

ABENGOA

Corporate
Presentation
2019



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Who are we?



Who are we?

Abengoa (MCE: ABG.B) is an international company that applies innovative technology solutions for **sustainable development** in the infrastructure, energy and water sectors.

Constructing energy infrastructures

- Generating conventional and renewable energy.
- Transporting and distributing energy.

Providing solutions for the integrated water cycle

- Developing desalination and water treatment processes.
- Constructing hydraulic infrastructures.

Being a referent in the transmission and distribution sector

- Developing transmission lines, electric distribution and railway electrification projects.
- Constructing installations and infrastructures for all types of plants and buildings.

Obtaining results in the services area

- Providing operation and maintenance services for plants optimization.
- Managing private assets efficiently.

Furthering new horizons for development and innovation

- Our 342 accumulated awarded patents since 2008 position us as technological leaders in sectors such as solar thermal technology.
- Renewable energy storage and our bet for energy efficiency and water consumption (water-energy nexus).

A Viable **Company with Solid Fundamentals**



Solid business of engineering, procurement, construction and operation and maintenance in high growth markets



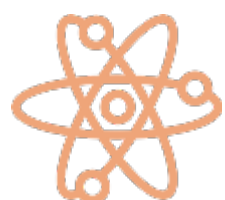
Global footprint makes Abengoa's business more resilient and the size of its backlog and pipeline provides revenue visibility



Credibility regained with stakeholders



Leaner organizational structure and high operational efficiency



The development of commercially viable cutting-edge technology has become Abengoa's key competitive advantage



A more focused business model and a healthier, sound capital structure, together with a multidisciplinary set of capabilities places Abengoa in a solid position for future value creation



Formed by a team of committed and skilled people that have specialized and competitive know-how

Main Magnitudes



Global presence with a recognized position of leadership in main world rankings (ENR, GWI).



9.3 GW of installed power in conventional generation plants, of which 1.4 are under construction.



2.1 GW* solar power constructed, 860 MW under construction, and 480 MW of wind power.

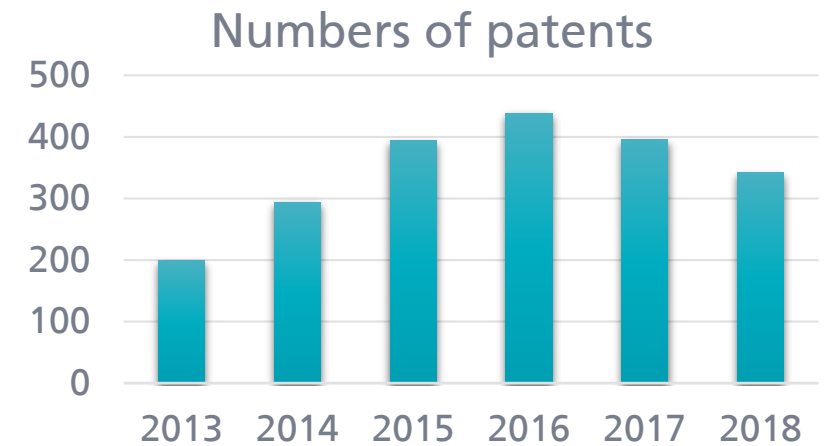
*34 % of solar thermal installed capacity worldwide.



+ 27,000 km of transmission and distribution lines and more than 330 substations worldwide over the last 15 years.



