

Shuaibah-3 IWP conversion, Saudi Arabia

James Hebert

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It will soon be out with the old and in with the new in 2025 when the newly signed Shuaibah-3 independent water project (IWP) replaces the old Shuaibah independent water and power plant (IWPP) in Saudi Arabia.

An ACWA Power-led consortium just last month (mid-October 2022) signed a \$632 million soft mini-perm to finance the deal for the conversion project, which will have a design capacity of 600,000 cubic metres of water per day (m3pd).

The conversion/restructuring project is emblematic of Saudi Arabia's overhauled water sector policy in recent years. Two decades ago, Saudi Arabia launched its 2002 IWPP programme to boost desalination capacity in Saudi Arabia and placed the responsibility for its implementation under the charge of the then-new Water & Electric Company (WEC).

The 900MW Shuaibah IWPP was thus the first of its type to be developed in the kingdom under the WEC regime and its private sector-focus towards infrastructure. However, the asset will cease operations in 2025 after the conclusion of its 20-year power and water purchase agreement (PWPA). The offtake agreement will be replaced by a 25-year water purchase agreement that will do away with the conventional tariff structure split between capacity and output charge elements involving the necessary supply of fuel for the power component.

The project financing for the incoming IWP also involves a refinancing of the IWPP debt. The short turnaround between the water purchase agreement signing on 20 June (2022) and financial close just 4 months later demonstrates market confidence in the Saudi water market despite the global economic turmoil.

Shuaibah-3 IWP was put to financial close on [28 October \(2022\)](#).

Out with the IWPP

WEC was founded in 2003 to enable a role for the private sector in the delivery of water projects in Saudi Arabia. It saw reasonable success during this time, chiefly by launching IWPPs, the first of which to be developed was the [Shuaibah IWPP](#).

ACWA Power signed a deal for the IWPP on 21 December 2005. The Saudi developer subsequently financed 2 expansions of the Shuaibah complex, the most recent occurring in [2017](#) after reaching financial close on a \$320 million, 250,000 m3pd expansion of the water component. This [latest configuration](#) started commercial operations in Q2 2019. Around June 2021, ACWA Power refinanced the project debt with a \$170 million 24.5-year bond.

During the course of the IWPP's life, WEC was gradually transformed into SWPC between 2017 and 2019 with a new management team and a fresh mandate incorporating the procurement of wastewater schemes alongside its long-term interest in desalination capacity. The Saudi government also brought in Marafiq's O&M vice president Khaled Al-Qureshi to become the new chief executive of the repackaged utility.

In effect, the new SWPC moved away from IWPPs towards IWPs. In 2017, the old WEC had set out a plan for 8 IWPs between them and 2025, thus increasing Saudi Arabia's desalination capacity to as much as 7.3 million m3pd. This transition away from IWPPs was confirmed by the inception of SWPC.

On 20 June (2022) the special purpose vehicle (SPV) – Shuaibah Three Water Desalination Company – signed with the SWPC a new 25-year water purchase agreement which was said at the time to have a value of SR3 billion (\$800m).

The SPV is owned by:

- ACWA Power
- Badeel Company

Badeel is wholly owned by the Public Investment Fund (PIF), which also owns a 50% stake in ACWA Power. The PIF had steadily increased its stake in the Saudi infra developer from 9.78% prior to 2018 up to 33.36% and then to 50% by December 2020. ACWA Power underwent an IPO in October 2021, selling 11.1% of its shares.

Financing

The total project cost comes to \$821 million, substantially lower than the \$2.5 billion capex for the IWPP back in 2005. For the new IWP, up to \$632 million in USD-denominated senior debt was signed in [mid-October \(2022\)](#) on a non-recourse project finance basis.

In the process ACWA Power also refinanced the senior facility of the IWPP. The lenders on the soft mini-perm are:

- Standard Chartered Bank
- MUFG
- Abu Dhabi Islamic Bank
- Bank of China
- Industrial and Commercial Bank of China
- Korea Development Bank
- Saudi Investment Bank
- Saudi National Bank
- Warba Bank

The debt was syndicated following commitments from Standard Chartered and MUFG in June (2022). Debt pricing starts at around 130bp. In addition, 2 more lenders – SABB and Riyad Bank – provided a \$189 million equity bridge loan.

In with the IWP

At 600,000 m3pd, the new IWP will have a slightly smaller desal capacity than the outgoing IWPP which swelled at 880,000 m3pd however the conversion involves a technology switch from multistage flash (MSF) to reverse osmosis (RO) which is more common in modern desal schemes.

SWPC also sought a less carbon-intensive replacement of the IWPP. Up to 22 million barrels of light crude oil will be saved annually following the removal of the 900MW oil-fired power component which has become less of a priority compared to desalination capacity – since 2002, Saudi Arabia's generating capacity has risen from around 140,000 GWh to around 335,000 GWh in 2020.

Shuaibah-3 will still produce power through a 60MW solar captive, which will provide as much as 45% of the plant's electricity needs.

ACWA Power awarded the \$639 million EPC contract to Korean engineers Doosan Enerbility on [4 August \(2022\)](#). Doosan was also one of the contractors for the IWPP back in 2005. The construction of the captive solar PV was [subcontracted](#) to a joint venture of Louis Berger Services and KGB Holding in September (2022) in a \$44.4 million deal.

The new Shuaibah 3 IWP is expected to begin commercial operations in Q2 2025.

Advisers

SWPC was advised by:

- SMBC – financial
- DLA Piper – legal

Covington & Burling advised the sponsors and Norton Rose Fulbright advised the lenders.

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