



With the sun... we produce thermoelectric and photovoltaic electric energy



With biomass... we produce ecologic fuels and animal feed

Abengoa's. Your partner  
in Resources and  
Technical Solutions

- Corporate Structure
- Main Activities



With wastes... we produce new materials by recycling, and we also treat and desalt water to achieve a sustainable globe



With Information Technology... we transform data into knowledge, providing effective operational and business real-time decision making for traffic, transport, energy and environment



With engineering... we construct and operate conventional and renewable energy power plants, power transmission systems and industrial infrastructures

## Corporate Structure

Abengoa is a technological company that applies innovative solutions for sustainable development in the infrastructures, environment and energy sectors. It is present in more than 70 countries where it operates through its five Business Units: Solar, Bioenergy, Environmental Services, Information Technology, and Industrial Engineering and Construction.

**Solar**, whose holding company is Solucar Energía, and whose activity focuses on the design, promotion, finance attainment, construction and operation of electric energy generating plants, utilizing the sun as the primary energy source. It possesses the know-how and technology for thermoelectric solar power plants: plant receiver systems, parabolic cylinder and parabolic dish collectors; and for photovoltaic power plants, with and without concentration.

**Bioenergy**, whose holding company is Abengoa Bioenergía, focuses on the production and development of biofuels for the transport sector, including bioethanol and biodiesel, utilizing biomass as the raw material (cereals, cellulosic biomass, oil-bearing seeds). The biofuels are utilized in ETBE production (gasoline additive), or are directly blended with gasoline and gas oil. Given that they are renewable energy sources, biofuels reduce CO<sub>2</sub> emissions, contributing to the security and diversification of energy supply, while reducing the dependency on fossil fuels used in the automotive sector and collaborating in the attainment of the Kyoto Protocol.

**Environmental Services**. Befesa Medio Ambiente focuses on providing environmental services for industry and the construction of environmental infrastructures. It develops aluminum waste recycling, zinc recycling, industrial waste management, and environmental engineering (desalination, water treatment and drives) activities.

Befesa, established in 1993, is listed on the Madrid and Barcelona Stock Exchanges, and closed 2005 with treasury stock in excess of 397.4 million euro.

**Information Technology**. Telvent is Abengoa's holding company in the Information Technology sector. It manages high value-add solutions in four industrial sectors (Energy, Traffic, Transport, and the Environment). Its technology enables companies to take real-time business decisions utilizing data control and acquisition systems, and leading-edge operational applications that provide the enterprise with secure and effective information.

Telvent is listed on the North America NASDAQ Stock Exchange since October 21, 2004. It closed 2005 with treasury stock of 323.1 million US dollars.

**Industrial Engineering and Construction**. Abeinsa is Abengoa's holding company in this field of activity: design engineering, construction and maintenance of electric, mechanical and instrumentation infrastructures for the energy, industry, transport and services sectors. Its activities also extend to the promotion, construction and operation of industrial plants and conventional (cogeneration and combined-cycle) and renewable energy (bioethanol, biomass, wind, solar and geothermal) power plants, and turnkey telecommunication networks and projects.

## Main Activities of the Business Units

### Solar

Abengoa is dedicated to the generation of electricity utilizing solar energy. It conducts the design, promotion, construction and operation of electric energy generating plants, for grid incorporation under the special regime.

This recently-established Business Unit is the result of more than twenty years investing in solar energy research and development projects.

Abengoa is currently in a privileged position in the solar energy harnessing field as it has known how to compatibilize, during the development of its activity in this field, the dedication to the two technologies that permit electricity generation from solar energy: the thermal and photovoltaic methods. Therefore, it is vastly experienced in the different thermal harnessing techniques: plant receiver systems, parabolic cylinder collector and parabolic dish. With all these technologies, thermal energy is transferred to a fluid by means of optical solar radiation concentration systems. It is also vastly experienced in the development of photovoltaic projects, with and without concentration, that directly convert solar radiation into electricity with the use of photovoltaic cells and modules.

