be capable of supplying drinking water to a population of 500,000. The desalination plant will use reverse osmosis technology with groundbreaking designs both at the pre-treatment stage (ultrafiltration membranes) and for the centralized pumping system, thus achieving greater energy efficiency. It is estimated that, over the 25-year operation period, the plant will generate revenues of over €654 M from the sale of water and a further €25 M from the technical support required to operate it.
- Ratnapura (Sri Lanka) construction and supply agreement. In October 2009, an agreement was concluded with the Sri Lankan government's National Water Supply and Drainage Board to build the first phase of the project to supply the city of Ratnapura and its surrounding area with drinking water. The project, which consists of a water treatment plant in Muwagama with a 13,000 m³/day capacity, drinking water tanks, open-pit water collection points and transmission of water to the various tanks, will involve an investment of around €26 M.
- Start of the Skikda (Algeria) desalination plant's operation and maintenance period. 2009 marked the end of the construction and launch period for the desalination plant awarded to Befesa Agua in Skikda, north Algeria, which has now entered the water production stage. The desalination plant, whose construction and operation were awarded by the Algerian Energy Company (AEC) to the consortium formed by Befesa and Sadyt under a 25-year concession, will produce 100,000 m³/day of drinking water utilizing reverse osmosis technology. It will have sufficient capacity to supply a population of 500,000. It is estimated that the concessionaire will derive revenues of over \$564 M from water sales.



- Completion of construction on the Chennai (India) desalination plant. 2008 saw the end of the construction period for the Minjur seawater desalination plant in Minjur, Chennai, which has now entered the start-up and initial production stage. With this contract, the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) will meet the needs for drinking water to supply the city of Chennai, also known as Madras, in the southern Indian province of Tamil Nadu. Using reverse osmosis technology, the plant can desalinate 100,000 m³ of water/day. The contract provides for the plant's design, financing, construction, possession, operation and maintenance for an initial term of 25 years.
- Execution of pilot seawater desalination plant projects in Texas (U.S.A.). During 2009, NRS Consulting Engineers, a North American subsidiary of Befesa Agua, carried out several projects to turn seawater into drinking water in the State of Texas, U.S.A. The subsidiary is now a market leader in Texas in harnessing seawater and other limited natural resources. One of its many highlight projects is the development of the first pilot seawater desalination plant in Texas, carried out for the Brownsville Public Utility Board (BPUB), on the Brownsville Ship Channel. In addition, it is currently developing the second pilot seawater desalination plant for the Madre Laguna water district on South Padre Island (Texas). This desalination plant, which will be the first in Texas to take water directly from the Gulf of Mexico, will employ reverse osmosis to produce over 4,000 L/h.
- Award of the project to improve the Guadalhorce (Málaga, Spain) irrigation channels. Egmasa awarded Befesa the project to enclose the Guadalhorce Valley irrigation channels and improve their transportation capacity under a contract worth over €8 M. The aim of the agreement is to cover the main channel's open-air sections. This will prevent the risk of accidents and toxic spillage, which could affect the area's 550,000-plus inhabitants.



- Award of the contract to modernize the Canal de Estremera (Guadalajara, Madrid and Toledo, Spain) irrigation systems. The state-owned company Aguas de la Cuenca del Tajo, attached to the Spanish Ministry of the Environment and Rural and Marine Affairs (Ministerio de Medio Ambiente, y Medio Rural y Marino), awarded Befesa a contract worth over €15 M to modernize the Estremera Canal Irrigation Community. This will allow this irrigation system to be replaced by a pressure system, using either drip or spray technology, thereby reducing water loss, providing greater control over water use in each separate plot of land and leading to greater diversity of crops and yields.
- Award of the contract to reuse the Peñon del Cuervo treatment plant in Málaga (Spain). The state-owned company Aguas de las Cuencas Mediterráneas (Acuamed) awarded Befesa a €5.5 M contract to design and construct the Peñon del Cuervo wastewater treatment plant tertiary treatment works in Málaga (Spain). The project will make it possible to reuse over 9,000 m³ of water per day, giving the treatment plant a new tertiary treatment system that will allow its effluent water to be used for irrigation of urban parks and green spaces instead of using new resources.
- Award of the contract to extend the Santomera treatment plant in Murcia (Spain). The Murcia Regional Ministry of Agriculture and Water (Consejería de Agricultura y Agua) awarded Befesa the contract, worth over €1.3 M, to extend the wastewater treatment plant north of Santomera. The plant will have a treatment capacity of almost 6,000 m³ of water per day, benefiting a population of over 20,000.
- Award of the contract to improve the Plaza de España square in Seville (Spain). Empresa Metropolitana de Abastecimiento y Saneamiento de Aguas de Sevilla (Emasesa), awarded Befesa a contract to install a water treatment system for the pond in Plaza de España square. The project produces water that can be used to turn the pond into a boating lake, with fish, freshwater tortoises and birds. The treatment will enable the Spanish city to use the water to irrigate the adjoining Maria Luisa Park and to supply the city's non-potable water network.

- Award of the contract to modernize Canal del Viar in Seville (Spain). The Andalusian Regional Government's Department of the Environment (Consejería de Medioambiente de la Junta de Andalucía), through the Andalusian Water Agency, awarded Befesa a contract worth over €13 M to modernize the Canal del Viar canal, so that it can be used both for irrigation and to supply the city of Seville. This will be achieved by using 30 km of the existing Canal del Viar, downstream from the reservoir, where Befesa will carry out works to repair, adapt, rebuild and improve its structure, as well as work on the aqueducts, tunnels, drainage systems, service paths, and bridges.



- Award of the contract for the tertiary treatment system for the Blanca water treatment plant in Murcia (Spain). The Murcia Regional Ministry of Agriculture and Water awarded Befesa a contract, worth over €1.2 M, to construct the Blanca wastewater treatment plant's tertiary treatment system. The aim of the contract is to treat the water from the treatment plant so that it can be subsequently used in agriculture. This treatment system, with a capacity of over 208 m³/h, consists of flocculation, open filtration and ultraviolet disinfection.
- Award of the contract for the construction of a regulating tank in Kurkudi, Vizcaya (Spain). Consorcio de Aguas de Bilbao Bizkaia awarded Befesa Agua a contract worth over €4 M to construct a regulating tank in Kurkudi (Vizcaya). This will improve the supply of water to over 200,000 people in the region of Uribe-Kosta, which could be at risk in the event of ruptures upstream of Kurkudi and faults in the emergency pumping system.

Latin America

Befesa Argentina

Befesa Argentina's activities include handling, transportation, recycling, recovery, treatment, incineration and final disposal, using hazardous waste landfills, of non-hazardous industrial waste and special or hazardous waste. It also provides industrial liquid and water cleaning services to the oil industry. These environmental

management services are carried out using state-of-the-art technology under strict international environmental standards, combining experience, technology and responsible handling of resources. The company thus contributes to sustainable industrial development by providing suitable treatment for each type of waste. The company has two plants with which to attain this goal: Campana, which provides inertization and final disposal services, and Pacheco, which acts as an incineration plant.



At the Campana plant, work has been completed to make it possible to work with zero effluent within the plant and to install and implement new software to trace the waste arriving at, and processed in, the plant. In Pacheco, a new bulk waste inertization area near the cell has been included with the aim of supplementing the inertization capabilities of the rotating equipment installed in 2008. In addition, the lixivate pond installations were completed and an application was filed with the Provincial Water Authority (Autoridad Provincial del Agua) for a permit to discharge duly treated water into a nearby stream.

With effect from January 1st, 2009, industrial cleaning, mud centrifuging, oil and derivative product tank cleaning services, physical chemical treatments and hydrocarbon recovery were split off from Befesa Argentina, S. A., together with all associated equipment and staff, and merged with the assets of the company Soluciones Químicas, S. A. This resulted in a new company, Befesa Servicios, S. A., which started operating on that date, continuing the activities of the companies that had provided their assets and industrial cleaning staff.

Befesa Chile

Befesa Chile, through its company Soluciones Ambientales del Norte, carries out the integral management of solid hazardous and non-hazardous industrial waste. It does this through temporary storage, final disposal systems and treatments aimed at valorizing the waste and minimizing the hazard posed by it, recycling wherever possible. The waste, which is mainly produced by mining and industry, is managed safely and responsibly, contributing to the country's sustainable development.



Its Sierra Gorda plant, located in the Atacama desert 120 km inland from Antofagasta and 1,600 km from the capital Santiago, occupies a 40 ha plot of land and has been operative since May 2008. This year, it managed over 12,000 t of waste. In addition, its first two trucks were placed at its customers' service and it carried out the integral management of two sites in Codelco Norte. Furthermore, the company is now at the final stage of implementing its integral management system to obtain ISO 9000, ISO 14000 and OHSAS 18000 certification. It is also implementing laboratory procedures to obtain certification under Chilean Standard 17025.

Befesa Peru

Befesa Peru specializes in providing industry with integral environmental services, including the collection, transportation, treatment and final disposal of industrial and hazardous waste, environmental management of industrial installations, recycling of metallic containers and exports of PCB. All this is accomplished through tried and tested techniques pursuant to national and international standards that guarantee respect for the environment. This way, the company employs the best available technology to help protect both the environment and public health, ensuring that waste is kept in strict isolation and permanently removing any risk by monitoring it during operations and following its sealing.

Over 2009, Befesa improved the efficiency of its operations and developed new services and infrastructures to serve a greater number of customers. During the last quarter, a fixed dual-chamber incinerator came into operation, and work began on the construction of the facilities for the new safety storage deposit in Trujillo, 500 km north of Lima.

Befesa is the first and only company in Peru to be authorized by the Ministry of Health's Directorate-General for Environmental Health (DIGESA) to carry out the treatment and final disposal of hazardous industrial waste. In addition, it enjoys the approval of the Environmental Impact Study (Estudio de Impacto Ambiental). The company has successfully managed over 21,000 t of waste.

Befesa Mexico

Befesa Mexico and its subsidiary, Sistemas de Desarrollo Sustentable (SDS), carry out the management, processing and confinement of hazardous waste for industry and the public sector. These activities help promote sustainable development by offering a responsible alternative to the management of hazardous waste, which might otherwise lead to significant environmental contamination.

The year's main projects include managing the hydrocarbon and soda-contaminated land of the former "18 de Marzo" refinery in Mexico City as part of the project to remedy this situation in preparation for the Federal Government's plans for its Bicentenario park.



Activity Report 2009
ABENGOA

7.4

Information Technologies and Services

Telvent is a global technological solutions and business information services company that helps to enhance the efficiency and security of leading companies worldwide. Telvent targets markets tagged as critical to the sustainability of the planet, including the energy, transportation, agriculture and environmental sectors.

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International Presence



Key figures 2009

Revenue (M€)	759
Gross Cash Flows (M€)	173
Electrical Energy Transmission & Distribution Management (GWh/día)	> 140,000
Train, Metro, Bus Passengers Travel Management (M passengers/year)	> 2,500
Average number of employees	5,787
Hours of training	216,379

Our Business

Over the course of 2009, markets continued to suffer the fall-out of the global crisis, which first emerged in 2008. This is not confined solely to the financial crisis, but also encompasses all aspects of the energy crisis, particularly environmental concerns. Despite this backdrop, Telvent has continued to grow and has even consolidated its strategic targets in those markets that have a direct impact on the planet's sustainability, such as energy, transportation, the environment and agriculture.

The company has played a central role in a host of external and internal initiatives and events that have enabled it to consolidate its position in all possible fields. If we had to summarize what the year 2009 has meant for Telvent, we would simply say that the company has become more solidly entrenched and now focuses on sustained growth.

Telvent has continued to demonstrate its unflinching commitment to sustainability and security and, in particular, to seeking out excellence in management and innovation applicable to all lines of business and professional relationships: with investors, analysts, customers, suppliers, employees and society in general. All the foregoing falls within the company's strategic framework, as shaped by its mission, vision and values.

Telvent's mission is to provide fully comprehensive, efficient and secure management services to help manage the operational and business processes of leading companies worldwide.

Telvent works on a daily basis to become the global company with the most talented professionals in each country. These people, through the use of cutting-edge information technologies, together with their customers, help us to overcome the formidable challenge of creating a sustainable and secure world for future generations.

Telvent is wholly committed to the underlying criteria of integrity and ethical conduct and will attain its mission on the basis of the following core values:

- Showing honesty and respect at all times in dealings with its customers, shareholders, collaborators, technological partners and suppliers.
- Demonstrating flexibility and the capacity to assume risks, enabling it not only to maintain but also strengthen its position of leadership in the industrial sectors in which it operates.
- Supporting innovation, hard toil and team work among the highly qualified professionals that make up the company.
- Predicting and utilizing future industrial and technological trends on the path towards long-term business success.

Telvent, the only Spanish company listed on the North American technological NASDAQ index (TLVT), is currently configured as a global technological solutions and business information services company that helps to enhance the efficiency and security of leading companies worldwide.

Boasting over 5,900 highly qualified workers, distributed among Telvent's many work centers worldwide, the company serves those markets tagged as critical to the sustainability of the planet, of which we highlight the energy, transportation, environmental and agricultural sectors.

Telvent is present in 24 countries around the world, with offices and facilities from which the business units conduct their respective business activities. In addition to its head offices in Madrid (Spain) and Rockville, Maryland (United States), Telvent has offices in the following locations:

- Europe: Spain, United Kingdom, Netherlands, Sweden, Switzerland, Greece and Portugal.
- North America: United States and Canada.
- Latin America: Mexico, Brazil, Venezuela, Peru, Chile, Uruguay, Panama and Argentina.
- Asia-Pacific: China, Thailand and Australia.
- Middle East-Africa: Lebanon, Turkey, Saudi Arabia and Qatar.

Rooted in the growth that Telvent has experienced is a strategy based on diversification by business and geography; corporate presence in sectors experiencing huge growth and low seasonal fluctuations, which generate recurring trade and provide the company with a solid foundation; in-depth knowledge of the market, with an extensive base of loyal customers; and an unwavering commitment to permanent innovation.



Telvent is well-known for preferring long-term relationships and for following a business model geared toward stable relations with its customers. Every year, more than 85 % of sales come from existing customers and 30 % from recurring trade agreements. These figures can largely be explained by the fact that Telvent has forged its policy of quality around one key principle: customer satisfaction.

Telvent maintains direct and uninterrupted contact with its customers, given that fluid communication allows the parties to improve the quality of products and services. Telvent constantly strives to offer the very best technologies and services based on innovation and excellence. It also conducts a yearly customer satisfaction survey to acquire further information on how the company has performed in which it is involved.

This level of success has been made possible thanks to the hard work and dedication of Telvent's personnel. Telvent's corporate vision specifically mentions the overriding need to attract and retain the finest professionals in each area and country in which the company operates.

In the field of social action, Telvent has a Framework Equality Plan in place and all workers are offered the same specialized and continuous training opportunities. In 2009, the number of hours of training run exceeds 250,000, distributed in different areas of specialization: new techniques, professional refresher courses, management models, administration and finance, the environment, quality, operations and logistics, office systems, languages and risk prevention, among others.

In addition to customers and employees, Telvent has identified investors, suppliers and the environment as relevant stakeholders. The company is fully aware that all of these stakeholders expect the highest levels of global performance by the company. This has prompted Telvent to offer them transparent and accurate information on its activities, policies and results.

All stakeholders can find detailed information on the corporate website and also have e-mail boxes available to make enquiries and communicate with Telvent.



Looking ahead to 2010, Telvent will continue to focus on the core principles of excellence and innovation as the cornerstones of its business, always in the interests of a more secure and sustainable world. In this regard, Telvent will remain committed to the following objectives:

- Providing solutions and services that help curb CO₂ emissions.
- Improving the mobility of people in relation to their daily travel needs.

- Developing technological solutions to ensure the efficient management of electrical energy, oil and gas.
- Offering a high added value technological response geared towards protecting the environment worldwide.
- Offering a global technology outsourcing model that covers the complete life cycle of customers' information and communication technologies, thereby guaranteeing their security.
- Streamlining the exchange of proprietary information in real time, which is of high added value to farmers and other critical sectors of the current social model.

2009 in Review

Telvent successfully navigated a difficult 2009 in light of the prevailing economic conditions worldwide and managed to close the year in positive figures.



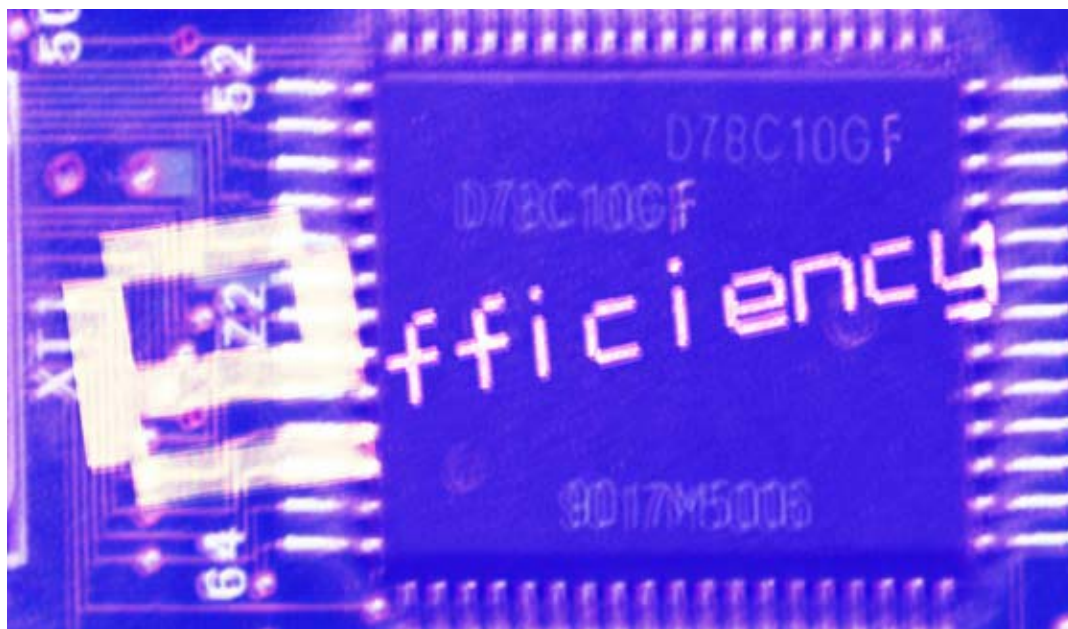
Focusing on the Energy business line, Telvent's business strategy of offering products and services that optimize value and foster excellence in performance for customers' businesses has yielded two highly significant signs of growth: An increase in the company's market share and an increase in levels of customer satisfaction. Smart Grid solutions applied to the electricity sector are paving the way for future growth, that had already begun to materialize in 2009.

Regarding Transportation, 2009 was characterized by the company's market leadership in territories such as Spain and the United States, with particular emphasis on urban mobility and toll management, and also by the company's ability to secure new agreements in the rail transportation business line. The company also managed to consolidate its business concerns in Latin America, Asia-Pacific and the Middle East. For a further year, Telvent's relationship with recurring customers bore testament to the strength of its range of intelligent technologies for the transportation market, while underscoring the enormous trust that such customers place in the company.

The Environment division continues to attract the loyalty of its customers, who have once again confirmed their trust in the company. Geographical expansion was another of the defining features of 2009.

During 2009, Agriculture further consolidated its status as the overall leader in the provision of business information services in support of production, marketing and the distribution of grain and livestock, predominantly in the North American market.

Lastly, Telvent's Global Services division managed in 2009 to round off its 360° suite of services, products and solutions. The full integration of Matchmind and the migration of capacities from the former Public Administrations business area to Public Administrations, Health and National Security, have completely reinvigorated the company's portfolio of services solutions and allowed us to develop a business model capable of responding to customers' needs over the entire technological life cycle.

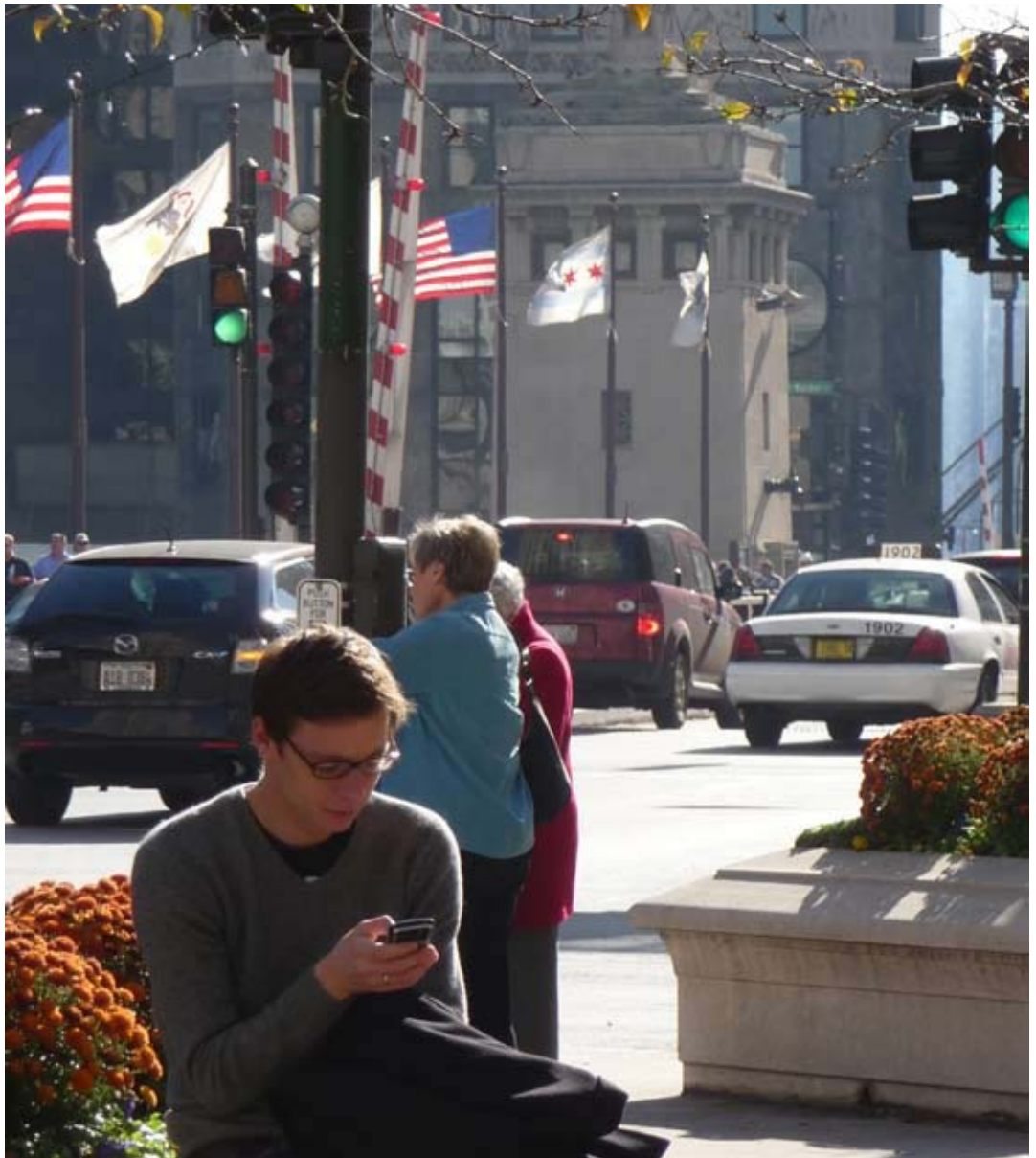


Over the course of 2009, Telvent received a host of awards and accolades in recognition of its performance, its business excellence and its dedication to forging a more sustainable world:

- Muévete Verde Award from Fundación Movilidad of Madrid City Council in the General Mobility Plans and Initiatives section, granted in recognition of the numerous initiatives geared towards sustainable mobility within the company.
- Telvent's Global Services division received an award for Business and Related Services at the XXI Annual Ceremony of the Computerworld Honors Program. This award was granted in recognition of the success of the best practices project performed by Global Services in 2009, which primarily involved the design, development and start-up of a series of processes, technologies and services intended to transform corporate culture, procedures and conduct tied up with IT services.
- SustainableBusiness.com, a reference website and business directory that combs through and analyzes the world's "green" markets, included Telvent in its "Top 20 2009" list. This effectively positions Telvent among the world's 20 most sustainable companies. The Sustainable Business 20 ranking (SB20), "The World's Top Sustainable Business Stock", comprises the 20 companies that SustainableBusiness.com believes are currently leading on the path towards sustainable economies.

- The magazine Fortune featured Telvent in its list of companies that have experienced the most rapid growth. Telvent is currently ranked 15 among technological companies and 70 on the overall list. The list includes global companies that have witnessed extraordinary growth ratios over the last three years in terms of earnings per share (EPS), growth in sales and returns.

2009 also marked the fifth anniversary of Telvent as a NASDAQ listed company. Telvent was first listed on the NASDAQ technological market in 2004 and remains today the only Spanish company to feature on this prestigious stock index. To coincide with this milestone, Telvent held its Fifth Annual Meeting of Analysts and Investors at the NASDAQ stock exchange and was, once again, invited to attend the closing ceremonies of the North American technology-focused market.



Telvent was likewise selected in 2009 to feature on the new NASDAQ OMX® Clean Edge® Smart Grid Infrastructure index, which centers on the Smart Grid intelligent electricity networks as a key strategy for a future of sustainable energy.

Our Activities

Telvent offers high added value information services and technological solutions in those sectors that are critical to the sustainability of the planet: energy, transportation, the environment and agriculture.

Starting with Energy, Telvent offers solutions to ensure the efficient and optimized management of electrical energy, oil and gas. Telvent develops advanced applications to control the automation and management, in real time, of these industries' information. Telvent's solutions in this sector, which include Smart Grids, optimize the use and mix of the planet's natural resources, while minimizing the impact on the environment of the activities associated with the energy supply.

The Transportation business area offers intelligent solutions to enhance people's mobility when travelling on a daily basis. Telvent helps to manage road, rail and maritime transport infrastructures so as to increase security and reduce contaminating emissions by championing public transport and improving mobility.



The Environment business area offers customers technological solutions and added value services that help them adapt to and cushion the effects of climate change on the population and on biodiversity while also fostering the concept of sustainability. The area focuses in particular on observing and predicting weather conditions applied to the transportation and energy sectors. It also specializes in technological solutions geared towards the efficient management of the complete water cycle, encompassing water treatment and desalination facilities, along with transportation and distribution.

Telvent offers critical business information for decision-making and marketing to the numerous players involved in the agricultural supply chain. This proprietary real time information is invaluable for managing agricultural business, benefitting producers, middlemen and traders alike, and covers grain spot prices, climatic conditions and a range of different specific content used as reference information within the industry. By using the Grain Trading Portal, Telvent connects buyers and sellers and facilitates relations and commercial dealings between them.



Telvent offers technological consultancy, outsourcing, software development and IT infrastructures services to a wide range of industries. Through its portfolio of services, Telvent covers the entire life cycle of its customers' technology, thereby enabling the latter to streamline the management of their business and resources. Furthermore, as Telvent hosts customers' technological platforms at its own energy efficient data centers, the company is actively improving the sustainability of the planet.



