

Qatar Electricity & Water Market Report

The region's largest gas exporter has set a renewables target and procured its first solar PV

The production of electricity and water in Qatar is dominated by thermal desalination plants, which meet the vast majority of the country's power and water consumption. The production assets in Qatar are privately-owned IWPPs and IPPs, however the state retains an equity stake in all thermal plants via Qatar Water and Electricity Company and Qatar Petroleum.

In 2020 Qatar procured its first renewable IPP, the 800MW Al Kharsaah Solar PV project, developed by state-owned Siraj Power alongside Marubeni and Total. The Al Kharsaah plant is likely to be first of several large PV IPPs, as Qatar targets 20% of generation from renewable sources by 2030.

The water production mix is also likely to see further change as reverse osmosis (RO) becomes more prevalent. The newest IWPP, Umm Al Houf, contains Qatar's first large RO plant (60MIGD), with a further 61MIGD RO expansion under construction. In addition to falling RO costs, the gas price assumed in planning is key determinant of the competitiveness of thermal desalination versus RO.

On the demand side, the economic blockade resulted in a reduction in electricity and water consumption, although demand for both rebounded as the economy recovered. Future demand growth is expected to be heavily dependent on the pace of economic expansion.

Outside of the production segment, state-owned utility Kahramaa controls all parts of the electricity and water value chains. Kahramaa is the single buyer, network owner, network operator and sole retailer of power and water. The government has not disclosed any plans to move away from the current single buyer model or unbundle Kahramaa.

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Our Offering

AFRY Independent Market Report

- Presents our annual projections for installed capacity, generation and the value of electricity for our three internally consistent scenarios (*High, Central and Low*).
- Considers the main drivers of capacity expansion in each scenario, including:
 - the evolution of electricity and water demand;
 - developments in technology costs; and
 - fuel prices.
- Delivers in-depth market intelligence, including insights into:
 - government policy and regulation;
 - impact of solar PV and storage on system operation; and
 - value of existing and new power plants.
- Key data for AFRY projections is provided in a usable Excel format.

Updates

- Projections updated upon request, ensuring all the latest regulatory and market developments are reflected.

Workshop / Virtual Q&A session

- Provides the opportunity to discuss the market, our modelling and price developments.

Subscriber support

- Prompt access to our experts who have a wealth of experience and constantly follow market developments.

Our reports and projections are:

- **Independent.** Our reputation is built on providing an impartial view.
- **Trusted.** The 'AFRY curves' are the definitive benchmark for the power sector.
- **Bankable.** Relied on by the financing community for over 25 years.



Our Qatar market expert



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Define specific sensitivities or scenarios

- Customisation for bespoke assumptions, e.g. fuel prices or decarbonisation goals.
- Sensitivities to examine impact on power price of changing gas or carbon prices.

Transaction support services

M&A advisory (including commercial, market and technical due diligence)

- Buy and sell-side support for the investment in, or disposal of, generation assets.
- Lenders' Market Advisor services to support debt financings.

BID3, Pegasus and BID3live

Models and datasets available for purchase

- For clients needing full flexibility to do own model runs.
- Live short-term forecasts available with BID3live.

Other AFRY Independent Market Reports available

Our expansion is client-led: if you're interested in any other market, please contact us for options

Capture prices

Available for all markets and technologies

- Pre- and post- economic curtailment.
- Market-wide, asset-specific or for portfolio of assets.

Imbalance projections

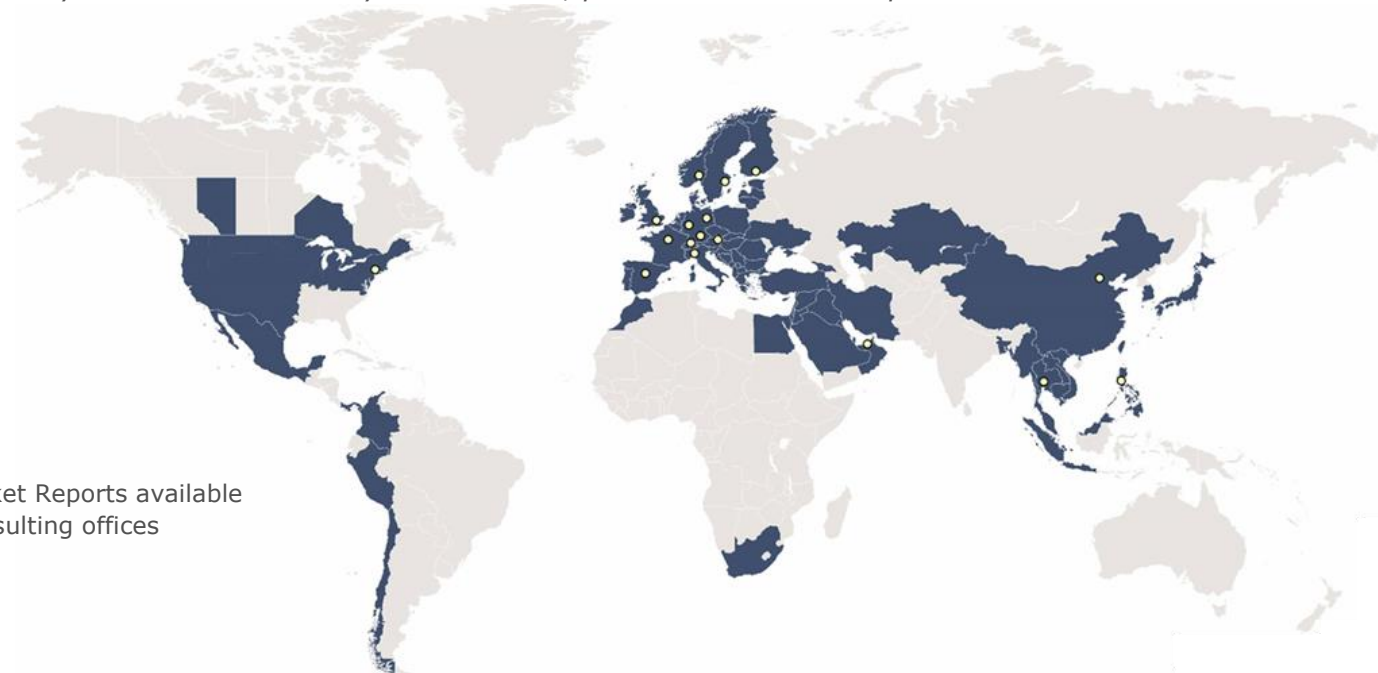
Projections of the costs of imbalance for wind and solar farms

- Accounts for future growth of renewables, different trading strategies and improvements in forecasting.

Ancillary service projections

Reserve product value projections for flexible generation and storage

- Fundamental projections using BID3 to account for changing capacity mix.
- Covers both holding and activation fees for FCR, aFRR, mFRR, RR, and equivalent.



- AFRY Independent Market Reports available
- AFRY Management Consulting offices