

## GPAM Q&A

### 1) Is the GPAM too complex?

No. The auction structure is already in place, fully operational and used by a large number of market participants. The NFFO projects (during the 1990s) used this structure to finance projects. This long and established operating history brings confidence to the financial community as a result.

The structure is simple, all that is required is for the auction structure to be linked directly to the CfD structure through the market reference price and you have a financeable structure that breaks the need for long-term PPAs and a dependence on the utilities to provide that contract.

### 2) Will GPAM increase risk to consumers?

GPAM will actually lower the cost to the consumer. Available academic and market evidence suggests that the true cost of balancing a wind generator in the system at the moment should be approximately 3% of the total revenue.

Currently, securing a long-term route to market costs between 10-20% of the total revenue. The difference between these percentages for onshore wind is £11/MWh which when applied to all onshore wind generation would have a net saving of £2 billion.

The GPAM will lead to a low strike price than would otherwise be the case and this will lower the costs to the consumer.

### 3) But auction prices could fall and this will cost the consumer more?

In the NFPA on average there are 8 bids on every site, suggesting that competition for the output of each site is at multiples more than is currently in place for long term PPAs.

It relies on straight-forward economics. The price in the NFPA auction is directly comparable to the price in one of the exchanges (N2EX or APX). As a result, a significant discount in the NFPA will be quickly spotted by any trader who will spot the easy margin by trading between the NFPA and the exchange price and it will be traded away (as with any arbitrage opportunity in any open market).

Unlike the existing long-term PPA market which is only open to companies with a BBB+ credit rating, the GPAM is contracting for a shorter period (currently 6 mths) and therefore has much lower credit requirements. This opens the market up to much greater competitive tension and ensures effective price discovery.

### 4) What if the site does not clear in auction?

Throughout the operational history of the NFPA there has never been a site that has not cleared. This is a risk that will concern the financial investors, so we proposed that the default price should always be set at zero to allay these concerns, appreciating that effective competition will prevent this from ever being realised.

### 5) GPAM risks splitting the market, this could reduce market liquidity.

This is not correct. Currently, independent generators have to contract with large utilities who control whether that is released to the market or not. Small independent suppliers do not have the credit position to trade directly with independent generators and as such are unable to access that source of generation.

By creating GPAM, you are creating a new market, which makes accessible generation that would otherwise be tied up in long term contracts available to the small suppliers. This will increase overall liquidity, indeed many small suppliers depend on the current NFPA to provide essential liquidity to the market.

**6) Will GPAM remove the incentive for aggregators to join the market?**

No. The available evidence (as pointed out by many respondents to DECC's call for evidence) is that there is a high level of competition in the short term PPA market. From our conversations with aggregators from across Europe, they suggest that they are most comfortable operating in these time periods.

By providing generating plant under short term contracts, it has the potential to open the market up to aggregators by allowing them to access a diverse portfolio of sites which would otherwise be unavailable to them.

**7) Doesn't GPAM create a Fixed-FIT and which was ruled out?**

No it doesn't. Unlike a fixed FIT GPAM is a power auction market supported by CFDs. Unlike a fixed FIT it does not require a long-term contract counterparty that needs to be imposed on the incumbent utilities. Finally, it maintains the key attributes of the CfD in that if the market price of electricity rises above the strike price the excess revenue is clawed back and can be given to consumers as discounts off bills. GPAM would provide the route to market that would ensure that CfDs are viably introduced – and without a Fixed FIT.

The reason why the Fixed FIT was ruled-out was that it did not allow for renewable generators to inter-act within the rest of the market. The Fixed FIT contract is typically with the Government or a large utility (who has an obligation is imposed on them). As the electricity generated then flow directly to that counterparty and no longer flows to the market more generally at significant volumes it can distort the market.

The GPAM avoids that need and maintains the same level of effective market interaction as set out in the original proposals

**8) Doesn't GPAM remove any incentive on the generators to manage their balancing costs?**

Balancing cost and managing that risk is one of the key reasons why a PPA contract is required of generators by investors. Independent generators cannot secure investment from banks for projects that are required to bear their own balancing costs. Instead, the balancing exposure is contractually transferred to vertically integrated utilities through the PPA because they are in the best position to manage it at least cost as a part of a larger portfolio.

That is why, to be viable, independent generators require a long-term PPA that covers/includes balancing cost and therefore insulates them from that risk. In this way current PPAs and the GPAM are no different - in that they both transfer risk at a fee to those able to manage it most effectively, and this is eventually passed on to consumers through the support mechanism.

However, the critical difference is that under GPAM the long-term contractual requirement is removed. This opens the market up to competition rather than embedding the current impasse which requires

independent generators to secure long-term PPAs from one of the vertically integrated utilities at a time when they are commercially reluctant to offer viable terms.

Ensuring that there are appropriate incentives to balance and minimise balancing risk is important. However, this is most effectively achieved in contract, as is currently the case. By insisting that it should be placed directly on the generators the Government is in danger jeopardising investment, and costing consumers more, by tying them into commercially unviable long-term PPAs.