Energy

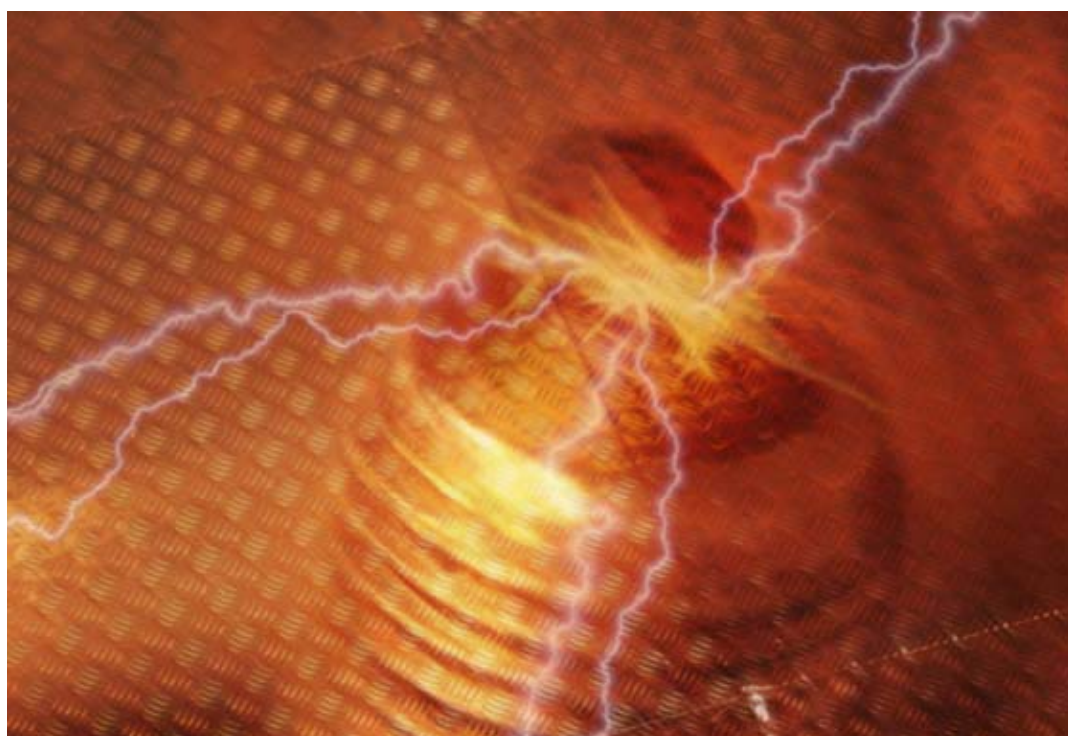
Telvent's Energy business area is the market leader in developing and supplying turnkey solutions to control the task of automating and managing information, in real time, for the oil, gas and electricity transmission/distribution industries. Advanced supervisory control and data acquisition systems (SCADA) and business geographic information systems (GIS) are integrated with other premium products and services to create Telvent's impressive suites of energy solutions: Suite Smart Grid Solution (SGS), the ArcFM™ solution, the Liquid Suite and the Gas Suite. These solutions have illustrated the company's ability to guarantee the security and sustainability of energy companies' operations, thereby optimizing the functionality and profitability of the business.

The suite of software applications includes high performance OASyS DNA SCADA, which aids real time data processing, database management and secure, distributed, open and

scalable interconnections. The OASyS DNA is integrated with a graphic user interface (GUI) and makes it easy for the company to compile critical information in real time for use in practically any business area.

Telvent complements these cutting-edge infrastructure solutions with its impressive market-leading range of systems integration, project management, applications development and IT services. Telvent allows its customers to concentrate on project design and analysis and take full advantage of their business and reengineering opportunities, while also helping them to complete operations successfully by meeting business requirements and strategies.

Over the course of 2009, Telvent's Energy business area pressed on with its mission of providing premium real time IT solutions to the world's oil and gas markets and to electric utilities. Despite the gloomy economic environment affecting most of the world, Telvent's Energy business area reported sharp growth in 2009, while also steadily increasing trade name recognition and presence in strategic territories, specifically targeting North America, Latin America and Europe.



The chosen business model entails combining the company's in-depth knowledge of the market, particularly the vertical market, with sturdy relations characterized by long-standing recurring trade. The final link in the business model is Telvent's human talent and management team, the people who ensure that promises become results. This business model has afforded Telvent more than 450 electric utilities as customers and over 260 customers from the oil and gas sector. Telvent's customer base spans the entire world and represents a genuine Who's Who list of energy companies.

In keeping with its global vocation, Telvent's international exposure has continued to grow as it provides solutions and services to its customers around the world at all times, thanks to the 1,300-plus team of energy experts working at the global product centers, competency centers and delivery units.

Telvent's Energy area works in the following segments:

Electric Utilities

The Utilities segment of Telvent's Energy business area has been working on applications specific to the utilities industry and ancillary services since 1980. Telvent has built up a thorough understanding of the specific needs of electric utilities to be able to access and update operating data from different locations.

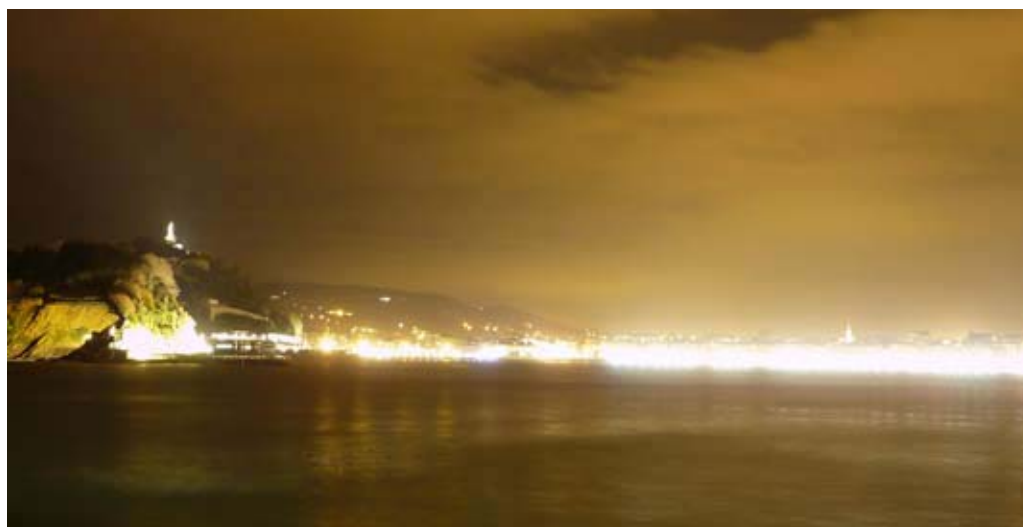
Telvent's Smart Grid services allow intelligent analytical applications and tools to compile data from the grid and make it available in real time so as to improve day-to-day operations. Among these services, Telvent's advanced SCADA-integrated Distribution Management System (DMS), GIS and outage management system allow for real time control and efficient energy management. DMS provides enhanced staff and infrastructure efficiency, enabling the company to report improved financial results while enjoying more accurate information for decision-making processes.

Oil and Gas

Telvent's Oil and Gas business area offers applications for operational monitoring and measurement of pipelines and energy management, all in real time. It is seamlessly integrated with Telvent's SCADA infrastructure products to create state-of-the-art solutions for crude oil pipelines and products, ranging from the wellhead to the boardroom.

Enterprise GIS

Telvent's GIS solutions area provides utilities with tangible benefits for cutting costs, upping productivity and offering better and more agile services to their customers.



The main projects and milestones of Telvent's Energy division over 2009 were as follows:

- Telvent began work on designing the underlying project and developing and starting up the Smart Metering Management system (SMM), a component of Telvent's integral Smart Grid solution, for Fortum, the Finnish energy company. The project will provide Fortum with real time intelligence to revolutionize both customer relations and the operational aspects of its electricity grid.

- Contract with PEMEX (Petróleos Mexicanos) in Mexico to implement a SCADA control system in seven product pipelines along the Mexican pipeline network of PEMEX's Refining Division. The control system will integrate nearly 2,568 km of pipeline, representing 19 % of the total length of the national network and spanning eight sectors of the Republic of Mexico. In contrast to oil pipelines, which transport only crude, multi-product pipelines are able to transport different kinds of liquid hydrocarbons.
- Contract with Petroproducción, a subsidiary of the Ecuadorian government's Petroecuador state corporation, to implement a SCADA OASyS system at Petroproducción's main control center and satellite production centers. The new system will allow Petroproducción to centralize the task of managing its installations in just one main control center located in Lago Agrio, connected with various systems distributed among the different substations, generation centers and oil production stations.
- Contract with PetroChina, in China, to implement a system to monitor and control 28 stations, as well as 35 block valve stations and 5 remote terminals located along China's largest and longest liquid pipeline network. The oil pipeline measures more than 2,100 km and overall the solution will enable PetroChina to manage its entire multi-product pipeline in real time, thereby improving operational security.
- Contract with Progress Energy in the United States to supply an OASyS DSCADA/DMS system. The company includes two major utilities that supply over 3.1 M customers in the states of North Carolina and Florida. The project involves implementation of the project Smart Grid – Response to Distribution System Demand. This is one of the first projects of its kind, featuring an advanced distribution network and integration of Smart Grid infrastructure in the United States.
- Contract with Enogex in the United States to upgrade its OASyS 6.3UX system with Gas Suite to OASyS DNA, this being the second stage of an upgrade project. Natural gas gathering, processing, transportation and storage are the core activities of Enogex LLC, which has facilities at the main natural gas producing basins of Oklahoma. This interstate supplier of natural gas pipeline and intermediary services boasts more than 50 years of experience in the industry and over 12,700 km of pipeline for gathering and transporting gas. Enogex currently manages the eleventh most extensive gas pipeline network in the country.
- Contract with the Chilean company SEC, which will soon be able to benefit from the ArcFM™ geographic information system (GIS), Telvent's Smart Grid GIS solution, to streamline the task of monitoring the country's electricity distribution networks. By replacing paper maps and manual information management processes with the ArcFM geographic database, SEC will enjoy substantial savings in both time and resources when conducting its analysis and inspection work. The accurate and fully updated graphical representation of the country's electricity networks will enable the agency's inspectors to channel their attention and resources into areas that could prove critical to energy quality and security, while also supporting and protecting Chilean electricity consumers.
- Deployment of the ArcFM™ geographic information system (GIS), part of Telvent's Smart Grid solution, for Tianjin Power. Following the agreement, Tianjin Power will be able to maintain and manage its electricity distribution grid more efficiently. The company supplies energy to the city of Tianjin, the sixth largest city of the People's Republic of China, with over 10 M inhabitants. This solution will help the Chinese energy utility improve the management and maintenance of its installations and also reduce its workload and the expenses associated with a number of its business divisions.

- Contract with Kenya Pipeline Company Limited (KPC) in East Africa to upgrade the supervisory control and data acquisition system (SCADA) for its pipelines to Telvent's OASyS DNA 7.4 system. This upgrade includes a host of new or extended functions to enhance the management of the pipeline network, helping to make pipeline operations more secure. KPC, which currently has a 900-km network and a total storage capacity of 525,000 m³, is fully owned by the Kenyan government and operates as an agency attached to the Ministry of Energy.
- Contract with Enelbar (Energía Eléctrica de Barquisimeto) in Venezuela to supply a turnkey SCADA OASyS DNA platform. Enelbar is the utility entrusted with the generation, transmission and distribution of electricity to nearly 900,000 customers in the Venezuelan states of Lara, Yaracuy and Carabobo. The utility is owned by the state corporation Corporación Eléctrica Nacional (Corporelec), Venezuela's only electric utility.

Transportation

The company has taken on the challenge of developing an integrated, secure and sustainable transportation network, the aim being to improve the efficiency of current infrastructures while helping at the same time to curb greenhouse gas (GHG) emissions.

Telvent offers its customers a fully comprehensive solution of information technologies to make significant improvements to the daily travel needs of citizens and increase the security and sustainability of the different modes of transport for both people and goods.

Over 2009, Telvent consolidated its Transportation activities in certain strategic markets.

Business in North America was largely driven by real time traveler information projects, a field in which Telvent is the market leader.

The Asia-Pacific region continues to stand out as an area of business growth, thus helping to boost revenue.



In the Middle East, 2009 was characterized by the deployment of the ATVAM project in Saudi Arabia, which was awarded in 2008. Once completed, it will increase the international exposure of Telvent's Road Safety business line.

Turning our attention to the Spanish market, Telvent has continued to consolidate its standing with recurring operation and maintenance service agreements (Seville, Barcelona and Valladolid) and has also secured major contracts for the construction of new road infrastructures.

Telvent's Transportation business area works in the following segments:

Urban Mobility

In the present time, cities are plagued with continuous daily traffic and pollution problems due to our excessive dependence on private modes of transport. It is therefore crucial to roll out solutions aimed at improving urban mobility, curbing contaminating gases and increasing safety.

Telvent has developed a raft of management solutions and consultancy services to tackle these objectives. These solutions range from urban traffic management, urban ticketing management, citizen information systems, offence management, car parks and urban tolls.

Interurban Mobility

Improving safety and cutting contaminating emissions on the roads are two of the key objectives driving Telvent forward. For this reason, Telvent has a host of highly innovative solutions, including traffic management, offence management, tunnel management, traveler information systems and toll facilities management. The company also offers consultancy and project planning services, freeway management and intelligent traffic systems (ITS).

Rail

Telvent offers a suite of advanced management solutions to enhance safety in rail traffic and infrastructure control, and to improve user access to public transport. The company therefore leans toward and promotes intermodal transport.

Telvent's solutions range from rail traffic control and regulation, railway ticketing, station management and user information systems to remote energy control systems, communication networks and park and ride car park management.

Maritime

Telvent offers a suite of integral port management solutions coupled with a wide range of maritime and fishing simulators to operate and manage maritime transport with the utmost levels of safety.

These solutions have been designed to offer the maximum flexibility and address all the different aspects of maritime port management: Maritime traffic, port facilities control, fleet management, real time information systems, port security management, port communications and advanced business applications.

The main projects and milestones of the Transportation business area for 2009 were as follows:

- Contract with the New Hampshire Department of Transportation in the United States to implement a free-flow toll system at the Hampton Mainline toll. The project aims to improve traffic conditions over peak periods of the year and ensure that toll collection operations remain efficient and reliable.
- Contract with Interbiak in Spain to implement a toll management system on the new Bilbao southern bypass (Supersur), which was constructed to avoid the congestion caused by the 100,000-plus vehicles that travel on the A8 as it hits Bilbao every day. The project involves developing and implementing a mixed toll system, combining

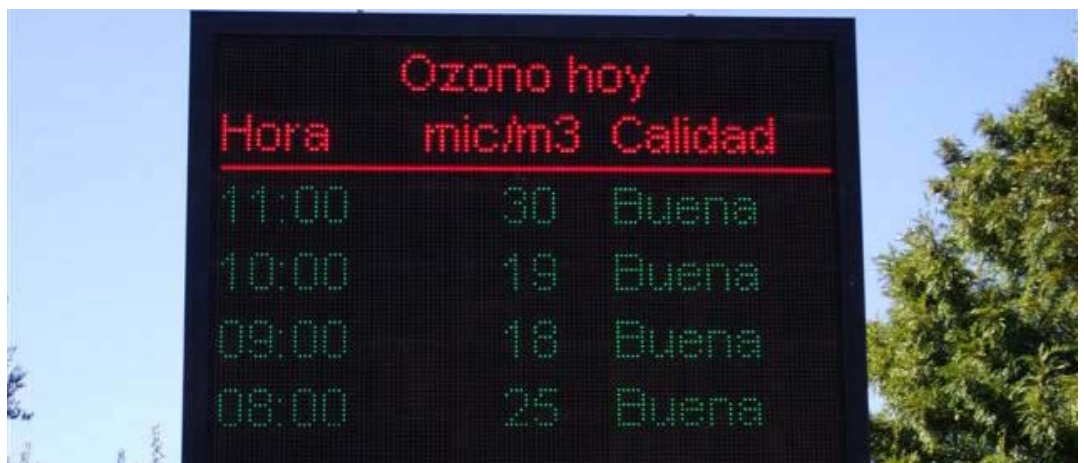
conventional and remote toll technologies and including two free-flow vehicle identification gantries.

- Contract with the "I-95 Corridor" coalition in the United States to design, implement and operate a pilot real time vehicle information and guiding system for transporters (SmartPark), which will allow truck fleets to obtain information via mobile phone or Internet on the availability of parking spaces at rest areas and truck parking facilities. The system will incorporate data on between 40 and 65 parking areas over eight different States. The aim of this system is to improve safety, reduce congestion and save on fuel.
- Contract with Adif in Spain to develop a new simulator to manage railway traffic through the use of innovative techniques that will recreate a complete railway control center in the training rooms. Operators will be able to improve their efficiency in the day-to-day management of the rail network and their capacity to resolve any incidents that may arise.
- Start-up of Bombay's urban traffic control center in India. The first stage of the project has now been successfully completed and involved the supply, installation and start-up of the urban traffic system, which will enable the Indian city to improve urban mobility and optimize its transport infrastructures.
- Start-up of the urban traffic control system developed for the Chinese city of Urumqi. The project has allowed the city to improve its urban mobility while optimizing its transportation infrastructures. As it currently stands, 138 intersections in the city of Urumqi are controlled by the solution offered by Telvent and managed from the city's traffic control center. Over 1.6 M inhabitants are now able to travel more freely through the city, enabling them to spend less time travelling in their cars every day.
- Contract with the Algerian Ministry of Transport to supply a navigation and maneuvering simulator for commercial ships.

Environment

In the interests of a sustainable future, Telvent helps different companies and public bodies overcome the social, environmental and economic restrictions affecting the supply of water to users. The company strives to ensure the quality of the drinking water supply and fosters the good use of emerging technology and services as an integral part of responsible water management.

Telvent also observes climatic conditions, forecasts the weather, tracks and prevents adverse meteorological and water-related events and monitors contamination by supplying real time technology and added value services.



Telvent's Environment business area used 2009 to consolidate its business in hugely important territories, including Europe, North America, Asia-Pacific, North Africa and the Middle East. It also established its presence in new regions, such as Egypt, Slovakia, Norway and Bosnia and Herzegovina. Lastly, it managed to hold on to its dominant market position in Spain in the fields of aeronautical meteorology, hydrometeorology and air quality.

The Environmental business area includes the following fields of activity:

Meteorology (Weather)

Aeronautical Meteorology

Telvent offers aeronautical meteorological observation solutions that meet all ICAO and WMO recommendations, as well as the operational requirements of airports, ranging from small airfields to category IIIC international airports.

Hydrometeorology

Telvent provides hydrometeorological solutions that include surface meteorology, seismic detection systems, remote detection, meteorological radar networks, surface water flow and quality monitoring and control systems and hydrologic detection and alert systems.

Meteorological Forecasting

In order to provide added value when managing customer processes and assets, Telvent has prepared a horizontal platform of decision-making support applications to serve the energy, transportation, aviation and other sectors.

Air Quality

Telvent provides the equipment, installation, maintenance and operation of Air Quality Monitoring and Forecasting Networks (AQMN), networks for measuring contaminant dispersion in cities and industrial zones and emissions in chimneys (CEM) and environmental emergency management systems.

Water Utilities

Network and Plant Supply and Cleaning

Telvent provides technological solutions and services to ensure the integral management of water and cleaning companies. In order to combine the operational and corporate activities of water utilities, Telvent has developed its Water Management Suite (WMS), a modular system that allows users to cut energy costs, enhance the efficiency of water loss management processes, enjoy accurate figures on projected demand and control the quality of the treated water.

The main projects and milestones attained by the Environment business area in 2009 were as follows:

- Contract with the Swedish Meteorological & Hydrological Institute (SMHI), in Sweden, to maintain the institute's NEMO meteorological data acquisition system for four years. The initial NEMO contract was also awarded to Telvent several years previously.

- Development of the second stage of the project for Meteoswiss in Switzerland to automate the SwissMetNet network of meteorological stations.
- Project for Nasittuq Corporation in Canada to upgrade its current control system to a supervisory control and data acquisition system (SCADA OASyS DNA). The project includes engineering, software and license services and the implemented system will be used to monitor an infrastructure of 47 radars.
- Contract with South Florida Water Management District (SFWMD) in the United States to supply software, hardware, training, consultancy and other services related to its current system, a SCADA OASyS.
- Contract with Indra in Panama to supply, monitor and install the meteorological information system for Bocas del Toro, Howard and Enrique Malek airports. The project includes the meteorological infrastructure for the three airports, comprising two head facilities and an observatory in the case of Enrique Malek airport, as well as systems to exchange and present the meteorological information at the meteorological office and the control tower.
- Contract with Sedapal in Peru to update its current supervisory control and data acquisition system (SCADA OASyS) at the La Atarjea water treatment plant, which supplies over 8 M people.
- Contract with Larsen and Toubro (L&T) in India to update the SCADA control system for Bombay City Council. The agreement includes engineering and software services.
- Contract with the Great Man Made River Authority in Libya to supply the system for controlling and automating 21 pumping stations under stage two of the GMMR project, including local automation systems, communications and interfaces with the existing central systems.
- Contract with Egyptian Engineering Projects Co. (Quality) in Egypt for a SCADA system at a water treatment plant. The project requires Telvent to implement a SCADA system to link up the 17 outstations in place at the same plant, and also to assemble two control centers (with MIMIC displays), one to control the 17 outstations and the plant, and the other to control solely the water pumping station (located on site at the water treatment plant).

Agriculture

The agricultural information services of Telvent DTN/The Progressive Farmer play a key role in supporting the sustainable and secure production, marketing and distribution of grain and livestock, particularly in the United States.

These services facilitate the daily business and operational decision-making processes of 700,000 subscribers involved in the North American grain and livestock industries. Telvent DTN/The Progressive Farmer provides key data to support day-to-day critical decisions, benefitting not only producers, who need daily updates in the rapidly changing agricultural markets, but also grain harvesters, ethanol plants, feed producers and also commodities brokers.

This source of independent information provides unique solutions with an impressive scope, including: Exclusive editorial content that has won numerous accolades, proprietary meteorological information, consultancy services for the property market and solutions for supply chain integration, making it the industry's most trusted information service.

Over the course of 2009, Telvent DTN/The Progressive Farmer further consolidated its position as the leading supplier worldwide of business information services to support the

production, marketing and distribution of both grain and livestock, predominantly in the large and hugely influential North American market. The agricultural market was highly volatile in 2009 and the main commodities, such as corn and soy beans, experienced major price fluctuations over the year and slumped well below the levels seen in 2008 (in some cases by over 50 %). The price of supplies, including fuels and fertilizers, was also impossible to predict and fluctuated considerably over the year. The combination of volatile prices with an increasingly restrictive lending market has led to a highly challenging business environment for most involved in the agricultural market and many parties have had some very difficult decisions to make.

More than ever in 2009, agricultural producers and businesses turned to the Telvent DTN/The Progressive Farmer to obtain the information needed to make these critical decisions.

Revenue from subscriptions to the core services of Telvent DTN/The Progressive Farmer continued to increase over 2009. Telvent customers displayed their loyalty and underscored the value of the product, as our customer retention rate remained at over 90 % despite the prevailing economic outlook.



Innovation has remained strong as the company has evolved, leading to new and improved products, and existing customers have continued to migrate towards the solutions that offer the greatest possible added value. Telvent's team of more than 100 internal market analysts, journalists and meteorologists produce unparalleled proprietary content within the industry.

In addition to the promising results reported in the core markets, Telvent DTN/The Progressive Farmer has continued to press on with its new initiatives. More specifically, the DTN Grain Portal has continued to grow and the industry has been gradually turning to electronic grain trade. As well as offering the DTN Grain Portal to encourage commercial dealings, the company has extended its range of products by striking up alliances with leading back office accountancy firms, the aim being to offer data integration services to customers involved in agriculture. Looking ahead to the future, Telvent DTN/The Progressive Farmer has chosen to invest early in the growing carbon emissions markets. As expected, Telvent has built up a formidable reputation as a publisher and our customers continue to trust us with their information and training needs in this area.

2009 turned out to be a volatile year for the agricultural sector, in which prices of both crops and end produce experienced considerable fluctuation. This testing environment has enhanced the value of Telvent DTN/The Progressive Farmer, as subscription services continued to enjoy their already impressive levels of customer loyalty. The company also

secured new agricultural producers and businesses as customers and introduced existing customers to its new range of added value solutions. Furthermore, the electronic grain trading initiative offers considerable advances over the key metric system, as Telvent continues to tackle the challenges arising from an agricultural sector in the throes of change.

The Agriculture business area includes the following lines of business:

Producers

Telvent DTN/The Progressive Farmer is the leading supplier of agricultural information services to the North American corn, soybean and livestock industries. The company offers hugely popular services to the many different producers.

Brokers, Converters and Associated Agricultural Businesses

Telvent DTN/The Progressive Farmer enjoys a privileged position among the leading commodity brokers and converters and associated local agribusinesses.

Risk Management

Telvent DTN/The Progressive Farmer is one of the leading commercial risk managers of agribusinesses and brokers.

Advertising

The Progressive Farmer is the leading business publication within the agricultural sector and has gone from strength to strength thanks to the company's unflinching commitment to expanding its digital information services in order to satisfy the changing needs of modern-day producers and of the advertisers looking to attract them.

Of the main achievements and milestones reached by Agriculture over 2009, we highlight the following:

- Telvent DTN/The Progressive Farmer continued to experience an increase in business associated with the DTN Grain Trading Portal, that enables producers and agribusinesses to deal in grain electronically. The electronic grain trade is still a relatively new concept, but has already made up considerable ground on the key metrics.
- Telvent DTN/The Progressive Farmer reached an agreement with John Deere Agri Services to offer data integration services to mutual customers of the agricultural sector. The target market of this new service contains roughly 600 agribusinesses in North America. The integrated data services will allow customers to improve their overall operational efficiency and to become more flexible when setting prices in the rapidly changing markets. We also expect this increased level of integration to generate new sales opportunities for Telvent DTN, while also increasing customer loyalty.
- Telvent DTN/The Progressive Farmer managed to secure a new customer in MF Global, one of the largest commercial operations and risk management firms worldwide. As an initial step, this new customer has purchased DTN Prophet X for some of its North American users, thereby opening an important door to the organization's global growth.

- Telvent DTN/The Progressive Farmer played an active role in shaping the quota and exchange initiatives for reducing carbon emissions and their possible impact on agriculture. Although existing legislation governing the quota and exchange system is still shrouded in doubt, it may still have a heavy impact on the U.S. agricultural sector. Telvent DTN/The Progressive Farmer has led the way in covering and raising awareness of this important issue by unveiling a Carbon Center and establishing a list of partners with TeraVista Systems in order to provide producers with solutions so they can take part in voluntary soil-based carbon sequestration programs (and ultimately participate in the compulsory programs if the legislation is approved by the U.S. Senate).
- Telvent DTN/The Progressive Farmer published a Special Interest Publication (SIP) on the subject of sustainability in the fourth quarter of 2009. The publication is intended for all North American users of The Progressive Farmer and focuses on environmentally friendly agricultural practices, encompassing soil cultivation, the use of fertilizers and chemical substances and other important decisions to be made by producers. The SIP was sponsored by the leading players in the sector: Monsanto, John Deere and the United Soybean Board.

