

Centrica's response to the Supplier Obligation Call for Evidence

Centrica welcomes the opportunity to respond to DECC's call for evidence on the Supplier Obligation. We have an interest both as a significant generator of low carbon electricity and as a gas and electricity supplier to residential and business properties.

Our responses to the questions in Annex A of the CfD Operational Framework are set out below:

1. *Do you have concerns about the predictability of the amount of potential volatility of CfD payments?*

Centrica recognises the volatility of CfD payments implied by the variable rate, but believes suppliers will be able to manage this. We already manage considerable cost volatility when setting our gas and electricity tariffs, perhaps most notably with industry imbalance costs which are significant, unpredictable and difficult to manage. A sensible hedging policy allows us to manage these risks however, and we believe we would be able to similarly hedge the new risks introduced by a variable tariff. Perhaps most importantly, such volatility would be preferable to the negative impacts of the reconciliation process implied by the fixed rate model. Such reconciliations could be large, equally unpredictable but even more difficult to hedge.

We are also concerned about the principle that the counterparty body will only "pay when paid" with the result that defaults or delayed payments from suppliers will delay payments to generators.

2. *Does this differ based on different scenarios for how generation mix evolves?*

Whilst the generation mix will have an impact on the price volatility of CfDs we believe that this volatility is manageable. It will however be important to ensure suppliers are supported in mitigating this volatility by providing them with visibility of likely generation volumes coming on line several years out, being firmed up the nearer we get to the project. This will allow more accurate forecasting and better management of the volume risk. This could be a role for the system operator.

3. *How would you manage the fact that CfD payments are changeable, noting that they are inversely related to wholesale price movements and looking at this from the perspective of variations in total costs to serve (i.e. wholesale price/other cost variations in conjunction with CfD payment variation)?*

We recognise that the power price provides a natural hedge to our CfD exposure, with wholesale costs moving inversely to CfD costs. To a certain extent therefore, DECC's policy design provides suppliers with a natural hedge against volatility. As above however, we believe there are other measures suppliers can take in order to mitigate any residual volatility, for example, by adapting our hedging strategy to take account of the particular generation mix at any one time.

4. *Is there a hedge that suppliers can utilise that may mitigate any risks?*

See above answer

5. *Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?*

We support the variable rate obligation. As above, we would be more concerned with a move to a fixed rate model which would raise post year reconciliation issues. This is because the fixed rate model would always be over or under the true value of payments required meaning that there would need to be reconciliation in the subsequent year, the value of which could be unpredictable and large. Our focus is therefore on ensuring suppliers are provided with sufficient information about likely generation volumes coming on line as far out as possible. This will ensure that suppliers are able to take the best view possible of their likely exposure.

6. *What are the potential impacts on suppliers of implementing the supplier obligation, including:*

- *Cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;*
- *Method of data collection;*
- *Changes to internal systems;*
- *And the proposed payment periods?*

We are comfortable with the amount of collateral that may need to be posted up front by suppliers, provided that the rules apply in the same way to all suppliers including small suppliers. As a guide Transmission and Distribution payments, which are of an equally significant size, currently require 6 weeks collateral. We believe the process for collecting information/making payments should be 'bolted on' existing systems to save administrative costs.

DONG ENERGY RESPONSE TO DECC CALL FOR EVIDENCE ON SUPPLIER OBLIGATIONS

DONG Energy is a Danish utility company and one of the leading energy groups in Northern Europe. Our business is based on procuring, producing, distributing, and trading in energy and related products in Denmark and Northern Europe. We have approximately 6,000 employees and generated £6.2bn revenue in 2011. With more than 20 years' experience in the wind power industry, DONG Energy is one of the leading offshore wind farm developers in the world. We have installed half of the world's largest offshore wind farms. The UK is one of DONG Energy's primary markets for developing offshore wind, having invested over £3 billion in UK renewable since 2005.

We currently have five offshore wind farms generating power in the UK and a stake in a number of sites pending construction, also a strong pipeline of future projects.

In thermal generation, DONG Energy is operating the highly efficient CCGT Severn power station near Newport in South Wales which has the capacity to generate up to 824 MW of electricity.

DONG Energy UK oil and gas exploration activities started in 2001 with the award of three exploration licences. Today the portfolio includes over 20 UK licences. DONG Energy is one of the largest acreage holders West of Shetland and we are a partner in the Laggan and Tormore gas discoveries and have a number of other West of Shetland developments in the pipeline.

In May 2012, DONG Energy established DONG Energy Sales UK¹ to supply natural gas to the non-domestic sector. With around 11% market share of the non-domestic sector, DONG Energy Sales UK supplies gas to around 5,000 customers from SMEs to large industrial. In addition, DONG Energy will begin providing electricity to the non-domestic sector during 2013.

