



08. Appendix

Abengoa communication channels with its social partners *G4-24, G4-26*

From Abengoa to suppliers

- › Corporate website
- › Specific site dedicated to the financial restructuring process. Information on process developments, FAQs and specific supplier contact
- › Structured procedure for gauging supplier effectiveness
- › Safety management system tool
- › Periodic visits to suppliers
- › Annual report
- › LinkedIn, Twitter and Instagram

From suppliers to Abengoa

- › Structured procedure for taking in supplier information and opinions
- › Abengoa Easy Management (AEM) computer application for managing company decision making and action plans
- › Safety management system tool
- › Stakeholder mailbox
- › Specific site dedicated to the financial restructuring process. Information on process developments, FAQs and specific supplier contact
- › External whistleblowing channels
- › Interviews
- › CSR mailbox
- › LinkedIn, Twitter and Instagram

From Abengoa to society

- › Corporate website
- › Annual report
- › Focus-Abengoa Foundation website
- › Press releases
- › Corporate Social Responsibility Department
- › Gatherings with NGOs and academic institutions
- › Open-house events
- › Trade fairs, forums and conferences
- › Corporate blog
- › LinkedIn, Twitter and Instagram

From society to Abengoa

- › Press releases
- › Communication Department
- › Corporate Social Responsibility Department
- › Gatherings with NGOs, the media and academic institutions
- › Trade fairs, forums and conferences
- › Stakeholder mailbox
- › Corporate blog
- › CSR mailbox
- › External whistleblowing channels
- › Opinion survey
- › Interviews
- › LinkedIn, Twitter and Instagram

From Abengoa to local communities

- › Corporate website
- › Annual report
- › Focus-Abengoa Foundation website
- › Press releases
- › Corporate Social Responsibility Department
- › Gatherings with NGOs and academic institutions
- › Open-house events
- › Trade fairs, forums and conferences
- › Corporate blog
- › LinkedIn, Twitter and Instagram

From local communities to Abengoa

- › Corporate Social Responsibility Department
- › Gatherings with NGOs and academic institutions
- › Open-house events
- › Trade fairs, forums and conferences
- › Corporate blog
- › CSR mailbox
- › Beneficiary assessment of community engagement programs
- › External whistleblowing channels
- › Interviews
- › LinkedIn, Twitter and Instagram

From Abengoa to customers

- › Corporate website
- › Specific site dedicated to the financial restructuring process. Information on process developments, FAQs and specific customer contact
- › Focus groups with customers
- › Safety management system tool
- › Advertising and marketing
- › Trade fairs, forums and conferences
- › Periodic visits paid to customers
- › Annual report
- › LinkedIn, Twitter and Instagram

From customers to Abengoa

- › Satisfaction surveys
- › Troubleshooting report computer application
- › Abengoa Easy Management (AEM) computer application for managing company decision making and action plans
- › Safety management system tools
- › Stakeholder mailbox
- › CSR mailbox
- › Specific site dedicated to the financial restructuring process. Information on process developments, FAQs and specific customer contact
- › Training sessions on products
- › External whistleblowing channels
- › Interviews
- › LinkedIn, Twitter and Instagram

