



Independent water and power producers

Independent water and power producers (IWPPs) are major players in the Abu Dhabi water and electricity sector and as of 2013 account for nearly all of the total generation and desalination capacity in the sector.

IWPPs sell their capacity and output to the Abu Dhabi Water and Electricity Company (ADWEC), the single buyer, under long-term power and water purchase agreements (PWPAs). These PWPAs usually have a term of c.20 years from the commencement of the commercial operation date of these production companies.

Each IWPP in the sector is required by law to be licensed by the Bureau to carry out either electricity generation, water desalination or both in co-generation facilities.

Power and water purchase agreement

Payments to IWPPs by ADWEC under PWPAs (or PPA's / WPA's) comprise two main components, separately for electricity and water:

- capacity (or availability) payments covering the fixed costs of the plant (return on capital, depreciation and fixed operating and maintenance (O&M) costs), to be paid when the plant is available for production irrespective of whether and how much the plant produces; and
- output (or energy or water) payments for variable O&M costs, payable only for the water or electricity actually produced by the plant.

Various PWPA payment rates are subject to annual indexation against US and UAE inflation and/or the US\$-AED exchange rate.

ADWEC pays directly to the fuel supplier for the fuel consumed by each IWPP. However, the IWPPs are incentivised to consume fuel efficiently via a bonus-penalty mechanism under the PWPAs, based on benchmark or reference heat rates. Capacity payments and fuel costs are the two largest components (accounting for about 90 %) of the production costs

ADWEC is also required by the PWPAs to pay supplemental payments to the IWPPs, such as start-up and shut-down costs and back-up fuel costs. The PWPAs also require ADWEC to pay for the shared-facilities costs where applicable to a jointly owned Shared Facilities Company operating at a specific location (typically where a number of plants are co-located eg at Taweelah or Shuwaihat). PWPAs also include provisions for invoicing and payment by the relevant party of liquidated damages for delay in performance and of interest on late payments.

Award of contract

Generation and desalination projects are developed by IWPPs on a build, own and operate (BOO) basis, where projects are awarded through a competitive bidding process. For greenfield projects, the primary bidding criterion has been the lowest levelised tariffs for the sale of water and electricity to ADWEC, whereas for brownfield projects that has been the highest asset value for given tariffs. The levelised tariff is calculated, based on the given assumptions about availability, production, fuel prices and other factors, as the ratio between (i) the net present value (NPV) of the PWPA payments and fuel costs and (ii) the NPV of the outputs over the term of the PWPA. A nominal discount rate of 10% has been used for NPV calculations. The nominal internal rate of return (IRR) on equity is required to be not less than 13%.

The Abu Dhabi Water and Electricity Authority (ADWEA) manages the entire bidding process through pre-qualification of bidders, issue of request for proposals (RfP) and selection of the successful bidder for the projects. The successful bidder can be a single company or a consortium of companies.

Ownership structure

An IWPP is established as a joint-stock company by the successful bidder and a local holding company to be established by ADWEA. 40 % of share capital of the IWPP is owned by the successful bidder and the remaining 60 % is owned by the local holding company. In turn, the local holding company is 10 % directly owned by ADWEA and 90 % owned by Abu Dhabi National Energy Company (Taqa). ADWEA and the government-affiliated Farmers' Fund own 51 % and 24.1 % of Taqa respectively. The remaining shares (24.9 %) are held by local private shareholders limited to citizens of the UAE. Taqa is one of the largest companies listed on the developing Abu Dhabi stock exchange.

The request for proposal issued by ADWEA for any IWPP contains a draft of the Shareholders Agreement to be entered into by the local holding company and the successful bidder to establish the project company (IWPP) and govern the relationship between the shareholders. The IWPP has a Board of Directors composed of 7 members, 4 of which are appointed by the local holding company and 3 by the successful bidder. Furthermore, operational management of the IWPP is granted to the successful bidder by delegation of the Board of Directors' authority to an executive managing director who is a member of the Board of Directors nominated by the successful bidder and appointed by resolution of the Board of Directors.