DONG Energy supports the introduction of the Energy Bill and the proposed reform of the electricity market. Whilst we are broadly in agreement with the Energy Bill, we await the detail that will be contained in the secondary legislation and we welcome the opportunity to respond to DECC's Call for Evidence on the proposed approach for the supplier obligation.

Question 1

Do you have concerns about the predictability of the amount of potential volatility of CfD payments?

The CFD payments are likely to be subject to some degree of volatility and as a consequence, are likely to cause some level of cash flow management for supply companies. The extent of the volatility of CFD payments is unclear but it will mean the supplier needs to levy a variable amount on the customer. However, it should be possible to determine a cap for any supplier based on the volume of generation requiring support, the applicable CFD and the day ahead price. It should also be possible to be more precise in the shorter term by applying an appropriate load factor to the renewable generation.

The potential volatility around a CFD payment may act as a barrier to entry for new entrants to the electricity supply market as new entrants to the electricity supply market in the UK will not hold customer data which could help to manage some of the potential volatility for the customer.

¹ Previously Shell Gas Direct

A direct consequence of the potential volatility will be the impact on the consumer who may perceive that he has no control or understanding of his energy bills. Whilst the energy supplier can go some way towards explaining and communicating proposed policy, it would be helpful if Government is able to endorse or lead in this area.

Question 2:

Does this differ based on different scenarios for how the generation mix evolves?

Paragraph 301, Annex A highlights that reference prices for CFD payments could prove unpredictable and that this could increase when combined with a changeable generation mix. With all wind, wave and solar generation, there is an element of unpredictability based on weather patterns although this is less so for those low carbon generators receiving a baseload CFD. As such, if there is a greater proportion of baseload CFDs granted than intermittent CFDs, there is likely to be a lower level of volatility in the CFD payments. In addition, over time, it can be expected that prediction of intermittent generation output should become more sophisticated and could potentially lead more accurate management of any volatility that does arise.

Question 5

Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?

DECC is currently proposing a variable rate obligation as it offers the most efficient approach to raising funds for the CFD counterparty. The variable rate obligation would enable the precise amounts owed by the generators under the CFDs in a given period are collected by the CFD counterparty from suppliers as soon as possible after that period and passed through to generators. This would mean that suppliers would have to manage the risk of over or under collection from consumers arising from the unpredictability and volatility in generation volumes. The only way to mitigate this risk would be to develop 'real time pricing' for consumers. However, this would be a costly option for both consumers and suppliers from a systems perspective. Neither of these options is viable option for a small supplier where the margins and, potentially, the number of customers are limited.

DONG Energy's preference is for the alternative proposal, a fixed rate obligation. However, the Government has concerns the risk of underpayment could damage investor confidence which could only be mitigated by over collection. A fixed rate would be derived from predictions of the likely payments arising from the generator's CFDs in a future period and prediction of supplier market share, and a reconciling mechanism to make up any under or over payment. A fixed rate obligation allows a supply company to manage the risk of under payment from consumers and reduces the level of administration required. However, the CFD Counterparty would need to be able hold funds to ensure generator payments if the fixed rate option were pursued.

Paragraph 288, Annex A proposes that Suppliers will be obliged to post collateral for the forthcoming payment they are due to make. The amount of collateral will depend on the frequency of obligation payments, and how far in arrears the payments are made. It could also depend on the expected size of the payment, i.e. would require a view of prices for the relevant period.

It is not stated in the document whether monthly payments will mean monthly calculations of market share, but if this is the case there may be further invoicing required to ensure the correct amounts are paid, as supply data is not finalised until around 15 months after the point of supply.

Overall, the larger, more established suppliers who are able to make appropriate adjustments via their trading platforms and/ or their generation arms will find it easier to manage and absorb the financial and operational risks.

Question 6

What are the potential impacts on suppliers of implementing the supplier obligation, including:

- *cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;*
- *method of data collection;*
- *changes to internal systems;*
- *and the proposed payment periods?*

Clearly, there will be an increase in costs for suppliers to implement the supplier obligation, although at this stage it is not possible to determine the level of the increased costs for the variable rate option, it will be considerably cheaper to implement the fixed rate obligation

DONG Energy is supportive of using an existing approach, such as the Balancing and Settlement Code (BSC), to collecting data. This approach would include the regulation of relevant parts by Ofgem and open industry governance, as appropriate.

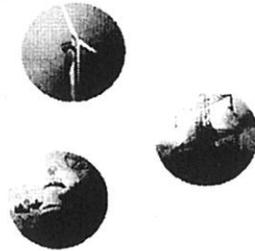
DONG Energy is supportive of longer payment periods, for example, monthly.