Global Services

Within Telvent, the Global Services division is a horizontal business that addresses Telvent's vertical businesses by providing horizontal corporate capacities to any business, regardless of sector or market.

Telvent is the only independent supplier of information technologies within Spain able to provide added value to its customers over the entire life cycle of their technology applied to business.



Telvent offers global services and solutions that foster security, sustainability and present and future business feasibility, enabling companies and public administrations to keep up with the dizzying changes in technology, manage changes and support innovation through models of collaboration.

- Process and technology consultancy. Telvent assists its customers in the day-to-day running of their business, ranging from the initial stage of pinpointing needs to transforming the business.

- Integration and start-up. Telvent develops projects within the timeframes prescribed by the market, thereby ensuring their feasibility and ultimate success.
- Outsourcing. Telvent is fully capable of managing the daily running and maintenance of all the business information systems of its customers.

Telvent's Global Services division offers services and solutions that cover the entire life cycle of its customers' technology and has structured these capacities into a suite of horizontal solutions specifically designed to manage the four cornerstones of any company:

- Technology, as a key element behind business growth, optimization and innovation.
- Business processes, as key elements for defining, adapting and scaling the business.
- People, as the key element for developing talent and shaping the organization underlying the business.
- Assets, as key elements for managing resources and streamlining operational costs.

By following this approach, Telvent has managed to permeate all areas of Spain, positioning itself among the country's leading information technology companies. Telvent is widely recognized by its main competitors as being the only company able to offer consultancy, development and infrastructure services for information technologies.



Telvent's Global Services business area is engaged in different lines of business, through which it structures its current portfolio of vertical solutions, namely:

- Energy and Utilities.
- Industry.
- Marketing, Consumption and Distribution.
- Banking and Insurance.
- Telecommunications, Media and Technology.

- Transport and Tourism.
- Healthcare.
- Agriculture and the Environment.
- Public Administrations.
- Services.

The most notable projects and milestones of Global Services over 2009 were as follows:

- Contract with the Santander Group in Brazil to define, design and construct technological architectures, solutions and applications, of which we highlight the implementation of the Partenón system, a platform of integrated transactional systems that allows users to consistently cut operating costs while enhancing information on relations between the bank and its clients.
- Contract with the Spanish Ministry of Public Administrations to outsource all @firma systems. The project includes the monitoring, administration, management, operation and coordination of all operational environments.
- Contract with Viajes Marsans in Spain to renew outsourcing of its technological platform.
- Contract with Google Spain, in Spain, to host its technological platform. The agreement includes hosting, interconnection in the Meet-Me-Room to benefit from the information of telecommunications operators, and remote hands service.
- Contract with Vueling Airlines in Spain to renew and extend the technological infrastructure management services, 24/7 monitoring services and system and application administration services. These services entail extending and integrating the company's new hardware and software to boost its operational capacity ahead of the upcoming integration of the Clickair systems.
- Contract with BT in Spain to host its technological architecture.
- Contract with the Andalusian Health Service (Servicio Andaluz de Salud) in Spain to broaden management of the information systems in place in Andalusian hospitals. The aim is to respond to possible incidents within the system and support the technical and functional needs of hospital staff, who care for a high percentage of the population.
- Contract with Metrovacesa in Spain to renew and extend the current connectivity, security and administration services for its technological platform.
- Contract with RTVE in Spain to incorporate the latest technology in order to manage the increasing volume of portal data and offer RTVE a fully-comprehensive posting service that includes the administration, monitoring, backup, hosting and Internet access for its entire Web 2.0 platform of interactive services.
- Contract with the Salud Universidad de Chile network in Chile to supply and implement a medical history solution based on Telvent's TiCares product, against the backdrop of a project administered by the Inter-American Development Bank. This solution also falls within the scope of the hospital technology transfer initiative to generate capacities in the field of private healthcare.



Activity Report 2009
ABENGOA

7.5 Industrial Engineering and Construction

Abeinsa is an Industrial and Technological Business Group that offers fully-comprehensive solutions in the fields of Energy, Transportation, Telecommunications, Industry, Services and the Environment. Its highly innovative solutions are geared towards sustainable development and help generate value for customers, shareholders and employees, thereby guaranteeing the company's international expansion and future success and the profitability of its investments.

www.abeinsa.com

International Presence



Key figures 2009

Revenue (M€) ⁽¹⁾	2,576
Gross Cash Flows (M€) ⁽¹⁾	363
Project Back-log (M€)	6,311
New Contracts (M€)	3,464
Average number of employees	10,256
Hours of training ⁽²⁾	534,586

(1) Include corporate activity and consolidation adjustments

(2) Including the corporate area



Our Business

Over the course of 2009, a year marked by sluggish markets and investment in general, Abeinsa successfully overcame these hurdles and managed to report business growth, closing the year with a total of €2,681 M in sales, €3,464 M in new contracts and €6,311 M in back-log, representing an increase in turnover of over 30 % and ensuring the company's continued growth for the years ahead. The company focuses on projects offering high returns while working to increase its international standing.

The prevailing economic and financial climate is having a positive and negative impact on Abeinsa's business. On the one hand, investment and current projects under negotiation or in progress have ground to a halt and competition is stiffening, while customers are experiencing huge difficulties in acquiring funding and insolvency risk is running high. Yet on the other hand, there have been signs of increased public spending in infrastructure in the mid-term and a surge in renewable energies, factors that Abeinsa is relying on as the cornerstones for its future growth, which will be based on innovative solutions, a full range of high added value services, consolidated international presence and fluid relations with both customers and suppliers.

Abeinsa specializes in the engineering, construction and maintenance of electrical and mechanical infrastructures and instruments for the energy, industrial, transportation and services sectors. It also develops, constructs and operates industrial plants, conventional

power facilities (cogeneration and combined cycle), and renewable energy plants (bioethanol, biodiesel, biomass and wind and solar power), while also managing “turn-key” telecommunications networks and projects.

Abeinsa is therefore able to offer clean energy solutions by applying its technological knowledge to the following fields:

- Design and construction of electrical power plants based on renewable energies, capable of generating thousands of MWh of clean energy.
- Design and construction of biofuel plants that help to combat climate change.
- Design and construction of cleaner and more efficient power plants.
- Design and construction of efficient power lines that help to reduce energy consumption.

Abeinsa also conducts research in different fields and develops and applies new technologies to help combat climate change:

- Through Zeroemissions, it contributes to reducing emissions of CO₂ and other greenhouse gases, thereby working towards compliance with the Kyoto Protocol.
- Through Hynergreen, a market leader in hydrogen technology, with groundbreaking R&D projects in clean energy generation through fuel cells.
- Through the development of new technologies associated with efficiency.
- Through research into new renewable energies.

By following this approach, the group invests in markets where it can contribute to sustainable development, where technology and innovation make a genuine difference and where it can grow globally and become an international market leader in the long-term.

Abeinsa structures its business around six divisions or business lines: Energy, Installations, Marketing and Ancillary Manufacturing, Telecommunications, Latin America & Abeinsa New Horizons.



Abeinsa conducts business in over 30 countries and on all five continents, while operating in highly diverse social, cultural and economic environments. In this respect, the company applies global standards, policies and practices without overlooking local concerns. This allows it to understand and respond to the specific needs of the different communities it is involved with in the different stages of its business.

Company growth is based on geographic and business diversification, focusing at all times on the need to provide technological solutions that feature high levels of innovation and help to champion sustainable development.

Its extensive experience enables it to respond to the needs of its customers by developing innovative solutions. Its customer base includes most of the world's leading companies in those sectors in which Abeinsa operates, and mainly encompasses public administrations and large corporations in a raft of different industrial sectors, ranging from the environment to energy generation.

Abeinsa is fully aware of the importance of attracting and retaining talent and has adopted a competency-based human resources model, allowing it to match post to person. Its policies relating to human resources underscore the following:

- Enhancing, harnessing and conveying knowledge.
- Developing talent and competencies.
- Incorporating and integrating professionals ideally suited to each job, mission and responsibility.
- Transforming Abeinsa into a company that provides excellent conditions for personal and professional development and offers enticing conditions and working environments and an attractive human resource management model.

One of the consequences of the current widespread doubt is the huge importance being attached to risk prevention and control. Abeinsa adopts the strictest possible measures to mitigate risks by relying on Abengoa's joint management systems, avoiding contact with customers that display even the slightest signs of credit risk, taking extreme care when formulating offers and stepping up cost control processes when performing projects.



Abeinsa is unflinchingly committed to all its stakeholders and relations with them are underpinned by the principles of transparency, accuracy and professionalism.

Abeinsa ultimately intends to set itself up as a guiding light, with a corporate culture and management model that mirror its commitment to sustainable development and generate credibility, trust and respect throughout the markets, businesses and communities in which it operates.

Despite the fact that the net effect of external factors over 2009 was negative, Abeinsa has devised a suitable strategy for tackling 2010, based on the following key priorities:

- Strengthening technical, commercial and strategic alliances to diversify products and markets.
- Consolidating and stepping up business in the international markets where it already operates, while continuing to explore and expand into new international markets.
- Launching new lines of R&D&I.
- Not overlooking traditional markets by developing and following specific strategic plans for these traditional lines of business.



2009 in Review

During 2009, Abeinsa managed to maintain the levels of performance and international expansion that have characterized the company over recent years and reported significant growth in turnover and its project portfolio, enabling it to view the future with renewed optimism.



The winning combination of the talent and dedication of Abeinsa's human team is one of the driving forces behind the company's success in executing its projects. Among the numerous projects performed over 2009, we would highlight:

- Construction of Abengoa Solar's Solnova 1, Solnova 3 and Solnova 4 solar thermal power plants, all featuring parabolic trough technology and each with a power output of 50 MW.
- Construction of two solar thermal power plants utilizing ISCC technology, the first in Ain Beni Mathar (Morocco), with 470 MW of power, and the other in Hassi R'Mel (Algeria), with 150 MW of power.
- Construction completed on two bioethanol plants for Abengoa Bioenergy in the United States (Illinois and Indiana, each with a production capacity of 88 Kgal) and construction of a bioethanol plant in Rotterdam (The Netherlands), with a capacity of 126.8 Kgal, also for Abengoa Bioenergy.
- Construction of the Carhuamayo-Paragsha-Conococha-Huallanca-Cajamarca-Cerro Corona-Carhuaquero transmission line in Peru. The line is approximately 670 km in length and traverses Peru's northern mountain range at an average elevation of 3,000 m above sea level.
- Construction of package II of the electrical interconnection system for the countries of Central America (Siepac), a project requiring the installation of 950 km of 230 kV line across Nicaragua, Costa Rica and Panama.



The satisfaction of our customers after successfully completing their projects has enabled Abeinsa to secure major contracts over the year, of which we would highlight:

- The state-owned corporation Petróleos Mexicanos (PEMEX) awarded a contract to a consortium comprising Abener and Abengoa México to construct and operate, over 20 years, a 300 MW cogeneration plant in the state of Tabasco, Mexico. The new facility will transform demineralized/condensed water into steam and natural gas into electrical energy. This will then be supplied to the Nuevo PEMEX gas facility, which the Mexican corporation operates in the state of Tabasco. The future plant will be capable of generating between 550 and 800 t of steam per hour.
- The Brazilian Electricity Regulatory Agency (Agência Nacional de Energia Elétrica, or ANEEL) awarded the Porto Velho-Jauru consortium (25.5 % Abengoa Brasil, 25.5 % Compañía de Transmisión Eléctrica Paulista and 49 % Eletronorte) a contract to construct and operate two sections of 230 kV electric transmission line, with a combined length of 1,500 km.
- Instalaciones Inabensa was awarded the contract for the A4 and A7 packages of an 800 kV direct current transmission line running from Biswanath Chariyali to Agra and from Gorakhpur to the Gomti River in India. The projects require the company to construct a total of 401 km of direct current power lines and, together with the 2,375 km 600 kV power line currently commencing construction in Brazil, helps to consolidate Abeinsa's position as one of the leading companies worldwide in the construction of such direct current lines.
- The Argentine Federal Office for Electrical Energy (Consejo Federal de la Energía Eléctrica, or CFEE) commissioned Teyma Abengoa, Abeinsa's subsidiary in Argentina, to construct the southern section of the Comahue-Cuyo electric interconnection line, a project that falls within the federal plan to transport electrical power at 500 kV, with an approximate length of 518 km.

This increase in business has allowed Abeinsa to consolidate its standing as a world market leader. According to the 2009 ENR (Engineering New Record) ranking, Abeinsa is ranked as the largest international construction firm for transmission and distribution, the second largest in electrical infrastructures and the ninth largest contractor in Latin America.



Abeinsa's strategy of geographic and business diversification over recent years has been reflected in the arrival of new subsidiaries and the acquisition of new companies in 2009:

- The business group has strengthened its presence in North America by opening new subsidiaries: Teyma USA, which offers third parties engineering and construction services under "turn-key" industrial projects, particularly in the field of renewable energies, solar energy, biofuels and generation technologies, civil, electric, hydraulic, architectural infrastructure and urban services; and Abengoa T&D, which operates in the electric transmission line engineering and construction sector, with the added value of offering core components in power line installation, these being the structures supplied by Comemsa. Abengoa T&D is therefore seeking to replicate the electricity market business model in other territories, thereby consolidating its leadership throughout the Americas.
- Through Inabensa's new subsidiary in Australia, Abeinsa has boosted its international presence and now boasts operations on all five continents.
- 2009 marked completion of the negotiations in which Abengoa Chile acquired the company Servicios de Ingeniería SDI-IMA, a key player in the Chilean electrical infrastructure engineering sector, thus reinforcing and strengthening its continued development.
- Abengoa Brasil created Omega, a management, operation and maintenance firm located in Rio de Janeiro, which includes the operations center and is able to operate electric transmission lines located in any part of the country.
- Nicsa incorporated its subsidiary company in Brazil, Nicsa Fornecimento do Materiais Eletricos, with which it hopes to consolidate its international standing as a supplier of electrical material, instrumentation and communications for heavy industry in general.
- At the start of the year, Hynergreen acquired part of the Dutch company HyGear, which specializes in the development of hydrogen production systems through natural gas reforming, the aim being to join forces in developing reactors and compact systems for hydrogen technologies.
- Zeroemissions strengthened its geographic presence over the year, and now has subsidiaries in Rio de Janeiro, Beijing, Bombay, Moscow, Brussels and New York.

Our Activities

Abeinsa is an international company specialized in industrial engineering and construction. Its business revolves around six divisions or lines of activity: Energy, Installations, Telecommunications, Marketing and Ancillary Manufacturing, Latin America, and New Horizons.

1. Energy. Integrated solutions in the energy sector, including the promotion, funding, engineering, construction and operation of new power plants and industrial facilities, with special emphasis on the solar and biofuel sectors, and streamlining of existing facilities.
2. Installations. Engineering, construction and maintenance of electric and mechanical infrastructures and instrumentation for the energy, industry, transportation and services sectors, as well as the installation of insulation, refractory and passive fire protection materials.
3. Marketing and Ancillary Manufacturing. Marketing of products associated with the activities described above and manufacture of auxiliary elements for energy and telecommunications.
4. Telecommunications. Integration of telecommunication networks and "turn-key" projects.
5. Latin America. A market in which the company has maintained a solid presence for more than forty years through local companies that carry out all the Business Unit's activities with full autonomy.
6. Abeinsa New Horizons. Develops innovative projects relating to sustainable development: hydrogen technologies, energy efficiency, carbon credit management, CO₂ capture and valorization, and new renewable energies, such as ocean energy.

Energy

This business line focuses primarily on the development, design, construction and maintenance of industrial plants and conventional energy (cogeneration and combined cycle) and renewable energy (bioethanol, biomass, solar, and geothermal) power plants.



Demand for energy infrastructures geared towards sustainability and renewable energies has increased sharply on the international stage, both in the more developed countries and in emerging or developing economies. Abeinsa, through Abener, has rolled out a plan to heighten its international presence, with its geographic expansion focusing on the following territories: Eastern Europe, the Middle East, North Africa-Maghreb, Latin America, the United States and emerging countries such as China and India.

The Operation and Maintenance (O&M) business line applied to generation plants includes preventive, scheduled and corrective maintenance of equipment and systems, and the operation thereof to ensure the facility operates reliably and meets its technical specifications with a view to minimizing fuel consumption and Greenhouse Gas (GHG) emissions while maximizing the load factor.

Abener Energía

For Abener, a market leader in engineering and construction for sustainable development, 2009 signaled a turning point. It completed highly innovative projects, penetrated new emerging markets and contributed to the environment, all key to its continued consolidation on the international market.

Abener operates in three areas: solar, biofuels and generation.

As regards solar business in the Maghreb, the company has fully established its standing by constructing two groundbreaking projects: the world's first two ISCC (Integrated Solar Combined Cycle) plants, located in Algeria and Morocco and which it has developed in collaboration with other group companies. Abener's ventures in North Africa are prime examples of its capacity to tackle the challenges facing it in the present, given that there is no prior experience of ISCC facilities.

Brazil and North America are the world's largest markets in terms of bioethanol production and consumption and already Abener has fully consolidated its position in them, with numerous projects that are progressing very satisfactorily. Moreover, Abener is continuing to construct Europe's largest bioethanol plant in Rotterdam (The Netherlands).

In Mexico and the rest of Latin America, Abener has an extensive portfolio of generation projects, ranging from upgrade work and simple/combined cycles to motor and cogeneration plants. The operational success of these industrial plants is a fine illustration of Abener's formidable capacity in this business area. A further example of this is the fact that Abener, through a consortium with Abengoa México, has been awarded the new 300 MW cogeneration project for PEMEX (Petróleos Mexicanos).



Operation and Maintenance

During 2009, the O&M Division conducted its business at four different plants: Three cogeneration plants located in Alcantarilla (Murcia), Ayamonte (Huelva) and Cuevas de Almanzora (Almería), all in Spain, and the Ain Beni Mathar ISCC plant in Morocco. The total power output of all these facilities amounts to 502 MWe.

The company is currently selecting the staff that will make up the O&M team of the 150 MW ISCC plant at Hassi R'Mel (Algeria). Abengoa's experience in handling the O&M of these plants in North Africa will be enormously useful for developing solar energy production facilities within this market, one of the strategic horizons offering the best operational opportunities for the company.



Installations

This is the business line in which Abengoa commenced its industrial activity back in 1941. The parent company is Inabensa, S. A. and it engages in the group's core activities, mainly engineering, construction and maintenance of electric and mechanical infrastructures and instrumentation for the energy, industry, transportation and services sectors, but also the installation of refractory, insulation and passive fire protection materials.

Inabensa

Year after year, Inabensa has been strengthening its standing as one of the companies with the greatest experience in the electricity sector, having inherited both know-how and tradition from Abengoa, its parent company and the market leader since 1941, which passed on the torch to Instalaciones Inabensa in 1994.



Electric Installations

Within this sector, we would highlight the high and low voltage customized electric installations performed by the Regional South Department for the Campus de la Salud hospital complex in Granada, the electric installations for Nestlé in Cáceres, Heineken's new Cruzcampo factory in Seville (Project Jumbo), or the high voltage installations at the home for the elderly in Algeciras for the Regional Government of Andalusia, to name but a few.

For a further year, electric installations proved to be of vital importance to the overall business of the Regional Department for Eastern Spain. Within the industrial sector, we would highlight the electrical upgrade work on the Ford factory in Almusafes for the Fiesta and C-Max Project, the work on the new cooked and sliced food production facilities of the company El Pozo Alimentación S. A. and also the new power station for Alicante airport, with its network of distribution galleries for electrical services.

Once again, Metro de Madrid entrusted Inabensa with work on two Underground lines. Firstly, renovation work on the electric installations at the stations of Chueca, La Latina and Callao on line 5 had to be finished, and on the other, line 6 required renovation work on the tunnel lighting system between Guzmán El Bueno and Puerta del Ángel.

The Regional Department for Catalonia and Aragón was involved in maintenance and construction work on the high voltage overhead lines for Fecsa-Endesa, the alternative high voltage distribution lines resulting from the services affected by the construction of the high-speed AVE Madrid-Barcelona-French Border line for Adif (the Spanish railway infrastructure administrator) and underground ducting and stringing of the 220 kV incoming supply lines at the Zona Franca (free trade zone) substation.

Large HV Lines

In the electricity lines sector, Inabensa has continued to lend its support to the development of the Spanish transmission network by taking part in some of the most important projects in which the Spanish Power Transmission Company (Red Eléctrica de España, or REE) is currently involved. Worthy of particular note is the continuation of the cable hoisting and stringing work on the 400 kV Soto-Penagos line, on the compaction section with the Aguayo-Penagos line, as well as the work on the 400 kV Pesoz-Salas, Sentmenat-Vic-Bescanó, Penagos-Güeñes, Arcos-La Roda and Tordesillas-Aparecida lines and the inputs and outputs at the Torrente substation.

Abeinsa would also single out the reconstruction work on the 220 kV Begues-Collblanc and Begues-Castellbisbal lines in Catalonia and the San Vicente-Jijona-Catadau line in the eastern coastal region as a result of hurricane Delta at the start of 2009, along with the construction of an alternative to the 220 kV Bellicens-Constantí line, with connection of the ends under service conditions.



Rail

The main highlight of Inabensa's railway business over 2009 was the contract awarded by Adif to construct the installations for the overhead contact line and associated systems for the new AVE Madrid-Eastern Coast railway access (Spanish high-speed railway), on the Motilla del Palancar-Valencia and Motilla del Palancar-Albacete sections.

As regards conventional lines for Adif, Abeinsa would highlight the rehabilitation and upgrade work on the overhead contact wire system of the Gallur-Castellón section, the full renovation and independent compensation project for the catenary on the Mataporquera-Reinosa section of the Palencia-Santander line, and renovation work on the catenary system of the El Escorial-Santa María de la Alameda section of the Madrid-Irún line.

Other highlights of 2009 included further business for Inabensa in the high-speed voltage maintenance market, with four-year contracts to carry out maintenance work on the Madrid-Barcelona and Madrid-Valladolid lines.



Maintenance and Instrumentation

Highlights here include various projects at storage stations for CLH, electrical installation work on the Cepsa-San Roque vacuum plant, electric installation and instrumentation work on the thermal storage plant in Sanlúcar La Mayor and electric installation and instrumentation work on the solar field of parabolic troughs at the Solnova 1 solar power plant.

The Almaraz and Trillo nuclear power plants were once again key pieces in the nuclear energy sector for 2009, with the numerous services rendered including maintenance and instrumentation, operation and loading, modifications to electric designs and operation of different computerized process systems.



Insulation, Refractory and Passive Fire Protection

The most significant business over 2009 at Protisa was the heat insulation work for piping and equipment, with activities focusing on the different solar power plants at Abengoa Solar's solar platform, where the company insulated the Solnova 1, Solnova 3 and Solnova 4 solar fields and the power islands of Solnova 3 and 4.

In the field of passive fire protection (PFP), fireproofing work continued on the extension to the Cepsa refinery at the La Rábida facilities and the company also conducted maintenance work on the fireproofing at the Gibraltar refinery, all within the framework of the master agreement signed with Cepsa.

Mechanical Installations

In 2009, the Mechanical Assemblies Division constructed the solar fields for the Solnova 3 and 4 plants, and manufactured, supplied and installed all the piping for the heat transfer fluid (HTF) of the three plants. Nearly 30.5 km of piping was required for this project, with diameters ranging from half an inch to 26 inches. The total length to be welded and fully X-rayed amounts to 135,000 inches.

In the installations sector, the Mechanical Assemblies division collaborated on a project to reform the installations of the old Vigil de Quiñones hospital and bring it in line with existing regulations.



Concessions

Within the Service Concessions Division, highlights include the contract to construct and operate the Mexiquense Cultural Center in Texcoco, Mexico.

Construction work also continued on the Costa del Sol hospital in Marbella, which is scheduled for completion in 2010.

The company also constructed the Campus Palmas Altas photovoltaic plant, implemented energy efficiency projects and began to develop various wind farms.

Manufacturing

Over 2009, Inabensa's Manufacturing Division supplied Red Eléctrica Española (REE) with auxiliary services cabinets, protection relay frames and distribution boxes, all within the framework of the Asset Integration Project (AIP) covering several substations.



Overseas

Year after year, business overseas has helped to strengthen the company's standing in its strategic markets.

The group has continued to expand operations overseas with a host of important projects, including, in particular, the continuation of the Siepac projects in Central America (across Nicaragua, Costa Rica and Panama) and Libya (construction of the 400 kV single circuit Misurata-Surt-Ras Lanouf-Agdabia line, scheduled for completion in 2010).

In Serbia, the scope of the contracted work includes engineering, supply of materials and civil construction work, hoisting of supports and stringing of conductors for the 400 kV single circuit Leskovac-Vranje-Macedonian Border line, spanning 100 km in length. The project is being financed by the European Agency for the Reconstruction of Serbia, an official body attached to the European Union.

Inabensa Maroc

In 2009, Inabensa Maroc was awarded a two-year contract with the operator Meditel to install fiber optics in various Moroccan cities. Together with the construction of Sites GSM, the project consolidates Inabensa Maroc's standing as a benchmark company in the development of telecommunications infrastructures in the country.

The company secured a new customer in the energy sector in 2009 (the steel company Maghreb Steel) to bolster business in the field of high voltage transmission lines for the Moroccan freeway authority.

Inabensa Bharat

Inabensa Bharat is currently completing work on the 400 kV D/C (135 km) Baripada-Mendhasal transmission line for Powergrid Corporation of India Ltd.

A further highlight of the year was the contract secured by Inabensa Bharat to install two sections on the 401-km 800 kV D/C two-pole Biswanath-Chariyali line, consisting of six 37-mm diameter wires per pole. Both projects are currently in their initial phase and each of the awarded sections will last approximately 30 months.

Inabensa Tianjin

Over 2009, the group's subsidiary in China, Inabensa Tianjin, continued to report impressive growth in its manufacturing business. Among the many projects performed over 2009, we would single out the manufacture, through Telvent, of RMY local traffic control regulators in Spain, or the production of motor control centers and turbine control equipment for a variety of projects in Iraq and Pakistan.

Furthermore, Inabensa Tianjin was awarded the ISO 9001 and CCC (China Compulsory Certification) quality standards for low voltage motor control centers, enabling the company to commercialize this equipment in the domestic market with local customers, thereby opening up an important path for further business development.

Inabensa France

The most significant engineering projects secured by the French subsidiary over 2009 include the project currently underway to modify the 2x400 kV Coulange-Pivoz Cordier line, where the company is assessing the possibility of changing conductors for high capacity ACSS 687R or ACCR 1023/T23 wires. With regards to high voltage overhead lines, we would highlight the company's involvement in the reinforcement work on the 400 kV Tamareau-Tavel, Avelin-Warande-Weppes and Eguzon-Rueyres lines and the construction of the 63 kV Bergé-Dax line.