Financing

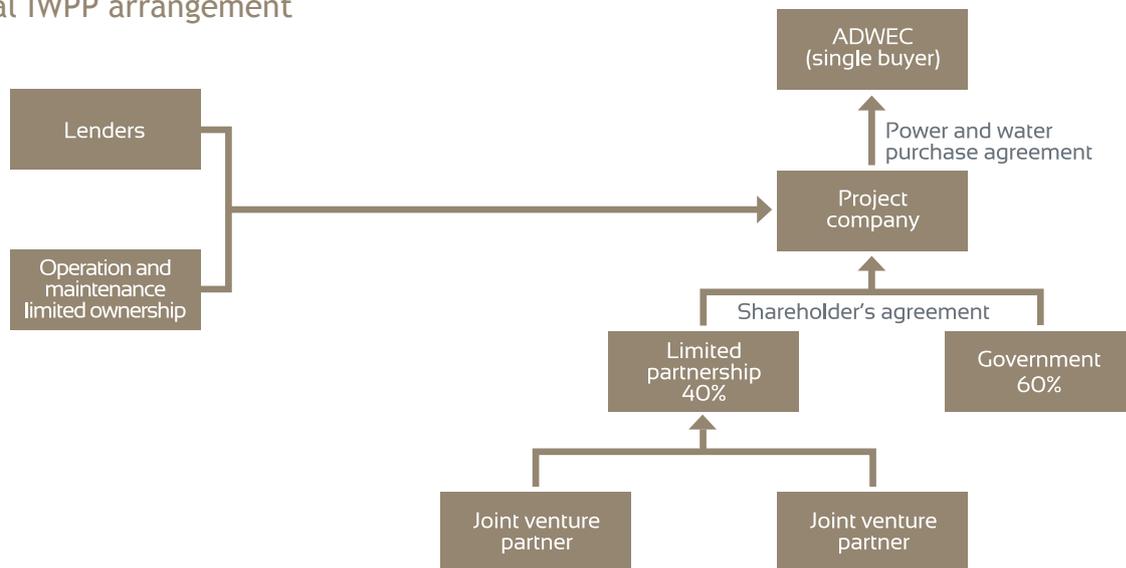
The project costs are funded through a combination of debt, equity and (if any) internally-generated net operating cash flows of the IWPP. The debt is arranged on a non-recourse project financing basis. The successful bidder is responsible for arranging the required financing and for negotiating financing agreements with the lenders. The debt to equity ratio is required not to exceed 80:20.

The debt may be raised in international, regional, Islamic or local debt or capital markets. IWPPs often have interest rate hedging arrangements.

Contractual arrangement

The following figure shows the typical contractual arrangement for an IWPP, which makes the IWPP a low-risk transaction by allocating respective risks to the best party to manage such risks:

Typical IWPP arrangement



In addition to the PWPA, shareholders agreement and financing agreements mentioned above, an IWPP is also governed by a number of other contracts, such as EPC Contract, O&M Contract and Land Lease Agreement. Because of its optimal allocation of risks between the parties, the IWPP structure is considered a low-risk transaction.

A brief description of these other agreements is as follows:

EPC Contract

The engineering, procurement and construction (EPC) Contract is a lump sum, date-certain turnkey contract entered into by the IWPP and its EPC contractor for the development of the project. At the time of bidding for the project, each bidder for the IWPP is required to specify, together with required details, the EPC contractor and its designated sub-contractors, if any. The EPC contractor, which may be a single contractor or a consortium or a bidder itself, should have proven experience in implementing power and desalination plants. The bidder is required to utilise good engineering practices in preparing the design, procurement and construction of the project. The proposed equipment should be newly manufactured by reputable manufacturers with sufficient operating experience with regards to the particular units proposed.

The EPC Contract contains detailed designs, specifications, scope of work, target dates and lump sum cost of the project that the EPC contractor is bound to meet. The contract also specifies the liquidated damages and other remedies intended to compensate the IWPP for any delays and deviations from the terms of the contract. There is no contractual relationship whatsoever between ADWEC and any of the contractors of the IWPP.

Land Lease Agreement

The land for the project is acquired by ADWEA. The Land Lease Agreement is entered into between ADWEA and the IWPP pursuant to which the IWPP is granted an exclusive long term leasehold interest in the land, in addition to easement rights for access to such land during the term of the project.

The Land Lease Agreement contains the responsibilities of ADWEA and the IWPP in relation to the use of the land and environmental impacts. In addition, it governs the arrangements, upon expiration or termination of the lease term, for surrender of the land and, if required, clearing of all plant and any residual wastes, filling in all excavations and returning the surface to grade.

O&M Contract

The project is often operated and maintained by an operating and maintenance (O&M) contractor, which may be a third party or a subsidiary of the shareholders of the IWPP. At the time of the bidding, the bidder for the IWPP is required to specify the proposed O&M contractor, together with references and details about their experience. The O&M Contract between the IWPP and the O&M contractor requires the provision of all O&M services, including all maintenance, overhaul and special repair services by the O&M contractor based on a fixed fee plus escalation structure or on a cost plus fee pricing structure. The liabilities of the parties under the O&M Contract are determined based on the assessment of the actual power and water availability and actual fuel consumption achieved by the O&M contractor against the targets specified in the PWPA.