Over the next eight years, it plans to construct a Solar Complex in the vicinity of Sanlúcar la Mayor (Seville). The nominal rating of this complex of thermoelectric and photovoltaic facilities will be 302 MW. Trust is therefore being put in the potential of solar energy for electricity production while contributing to sustainable development and the preservation of the environment and natural resources.

In 2004, works commenced on the 1.2 MW Sevilla PV low-concentration photovoltaic, and the 11 MW PS10 tower thermoelectric power plant projects. Their start-up is scheduled for sometime in 2006.

The Solar Business Unit bases its growth on the construction of new plants and participation in new

projects, by putting its trust in technological innovation and investing in R&D&I projects that are focused on a continuous reduction of costs and the enhancement of efficiencies of the plants foreseen in its strategic plan.

### Bioenergy

Abengoa produces and markets bioethanol, a renewable product that replaces gasoline as an automotive fuel, and which is obtained from cereals. Bioethanol is an alcohol produced from the sugar component of corn, sorghum, potatoes, wheat, sugar cane, and from the cellulosic materials in vegetable wastes (cereal straw, corn stalks) or forest wastes. Given its high oxygen content, when blended with gasoline the octane number increases which enables better combustion while reducing exhaust pipe emissions of carbon monoxide, hydrocarbons and sulfur dioxide, and also of pollutants that are even more harmful for the atmosphere, emitted by gasoline, such as benzene and toluene.

The bioethanol that is produced at Abengoa's facilities can be utilized to manufacture ETBE (gasoline additive) or for direct blending with gasoline or gas oil. In both processes, upon it being a renewable energy, net CO<sub>2</sub> emissions (greenhouse effect) are reduced and this contributes to climatic change prevention and to the attainment of the objectives established in the Kyoto Protocol. Abengoa's current production of bioethanol used in gasoline blends (low proportion of bioethanol in the blend) enables emissions of CO<sub>2</sub> to be reduced by a minimum of 860,000 tons/year.

In addition, in the bioethanol production process, by means of hydrolysis, fermentation and distilling of the grain, a sub-product (DDGS), a high energy and protein value feed component for cattle is obtained. There is also a potential use for the DDGS, as recent research studies have demonstrated, in the pig-breeding industry.

At year-end 2005, Abengoa signed an agreement with the oil company CEPSA to construct a 200,000 ton capacity biodiesel production facility in Cadiz

(Spain). The raw material will be crude vegetable oils and it will be operational in 2008.

Biodiesel is a renewable biofuel obtained by a chemical reaction of methanol (or bioethanol) with vegetable oils (rape, sunflower, soya, palm). It does not contain sulfur and, compared to petrol derived diesel, it reduces emissions of greenhouse effect gases (CO<sub>2</sub>, among others), carbon monoxide (CO), particles (PM) and other contaminating products. It is suitable for use as a fuel, totally or partially substituting gas oils in diesel engines, without the need for vehicle engines having to be subjected to conversions, adjustments or special regulations.

Bioethanol and biodiesel are renewable and clean energy sources that contribute to reducing soil contamination due to their biodegradable and non-toxic nature. Their utilization reduces energy dependency on fossil fuels and contributes to the security of energy supply. Their production creates new opportunities of sustainable rural development within the framework of a more market-focused agricultural policy, given that it encourages the development of energy crops and the creation of agro-industries, which contribute to the maintaining of employment and income levels in the rural environment.

This Business Unit bases its growth on production increase through the construction of new facilities, its participation and presence in new projects and markets, and on continuous trust in technological innovation as a basis of its strategy, by making important financial and human resource investments in R&D&I projects, basically in areas related with the enhancement of process performances, bioethanol production from cellulosic biomass and biomass gasification, and the development of new bioethanol-based products (e-diesel, hydrogen).