Inabensa Abu Dhabi

In 2009, Inabensa's subsidiary in the United Arab Emirates continued to consolidate its position as a benchmark integrator of electrical engineering and telecommunications projects, having successfully designed a fiber optic network for ADWEA and installed 16 new substations to complement the medium voltage grid for ADDC in the western region of the Emirate of Abu Dhabi.

The Arab Emirates transmission grid operator, Transco, awarded the company a contract to install two 132 kV overhead lines over 71 km of mountainous terrain on the ocean coastline of the Emirate of Fujairah, the aim of the project being to link the capital city with the city of Dibba.

These projects help to strengthen the company's presence and underscore its commitment to the country and will act as the building blocks for growth in other countries in the Persian Gulf.



Inabensa I+D

In 2009, Inabensa's R&D Department was involved in a host of strategic projects and initiatives to improve the company's future business growth, such as energy efficiency and CO₂ capture and valorization. 2009 also saw the company take its first steps towards establishing a technological presence in marine energies.

Telecommunications

This line of business is committed to integrating "turn-key" telecommunication networks and projects. The activity is carried out by Abentel and by Inabensa's Communications Division.

Abentel continued to carry out its traditional outdoor plant construction and maintenance business over 2009 and was also involved in the provision and maintenance of customer loops and equipment. Within this latter field, the company reported a sharp increase in the installation and maintenance of ADSL broadband and its range of associated products.

Abentel

During the year, the company continued to work on the 2007-2012 Global Customer Loop Agreement with Telefónica de España S. A. U., with implementation continuing in the provinces of Alicante, Badajoz, Barcelona, Cádiz, Jaén, Madrid, Seville, Tenerife and Valencia. Abentel is Telefónica's chief collaborator on this agreement in Spain.



Within the scope of the agreement, the company took part in the project to install and maintain the new VDSL+ networks to double, or even triple, the channel bandwidth of ADSL and Imagenio customers, benefitting residential and corporate users alike. This improvement to Telefónica's copper wire network allowed it to improve its customer ratio for the year.

Moreover, and as a result of Abengoa's sustainability policy, Abentel started to renew the vehicle fleet of the customer equipment installation and maintenance technicians for Telefónica de España. Deployment of this new fleet started in Madrid, where 33 diesel-powered vehicles have been replaced by others with engines adapted for E85 bioethanol. Work will continue in the near future to replace existing vehicle fleets at Abentel's other work centers.

Thanks to this move, Abentel is helping to curb Greenhouse Gas (GHG) emissions through its greenhouse gas reduction policy, thus helping to improve the environment for the benefit of society in general.

Inabensa Communications Division

Despite the slump experienced within the sector, Inabensa's Communications Division has continued to attract impressive levels of business from telecommunications operators, chiefly Vodafone and Orange, and the leading technology firms: Nokia-Siemens Networks, Ericsson and Huawei.

Highlight projects of the year included engineering and installation work on Vodafone's fiber optic network and the work to bring mobile telephone coverage to the Atocha-Chamartín tunnels and Madrid's commuter railway network.

A further highlight was the contract covering central Spain and Extremadura to carry out maintenance work on the wireline and mobile networks of Orange. The company also strengthened its standing in the railway transportation sector by taking part in various projects, including GSM-R communications for the Barcelona commuter railway network (Seitt/Adif), communications for the Jaén tramway system (regional government of Andalucía) and the installation of coverage and communications infrastructures for the Metronorte northern extension to Madrid Underground and line 11 of Madrid Underground (Mintra).

Marketing and Ancillary Manufacturing

Within this field, Abeinsa primarily manufactures and markets products related with the Business Unit's activities, while also producing auxiliary elements for energy and telecommunications.

Nicsa maintained its dominant position in the Spanish market and consolidated its international presence as a supplier of electric materials, instrumentation and communications for the chemical and petrochemical industries, refineries, combined cycle, solar thermal, nuclear and thermal power plants and heavy industry in general.

Abencor continues to focus its business model on those markets associated with sustainable development. It has likewise increased both procurement and sales, particularly within the international market, with operations centering on Latin America and other developing countries, such as Russia, China and India, where the company has permanent operations in place, enabling it to penetrate markets undergoing rapid expansion.

Over 2009, Eucomsa managed to consolidate its position as a leading supplier of structures for the Solnova 1, Solnova 3 and Solnova 4 solar power plants. It coordinated the work with Comemsa, its subsidiary in Mexico, with the exception of Solnova 4, which was supplied exclusively by Eucomsa. The work over 2009 followed on from the projects rolled out in 2008 and has led to a significant jump in turnover.

Driven forward by its traditional focus on exports, Comemsa has continued to flourish in the North American and Latin American markets. With a view to serving these markets more directly and in accordance with their particular needs, 2009 witnessed the creation of the company Power Structures Inc., PS, in the United States. PS will be responsible for marketing the component structures of Abengoa's electric power lines in the U.S. and for providing clients with expert technical support.

Nicsa

2009 was an exceptional year for Nicsa, with highlight projects including:

- Project to extend the Repsol refinery in Cartagena, Murcia (Project C10). Nicsa signed its biggest ever contract with Repsol and the Técnicas Reunidas group. The company was awarded a contract to supply all the energy wires, instrumentation, lighting, cable trays and conduits. It also supplies junction boxes, compression glands, control stations, power outlets, panels, capacitor batteries and direct current supply boxes.
- Fuel Oil Reduction Unit project for Petronor, Repsol's refinery in Bilbao. Fully-comprehensive agreement to supply all the necessary electrical equipment and instrumentation assembly work for the project. The scope includes electrical and instrumentation cables, grounding, trays, conduits, wiring, junction boxes, compression glands, switching stations and power outlets.
- Técnicas Reunidas: Besos combined cycle power plant (Barcelona) for Endesa; Barcelona combined cycle power plant for Gas Natural; Montoir de Bretagne combined cycle power plant for EDF (France). The contracts include the supply of cables, wiring, trays, conduits, junction boxes, pushbutton stations, boxes for instrumentation and electric heat tracing.



A key driving force behind Nicsa's growth over 2009 was the performance of its subsidiaries overseas: Nicsa México successfully completed the supply work and services for the "Reconfiguration of the General Lázaro Cárdenas Refinery, Package III" project for Dragados Industrial; Nicsa Industrial Supplies, in North America, extended its corporate presence by making significant inroads into the U.S. market; Also worthy of note was the incorporation in October 2009 of Nicsa's subsidiary company in Brazil, Nicsa Fornecimiento do Materiais Eletricos.

Abencor

Highlight projects for Abencor over 2009 include:

- Procurement and supply of over 500 MVA of power transformers, both in Spain and overseas. The company supplied the Pestera and Cemavoda transformers in Romania for the EDP group and also the Torremadrina, Ibiza and Portillo transformers for Endesa in Spain.
- Sale of 66 kV and 220 kV insulated cables, along with the corresponding terminals. The agreements not only include the supply of the cables, but also supervision and assembly work and preparation of the junction points for the substations on the Barcelona-Figueras section of the high-speed AVE railway line currently under construction.
- The Energy Efficiency Division supplied four special industrial ventilators for the Rotterdam biofuel plant, which Abengoa is currently constructing.

Eucomsa

In the traditional pylon and tower market, the company has successfully kept up with the exceptional demand from the Spanish Electricity Grid (Red Eléctrica de España, or REE) over the last two years and remains upbeat that future investment will enable it to maintain current levels of business.



The Sheeting division continued to supply fiber optic distribution cabinets for Telefónica and other consumers. It also disinvested its signage business line and dismantled its painting installations, leaving space for new business activities or to extend the existing capacity of its solar business.

As regards testing stations, business for 2009 outperformed previous years, with the company conducting extensive testing work, including, in particular, tests on the Lázaro-Cárdenas line for Abengoa México, the Tía María line for Abengoa Perú, the 2C21 tower for Comemsa in Mexico and a host of pylons and towers for the likes of Unión Fenosa, Jovir, Tranluz, Semi and Andel.

Comemsa

During 2009, Comemsa supplied equipment under two major projects for Abengoa companies: The Siepac project signed with Inabensa relating to the electric interconnection system for Central America for a grand total of over 11,000 t and the Solnova 1 and Solnova 3 solar thermal plants and the hybrid Hassi R'Mel (Algeria) and Ain Beni Mathar (Morocco) plants, for a total of 11,700 t, both contracted with Abener.

The most important projects performed in 2009 included the 68 RTA 718 El Pacífico line (Phase Two) "turn-key" project secured by Abengoa México from the Mexican Federal Electricity Confederation (Confederación Federal de Electricidad, or CFE), supplies for which exceeded 5000 t and were subcontracted to Comemsa. Before supplying the material, it was necessary to design and test four types of pylons able to resist hurricane-force winds of up to 200 km/h. The task of designing these towers posed a genuine challenge for the engineering division, particularly the end-of-line tower, which incorporated a three-leg design, the first time this configuration has been used for power transmission lines. Its successful response under testing station conditions was also unprecedented.



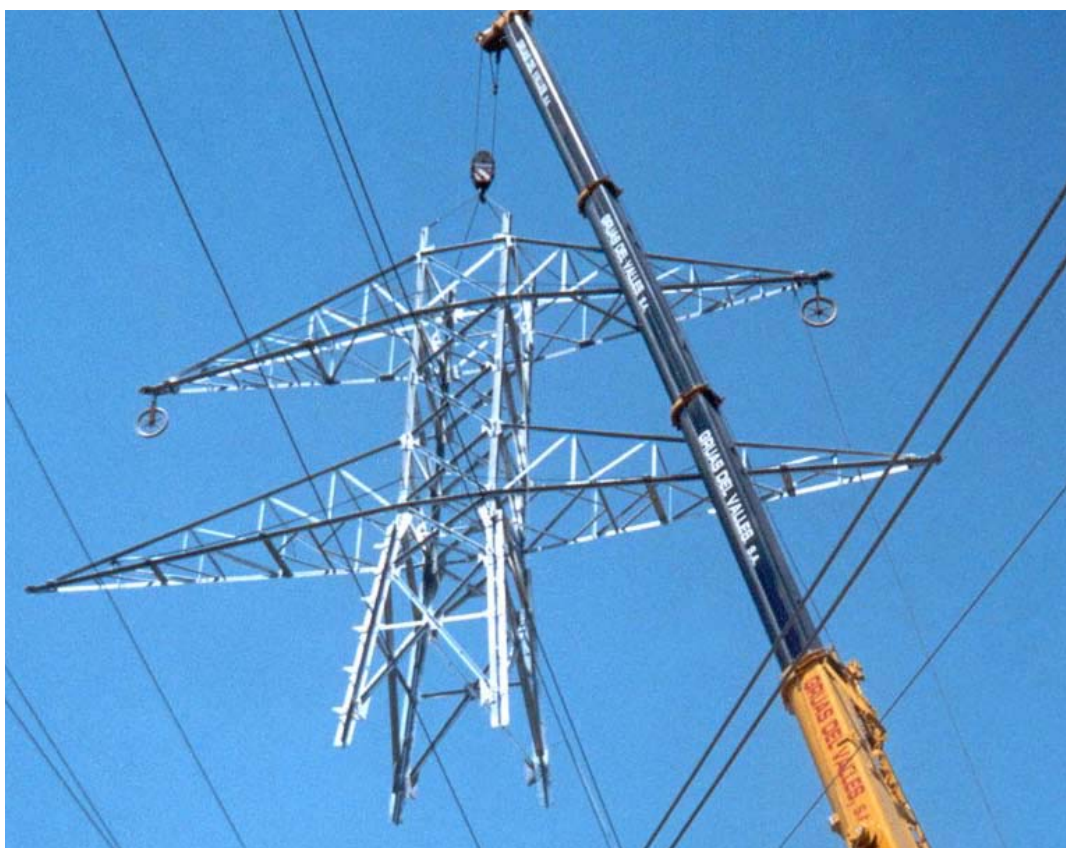
Latin America

The chosen strategy of the Latin America Business Unit is to make its presence felt in different countries through local companies, covering Argentina, Brazil, Chile, Mexico, Peru, and Uruguay. It operates as an independent group within Abeinsa, as it operates

within a specific market where we have enjoyed a solid presence for over 40 years and where the different group companies conduct all of Abeinsa's lines of business, including Energy, Installations, Telecommunications, Marketing and Ancillary Manufacturing, Civil Engineering and Environmental Services.

After several years without any work on the Argentine electricity transmission system (from 2006 onward), 2009 finally saw the start of various projects under the 500 kV Electrical Transmission Federal Plan. A major player in this plan is Abeinsa's local company in Argentina, Teyma Abengoa.

In 2009, Abengoa México secured major projects to guarantee sustained future growth. Its strategy focuses on increased participation in projects from PEMEX, private customers and other activities, thereby helping to cut energy consumption while championing sustainable development.



Abengoa Brasil

The successful development of the core aspects of Abengoa Brasil's Strategic Plan, coupled with its alliances, insourcing of knowledge and business diversification have all led to increased business, enhanced control over processes and major improvements to both efficiency and effectiveness.

Energy Transmission Grid Concessions Division

In Brazil, the company is currently operating 3,600 km of high voltage lines (230-500 kV) and boasts a further 4,435 km of lines through new concessions currently undergoing engineering and/or construction work.

Highlights among these new projects include:

- Concession of the Porto Velho-Araraquara power transmission line through the new concessionaire company Norte Brasil Transmissora de Energia, in collaboration with the state-owned corporations Eletronorte and Eletrosul. This particular concession includes the construction and operation and maintenance of a D/C transmission line measuring 2,350 km for 30 years. The line will transport some of the energy generated by the hydroelectric power plants on the Madeira River directly to São Paulo, the country's main consumer.
- Two concessions, spanning 1,500 km in total, of 230 kV transmission lines, in collaboration with Eletronorte and CTEEP (Companhia de Transmissão de Energia Elétrica Paulista).

Abengoa Brasil has accomplished its plan to operate and maintain installations through the company Omega, a supplier of operation and maintenance services, including the Operations Center in Rio de Janeiro, and with capacity to operate lines in any part of the country.



Lines and Transformer Substation Construction Division

Over 2009, construction work on a section of ATE VI and ATE VII was completed and the relevant sections brought into operation, with the corresponding contracts amounting to 200 MBRL. The ATE IV and V agreements will conclude in the first quarter of 2010.

Work is currently continuing on the two third-party agreements signed in 2008, a “turn-key” agreement to construct a power transmission line for Eletronorte, with the value thereof amounting to 92 MBRL, and the construction of the lines and substations required by Abengoa Bioenergy to evacuate the energy to be produced at its cogeneration facilities.



Teyma Abengoa

The main contracts performed in 2009 include:

- 500 kV El Bracho substation. Construction of a new lane to equip the output of the 01 field. Transfer of the output to the Tucumán de Pluspetrol plant. Supply and electromechanical assembly of the 500 kV switchyard, with extension of busbars, general panels, protection equipment, remote control components, communications, remote protection devices, etc.
- 500 kV San Juancito substation. Supply and electromechanical assembly of the 500 kV switchyard, consisting of two lanes (one incomplete) for 500 kV line input from the Cobos transformer station, with a 50 MVAr reactor, a field for the 300 MVA 500/132/33 kV power transformer and a lane comprising the antennas mounted between towers and a break switch to link up the busbars of the transformer station.
- 500 kV Comahue–Cuyo (Southern Section) project to interconnect the Agua de Cajón substation, in Neuquén province, with the Gran Mendoza substation, in Mendoza province, with a total length of approximately 707 km. The project will require a 500/220 kV midpoint substation called Los Reyunos (currently Río Diamante), close to the existing 220 kV Los Reyunos substation, which belongs to the company Distrocuyo S. A.. The new substation will be linked up with a roughly 7-km long 220 kV power line and with the extensions made to three other existing substations.



Abengoa Chile

Of note among the main projects secured and performed in 2009 were the following:

- Engineering, supply and construction of the Lagunillas and Hualpén substations for Transelec in the Eighth Region. This particular project will involve the construction and assembly of a substation in Lagunillas, the extension of a 220 kV yard and construction of a new switch house in Hualpén.
- Construction for Pacific Hydro Chile of the Interconexión substation and modification of the Maitenes and Sauzal substations and the 2x220 kV power transmission line between the Chacayes and the Interconexión substations. The work requires the company to configure the Interconexión substation as a SF6 gas insulated substation (GIS), modify and extend the Maitenes and Sauzal substations and construct a 2x220 kV line between Chacayes and Interconexión.
- Construction of two overhead lines for Minera Esperanza. The first will be 110 kV and 55 km in length, between the Chacaya substation and the Principal Puerto substation in Michilla. The second, which will be 2x220 kV, 82 km in length and span the El Cobre and Esperanza substations, will be used to deliver electricity to the Esperanza Project, located in the commune of Sierra Gorda, 150 km from Antofagasta.

Thanks to its acquisition of Servicios de Ingeniería SDI-IMA, a company with a strong presence in Chile's electric infrastructure engineering sector, Abengoa Chile has bolstered Abeinsa's standing in Latin America, in line with its strategy of strengthening its capacities and long-term growth potential.



Teyma Uruguay

Teyma continued to enjoy business growth over 2009 and turnover in Uruguay and from international trade jumped sharply. The company successfully completed several major projects and continued to expand into new territories.

Teyma Construcción

The main projects completed or in progress in 2009 are described below:

- Sixth pumping line to supply drinking water to the western zone of Montevideo and Canelones. The project includes the engineering, supply and installation of 33 km of 1,200 mm diameter ductile cast piping, 14 km of 800-1,000 mm ductile cast piping and 40 km of 350-800 mm fiber-reinforced plastic (FRP) piping.
- National Port Authority (Administración Nacional de Puertos, or ANP). Engineering and construction work on the Colonia Port terminal. Civil infrastructure for services to be provided at a terminal that will include all the waterway operators and which will allow for efficient transport mode changes while also catering to the tourism industry.
- 500 kV substations for Administración Nacional de Usinas y Transmisiones Eléctricas (JV). The project, currently in progress, encompasses the supply and "turn-key" installation of two 500 kV substations located in Punta del Tigre and Las Brujas to join or link up the line from Punta del Tigre with the existing 500 kV Uruguayan transmission grid.

- Administración Nacional de Usinas y Transmisiones Eléctricas (JV). Areva - Frequency Conversion Station in Melo. Supply and “turn-key” installation of a 60/50 Hz frequency conversion station, capable of connecting Uruguayan and Brazilian power lines and transmitting up to 500 MW. Teyma has been entrusted with the engineering and construction of all the civil engineering work and associated electromechanical assembly work.



Teyma Forestal

The company specializes in the harvesting, extraction and transportation of wood, both as a source of energy for industries and as a raw material for industrial processes. The main contracts over 2009 were as follows:

- Mechanized harvesting to be used for cellulose paste production for Eufores S. A. (ENCE). The four-year agreement to harvest eucalyptus plantations will result in an annual production volume of 39.6 Kgal. of wood chippings, which will be sold to European cellulose plants.
- Supply of forest biomass for industrial energy. In January of 2009, operations were successfully started at a wood chipping power plant located in Soca, which supplies chips on a permanent basis to two industries within the Canelones department.

Teyma Medioambiente

A Teyma subsidiary primarily engaged in urban waste management and providing innovative technical solutions. Its main line of business is urban waste collection, the contract with Montevideo City Hall being the most important.

Operating under the name CAP, it provides waste collection and street sweeping, washing and cleaning services in a specific area within Montevideo city center. The contract has a term of seven years, renewable for a further seven years.

Teyma Internacional

Specializing in “turn-key” renewable energy projects, Teyma Internacional is currently acting as an executor of Abengoa’s investments in new biofuel and solar power plants. It has incorporated companies in Spain, Brazil and the United States to continue growing in markets with heavy investment in renewable energies.

The main contracts in progress are:

- ISCC Ain Beni Mathar in Morocco. Hybrid electrical power plant utilizing gas and solar thermal energy with a combined capacity of 470 MW. The company is developing the plant in collaboration with other group companies.
- Hassi R'Mel 150 MW hybrid electrical power plant in Algeria. This hybrid plant features similar technology to the Ain Beni Mathar plant described above and is also being developed in collaboration with other group companies.
- Cogeneration plant for Abengoa Bioenergia São Luiz in Brazil. EPC agreement to deliver a cogeneration plant, with an installed capacity of 70 MW and powered by sugarcane bagasse, at the sugarcane and alcohol plant in the city of Pirassununga, in the state of São Paulo.

Abengoa México

The main projects secured in 2009 and in progress are:

- 204 SLT 1119 South-East Transmission and Transformation Project (Phase 1), involving the construction and installation of five 400 and 230 kV transmission lines measuring 168.9 km, along with two 400 and 230 kV, 875 MVA, 60 MVAR substations and ten feeders.
- 190 SE 1120 North-East Project, involving the construction and installation of 11 jobs: three 115 kV transmission line jobs spanning 8.41 km and eight 115/13.8 kV and 115/34.5 kV, 210 MVA and 12.6 MVAR distribution substation jobs, along with six high voltage feeders, 40 medium voltage feeders and 35.37 km of trunk line.
- The Oil & Gas and gas division of Abengoa México, in collaboration with Abener Energía, has been awarded the first energy generation concession that PEMEX has launched on the market. The project requires the construction and operation of a 300 MW cogeneration plant capable of producing between 550 and 800 t of steam for use in the natural gas production process at the Nuevo PEMEX gas facilities. The timeframe for construction is 36 months and the project includes the operation of the plant for 20 years once it has been constructed.



In keeping with its growth strategy, Abengoa México has broadened its electric power transmission line business to take in the United States. Abengoa T&D, with head offices in Denver, has been operating since August, and is working tirelessly to pinpoint business opportunities and seek out strategic alliances with potential partners.



Abengoa Perú

Abengoa Perú closed 2009 on an all-time high, with turnover exceeding the \$140 M mark and a portfolio sure to guarantee similar levels of business for 2010.



The main projects completed or in progress include:

- Sedapal:
 - The project to extend and upgrade the Manchay drinking water and sewage system was completed within the framework of the government's Agua para todos (Water for Everyone) program. The project will benefit more than 40,000 underprivileged inhabitants and includes the design, supply, land preparation and construction of the entire water supply and sewage system.
 - Construction of the Malecón Cieneguilla piping channel and improvements to the Caña Hueca and Jatosisa-Sotelo irrigation channels.
 - Extension and improvement work to the drinking water and sewage systems for the zones of Pariachi, La Gloria, San Juan, Horacio Zevallos and Annexed Territories.



- Package 3A of the Piura "Water for Everyone" program: The Piura consortium, comprising Abengoa Perú and Teyma Uruguay, has been awarded a contract to prepare the technical documentation and construct the drinking water and sewage system for Piura-Castilla. The project includes the construction of the Lagunas San Martín wastewater treatment plant, with an average water treatment flow of 200 L/s.
- ATN: Construction of the high voltage 220 kV Carhuamayo-Carhuaquero line and associated substations. The project includes EPC and operation and maintenance for 30 years and comprises 670 km of 220 kV line, two new substations and five extensions to existing substations. It spans the Peruvian mountains at an average elevation of 3,000 m above sea level.

Bargoa

Bargoa specializes in the development, manufacture and marketing of a wide range of products for telecommunications networks and exchanges.

Despite the fact that investment by telephone operators in 2009 was down on previous years, Bargoa still managed to consolidate its status as a leading company in the Brazilian market, where it markets the products it manufactures.

Its main clients were Oi-Brasil Telecom and Telesp in Brazil, whereas in the field of exports, business flowed in predominantly from Chilean, Argentine and Spanish telecommunications companies and traditional clients from North America, Korea and Japan.

Abeinsa New Horizons

Hynergreen experienced growth over 2009 in terms of size and business volume by upping R&D investment in new hydrogen technologies and fuel cells, a further illustration of Abengoa's spirit of innovation in the key areas of sustainability and clean energies.

Zeroemissions spent 2009 consolidating its business and international offices. As a result, its human capital and geographic presence jumped to nearly 60 employees, with subsidiaries in Rio de Janeiro, Beijing, Bombay, Moscow, Brussels and New York.

Hynergreen

Hynergreen, the Abeinsa company specializing in hydrogen and fuel cells, has continued to flourish over the last five years, having reported a marked increase in project execution over 2009.

Highlight projects for the year include:

- Continuation of the engineering work for Navantia within the framework of the Air-Independent Propulsion System (AIP) for the new S-80 submarines, which the Navantia shipyard is constructing for the Spanish Navy.
- Completion of the service station for Project Hércules, an unprecedented milestone in that it represents southern Spain's first hydrogen fueling station. It produces hydrogen through clean and renewable electrolyzer technology, which employs water and the electrical power generated by photovoltaic panels and Stirling dishes.



In the field of internal R&D, Hynergreen has continued to implement its strategic plan by carrying out projects and activities in two core areas:

- The production of hydrogen from renewable sources (solar, wind, biomass and biofuel), including storage and transportation.
- Electric energy production through fuel cells, taking in the entire process and including such aspects as power adaptation, control, security and the user interface.

On the international stage, Hynergreen has acquired part of the Dutch company HyGear, which specializes in the development of hydrogen production systems through natural gas reforming, the ultimate aim being to join forces and develop reactors and compact systems for hydrogen technologies.

Zeroemissions Technologies

Zeroemissions was created in 2007 to centralize and head Abengoa's carbon activity with one specific mission in mind: to offer solutions to climate change by promoting, developing and trading carbon credits and through the company's corporate carbon strategy, voluntary emissions compensation and innovation in GHG reduction technologies.



In the field of Carbon Credit Generation through projects to reduce emissions, CDM (Clean Development Mechanisms) and JI (Joint Implementation) have significantly increased in volume and currently boast 25 projects, with a credit potential of close to 10 Mt of CO₂. This credit portfolio is well diversified both geographically (China, India, Brazil, Chile and Colombia) and technologically (hydraulic plants, wind farms, energy efficiency, heat recovery, avoided methane from livestock waste, substitution of fuel for biomass, manufacture of bricks, etc.).

Of the various projects secured over 2009, highlights include the contracts with Pushpit Steels in India and Mafriur in Chile.

During the year, the Certification and Labeling Team continued to hone its consultancy services to help customers implement GHG emissions reporting systems, prepare emissions inventories, calculate emissions associated with products and services and roll out plans to monitor GHG emissions, enabling companies operating within the regulated sector to seek emissions authorization. The team also provides emission rights management and environmental consultancy services.

Ocean Energy

The Inabensa R & D department is evaluating the various options offered by marine currents, waves and tides with a view to finding uses for this new source of renewable energy.

