

EMR Consultation

Advanced Plasma Power Limited's Response to UK Government's Electricity Market Reform Consultation Document

Advanced Plasma Power Limited (APP)

APP is a private UK company which owns the Gasplasma® process, an advanced gasification system for energy from waste. We are developing plants in the UK, Europe and further afield. A typical plant processes 150,000 tonnes of waste and produces 16MW of electricity. The Gasplasma® process has unique benefits over existing technology solutions including the flexibility to use a wide range of wastes and generating virtually no residual waste.

Executive Summary

APP's response to the EMR Consultation Document is focused on the low carbon support mechanism proposals and will only cover the questions on which we feel that we have strong opinions.

Whilst we understand that the Government's objective from the EMR is to provide attractive long term investment into the low carbon generation market it is necessary that the reforms do not create additional uncertainty for this sector. Therefore we strongly recommend the Renewables Obligation (RO) is retained. The legislation is in place to support the RO until 2037, and project funders have been relying on this for stability to build confidence. A change now will erode that confidence and send a message that the system will change with every new Government. Each change in legislation erodes the ability of governments to encourage low carbon technologies.

Clearly some improvements could be made to the RO but we suggest that during this period of austerity it would be counter productive to introduce measures such as the FIT that will involve a cost to the Treasury.

Given this, if the Government still proceeds with replacing the RO with a form of the measure contained within the EMR Consultation Document then APP requests that the Transparency, Longevity and Certainty (TLC) of the legislation are key tenets. For us the key issues may be summarised as follows:

1. Ensuring that the same levels of support afforded by the RO are continued within the EMR for each type of technology including Advanced Gasification which is the technology type that APP's Gasplasma® technology fits within. Setting the pricing point for FIT is a subjective judgement and therefore could be set incorrectly, resulting in a failure to support developments, or over support them.
2. Ensuring the transition arrangements leave no uncertainty to current developments. The transition arrangements of the RO should be grandfathered and fixed at the highest level reached between 2011 and 2017.

3. There should be a one-off choice between the vintage RO and the new support mechanism during the period 2013 to 2017.
4. We would prefer the Premium FIT tariff mechanism over the other options due to its similarity to the RO and its advantage of being contractual with the price being set in advance.
5. We have a suggestion that the accreditation process be developed such that there are two stages giving certainty to the process as early as possible whilst providing the regulator transparency of likely future generation with sufficient commitment to build and generate.
6. We note the Governments preference for the Contracts for Difference Feed-in Tariff (CfD FIT). Although we disagree with this approach, if it is selected we strongly believe that there needs to be a secure method by which a generator may achieve the “electricity market price” used to determine the level of CfD payment to the CfD Strike Price. Without this certainty this form of feed-in tariff is unworkable with investors seeking certainty from this Government contract. There has been a suggestion that all CfD contracts would have clauses making the generator sell electricity into a “market pool”. We would welcome some detail on this and how it would work in the White Paper.

Consultation Questions

Current Market Arrangements

- 1) The ability to meet the 2020 renewables target should be a priority for the Government and if the past is a guide to the level of development over the next eleven years then the current system appears unlikely to achieve the necessary levels that are being requested from the power sector. With the legally binding target of 15% renewable energy by 2020 this is likely to require 30% renewable electricity. In order to achieve this level of generation the renewables market is going to require considerable investment and deployment which we hope the Government recognises and therefore gives sufficient levels of certainty, longevity and quantum of support in these reforms.

- 2) No comment

Options for decarbonisation – Feed-in Tariffs

- 3) In all variations of FIT the price point is critical in creating a successful mechanism without giving unnecessary support to certain technologies. Setting this price point is a subjective judgement and therefore introduces the potential for FIT pricing at the wrong level.

Fixed FITs are impractical and it is difficult to see how they would operate in the current electricity market.

Premium FITs are similar to ROCs with the benefit of additional certainty on the level of support. They would reduce the cost of capital of waste gasification plants. Premium FITs work well with our power purchase strategy. We enter into a long term power purchase agreements (PPA) at a fixed price for the electricity we produce. A premium FIT would give us a certain additional income stream to the PPA.

CFD FIT introduces a high level of complexity into the process. CFD FITs could provide the same level of certainty if there were changes in the structure of the electricity market. If we were to enter into a fixed price PPA under a CFD FIT regime our revenues would be uncertain. The amount of FIT we would receive would vary with the market price of electricity but the amount we receive for the electricity would be fixed. In order to guarantee a fixed income we would need to be able to agree a PPA linked to the same market rate as is used for the CFD calculation.

Currently, the ability to contract a long term PPA based on the market rate for electricity is very uncertain. For CFD FITs to work, changes will need to be made to the market to ensure that medium sized providers have access to the market rate used as a reference rate for the CFD. In our view, the risk surrounding the success for these changes is the biggest weakness for CFD FITs.

