Welcome to The e-POWER Bulletin!

The e-POWER Bulletin aims to provide a unique focus, giving you - the generators - just what you need to know when selling your renewable power. No more, no less. In this issue we take a look at:

- the ongoing changes to embedded benefits in the GB market and potential impacts on generators;
- the recent capacity market auction results;
- recent e-POWER auction results;
- A look at wholesale power prices and trends to watch in 2017 for generators;
- the latest e-ROC auction results;
- other industry news updates.

Whether you're a prospective or existing e-POWER user, the aim of this newsletter is to meet your needs. So if it doesn't hit the spot or you've got ideas for future content, I would love to hear from you.

Lastly, we would like to wish you all a Happy Christmas and prosperous New Year.

Thanks for reading,

Stuart Stephens

S Stephens

Embedded benefits under scrutiny

The energy regulator Ofgem has recently updated the industry on the work that it is undertaking on the charging arrangements for embedded generation.

Small-scale generation connected to the distribution system currently receives a range of benefits, which are intended to reflect the value that such projects offer to the wider electricity network.

However, Ofgem believes that the current level of benefits received by embedded projects represent a "major concern".

The regulator has focused particularly on what's known as the TNUoS Demand Residual payment. Embedded projects that generate during the three half-hourly periods during the winter in which electricity demand is highest—known as triad periods—receive a payment from suppliers. This is intended to recognise the reduction in costs from which the suppliers benefit.

The payment currently stands at approximately £45/kW, but it is expected to rise to £72/kW by 2020.

Many stakeholders have suggested to the regulator that concerns about the payment can only be properly addressed through a fundamental review of the current network charging arrangements.

Ofgem believes, however, that the current arrangements risk causing distortions in the electricity markets and that implementing early changes would be in consumers' best interests.

In particular, it is concerned that the payments will continue to increase in the meantime, and that investors would face a sustained period of uncertainty over the period of a review.

Reform proposals

Two proposals to modify the market rules so as to address the issue are currently under consideration. These are:

- CMP264—this aims to stop any new embedded generation connecting after next June from receiving the benefit until Ofgem has finished reviewing the issue and implemented any resulting changes; and
- CMP265—this would prevent any embedded generation with capacity market agreements from receiving the payment from April 2020 onwards.

In an open letter, issued on 2 December, Ofgem told the industry that—while it was yet to draw firm conclusions on the best way forward—it would be "prudent" for embedded plant to assume that by the end of the decade the TNUoS demand residual payments would be substantially reduced.

Ofgem intends to carry out a consultation on its minded-to position in early 2017, before reaching a decision in time for changes to be introduced by April 2018. The regulator has assured the market that as part of this process it will carefully consider the impact on competition and investment.

Industry criticism

There is substantial concern, within the industry, about the pace at which Ofgem is seeking to implement its reforms. Some analysts have suggested that the letter represented a rushed attempt to influence the outcome of the government's latest capacity market auction—as ministers had been eager to boost the chances that large-scale gas projects would be successful in the auction, and regarded the substantial participation of embedded generation projects as a potential obstacle to this.

The Association for Decentralised Energy (ADE), a trade group, has warned that the changes currently under consideration could increase the costs of industrial manufacturers by more than £160mn.

It has said that some energy-intensive manufacturers in the steel and chemicals sectors could see their energy bills rise by up to £5mn per year, raising the potential for plant closures.

Along with market analysts, the ADE has also raised concerns that isolated reforms, unaccompanied by a full-scale review, could prove detrimental to the nation's security of supply as small generators would close.

At present, more than 13% of peak electricity demand is met by small-scale generators, a figure more than twice as high as the forecast power capacity margin for this winter.

ADE director Tim Rotheray said: "The full range of harm to the government's strategic ambitions, from manufacturing energy costs to new battery storage investments, is substantial. Ofgem's rejection of stakeholders' concerns on how these changes will impact security of supply is equally worrisome.

"Until Ofgem has had the opportunity to undertake a more rigorous, holistic review, which the current process has not allowed, it needs to ensure it protects consumers, security of supply, and investor confidence by taking a cautious approach, including the grandfathering of existing sites."

Embedded generators successful in the latest Capacity Market auction

The latest capacity market auction has seen over 2GW of new embedded generation sign agreements. The results of the auction, issued on 9 December, showed that 2.6GW of embedded generation cleared in the auction and were the most successful new-build participants despite ongoing embedded benefit reforms.

About 1.2GW of embedded reciprocating engines burning gas and diesel cleared, 49% of all new build capacity alone was reciprocating engines. Overall, reciprocating engines had a 50% success rate in this auction, significantly above the 4% success rate for CCGT. Energy from waste (EfW) saw 166MW clear; a 67% success rate.