Carbon Capture and Valorization

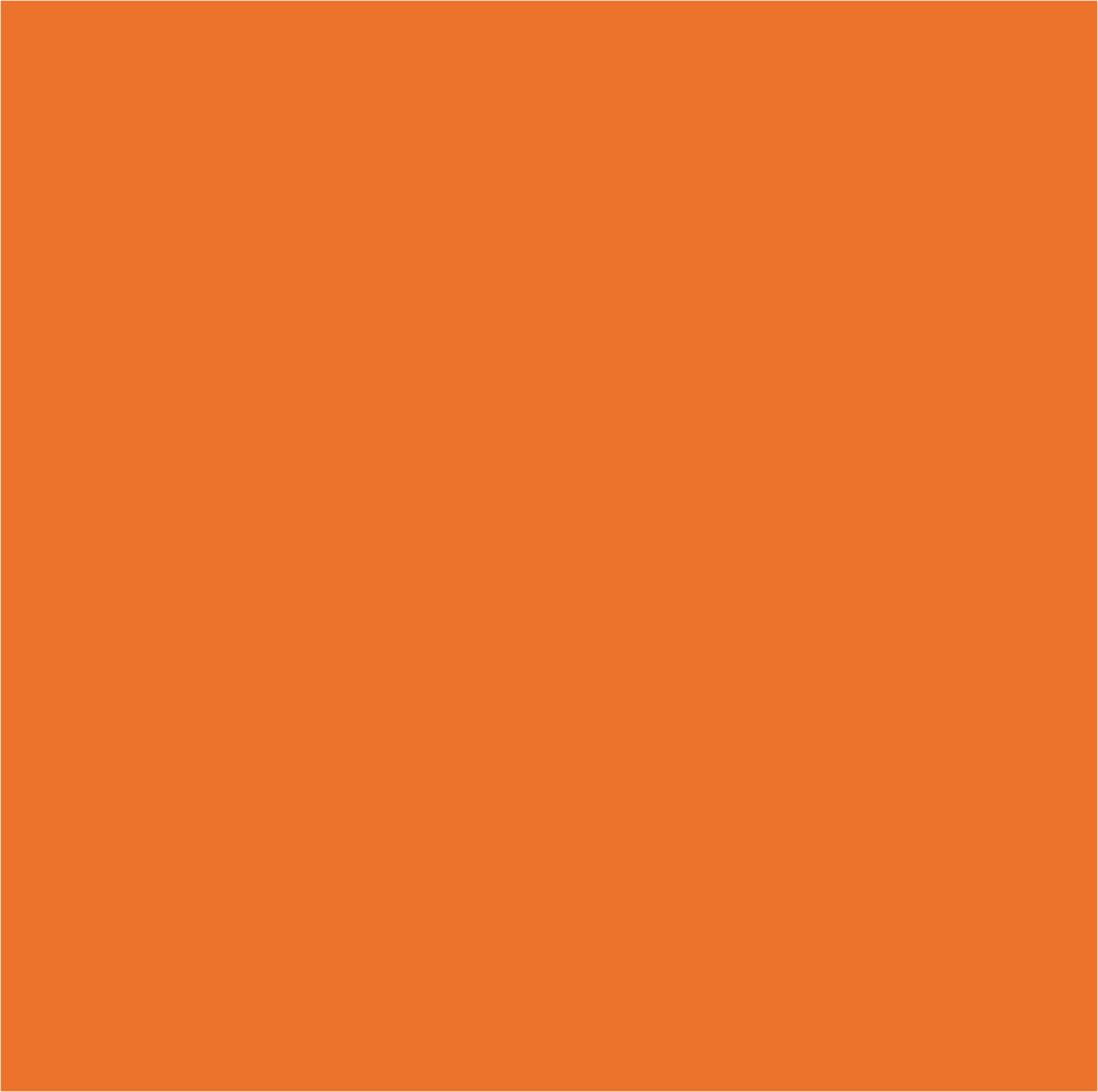
Abeinsa develops solutions to convert carbon dioxide into a valuable co-product: a biofuel or new raw material.

Energy Efficiency

Energy efficiency consultancy and research. Abeinsa creates technologies to raise the energy efficiency of industrial equipment and modes of transport, and develops efficient energy storage systems.

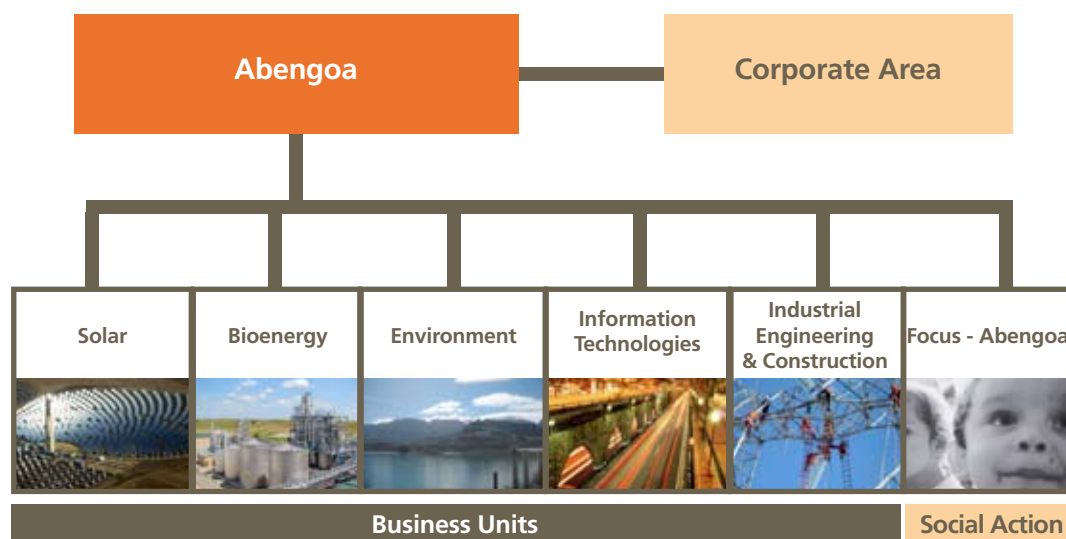
Telecommunications

Abeinsa develops infrastructure and technology with a special focus on medical and healthcare applications.



Abengoa's Commitment to Innovation

Abengoa is a technology company whose five Business Units create innovative solutions for sustainable development in industries concerned with infrastructure, the environment and energy.



The global community is now in the process of mitigating and reversing humanity's past mistakes. We have overused the world's natural resources and treated the environment as a dumping-ground for industrial emissions and waste.

The economist Jeremy Rifkin has said that what is now sometimes called the "black" economy (opposed to the "green") – the industrial revolution driven by oil, cars and centralized energy production – peaked in the late twentieth century. Attempts to preserve the status quo only led to distortions, like the financial and property bubble that has recently burst. So it is now time to undertake a third industrial revolution: the Green Revolution.

Global warming is caused by human activity. We have raised the atmospheric concentration of CO_2 year after year: In September 2009, the Keeling curve exhibited a CO_2 concentration of 385 ppm. This poses a serious risk to the environment and to our way of life. It is also set to deal a harsh blow to the world economy. According to the Stern Review on the Economics of Climate Change, global warming could throw the world into a slump involving a 20 % decline in global GDP (Gross Domestic Product). This means the economy and society would be severely disrupted for the remainder of this century and beyond.

The Stern Review estimates that an investment of 1 % of world GDP is needed to allay the effects of climate change. So far, however, decision-making processes have largely disregarded industry's harmful "externalities". Environmental and social considerations are thus rarely a factor in prevailing economic practice. But by this stage the only remaining question is how quickly we can get to a zero-emissions economy.

Against this backdrop of far-reaching change, Abengoa is determined to become a world benchmark in the development of innovative technological solutions for sustainable development. We hope to become a global leader of the Green Economy. The concept of "Green Economy" was coined in the midst of the present world

economic crisis as part of the Global Green New Deal, the United Nations environment program mooted on October 22, 2008 to address the interdependence between economic activity and natural ecosystems, more specifically, industry's harmful implications for climate change and global warming.

President Obama used the term "Green Economy" in his speech to the United States Congress on February 25, 2009 in connection with his ambitious program of energy reform. The new scheme, popularly known as "cap and trade", aims to lower greenhouse gas emissions by 80 % by 2050 and to create millions of new, "green" jobs.

Over the next ten years the United States will spend \$150,000 M to promote second-generation biofuels (lignocellulosic bioethanol), support the electric and hybrid car market, encourage the commercial development of renewable energies and start the changeover to a new digital power grid.

And, in Spain, the Council of Ministers set its seal on the draft of a new Sustainable Economy Bill on November 27, 2009. Regarded as the centerpiece of the current legislative term, the new law is intended to bring about much-needed change in the Spanish economy by opening it up to innovation and renewal.

Abengoa, for its part, has worked on the challenge posed by sustainability for the past twenty years. It has honed its capacity for technological innovation as the right tool for this paradigm shift. Abengoa has invested in research, development and innovation, recruited and developed the necessary talent, and disseminated the most promising technologies on a global scale. These new production processes call for a demanding schedule of investment, and that investment has served as Abengoa's engine in creating a new generation of jobs and a new array of benefits for the wider community.

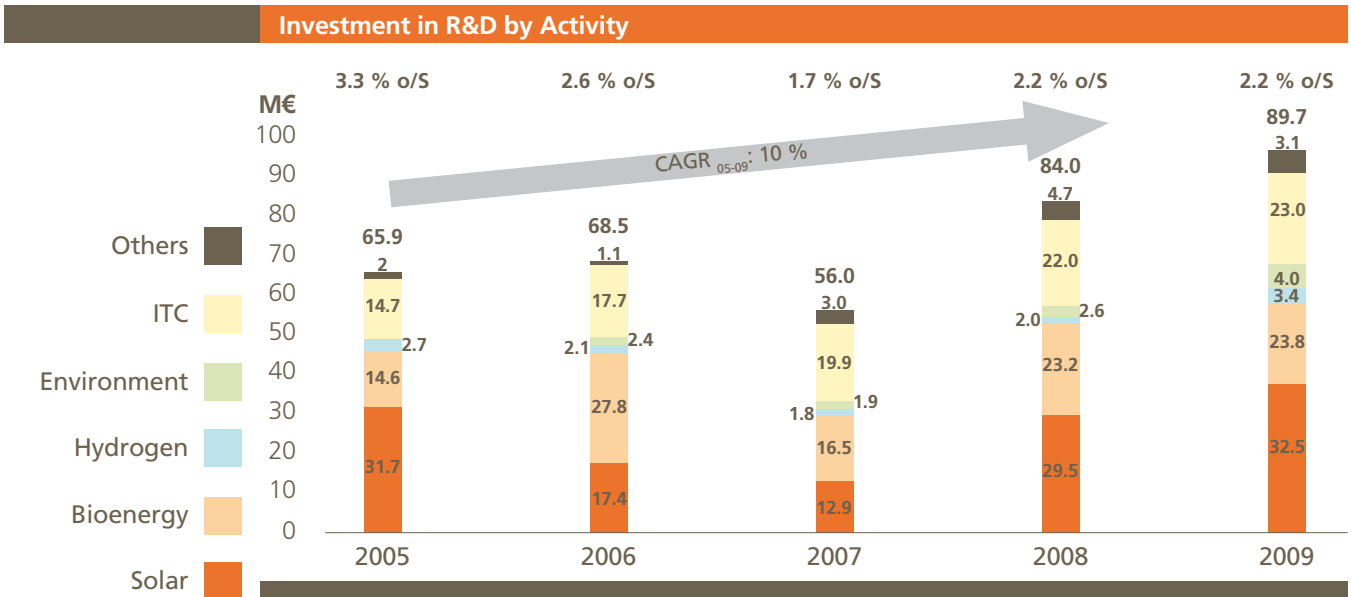
Creating Value at Abengoa through Innovation

Abengoa's overarching goal, sustainable development, is achievable only through innovation. Hence Abengoa has become a leader in creating new technologies, processes and know-how designed to provide innovative solutions that help preserve the environment, create value over the long term and provide a competitive edge. Technological innovation is the key factor in evolving towards a sustainable world in which people and societies can enjoy a high standard of living. Experts agree that close to 80 % of an economy's long-term growth comes down to technological achievement.

Investment in research and development makes technology the foundation of Abengoa's sustainable growth and plays a central role in its strategic objectives. Research and development is managed on business lines – result-oriented and closely aligned with strategy.

In 2009, Abengoa's investment in R&D amounted to €89.7 M, 7 % up on the previous year and equivalent to about 2.2 % of its total sales. R&D investment has grown at an annual average of 8 % over the past few years. This figure does not include investment in innovation, which, though not readily quantifiable, is a key element of Abengoa's strategy.

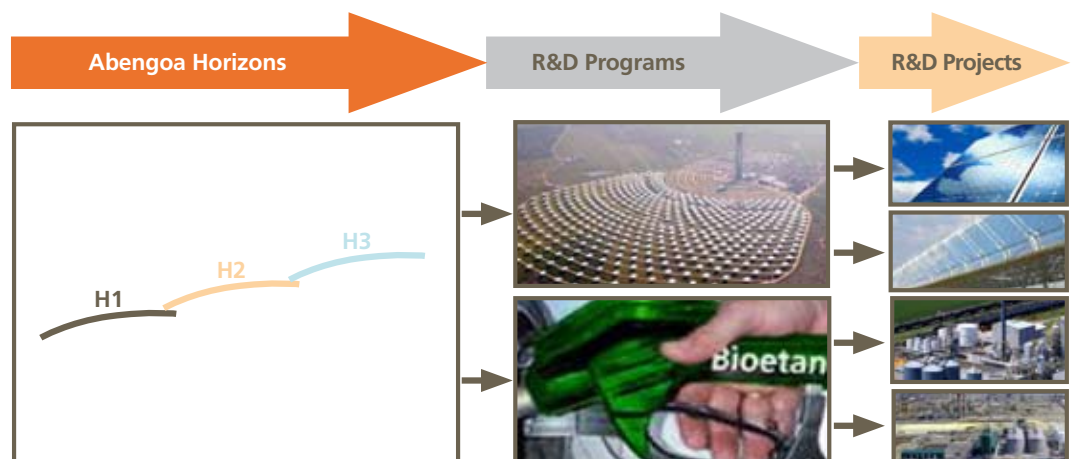
The table below shows how Abengoa's investment in R&D has evolved over the past few years in each distinct sector.



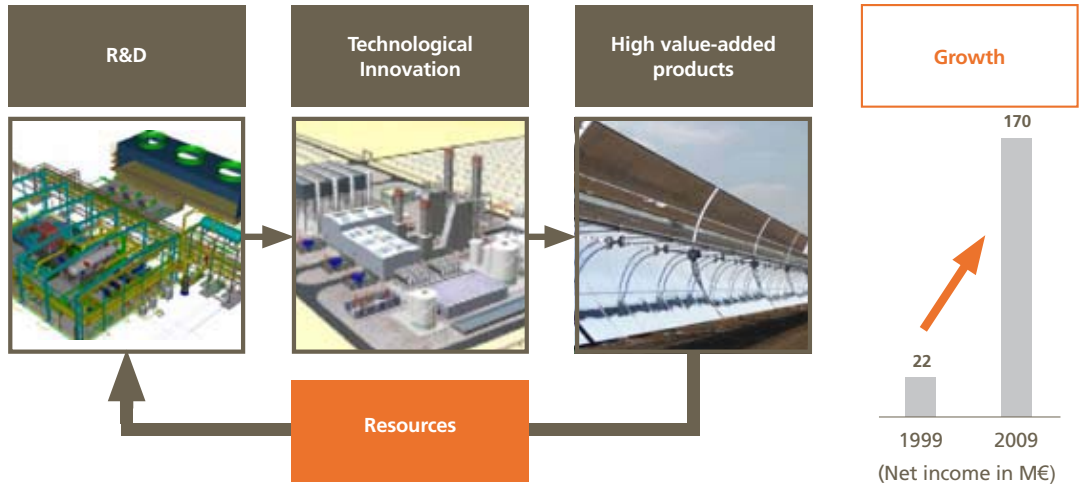
Innovation is a dynamic process that moves in step with an evolving society. It avails itself of all the resources offered by the knowledge, science and technology communities. In line with its calling as a leading company, Abengoa has adopted the “innovation ecosystem” approach: It works in partnership with universities, government agencies, public research institutes, technology centers and other private enterprises to support the creation of knowledge networks, with Abengoa as the driving force. It is through innovation alone that Abengoa is able to bring into being the necessary knowledge and provide responses and solutions to new challenges. The system of innovation embraces demonstration projects, research and development facilities in various countries and external suppliers. In 2009, two framework collaboration agreements were signed with the University of Seville. One concerned joint training for doctoral students while the other supported co-operation between the University and Abengoa.

Innovation management at Abengoa is a central part of the strategy implemented by each subsidiary or Business Unit. Innovation is regarded as having three aspects: new products, new processes and improvements to existing assets. Research and development programs are given a general scope, and each is linked to a given line of development.

Research and development programs take a long-term view (up to 30 years) and are undertaken as phased programs (each covering a ten-year period) and as specific projects (3-4 years). It is these specific projects that put Abengoa’s innovation effort into practice.



At Abengoa, most research and development investment goes towards applied research and the development of technological innovation towards the achievement of strategic sustainability goals and new products.



Sustainability. Abengoa's Business Metrics

Abengoa today is an international leader in many key areas of the Green Economy. This is where all its business units operate; all their policies and innovation strategies seek to make sustainable use of resources and raw materials so as to harness their entire life cycles. And it is to this end that each Abengoa business unit undertakes its own processes of technological innovation.

Abengoa has pioneered technological innovation in the field of renewable energy sources to offer high energy efficiency and low environmental impact. This realm of technological development, as part of the new Green Economy, leads to savings in greenhouse gas emissions. Furthermore, by decentralizing from conventional sources, renewable energy frees domestic economies from long-standing geopolitical constraints imposed by oil and gas states, and the shortfalls in security of supply that such sources sometimes imply.



The key areas of sustainable development being led by Abengoa include:

- Abengoa Solar, which produces energy using solar thermal or photovoltaic sources instead of conventional sources, and develops energy storage technologies. Abengoa owns the only two commercial concentrating solar power plants in the world that use tower technology, and is now developing several parabolic trough plants, including one of the world's largest in Arizona, USA. Abengoa has gained a clear world lead in this field. The key factor underpinning the company's leadership is its cooperation with the Almería Solar Platform and with CIEMAT as a whole.
- Abengoa Bioenergy, which produces first and second-generation biofuels to replace conventional fossil fuels. Using biomass as an energy source, Abengoa undertakes research and development projects that are set to mature into commercial enzymatic hydrolysis and biomass gasification facilities and hybrid biomass and concentrating solar power plants.
- Befesa Medio Ambiente provides solutions for the integrated water cycle and the integrated management of industrial wastes, creating new desalination and water treatment plants and new industrial processes for waste reuse.
- Telvent develops smart networks to optimize energy use and grid manageability. The company builds smart networks through research and development projects to create products which are then implemented in different countries around the world. Telvent's smart, efficient energy distribution networks play a leading role in this domain. Telvent is also developing highly competitive and sustainable agriculture with key support from new technologies. It supplies technology services to the world's leading farming sector: the United States agriculture.
- Abeinsa's "New Horizons" business unit comprises the companies Hynergreen and Zeroemissions. Hynergreen develops new systems to produce hydrogen from renewable sources and to use it in state-of-the-art fuel cells. Zeroemissions is a company providing global solutions for climate change through the promotion, development and sale of carbon credits, voluntary emissions set-off arrangements, and innovation in greenhouse gas reduction technologies. Abeinsa also implements energy efficiency improvements, carbon capture and storage programs and ongoing innovation schemes at industrial and energy plants, especially renewable energy facilities.



Abengoa Solar

Abengoa Solar and Innovation

For Abengoa Solar, innovation and the development of new technologies are key priorities. The company's goal is to offer technologies that generate clean energy at a cost that can compete with fossil fuels.

The solar energy sector is a relatively young and highly technology-dependent industry. Innovation is accordingly vital and solar energy plants still produce power at a higher cost than conventional plants. The development of the solar energy sector will depend on whether technology is able to bring down costs to a level equal to or even lower than the conventional energy sector. Two main drivers will combine to lower costs: increased market volume and more efficient new technologies. This is precisely where innovation has a vital role to play.



An increasingly competitive environment means that a company needs to innovate in order to survive and stay ahead of its competitors. Technology and innovation are tightly bound up with each other in a company's efforts to bolster its competitiveness. Abengoa must therefore create new technologies in a process of constant renewal that keeps the business at the forefront of the market.

Abengoa Solar's development of proprietary technology within its research and development department affords it a competitive edge. This fact is particularly significant given the company's role at various different stages of the value chain: among other activities, it manufactures technological components and operates as a plant developer.

Abengoa Solar's unflinching commitment to research, development and innovation is thus characterized by:

- A global presence. The company employs a team of more than 80 people at research sites across the world – Seville and Madrid in Spain; Denver in Colorado, USA.

- Abengoa Solar cooperates with leading institutions, such as Instituto de Energía Solar-UPM, Ciemat and many other universities in Spain; NREL, the University of Rochester and the University of California, Merced, in the United States; and DLR and Fraunhofer ISE in Germany.
- The company's projects are funded by two income streams: Government aid and subsidies at the regional (IDEA, AAE, CTA), national (Cenit, CDTI, MICINN and MITyC in Spain; and the DOE in the USA) and European levels (Framework Programs, or FPs); and a large proportion of investment comes from the company itself. Major awards of public funds secured in 2009 included:
 - In Spain, the company continued the Cenit Consolida project into its second year. The total budget of €24 M is subsidized in a proportion approaching 50 %.
 - In Spain, three projects co-financed by European Union EFRD funds were secured through the CDTI (the Spanish center for industrial technology, an agency attached to the Ministry of Science and Innovation).
 - In the United States, Abengoa Solar secured two new R&D projects from the DOE.
 - In the field of photovoltaics, we worked as partners on the Cenit Sigmasoles project, aimed at developing concentrating photovoltaics (CPV) technology. The project is scheduled to be completed over a period of three years and has a total budget of €24 M. On a regional scale, Abengoa Solar has attracted significant funding from Andalusian public authorities for R&D projects in photovoltaic energy, such as the PV-Dish and Tejasol projects.



Abengoa Solar Innovation Highlights of 2009

In 2009, the research and development team continued to grow, further honing its capabilities in its core research areas and building pilot facilities to put new technologies to the test at a small scale but under real operating conditions.

2009 saw the commissioning of several demonstration plants that corroborate Abengoa Solar's strategy in the field of new technologies: To develop and test technology using small-scale facilities (pilot plants) with a view to subsequent application at large commercial sites.

Abengoa Solar's research and development encompasses four stages. At the initial stage, the project to be undertaken is defined and preliminary research work completed. Next, the team conducts a thorough analysis and theoretical and practical modeling of the solution. This stage also includes searching for suppliers, signing cooperation agreements, etc. At the third stage, a prototype or demonstration plant is built and brought into operation. The final stage consists of analyzing the pilot plant's operational data in order to validate the demonstrated system with a view to undertaking large-scale commercial development.

These pilot plants enable Abengoa Solar to deal with the associated technological challenges successfully. The issues fall into two wide branches or different areas: enhancing the efficiency of solar energy conversion into electricity while lowering costs.

- Higher operational temperatures. The key benefit is to increase the efficiency of solar energy conversion into electricity by enhancing the performance of the power cycle.
- New materials to withstand the high temperatures and steep temperature gradients involved in each operating cycle. Such materials are either insufficiently developed or would be too expensive for commercial use under present conditions.
- New thermal storage systems to facilitate energy supply management so as to deliver power to the grid as and when desired. This is one of the key advantages of solar thermal technology – other renewable energy sources are not manageable in this way. A storage system raises the availability and capacity of the plant and makes for fewer turbine start-ups and shutdowns.
- Use of new heat transfer fluids, such as water, for direct generation of steam, thus avoiding the need for expensive heat exchangers or molten salts to achieve higher operating temperatures.
- Improvements in plant control and operation to enhance efficiency and reliability.

In response to these challenges, the company has set in motion several pilot plants as part of the Solúcar Platform over the course of 2009. The projects have validated a range of key innovative concepts:

- Operation of a tower plant at higher temperatures. Unlike the PS10 and PS20 models, the Eureka tower operates with superheated steam generated in a second receiver, with temperatures reaching 550° C. The plant was commissioned in early 2009.
- Water certified as an alternative to oil in parabolic trough loops. Our direct steam generation plant, also commissioned early in 2009, has validated the control system developed by Abengoa Solar, thus meeting one of the main challenges of this technology.
- Validation of thermal storage. The setting in motion of a molten salts demonstration plant in 2009 reinforced Abengoa Solar's know-how in the use of this fluid to store energy in the form of sensible heat and to quantify the overall performance of this storage mode.

Just like solar thermal technology, photovoltaic technology faces the challenge of developing systems that generate power at a cost that can compete with both other renewables and conventional sources.

The development of the photovoltaic market has meant that, holding geographical location constant, this technology now achieves costs comparable to those of high-temperature concentrating solar power plants. The versatility of photovoltaic technology makes it a strong candidate for use in virtually all regions of the planet – its efficiency and performance may differ, but it will be fully operational everywhere.

The market's learning curve and growth trend raise hopes for costs to be lowered with respect to other sources. Finally, the convenient modularity of photovoltaics makes them suitable for existing infrastructure and a wide variety of buildings, opening up special markets such as distributed generation (at a small scale) for industrial and residential areas.

This is why developing and operating efficient photovoltaic technologies has become a core goal for Abengoa Solar. The company is now working with flat panel systems, with and without concentration, and on high-concentration photovoltaics. Over the course of 2009, Abengoa Solar conducted a comparative survey of the power output of various available technologies and of newly emerging concepts in research and development: thin film, high-concentration photovoltaics and others.

The company has considered using high-concentration designs involving large area reflecting dishes and point focus approaches. Abengoa Solar has continued its research program to develop the concentration systems of the future, based on high-efficiency multi-band cells. A highlight here was the commissioning of one of the world's largest CPV plants, which now forms part of the Casaquemada facility (Sanlúcar la Mayor, Seville, Spain).



R&D Programs

The R&D program in the Solar Business Unit rests on five main pillars:

Central Receiver and Tower Technology

Abengoa Solar's research focus on central receiver and tower technology is what sets it apart from its competitors.

One of the internationally recognized hallmarks of Abengoa Solar is to use tower and heliostat technologies in its quest for efficiency, particularly in the solar component of the plant.

In 2009, besides commissioning the Eureka plant for the production of superheated steam, the company undertook research and development relating to one of the main components of a solar plant: the receiver.

The Eureka project was intended to address new challenges in tower technology, now that the start-up of PS20 has amply confirmed its reliability. This second-generation solar tower achieves higher temperatures by producing superheated steam, thus enhancing the overall efficiency of the steam cycle. The plant consists of 35 heliostats and a 50 m tower mounting the experimental superheating receiver. The approximate power of the plant is 3 MWth.

Running in parallel to the manufacture of the prototype and construction of the plant, the Resolve project – in partnership with leading Spanish research centers – developed a software application that simulates the thermal and fluid dynamics behavior in solar receivers of saturated and superheated steam. This work is embedded within the Cenit Consolida project and will accordingly run for a further three years, during which real-time observational data will be used to validate and improve the software.

In the field of tower technology, our research and development was not confined to steam. Two new projects were initiated in 2009 to focus on two very different fluids: molten salts and air.

The CRS Molten Salt project, co-financed by the CDTI, involves the engineering and manufacture of a tower solar receiver prototype in which the heat transfer fluid is a mixture of molten salts. The purpose of the exercise is to appraise the technical and economic viability of a large-scale plant based on this technology.

In addition, the Solugás project (co-financed by the European Seventh Framework Program), started in 2008, is intended to demonstrate the functioning of tower technology at higher temperatures, employing air as the heat transfer fluid and a gas cycle instead of steam.

