Public-Private Partnership Impact Stories

Saudi Arabia: Desalination

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The King Abdulaziz International Airport Desalination Project is IFC's first advisory project in the desalination sector. The airport is the main international gateway and hub for Saudi Arabian Airlines and in 2010 served more than 18 million passengers.

IFC was the lead adviser to Saudi Arabia's General Authority of Civil Aviation (GACA) to help structure and implement a public-private partnership (PPP) for the development and operation of a new 30,000 cubic meters (m^3) per day desalination plant to supply potable water to the airport. The concession was signed in June 2007. Commercial production started in March 2010.

The winning bidder quoted a water price of SAR 3.47 ($0.92)/m3, a precedent-setting price for desalinated water in the Middle East.

Increased water production capacity has enabled GACA to meet current water demand, with over 11,000 residents served by the new plant.

This series provides an overview of public-private partnership stories in various infrastructure sectors, where IFC was the lead advisor.

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BACKGROUND

The city of Jeddah, where the airport is located, had a population of approximately 2.8 million in 2006 and faced severe water shortages. The city lacked adequate water production and distribution systems around the airport, so GACA had relied on its own (captive) desalination plants, which it had funded and operated. These plants, however, were outdated, inefficient and were approaching the end of their economic life; and although GACA had three of them with a total capacity of 33,000 m^3 per day, only one, with a capacity of 25,000 m^3 per day, was operational.

GACA is responsible for constructing, managing, operating, maintaining, and developing airports and air navigation infrastructure in Saudi Arabia and is in the process of restructuring to achieve full commercialization by 2015. Its objectives for this project were to concentrate on its core activities of airport operation, increase water production to meet projected growth in demand, and improve service quality and reliability while lowering production costs. GACA also aimed to avoid incurring capital costs, to reduce its reliance on subsidies from the Ministry of Finance, and to develop a viable public-private partnership model that could be replicated for future transactions.

IFC'S ROLE

IFC was appointed as the lead financial adviser to help structure and implement the PPP for the new desalination project. IFC's technical due diligence examined the benefits of refurbishing the existing plants compared with constructing a new plant and concluded that the most cost-efficient option was a new seawater reverse-osmosis desalination plant. The benefits of a new plant were expected to be:

- Improved reliability.
- Reductions in energy consumption.
- No atmospheric emissions and no thermal pollution of seawater.
- Flexibility to increase capacity through modular construction.

IFC conducted a highly transparent bidding process, ensuring universal distribution of all information and fair treatment of all bidders. The transparency of the process ensured credibility and a successful transaction.

TRANSACTION STRUCTURE

The selection process for GACA's private sector partner began with an initial prequalification of prospective bidders based on certain technical and financial criteria that included experience with Build-Operate-Transfer (BOT) projects and private sector participation, experience with operating and designing reverse-osmosis desalination plants, and minimum revenues and net worth.

The winning bidder was selected through an international competitive bid process based on the lowest water price offered and technical expertise and experience. GACA and the investor signed a 20-year take-or-pay water purchase agreement under a BOT arrangement. The investor financed, designed, constructed, operates, and maintains a new desalination plant with an initial capacity of 30,000 m^3 per day of potable water, increasing to 35,000 m^3 per day in year eight. The investor also decommissioned the old plant and rehabilitated and beautified the site.

Off-taker commitment was guaranteed through GACA's reliance on the project for 100 percent of its water demand. Moreover, GACA established and funded a credit enhancement through an escrow account of $2.5 million to secure payment obligations to the investor. GACA is responsible for providing electricity to the project.

BIDDING

Bidding was organized as a two-envelope procedure whereby the technical bid was evaluated first, and only those bidders who passed the technical evaluation were invited to the commercial bid opening.

Four Saudi and international groups submitted technically compliant proposals to the commercial bidding process in December 2006. Sete Energy Saudia submitted the lowest price (as well as the strongest technical proposal) and was awarded the bid. The special purpose company established to undertake the BOT contract is Qatarat Saqia Desalination Company, with lead investors Sete Energy Saudia Ltd (part of the Latsis Group of companies of Greece) and Haji Abdullah Alireza of Saudi Arabia and technology companies Aquatech Easterner (a subsidiary of Aquatech Inc, USA), specialists in reverse osmosis and WTD, mineralization specialists, Italy.

EXPECTED POST-TENDER RESULTS

Design and construction was completed by Sete Energy under the fixed price EPC contract.

- Sete has invested a total of $39 million, in line with original projections.
- Fiscal impact as of 2010 was $20,000 (in line with original projects), with total fiscal impact by the end of the project expected to be $10.1 million in tax revenues.
- The savings directly to GACA resulting from the lower unit cost of water is between $8-10 million per annum.
- Increased water production capacity has enabled GACA to meet current water demand, with over 11,000 residents served by the new plant.
- Benefits to 18 million annual passengers of King Abdullah International Airport (expected to rise to 24 million by 2020).
- Other benefits as reported by GACA include: (i) increased reliability of water supply with no plant breakdowns or other unplanned outages to date; (ii) significant cost savings, attributed to cheaper reverse osmosis desalination technology and the competitive procurement process; (iii) operational benefits to GACA of no longer having to directly manage this part of its business.

** Unless otherwise stated, monetary values are presented in 2010 US dollars. Results are from a post-completion evaluation completed November 2010.*

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