



**EMERGING MARKETS
BUSINESS**

FIRST QUARTER 2017

REPRINT 82 - 86

INSIGHT:

BREAKING AWAY

ACWA Power is a desalinated water and energy company with a difference. While its competitors seek to maximize profit by securing contracts with the smallest possible margins, the Saudi Arabian developer, owner and operator of power and water plants, defies market pricing to win— a strategy that has earned it a success rate of two out of three tenders, as well as a growing international footprint. Here, ACWA Power's president and CEO, Paddy Padmanathan explains how.

by Paddy Padmanathan

BREAKING AWAY

DEFYING MARKET PRICING REALLY CAN PAY OFF

BY PADDY PADMANATHAN

Operations in 14 countries, a US\$31.5 billion portfolio and capacity to deliver 23,000 megawatts of electricity and 2.45 million cubic meters of desalinated water per day: to say that we have been busy at ACWA Power would be an understatement. Just 12 years ago, our Saudi-based company was a start-up on a mission to deliver electricity and salt-free water in bulk, at the lowest

possible cost. Today, as a leading developer, owner and operator of power and desalinated water production plants on the international stage, our mission is being executed to near perfection.

In essence, while our competitors seek to maximize profit by securing contracts with the smallest margins compared to those offered by other companies, we tread a different path, defying market pricing to win. Unlike others firms in our industry, we seek as big a gap as possible between our offer and that of our competitors — a strategy that earns us a success rate of two out of three tenders.

This unique approach has implications not just for ACWA Power or for Saudi Arabia, but for industry players worldwide. But before getting carried away, as the company's president and CEO, let me assure you that our victory has been hard fought. Our industry is dominated by a small handful of well-established players who offer stiff competition in an industry where change is the only constant. Transformation is happening at a much faster pace than anyone could have anticipated; not just in the way that electricity is generated, transmitted, distributed and consumed, but also in the business models that are used. The way we see it, the sector rewards those who embrace this change, and thus far, our unique business model is paying off.

“

We seek as big a gap as possible between our offer and that of our competitors, a strategy that earns us a success rate of two out of three tenders.

An Eye on Growth

ACWA Power is a Saudi-based developer, investor, co-owner and operator of power generation and desalinated water production plants, with a presence in 14 countries across continents. The company has grown rapidly since its establishment in 2012, with the investment value of its portfolio now standing in excess of US\$31.5 billion.

	2010	2015
Income from Main Operations (US\$ million)	44.8	254.7
No. Assets/Projects (operational or under construction/development)	7	36

AT A GLANCE

ACWA Power is a desalinated water and energy company with a difference. While its competitors seek to maximize profit by securing contracts with the smallest possible margins, the Saudi Arabian developer, owner and operator of power and water plants, defies market pricing to win—a strategy that has earned it a success rate of two out of three tenders, as well as a growing international footprint. Here, ACWA Power's president and CEO, Paddy Padmanathan explains how.

Underpinning our model is a drive to position ACWA Power not just as an influence peddler or financial investor seeking a return, but as a business that seeks to make a profit by truly adding value.

We do this by serving as an operator and a developer—often in partnership with other firms—whilst avoiding the conventional strategy of adopting market pricing to maximize profit. We consistently adopt the methodology of establishing the lowest possible cost for all inputs and add only a reasonable margin commensurate with the level of risk to arrive at the lowest possible tariff. The market price for what we produce and sell is of little consequence to a company that sets its own.

Our approach means that significant investments will only be recovered over decades, yet it also enables us to deliver tariff differences of between five percent and 31 percent, compared to the second bidder, regardless of technology, capacity or country. In sum, it has allowed our business to grow fast and set itself apart as a cost leader and a price setter.

In 2007, the third contract that ACWA Power was awarded in the Kingdom of Saudi Arabia utilizing this business model, was for an integrated power generation and desalinated water production project. Here the customer, the Water & Electricity Company of Saudi Arabia, called for 850MW of electricity and 218,000 cubic meters of desalinated water per day to be provided for 20 years. The customer specified that it would make available a certain quantity of oil to be used as fuel, but beyond that, did not specify what technology should be used.