Parabolic Troughs

Parabolic trough technology offers great potential for improvement in a wide range of its components, including its structure, mirror-fixing methods, tubing and interconnections. Abengoa Solar is researching all of these components. At its prototype facilities at the Solucar Platform, it tries out many different configurations in an ongoing search for an optimum that secures the utmost efficiency at a competitive cost.

Since 2007, the company has operated Repow PS10, an experimental loop comprising four collectors and using thermal oil as the heat transfer fluid. Potential optical and thermal improvements have been assessed and all the key components of the technology have now been identified. This unique test bench has earned us a practical familiarity with the functioning of the plant at smaller than commercial scale, and the know-how acquired has been passed on to commercial plants now in the process of construction.

2009 also saw the commissioning of the direct steam generation plant. Formed by three loops carrying saturated steam, the design of this technology removes the need for an oil-steam exchanger and accordingly raises the overall efficiency of the site. Yet this direct generation technology requires a far more critical degree of control than thermal oil; the coexistence of two phases of matter in the receiver tube makes for higher instability.

The Cenit Consolida project also involves research on improving components and transfer fluids. Here, the sought-after qualities are maximum durability and minimum environmental impact.

Storage Technologies

The technology underlying concentrating solar power plants is now reaching a state of maturity that positions solar power as a strong candidate to supersede conventional thermal plants. Some of the major issues still have to be resolved, however. One difficulty is the seasonality of the energy source, meaning sunlight. This means that energy has to be stored in large accumulator systems; levels of available sunlight and energy reserves at a given time impose severe strictures on operational planning.

The size of the energy storage system attached to a solar plant is determined by the plant's main transfer fluid – steam or thermal oil. Steam stores heat in latent form, while oil stores it in sensible form.

In the case of thermal oil, thermal storage at combined cycle plants is implemented in the form of sensible heat. A hot body (e.g., a heat transfer fluid) is brought into contact with a cooler liquid, solid or gaseous medium in which the heat is to be stored. As a result, the storage medium heats up. Using the sensible heat of the material, the medium stores energy as and when its temperature rises.

This technology was tested in 2009 at the TES PS10 facility, connected to the Repow PS10 oil loop. The experience provided a highly valuable lesson in operation and optimization for the construction of forthcoming commercial solar plants with attached storage systems.

Where heat is exchanged with a fluid that in that same process undergoes a change of phase – becoming steam – the storage technology makes use of the energy associated with the change of phase of the material or mixture of materials. This technology is at a very early stage, but Abengoa Solar has taken part in several past research projects relating to storage with a change of phase. For example, the Distor project led to a prototype that underwent trials at the Almería Solar Platform.

In partnership with a wide range of research centers and universities, we are now working on a definition and full specification of innovative mixtures of materials.

As part of the Cenit Consolida project, we are also beginning to conduct research on another mode of storage: thermochemical storage.

Photovoltaic Technology

Concentrating Photovoltaics (CPV)

In partnership with NREL and several North American universities and colleges, the company is developing new concentrating photovoltaic concepts. Highlights include a new generation of Fresnel lens photovoltaic concentrators, a semi-static low-concentrating system, quantum dots, light guides and other innovative technologies. These concepts are expected to become, in the medium term, the drivers of new photovoltaic systems capable of generating power at a competitive cost, thus widening the feasibility of renewable energy to embrace scenarios where incentives are not needed for the business to flourish.

The company has made a major effort to develop solar trackers for concentrating photovoltaic applications. Building on the knowledge amassed on this kind of system for concentrating solar power plants, the Photovoltaic Technology division is adapting and optimizing trackers for the markets and their new requirements. Several CPV technology devices have been successfully installed at a 100 kW plant at the Instituto de Sistemas Fotovoltaicos de Concentración (ISFOC) at Puertollano (Ciudad Real, Spain). The move unveiled a potential new line of business that may well valorize the research and development efforts of recent years and garner attractive returns in the short or medium term.

Thin Film Technology

One of the company's most ambitious projects is to build an R&D technology center in Huelva province, Spain. The center will be the setting for applied research on new materials, photovoltaic cells, and thin-film photovoltaic prototypes and technologies. The knowledge thus generated will lead to proprietary and competitive technologies in support of Abengoa Solar's future industrialization projects.

The technology center will employ a large team of researchers and undertake its programs in partnership with leading Spanish and international research institutions. It will be endowed with a large budget so that it can acquire and use the latest techniques to characterize and deposit new materials.

One of the center's key goals is to become a world benchmark in applied research on advanced materials with photovoltaic applications.

Photovoltaics Laboratory

The photovoltaics laboratory built in 2008 has tested and measured the performance of a wide range of photovoltaic systems under real operating conditions and using various monitoring methods. Based on the data thus gathered, the laboratory has developed an experimental software application to analyze the cost of generating energy using different technologies and configurations, prevent or solve problems arising over the lifetime of photovoltaic systems, and identify the optimal technology and configuration for various kinds of facility. The company's photovoltaics laboratory, installed at the Solúcar Platform, is equipped to measure and characterize photovoltaic devices and systems. It serves as a powerful auxiliary for the requirements of the various

research and development projects now underway – solving and preventing difficulties at existing photovoltaic plants and troubleshooting the design of future plants.

Emerging Technologies

Stirling Dish Technology

Abengoa Solar's research and development also embraces Stirling dish technologies. Abengoa Solar has an eight-unit demonstration plant at the Solúcar Platform. Based on the experience thus gained, a number of projects are in progress to design and manufacture prototypes for new concepts of Stirling engines and similar concentrating structures. Stirling dishes have been shown to be by far the most efficient existing technology, with a heat-to-power yield in excess of 30 %. It is hoped that further advances will make it competitive in terms of cost with respect to other concentrating thermo-electrical technologies, such as parabolic troughs and central receiver plants. Being modular, Stirling dishes are suitable for fields that have hitherto been catered to only by photovoltaic technologies (distributed energy generation).

Their scalability means that they can also be used to build large plants offering tens of MW.

Renewable Hydrogen Production

In an ongoing partnership with Hynergreen, Abengoa Solar has undertaken numerous projects to produce hydrogen using thermal and photovoltaic solar power. As part of the integrated Cenit Consolida project, the company is working to single out the most suitable thermochemical cycle for combination with thermal energy produced by solar concentration. In late 2009, Abengoa Solar was awarded the tender for a project funded by the Spanish Ministry of Science and Innovation (MICINN) to implement a hydrogen receiver-reactor prototype at a tower plant.

Abengoa Bioenergy

Abengoa Bioenergy and Innovation

Abengoa Bioenergía Nuevas Tecnologías (ABNT) was formed in early 2003 with the goal of positioning Abengoa Bioenergy as an innovative leader in the bioenergy industry. ABNT's mission is to develop innovative technological processes to produce bioethanol and its co-products.

ABNT's team of engineers and scientists, in cooperation with research and development centers, universities and industrial partners, develops innovative processes to raise the performance of bioethanol through dry mill technologies, improve co-product quality, develop new co-products and develop biomass technology for bioethanol and co-product production. ABNT's business strategy involves developing and registering the intellectual property rights to provide technology to third parties under management agreements.



Abengoa Bioenergy Innovation Highlights of 2009

Abengoa Bioenergía Nuevas Tecnologías' mission is to engage in scientific and innovative endeavor to develop and demonstrate technological solutions that fulfill the aims of Abengoa Bioenergy's strategic plan:

- To develop biomass technologies and bring them to the market at competitive prices.
- To raise the value-added of existing co-products and develop new co-products.
- To improve on current dry mill technologies.
- To encourage the development of energy crops.
- To develop the biomass market.
- To develop biofuel end-use programs.
- To develop and improve new enzymes for cellulose breakdown.
- To develop carbon capture technologies using micro-algae.

For the use of new raw materials as sources of carbon, the company's efforts focus on enzymatic hydrolysis, gasification and catalysis processes.

The company has conducted extensive research on enzymatic hydrolysis at its pilot plant at York, Nebraska. Having acquainted itself with the process and operating procedures, Abengoa Bioenergía Nuevas Tecnologías has set in motion a second-generation 5 ML BCyL bioethanol demonstration facility. The data thus collected is critical for developing the design of the first industrial facility using this technology, now being implemented as part of a project funded by the DOE.

In the field of gasification and catalysis, over the course of 2009 the company continued its ambitious program to develop heterogeneous catalysts for converting synthesis gas into bioethanol. The company has filed applications for two Spanish patents over groundbreaking catalysts that have improved on the prior art. We have continued to develop technical and economic models and analyses for various configurations of thermochemical conversion of biomass, and to explore the different options for introducing biomass gasification technologies.

Our pilot plants are constantly evolving. We have introduced improvements to the starch-based production process so as to raise the performance of bioethanol/grain conversion. The company is experimenting with new enzymes to assess the potential improvements to performance and reductions in impact. Major progress has thus been made in output performance as measured by liters of bioethanol per ton of grain.

Abengoa Bioenergy has also worked on the development, evaluation and validation of new processes to valorize the co-products of cereal-based bioethanol production, with a special focus on improving co-product consistency, enhancing the digestibility and concentration of proteins, and developing pig and free-range poultry feeds.

According to data produced by the Joint Research Center (JRC), raw materials account for 60 to 70 % of the production cost of biofuels, and 30 to 40 % of greenhouse gas emissions over biofuel life cycles. Abengoa Bioenergy is working on four distinct lines of research in the field of raw materials: analyzing and identifying the most sustainable raw materials at the global scale; assessing potential local supply of biomass to Abengoa Bioenergy's facilities in Europe; developing software to track the sustainability of raw materials used; and selecting the most suitable species for both first and second-generation technologies.

Fully aware of the environmental benefits of using biofuels, the company is undertaking e85 and e95 demonstration programs and research aimed at developing stable ethanol-diesel blends to satisfy the requirements of gasoline and diesel engines. These programs demonstrating potential new applications of bioethanol as an end product have focused on captive fleets of heavy vehicles – buses and construction machinery. Fuel analysis has been guided by a strategic focus on blend stability, engine performance and engine part durability when using e-diesel. The various studies and demonstrations using e-diesel have shown a reduction of up to 70 % in visible smoke, up to 40 % in particulate matter, and up to 30 and 6 %, respectively, in carbon monoxide and nitrogen oxides emissions.

Another concept that has attracted our research team is bio-refining, the process of obtaining marketable products from biomass. The company is developing integrated concepts that combine first- and second-generation technologies to identify and select high value-added products that can be derived from biomass and to integrate enzyme production and microalgae-based carbon capture facilities within bioethanol production plants.

The significance of biocatalysts – or enzymes – in the biochemical route to biomass-based bioethanol production has led the company to dedicate a specific line of research to developing optimized enzymes that more effectively reduce consumption and thus mitigate economic impact. We are working on isolating and achieving the expression of the genes underlying enzymatic activities, isolating and improving producer microorganisms, characterizing and optimizing enzymatic mixtures, optimizing operating conditions and raising productivity. These lines of research are all geared towards lowering production costs and reducing enzyme dosage.

After preliminary assessment of the potential for using microalgae cultures to capture the carbon dioxide generated by prevailing production processes, the company set in motion an ambitious development program to isolate, improve and select carbon capture and biofuel production microorganisms, develop laboratory-scale techniques to cultivate and process these microorganisms in biofuel settings, optimize production systems so as to attain viability, develop post-cultivation processes of conversion into target products, and, finally, integrate the productive process with industrial activities.



R&D Programs

The most significant projects are outlined below.

I+DEA Project

Abengoa Bioenergía Nuevas Tecnologías (ABNT) is leading this multidisciplinary consortium towards the goal of generating knowledge for the use of bioethanol as a fuel.

The specific objectives of the project include:

- Developing the right energy crops for both existing and second-generation technologies.
- Developing enzyme mixtures for the enzymatic hydrolysis process so as to reduce the impact of this stage on the overall cost of manufacture.
- Making significant progress with bioethanol synthesis catalysts.
- Undertaking complex process design and in-depth analyses.
- Conducting analyses on blend stability, engine performance and engine part durability.
- Demonstrating the use of e-diesel in bus and machinery fleets and developing on-board emissions measurement.
- Developing new applications for bioethanol: specific industrial bioethanol burners, use of bioethanol in marine engines, high-load engines and motorcycles (in modified and unmodified motors).
- Developing standards for tank design and soil restoration after bioethanol spills.

Biosynergy

The Biosynergy project researches the use of biomass to synthesize bioproducts: chemicals or materials with the production of secondary energy carriers; and fuels for transport, energy and/or CHP through the development of bio-refining. The company's research focuses on advanced and innovative development of breakdown

and conversion processes, combining biochemical and thermochemical aspects and developing the process from the laboratory scale to the pilot plant scale.

Abengoa Bioenergy's goal is to generate the data required to weigh up the various options for the physical or chemical breakdown of pre-treated forage and post-treated materials. This data is needed to configure the process while it remains in development and to select the right equipment for bio-refining facilities. It will also aid the development of the conceptual plan for a bio-refining plant that turns energy crop wastes into bioethanol and high-value-added co-products.

Major milestones achieved:

- Evaluation of a range of bio-refining concepts under technical, economic and environmental criteria.
- Analysis of the main bioproducts that can be produced from the various fractions of biomass.
- Technical and economic analysis of various pre-treatment options.
- Technical and economic analysis of various concepts involving combinations of biochemical and thermochemical processes.

PSE (“unique strategic project”) for Energy Crops

Abengoa Bioenergy, Ecoagrícola and ABNT are partners in this project funded by the Spanish government to develop energy crops for a range of different applications – heat, electricity and biofuels. With Ciemat playing a coordinating role, the consortium includes Abengoa Bioenergy, Ecoagrícola, Acciona Energía, Acciona Biocombustibles, Guascor, Ciemat, CSIC, INIA, Taim, Circe, the University of Comillas and Valoriza.

Milestones achieved:

- Externalities associated with the use of cereals as an energy crop.
- Development of a software application to identify the cereal used at bioethanol production plants in relation to greenhouse gas emissions along the production and supply chain.
- Selection of the first batch of cereal varieties optimized for bioethanol production.
- Agricultural engineering of Jerusalem artichoke and sweet sorghum (cultivation techniques, harvest periods and techniques, sugar yield, etc).

Híbrido Project

Abengoa Bioenergía Nuevas Tecnologías is leading the implementation of this initiative. The goal is to design, build and operate a commercial hybrid biomass and starch plant with a capacity of 380 ML.

The specific objectives of the project include:

- Demonstrating the commercial viability of the process of converting biomass into bioethanol.
- Confirming that the technologies developed can be adapted to existing and future plants.

Abengoa's ABNT subsidiary has been selected to design, build and operate the US DOE's large demonstration bio-refinery. The project is partly funded by a DOE subsidy.

The bio-refinery will be adjacent to a starch bioethanol plant, thereby forming a hybrid complex at Hugoton, Kansas, USA.

The bio-refinery will boast a processing capacity of at least 700 t/day, and will comprise two sections – an enzymatic hydrolysis (EH) section and a gasification section. The EH section will convert biomass (400 t/day) into bioethanol, lignin and livestock feed, whereas the gasification section will convert 300 t of biomass per day into syngas, which will be burned to generate steam. The steam will be used internally within the biomass plant, with any surplus being sold to the adjacent starch plant.

Milestones achieved:

- Secured a DOE grant worth \$38 M for the phase 1 contract.
- Hired staff and rented offices for the project.
- Signed property management and water supply agreements.
- Obtained pro-forma approval for the hybrid starch/biomass plant.
- Obtained approval for pre-construction of the project and the EPC program.
- Completed the enzymatic hydrolysis and gasification simulation model.
- Selected the starch technology.
- Selected and engaged architecture and engineering consultancy firms.
- Completed the engineering phase of the project.

Bioref-integ Project

The Bioref-integ project studies and develops bio-refining concepts based on existing industrial fuel production complexes in order to enhance their competitiveness with co-production of new products. The project addresses various sectors of the market: bioethanol, biodiesel, pulp/paper, oil refining, energy production, the food industry and the farming sector. The bio-refining concepts developed as part of the project are then assessed in terms of their technology, economic features and emissions profile.

Abengoa Bioenergy's goal is to help identify existing industrial complexes in the bioethanol sector and potential co-products, while developing bio-refining simulation models for integration within the bioethanol sector.

- Identify and characterize bioethanol-producing plants in Europe.
- Model and evaluate the integrated process of grain-based bioethanol production and assess its co-products.

Sost-CO₂

This project is funded by the Cenit program (Spanish Ministry of Science and Innovation, or MICINN) and coordinated by Carburos Metálicos (Air Products Group).

Overall objective: To develop sustainable technologies for the use of CO₂. ABNT will work in partnership with Universidad Politécnica de Valencia, the University of Seville, Cener and Inabensa.

ABNT's specific objectives for the project include:

- Developing carbon dioxide hydrogenation selective catalysts for bioethanol synthesis.

- Developing the process for producing bioethanol from CO₂ and renewable hydrogen.
- Developing the process of converting fermentation CO₂ and processes for converting microalgae biomass into co-products.
- Evaluating the life cycles of the proposed alternatives and their impact on the life cycle of existing grain-based bioethanol production technology.

Milestones achieved:

- Proposal and technical and economic analysis of various configurations of catalytic processes to turn CO₂ into bioethanol.
- Development of catalyst evaluation from the laboratory scale to the test bench scale.
- Conceptual design and technical and economic evaluation of the process of carbon capture using microalgae cultures.
- Development of a methodology to analyze, pre-treat and ferment algae biomass.
- Development of laboratory procedures for converting microalgae into biofuels.

New Projects

LED Project

Recently awarded as part of the European Seventh Framework Program, the LED project is currently in the process of being negotiated. The objective of the Lignocellulosic Ethanol Demonstration (LED) project is to design, build and operate a plant producing 50 ML annually of bioethanol using lignocellulosic biomass. This four-partner project is led by Abengoa Bioenergía Nuevas Tecnologías.

Befesa

Befesa and Innovation

Befesa's research and development strategy is geared towards results and value creation by proposing new technologies in alignment with sustainable development.

Befesa's strategic research and development plan pursues the following objectives:

- To become a technologically competitive leader in aluminum and galvanized steel waste recycling.
- To develop new technologies for industrial waste management.
- To lead the field in desalination technology and become technologically competitive in wastewater treatment and reuse.

Research in the field of aluminum waste recycling seeks to improve performance in the recovery of aluminum raw materials and waste, optimize operating procedures and product quality, and develop new, improved technologies in aid of sustainable development.

The steel and galvanic wastes recycling area has recently formed a new company, Befesa Steel R&D, S. L., with a view to bringing organizational structure in line with the new model,

expand the various lines of activity and widen and improve our range of services so as to exceed market expectations and enhance both delivered and customer-perceived value.

The industrial waste integrated management area is developing new technologies along with ongoing change in environmental law. The company prioritizes its management methods based on a hierarchy headed by reuse, recycling and valorization as against merely eliminative treatment. We are also diversifying into new environmental markets and widening the range of treatable wastes.

In the water area, the company's goal is to lead the desalination field, become technologically competitive in potabilization and urban and industrial wastewater treatment and reuse, and entrench its leading position in hydraulic infrastructure and water resource management models and systems.

One of the main vectors of Befesa's research and development strategy is to enter into external partnerships with institutions and universities. Major partners include the Fundación Euskoiker and the Escuela Técnica Superior de Ingenieros Industriales de Bilbao, as part of the activities conducted by the Aula Befesa higher education unit in training and research. The company has also engaged in cooperation with Spanish government bodies in the form of subsidies or partnerships with the Spanish Ministry of Industry, Tourism and Trade (MITyC), the Andalusia devolved regional Department of Innovation, Science and Enterprise, CDTI, Inasmet, University of Valladolid, Programa para el Fomento de la Investigación Técnica (PROFIT), Corporación Tecnológica de Andalucía, Laboratorio Inatec, Insesca and Alcan, among others.

In 2009, Befesa set in motion a new research and development center to centralize R&D activities and bring to bear the necessary equipment and means to undertake valuable research. Located in Dos Hermanas, Seville province, Spain, construction work on the new research center got underway in April 2008.



Befesa Innovation Highlights of 2009

Befesa Gestión de Residuos Industriales' strategic research and development plan seeks to entrench the company's leadership in waste management and adapt to ongoing changes in environmental law. Specific objectives include:

- Gradually replacing elimination treatments with recovery and energy valorization approaches.
- Reinforcing technological leadership in industrial waste management by developing environmentally safe and energy-efficient treatments.
- Widening the scope of the market by offering industry news services and extending the range of treatable wastes, while diversifying into new environmental markets.

The strategic research and development plan develops technologies that offer an environmentally friendly and sustainable treatment alternative to prevailing practices in waste management, by using the material and energy resources of waste material through recycling and valorization processes. The technology activities associated with the strategic plan include:

- Production of waste-based fuels as alternatives to fossil fuels.
- Acquisition of substitute raw materials for industry.
- Development of the best available technologies for treating wastes and contaminated soils.
- Development of technologies to diversify into new markets and opportunities.

Befesa Agua's strategic research and development plan pursues the goals of leading the way in desalination, becoming technologically competitive in potabilization and urban and industrial wastewater treatment and reuse, and underscoring its leading position in hydraulic infrastructure and water resource management models and systems.

Befesa Agua's strategic R&D plan relies on four main vectors of advance:

- In-house resources, such as the R&D department and Befesa's research and development center.
- R&D aid and subsidies awarded by a range of public authorities.
- Collaboration agreements with universities.
- Technology partnership agreements.

R&D Programs

Befesa's R&D is structured into two core research and development programs: the Industrial Waste Recycling Program and the Water Program.

Industrial Waste Recycling R&D Program

The Industrial Waste Treatment Program is structured into three strategic lines of action:

- Steel and galvanic waste recycling.
- Aluminum waste and salt slag recycling.
- Industrial waste recycling.

Some of the highlights of our research and development in 2009 are outlined below.

Treatment and Preparation of Raw Materials

This project is aimed at managing and finding uses for the co-products of treating spent pot lining (SPL) from the electrolytic cells used for primary aluminum production. The research will widen Befesa's recycling market.

Development of Products and Applications

One of the company's main goals is to demonstrate the potential uses of the alloys produced at its facilities and their applications in various fields. Secondary aluminum alloys can be used to replace primary aluminum to manufacture sand-

cast parts called on to bear high mechanical responsibility. Alloys commonly used for aluminum injection can be alloyed by up to 1.8 % without impairment. A new modifier can be created for the structural phases of iron present in the alloys, which makes them brittle.

New Applications of Paval/BFA/Serox

The company has developed a Paval+polyester component that fulfills the innovation requirements for a range of urban architecture and street furniture projects. The invention now needs to be followed through with its final touches: specifications of the production process; color schemes; development in polystyrene casts and complex forms; introduction of fibers, etc. The trademark has been registered in the name of ONN, a company that uses Paval® (a trademarked form of aluminum dross residue) to make architectural and street furniture.

Production Process Improvements

This innovation project enhances the equipment itself as part of the production process in both aluminum smelting and in molten salt recycling, so as to optimize the process and lower costs. A highlight of equipment enhancement is to develop a new refractory inner lining for rotary kilns. Salt recycling has been improved by lowering the humidity of the molten salts at the crystallization exit, making savings in the natural gas required to produce steam, and enhancing the process of drying the salts and Paval, and further conditioning the Paval on its exit from the production line.

Introduction of the Greenhouse Gas Emissions Inventory

Over the course of 2009, the company advised on the introduction of the new greenhouse gas emissions inventory in all companies within this business unit in accordance with Abengoa's internal rules and regulations. The move involves setting objectives and framing plans and specific measures to reduce carbon dioxide emissions across the group's various facilities.

Design of New Dust Recycling and Waelz Oxide Lixiviation Plants

The company has undertaken engineering projects and services for the design of two new plants. One will serve as the central purification unit for unwashed Waelz oxide produced by the common steel waste recycling division, while the other, currently installed in southern Europe, is intended to accommodate expanded capacity for the treatment and valorization of steel mill dust by means of the Waelz process. We have located the ideal site for each project and filed applications for the required administrative permits for implementing our plans.

Improving Existing Processes and Products

The company is assessing a range of innovative processes for enhancing the quality of our products. We are searching for economically viable applications for a Waelz process co-product called Ferrosita®, which has been tested successfully as an input material for making various kinds of bricks and concrete counterweights for elevator systems. In addition, the galvanic waste recycling division has conducted research to produce a commercial quality zinc oxide through valorizing low-zinc-content concentrates.

Development of Oxygenated Additives Derived from Glycerin for use in Liquid Fuels

The aim of the project is to use excess crude glycerin from biodiesel production plants to make high-value-added products. A specific area of interest is to synthesize glycerin esters for use as oxygenated additives for diesel fuels. Finding a use for the large surpluses of crude glycerin – for which there is no market in Spain at the moment – will improve the life cycle of biodiesel, support sustainable development and mitigate adverse environmental impacts. Befesa Gestión de Residuos Industriales' (BGRI's) research and development department is working on this project in partnership with the Fundación de Investigación Tekniker and the thermal machinery and engine research team of the University of Seville.

The project has attracted funding from the Spanish Ministry of Industry, Tourism and Trade (MITyC), the CDTI, the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia (Agencia IDEA) and Corporación Tecnológica de Andalucía (CTA).

New Construction Materials Made from Recycled Waste

This project is concerned with stabilizing inorganic wastes which can then be used as construction materials – bricks, mortar, sound and heat insulation, etc. The company hopes to validate techniques for stabilizing inorganic industrial wastes in silicon matrices using gentle hydrothermal processes that do not require high energies. Project partners include the solid-state chemistry research team of the University of Seville and the private enterprises Cerámicas Malpesa and Cementos Barrero S. A..

The project has attracted grants from the Spanish Ministry of Education and Science (MICINN) and the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia (Agencia IDEA).

Restoration of Contaminated Soils using Non-Hazardous Wastes and other Byproducts

The project is intended to validate remedial techniques for metal and hydrocarbon contamination. The proposed methods involve fixing the contaminants using non-hazardous industrial gypsum wastes and other byproducts, such as modified or organic clays. The arrival of a new regulatory framework on contaminated soils management has prompted the development of techniques that prioritize on-site treatment of the terrain as against techniques requiring mass displacement of soils. Research partners include the CSIC (the Spanish national research council), the IRNA (the Spanish Institute of Natural and Agro-biological Resources), the ICMS (the Seville Materials Science Institute) and the University of Barcelona.

The project has attracted a subsidy funded by the Spanish Ministries of Education and Science (MICINN) and of Environment (MARM).

Water R&D Program

Befesa Agua's strategic R&D plan is structured into three areas: desalination, potabilization-purification-reuse and water cycle sustainability.



The Desalination area focuses on improving the efficiency of the reverse osmosis process and lowering its investment, operation and maintenance costs.

The Potabilization Purification Reuse area seeks to optimize membrane-based water treatment processes so as to save energy and produce less sludge, develop sludge treatment and elimination technologies and undertake research on supercritical oxidation.

The Water Cycle Sustainability area seeks to optimize energy use in water infrastructure, develop hydro power and marine energy capabilities, create sustainable water management models, and develop and apply sustainability criteria in the design of the company's solutions.

