

SINGIN' IN THE RAIN

THE KIRIKKALE IPP IS THE FIRST MERCHANT POWER PLANT FINANCED BY INTERNATIONAL BANKS WITH NO COMPLETION SUPPORT IN TURKEY. BY **PASCAL MARTESE**, EXECUTIVE DIRECTOR, ACQUISITIONS AND PROJECT FINANCE, AND **YUNHE LU**, SENIOR MANAGER, ACQUISITIONS AND PROJECT FINANCE, **ACWA POWER**.

The Kirikkale power project is located near the city of Kirikkale, 50km east of Ankara. It is a combined-cycle power plant comprising two Alstom gas turbines and one steam turbine, and has a gross output capacity of up to 950MW. The plant is particularly well located for power, gas and cooling water connections, and when completed will be one of the most efficient combined-cycle power stations in the country.

The total investment in the project is approximately US\$1.1bn, with a funded debt equity ratio of 65/35. The plant will operate as a pure merchant plant and sell its electricity in Turkey in the Day Ahead Market, and potentially also through bilateral contracts. Financial close was reached in December 2014 and the project is scheduled to be in operation around mid-2017.

Project contractual structure

The project sponsors are ACWA Power, a Saudi based leading power and water development group, and Samsung C&T from South Korea, the latter also the EPC contractor of the project. ACWA Power and Samsung C&T hold 90% and 10% equity interests in the project company, respectively. The EPC contract is a lump-sum turnkey contract with Samsung C&T, and the O&M contract is a comprehensive fixed lump-sum contract covering all aspects including parts and services for long-term maintenance with Nomac Turkey, a wholly-owned affiliate of ACWA Power.

Gas supplies will be procured during the construction period from either Botas (the state-owned gas supply company) or private supplier, or a combination thereof. In order to be able to sell electricity in the Day Ahead Market, the project company will enter into several agreements, such as a Market Participation Agreement and a Frequency Service Control Agreement. The project includes the construction and commissioning of a 120km transmission line, which will be transferred to TEIAS. Grid connections have been secured with TEIAS, the state-owned company operating the electricity transmission in Turkey, and Botas, through the execution of standard connection agreements.

Project financing structure

The funded debt equity ratio is a conservative 65/35 due to limited senior debt financing sources

available and minimum debt service cover ratio (DSCR) requirements in the lender's base case. The senior lenders include the EBRD, IFC, Kexim, Korean Development Bank, Banque Saudi Fransi, and Standard Chartered Bank, the latter providing a loan under Kexim cover. The door-to-door tenors of the senior loans are in the range of 15–16 years.

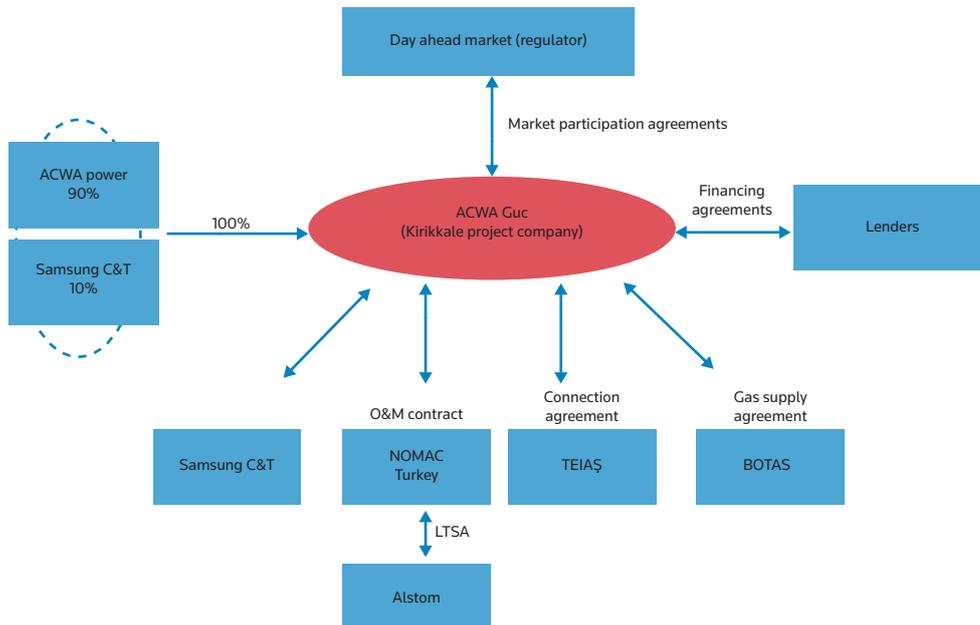
In order to enlarge the investor base, the sponsors have pre-negotiated with the lenders the right to raise up to 15% of the total project cost as mezzanine debt, on a fully subordinated basis. The mezzanine debt has a final maturity date of 15 years post-commercial operation date (COD), a sculpted repayment profile together with a deferral mechanism. Separately, a creative inter-creditor arrangement allowing trade LC issuers and DSRA LC issuers to accede to the benefit of the security package on a pari passu basis has been negotiated with the senior lenders.