Abengoa currently operates five facilities that produce bioethanol from cereal grains in Europe and the United States, with an overall production capacity of 197 million gallons (746 million liters). In 2006, a new production facility (50 Mgal) will be brought into operation in Spain. It will incorporate a production unit prototype based on cellulosic

<b>Highlights Bioenergy</b>	<b>2004</b>	<b>2005</b>
<b>Sales (M € )</b>	<b>335.2</b>	<b>392.7</b>
<b>EBITDA (M €)</b>	<b>39.3</b>	<b>43.8</b>
<b>Ethanol production (millions of liters)</b>	<b>618</b>	<b>689</b>
<b>Workforce</b>	<b>369</b>	<b>421</b>

biomass (cereal straw). Abengoa's biofuels are currently marketed in Germany, Spain, France, Sweden and the US. The Business Unit's corporate headquarters is in Saint Louis, Missouri (USA). Abengoa is Europe's leading bioethanol producer and number five in the United States, and it is the only producer that operates in both markets.

The new biodiesel project allows Abengoa Bioenergy to get to be known in this biofuel market and, in addition, become a reference for the construction and operation of biodiesel facilities. This strengthens Abengoa's capacities in the bioethanol sector and consolidates its involvement in the development of a global transport biofuels market.

## Environmental Services

Abengoa provides environmental services for industry and constructs environmental infrastructures throughout the following areas: Aluminum Waste Recycling, Zinc Waste Recycling, Industrial Waste Management, and Environmental Engineering.

**Aluminum Waste Recycling.** Providing of diverse content aluminum waste collection and treatment services, manufacturing and marketing of aluminum alloys and design, manufacturing and installation of equipment related with the recycling of this metal. In addition, salt slags which are managed by this Business Unit are a hazardous toxic waste originating from the aluminum waste recycling process. The recovery of salt slags is the alternative to dumping and the objective is to separate the metallic aluminum, the salt and the aluminum oxide to enable reutilization of all the components. This activity enables complete closure of the recycling cycle and integral exploitation of wastes with aluminum content.

**Zinc Recycling.** Recycling and recovery of residual powders (steel powders) originating in the electric arc kiln steel manufacturing and casting process. The services provided by Befesa's companies in the zinc sector are a fundamental link in the zinc recovery cycle. They prevent the useless loss of tons of this metal, reduce dumping and contribute to reducing extractions of zinc mineral from nature. It is the only company in Spain that offers the integral steel powders collection and treatment service for valorization purposes and the only alternative, offering the optimal environmental solution for treatment of steel powders.

In addition, this Business Unit conducts a Desulfurization activity that applies the cleanest and safest process for residual sulfur exploitation, and provides services for petrochemical facilities that resolve the desulfurization waste problems that arise from their production processes.

Highlights	2004	2005
<b>Environmental Services</b>		
<b>Sales (M €)</b>	<b>357.8</b>	<b>402.4</b>
<b>EBITDA (M €)</b>	<b>36.7</b>	<b>40.4</b>
<b>Treated production (thousands of tons)</b>	<b>1,374</b>	<b>1,654</b>
<b>Workforce</b>	<b>1,249</b>	<b>1,348</b>

**Industrial Waste Management** focuses, on the one hand, on providing an integral service for industrial waste producers following a treatment hierarchy, the priority of which is minimization, reutilization, recycling, valorization (energy or material exploitation of the wastes), and waste disposal in accordance with national and European environmental legislation and, on the other hand, it provides a wide range of industrial cleaning services that cover almost all industrial sectors.

**Environmental Engineering.** Befesa's Environmental Engineering activities focus on the design, construction and operation of infrastructures for the integral water cycle and waste management. Of note is the desalination activity in which the company is one of the world's leaders with plants in operation and/or under construction with a global production capacity of more than 900,000 cubic meters of desalinated water per day.

## Information Technology

Through Telvent, Abengoa manages real-time Information Technology. Telvent specializes in high value-add solutions and services in four industry sectors (Energy, Traffic, Transport and Environment). Its technology allows high performing companies to make real-time business decisions using data acquisition, control, and advanced operational applications, providing secure actionable information delivery to the enterprise.

The solutions offered facilitate complete real-time integration of the information from the mission-critical applications, in the suite of corporate systems of the companies for which we work.

