



CASE STUDY

The Challenge

Industry Competing with Residents for Access to Fresh Water



In the vibrant seacoast city of Qingdao, China, a diverse population of over 8 million people shares space and resources with rapidly growing industry. The pressing need for a larger municipal water supply led government leaders to commission a seawater reverse osmosis (SWRO) water treatment plant. In choosing Abengoa Water, which has built huge reverse osmosis (RO) plants on other continents, the Municipality of Qingdao sought the expertise of a company that knows how to design and build massive water treatment plants that bring huge quantities of drinking water to urban populations.

LOCATION

Qingdao, Shandong Province, China

PROJECT

Qingdao BAIFA Seawater Desal Plant

CAPACITY

100,000 m³/day

ENERGY SAVINGS

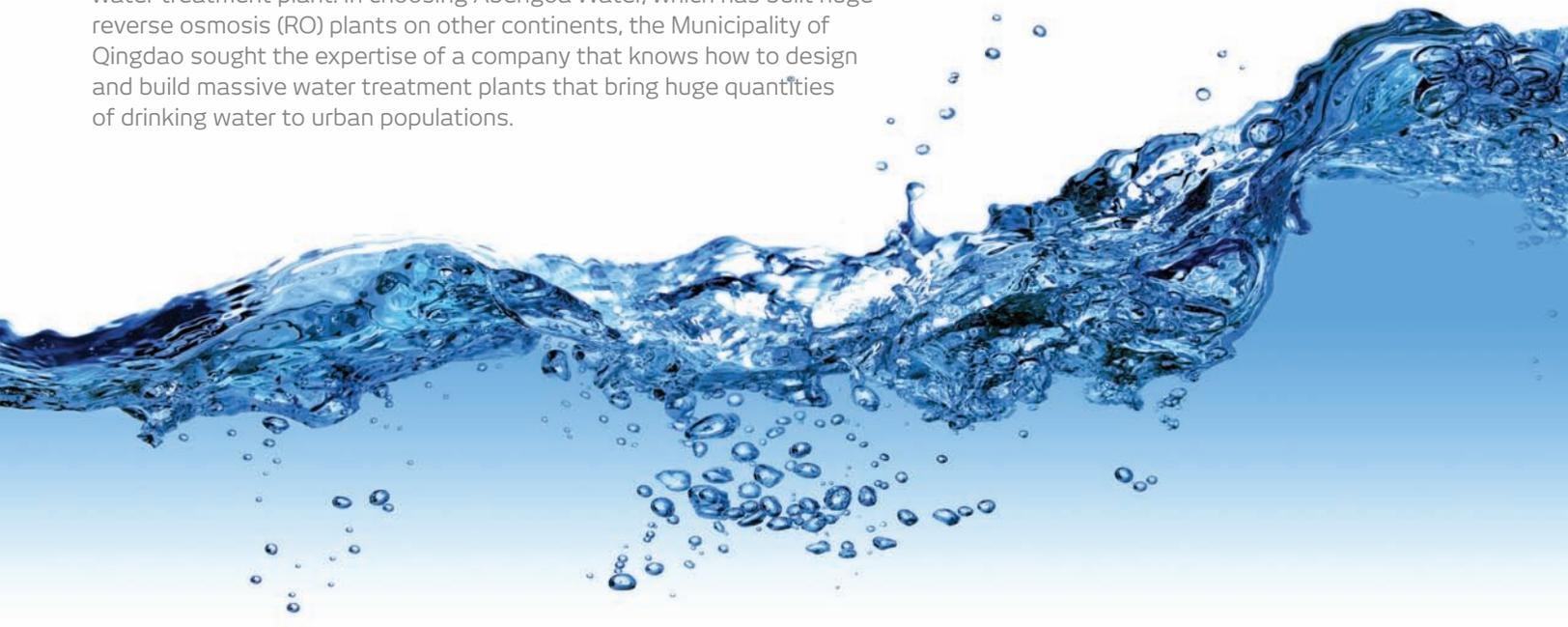
US\$ 9.6 million or 96 million kWh/year*

