Saudi gets solar right with Sakaka

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After a number of false starts, Saudi Arabia's first utility scale solar project – the 300MW Sakaka PV plant – is nearing financial close. The deal is the first step in the kingdom's ambitious renewable energy plans.

Financial close for Sakaka was scheduled – since the RFP – to take place on 28 February 2018. Project participants didn't manage to meet that deadline today after the PPA took longer to sign than expected. Close is now expected to take place in mid-March, a source involved with the deal said.

The world's largest oil exporter is pursuing renewable energy as part of an effort to diversify its economy and bolster growth. Much of Saudi Arabia's power comes from oil-fired power plants, with some 680,000 barrels of oil burnt per day as of last June – down from 900,000 per day in 2015. By leaning more heavily on renewable generation the country can export more of its oil, funding its budget.

Although Saudi has attempted to procure solar IPPs in the past, the most recent effort is the closest the country has come to realising a project.

Saudi Arabia is aiming for renewables to account for 10% of its power generation by the end of 2023. It has a chunky pipeline of projects to support this with plans to tender 3.3GW of solar capacity and an 800MW wind farm in 2018. Investment costs for those projects to be tendered this year are expected to be between $5 billion and $7 billion.

The kingdom has not successfully closed any other solar IPPs in the past, despite having made progress with some tenders. The Saudi government, via the King Abdullah City for Atomic and Renewable Energy, planned in 2012 to procure some 16GW of solar PV and 25GW of solar thermal capacity. That programme would've kicked off with an introductory 600MW but little progress was made.

In mid-2016 the government launched its Vision 2030 plan as a blueprint to modernise and diversify the country's economy. Around the same time, the Saudi Electricity Company launched tenders for the Al-Jouf (80MW) and Rafha (20MW) solar projects.

Al-Jouf and Rafha were cancelled after the creation of the Renewable Energy Procurement Development Office (REPDO) in February 2017. No reason was provided for the cancellation but some in the market suggested it was because the smaller scale of the projects would not have yielded pricing as competitive as SEC wanted.

REPDO took up the torch and issued an RFP for Sakaka in April last year – eventually leading to where we are now.

Acwa Power won the tender to develop the Sakaka project earlier this month, with a 25-year PPA signed on 14 February. Sakaka is expected to cost $300 million in total

Natixis, leading the financing on behalf of Acwa, has arranged a $240 million debt package for the deal. It will consist of a 20-25 year soft mini-perm structure.

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The Saudi Power Procurement Company will offtake electricity from Sakaka under the PPA. SPCC is a 100% subsidiary of Saudi Electricity Company, which is being advised by:

- HSBC – financial

REPDO is being advised by:

- SMBC – financial
- DLA Piper – legal

Acwa is being advised by:

- Covington – legal

Pricing Saudi solar

Saudi energy company Acwa's success in the tender raised a few eyebrows after REPDO passed over Masdar's bid, which offered the lowest tariff. It isn't clear why Masdar wasn't shortlisted but a source involved with the bid said there were deviations from the RFP which helped it achieve the lower tariff. And rumours in the market suggest it was because Masdar's bid offered an unproven technology – possibly bi-facial PV. REPDO had requested established technology – possibly wanting to set a precedent for its pipeline of future projects.

REPDO shortlisted second- and third-place bidders Acwa and Marubeni, respectively, for the Sakaka project:

- Acwa Power (Saudi Arabia) – at the time of the bid offered a 300MW project at a levelised cost of energy of SR0.87815/kWh ($0.02340)
- Marubeni Corporation (Japan) – offered a 310MW project with a LCOE of SR0.9976/kWh

Marubeni's bid was backed by two Japanese lenders – MUFG and Norinchukin.

Masdar's consortium – now out of the competition – set a global solar pricing record at the time of the bid opening in October 2017:

- Masdar with EDF offering a 300MW project with a LCOE of SR0.6697736 per kWh ($0.01785/kWh)

Despite Masdar being out of the running, Acwa's winning bid is still competitive. The $0.0234/kWh LCOE Acwa offer is 25% lower than the previous record Marubeni held for the 1,177MW capacity Sweihan solar project in Abu Dhabi.

The Sweihan project had an LCOE of $0.0294/kWh but was paid with a 1.6x multiplier during the "peak period" between June and September each year, giving the lower weighted cost of energy of Dh0.08888/kWh ($0.0242/kWh).

Saudi R1 renewables

The Sakaka project is part of the kingdom's round one renewables programme. The country is also planning to procure the 400MW Dumat Al Jandal wind project under the same round. Bid submission and shortlisting were pushed back due to some environmental and technical information being delayed.

An RFP for Dumat Al Jandal was issued at the end of August 2017, with bids previously due at the end of January 2018. They are now due on 20 March.

Dumat Al Jandal replaced the 400MW Midyan wind project in round one which fell by the wayside in July 2017.

REPDO "is working towards being able to tender the Midyan site in a future round of the NREP", a spokesperson said at the time. "We continue to work on our Midyan site to ensure it meets the standards of predevelopment data we aspire to."

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