Main references G4-4, G4-8

Energy

	Technology	Power	Location	Status	Activity in 2016
Solúcar Platform	Thermosolar, tower and parabolic trough and photovoltaic	183 MW	Seville (Spain)	In operation	Operation and maintenance of the Solnova 1, Solnova 3 and Solnova 4 plants (50 MW each) and the first two commercial plants in the world to use tower technology PS10 (11 MW) and PS20 (20 MW)
Photovoltaic plants in Andalusia	Solar photovoltaic	Casaquemada 1.9 MW; Seville PV, 1.2 MW; Linares PV, 19.9 MW; Las Cabezas PV, 5.6 MW; and Copero PV, 1.9 MW	Casaquemada and Seville PV are located on the Solúcar Platform; Linares PV in Jaén; Las Cabezas PV, in Las Cabezas de San Juan (Seville), and Copero PV in Dos Hermanas (Seville)	In operation	Midway through the year the company sold these facilities as part of its divestment plan. However, Seville PV was operated and maintained by Abengoa until January 2017, while the others were operated and maintained until July 2016
Solar platform of Extremadura	Thermosolar parabolic trough	200 MW	Logrosán, Cáceres (Spain)	In operation	Operation and maintenance of the four Solaben 1, 2, 3 and 6 plants, 50 MW each
Castilla La Mancha solar platform	Thermosolar parabolic trough	100 MW	Ciudad Real (Spain)	In operation	Operation and maintenance of the two Helios 1 and 2 plants, 50 MW each
El Carpio solar platform	Thermosolar parabolic trough	100 MW	El Carpio, Córdoba (Spain)	In operation	Operation and maintenance of the two Solacor 1 and 2 plants, 50 MW each
Écija solar platform	Thermosolar parabolic trough	100 MW	Écija, Seville (Spain)	In operation	Operation and maintenance of the two Helioenergy 1 and 2 plants, 50 MW each
Kaxu Solar One	Thermosolar parabolic trough	100 MW	Pofadder, Northern Cape (South Africa)	In operation	Operation and maintenance of the plant. It has already begun to produce electricity and to sell to the state-owned company Eskom
Xina Solar One	Thermosolar parabolic trough	100 MW	Pofadder, Northern Cape (South Africa)	Under construction	The project is currently involved in the development of the commissioning tests, and we can highlight the recent synchronization of the steam turbine
Khi Solar One	Tower thermosolar	50 MW	Upington, Northern Cape (South Africa)	In operation	Construction completed. Commissioning, commercial start-up and commencement of the operation and maintenance phase of the largest thermosolar plant using this technology in the African continent
Solana	Thermosolar parabolic trough	280 MW	Gila Bend, Arizona (USA)	In operation	Operation and maintenance of the plant
Mojave Solar	Thermosolar parabolic trough	280 MW	Barstow, California (EE.UU.)	In operation	Operation and maintenance of the plant
Cerro Dominador	Tower thermosolar and photovoltaic technology	210 MW	Municipality of María Elena, Antofagasta (Chile)	Under construction	Working on the assembly of the heliostats on the thermosolar part of the platform, as well as the booster and disconnecting substations
Ashalim solar plant	Thermosolar parabolic trough	110 MW	Ashalim (Israel)	Under construction	Abengoa transferred its stake in the project. We continue with the assembly of the solar field
Agua Prieta solar plant	Thermosolar parabolic trough	14 MW	Agua Prieta, Sonora, (Mexico)	Under construction	On the point of completing the solar field, which will be integrated into a combined cycle plant, thus representing the first solar-gas hybrid plant in Mexico and Latin America

	Technology	Power	Location	Status	Activity in 2016
Hassi R'Mel	Solar-gas hybrid	150 MW (20 MW from the solar field)	Hassi R'Mel (Algeria)	In operation	Operation and maintenance of the plant and asset management
Ain Beni Mathar	Solar-gas hybrid	470 MW (20 MW from the solar field)	Ain Beni Mathar (Morocco)	In operation	Operation and maintenance of the plant
Waad Al Shamal combined cycle	Gas-solar combined cycle	1,270 MW + 50 MW from the solar field	Turaif (Saudi Arabia)	Under construction	Detail engineering of the plant has been developed as well as the start-up and assembly of the main equipment in the field. Project developed together with General Electric
Morelos Combined Cycle Plant	Combined cycle	720 MW	Cuautla, Morelos (Mexico)	Under construction	Pending completion of the latest commissioning tests to formalise provisional acceptance
Norte III combined cycle	Combined cycle	924 MW	Ciudad Juárez, Chihuahua (Mexico)	Under construction	Termination of the detail engineering at the plant and commencement of the first civil engineering works. Part of the divestment plan of Abengoa
Villaricos cogeneration	Cogeneration	21.7 MW	Almería (Spain)	In operation	Operation and maintenance of the plant and asset management
Nuevo Pemex cogeneration	Cogeneration	300 MW	Tabasco (Mexico)	In operation	Maintenance of the plant
A3T cogeneration	Cogeneration, transmission system and compression system	260 MW	Tabasco (Mexico)	Under construction	Completed 91 % of the expansion project of Nuevo Pemex Cogeneration. Transmission system, with 80 % completed. And 26 % of the compression system has been completed
Dead Sea Works cogeneration	Cogeneration	220 MW	Sdom (Israel)	Under construction	Specific engineering and construction works and transfer of the systems for the start-up tests and equipment testing
Tres Mesas wind farm	Wind power	148.5 MW	Cd Victoria, Tamaulipas (Mexico)	Completed	Project completed. Abengoa was responsible for the Balance of Plant (BOP), consisting of civil and electromechanical works for the construction of the wind farm
Campo Palomas wind farm	Wind power	70 MW	Departamento de Salto (Uruguay)	Completed	Project completed. Abengoa was responsible for the construction of this wind farm. As part of the company's divestment plan, in 2016, this project was sold to Invenenergy Wind

