

ABENGOA

Innovative technology solutions for
sustainability



ABENGOA

USEA - Annual Energy Supply Forum

October 2015

- 1** Introduction to Abengoa
- 2** Major projects
- 3** Presence in US, Canada & Mexico
- 4** Responsible management

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Introduction to Abengoa

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Major projects

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Presence in US, Canada & Mexico

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Responsible management



Abengoa focuses its growth on the creation of new technologies that contribute to sustainable development by...

- Generating energy from renewable resources
- Converting biomass into biofuels and producing drinking water from sea water
- Creating infrastructures respectful with the environment
- Promoting new development and innovation horizons

To achieve this, in Abengoa...

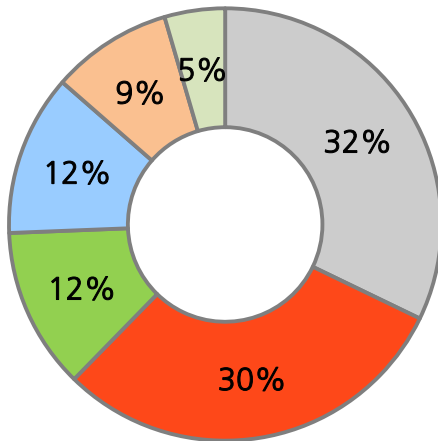
- We invest in research, development and innovation (R&D&I)
- We expand big potential technologies
- We develop the necessary talent by attracting and retaining the best people (more than 24,000 employees)
- We devote financial and human resources to promoting social action policies that contribute to social and human progress



Abengoa's commitment to sustainable development is a priority in all its activities We try to reduce the impact of our activities with the help of an integrated management system

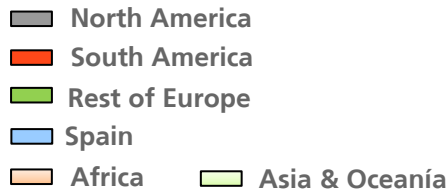
Abengoa (MCE: ABG.B/P SM /NASDAQ: ABGB) applies innovative technology solutions for sustainability in the energy and environment sectors, generating electricity from renewable resources, converting biomass into biofuels and producing drinking water from sea water

2014 Sales

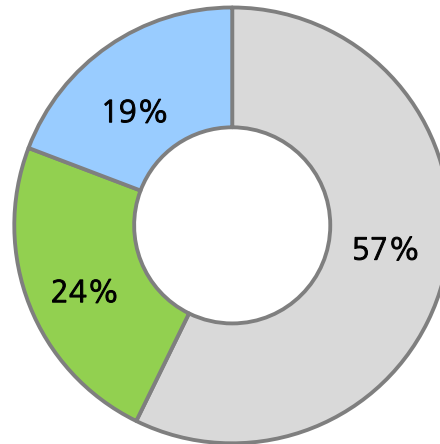


7.151 M€

Geographical areas



Ebitda 2014



1.408 M€

Activity fields



Sales

7.151 M€

↓ (1) % (7.245 M€ en 2013)

Ebitda

1.408 M€

↑ 11 % (1.267 M€ en 2013)

Net profit

125 M€

↑ 24 % (101 M€ en 2013)

Abengoa creates value based on its technology



R&D&Innovation

- Development of innovative technological solutions
- Competitive market advantage



Business development

- Pilot demonstration plants
- Technological marketing
- Offers, financing and contracts



Engineering and construction

- Converts technology into reality
- 70 years of experience in energy infrastructures
- Own "Know-how"
- International leading contractor in T&D



O&M

- Solar, transmission lines, desalination, cogeneration and others
- 25 years of contracts' average life
- Biofuels

We operate in two high growth sectors: **Energy** and **Environment**

R&D & innovation

Technology is the beginning of the value chain:

- R & D is one of the main growth engines of Abengoa

Projects research, development and innovation in the following areas :

- Thermosolar energy
- Photovoltaic energy
- Chemical processes
- Biotechnology and bioproducts
- Power systems
- Hydrogen
- Water desalination, reuse and treatment
- Energy crops

