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DEWA CSP

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Acwa Power and Shanghai Electric's 700MW CSP project in Dubai is the world's largest thermal solar development, and the sponsors are looking to finance the $3.9 billion development with loans from a raft of European, Chinese and regional lenders under a soft mini-perm structure.

A ground-breaking ceremony took place on 19 March (2018) shortly after the PPA signed on 15 March. This development comes as another leap forward for renewable energy in Dubai. The Emirate has been aggressively pursuing renewable energy targets to slash carbon emissions by 16% by 2020, alongside a targeted share of 75% of renewables in its energy mix by 2050.

Procurement authority Dubai Electricity and Water Authority's (DEWA) near-term targets include pushing renewable generation as a portion of its overall energy mix to 7% by 2020 and 25% by 2030 – a huge step-up on its previous intention of 1% and 5% over the same time period.

DEWA is seeking to meet these targets in part by developing its Mohammed bin Rashid al Maktoum solar park. Unlike the latest development, the previous three phases of the solar park – totaling 1,013MW capacity – use PV technology. The entire park is expected to have a capacity of 5,000MW by 2030.

The 700MW DEWA IV CSP project represents the fourth phase, following earlier stages:

- DEWA I – 13MW
- DEWA II – 200MW
- DEWA III – 800MW

DEWA will offtake production from the CSP project under a 25-year PPA. Commissioning is planned for the fourth quarter of 2020.

Stakeholders in DEWA IV include:

- DEWA – 51%
- Acwa Power – majority of the remaining 49%
- Shanghai Electric – minority of the remaining 49%

Financing details

DEWA initially tendered DEWA IV as a 200MW project. Acwa's consortium offered a levelised cost of energy at $0.0945 per kWh for the 200MW project – the lowest bid with Masdar, EDF, Engie and others trailing it. Acwa also submitted an alternative offer of $0.073/kWh for the 700MW capacity version – which DEWA awarded in September 2017.

DEWA CSP has a total cost of $3.87 billion, including a steep equity requirement of around $1.5 billion, for a ratio of

39:61.

The remaining debt financing will be split into two tranches. First, a $1.5 billion to $2 billion tranche led by the Industrial and Commercial Bank of China (ICBC).

Acwa began early-stage discussions with Chinese lenders in 2017, but more recently confirmed the line-up of lenders in ICBC's tranche:

- ICBC
- Bank of China
- Agricultural Bank of China
- China Minsheng Bank
- Silk Road Fund

That leaves $500 million to $1 billion of debt from a group of commercial lenders co-led by Natixis and Standard Chartered:

- Natixis
- Standard Chartered
- ABN AMRO
- Union National Bank

Acwa and Shanghai Electric are aiming for a 26-year door-to-door tenor for the deal, structured as a soft mini-perm, *IJGlobal* previously reported. It will feature a high cash sweep, effectively reducing the tenor.

Acwa used a similar setup for its Hassyan coal project – the use of soft mini-perms for projects across the GCC is being driven by highly-competitive pricing on renewable energy projects as well as a tightening of restrictions on bank liquidity.

The sponsors are aiming for debt signing in the second quarter of 2018 with financial close to follow in the third quarter. Shanghai Electric will conduct EPC works.

Advisers

DEWA is being advised by:

- KPMG – financial
- Ashurst – legal
- Mott MacDonald – technical

Acwa is being advised by:

- Covington – legal

The lenders are being advised by:

- Allen & Overy – legal

There are not many CSP projects worldwide to have reached financial close – and even fewer that will match DEWA IV for size. As well as being the cheapest, DEWA IV will be the highest capacity single-site CSP plant in the world and will have a central tower 260 metres high. The development will cover an area of 43km squared – equivalent to 40% of Barcelona.

Morocco's Noor Midelt CSP comes close with a planned 800MW of capacity albeit over two sites. Acwa and four other consortia were prequalified for the Midelt development in June 2017. The project is expected to be financed by German bank KFW and the African Development Bank.

Although more expensive than solar PV, CSP makes it possible for solar technologies to produce electricity throughout the day and night by storing heat for later conversion into electricity.