The overall capital and funding structure was chosen after having tried and compared the universe of liquidity pockets that showed appetite for the project. Deferral mechanisms for senior debt principal payments, which are customary for merchant projects, were initially considered but eventually abandoned in exchange for higher DSCRs.

With most banks in the GCC and even international banks used to long-term PPA structures and comfortable with stable forecast cashflows contracted with creditworthy offtakers, and very few of them having experiences in lending to a merchant power plant, the due diligence process on the merchant risk and the Turkish gas and electricity market regulatory environment was of essence.

The deep experience of the EBRD and IFC was key in building a consensus to a satisfactory and credible lender's base case. Turkish banks are more comfortable with such risks but they typically require some level of project completion support, which ACWA Power was unable to offer. There could have been alternatives but they would not be able to match the tenor and pricing of dollar loans that ECAs and multilaterals were in a position to offer.

FIGURE 1
CONTRACTUAL STRUCTURE



A persistent developer/owner

ACWA Power’s Kirikkale project suffered many setbacks during the last several years until it finally reached financial close in December 2014. ACWA Power started the development of this project in 2011 in partnership with a Turkish developer. In October 2012, as ACWA Power was about to ink the EPC contract and finalise the financing and security documentation, financial close seemed only a step away. Unfortunately, the Turkish partner became insolvent, and a failed attempt to buy out the Turkish partner led to the impossibility to reach financial close under the then licensed company for this project.

Despite such unfortunate circumstances, ACWA Power, with the continuing support of its shareholders, lenders and contractors, finally decided to apply for a new generation licence on a nearby site in Kirikkale, and start the necessary permitting procedures all over again in 2013. Such effort was delayed by the implementation of a new licensing regime for power plants, which came into effect in September 2013, but ACWA Power did not give up, filed its application promptly, was granted its pre-licence in January 2014, cleared the environmental impact assessment in April 2014, and was finally awarded a generation licence by the Electricity regulator (EMRA) in July 2014.