ACWA Power competed with two other well-experienced bidders and won with a 16.5 percent tariff difference. This translated to a US\$600 million saving to the customer in terms of net present value over the 20 year term of the contract. The depiction opposite shows at a high level where the savings came from.

The business model that we have crafted requires the developer (often a partnership between ACWA Power and one or more investors) to take all risks associated with getting a fit-for-purpose plant built on-time and on-cost, which also thus includes all risks associated with the technology that will be used in each instance.

The developers are also responsible for ensuring that the plant produces the required output, while utilizing the resources estimated, including fuel and other consumables. Finally, developers also shoulder the responsibility and costs associated with operating and maintaining the plant over the full term of the contract.

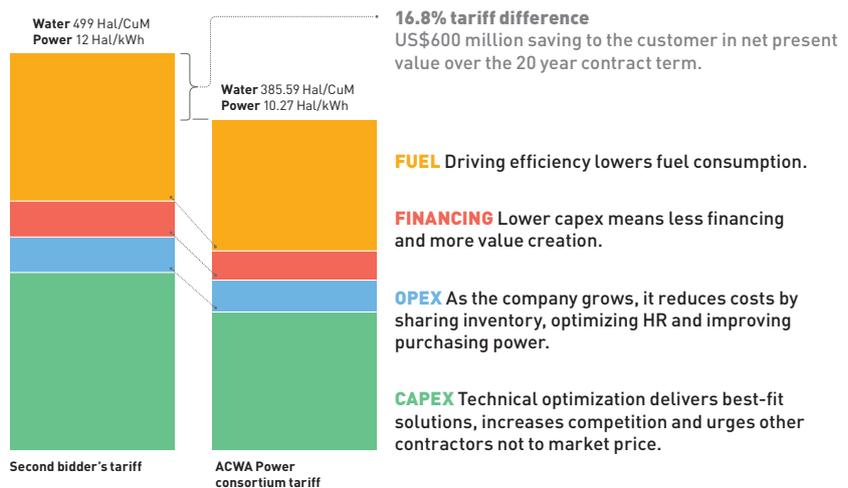
How We Make Money, and Keep It

In many ways, the formula is simple. On the one hand, we ensure a profit by setting our tariff as low as possible to make sure that our customers pay the contracted tariff throughout the term. Meanwhile, on the other hand, we set the tariff high enough to enable us to recover all costs and for the investment to make financial sense.

The model requires us to focus on the cost of each and every component and, thus, possibly restrict the margins the supply chain might have realized by working with our competitors. However, the win rate that we deliver through our

Focusing on Cost

Independent Water and Power Project, Shuqaiq, Saudi Arabia



Hal = Halala (Saudi currency). 100 Hal = 1 Saudi riyal.

By focusing on every element of cost and passing all the savings to the tariff without seeking to market price, ACWA Power achieved a tariff difference of 16.8 percent next to that offered by the second bidder. **Source: ACWA Power**

strategy of defying market pricing, more than compensates through provision of consistent work volume.

Where rates are concerned, the selling price, or tendered tariff, for desalinated water and electricity is usually procured by the creditworthy bulk customer via a transparent, competitive tender process. This rate is established by the developer who estimates the capital and operating costs for the full term of the contract, which typically spans two or more decades.

If the developer does not collect the last cent on the last kilowatt hour of electricity, or the last cubic meter of desalinated water sold at the last day of the contract term, it will lose money.

To be successful in this business, therefore, it is critical for any developer to ensure two things. First, it must make sure that reliable delivery is guaranteed by building, operating and maintaining a plant that is capable of producing the required output for the estimated inputs over the

multiple decades of contract duration. Second, it must ensure that it enters into a contract with a trustworthy counterpart who is likely to also remain creditworthy over a period of at least two decades.

Equally important, is the need to maintain the distinction between (a) a robust contract and clear obligations to pay and (b) credit worthiness of the counterparty and their continuing "willingness" to honor that contract by paying over the long-term.