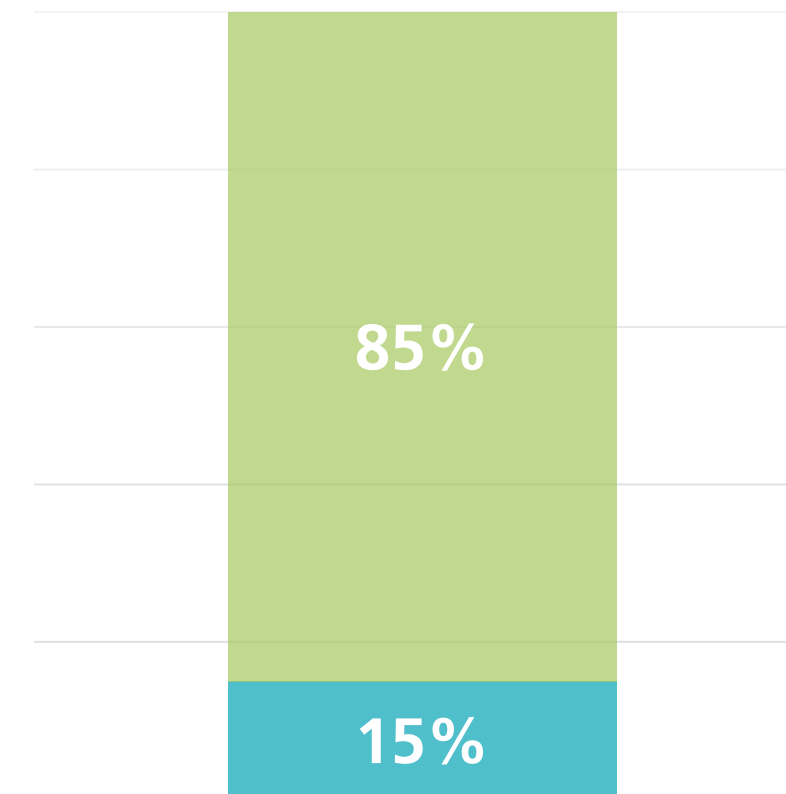
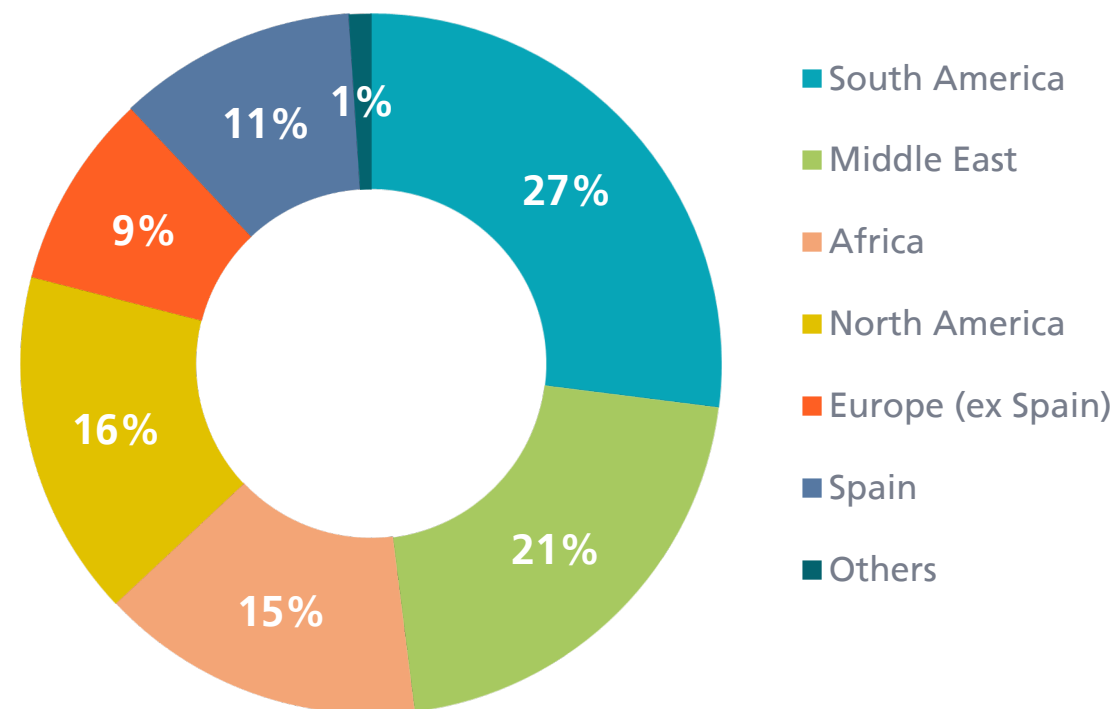
+ 1.7 million of m³/day of desalinated installed capacity and 2 million m³/day under construction.



342 accumulated awarded patents since 2008.