FIGURE 2
THE FINANCING STRUCTURE

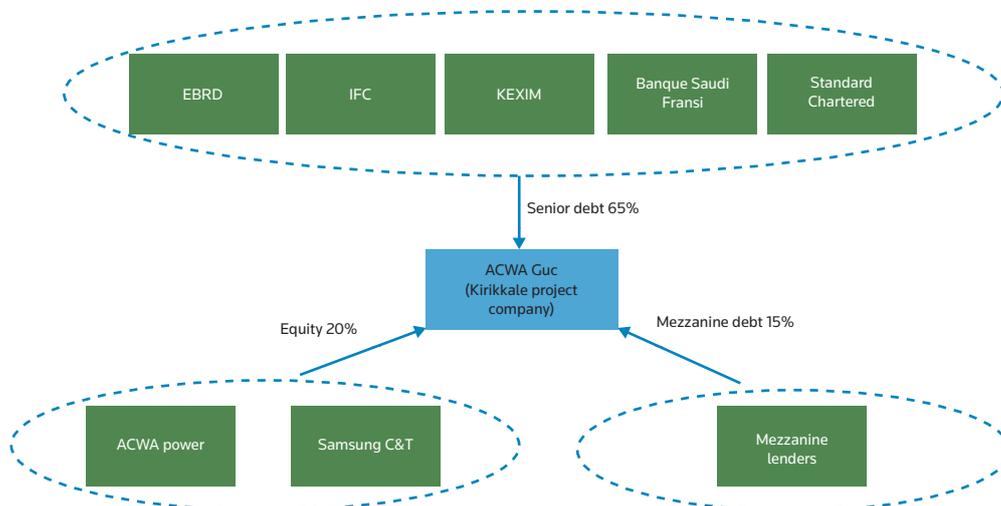
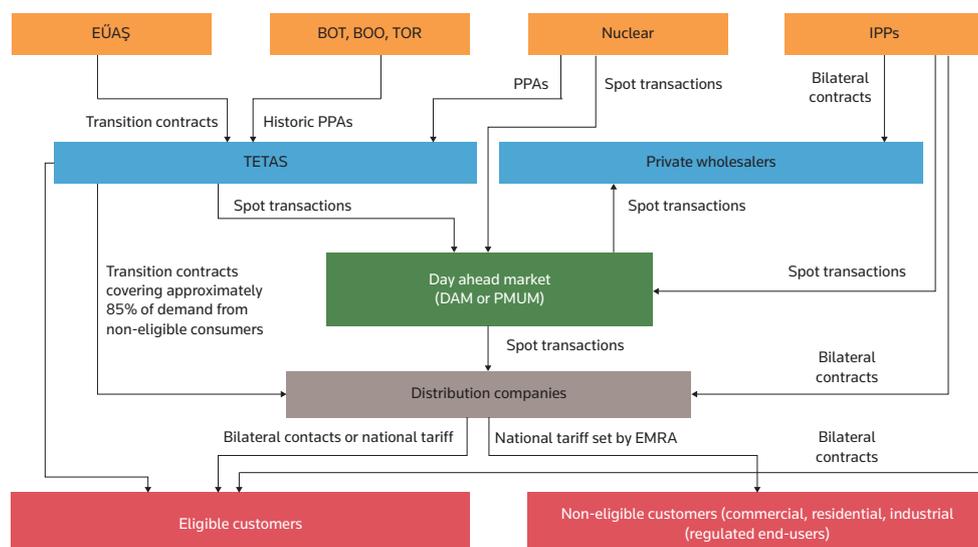


FIGURE 3

THE DAY AHEAD POWER MARKET



As two years had elapsed, the delay also gave an opportunity for the technical configuration to be revised for more efficient gas turbines. Meanwhile, the outlook for the electricity market had changed quite drastically, and therefore due diligence had to be re-initiated with financial documentation amendments re-negotiated till financial closing was reached in December 2014.

Day ahead electricity market

Turkey's electricity sector is going through a market liberalisation period during the last years. In 2009 Balancing and Settlement Regulation was amended to introduce hourly settlement in Day Ahead Planning and Balancing Power Market in the first phase on a "net pool" basis used in Western Europe and other liberalised markets. Each electricity generation companies can offer prices for the next day on hourly basis, on the other hand each eligible electricity consumers can also bid for the prices in each hour, the final hourly prices will be set based on matching the bid and ask prices, one day ahead of the actual electricity sale.

Finalising a base case

Agreeing to a topline is the most challenging due-diligence task in a merchant environment. IPA Economics acted as independent market adviser and did a comprehensive market study based on a well-developed market model based on thorough supply-demand analysis to forecast electricity and

gas price over 30-year economic life of the project. Each technical, market and economic input, including the GDP growth forecast, electricity demand growth, installed capacity forecast and the dependable factor of each technology was the subject of independent long consensus-building discussions, especially in the context of a currently oversupplied electricity market.

Mitigating the merchant risks

Despite the fact that the sponsors believe a standard project finance structure will be sufficient to make the project bankable, additional supports have been structured in order to mitigate further the potential merchant risks for the lenders. First, the DSCR requirement in Kirikkale Project was set at a conservatively high 1.75x; second DSRA has been increased to 12 months during the early operating periods, and will step down to six months when certain conditions are met. All in all, more than 24 stress test scenarios were required to be mitigated, and the project proved to have a solid and sustainable structure to face all these different risks, including low demand, exchange rate fluctuation, high gas prices, etc.

Setting footprint in Turkey

ACWA Power's strategic review identifies Turkey as a market to enter because of its strong fundamentals, including high demand growth based on strong demographics and continuing industrialisation, an uncompetitive power plant fleet, and fragmented private players. In 2010, ACWA Power had established an office in Istanbul and currently have expanded significantly its team. Kirikkale project crowns ACWA Power's first green-field development in Turkey, and the financial close is just the beginning of its long journey. ACWA Power is looking forward to contributing more in Turkey's power sector and sustainable economic developments ■

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