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**RWE UK response to DECC's call for evidence on barriers to securing long-term contracts for independent renewable generation investment**

RWE welcomes the opportunity to respond to this consultation. We are responding on behalf of RWE companies operating in the UK:

- RWE npower supplies gas, electricity and energy services to over 6.5 million households and businesses. We produce over 10% of the UK's electricity from our eleven gas, coal, oil and biomass-fired power stations, and manage a portfolio of combined heat and power plants across the country.
- RWE npower renewables, the UK subsidiary of RWE Innogy, is one of the UK's leading renewable energy developers with an operational portfolio in the UK of 500MW and a potential UK development portfolio of over 7,700MW, including wind farms, hydro plant and biomass generation to produce sustainable electricity.
- RWE Supply & Trading is one of the leading companies in European energy trading and is responsible for all of RWE's activities on the international procurement and wholesale markets for energy.

Our detailed response to the individual questions is given below. However, we wish to highlight the following key points:

There has been a significant impact on the PPA market from the decline in the wider economic environment and increased emphasis on credit risk. The problem of imputed debt has restricted suppliers' ability to offer PPAs on terms which meet the requirements of generation customers.

Additional risks have been introduced by significant market and regulatory uncertainty. No market participant is well placed to manage such risks, therefore it is unclear where the risks should be allocated and what price should be attached to them. This has caused a slowing of pace in the PPA market.

Contrary to what some market players have argued, the transition to a Contract for Difference (CfD) regime could address one of the most significant barriers, imputed debt, to the development of the PPA market. Under the CfD mechanism the requirement to offer a PPA with a fixed or floor price will be

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secondary to the requirement to offer a price linked to the reference price. This could reduce or eliminate the problem of imputed debt, meaning that suppliers should be able to offer PPAs with durations which better suit generation customers' needs.

The market has been innovating and has developed a range of different PPA products to overcome some of the current barriers. However, the industry is experiencing a period of significant change to market arrangements and it is to be expected that during this time market participants will seek to reduce the amount of risk they are exposed to. Some market participants will be seeking greater assurances whilst others are seeking to reduce their contractual commitments. It is inappropriate to make a pre-emptive judgement as to what the PPA market will look like once this transitory period has ended. Government should not second-guess the ability of the PPA market to innovate and develop in response to the implementation of EMR and should allow the package to bed-in before reviewing whether developments have been sufficient to satisfy the needs of participants, both suppliers and generators.

Yours sincerely,



Director of Policy and Public Affairs

## RWE UK response to specific questions

### 1. Please could you provide a summary of your experiences with the PPA market over the past three years?

Under the RO a significant PPA market has developed which allows generators and suppliers to negotiate and agree terms which provide benefits to both parties. The RO has not achieved this by placing an obligation on suppliers to source power from renewable generators. Suppliers have the option of demonstrating compliance with the RO through either redeeming ROCs or paying the buyout price – it is perfectly conceivable that suppliers could choose to achieve 100% compliance through paying the buyout price, if there were no commercial benefits to purchasing ROCs and entering into the accompanying PPAs.

To the contrary, the success of the PPA market to date can be attributed to the fact that benefits are accrued to both generators and suppliers through entering into bilateral PPAs.

The market risk associated with intermittent renewable generation is most effectively managed by actively trading output volume. Suppliers are able to provide an active risk management service to generators in order to reduce the market risk they are exposed to.

Allocating risk to suppliers via a PPA has benefits for smaller generators which go beyond removing the need for them to have the capability to actively manage risk. A PPA allocates market risk to a party which is typically larger than the generator and has a more robust credit profile. This contributes significantly to making investment in smaller generators more appealing to financial institutions. Suppliers benefit through being able to charge for the services they provide; an imbalance premium, cost to serve and margin. Suppliers also accrue embedded benefits, which are usually shared with the generator.

#### Generator appetite for PPAs

We have experienced a consistent increase in the number of requests we receive for the provision of PPAs over the past 3 years. In order to meet demand from our customers and to realise the commercial benefits of PPAs, the team which develops power purchase products and negotiates PPAs has doubled in size.

We believe the increase in demand for PPAs we have experienced is due to a number of factors, including growth from NFFO terminations, portfolio players introducing new sites, off-balance sheet developments and projects previously financed by banks moving into the merchant market.