Abengoa Figures	2018
Sales	1,303M€
EBITDA	188 M€
Employees	13,450

Revenues by Geography



Revenues by segment

■ Concessions ■ E&C

Main Projects under Execution

⚡ Waad Al Shamal (Saudi Arabia)

☀️ O&M solar plants (Spain)

⚡ A3T (Mexico)

🔥 Shuaibah (Saudi Arabia)

🚆 CP5 Network Rail (UK)

🚆 Mar de Plata (Argentina)

☀️ Cerro Dominador (Chile)

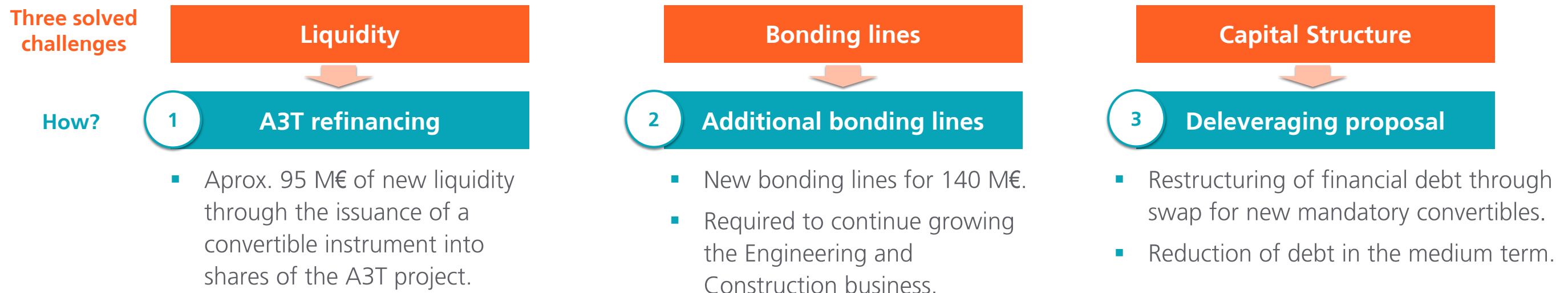
⚡ Fulcrum (USA)

New Financial Restructuring 2019

- 1** **Abengoa completed its initial restructuring in March 2017**
- Reduction of debt through capitalization or write-off of 70% and dilution of 95% for shareholders.
 - New liquidity received, mainly dedicated to the repayment of outstanding debt and restructuring costs, net funds received by Abengoa were limited.
 - It represented an important, although not definitive, step in order to achieve a sustainable capital structure.

- 2** **Business recovery since the completion of the financial restructuring:**
- The business has been focused on engineering and construction projects for third parties.
 - Advances in the asset divestment plan: sale of 41.5 % of Atlantica Yield; the Norte III combined cycle in Mexico, bioenergy business in Europe, transmission lines in Brazil, among others.
 - Other initiatives to reduce debt and improve liquidity: creation of the AAGES joint venture with Algonquin.

- 3** **Financial Restructuring 2019**
- The new financial restructuring, completed in April 2019, addresses and resolves the main challenges faced by the company, allowing for its future viability.



Assets Disposal Plan

Sale of concessional assets and non-core businesses will contribute to improve Abengoa's leverage and liquidity profile



Bioenergy USA

1G & 2G bioetanol ✓

Bioenergy Europe

1G bioetanol ✓

AB San Roque

Biodiesel ✓

Bioenergy Brazil

1G bioetanol



Khi

50 MW CSP – South Africa

Xina

100 MW – South Africa

SPP1

150 MW hybrid CC+CSP in Algeria



Accra

60,000 m³/day en Ghana ✓

Ténès

200,000 m³/day in Algeria

Chennai

100,000 m³/day in India



Brazil T&D

3,532 Km lines in operation in Brazil ✓

Brazil T&D

6,218 km in construction

Peru T&D

320 km transmission line ✓



Norte III

924 MW Combined Cycle in México ✓



Hospital Manaus

300-bed-hospital in Brazil

Real Estate

Various assets

Atlantica Yield Sale

- The company completed in March 2018 the operation for the sale of 25 % stake in Atlantica Yield (AY) to Algonquin Power & Utilities Corp. (APUC):
 - Operation worth 607 MUSD.
 - Constitution of AAGES (Abengoa-Algonquin Energy Solutions), a joint venture between Abengoa and Algonquin.
- On November 27th 2018, Abengoa completed the sale of the 16.7 % remaining stake in AY to APUC, for a total purchase price of 345 MUSD. The resulting net proceeds, 285 MUSD, have been fully allocated to debt repayment, as per the financing contracts.