Of course, willingness to pay is a context sensitive construct. Over time, as technology improves and the costs associated with producing electricity and desalinated water fall, it is important to accept that bulk customers will, in all likelihood, be buying new capacity at lower tariffs as the years pass by. This means that ensuring the enduring relevance of the tariff over decades, yet at a rate contracted at the outset of any venture, becomes essential. >>

Why We Keep the Tariff Low

The strategy of setting low tariffs is not a recent development at ACWA Power. From the start, we decided to focus on keeping tight control of costs and seeking a reasonable rate of return on investment to keep the tariff low on each and every contract, rather than aiming to maximize the tariff and striving to win by the smallest margin possible. By doing so, we are able to ensure that the gap between a contracted tariff and any future bulk purchases made by any one customer will remain consistently small over time. Moreover, the move guarantees us our position as a competitive, low-cost service provider, making our customers more likely to remain willing payers over the full contract term.

More excitingly, this strategy has also allowed ACWA Power to play its part in bringing down the cost of solar power. With the costs reduced, solar technology is now able to compete with fossil fuel power, generating alternative energy options in the Middle East and Africa. Meanwhile, more broadly, it is accelerating progress towards the goal set by the CoP 21 climate conference in Paris last year to decarbonize power generation by 2050.

Managing What Is Out of Our Hands

While we strive to keep our tariffs as low as possible, there are factors at play that fall outside of our control. In fact, the cost components rest, for the main part, in the hands of many others actors.

Construction: For instance, while ACWA Power might specify the technical solutions, we enlist others to engineer and construct the plants. The cost of getting a plant built is by far the biggest component of the contracted tariff and this cost, in turn, is driven by the design of the plant as well as the equipment and construction methods employed. These choices are significantly influenced by the cost of thousands of big and small components, along with work packages from a very large supply chain involved in the delivery of a power generation or water plant. To minimize these costs,



Our approach means that significant investments will only be recovered over decades, yet it also enables us to deliver tariff differences of five percent to 31 percent.

we strive to develop best-fit solutions through technical optimization and by convincing the technology providers and contractors to prepare project-specific cost estimates, free from 'guesstimates' and contingencies.

Fuel, Operating and Maintenance:

The volume and cost of fossil fuel to drive plants are also significant factors in the tariff equation. Then there are the operating and maintenance costs associated with a plant, as well as the expenses incurred in running the business itself, including staffing costs. As ACWA Power's fleet grows, we are able to reduce these costs by sharing inventory where possible, taking advantage of our increasing purchasing power and by capitalizing on the growing pool of human resources now deployed across our rapidly growing fleet.

Financing: Last, but by no means least, the cost of financing is also an important factor in formulating the tariff. This financing cost includes the interest on borrowed funds and, to a lesser extent, the return on equity capital. However, we are able to extract value through rigorous risk compartmentalization and mitigation planning, as well as through optimized financial structuring, leading to better loan pricing.

It is also important for us to recognize that cost is a function of real and perceived risk. In response to this, at ACWA Power, we have developed a methodology, practice and culture of

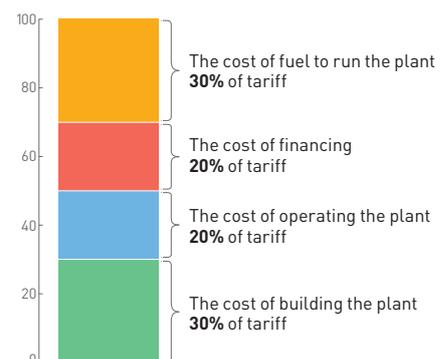
ACWA Power's Tariff Breakdown

Fuel: Optimizing the plant from the outset and maintaining it during operational life lower the fuel consumption and drive efficiency.

Financing: Appropriate financing structures in terms of loan and equity pricing drive costs down.

Operations & Maintenance: A stronger supplier relationship and bigger portfolio lower cost through sharing inventory and stronger purchasing power. Optimization of human resources also reduces costs.

Capital: Technical optimization delivers best-fit solutions and creates competitive tension with original contractors. Efficient project management and construction oversight also ensure timely completion without compromising quality.



evaluating and documenting all risks, and allocating them to the parties best able to mitigate and manage them. For these processes to work, we have had to establish a shared vision, mutual trust and transparent relationships with our very broad supply chain and partners. This shared vision and trust convince participants to not market price inputs, but rather, to rigorously develop fit-for-purpose designs, establish lowest possible costs, apply reasonable margin and, where appropriate, eliminate contingencies and risk margins.