**9) Without exposure to the cost of balancing then there is no incentive to respond to improve forecasting or introduce technological fixes that may or may not come along?**

This wholly misrepresents the situation under existing PPAs. Individual sites do not currently forecast their output on a within day basis. The reason for this is that it is far more efficient for forecasts to be managed centrally so weather patterns can be tracked across the country and actual output variations monitored. Whilst services exist to do this at an individual plant level, exposing individual generators directly to this only increase the cost of contracting and will not drive improvements in itself.

This point is elaborated upon in a paper referred to in the liquidity impact assessment Newberry (2012) who estimates that the cost of an individual wind generator balancing itself is approximately £2/MWh higher than balancing the plant on a system wide basis. Yet officials seem to prefer the inefficient solution, even if it costs an estimated £56m/yr more.

For technological fixes the incentives are no different compared to PPAs where it is the PPA provider that takes exposure to the balancing mechanism, so the incentives remain the same under the PPA structure or the more efficient GPAM structure.

By introducing GPAM and six monthly trading periods you would remove the need for forecasts over a 15-year period. This would improve economic efficiency and ultimately benefit the consumer.

**10) Would the removal of imbalance costs affect decisions on locating turbines or the turbines that are deployed? Wouldn't this pass risks onto the consumer?**

Imbalance costs do not have any bearing on the decision about the type of turbines that independent's install or the location of the turbines.

Each turbine type has a different power curve that will make it more or less effective in different wind conditions. As a result generators spend a lot of time gathering data and selecting the most appropriate turbine for the site in order to provide the best trade-off in terms of costs to install and operate and energy output. This choice is central to the investment decision.

Energy output, however, is always determined as the annual energy yield. Two turbines that are equally appropriate for a site may have an annual variation in their energy yield of 5% or more. This difference in annual energy yield is far more substantial than an possible impact on balancing costs.

**11) Is there not a need for two strike prices?**

Only a single strike price is required.

GPAM gives an auction price for the summer (or winter) period that excludes the balancing cost. This can be directly compared with the market price (N2EX or APX) for the summer (or winter) period that includes balancing cost. These two prices are robust market driven price signals and the difference between them is by definition the cost of balancing.

This difference can then be simply be reimbursed by the CfD-counterparty to generators that chose not to participate in the GPAM through the proposed CfD structure. This has the direct benefit that the Government no longer needs to expose the consumer to the cost of having inaccurate forecasts of balancing costs over a 15 year CfD period or the exposure of opening up change of law provisions when the changes in balancing costs come into effect (such as the cash-out SCR). Under this scenario therefore you only need a single strike price for generators, regardless of whether they are in GPAM or not.

An alternative would be to not compensate utilities for balancing risk and thereby encourage them to enter GPAM, which will bring the benefits of economic efficiency, greater market liquidity, and opening the market to new suppliers and traders.

**12) How would the proposed GPAM fit with a future CfD auction regime? Imbalance costs faced by each technology differ significantly.**

The GPAM does not prejudice any possible introduction of auctioning process; rather it ensures that all plants can compete on an equal basis.

Under current proposals independent generators are dependent on a PPA from a large utility to provide a route to market that enables them to enter into the auction and access the CfD payments. However, independent generators are then expected to compete against these same utilities in the auction, which means the current design has a bias in favour of the Big Six built into it.

The introduction of the GPAM, and the ability to clearly define the cost of balancing creates a level playing field which allows everyone to compete on an equal basis.

In the GPAM (or NFPA at the moment) there will be an auction price for dispatchable and intermittent generation auction prices and therefore a market derived cost of balancing for each. This would remove both the risk and the complexity.

**13) What is the exit strategy? The Government's long-term vision is for low-carbon generation to compete on an equal footing without subsidy. The implication is that the auction (as well as CfD counter-party) needs to be in place for 15 years after the last project enters the GPAM. Is there a risk that auction liquidity will fall over time?**

If GPAM is providing a more economically efficient solution that has broader benefits in terms of market liquidity, competition and provides a stable structure that enables the funds to invest (which is one of the key objectives of the EMR) then it would be reasonable to assume that it would not require an exit strategy. In the event that there is sufficient liquidity and a significant number of independent aggregators in the UK market then an exit strategy for the few remaining GPAM sites will not be a problem.

**14) The current NFPA auction includes a range of technologies (CHP, hydro) and suppliers use the auction to buy ROCs as well as power. Will an auction biased towards intermittent generation offer the same attractions to small suppliers?**

The NFPA is an essential source of liquidity for the small suppliers, which is why they participate. However, we understand that a number of the large utilities are also active in the NFPA, such as EDF.

Bias would be a real risk if the market was controlled by a single group that had a limited appetite to contract with a particular type of technology to manage their risk exposure. However in the NFPA this is not the case. The discount observed in NFPA prices currently ranges from 1-3% for intermittent generation, representing a significant reduction on current PPA terms of 10%+.

Furthermore as we get more intermittent generation in the market, then the potential for arbitrage between the GPAM and the rest of the market would prevent any significant bias from being sustained.

**15) Cost of implementing GPAM? What are the costs to the consumer? What are the costs to the Government?**

With regards state-aid, this is the introduction of a market structure, so it would not fall into problem with state aid approvals.

With regards public finance, GPAM provides an administrative service rather than acting as the counterparty.