Progress in the sale of A3T

- 220 MW cogeneration plant in Mexico.
- Delivering energy to de grid since late December 2018.
- PPAs signed for more than 80 % of the capacity.

Abengoa was awarded projects with a value of €1.5 billion in 2018, with a current backlog of €1.8 billion, on December 31st, 2018.

Main projects

	Dewa	Dubai	▪ Technology and solar field of 3 x 200 MW parabolic trough.
	Cerro Dominador	Chile	▪ 110 MW solar thermal tower plant with a 17,5 hour storage system.
	Luneng	China	▪ Procurement of engineering and technology for 50 MW solar thermal tower plant.
	Rabigh	Saudi Arabia	▪ The largest reverse osmosis desalination plant in the country. 600.000 m ³ /d.
	Salalah	Oman	▪ Reverse osmosis desalination plant with a capacity of 114,000 m ³ /day.
	Agadir	Morocco	▪ 275,000 m ³ /day reverse osmosis desalination plant for the supply of drinking water and 13,500 ha of irrigation.
	Shuaibah	Saudi Arabia	▪ Desalination plant with a capacity of 250,000 m ³ /day by reverse osmosis.
	Fulcrum	USA	▪ Plant to produce 10 million gallons of aviation biofuels per year from municipal solid waste.
	A3T	Mexico	▪ 260 MW e(220 MW guaranteed) and 120 ton/h of steam efficient cogeneration power plant.
	WAS	Saudi Arabia	▪ 1,390 MW combined cycle: the largest hybrid solar-gas plant in the world.
	Quebrada Blanca	Chile	▪ Electrical substations for the second phase of the Quebrada Blanca mine.
	Puerto Capurro	Uruguay	▪ Construction of approximately 1,000 meters of quay in Montevideo.

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Business Areas



Areas of Activity

Abengoa organizes its activity in several business areas: Energy, Water, Transmission and Infrastructure and Services, all of which are based on R&D and Innovation.



Energy



Water



Transmission & Infrastructures



Services

- Conventional and renewable energy generation
- Capabilities covering engineering, procurement, construction and commissioning.
- 9.3 GW of installed capacity in conventional generation
- Owned solar technology and leader in worldwide installed capacity.

- Specialist in infrastructures for the integral water cycle.
- Excellence in technical capabilities and international positioning.
- Wide experience and track-record in water treatment and hydraulic infrastructures, being leaders in the international desalination market.
- Over 1.7 million m³/day desalinated water capacity and 2.2 million m³/day of drinking water

- Leading international contractor in transmission and infrastructures for energy, industry, transport, environment and communications.
- Over 27,000 km of transmission lines and almost 330 substations built over the last 15 years.
- Railway business, with over 4,500 km of lines and 80 substations developed



- Service providers for infrastructure in the transmission, water, and renewable and conventional power generation sectors.
- Optimization of O&M, improving management and increasing production.
- 25 years of contracts average life.

Energy

Abengoa has extensive experience in **engineering, construction, assembly and commissioning** of power generation plants with open cycle technologies, combined cycles, cogeneration, wind farms, solar thermal and photovoltaic plants, and biomass plants that together exceed **12,800 MW installed** capacity.

Abengoa has its own **solar thermal technology** and has become a world leader in the construction of solar thermal plants, with **34% of the installed capacity worldwide**.

Abengoa is carrying out turnkey (and EPCM) projects in all these areas that encompass the entire **value-chain**: development, engineering, purchasing, construction, plant commissioning, in addition to offering operation and maintenance.

				
Hassi R'Mel Algeria 150 MW solar-gas hybrid plant	Waad Al Shamal Saudi Arabia 1,390 MW + 50MW solar combined cycle	ACT – A3T Mexico 300 and 220 MW efficient cogeneration plants	Cerro Dominador Chile 110 MW solar thermal plant + 100 MW photovoltaic plant + 17.5 hours of storage	Fulcrum USA Plant to produce biofuels for the aviation sector from municipal solid waste

Transmission & Infrastructures

Abengoa has built more than 27,000 km **of transmission lines** all over the world and more than 330 substations in the last 15 years. Currently, interconnection projects are being executed of up to 800 kV for both AC and DC.