#### Supplier appetite for PPAs

Our desire to enter into PPAs is strong. However, the terms on offer have been affected by a number of external market risks centring around debt issues, largely due to the deteriorating financial climate during this period and additional pressure on managing credit risk. Whilst our short-term PPAs (up to 5 years in duration) remain competitive, the structures we can offer for longer-term PPAs have become increasingly restricted. The most significant restriction on our ability to offer competitive products for long-term PPAs is the problem of imputed debt.

#### The impact of imputed debt

Imputed debt is the process whereby the financial risk inherent in signing a long-term PPA is measured by credit rating agencies and imputed onto a supplier's balance sheet for the purpose of assessing the company's creditworthiness. One credit rating agency (Standard & Poor's) has clearly stated its view that long-term PPAs impose financial risk on the utility and has developed and publicised a standard procedure for calculating imputed debt and its impact on the financial ratios used to measure a utility's creditworthiness.

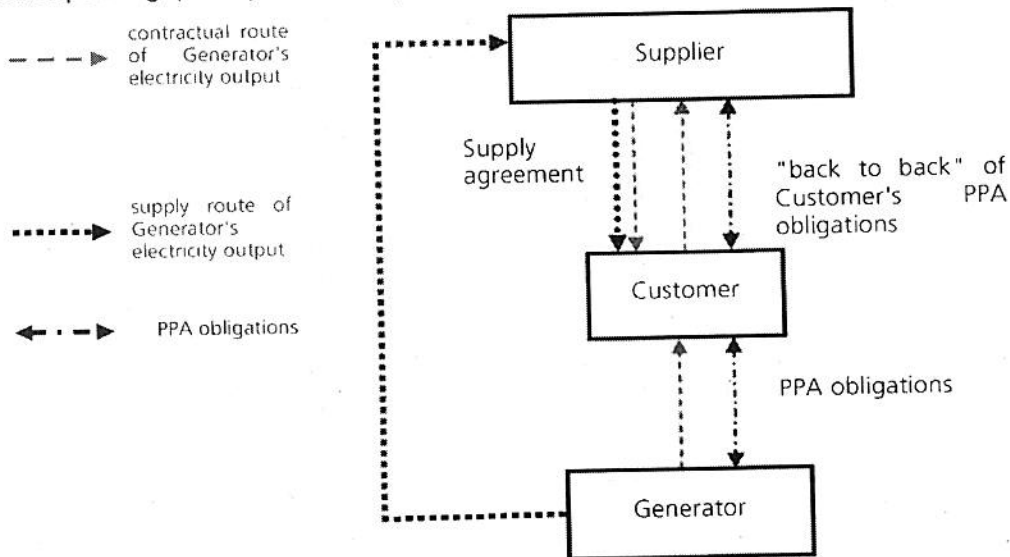
The impact of imputed debt is most acute when a supplier is subject to a fixed obligation associated with the output of a plant beyond the period in which trading is taking place in the wholesale power market (around 3 years ahead). The imputed debt resulting from a large portfolio of PPAs may lead to a credit rating downgrade. In addition, the weakened credit ratings (i.e. increased financial risk) could increase the purchaser's cost of equity and debt capital assessed by financial markets.

Imputed debt is the most significant barrier to suppliers, such as RWE npower, offering a long-term fixed or floor price. Alternative mechanisms like a rolling annual fixed price or long-term flexible price arrangements do not

always suit the limited risk appetites of the financing parties. However, our commercial appetite to enter into PPAs, including long-term PPAs is undiminished and we are working to develop power purchase products which will allow us to meet the needs of our customers. One example of this is 'PPA Sleeving', whereby a generation customer seeking a long-term PPA is contracted to deliver power to a demand customer seeking to enter into a long-term supply contract.

#### Overcoming the problem of imputed debt

PPA Sleeving brings supply customers and generators together. Instead of only buying electricity from its supplier, with a PPA Sleeving arrangement the supply customer is able to contract directly with generators for all or part of its electricity requirement. The customer then on-sells the electricity to its own supplier, who allocates a corresponding quantity of electricity to the customer's supply account.