Staff working in R&D& innovation



Total 882 employees

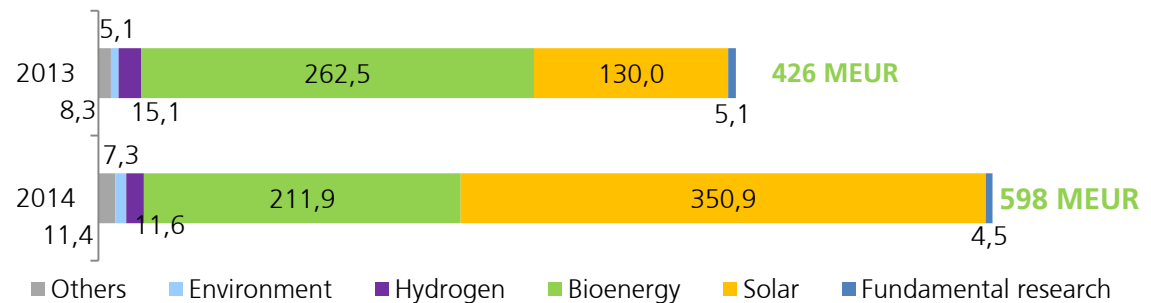
Priority patents applied as per December 2014



Total priority patents 312*

* 1 Simosa patent

Investment in R&D in 2013-2014



Business development

Abengoa, the leading company in the development of projects of:

- Solar energy
- Other sources of power generation (wind, biomass, combined cycle, cogeneration)
- Energy storage
- Transmission lines
- Water desalination, treatment and reuse
- Bioenergy 1G and 2G
- Hydrogen
- Energy crops
- Singular buildings

Business model based on growth and diversification

- International activity, 88 % of total sales

Figures

7.151 MEUR in sales in 2014

24.306 employees worldwide

6.900 GWh of generated energy

4.474 MW of total installed and in construction capacity in power generation plants

118 Mm³ of desalinated water

15 plants of biofuel production

5.100 km of operating transmission lines



Engineering and construction















Specialist in execution
of complex turnkey projects

- Solar plants (CSP) e hybrid solar-gas (ISCC)
- Conventional generation plants and biofuel production facilities
- Hydraulic infrastructures, Including large desalination plants
- Power transmission lines
- Rail transport infrastructures

Solid engineering capabilities
that can capture growth
opportunities

- Approximately 18,000 people
- Design engineering Network with centers in the United States, India, Poland, Chile and Spain

Major projects awarded in 2013

Country	Project	Activity	Details
	Water treatment and supply plant in San Antonio		168.970 m ³ /day
	Expansion of Nuevo Pemex cogeneration plant		1.245 MW
	Ten transmission lines		7.200 km
	Transmission line and substation		176 km
	Desalination plant		100.000 m ³ /day
	Atacama 2 Solar plant		210 MW
	Gante biomass plant		215 MW

Operation and maintenance

Power generation plants, desalination plants, transmission lines and biofuel production plants

42 assets currently in O&M:

- 17 solar plants
- 11 transmission lines
- 1 cogeneration plant
- 6 desalination plants
- 7 biofuels plants

Biofuels:

- World leader in developing technology for producing 2nd generation ethanol
- Presence in the three major markets: Europe, the United States and Brazil.

Solar:

- World leader in both tower and parabolic trough thermosolar concentration technology.



Asset base

1,450 MW solar power

300 MW cogeneration

5.100 km of transmission lines

317.000 m³/day

3,175 ML of ethanol

Technology is our engine of growth, providing innovative solutions to keep creating value and maintaining a leading position

R & D and technology in numbers :

598 M€ invested in R&D in 2014

312 patent applications, 146 of which have already been granted

882 people team engaged in R & D and innovation, led by Abengoa Research



W2B Demo plant (Salamanca)

Products with high technological content close to the market ...

Smart Solar Plant

- Power generation plants that integrate different technologies of energy generation and storage.
- Deals with the design and implementation of an intelligent distributed control system.