In the **railway** sector, more than 4,500 km of railway lines have been electrified and over 80 traction substations have been constructed.

In addition, the company has a facility and **infrastructure division** that specializes in all kinds of installations, plants and other buildings (hospital, correctional and administrative facilities, etc.).

It also has a **production center for electrical panels and electronics** and one for the **manufacture of metal structures**.



Water

Abengoa specializes in the design and construction of **desalination plants** and has constructed more than 30 in Spain, Africa, Latin America, Asia and Middle East. These **produce drinking and industrial water** through conventional and advanced membrane processes from seawater or brackish water. Currently it has over **1.5 million m³/day** desalinated water installed capacity and **1.3 million m³/day under construction**.

The company is also specialist in **water treatment plants** and has built more than 120 plants that include those for **drinking water treatment** as well as **urban and industrial wastewater treatment** and re-use by means of physic-chemical and biological processes, including sludge digestion and recovery.

Abengoa has always been at the forefront of **hydraulic initiatives**, with public and private institutions in the implementation, **improvement and exploitation of regulation infrastructures, transport** (+40 pumping stations and +1,100 km of large conductions), **distribution** (+4 M of people served), irrigation (+500,000 ha) and **hydroelectric plants** (400 MW installed in more than 40 projects of plants construction, improvement and modernization).

Desalination



**Agadir
desalination plant**
Morocco

**Rabigh desalination
plant**
Saudi Arabia

Water Treatment



**Cunene supply and
sanitation system**
Angola

**Sewage treatment
plant Ranilla**
Spain

Hydraulic Infrastructure



**Tierra Amarilla
Aqueduct**
Chile

**Canal de Navarra
Irrigation**
Spain

O&M Services

The vast experience (more than 18 years) and involvement in the **development, industrialization, operation and maintenance** stages, where we are global leaders in **solar thermal O&M**, allows Abengoa to have a large backlog and pipeline of products and services for different technologies. These optimize **energy and water** plant's operation and maintenance and therefore provides our clients with a high-quality service that results in high rates of availability and improved asset productivity.

- Abengoa is a benchmark in the O&M of **solar plants** of which it has a commercial experience of 1,631 MW, of all commercial technologies (photovoltaic, solar thermal, hybrid with conventional cycles).
- It operates **desalination plants** all over the world. Currently, it supplies O&M in seven plants, located in Spain, Algeria, India and Ghana.
- Abengoa currently operates 190 MW in wind farms and more than 850 MW **in cogeneration and conventional plants**, being a pioneer in the O&M of hybrid solar-gas plants.



Ain Beni Mathar

Morocco

472 MWe Combined cycle
(solar+gas)



Solana

USA

280 MW parabolic trough
plant with six hours of
storage



Honaine

Algeria

Desalination plant producing
200,000 m³/day of drinking
water



Cerro Dominador

Chile

100 MW PV solar plant



Abent 3T

Mexico

220 MW high efficiency
cogeneration plant

R&D and Innovation

Technological development continues to be Abengoa's key **competitive advantage** in the undertaking of high added value projects. The company continues to develop R&D and Innovation projects, which improve both the performance of current products and services and the acquisition of new skills. Abengoa has **342 granted patents** accumulated since 2008.

 **Solar thermal**

 **Energy Storage**

 **Water**

 **Aerospace**

 **Railway**

 **Hydrogen generation**



Solar thermal

Development of more efficient solar thermal plants to improve the competitiveness and dispatchability of solar technology in the energy mix. Abengoa has its own technology and a worldwide solar thermal installed capacity of 34%.

Energy Storage

Development of storage systems with the objectives of improving the quality of the electricity network and favoring the integration and dispatchability of renewable energies.

Hydrogen and Fuel Cells

Development of power generation plants, based on fuel cells, as well as hydrogen production plants and hydrogen service stations for vehicles.