Question 7

Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

To both mitigate risks to the industry and to reduce the timescale for implementation, DONG Energy supports fixed rates.

16 January 2013



elec.marketreforms@decc.gsi.gov.uk

15 January 2013

Dear Sir/ Madam

Re: Cornwall Energy Response: Funding the Contract for Difference Feed-in Tariff: Supplier Obligation: A Call for Evidence

Cornwall Energy welcomes this opportunity to present views and analysis on the proposed mechanism to fund contract for difference feed-in tariffs (CfD FiTs) and the supplier obligation.

The contents of this response have been discussed with the members of our Independent Energy Supplier Forum¹. This letter does not purport to represent a view from the group members, but the arguments set out here are supported by many of the individual members. Most members will be submitting their own responses to this consultation and would like to engage with officials.

The introduction of an obligation on suppliers to make good payments for eligible CfD FiT generators, in its proposed form, creates significant issues and risks for the supply community. Many of these risks are difficult to manage a point already made publicly by two of the Big Six. These problems are exacerbated for independent suppliers.

This response makes a number of general comments and highlights specific concerns. Detailed responses to the DECC questions are at Appendix A.

Transfer of risk to suppliers

One of the arguments put forward by government for introducing CfD FiTs is to reduce the risk (and therefore the cost of capital) for investors in new low-carbon plant. The avoided price risk is significant, but this has simply been passed through to consumers. In practice, the risk sits with

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suppliers between the point at which the subsidy is collected and the point at which that cost is recovered from the customer. These new risks are significant. However, suppliers, as collection agents, are not well placed to absorb or mitigate these, which as we demonstrate below is likely to be particularly significant for non-credit rated independent suppliers with relatively small "non-sticky" customer bases.

Furthermore, under the Renewables Obligation, where suppliers can be confident (within a small margin) of their exposure and therefore can price this into their tariffs and contracts and collect revenues from customers prior to meeting their obligation. In contrast the CfD FiT supplier obligation as proposed does not allow for this, and it will under DECC's proposals be based on a variable charge reflective of day-ahead prices. In a world of increasing intermittency the day-ahead price is likely to be very volatile, potentially going negative. The potential liability for difference payments by suppliers will therefore be extremely difficult to quantify and to price into retail offers.

Particular problems for independent suppliers

Under the current CfD FiTs proposals, all suppliers will have to post credit probably sufficient to cover two months of maximum exposure to difference payments. These amounts will be significant. Constraining cash-flows for independent suppliers by tying it up in collateral will detrimentally impact on their working capital requirements.

CfD FiTs should not be seen in isolation. There are a raft of other obligations on suppliers that are already diverting scarce working capital, especially relative to the current baseline under the RO. Taken in the round, these are placing real limits on the ability of the independent supply community to grow. In turn this will inevitably frustrate ministerial expectations regarding competition in the market and the ability of credible competitors to the Big Six to emerge.

Competitive distortions

Unlike their larger counterparts most independent suppliers are not credit-rated, so their cost of working capital will be higher than their competitors. Neither do independent suppliers have the luxury of a large, stable and diverse customer book over which they can defray third-party costs. Furthermore independent suppliers are unlikely to be significant investors in CfD FiT plant. In contrast significant volumes will be brought forward by the vertically integrated incumbents, which of course will have greater ability to shift revenues around their corporate structure and so dampen any "shocks" on the retail side of the market.

In combination these factors will materially undermine the ability of independent suppliers to compete, and further tilt the playing field to the Big Six.

Forecasting the unforecast-able

To understand its exposure each supplier must have a view of:

- the amount of CfD FiT approved plant and project commissioning;
- future generation volumes, which will largely be a function of the prevailing weather as round three plant is installed ahead of more predictable baseload stations;
- day-ahead market reference prices and their volatility; and
- the impacts of these on cash-flow and working capital requirements across the entire business.

To ensure sufficient revenues can be collected from customers to cover CfD FiT payments, suppliers will have to have a view of the above factors over at least one year out and possibly up to three years ahead, even though many will not have generation interests themselves.

Historic data shows that the load factors for renewables can vary significantly due to dry and still periods versus wet and windy conditions. In the case of offshore wind (which we assume will dominate CfD FiTs at least until the early 2020s), recent data from Barrow offshore wind farm shows that the load factor for May 2011 was exceptionally high at 60%, yet two months later it had dropped to 19%.

Many (but not all) suppliers will be more comfortable with assessing wholesale prices. Although all suppliers will employ different wholesale purchasing and hedging strategies, it is reasonable to assume that most will seek to enter the short-term (and specifically the day-ahead) wholesale markets to refine their positions provided they post the appropriate credit. However, attempting to assess day-ahead prices over a time-frame of a year or more will always be fraught with uncertainty.