Water

	Technology	Capacity	Length	Location	Status	Activity in 2016
Desalination plant in Cartagena	Reverse osmosis	65,000 m ³ /d		Cartagena (Spain)	In operation	Operation and maintenance of the plant
Desalination plant in Almería	Reverse osmosis	50,000 m ³ /d		Almería (Spain)	In operation	Operation and maintenance of the plant
Desalination plant in Skikda	Reverse osmosis	100,000 m ³ /d		Skikda (Algeria)	In operation	Operation and maintenance of the plant
Desalination plant in Honaine	Reverse osmosis	200,000 m ³ /d		Honaine (Algeria)	In operation	Operation and maintenance of the plant
Desalination plant in Ténès	Reverse osmosis	200,000 m ³ /d		Ténès (Algeria)	In operation	Plant under concession. Abengoa is currently responsible for its operation and maintenance as well as asset management

	Technology	Capacity	Length	Location	Status	Activity in 2016
Desalination plant in Accra	Ultra filtration + reverse osmosis	60,000 m ³ /d		Accra (Ghana)	In operation	Plant under concession. Abengoa is currently responsible for its operation and maintenance as well as asset management
Desalination plant in Chennai	Reverse osmosis	100,000 m ³ /d		Chennai (India)	In operation	Plant under concession. Abengoa is currently responsible for its operation and maintenance as well as asset management
Desalination plant in Qingdao	Reverse osmosis	100,000 m ³ /d		Qingdao (China)	In operation	Technical assistance services
Desalination plant in Agadir	Reverse osmosis	100,000 m ³ /d		Agadir (Morocco)	Under development	Plant under concession. Project development
Carpapata III hydroelectric plant	Hydraulic infrastructures (hydroelectric plant). Power: 12.8 MW			Region of Junín (Peru)	Under construction	Construction progress
Small hydroelectric plants of the Canal de Aragón and Catalonia	Hydraulic infrastructures (11 small hydroelectric plants). Power: 7.5 MW			Spain	In operation	Operation and maintenance and asset management
Cerrato hydroelectric plant	hydraulic infrastructures (hydroelectric plant). Power: 4.3 MW			Spain	In operation	Asset management
Irrigation area of the Canal de Navarra 1st phase	Hydraulic infrastructures (irrigation). Area: 23,611 ha			Spain	In operation	Asset management
Denizli supply and sanitation	Hydraulic infrastructures (supply and sanitation network)		400 km	Denizli (Turkey)	In operation	Completion of works
Roorke sanitation	Hydraulic infrastructure (sanitation network)		30 km	Roorkee, Uttarakhand State (India)	Under construction	Contract award and commencement of construction
Independencia Lima supply and sanitation	Hydraulic infrastructures (supply and sanitation network)		128 km of drinking water pipeline, and 110 km in sewage networks	Lima (Peru)	Under construction	We are installing 128 km of drinking water pipeline and 110 km of sewer network and more than 12,000 connections to provide 20,000 Peruvians with access to drinking water and the sewerage network
Nueva Planta Protisa supply	Hydraulic infrastructures (supply network)		4 km	Cañete, Lima (Peru)	Under construction	We are installing a pipeline with a land component and an underwater component, which will serve as drainage for the new paper mill that the client is building in Cañete
Extension and improvement of the drainage and sanitation system of Montevideo	Increase of the capacity of the existing drainage system through the construction of a stand-by tank and all of the works required for the reinforcement pipes	12,800 m ³ (stand-by tank)		Montevideo (Uruguay)	Under construction	Completion of tank construction. At the moment, the architecture and urban conditioning works of the land above the tank are taking place
Cleaning and maintenance of the Montevideo sewer network	Of the sewer network and cleaning and repair works			Montevideo (Uruguay)	In progress	