Aerospace

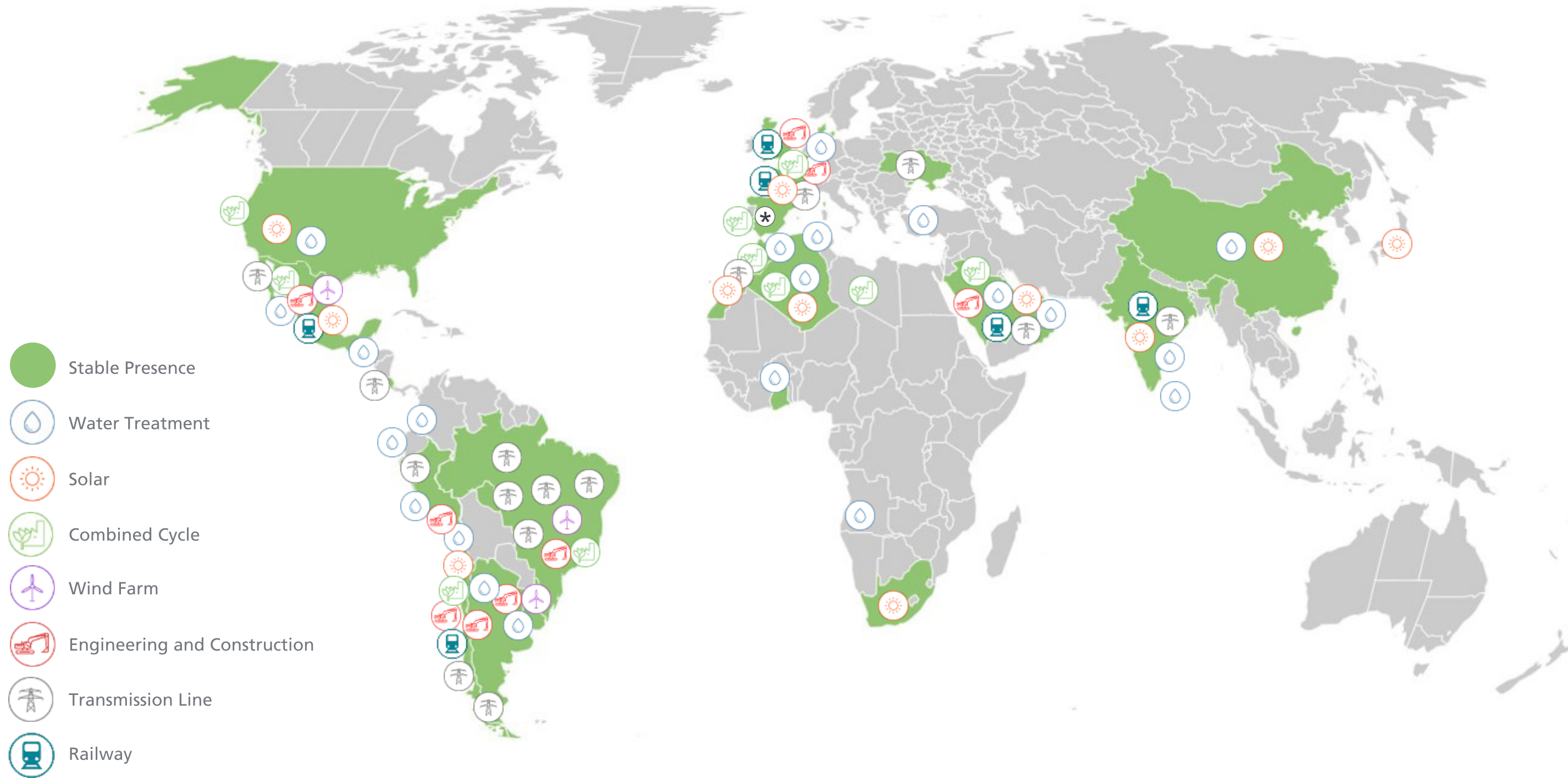
The main activities focus on the development of electrical and electronic products for the aerospace and defense sectors, as well as the promotion of synergies between space technologies and energy.