Waste to Biofuel

- Technology for converting MSW into biofuel
- Demonstration plant operating in our facilities in Salamanca

... we keep working on new options
For the future



Hydrogen



Energy crops

Thanks to our technological development we can offer pioneering solutions in the markets we operate

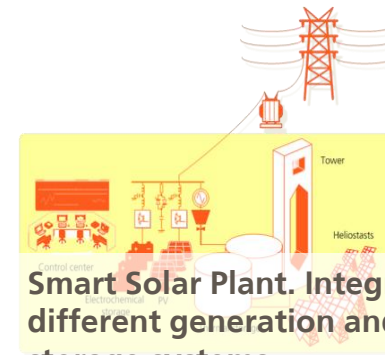
Demo plant



Storage demonstration plant TES



2G BCyL demonstration plant (Salamanca)



Smart Solar Plant. Integration of different generation and energy storage systems

Commercial plant



Solana (USA)
CCP with storage with 280 MW and 6 hour storage. Launched in Q3 2013



Hugoton (USA)
Biorefinery of 2G; 25 Mgal. Proves the viability of the 2G technology developed by Abengoa



Atacama 1 (Chile)
210 MW + energy storage systems.
First thermosolar plant for direct power production in Latin America

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Responsible management

Major projects across the world for both public and private clients

Desalination plant: Accra Sea Water

Western Africa's first desalination plant, located at Accra, Ghana

- Capacity: 60,000 m³ of drinking water a day
- Contract: BOOT
- Period: 25 years
- Opened in: April 2015

Transmission: Maritime Link

Power transmission line

- Country: Canada
- Length: 400 km
- Contract: EPC
- Awarded in: March 2015

Solar thermal: Kaxu Solar

First solar thermal power plant to be brought online commercially in South Africa

- Capacity: 100 MW with 2.5 hours of storage
- Contract: power purchase
- Period: 20 years
- Opened in: March 2015

Solar-powered desalination plant

World's first desalination plant to be powered by solar energy

- Country: Saudi Arabia
- Capacity: 60,000 m³ of drinking water a day
- Client: Advanced Water Technology
- Awarded in: January 2015



Major projects across the world for both public and private clients

Combined Cycle: Norte III

It produce enough power to supply more than 500,000 homes every year in Mexico

- Capacity: 924 MW
- Contract: EPC + 25 years of operation and maintenance
- Awarded in: January 2015

W2B: Sierra biofuels plant

The first biorefinery producing bioethanol from MSW in the USA

- Capacity: 38 MI/year
- Row material: MSW
- Contract: EPC
- Awarded: May 2015

Bioethanol: Rotterdam

The biggest bioethanol plant in Europe

- Country: Netherlands
- Capacity: 480 MI/year and 350,000 t of DDGS
- Row material: cereal
- Contract: bioethanol purchase
- Opened in: August 2010

Solar thermal: Solana

The US's first large-scale solar plant with thermal energy storage system

- Capacity: 280 MW with 6 hours of thermal storage
- Contract: energy purchase
- Period: 30 years
- Opened in: October 2013



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Projects in USA

Abengoa US & Canada office locations

- Austin, TX
- Denver, CO
- Los Angeles, CA
- Phoenix, AZ
- San Diego, CA
- St. Louis, MO
- Calgary, Canada
- Toronto, Canada
- Washington, DC



