

Peaking interest

Alexandra Dockreay

13/10/2017

Sales of two companies owning flexible peaking power plants are being eyed by various fund managers. A regulatory change to "embedded benefits" enacted this June has effected these companies' revenue streams, meanwhile potential buyers must take a view on the existential threat to the sector from emergent battery storage technology.

Peaking power plants can turn on for short periods of time when needed in addition to the UK's baseload and renewables sources. Given the rising contribution of wind and solar to the country's energy mix, intermittency of supply is increasingly relevant.

Diesel and natural gas are the fuels used in peakers plants, DNV GL's energy storage segment leader Paul Gardner says, adding that the plants can be open-cycle gas turbines, or reciprocating engines (such as diesels). Reciprocating engines can be started in only a few seconds, though this adds costs to the plants.

Two auctions

Of the two current auctions, Green Frog Power's is furthest along. InfraRed Capital Partners' InfraRed Environmental Infrastructure Fund and management are the shareholders. Rothschild is financial adviser, and sources say indicative bids are due very shortly, this week or next. InfraRed invested in 2010.

Meanwhile, financial adviser RBC has launched a sale process for UK Power Reserve (UKPR) on behalf of private equity firm shareholders Equistone Partners and Inflexion. They bought the company in 2015, after UKPR's managers established it in 2010. Information memorandums were issued within the last week or two.

Acquisition and energy bankers say both infrastructure fund managers and some private equity firms are approaching them for the sales with both energy and leveraged buyout teams eyeing the deals.

Australian fund manager AMP Capital has been putting together a bid for Green Frog Power, while 3i, Arcus and I Squared are all also understood to be interested.

Fixed revenues

For these reserve power generators, the majority of their revenues are from the merchant market, switching on to sell energy for the prevailing price per MWh when it has risen due to high demand.

For reserve power generators, there are two fixed revenue stream alternative options from National Grid, though these only account for a minority portion of revenues.

There are Short Term Operating Reserve (STOR) contracts, on the Balancing Services Market, requiring that within the availability window plants must be able to deliver the full power they committed to within 240 minutes of an instruction for at least two hours, or face penalties. National Grid makes availability payments on a £/MW/hour basis for the agreed

contract period, of up to two years and, if called up, utilisation payments. Auctions take place three times a year.

Historically in the early auctions, bidders could have qualified for 15-year STORs for new builds. Those contracts have been grandfathered, whereas now contracts are only for two years. Green Frog's main operation is based on a [15-year STOR project for its 214MW portfolio of diesel peakers](#), though it has since been building new gas-fired plants and has a delivery plan to reach 1GW over the next three years.

In 2014 the UK government then introduced the Capacity Market, to ensure stability of power supply by paying for certain availability in the future.

Capacity Market contracts provide monthly payments, based on the fixed prices per kWh power providers bid in the annual auction.

The latest T-1 and T-4 Capacity Market auction closed for pre-qualifications on 29 September. Results will be due in November for this round.

A T-4 contract is for delivery of power four years ahead in the winter 2021-2022, while T-1 contracts are for one year ahead for 2018-2019. Longer term 15-year agreements are available to incentivise and support development of new plants, and three-year contracts also where significant capital will be spent refurbishing plants.

The latest T-1 and T-4 Capacity Market auction closed for pre-qualifications on 29 September. Results will be due in November for this round.

Regulatory change

Regulations have been changed this summer with the "embedded benefits" revenue stream to decrease, almost to nothing, in phases over the next three years. People in the market say Green Frog and UKPR would have had to reset financial models before their sales could launch.

So-called "embedded generators" are connected to local, lower voltage electricity distribution networks.

At the periods of peak power demand in the UK, which are used to set charges, "embedded generators" were earning extra payments and exemptions, known as the triad "embedded benefits", because they were effectively being treated as negative demand. Ofgem has perceived this was distorting wholesale and capacity markets in favour of those district network generators.

On 22 June 2017 Ofgem announced it will phase in a reduction over the next three years from the current payment of £47 per kW down to between £3 and £7 per kW.

The battery threat

Gas-fired assets are widely viewed as an integral power source with relatively low emissions, as the nation transitions to green energy, to complement renewables' intermittency. But there is an existential threat for gas plants as the providers of responsive generation, when looking ahead to the future of battery storage.

In the Capacity Market auctions, battery storage asset owners are able to bid too and are already winning capacity.

UKPR is itself developing battery assets. UKPR has 693MW of small-scale gas plants in operations and development, but the company is developing 120MW of rapid response battery storage capacity, which it won in the 2016 capacity market.

Antony Skinner, partner at Ashurst, says: "I think this time around we'll see more battery storage projects bidding in the Capacity Market auction. They can also bid into frequency response auctions (firm and enhanced) and receive an availability-based payment for that, for assisting with balancing the grid from a frequency perspective. They can obtain both capacity market and frequency response revenues and layer that onto their battery revenue stream."

But Skinner points out batteries will need to become more efficient to be seen as a competitor rather than an alternative, to the peaking power plants.

Batteries do face a set-back in the Capacity Market auctions, as proposed regulations for upcoming auctions are due to address the fact that batteries typically can only discharge power for shorter periods of time in stress events than other generation types.

DNV GL's Gardner says, "Battery installations are already competing on cost with new gas turbine peaking plant in some parts of the US... I suspect the same will apply here. Batteries are unlikely to cause closure of existing plants, but may well compete against new-build."

Thank you for printing this article from IJGlobal.

As the leading online publication serving the infrastructure investment market, IJGlobal is read daily by decision-makers within investment banks, international law firms, advisory firms, institutional investors and governments.

If you have been given this article by a subscriber, you can contact us through www.ijglobal.com/sign-in, or call our London office on +44 (0)20 7779 8870 to discuss our subscription options.