	Technology	Length	Flow	Power	Location	Status	Activity in 2016
El Zapotillo aqueduct	Hydraulic infrastructures (integrated water resources management system that includes a supply network, a water treatment plant and pumping system)	Supply network: 139 km of large gauge pipes and 40 km of a distribution circuit	Transported: 5.6 m ³ /s Treatment plant: 3.8 m ³ /s	Pumping stations: 24 MW	Jalisco y Guanajuato (Mexico)	Under construction	Engineering and construction of the plant under a concession
San Antonio supply	Hydraulic infrastructures (supply system with pipes, wells, tanks and pumping stations)	225 km	168.970 m ³ /día		San Antonio, Texas (USA)	Under construction	Partial divestments by Abengoa in the concession of this project after which it maintains 20 % of its interest
Aceguá sanitation	Wastewater treatment plant, pumping systems and sanitation network	Supply network: 9 km	Wastewater treatment plant: 5.0 L/s of average flow and 9.0 L/s of maximum flow		Aceguá, Region of Cerro Largo (Uruguay)	Under construction	In 2016 we commenced the first stage that refers to the preparation of the executive project

Bioenergy

	Description	Capacity	Location	Status	Activity in 2016
Fulcrum Sierra BioFuels Plant	Biorefinery for production of biofuel using municipal solid wastes	10 million gallons of biofuel / year	Nevada (USA)	Under construction	Detail engineering and design of the main mechanical systems and equipment

Transmission and infrastructures

Projects in

	Spain	<p>Abengoa continues to develop several important projects in the transmission and distribution sector, and is one of the leading sector companies in Spain.</p> <p>Work continues on electrical maintenance and instrumentation in various industrial plants.</p> <p>In the railway sector, it continues with the project of installation and maintenance of systems of protection, security and landlines along a stretch of 51 kilometres of railway between the provinces of León and Asturias, as well as the catenary and substations installation works for the administrator of railway infrastructures (ADIF) in Spain.</p> <p>Deployments have been made of networks of mobile, radio and fibre-optic operators, as well as the installation of telecommunications structures or GSM-R installation.</p> <p>Work continues on manufacturing electronics and equipment with integrated electronics for the traffic, defence and transportation, energy and telecommunications sectors, among others. In this area, it is worth noting the contract award for repair of the feeder project, the laying of underground lines and the replacement of the current sections and disconnectors of the US military base in Morón de la Frontera, Seville, (Spain) for the Air Force of the USA.</p>
Europe	Belgium	<p>Liège Hospital</p> <ul style="list-style-type: none"> › Activity area: transmission and infrastructures › Location: Liège (Belgium) › Status: first provisional contract award in 2016. Final contract award received in 2017 › Activity in 2016: engineering and construction
	France	<p>For the last 14 years, Abengoa has been working for the public French operator responsible for the transmission systems in France. In 2016, it has worked on overhead and underground lines and high voltage electrical substations. As a significant project, we highlight the campaign to change high-capacity conductors on 400 kV lines throughout the Rhone valley.</p> <p>The company has also performed catenary and traction substation projects for the French railway company, in various parts of the country.</p> <p>It continues with construction of part of the International Thermonuclear Experimental Reactor (ITER) project with the installation of the seven bays of two 400/22 kV substations</p>
	United Kingdom	As part of the 2014-2019 framework contracts for the English railway operator, engineering and installation work continues on both catenary and traction substations on different railway lines in and around London.
	Denmark	Abengoa has begun work on the electromechanical facilities of a new 56,000 m ² hospital complex in the town of Herlev. It is a hospital complex that is included within the country's hospital investment programme, with 825 beds, an area of 56,000 m ² and a coverage of 435,000 patients in 2018.
	Ukraine	The construction of a 765 kV line along 187 km continues.
	South Africa	We are continuing to work on the construction of a 400 kV 84-km-long power transmission line for the country's main power company.
Africa	Morocco	<p>Abengoa continues to build three 400 kV transmission lines in Oujda and a 225 kV transmission line in the Ouarzazate area for the country's electrical operator.</p> <p>In the area of communications, a project consisting of LV and MV electrification of GSM stations has been contracted with the main Moroccan telecommunications operator. Furthermore, we are working for the second largest Moroccan telecommunications operator in the GSM network deployment project throughout Morocco.</p>
	Oman	<p>In 2016, the construction of 132/33 kV substations in Samad and Sinaw were contracted, as well as associated high-voltage power lines, for the Omani power company.</p> <p>We are also continuing with the civil engineering, assembly and start-up of the 132/33 kV Al Dreez substation.</p>
Asia	Saudi Arabia	Works continue for the construction of the 450 km high-speed line between the cities of Mecca and Medina.
	The United Arab Emirates	The supply and assembly works corresponding to a Faya-Shamkha electric transmission line were carried out in 2016.
	Kuwait	Construction of a 132 kv transmission line in Shagaya has been completed.