Some of the highlights of our research and development in 2009 are outlined below.

Pilot Plant for High-Efficiency Desalination

The aim of the project is to lower energy use for desalination purposes to less than 2.5 kWh per cubic meter of water output. Befesa Agua has researched and developed reverse osmosis membranes and energy recovery systems and implemented process improvements to minimize energy use. The project is now at the pilot phase in that a high-efficiency pilot plant has been built and experimental campaigns are being conducted.

The project has secured grants from the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia and from the Spanish Ministry of Environment.

Seawater Pretreatment System using MF/UF Membranes

This project is directed to developing an advanced seawater pretreatment system using membrane technology. The company has conducted real-site tests on seawater at the pilot plant scale to evaluate the performance of commercially available micro- and ultra-filtering systems in comparison to one another and to conventional

schemes. The results have then been used to design a proprietary system based on MF-UF membranes.

The project has won grants from the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia and from the Spanish Ministry of Environment.

Desalination Plant Remote Control and Monitoring System (Befel-CRIBA)

This project is aimed at developing a remote control system affording real-time vision of the state of operation of Befesa's desalination plants across the world. If successful, the system will be a key tool for optimizing the operation and maintenance of Befesa Agua's plants. The company has created an IT platform for remote control and monitoring, a communications system, an information management system and a control room. Now in its demonstration phase, the platform is being tested with data from one of Befesa Agua's desalination plants.

The project is funded by subsidies from the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia and from the Spanish Ministry of Industry's PROFIT scheme.

Advanced Wastewater Treatment for Reuse (TRASOS)

The ability to reuse wastewater stands to be a key factor in sustainable development, and offers high potential as an alternative source of water. The goal of this project is to optimize wastewater treatment processes by taking account of the specific type of wastewater concerned and its intended future use. The company is researching membrane technologies such as biological membrane reactors and micro- and ultra-filtering systems. The project is now at the stage where a pilot plant is under construction and experimental campaigns are scheduled for 2010. The company is awaiting a decision on its application for funding from the CDTI technology program.

Wastewater Treatment Plant Sludge Removal using Supercritical Oxidation

With Befesa Agua acting as coordinator, this project has been undertaken in partnership with Emasesa. The goal is to demonstrate the technical and economic viability of supercritical oxidation technology for eliminating wastewater treatment plant sludge. A pilot plant has now been designed and built, experiments are already underway, and by 2010 tests will be extended to other types of sludge.

The project is funded by subsidies from the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia, the Corporación Tecnológica de Andalucía and the Spanish Ministry of Environment.

Telvent

Telvent and Innovation

One of the mainstays of Telvent's strategy is to invest in R&D&I so as to offer our clients innovative solutions providing technological support for sustainability, security and safety. Our goal is that our clients should be able to benefit from all the advantages of technological applications and solutions without having to become involved in the

increasingly complex issues surrounding technological decision-making. They should be confident that the ongoing evolution and improvement of Telvent's systems will enable them to manage their processes efficiently and securely and gain high value-added information for their operational, business and environmental decisions.

One of Telvent's strengths is its global presence. The company has accordingly achieved a high standard of competence in a very wide range of technological domains. The company's business is organized under a distributed scheme of Product and Competency Centers. Product centers create the technologies that afford the underpinnings for Telvent's range of solutions. Sometimes sold as freestanding packages in their own right, these technologies are utilized by our competency centers to develop high-value-added system architectures and advanced applications specifically aimed at each given industry.

Across Telvent's network of centers, a research staff of close to 400 implements our global research and development programs to create and evolve over 75 technology products and solutions. In 2009, Telvent's R&D&I highlights included:

- Smart Grid Solutions (SGS). This program encompasses Telvent's technological strategy for the utilities sector. Taking a global, integrated approach, research ranges over three key areas – Smart Network, Smart Operations and Smart Metering – to develop solutions built on the foundations of Telvent's proprietary technologies. SGS focuses on technology and process innovation to offer value-added to our clients through tightly cohesive integration of advanced applications with underlying platforms. SGS conceives of the power supply grid as a network of two-way services and information, supported by smart automation at an exceptional standard. The advantages of this concept are that our clients can get from now on unavailable demand management tools, adapt their grid to new and alternative forms of power generation, help consumers self-manage the service using real-time information, enhance energy efficiency across the grid, and boost quality of service.
- Smart Mobility. This concept is concerned with sustainable mobility, and addresses the issue from two angles: The efficiency issue, by implementing smart information technology systems to manage and enhance existing infrastructure capabilities, assure security, safety and sustainability, and free up traffic flows; and the information issue, by offering the public accurate information to enable users to combine different modes of transport ("intermodality"), facilitate access to public transport, and allow for journeys to be planned in advance in aid of improved efficiency.



Research and Development Highlights of 2009 at the Product and Competency Centers

Key products and successes are outlined below, by product and competency center.

SCADA and Information Management

Our product center at Calgary, Canada, develops and maintains OASyS DNA (Dynamic Network of Applications). OASyS DNA is Telvent's main applications platform. It is the technology foundation for a wide range of solutions directed at the energy, transport and environment sectors. Its robust security and wide flexibility make it ideal to accommodate technological progress in the critical industries where Telvent operates.

- 2009 witnessed the completion of the second stage of our joint research project with the Idaho National Laboratory (INL). Commissioned as part of the United States Department of Energy's National SCADA Test Bed Program, this research is concerned with the security of critical infrastructure. OASyS DNA was selected on the strength of its leading position in the market for intrinsically secure platforms. INL is now continuing its trials with OASyS DNA to validate secure information transactions in the setting of a full SCADA system comprising equipment from a variety of suppliers.
- OASyS DNA technology is embedded in several Telvent products, which thus benefit from a high-performance, high-security foundation. In addition to its long-standing use in SCADA solutions, OASyS DNA is also the platform for Responder, the outage management system, and for DMS, the next generation of the power distribution management system.
- To satisfy the demanding requirements of DMS and of its role in Telvent's proprietary Smart Grid system, in 2009 the functionalities of OASyS DNA were given a major boost. When the project reaches completion, the volume of data that OASyS DNA can handle will have increased tenfold.

Geographic Information Systems (GIS)

Based at Fort Collins, Colorado, USA, this product center leads the field of GIS applications for utility companies with its ArcFM suite. ArcFM helps power, gas, water and telecommunications utilities manage their assets, work and operations to enhance quality of service and lower costs. Since 1987, this product center has operated a highly successful technological cooperation agreement with ESRI, the leading software developer for Geographic Information Systems.

- Telvent continued to develop its ArcFM solutions with the April 2009 release of version 9.3 Rev2 of the package. Certified for use with ArcGIS® 9.3.1 and ArcGIS 9.3.1 SP1 developed by ESRI, this version of the ArcFM suite offers a wide range of new functionalities and improvements that have been introduced to meet emerging market needs.

Data Capture Subsystems

The Data Capture Subsystems product center operates sites in Seville, Spain, and Houston, USA. Its core business is to develop Remote Terminal Units (RTUs), especially Saitel and its two auxiliary packages, the gasCAT gas flow calculator and the subCAT power substation remote controller. Our range of remote control solutions is

completed by RTU SAGE. Developed in and for the North American market, this suite has earned widespread acceptance and a broad base of installations.

- In 2009 the company continued to develop its Cross Domain Platform (CDP). Telvent has brought to bear the experience it has amassed in recent years in its target sectors. The project thus benefits from the latest technologies, and ranges over the whole family of equipment for real-time data capture, embracing both present and emerging trends. This means that our customers will get a highly flexible solution that they can tailor to their configuration and technology needs. As always, security is a key issue that has been considered at all stages of design and development. Some of the research areas within this project have attracted public funding, such as SEPIC (the Spanish acronym for “embedded systems for critical infrastructure”), supported by MITyC, Spain’s Ministry of Industry, Tourism and Trade.

Electricity Competency Center

The Electricity Competency Center, with sites at Seville in Spain, Fort Collins and Houston in the USA, and Novi Sad in Serbia, develops and integrates advanced applications to meet the global requirements of electric utilities in transmission, distribution, substation automation and network operation. This business unit’s core package is Smart Grid, outlined in the introductory section of this chapter. Highlights relating to Smart Grid in 2009 included:

- In November 2009, Telvent released the first version of a new product that rounds off the long list of Smart Grid solutions: MDM (Meter Data Management). MDM is the starting-point for the configuration of an advanced metering infrastructure (AMI). The data identifying and tracking millions of consumers is processed into a body of information validated by a given set of rules; it can then be fed into the utility’s corporate applications, such as billing or customer relationship management.
- The Novi Sad center in Serbia has continued to improve the DMS (distribution management system). This package provides a distribution network behavior model and makes power grid calculations as required for effective analysis, operation and control of the network. 2009 saw the start of the technological re-engineering of the product, based on the powerful and secure OASyS DNA platform. This will considerably enhance its scalability and its potential uses in large complex networks, both on the American and on the European pattern. The new version is particularly suited to the Common Information Model (CIM) exchange scheme, widely used under Smart Grid’s international standards.
- Another key milestone has been the synergic connection of two previously separate systems: the Advanced Metering Infrastructure (AMI) and the outage management system (Responder OMS). This means that the electricity utility gets a previously unavailable real-time snapshot of the state of the grid.
- The company started its Substation to Grid or S2G project. This partnership project will build a pilot facility to test the deployment of wireless smart sensors at high- and medium-voltage substations and explore the benefits of a predictive maintenance system.
- 2009 also saw the launch of SmartCity, a partnership project led by Endesa. The aim is to analyze the development of a sustainable and energy-secure city from the standpoint of electricity distribution. The project will be conducted in the city of Malaga, Spain.

- The first year has now been completed of a project in partnership with Consolida, led by Abengoa Solar, to research more efficient solar thermal technologies. Telvent's contribution involves its Electricity and Environment competency centers. The Electricity Competency Center contributes its experience in developing advanced remote control solutions for solar plants.

Oil and Gas Competency Center

The Oil and Gas Competency Center, located at Calgary, Canada, and Baltimore, USA, develops advanced operation, measurement and business solutions for the hydrocarbon production, transportation and distribution segments, aiming to meet the needs of the world's leading energy companies. Our products are developed on the basis of the OASyS DNA applications platform. They provide oil and gas companies with a centralized and highly automated operating environment, closely integrated with corporate business applications and shielded by the strongest available security safeguards.

- In 2009, the company significantly improved the user interface for the gas measurement accounting system (GMAS) product line. Dubbed "Sightline", the interface has been favorably received by the industry, and rated as an impressive tool with innovative functionalities that will considerably raise productivity.
- In our liquid fuels area, in 2009 the company completed stage 2 of its Power Optimization product. Oil pipeline operators are now in possession of the tools to minimize the cost of operating pumps while delivering fuel to deadline.

Transportation Competency Center

The Transportation Competency Center, with sites at Madrid and Barcelona in Spain, Rockville in Maryland (USA), and Beijing (China), develops solutions for urban and interurban road and rail traffic, including: traffic control systems (MIST), with extensions for adaptive centralized and distributed control (Itaca, OPAC); traffic regulators (RMY, RMB, RBY); centralized railway traffic control systems (OASyS-based CTC); and traffic information systems (SmartNET).

At its development sites in Bilbao, Spain, and Austin, Texas, USA, the company creates solutions for toll, ticketing and parking lot management. Highlights include: toll network management systems (SmartToll), ticketing management (Mobifast) for rail and underground rail networks, ticketing management (Valtick) for road transport, and parking lot control management systems (Web.Park).

The core package is SmartMobility, outlined in the introductory section of this chapter. Highlights relating to SmartMobility in 2009 included:

- Technology upgrade of traffic light controllers to satisfy the most stringent technical requirements and thus gain access to new international markets. The controllers have been equipped with a new Cross Domain Platform CPU to accommodate new standards and protocols. The present controller has been ported to the new technology, and a controller has been developed to implement NTCIP (National Transportation Communications for ITS Protocol), the present standard communication protocol for American controllers and increasingly in demand in most other countries.
- The company's innovations in enforcement systems have garnered excellent results in recent years in terms of road accident reduction. In 2009, we continued

to make progress with new speeding offense detection systems such as En4Speed, a system that measures the average speed of a vehicle over a given stretch of road. In comparison with conventional speed radars, which detect speeding offenses only at very specific points of the network, En4Speed allows for great strides to be made in discipline enforcement throughout the entire road network.

- Our projects have again won the support of Spain's Ministry of Industry, Tourism and Trade (MITyC), which will provide public funds for the completion in 2009 of the mVía project. This year, the project focused on researching new platforms for the creation and provision of vehicle services, based on on-board equipment, satellite positioning and new vehicle-infrastructure communications networks. The available information can be supplied to drivers in transit. This solution has been validated in a range of different scenarios and test runs.
- The company has continued to work on the ViaSens project with the aim of bringing to bear a new approach to road-based information capture and processing. It is hoped that this new paradigm will enhance mobility and safety using non-intrusive sensors fully distributed throughout the entire road network.
- We have also successfully developed and field tested a new bus ticketing solution, ValTick. This development, which we began a number of years ago, posed a major design challenge that called for a combination of high performance and attractive design. The outcome is a tightly integrated piece of equipment.
- In transport ticketing, Telvent is focusing on introducing innovations to facilitate access to and use of public transit systems. In 2009, highlights included:
 - The development of a modular platform, SGIT, to manage integrated ticketing systems. This solution will facilitate the deployment of interoperable and intermodal transport networks and so encourage the use of public transit systems, thus supporting a more sustainable and environment-friendly transport model.
 - In our rail ticketing product line, Mobifast, we have completed the development of a new generation of devices, including the new MáquinaAutoventa Universal Accesible (accessible universal vending machine) and the new Paso, primarily intended to facilitate access to public transit systems to people with disabilities.
- A final highlight is the mIO! project aimed at researching new technologies to provide mobility services as part of the future intelligent universe, in which users can use their cell phones to access multiple services in accordance with their preferences and roles. The project is being undertaken in partnership with a wide range of leading Spanish companies, research centers and universities. It has attracted a large subsidy from the CDTI through the Cenit program and is scheduled for completion in December 2011.

Environment Competency Center

The Environment Competency Center, with sites at Seville in Spain, Culemborg in the Netherlands and Perth in Australia, searches for advanced IT solutions to address the risks currently blighting our planet, such as pollution, climate change, water management and natural disasters.

- In 2009, as part of the Consolida initiative – mentioned above in the context of the Electricity Sector Competency Center – a partnership has been formed with Abengoa Solar New Technologies to create a meteorological prediction software platform for efficient and sustainable management of solar energy, garnering

higher functionality and accuracy in solar resource predictions by using adapted and integrated new technologies and information sources. This is a Cenit project subsidized by the CDTI.

- 2009 also witnessed the start, as an offshoot of the Illion WeatherNet project, of the development of a web-based weather service that provides users with state-of-the-art forecasts tailored to their requirements and geographical location. Users working in sectors as wide apart as farming or helicopter emergency services can get real-time information and forecasts aligned to their day-to-day operations, making for more effective decision-making. The project is financed by MITyC and the European Regional Development Fund (ERDF).
- In addition, as part of the Water Management Suite (WMS) project, we have developed a range of applications for sustainable water management. The package streamlines operating processes, raises quality of service, improves water quality, lowers costs and reduces greenhouse gas emissions – this is a feature of particular relevance to water utilities operating in urban environments.
- Finally, the launch of the MetDNA project provides a new information system for aeronautical meteorology applications. The suite offers new functionalities, satisfies the emerging safety and sustainability requirements of the aviation sector and is compliant with the guidelines and safety specifications of the United States Federal Aviation Administration (FAA) and the European Union's Eurocontrol.

Advanced Services for Agriculture Competency Center

This competency center, based at Minneapolis, Minnesota and Omaha, Nebraska, is the leading provider of agricultural information in the United States for corn, soybean and livestock feeds. In the face of increasing demand for new information services brought on by price volatility in commodity markets, this Competency Center is uniquely positioned to provide innovative solutions to executives in agricultural and plantation businesses. A reliable information source forms the basis for a very wide spectrum of solutions and services, such as a publishing business implemented in-house, weather forecasts and market reporting.

- In 2009, we created a whole new website (<http://www.dtnprogressivefarmer.com>) offering new capabilities and functions, including daily press room videos, digital advertising for cell phones, daily press releases and other features that are unique in the sector.
- AgHost is a website designed to help farming businesses contact their customers, encourage sales and foster a highly competitive market. In 2009, changes were made as required to host 500 new clients. AgHost now provides services to over 1,800 agricultural clients in North America.
- With over 16,000 customers, Ag Online is this Competency Center's flagship. It offers corn, soybean and wheat growers specific market data, low-altitude weather conditions in real time and farming business news. The intention is to help users get the best possible prices for their crops, save on supplies, manage key aspects of the business and face meteorological challenges. Significant improvements were made in 2009. Website users can now create specific commodity market price alerts, which are then sent to their cell phone or e-mail address, or make cash bids over the subscriber network.
- ProphetX solutions provide agricultural professionals with vital data that helps them find and complete the best deals. ProphetX offers real-time, individually itemized commodity market prices, analysis tools, market news,

expert commentary and even order execution. Specially adapted versions are also available for the livestock, grain sales and biofuel markets. In 2009, we introduced an option to make cash bids over the network of website subscribers, thus providing further value-added to our 3,000 members.

Government and Healthcare Competency Center

The Government and Healthcare Competency Center is based in Seville, Spain. Its research, development and innovation activity continues to focus on Homeland Security, eGovernment and eHealth.

- In 2009, Homeland Security research addressed physical security, targeting immigration management and document verification. Telvent played a leading role in the recently completed Globe project (European Global Border Environment) funded by the European Commission. This initiative has successfully responded to some of the main issues surrounding immigration in Europe, and will serve as the basis for Commission decision-making.
- Telvent also led the Cenit Integra project, which develops innovative technologies towards an integrated system of immigration management (prevention, control and integration of migratory flows).
- In the Healthcare domain, research in 2009 focused on telecare. We enhanced our understanding of how to manage multiple information sources, based on personal, environmental, positional and distributed location parameters. The information thus compiled can now be used to provide solutions to support the well-being and health of chronic and dependent adult patients. This activity has been chiefly based on AMIvital, one of the Cenit projects now in progress, which is aimed at developing a new generation of ICT technologies and tools for the modeling, design, implementation and operation of ambient intelligence (AmI) devices and systems designed to provide services and personal support for independent living, well-being and health.
- Our eFactura project in the realm of eGovernment is intended to identify standards, trends and technologies at the international scale. The first versions have now crystallized of an electronic billing platform that can be applied in both the private and public sectors.
- Finally, in 2009 the company shaped and reinforced several product lines as a result of evolving existing solutions or utilizing the results of fresh research. The core products now featured in the center's catalogue include:
 - TiCares: A comprehensive suite for clinical and health care management at sites providing healthcare services.
 - TiPacs: A multi-node system for medical image management at healthcare sites.
 - TiWorks: A comprehensive electronic administration solution.
 - TiPass: A biometric and document secure verification system.

ICT Platforms Competency Center

The Information and Communication Technologies Competency Center operates sites in Seville and Madrid, Spain.

- In 2009, the company made further progress with the Mobile Information System project. We have completed construction of a modular core to mobilize any app in a Blackberry device in record time and with functionalities already

tailored to the specific handset. We have also improved messaging performance and transmission and widened the scope of the project to encompass new applications like People Center or SAP. The new developments promise to improve employee mobility significantly.

- In 2009, Telvent developed the second version of its Greenhouse Gas Inventory application. Improvements have been made to indicators, to supplier data management and to the functionality for reporting to customers. Companies using this system can generate sustainability indicators based on data from multiple sources, effectively meaning that they can include a greenhouse gas emissions criterion in their supplier selection and procurement processes. This tool is key to achieving reductions in overall emissions, and thus provides high value-added to the wider community.

Other Key Projects



Alongside its research, development and innovation activity, Telvent is actively involved in international collaboration projects supported by mixed funding. Here, Telvent seeks out new foundational technologies that it can then apply in its solutions to create a competitive edge. Key projects other than those already mentioned above include:

- PROTEC-IC. Research on security and safety at critical facilities. Subsidized by the Spanish Ministry of Industry, Tourism and Trade (MITyC).
- TURTLE. A project aimed at bolstering the security of embedded electronic systems.
- ITEA R&D Roadmap 3. The ITEA (Information Technology for European Advancement) research and development roadmap is based on a vision of future technological development of software-intensive systems.
- Prometeo Technology Platform. Telvent is a founding member of the Prometeo distributed intelligence technology platform. This activity calls for building research and development cooperation networks among all relevant actors (academia, technology centers and industry) in those realms of endeavor where high importance attaches to new technologies for embedded and distributed intelligence systems.

- MoSIS. This project carries on the research focus of the CAFÉ and FAMILIES initiatives. The company is appraising system families so as to identify the most promising routes towards high-quality, highly adaptable products, while optimizing costs. The project is a response to industry's demand for increasingly complex products and services.
- OSAMI-Commons. As the natural next step after the COSI and OSIRIS projects, this research seeks to define architectural concepts and service-oriented common infrastructure using open source code, with the potential for being tailored to a wide spectrum of applications.



Abeinsa

Abeinsa and Innovation

Abeinsa is the Abengoa group's industrial engineering and construction Business Unit. R&D&I are of course core capabilities in this field. Innovation at Abeinsa focuses on energy and industrial facilities. The company undertakes the bulk of its projects in Spain, Europe and Latin America. Major activities include designing and developing solar power plants – particularly concentrating solar power – and biofuel production plants, improving railway facilities, designing substations and containers, and stringing major power transmission lines.

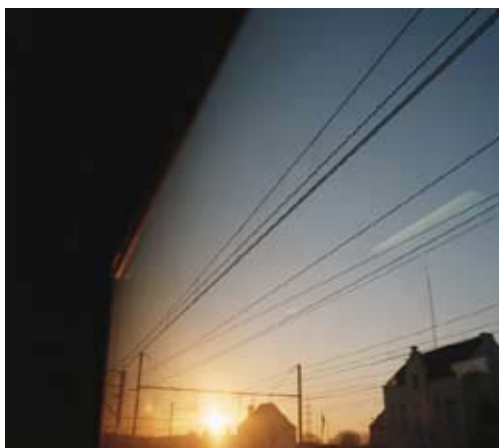
The Abeinsa group's research and development capability is brought together under the umbrella of Abeinsa New Horizons, the common name for the six strategic areas addressed by various subsidiaries within the business unit:

- CO₂ and other greenhouse gas emissions management: The company Zeroemissions generates knowledge on new technologies to reduce greenhouse gases and develop new emission control methodologies.



- Hydrogen and fuel cell technologies: Hynergreen conducts research on the production, storage and use of sustainable hydrogen and power generation through fuel cells.
- Carbon capture and valorization. The subsidiary Inabensa develops solutions to convert CO₂ into a valuable co-product: a biofuel or new raw material.
- Energy efficiency consultancy and research. Inabensa also creates technologies to raise the energy efficiency of industrial equipment and modes of transport, and develops efficient energy storage systems.
- Ocean energy. The Inabensa research and development department is evaluating the various options offered by marine currents, waves and tides with a view to finding uses for these new sources of renewable energy.
- Telecommunications. The Inabensa communications division develops infrastructure and technology with a special focus on medical and healthcare applications.

Abengoa's R&D efforts are undertaken in partnership with numerous research institutes and universities in Spain and elsewhere. Collaboration with these and the academic world is one of the pillars upholding the company's development strategy.



Abeinsa Innovation Highlights of 2009

2009 proved to be a tough year for new investment. However, Abeinsa increased its research and development budget to over €21 M, meaning that the Abeinsa group was able to continue all its strategic lines of research, development and innovation. Over the course of the year, close to 300 Abeinsa employees were involved on a day-to-day basis in R&D&I in close partnership with universities and research centers.

2009 saw the start of new projects both within Spain and abroad. Most of the international initiatives engaged Abeinsa in partnerships and alliances with leading industry players and research institutes.

Another highlight of the year was the successful move of a large number of employees and equipment involved in Abeinsa's R&D&I capability to the new Campus Palmas Altas, where our staff will be able to draw on enhanced material resources.

Abeinsa's R&D&I efforts will continue to be strongly supported in 2010, in which a further increase in investment is expected.



R&D Programs

The following is a list of Abeinsa's key R&D&I projects undertaken or completed over 2009 in each of the unit's strategic lines of concern.

CO₂ and Other Greenhouse Gas Emissions Management

New Cooling Systems

Conventional refrigeration is commonly based on technologies that involve greenhouse gas emissions. Our subsidiary Zeroemissions develops sustainable refrigeration alternatives, such as using CO₂ itself as a cooling agent or applying magnet-based solutions.



Hydrogen and Fuel Cell Technologies

S-80 Submarine AIP System

A conventional submarine is an electric-powered vehicle, in which the diesel engine is used solely to produce electricity. The electricity then drives an electric motor or is stored in batteries for later use.



This constrains the submarine's underwater autonomy. It can only stay underwater for as long as it has electricity stored in its batteries. The diesel engine will not work underwater, because it needs to exchange gases with the atmosphere.

Shipbuilding businesses therefore seek to develop Air Independent Propulsion (AIP) systems to lengthen the time that a submarine can stay underwater even beyond its battery capacity. One of the most promising technologies here is the fuel cell.

Since 2001, Abengoa has worked in partnership with the Spanish Ministry of Defense and the Spanish Navy on a prototype intended to equip the new Navantia S-80 class submarines with a novel form of AIP technology, in which hydrogen produced by bioethanol reforming is used in a fuel cell to produce electricity as and when required.

Over the course of 2009, Hynergreen completed the detail engineering for three major components of the AIP system for Navantia – the bioethanol processor, the power adjustment system and the control system. Construction has now begun, and the components are scheduled for delivery in 2010.

Hércules Project

This project is aimed at setting up a renewable (solar-generated) hydrogen service station at Sanlúcar la Mayor, Seville province, Spain. The supplied hydrogen will power the fuel cells used to propel electric vehicles – another of the company's developments.

The project, with an overall budget in excess of €9 M, has attracted funding from the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia (Agencia IDEA), Corporación Tecnológica de Andalucía (CTA), and the Spanish Ministry of Science and Innovation (MICINN), which has granted it PSE status ("unique strategic science/technology project").

The Hércules project is an Andalusian initiative promoted by eight partners under the overall coordination of Hynergreen. The consortium comprises five private enterprises, a government agency and two research institutions: Hynergreen, Abengoa Solar NT, Santana Motor, Carbueros Metálicos, GreenPower, Agencia Andaluza de la Energía (the Andalusian Energy Agency), INTA and AICIA. Having started the project in January 2006, the consortium developed and built the prototypes over 2009. The service station was opened in the closing quarter.