Recording Tangible Results

Clients: Seeking to tender the lowest possible cost has delivered impressive results for ACWA Power since the very beginning. While finding partners to follow our vision and business strategy was initially tough, we attracted three companies from Malaysia, and it was by working with this consortium that we secured our first customer, Water and Electricity Company of Saudi Arabia, the procurer of our inaugural project, Shuaibah Independent Water and Electricity Project (IWPP).

Shuaibah IWPP was not just a project, it was the first of its kind in Saudi Arabia and constituted a giant US\$2.4 billion transaction involving the production of 900 megawatts of Electricity and 880,000 cubic meters of desalinated water per day, using crude oil as fuel. The project was implemented to an exacting timeframe and turned out to be a remarkable success. We then went on to win the next three IWPPs, giving us a firm foundation and an enviable reputation that established us as a partner of choice.

Consumers: More importantly, thanks to our model and the stunningly low tariffs we have consistently delivered, we have provided value to the ultimate beneficiaries: the communities, nations and industries that consume the electricity generated and the desalinated water produced through ACWA Power's ventures.

Communities: It's not just consumers and clients who benefit. Our fortunes are very much tied in with the health, wealth and happiness of the communities in which our plants exist and with whom we will need to coexist for the long-term. Power plants are built in isolated locations, often where the poorest and the most under-privileged citizens of

any country live. As such, we have successfully embedded the philosophy that corporate social responsibility is a mission-critical activity for the company.

To translate this philosophy to action, we focus on value retention within the economy and the community in which investments are made. We do this by (1) maximizing local spend, (2) creating industrial activity through the investment and (3) generating local employment opportunities and then developing human resources capacities to match. In doing so, we help develop the local communities that we will not only co-exist with, but rely upon for decades to come.



Transformation is happening at a much faster pace than anyone could have anticipated.

Environment: The focus on lowest cost has not compromised ACWA Power's commitment to stewardship of the environment. Quite apart from ensuring that all plants comply with the requisite social and environmental standards, we are also at the forefront of progressively reducing the carbon footprint of even fossil fuel-based power generation.

In the Kingdom of Saudi Arabia, we have continued to focus on increasing the efficiency of fuel utilization on each and every plant. The gas fired combined cycle 4,000 megawatt plant at Qurayyah in Saudi Arabia, which was developed by ACWA Power and is now in full operation, has a world-class low carbon emission performance of 390g CO₂ per kilowatt hour, which is exceptional.

We then beat our own record by reducing carbon intensity by a further 7.2 percent at Saudi Arabia's Rabigh 2 IPP, a 2,000 megawatt gas-fired combined cycle power plant that went into construction in late 2013. This plant will emit only 359 grams of CO₂ per »

HOW IT WORKS

1 ACWA Power's clients enter into long-term contracts that see them purchase a fixed capacity of electricity and/or desalinated water.

2 ACWA Power is required to invest a significant amount of capital upfront that typically runs into the hundreds of millions—or even billions—of US dollars to realize the construction of a power generation and/or desalinated water production plant.

3 Once complete, ACWA Power uses the facilities to produce and sell water and energy over a period of decades, all the while generating revenues at the contracted rate of a few US cents per kilowatt hour, or tens of cents per cubic meter.

4 The income generated is then used to cover operating costs, repay any outstanding loans and recover the capital investment with a return commensurate with the risk taken.

5 Throughout the duration of these contracts, ACWA Power's formula of reliably delivering power and water while keeping the tariffs low, ensures client loyalty as well as continued, timely payment.

kilowatt hour; resulting in a significant 472,000 million tons less of CO2 emission per year, compared to equivalent electrical energy production at the Qurayyah plant, all the while using 8.8 percent less gas. This will be the most efficient power plant on the Saudi Arabian grid when it comes online later this year.

Looking to the future, we aim to be co-owning and operating a portfolio of assets that generate 39,000 megawatt of power and five million cubic meters of desalinated water per day by 2018. By then, 10 percent of our electricity should also be produced with renewable energy.



The market price is of little consequence to a company that sets its own.