Projects in	
	<p>Costa Rica Work has been completed on the construction of two electrical substations and two 230 kV lines.</p>
	<p>Argentina The contract awarded in 2015 (transformer station and 220 kV power line for the Gerdau steelworks) has reached its maximum execution volume during 2016. And work continues on the Mar del Plata transporter project (500 kV transformer station and 132 kV lines) awarded by the state to Abengoa at the end of 2014.</p>
	<p>We can highlight the development of the following projects:</p> <ul style="list-style-type: none"> › Supply of the electrical system for the project of lines 6 and 3 of the Santiago Metro. › 2x220 kV lines / Los Cóndores - Ancoa.
	<p>Chile</p> <ul style="list-style-type: none"> › Increased capacity of the line 1x220 kV Cardones - Carrera Pinto - Diego de Almagro. › Busbar switching 500 kV Alto Jahuel substation. › Busbar switching 500 kV Ancoa substation. › Busbar switching 500 kV Charrúa substation. › Complete switching of the Rahue substation.
America	<p>Mexico The construction of 317 LT 1902: substations and offsets of the Northwest 2nd Phase, located in Los Mochis, Sinaloa, has been completed and consists of the execution and commissioning of four substations of 230 and 115 kV.</p> <p>Work has also been carried out on four 230 kV transmission lines along 21.1 km and two 230 kV substations in the state of Chihuahua. Currently, the project, which will evacuate the electric power of the North III combined cycle plant, is under construction and is 17 % completed.</p>
	<p>Work continues on construction of the following projects:</p> <ul style="list-style-type: none"> › 40 km of transmission line in 220 kV, and 67 km in 138 kV, in the regions of Moquegua and Tacna, for Southern Peru Copper Corporation. › 60 km and 75 km in 500 kV, in Moquegua, for Kallpa Generation and Engie, respectively. › Lastly, the largest project in the company's mining sector continues, the scope of which will help increase Shougang Hierro Peru's iron ore concentrate production capacity by 10 Mt per year through the construction of more than 10 km of conveyor belts, 15 transfer houses, the secondary crushing plant, and the assembly of the largest stacker and reclaimer assembled in Peru.
	<p>Peru</p>
	<p>Abengoa has finalized the convention centre and fairground of Punta del Este in the community of Maldonado.</p> <p>In addition, it has an important portfolio of works in execution for public and private clients, which includes:</p> <ul style="list-style-type: none"> › The new port terminal of Capurro - Montevideo, which will have 1,000 m of dock on stilts with its corresponding works for shelter, berthing and defence for fishing vessels. › The rehabilitation works of two sections of railroad tracks, which involve the replacement of approximately 330 km of rails with the placement of sleepers and the corresponding reinforcement of the bridges. › The first project of public-private participation in the country that consists of a penitentiary centre of more than 42,000 m² distributed over 25 buildings located in Punta de Rieles - Montevideo. › The multi-functional complex Antel Arena, which hosts sporting events, musical, theatrical and social shows. › Several works of hospital infrastructure.
	<p>Uruguay</p>