For supply customers with significant electricity usage and who can benefit from an identifiable renewable energy supply, this kind of structure can provide considerable benefit and help manage the risks associated with fluctuations in electricity prices. The advantages of the PPA Sleeving to supply customers and generators are:

- Generators and customers have a significantly wider market available to them for the sale and purchase of electricity;
- The arrangement is 'portable' so both supply & generation customers are free to contract with another supplier if they choose;
- The supply customer is able to manage its exposure to pricing fluctuations by agreeing a fixed or floating price mechanism with the generator; and
- PPA Sleeving enables the customer to demonstrate a commitment to renewable energy by identifying specific products and services that are powered by renewable energy from a specific generating facility.

The level of benefits accrued by suppliers under this PPA structure is reduced to reflect the lower level of risk being borne by them.

#### Regulatory change

In addition to the problems imposed on suppliers by imputed debt, there is also an impact from significant market and regulatory uncertainty. For example, the EMR package has the potential to increase the amount of risk to which PPA parties are subject to. Additional risk increases the discount required by suppliers for managing risk. Increased regulatory uncertainty has also accentuated the difficulty in establishing change of law clauses in PPA contracts. No party (developer, bank or supplier) is particularly well placed to manage such risks. Therefore, it is unclear where this risk should be allocated and what price should be attached to it.

**5. Do you expect the EMR package to change the PPA terms that you might offer and if so how do you believe they will change? What do you think is the primary driver for these changes?**

There are some key differences between the RO and the CfD regimes and these differences result in diverging requirements from the PPAs which accompany support under each scheme. Whilst the transition to a CfD regime will present suppliers with challenges in terms of developing power purchase products which meet the changing requirements of our generation customers, it could also present opportunities to overcome some of the problems which are affecting the PPA market under the RO and it is likely that different PPA structures will be offered as a result.

The drivers of change

Since the RO provides a premium above the power price where the value of the premium is decided by the supply/demand balance in the ROC market, it contains an implicit floor for the value a generator can expect to achieve for their output, i.e. so long as a generator can get their power to market, they can expect to receive the technology weighted ROC price. Any revenue achieved through the sale of power using a PPA is in addition to this.

The situation is quite different with a CfD. Because the power price is an integral component of the value achieved by the generator for their output, the revenue a generator will need to achieve through a PPA has to be commensurate with the reference price, otherwise the generator will fail to achieve the full value of the strike price.

The CfD mechanism introduces additional basis risk between the reference price used to calculate the top-up payments and the price at which generators can get their power to market. This risk cannot be eliminated - a PPA merely allocates the risk with a supplier instead of a generator. This risk will need to be priced accordingly and the value attributed to it will depend on suppliers' ability to manage the risk effectively.

Responding to change

We expect that initial product offerings will be structured with an aim to providing generators with a revenue stream which is as close to the reference price as possible. Some questions remain as to exactly what the market will require in terms of the duration of PPAs, the level and duration of price certainty and credit requirements. It is likely that there will still be an imbalance premium (deduction), embedded benefits (addition) and cost to serve & margin (deduction). This is as per the existing PPA market under the RO.

Under the CfD mechanism the requirement to offer a PPA with a fixed or floor price will be secondary to the requirement to offer a price linked to the reference price. As a result, suppliers should be able to develop product structures which, for the purposes of imputed debt assessment, are not subject to a fixed obligation associated with the output of a power station. This could reduce or eliminate the problem of imputed debt, meaning that suppliers should be able to offer PPAs with durations which extend beyond the period which power is traded on the wholesale market.

It is worth noting that whilst the problems associated with imputed debt may be eliminated, there is a chance that the way that PPA obligations are treated for accounting purposes under international accounting standards could result in suppliers experiencing a similar impact to their balance sheet. However, this remains to be tested in practice.

Once a basic CfD PPA offering has been established and the market has become accustomed to it, our experience indicates that different generators will require different products which reflect their individual circumstances and appetite for risk and reward. Some generators will have a desire to outperform the reference price and will be comfortable accepting the potential downside risk in order to achieve this. An unrestricted and distortion free PPA market will allow the tailoring of PPA products to meet generators' individual requirements.