In the **Energy Sector** work is conducted in the **Oil and Gas** sectors, where a wide range of engineering software for oil, refined product and natural gas derived liquid pipeline systems are offered, as are leading-edge applications for operational, measurement and commercial process management. The technological applications developed by Telvent, utilized by more than 35 oil pipeline operators, enable functions as diverse as the control of hydrocarbon flow levels, leak detection or a wide range of measurement processes that facilitate the commercial operation of the pipelines. In the **Electric Sector**, real-time automation solutions are developed for the electric services sector. Telvent is the electric market leader in Spain and one of the most important providers of Control and Communications Solutions for the electric market in Latin and North America.

Telvent's activity in the **Traffic Sector** focuses on applications, products and services related with Intelligent Traffic Systems (ITS). Telvent provides global solutions for city traffic problems and motorway and highway control, monitoring and management to ensure safety and optimize flow conditions.

Telvent's objective is the promotion, execution and management of infrastructure installation projects for control and communications in the traffic sector. For this purpose, state-of-the-art technologies and real-time applications, that

Highlights Information Technology	2004	2005
Sales (M €)	281.1	362.6
EBITDA (M €)	27.1	33.3
Contracting Portfolio (M €)	285	389
Workforce	2,124	2,373

provide efficient solutions for the day-to-day needs that arise in cities and interurban areas, are utilized.

In the **Transport Sector**, Telvent offers solutions for rail traffic control, toll management, ticketing, automatic vehicle identification, video monitoring, navigation systems and simulators for maritime traffic training purposes. Telvent has developed, among others, leading-edge solutions for toll management and control for highway, tunnel and bridge concessionaires, ticket sale and cancellation management and control systems for passenger traffic in stations, and rail transport control systems.

Telvent's activities in the **Environment** are developed in the water and meteorology business areas. Telvent has developed systems that enable real-time and historic measurement of all the parameters that affect water management and which enable flood prediction and warning, remote control of irrigation systems or water management for the same. Telvent has been providing technological solutions in the weather observation sector for more than 20 years. Almost all of Spain's airports have been equipped or upgraded with Telvent-developed Automated Weather Observation Systems (AWOS).

The company also offers solutions for surface weather observation and provides tele-detection instruments for early detection and "nowcasting" of adverse weather phenomena.

In addition to the above consolidated activities, in which Telvent is a world leader, there are two new areas that are becoming ever more important for Telvent and are fruit of our continuous efforts in

innovation. These are **Health and Public Administrations**.

Finally, Telvent offers a wide range of **Information System outsourcing services**. These services include the engineering, project management, installation, operation, systems technique, monitoring, administration, maintenance, security, technical assessment and 24x7 help desk back-up. Telvent's professional services also offer data centers for mission-critical information systems. Telvent has four strategic centers at which these services are provided in Madrid, Barcelona, Seville and Lisbon.

## Industrial Engineering and Construction

Abengoa, through Abeinsa, the holding company of the Industrial Engineering and Construction Business Unit, develops this line of business in five activity areas: Energy, Installations, Telecommunications, Marketing and Industrial Manufacturing, and Latin America. There is a common objective, that of achieving customer satisfaction by offering integrated solutions in the Energy, Transport, Telecommunications, Industry, Services, and Environment sectors.

The experience accumulated over more than 60 years in the creation of infrastructures has put Abeinsa at the forefront in Spain and Latin America, with a large portfolio of both institutional and private customers.

**Energy.** Promotion, construction and operation of industrial plants and conventional (cogeneration and combined-cycle) and renewable energy (bioethanol and biomass) and geothermal power plants; exploitation of businesses and activities related with electricity production utilizing fuel cells.

Of note is the activity conducted in the promotion, design, engineering, construction, operation and maintenance of energy generating plants such as conventional plants, combined-cycle plants, cogeneration plants, biomass plants (forest,

Highlights	2004	2005
<b>Industrial Engineering and Construction</b>		
<b>Sales (M €)</b>	<b>772.0</b>	<b>865.8</b>
<b>EBITDA (M €)</b>	<b>77.0</b>	<b>98.9</b>
<b>Contracting Portfolio (M €)</b>	<b>762</b>	<b>814.3</b>
<b>Workforce</b>	<b>5,576</b>	<b>6,921</b>

agriculture), waste incineration plants (urban, agricultural, livestock) and bioethanol plants.