But of course, as we strive to fulfil these exciting goals, it important to remember that our strategy is not without challenge—and obstacles are not restricted to external forces. Even within our own corporate board, disagreements over the prices we set and the profits we pursue are not uncommon. Issues that are often debated include: Are our prices too low? Should we be looking to edge a little closer to our competitors' rates? These questions and others like them frequently rise to the fore as we aim to strike a delicate balance that satisfies our shareholders, our clients and our philosophy alike.

Within ACWA Power's walls, healthy debate over these important questions will no doubt continue, but as it does, one thing is for sure: while others pursue maximum profit at minimal cost, we won't be following the pack. With a mission to reliably deliver electricity and desalinated water at the lowest possible price, we are charting our own course, and so far, it's paying off. 

ACWA Power Projects: Saudi Arabia

The Marafiq IWPP

The Marafiq Independent Water and Power Project (IWPP) is the world's largest power and water desalination plant. It consists of 16 units of gas-fired GE turbines with a net capacity of c.2,700 MW and 27 desalination units producing 800,000 m3/day of desalinated water.

Location:

Jubail, Saudi Arabia

Off-taker: Tawreed (owned by Marafiq)

Power: 2,744 MW

Desalinated water:

800,000 m3/day

Project cost:

US\$ 3.36 billion

Commercial operational date: Q4 2010

ACWA Power share: 20%

Contract term: 20 years

Operator: JOML (IPR-GDF Suez and NOMAC)

Savings: 22.4%, SAR 1.8 billion (US\$0.48 bn)

The Shuaibah IWPP

The Shuaibah IWPP was the first independent water and power project developed following the Saudi government's decision to open the market to private investment. The facility delivers water and electricity to the cities of Makkah, Jeddah, Taif and Al-Baha.

Location: 120 km south of Jeddah, western Saudi Arabia

Off-taker: Saudi Water & Electricity Company

Power: 900 MW

Desalinated water:

880,000 m3/day

Project cost:

US\$2.45 billion

Commercial operational date: Q1 2010

ACWA Power share: 30%

Contract term: 20 years

Operator: NOMAC

Savings: 16.8%, SAR 2.3 billion (US\$0.61 bn)

The Rabigh IPP

The Rabigh IPP is a landmark project in the Middle East showcasing Chinese technology and is an important integral part of the strategic and economic relationship between Saudi Arabia and China. It is also the first IPP in Saudi Arabia without a guarantee from the Ministry of Finance.

Location: Rabigh, western Saudi Arabia

Off-taker: Saudi Electricity Company

Power: 1,204 MW

Project cost:

US\$ 2.51 billion

Commercial operational date: Q2 2013

ACWA Power share: 40%

Contract term: 20 years

Operator: ROMCO (Joint venture of KWEPCO and NOMAC)

Savings: 31.5%, SAR 3.3 billion (US\$0.88 bn)

The Qurayyah IPP

Qurayyah IPP, a greenfield project, is located on the eastern coast of Saudi Arabia with a net generation capacity of 3,927 MW. The design production capacity will make it, once completed, the largest IPP combined cycle gas-fired power plant in the world.

Location: Eastern Province, Saudi Arabia

Off-taker: Saudi Electricity Company

Power: 3,927 MW

Project cost:

US\$2.72 billion

Commercial operational date: Q1 2015

ACWA Power share: 17.5%

Contract term: 20 years

Operator: NOMAC

(Nominated sub-contractor, Siemens LTSA)

Savings: 15.5%,

SAR 1.2 billion

(US\$0.32 bn)

Rabigh 2

Rabigh 2 / Al Mourjan is a greenfield project and will be located in Rabigh, on the western coast of Saudi Arabia. The project represents another significant milestone in the Saudi power sector given that this will be the first IPP to utilize a combined cycle power plant with a gross thermal efficiency of c.58.8 percent—a particularly good rate—at reference site conditions at Rabigh.

Location: Rabigh, western Saudi Arabia

Off-taker: Saudi Electricity Company

Power: 2,060 MW

Project cost:

US\$1.56 million

Commercial operational date: Q2 2017 (forecast)

ACWA Power share: 37.5%

Contract term: 20 years

Operator: NOMAC

Savings: 4.8%, SAR 0.4 billion (US\$0.11 bn)



ACWA Power's focus on lowest cost has saved the Saudi Arabian government almost **US\$2.4 bn** in net present value.