**8. What are your views (costs, benefits and risks) on the potential options discussed in this call for evidence that may be necessary to achieve the Government's objectives?**

Our view is that the way to achieve an efficient and competitive PPA market is through the minimal use of regulatory intervention. The role of regulation should be to ensure that all parties that participate in negotiating the terms of PPAs do so on an equal footing and that no party is at a disadvantage. Our view is that the current PPA market arrangements achieve this.

## Measures to increase competition

We support any measures which result in a healthy and competitive market. The absence of ROCs under the CfD regime already means that generators will no longer have to depend on suppliers to realise the full value of their support, which should in turn allow new participants to enter the market with new operating models, increasing competition and stimulating innovation. However, whilst increasing the numbers of participants and improving wholesale liquidity will benefit the PPA market, increasing competition does nothing to address the underlying issues of market risk, regulatory uncertainty and imputed debt.

## Off-taker of last resort

This mechanism has the potential to significantly distort the PPA market. By providing generators with a guaranteed buyer who will offer standard, administratively set terms priced above the expected terms from a competitive bidding process, it will prevent the market from providing the price signals necessary to establish the value of each MWh. Even during periods when the balance of supply and demand results in depressed wholesale prices, generators will be able to realise a price for their power which is above the market value. This will result in a PPA market where price discovery is distorted and the cost of meeting the Government's carbon reduction objectives will rise as a result. It is likely that this mechanism would result in the terms of PPAs become fixed and there would be no competitive PPA market.

In addition, the problems which have impeded the establishment of a single counterparty for the CfD top-up payments would probably apply to the off-taker of last resort. This raises questions of how the purchasing entity could achieve a credit rating which is considered robust enough to make their offering bankable and how they would manage the issue of imputed debt.

## Supplier obligation

It is difficult to see the benefit of this mechanism as it is put forward in the call for evidence document. RWE npower already responds to the overwhelming majority of PPA tender requests, so mandating that suppliers have to respond to 100% would have little impact on the way we do business in the PPA market.

If under such an obligation suppliers are able to continue to offer terms on a commercial basis – which we believe is essential – then a supplier obligation does nothing to address the underlying problems of market risk and imputed debt. It is likely therefore that the terms offered would be no different to those already available.

If the obligation were to impose a percentage of suppliers' energy demand to be sourced from renewable sources via PPAs, this does nothing to guarantee beneficial terms and as the level of risk suppliers are exposed to increases, so will the discount expected against market price. This would seem to be the opposite of the intended consequence.

If suppliers are obligated to source a percentage of power from PPAs and to offer these PPAs on fixed terms, there is a danger that it imposes an unmanageable level of risk on suppliers. Suppliers must be left free to manage the amount of risk that they take on. High levels of imputed debt could have negative consequences for how the market views the creditworthiness of suppliers and consequently would undermine the bankability of the PPAs they can offer, whilst simultaneously increasing trading costs with a knock-on effect to consumers' bills. The problem of imputed debt could also have serious implications for vertically integrated utilities by increasing their cost of financing and putting their own generation projects at risk.

## 9. What are your views of the potential for market distortions and possible impact on the wider market?

Our views are included in our response to question 8.

## 10. Can you identify and explain any other viable options (voluntary, competition based, regulatory or otherwise) that should be considered?

Our view is that an unrestricted PPA market is the most efficient way of allocating and costing risk. The role of

regulation is to ensure that all parties participate in negotiating the terms of PPAs do so on an equal footing and that no party is at a disadvantage. Our view is that the current PPA market achieves this.

The PPA market has a history of bringing forward new products to meet the needs of generation customers. Fixed to Flex, market indices and PPA sleeving are all good examples of this.

The changes brought about by EMR present further opportunities for the PPA market to develop. As previously discussed, suppliers' ability to offer PPAs around the reference price should reduce the impact of imputed debt and mean that longer duration PPAs can be offered. The absence of ROCs means that generators no longer have to depend on suppliers to realise the full value of their support, which should in turn allow new participants to enter the market with new operating models, increasing competition and stimulating innovation.

Given that the scope and cause of any issues with the PPA market are uncertain, it is our view that the best evidence on which to make a decision regarding whether regulatory intervention is required should come from a review of the how the market develops once the EMR package has been implemented. It is our view that the Government should not pre-empt the PPA market's response to the implementation of EMR.