The method of averaging the market reference price for the CFD FIT would also have a major impact on how effective it is. A CFD based on the average market price across a year would introduce major uncertainty for the revenues of generators whose production varies across the year. A shorter time period would reduce this uncertainty.

Conversely, if the CFD was based on a half hour average the system would be very complex to administer. In addition, a dynamic CFD would remove any incentive to produce electricity to meet peak loads.

- 4) We think that modifying the current ROC system to include non-renewable low carbon options would be the best option. We think that the uncertainty created by changing the system will make it harder to finance low carbon projects. Premium FITs would be the second best option. They are easy to understand and give certainty of income and are not unlike ROC's.

The uncertainties about how CFD FITs would actually work and the complexity involved mean that we do not support them.

- 5) In order to secure funding, our projects require a predictable revenue stream so we need to minimise exposure to electricity prices. Our current business model assumes that we will enter into a long term, fixed price PPA which means that we are not exposed to electricity price risk. The CFD model would materially change our exposure to changes in the electricity price unless the Government can create a liquid "market pool" into which all low carbon and fossil fuel generated electricity is produced. Even this solution will create uncertainty in the first years of operation, which is unhelpful for project development and investment.
- 6) Given that our technology is likely to be operating under base load conditions in an efficient manner the price signal should not affect us on an operational day to day basis but will affect the investment decision process prior to construction.
- 7) We believe that the costs of capital set out in table 4 of the consultation are lower than are currently required by investors. Projects require returns in excess of 15% in order to secure funding.

As we state above we believe that any move to replace the ROC system will result in an increase in our cost of capital. The increase of 2-4% is our estimate.

We think that the additional certainty that Premium FITs offer over ROC's will reduce this based on the price certainty it brings to perhaps 1-3%. We do not believe that either fixed or CFD FITs will reduce the cost of capital by any more than premium FITs. They do not reduce risk any more than a premium FIT plus a fixed price PPA.

- 8) Moving from ROCs to any other system will reduce the availability of finance for renewable electricity generation because changing the system reduces confidence in Government support mechanisms. Premium FITs will have the least impact. CFD FITs may reduce the availability of finance substantially if generators cannot reliably sell their power at the market price used to calculate the FITs.
- 9) New entrant generators will have extra work getting the investors' confidence in the Government's support mechanism as well as the new technology that is being introduced to the market. Established generators will be able to show experience of the system (ROC's) in operation and therefore have an advantage over new entrants.
- 10) Additional liquidity in the wholesale market is essential if a CFD FIT model is to work. We are not concerned about what index is used as long as we are able to sell electricity at that price. Small to medium size generators do not have the resources and access to trade electricity effectively. We are dependent on long term bilateral trading to sell our power. Market reforms will be required to ensure that suppliers are obliged to buy electricity from generators at a price linked to the market price used to calculate CFDs.
- 11) Output. Generators should not get paid unless they can sell their electricity. Availability should only be paid to those generators specifically intending to offer power during shortages through the capacity mechanism.

Implementation Issues

- 30) Regarding the CfD FIT the main implementation issues surround the market price for electricity, if this cannot be guaranteed for the generator then as stated previously this option is going to disadvantage the generators.
- 31) It is very difficult to see how auctions could work. The biggest issue is who would be allowed to participate in the auction. There needs to be some obligation on bidders to proceed with projects if their bid is accepted to prevent frivolous bids. However, it will be very hard to be certain that a project will proceed when a bid is made as financing will depend on the outcome of the bid and investors may not be willing to engage with a project until there is some indication of the likely FIT level.

Auctions for specific projects add to the general level of uncertainty of project income and may increase the costs of capital.

If auctions are used, it is essential that banding is used. This will be required to enable new technologies to compete and to differentiate between the differing carbon foot print of different technologies. All of this introduces complexity.

- 32) If CfD FITs are implemented then we believe a market pool regulator will be required whether this comes as part of the “OFGEM” responsibilities or whether an independent market regulator depends on the new responsibilities of OFGEM.
- 34) We do not agree with the Government's assessment of risk. The uncertainty introduced by the EMR will delay all but the most advanced projects.
- 35) The principles of underpinning the transition of the RO we agree with however the vintaging of the RO and management after 2017 is key to the success or otherwise of this transition. Therefore the earliest confirmation of the vintage RO arrangements will give projects sufficient confidence that a project can proceed with clarity over the RO support mechanism.
- 36) It seems sensible to allow projects a one off choice of the support mechanism they use. This will allow projects that have been developed under the assumption they will use the RO to do so whilst also allowing projects to be developed using the new mechanism.
- 37) Our view would be to grandfather the technologies to avoid the problem and keep a level playing field.
- 38) Our key concern is that there is stability in the ROC price after 2017. Moving to a fixed ROC system would achieve this as long as the rate is fixed at reflected the ROC market value. The rate should be fixed at the peak ROC market rate achieved between 2013 and 2017.