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Our Presence



Our Presence

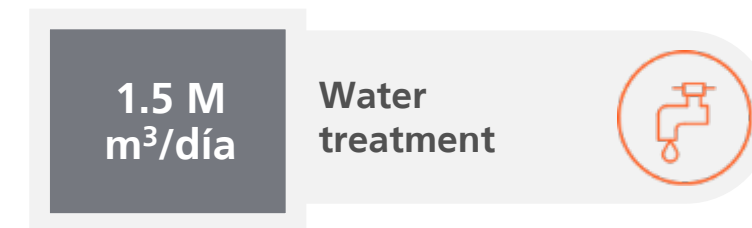
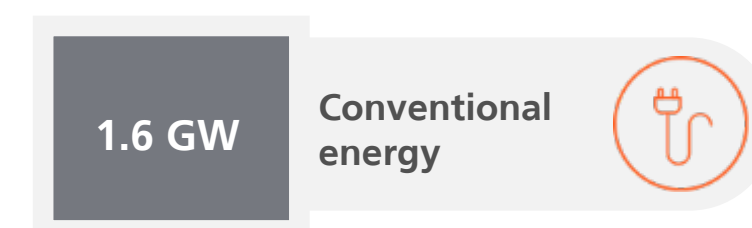


* All Abengoa's activities are developed in Spain.

South America

Geographies

Abengoa has been present in South America since 1968. In fact, the very first international projects were carried out in **Colombia, Venezuela and Guatemala**, and the first international office was opened in **Argentina**. From then on, it has become one of **the most significant regions for Abengoa**.




Peru	Argentina	Uruguay	Chile	Brazil
Shougang Mine extension	500 kV Neuquen-Mendoza Line	Wind Farm Campo Palomas	Electromechanical assembly Minera Escondida BHP	Norte Brazil Line DC 600 kV 2,411 km

North America


Geographies

Abengoa has achieved a commanding position in the **construction** and in the **energy** and **water** technology sectors in the United States and Mexico, particularly through its efforts in **solar thermal energy (STE)** and **photovoltaic** projects in USA, and through strategic activities in **conventional** and **renewable energy**, transmission, water and other buildings in Mexico, where the country has been operating for 35 years.

2.4 GW
Conventional energy




959 MW
Renewable energy



4,000 Km
Transmission lines



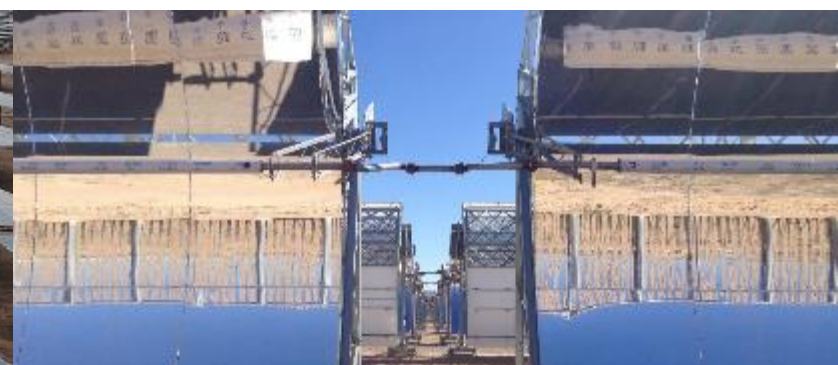

36,800 m³/day
Water treatment



761,000 m³/year
Biofuel plants



780 MW
Conventional and renewable energy O&M



Solana 280 MW + 6 hours of storage from salt
Arizona

Centro Morelos 724 MW
Mexico

Mount Signal 200 MW
California

Agua Prieta II 14 MW
Mexico

Europe

Geographies

Abengoa has undertaken a large variety of projects in Europe (**Spain, Belgium, France, United Kingdom, Netherlands, Ukraine, Poland, Denmark**). To be highlighted are the conventional and renewable **energy projects, transmission, desalination, water treatment, hydraulic infrastructures and single-buildings**. The company also has the largest Solar R+D Center in the world and is both a pioneer and global reference point for this technology. This has enabled the company to develop new technologies and pioneering operational and maintenance services and systems for maximizing plant capacity and production.