Also of note in the solar energy sector, in pursuit of sustainable development, is the activity developed in the construction of solar power plants for energy production and sale purposes.

In addition, in this Division, another objective is the organization and development of activities and projects related with the production of electricity utilizing fuel cells based on different technologies, and the use of hydrogen.

Research, development and innovation work is conducted, especially, in four important lines of activity: the production of clean hydrogen from renewable energy sources; the pursuit of new applications for different technology fuel cells (installations for telecommunications, residential and transport applications); the development of new, reversible, compact and direct, fuel cells; and renewable energy integration projects in which hydrogen is produced utilizing solar energy or wind power.

**Installations.** Design engineering, construction and maintenance of electric, mechanical and instrumentation infrastructures for the energy, industry, transport, and services sectors; installation of insulating and passive fire protection materials.

Of note in the Installations Division is the activity developed mainly in relation to the following sectors and products:

The services developed in the electric installations sector cover almost any activity associated with applied engineering, construction and fitting out for the creation of infrastructures, with the main fields of activity focusing on: hydroelectric, thermal and combined-cycle power plants; substations and transformation centers; airport infrastructures; industrial infrastructures; singular and public-use buildings; shopping and large surface area centers; maritime and rail transport; housing and industrial estates; and hospital, educational and high-technology buildings.

On the other hand, the mechanical activities cover the design, supply, manufacturing, assembly and testing of mechanical systems associated with hydroelectric power plants, thermal power plants, combined-cycle power plants, cogeneration plants, gas and chemical and petrochemical industry plants.

As regards insulating, refractory and passive fire protection materials, the following activities are conducted: thermal and acoustic insulation; supply and installation of refractory materials; fire protection systems; and smoke sectoring screens.

In addition, in relation to instrumentation and maintenance, the customer is provided with an integral installations and infrastructures service by the providing of specialized personnel and equipment.

With more than 60 years' experience, the company participates in line projects, executing medium, high and very high voltage projects, up to 800 kV, worldwide. In addition, in relation to railway installations, we have long-running experience that goes back to 1944, and have installed more than 4,000 km of catenary throughout Spain and, as of from 1998, abroad.

**Telecommunications.** Integration of turnkey telecommunication networks and projects.

Of note in this Division is the classic activity of external plant construction and maintenance; that of providing customer loop and equipment, as well

as specialization in providing engineering and Telecommunication Networks integration services.

Likewise, the Division offers a full range of products and services for the deployment and operation of telecommunication networks: design and engineering, infrastructure construction, equipment supply, installation and testing, operation and maintenance. In short, it is fully capacitated to execute Turnkey Projects.

**Marketing and Ancillary Manufacturing.** Marketing of products related with the remaining Business Unit activities, such as the manufacturing of ancillary elements for the energy and telecommunication sectors.

In the Marketing area, the company maintains its leading position on the home market as a provider of electric, instrumentation and communications material in the chemical, energy, telecommunications, and industrial sectors.

Likewise, in the Ancillary Manufacturing area, complex materials and products are manufactured and sold to the energy, industrial, services and telecommunications sectors.

Low and high voltage cabinets and distribution boards, power electronics and control electronics for remote stations, control and protection panels and ancillary services electric panels for all types of industrial, energy and services installations are designed and manufactured; steel reticulated structures such as power line pylons, telecommunication towers, substations and wind machine towers are manufactured; fine plate-derived products, such as panels, signals and telephone booths are manufactured; and products applied in outdoor telephone networks are manufactured.

**Latin America.** A market where our presence has been stable for over 30 years now, through local companies that conduct all the Business Unit's activities related with Energy, Installations, Telecommunications, and Marketing and Ancillary Manufacturing, in an independent manner, while applying Abengoa's global management standards.