The auction cleared at £22.50/kW—the highest price recorded in the three T-4 auctions held to date. This would cost £1.2bn overall and is worth around £12.30 on the typical household electricity bill. A number of city analysts had forecast higher clearing prices at around £30/kW to £40/kW, owing to a higher procurement envelope, increased credit cover requirements, emissions legislation and ongoing changes to embedded benefits. However, prices remained low compared to the £75/kW ceiling.

Elsewhere, the government's efforts to boost the prospects of new gas were only a limited success. The 333MW King's Lynn CCGT project owned by Centrica cleared in the auction, as did the 298MW Spalding Energy Expansion OCGT owned by Intergen.

The most successful participants in the auction were existing generators; 86% (over 45GW) of the capacity that cleared was from existing projects. 24GW of this was from large-scale CCGTs, 7.8GW from the existing nuclear fleet and 5.7GW of coal won an agreement.

Battery storage projects emerged as one of the major success stories. 500MW of batteries had cleared in the auction. This continued the technology's recent momentum, after National Grid's Enhanced Frequency Response auction in October saw 200MW of projects awarded four-year contracts at lower prices than expected. Battery success rate was 86%, one of the highest in the auction, with many developers looking to benefit from the additional value gained from battery projects through embedded benefits and frequency response provision.

Latest e-POWER auction results

Since the last issue of the e-POWER bulletin, e-POWER has held a further two auctions for renewable generators.

On the 27 October 2016 35MW across four PV, hydro and Energy From Waste (EfW) sites were sold. Contracts were sold for 1 year agreements from 1st December 2016, 1 year from 1st April 2017 and 6 months from 1st April 2017. Bidder activity was high with over 40 bids received on the four sites.

A further auction was held on 25 November 2016. 28 sites representing 180MW of renewables generation capacity was successfully auctioned. Over 200 bids were received for the range of sites and technologies in the auction. Projects ranged from 0.5MW FiT wind sites to 40MW EfW sites.

PPAs in the auction varied between 1 year contracts from 1st December 2016, 3 month contracts from 1st January 2017, 6 month contracts from 1st April 2017 and 12 month contracts from 1st April 2017.

The e-POWER auctions provide flexibility on contract length and timings and the next e-POWER auction will be on the 24th January 2017.

Wholesale power prices and trends to watch in 2017

Ahead of the 24th January 2017 e-POWER auction we have detailed in this bulletin a summary of recent power price trends and future drivers to watch for in 2017. The aim is to assist generators with their contract decisions for the January 2017 auction.

Power prices have been increasingly volatile in recent months and this was again highlighted in November and December. Shorter-term contracts rocketed higher as fears over French nuclear production and a tight UK supply margin pushed day-ahead prices up 17% during November to average £66.4/MWh. In contrast, seasonal baseload contracts fell 2.6% over November, following the gas market downwards. Gas markets lowered as news emerged that the Rough gas storage facility would restart in December. Summer 17 and winter 17 power contracts slipped over November and continued to do so into December. **As of 19 December 2016, the summer 17 contract was at £42.1/MWh and the Annual April 2017 contract at £44.3/MWh.**

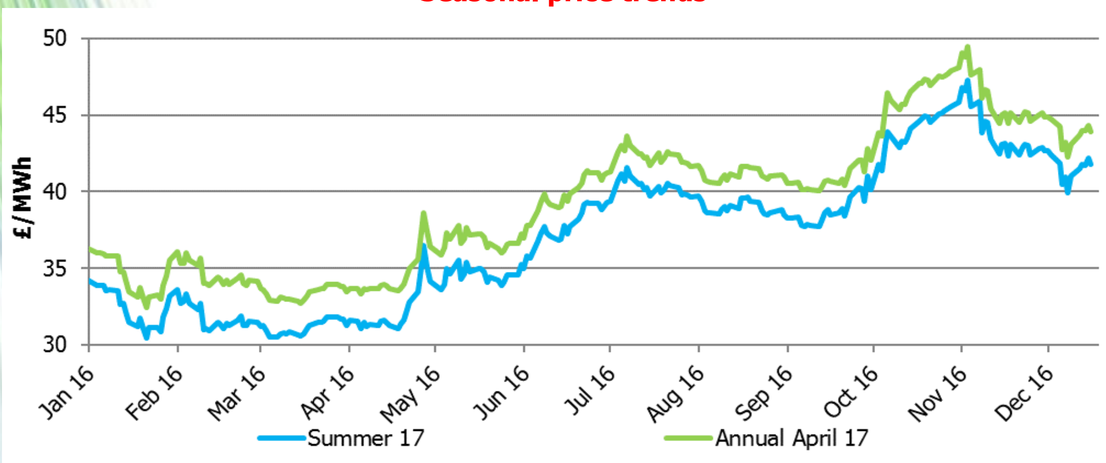
Going into 2017 there are a number of key trends that could drive price higher or lower over the coming months including:

- OPEC has agreed its first oil output reduction since 2008. The move could act to support oil prices and as seen in 2015 could feed into higher power prices through impacting European and GB gas markets;
- Centrica have announced the restart of its gas storage facility Rough, the UK's largest such facility, with the move already sending the gas forward curve lower. If the facility is maintained it is likely that gas contracts into summer 17 could fall further, also pushing down power prices; and
- The UK-France interconnector was damaged in November by a storm and half of the 2GW capacity will be out of action until February 2017. This could impact UK margins for the rest of winter and potentially lead to higher power prices

For generators entering the January e-POWER auction, decisions on whether to opt for 6 or 12 month contracts will be dependent on views of power prices and other benefits over the next year. In the short-term power prices have been on a rising trend. This could well continue into 2017. However, the wholesale power market is currently in "backwardation" to summer 2018. This is where contracts in the future are at a lower price than current seasonal (Winter 16) prices and suggests a deterioration in prices in 2017.

Overall, generator decisions will depend on the relative merits of different contract lengths. 6-month contracts provide short-term flexibility and the ability to re-auction through the July or August e-POWER auctions , while 12-month contracts provide the greater revenue certainty over a longer period.

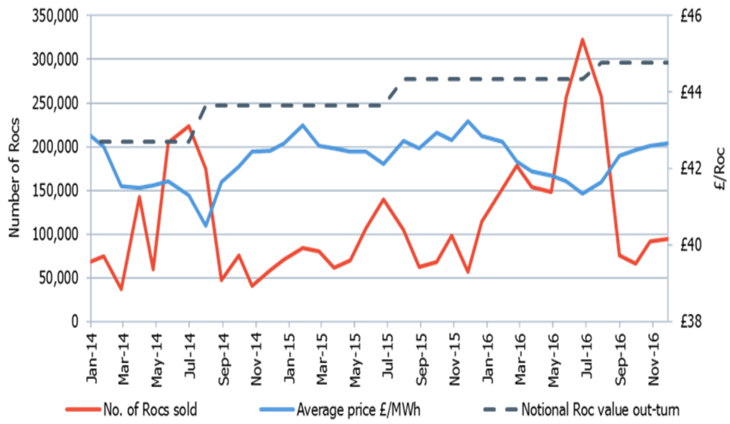
Seasonal price trends



Prices continue rising trend in latest e-ROC auction

The latest e-ROC auction was held on 25 November 2016 with 94,011 Rocs sold, up almost 3,000 on the October auction and over 40,000 on November 2015. Average prices rose £0.06/Roc on last month to £42.65/Roc with the auction including CP14 and CP15 Rocs. Prices remained at a discount to relevant buy-out prices as market forecasters continued to predict a tight market in CP15 with oversupply a real risk. Final recycle values are currently forecast at minimal levels but could recover to levels seen in CP12 and CP13 if low wind conditions persist. The next e-ROC auction will be held on 22 December 2016.

Recent e-ROC auctions



Other industry news in brief

Government drops plans to remove support for solar thermal in RHI

The government had opted against removing solar thermal from the domestic Renewable Heat Incentive (RHI), as had earlier been proposed.

Responding to its consultation on RHI reforms, the government said it had received evidence that continued support for the technology could incentivise greater deployment and drive further cost reduction than had earlier been anticipated.

Elsewhere, the response confirmed that support for domestic heat pumps would be increased.

Greencoat launches first solar vehicle

Greencoat Capital has announced the launch of its first solar funding vehicle.

The company confirmed that Greencoat Solar had acquired three PV farms from BayWa r.e. with 30MW of capacity overall, and that six projects totalling 78MW had been acquired from Primrose Solar.

Greencoat Solar has said that it is seeking to acquire a further 150MW of assets over the next six months.

Chancellor defers decision on low-carbon budget

Chancellor Philip Hammond has delayed a decision on the future of the UK's budget for low-carbon subsidies until next year.

Hammond had been expected to use his first Autumn Statement since succeeding George Osborne to confirm plans for the Levy Control Framework (LCF) into the next decade. But the decision will not be confirmed until the spring budget.

The coalition government set the LCF at £7.6bn (in 2012 prices) through to 2020-21, but has since faced warnings that an overspend is likely, in part because of the fall in wholesale prices.