Carbon Capture and Valorization

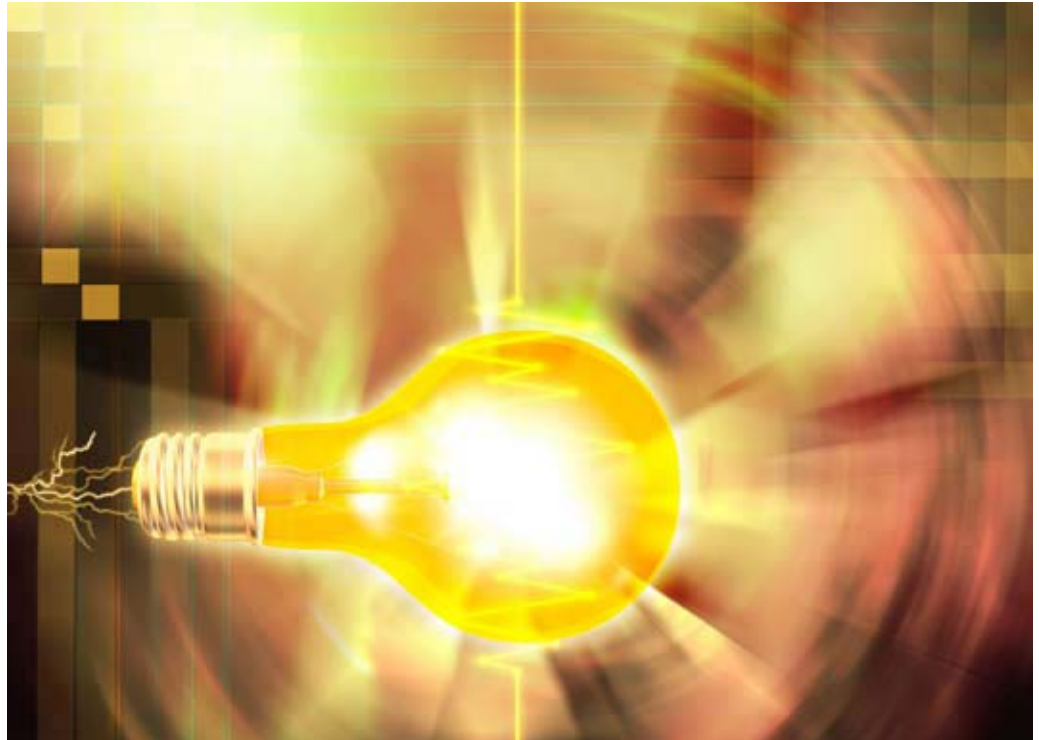
Sost-CO₂ (Carbon Capture and Use)

As part of the CDTI's Cenit program, and led by Carbueros Metálicos, this project is directed at the entire chain of capture, transport and potential viable uses of carbon dioxide.

Inabensa is involved in two clearly distinct areas. First, the company is developing new ionic-liquid-based chemical absorbents (using boron anions) as candidate competitors against amines – so far, the only commercial benchmark for carbon capture at industrial combustion sources. Secondly, we are researching carbon fixing by photosynthetic microorganisms (microalgae and cyanobacteria) and the potential production of biofuels. The company is working in conjunction with Carbueros Metálicos and Abengoa Bioenergía Nuevas Tecnologías on each respective line of research, and has the support of leading units of the CSIC (the Spanish Higher Council for Scientific Research), such as ICMAB (Barcelona Institute of Materials Science) and IBVF (Plant Biochemistry and Photosynthesis Institute) in Seville.

The project was started in 2008 and is scheduled for completion in 2012. The budget allocated to Inabensa amounts to roughly €1.5 M.

Energy Efficiency Consultancy and Research



Perseo (Energy Efficiency)

The Perseo (Packaged Electrical System Efficiency Container) project concerns the redesign of one of the Inabensa Manufacturing division's leading products: turbine control containers for combined cycle and gas power plants. The redesign is intended to reduce power and heat requirements. Our research is focusing on the thermal loads generated and on evacuation by cooling in adverse weather conditions.

The project is essential to defining a comprehensive methodology for energy efficiency. This methodology must generate theoretical models, provide for model validation in the field, and lay out improvement plans that make consumption savings and allow us to cost the required investment accurately.

Perseo, which has gained the support of the Corporación Tecnológica de Andalucía (CTA – the Andalusian Technology Corporation), is being implemented to a schedule running through 2009 and 2010. The project will ultimately result in the creation of a multimedia app to facilitate further design for this new type of efficient equipment.

Kess Project (Energy Storage)

Kess (Kinetic Energy Storage Systems) is a project that aims to evaluate the viability of various energy storage systems – electric or flow batteries, flywheels, supercondensers, etc – for various applications in railway traction and renewable energies (solar photovoltaics and wind power).

The specific goal is to construct technical solutions for integrating a given system of flywheels with railway traction substations. The design is to be implemented at a facility that is among the first of its kind in Spain and Europe, located near Atocha station in Madrid.

Inabensa is thus one of the partners in Sa2Ve, a PSE-rated project (classed by the government as "unique and strategic"), led by Adif (the state-controlled railway track operator) and in partnership with a number of other technology players, Ellyt Energy, Ciemat and GreenPower.

The venture, with an overall budget in excess of €300,000, has attracted funding from Corporación Tecnológica de Andalucía (CTA), the Department of Innovation, Science and Enterprise of the devolved regional government of Andalusia (Agencia IDEA), and the Spanish Ministry of Science and Innovation (MICINN), for implementation in the period 2009-2010.

Ocean Energy

PSE-Mar (Marine Energy)

This is a PSE-rated science and technology project (dubbed by the government as "unique and strategic"), led by Tecnalía, also with EVE, as fellow technology partners. The initiative is the national benchmark in the emerging field of wave energy.

Inabensa is focusing on putting forward innovative constructive solutions for the electrical and communications infrastructure required to integrate these new renewable sources with the existing energy system.

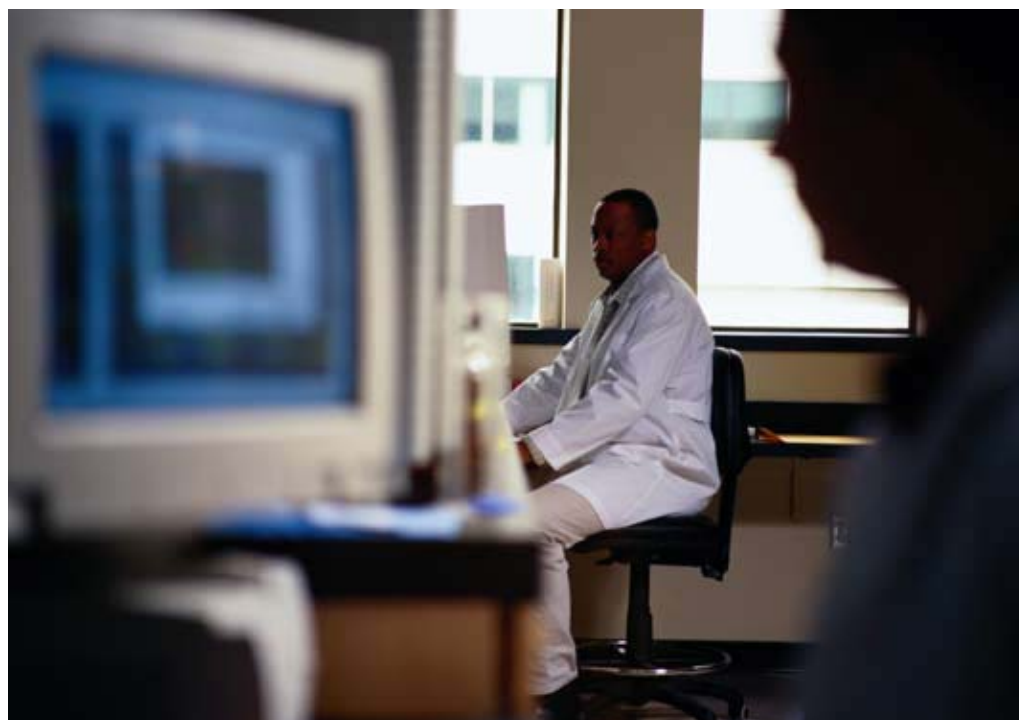
The project marks Inabensa's first foray into marine energy. It will serve as a source of knowledge and experience that can then be extrapolated to other needs in this field.

Having secured funds in 2008 from MICINN, the Spanish Ministry of Science and Innovation, the project is set to be completed in 2010.

Telecommunications

Elisa Project

Elisa (the Spanish acronym for "smart positioning environment for assisted services") is a project concerning the definition, design, implementation and deployment of new services in the context of technology platforms for research, with a special focus on positioning and accessibility/adaptability. Enlisting mobile and positioning technologies in both open and closed-ended environments, the services are intended to make a real difference for people with disabilities and general users.



The challenge here is to improve positioning-driven services in open and closed-ended environments by pushing forward the techniques and algorithms used in the positioning process.

In addition, the project is developing adaptation and profiling methods directed at mobile services linked to users and devices. Finally, we are creating a platform for generating services in real environments so as to adapt communications to the user profile on the basis of the possibilities offered by the device.

Elisa is a PSE-rated project (dubbed by the government as “unique and strategic”) which has attracted funding in the framework of the Avanza I+D sub-program of the Spanish Ministry of Industry, Tourism and Trade (MITyC). The subsidy period runs from 2007 to 2009.

AmlE Project

The goal of the AmlE (Ambient Intelligence for the Elderly) project is to develop a smart distributed system that enhances the quality of life of people in need of assistance, such as the elderly, people with disabilities, etc. Such assistance consists of support for day-to-day activities provided both at home and in external settings. This support must be provided discreetly, respectfully and with all due attention to ethical and legal considerations. The package to be developed will also include tools for monitoring and following up users via a system of alerts managed by health professionals.

The system is equipped with cognitive functionalities so as to accommodate the specific features and needs of a given user at a given time, and thus make his or her life easier. Adaptation takes account of the user's characteristics (personality, behavior and even state of mind), his or her environment (time of day, weather conditions, unexpected events, etc) and his or her historic data on file in the system.

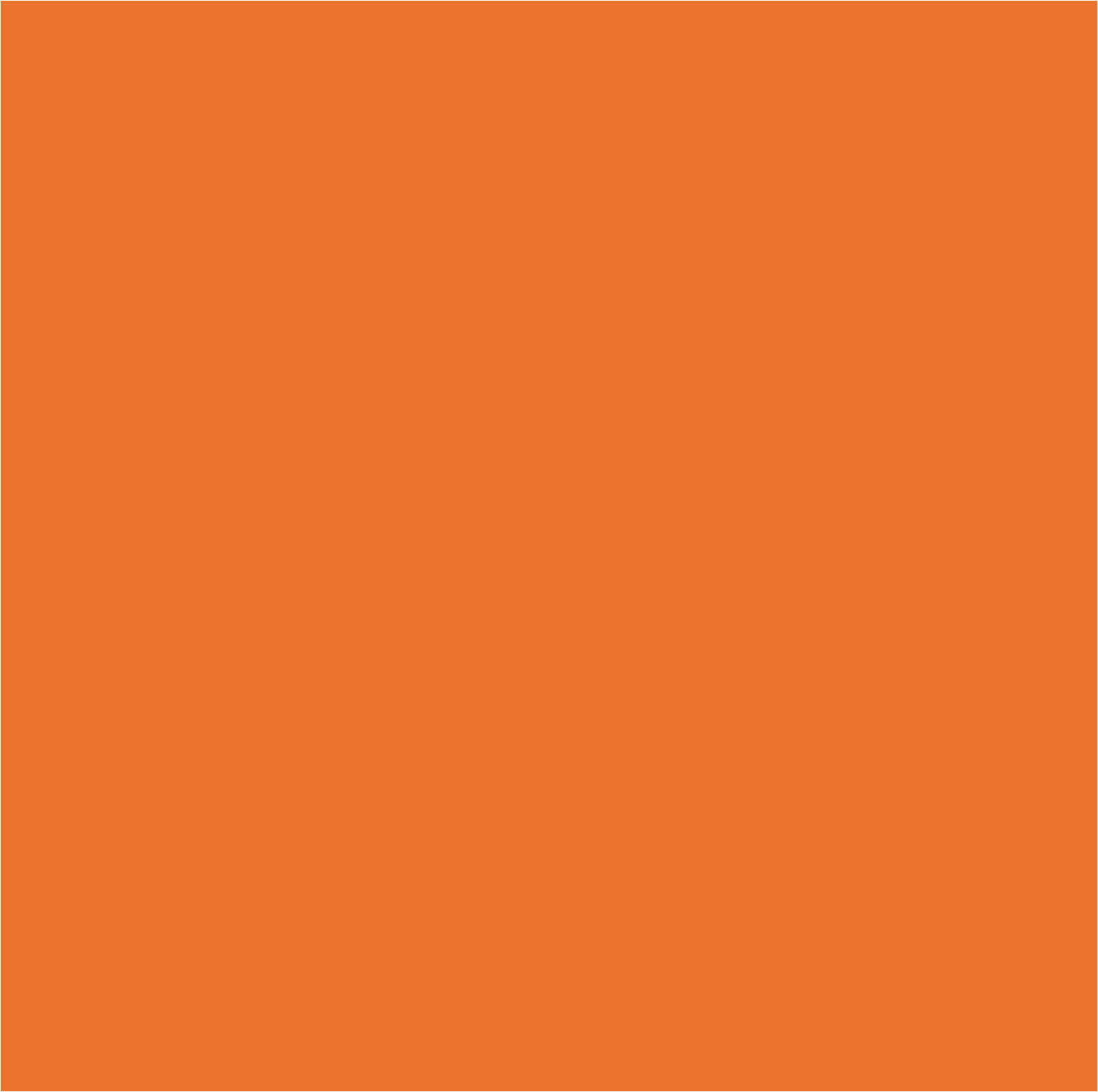
The research challenges of this project include the development of new technologies, applications and services that enhance the quality of life of social groups with highly specific requirements – the elderly, people with disabilities, etc. The developments must adapt to specific situations according to need, with the overarching goal of lengthening the period during which a user can continue to live independently in his or her own home and gain inclusion in the information society.

The project will develop equipment, applications and services to support care processes in the healthcare system and cater to both permanent and temporary situations. Remote monitoring, for example, embraces all information and communication technologies capable of tracking the patient's data (vital signs, activity, behavior) for the purposes of subsequent computer processing, sharing with specialist healthcare centers as needed, generating alerts in the event of anomalous circumstances, and positioning – locating the patient via a range of different devices.

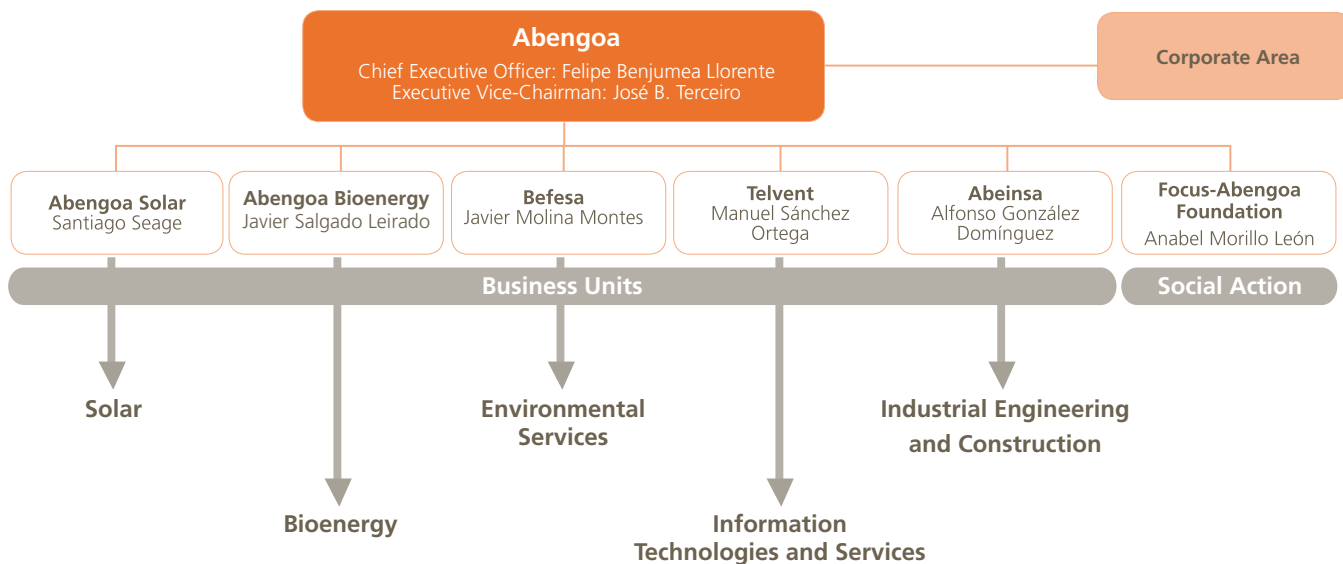
The intelligent systems to be developed include cognitive and reactive models, user personalization and profiles, and ontologies and knowledge representation. These features are intended to ensure that the care provided is appropriate and autonomous and that healthcare predictions are accurate.

Our research has prompted us to design ambient intelligence involving a network of monitoring sensors for remote assistance purposes that are inconspicuous or not noticeable and respectful of the user's privacy.

AmIE is a European Eureka project funded by the Itea2 scheme in the framework of the Avanza I+D sub-program of the Spanish Ministry of Industry, Tourism and Trade (MITyC). The subsidy period spans 2008 and 2009.



Abengoa Board Structure



Internal Audit
Luis Enrique Pizarro Maqueda

Consolidation & Reporting
Enrique Borrajo Lovera

Economics & Finance
Amando Sánchez Falcón

Corporate Finance
Jesús Angel García-Quílez Gómez

Structured Finance
Vicente Jorro de Inza

Strategy & Corporate Development
Javier Camacho Donézar

Appointments & Remuneration
José Marcos Romero

Organization, Quality & Budgets
Luis Fernández Mateo

Human Resources
Álvaro Polo Moreno

Institutional Relations, Assistant CEO
Germán Bejarano García

Investor Relations
Juan Carlos Jiménez Lora

General Secretary for Sustainability
Fernando Martínez Salcedo

Technical Secretary
José Domínguez Abascal

General Secretary
Miguel Ángel Jiménez-Velasco Mazarío

Legal Counsel
Maarten Hoogstraete

Communication
Patricia Malo de Molina Meléndez

Risk Management
Rogelio Bautista Guardado

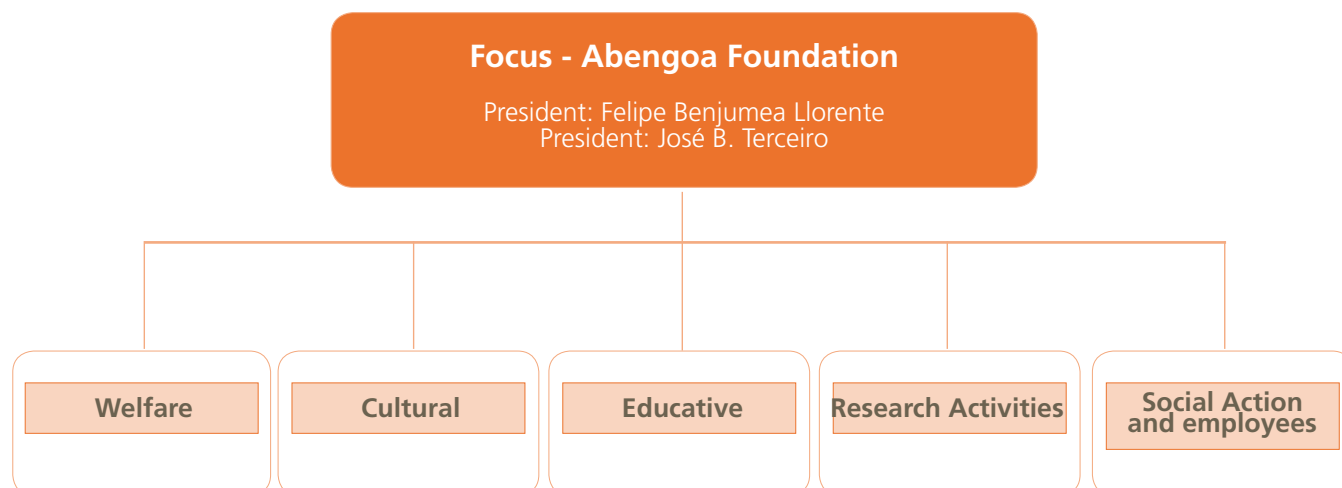
Corporate Social Responsibility
Carlos Bousoño Crespo

Deputy General Secretary
Armando Zuluaga Zilberman

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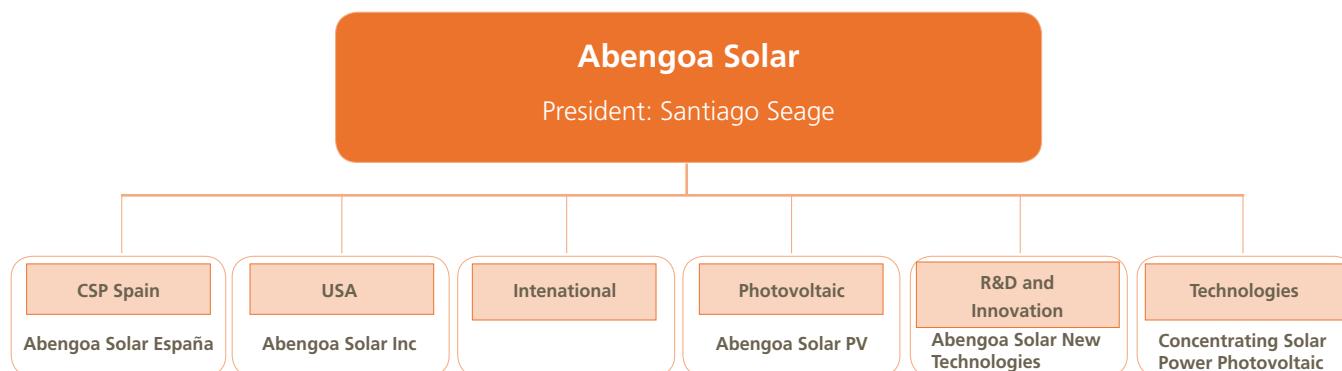
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Deputy General Secretary	Armando Zuluaga Zilberman	Campus Palmas Altas Parcela ZE-3 (Palmas Altas), 41012 Seville (Spain)	T. +34 954 937111 F. +34 913 105039

Focus-Abengoa Foundation Board Structure



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Abengoa Solar Board Structure



Board Structure	Head	Address	Phone & Fax
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Photovoltaic	Fernando Celaya Prieto	Paseo de la Castellana, 31-5ª P. 28046 Madrid (Spain)	T. +34 954 937111 F. +34 913 196677

Abengoa Bioenergy Board Structure



Board Structure	Head	Address	Phone & Fax
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Abengoa Bioenergy Hybrid of Kansas	Gerson Santos-Leon	16150 Main Circle Drive, Suite 300 Chesterfield, St. Louis MO 63017 (United States)	T. +1 636 7280508 F. +1 636 7281148
Abengoa Bioenergy of Illinois	Salvador Martos Barrionuevo	16150 Main Circle Drive, Suite 300 Chesterfield, St. Louis MO 63017 (United States)	T. +1 636 7280508 F. +1 636 7281148

Abengoa Bioenergy of Indiana	Salvador Martos Barrionuevo	16150 Main Circle Drive, Suite 300 Chesterfield, St. Louis MO 63017 (United States)	T. +1 636 7280508 F. +1 636 7281148
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Abengoa Bioenergía Agrícola	Joaquín Alarcón de la Lastra Romero	Rua Funchal, 418 - 36º andar , Vila Olimpia São Paulo - S.P. CEP 04551-060 (Brazil)	T. +55 11 2111 6500 F. +55 11 2111 6512
Abengoa Bioenergía Brasil	Joaquín Alarcón de la Lastra Romero	Rua Funchal, 418 - 36º andar , Vila Olimpia São Paulo - S.P. CEP 04551-060 (Brazil)	T. +55 11 2111 6500 F. +55 11 2111 6512
Abengoa Bioenergía São João	Juan Taín Varela	Fazenda Lagoa Formosa 13870-672 São João da Boa Vista-SP (Brazil)	T. +55 19 3565 5555 F. +55 19 3565 5502
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Befesa Board Structure



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Befesa Escorias Salinas, S. A.	Carlos Ruiz de Veye	Ctra. de Cabezón s/n, 47011 Valladolid (Spain)	T. +34 983 26 40 08 F. +34 983 26 40 77
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Befesa Salszchlacke GmbH	Carlos Ruiz de Veye	Am Brinker Hafen 6, 30179 Hannover (Germany)	T. +49 (0) 511 6303 0 F. +49 (0) 511 6303 177
Befesa Salszchalcke Sud GmbH	Carlos Ruiz de Veye	Söderbergstraße 10, 84513 Töging am Inn (Germany)	T. +49 (0) 511 6303 0 F. +49 (0) 511 6303 177
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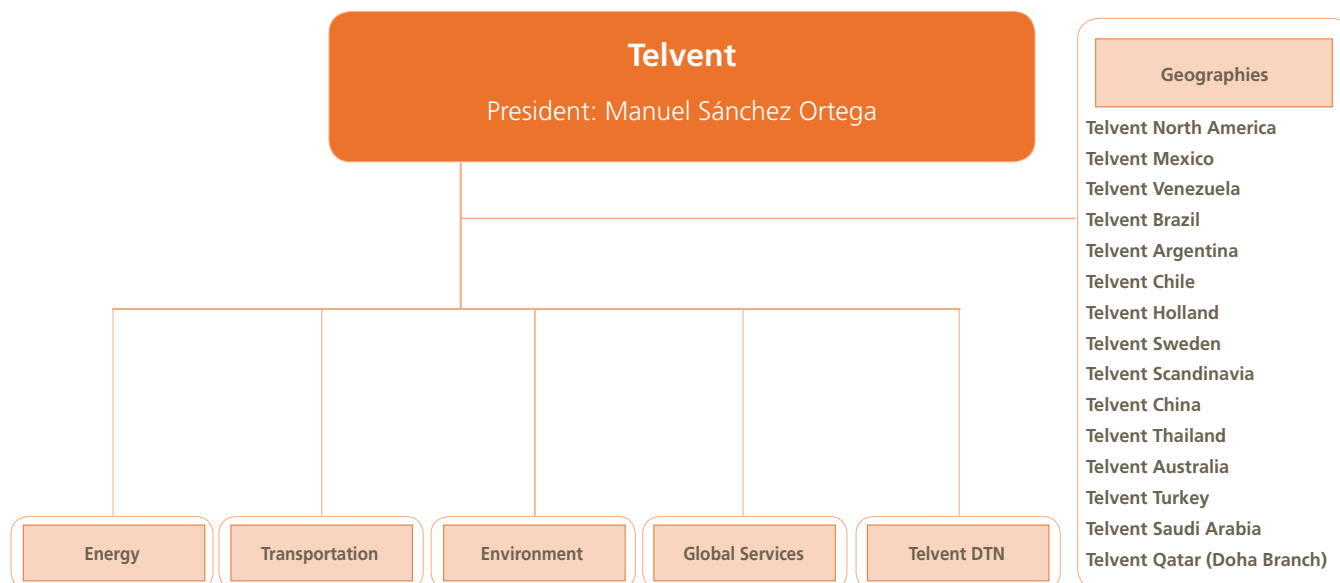
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Telvent Board Structure



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Abeinsa Board Structure



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