Projects in Canada

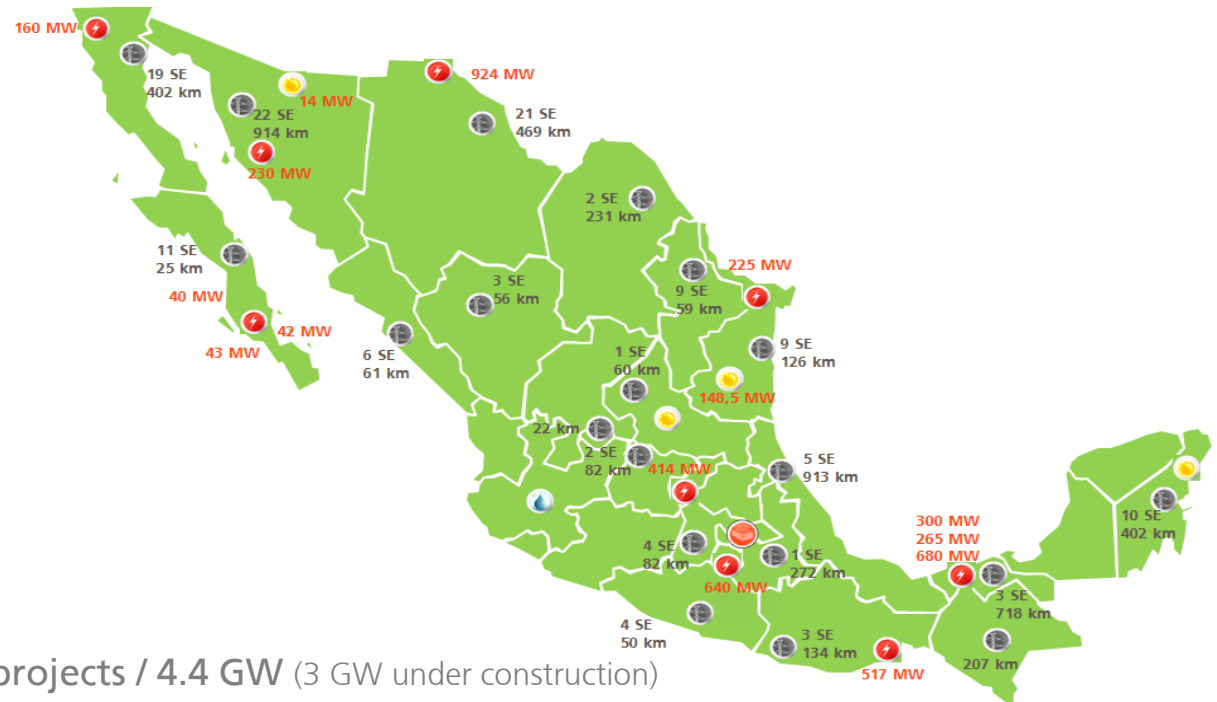


Transmission: Maritime Link Power transmission line

- **Country:** Canada
- **Length:** 400 km
- **Voltage:** 230/200/5 kV
- **Contract:** EPC
- **Awarded in:** March 2015

This work includes the development of several overhead transmission line. Abengoa will develop approximately 160 km of 230 kV AC transmission line, 188 km of 200 kV HVDC and 64 km of 5 kV.

Projects in Mexico



Conventional energy

13 projects / 4.4 GW (3 GW under construction)



Renewable energy

8 projects / 1.2 GW (900 MW under construction)



Industrial plants

11 projects with Pemex (PR, PGPB, PEP)



Transmission lines - Substations

6,553 km of TL from 13.8 kV to 400 kV
4,942 MVA - 938 MVar's - 313 SE feeders



PPS, singular buildings

Centro Cultural Mexiquense Bicentenario project



Water

Concession of the aqueduct El Zapotillo

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Corporate social responsibility

Committed to the **present and future society**, the **environment**, the **communities** in which we operate and **our employees**

We carry out and promote initiatives that contribute to a balanced growth of the company and the community

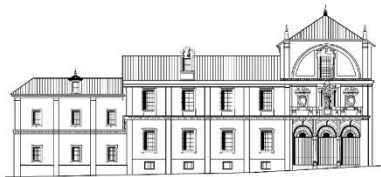
9.5 M € invested in social actions, 11 % more than previous year

92 % of certified environmental management systems in the ISO 14001

Theoretical reduction of 459,658 tons of CO₂

More than 2.4 million hours devoted to training our teams, 33 % more than in 2013.

12.391 human rights analysis for suppliers



focus ABENGOA

Through the **Focus-Abengoa Foundation**, Abengoa contributes to the cultural and social enrichment of the communities in which it operates

ABENGOA



Thanks for your attention!

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ABENGOA

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