

Fadhili Combined Heat and Power, Saudi Arabia

Jordan Bintcliffe

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French developer Engie reached financial close on the \$1.2 billion Fadhili combined heat and power (CHP) project in Saudi Arabia on 26 January 2017. The project has a unique structure that sees Saudi Aramco and Saudi Electricity Company (SEC) both offtaking production under separate contracts.

The Fadhili CHP project features a 1,507MW gas-fired power unit for which state utility SEC is the sole offtaker under a 20-year power purchase agreement. Fadhili will also produce some 1,447 tonnes of steam and 768.8 tonnes of water per hour, respectively, which Saudi Aramco will offtake under a separate 20-year purchase agreement.

Fadhili's single asset, dual-offtake structure is unusual. The project is also the first time that Aramco and SEC have created a joint venture, with both entities taking stakes in the project company alongside private sponsor Engie.

Located around 50km northwest of Jubail Industrial City, Fadhili is expected to begin commercial operations by the end of 2019. It will be operated under a 20-year build, own, operate and transfer contract.

Unique offtake agreements

"The Fadhili CHP project is unique and has a very novel structure", Antoine Cousin, Partner at White & Case said. "What really sets it apart from other deals is the commercial side. It is the first joint venture between SEC and Saudi Aramco as well as the first single asset, dual-offtake structure that I am aware of.

"There are two offtake agreements in this case because there are two separate buyers; that hasn't been done before, I think."

Steam and water purchased by Aramco will be used for processing and production by the Fadhili gas plant located near to the new CHP plant.

"It's hard to tell if this deal and structure is a trailblazer that we'll see reproduced again later," Cousin says. "It makes sense in the context of large companies such as Saudi Aramco that need substantial output (such as power and steam) for their own industrial facilities and another company (such as an electric utility) also needs some of that output.

"But to use cogeneration to produce both, with two offtakers with specific needs, such a plant can't be built anywhere – it would need to be built close to an industrial facility that had such requirements."

In short, to see such a project repeated would need a requirement for the power, steam and water in the same location – for instance at other gas processing facilities in the kingdom such as Wasit and Midyan.

Strategic manoeuvring

Fadhili is set to play a key industrial diversification role for the kingdom, producing the equivalent electricity consumption of 1.4 million people but also furthering Saudi ambitions to increase the share of gas in its energy mix.

The Fadhili gas plant will boost Saudi gas production to over 17 billion standard cubic feet per day by 2020 – a priority outlined in the Kingdom's National Transformation Plan. By using more gas for power generation and water desalination instead of burning crude oil Saudi Arabia can meet rising domestic power and water demand whilst also ensuring it is maximising its oil exports.

This is particularly important at a time when Saudi is trying to diversify its economy amid reports that a lack of power is "crimping" industrial development, according to reports last year. An increase in the supply of natural gas will enable more opportunities in Saudi industries such as steel, aluminium, and other downstream production.

By using independent power producers (IPP) such as Fadhili CHP to bring new capacity on the grid, Saudi is also reducing its costs in the short-term whilst bringing in foreign capital and expertise.

Using IPPs for power production is “a key axis of Saudi Government’s strategy to meet power demand growth and allowed the country to efficiently mobilize foreign capital through a solid and proven contractual template” Mereddyd Rees, senior financial adviser at Engie says.

IPPs look set to continue to play an important role in the country’s energy mix: “As part of Vision 2030, the country has decided to accelerate IPP development in particular to reach its 9.5GW renewable energy target by 2023 and this liberalization trend will indeed continue to grow,” Rees adds. The country’s newly-formed Renewable Energy Project Development Office is in the process of tendering [300MW of photovoltaic capacity and 400MW of wind capacity](#), launching RFQs in February 2017.

Deal details

Fadhili CHP’s debt financing includes a direct loan of \$200 million from Korea’s export credit agency Kexim; a commercial tranche of \$330 million split between MUFG, KFW and SMBC; a \$105 million US dollar-denominated Istisna Ijara tranche from the Islamic Development Bank; and a SR1,204 million (\$321 million) Istisna Ijara tranche from local lender National Commercial Bank.

“{Saudi riyal} funding plays an important part in the project financing,” Rees says. “Traditionally the mix has been no more than 50/50 of riyal/dollar financing which is driven to a large extent by the currency denomination of project costs and debt long-term hedging requirements.”

The \$956 million in debt has a 22.5 year tenor.

Equity interests in the project include:

- Engie 40%
- Saudi Electric Company (SEC) 30%
- Saudi Aramco Power Holding Company (SAPSCO) 30%

Doosan will provide engineering, procurement and construction services. Siemens will provide Fadhili’s turbines.

Advisers

Shearman & Sterling was legal adviser to the lender group with Saudi Legal as local counsel. The lenders were also advised by Pöyry (technical), BDO (model audit) and Benatar (insurance), and completed their financial advisory in-house

The sponsor group was advised by law firm Chadbourne & Parke with Baker McKenzie as local legal adviser. They received technical advisory from Tractebel Engineering and insurance advisory from Marsh.

Saudi Aramco and SEC received legal advisory from White & Case and DLA Piper, respectively. Mizuho was joint financial adviser to both SEC and Aramco.

Image shows Engie’s Paris headquarters, provided courtesy of Engie.

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