1,500 km

Transmission lines



462,000 m³/day

Desalination



2,500 km

Railway electrification



1,500,000 m³/day

Water treatment



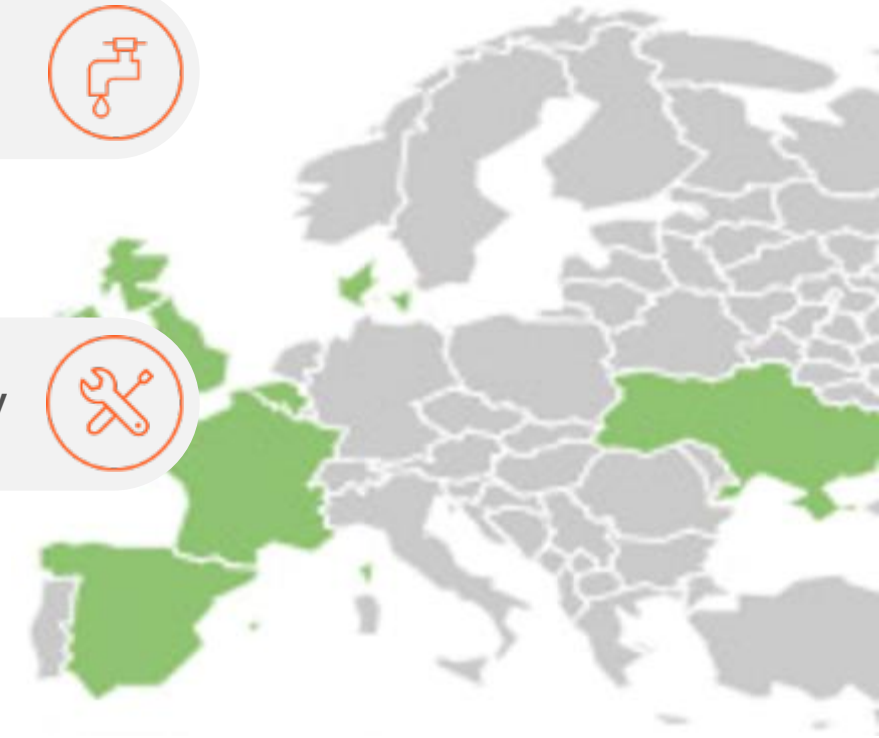
700 MW

Constructed solar energy



700 MW

OyM energía convencional y renovable



Thermosolar plants
Spain



Transmission Lines
Ukraine



Electromechanical installations
Denmark

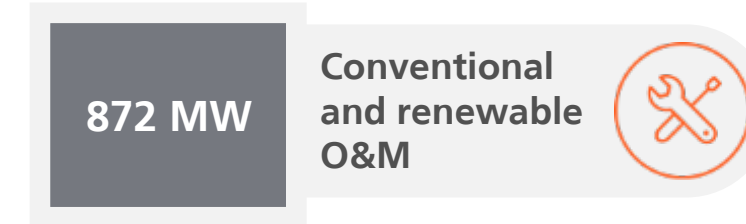
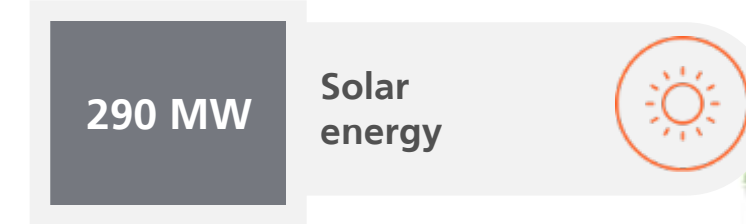


Desalination plants
Spain

Africa

Geographies

Thanks to its efforts in constructing a number of solar thermal projects in **South Africa** and **Algeria**, in addition to generation and transmission projects across the continent, and the construction of desalination and water treatment plants, Abengoa has risen to become one of the key players in the **energy** and **water** sector development in Africa.



Ain Beni Mathar
Morocco



Xina Solar One
South Africa



Cunene
Angola



Accra
Ghana



225 kV Line
Morocco

Middle East

Geographies


Abengoa is present in Middle East, in countries such as **Saudi Arabia, Kuwait, the United Arab Emirates (UAE), Oman, Qatar, Bahrain, Jordan and Egypt.**

The company has a large backlog and pipeline of projects and opportunities, as well as offices in several countries.



100 MW Solar energy in operation 

45,000 m³/day Desalination 

650 MW Solar energy under construction 

+1 M m³/day Desalination under construction 

1,390 MW Conventional energy under construction 

900 km Railway electrification 



Mohamed bin Rashid Al Maktoum Solar Park Phase IV
UAE



Faya-Shamka Line
UAE



Shuaibah Desalination Plant
Saudi Arabia

ABENGOA

Innovative technology solutions for **sustainability**



Thank you