CO₂ SAVINGS

56,000 tons CO₂/year**

* Energy savings estimates based on China's power cost of \$0.10/kWh

** Based on Energy Recovery's proprietary Power Model analysis



The Innovation Solution

PX® Pressure Exchanger 260

Abengoa Water knew from its RO work on several continents that recovering and recycling energy was paramount to keeping water affordable, a consideration especially important given the huge flow capacity needed at Qingdao. Because Energy Recovery's technological solutions have minimized the cost and energy footprints of their six other mega-projects, Abengoa Water wanted Energy Recovery's PX Pressure Exchanger® technology to make processing more productive, profitable, and environmentally cleaner.



The Result

Drinking Water for Half a Million People

The PX supplied Qingdao's RO plant with the potential of saving 96 million kWh per year and of cutting 56,000 tons of CO2 emissions with Energy Recovery's industry-leading technology that recaptures the reusable energy from fluid flows and pressure cycles. The Qingdao processing plant will bring fresh water to up to 500,000 residents of Qingdao. Energy Recovery's PX® trains make desalination more affordable and sustainable by harnessing reusable energy at high efficiency with no downtime.

"Abengoa continues to work with Energy Recovery to implement its innovative PX devices to significantly reduce the lifecycle costs of the desalination process."

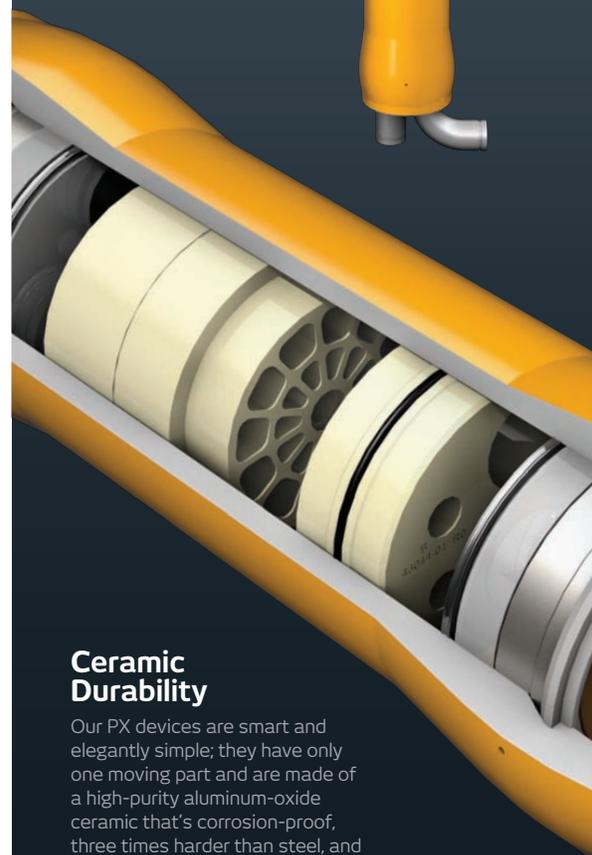
Carlos Cosín
CEO of Abengoa Water

WHERE DESIGN MEETS ECONOMICS

After a quarter of a century, we're still raising the bar with innovative desalination solutions. Our flagship PX® isobaric technology is the most efficient and reliable solution on the market in energy recovery for desalination.

PX S Series®

- Designed for any size reverse osmosis desalination plant
- Delivers 96.8% efficiency
- Scalable solution



Ceramic Durability

Our PX devices are smart and elegantly simple; they have only one moving part and are made of a high-purity aluminum-oxide ceramic that's corrosion-proof, three times harder than steel, and provides unmatched durability.

About Energy Recovery Energy Recovery Inc. (NASDAQ: ERII) technology harvests the power of pressure from high-pressure fluid flows and pressure cycles. Through collaboration with industry, Energy Recovery helps make industrial processes within water, oil & gas, and chemical industries more profitable and environmentally sustainable. Headquartered in the San Francisco Bay Area, Energy Recovery has offices in Madrid, Shanghai, and Dubai. For more information, visit energyrecovery.com

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