This situation is compounded by the proposal to use as a reference price for intermittent CfD FiTs the "GB Zone" price resulting from market coupling arrangements under the Single Target Model, which is not yet established or well defined. This will inevitably introduce new variables over which GB independent suppliers have little knowledge. It will also introduce new risks from step changes when new links are commissioned or where new price zones are created within markets already linked.

As with any uncertainty, the risks will be priced into supplier offers to end customers. The risk is greater to independent suppliers owing to their generally higher cost of borrowing, their tightness of working capital and the fact they do not have diversified business models to spread the risk. It follows that DECC's proposals will place them at a further competitive disadvantage.

Analysis

To illustrate the impact on independent suppliers that could arise from the obligation and validate these comments, we have modelled monthly payment calls in a single year (2016) and over a longer period (2016-21) from a CfD FiT market. We have:

- constructed cost benchmarks using what we believe to be the three main renewables technologies in terms of new capacity likely to be brought forward in the period to 2020-21—onshore wind, offshore wind and biomass conversions. We have modelled IGW of new capacity for each of these technologies for initial cross-comparison and used levelised cost estimates from DECC² to calculate the cost per unit (MWh) supplied for the technologies;
- set out a notional build out scenario for the three technologies in the period 2016-2021 to estimate a credible weighted average cost to support the technologies under CfD FiTs in the period;
- estimated the total cost to the supplier community and then looked at how this will impact individual suppliers—a small domestic supplier with around a 0.6% market share (50,000 customers), an independent supplier specialising in supply to SMEs with around a 1% market share and a larger commercial supplier with around 3% market share; and

² DECC's Renewables Obligation Banding Review levelised costs:
http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx

- also compared the notional costs incurred by the supplier under CfD FiTs with those of the Renewables Obligation, to indicate the extent of the residual obligation that will exist under those arrangements.

Further details can be found at Appendix B.

The paper shows:

- on a like-for-like basis biomass conversions will be the most expensive to support on a monthly basis given their relatively high levelised costs (and therefore strike prices) and load factors;
- assuming 2.5GW of CfD plant is accredited in 2016 (1GW offshore, 550MW onshore and 950MW of biomass conversion), the monthly cost for a supplier with 3% market share could peak at more than £2.5mn. A supplier with 1% market share could see monthly costs of around £800,000 and a small domestic supplier (0.06% market share) could have to stump up as much as £50,000 in a month. There will be significant variances in monthly payments required due to changes in production, reference prices and the volumes that costs are spread across in a particular month; and
- where suppliers are required to make good policy support costs from their customer base, it is not so much the amount to be recovered, but the certainty and predictability that is important to ensure non-detrimental impacts on the retail market. Suppliers that are unable to hedge this risk will have little choice but to fold into contract and tariff offers the higher end of the cost assessment to ensure they have sufficient cash-flow to meet the collateral calls and payments.

Mitigating measures

We believe the following mitigating measures should be assessed.

A fixed charge

A fixed-charge obligation should be introduced to allow suppliers to price in the cost of meeting their CfD FiT payments at a rate that is transparent and de-risked (as far as possible) for the paying customer, and be set annually. As with other regulated cost elements (such as network charges), any regulatory over/ under recovery can be dealt with in the following charging year. Assuming the CfD counterparty is government owned, it can make good any shortfall within year (at a lower cost of capital available to suppliers) and any balance would then be recovered from suppliers.

This time frame and mechanism would allow independent suppliers to better manage their working capital and reduce competitive distortions arising from incumbents being able to smear costs across large customer bases with significant numbers of "sticky customers". A fixed-charge obligation would also provide much needed transparency for customers on the cost of supporting low-carbon technologies through their bills.

The Renewables Obligation operates such that the market is notified in advance of each compliance period of the buy-out cost and government's view of generation volumes (similar to the DECC current approach as part of the headroom calculation). Therefore a fixed-charge obligation would build on this, albeit with the actual £/MWh charge confirmed by government (rather than inferred as is the case for the Renewables Obligation).

Pooling collateral

The CfD FiT counterparty (probably through the BSC-style settlement agent) would have access to 100% of all potential default funds, which would result in unnecessary collateralisation for the industry. Instead other models should be explored, such as those in place for electricity distribution

network charges that extend credit to parties that can demonstrate their creditworthiness and reduce the amount of collateral that has to be posted.

Others failing to meet an agreed standard could provide letters of credit as required, but to meet the assessed average liability over the twelve month period, but not the theoretical maximum exposure.

Shorter reconciliation periods

More frequent settlement perhaps based around initial interim data could be used, but the cashflow impacts of this on suppliers should be very closely scrutinised. There is a clear trade-off here between credit calls and working capital that should be modelled before final decisions are taken.

Answers to questions

As noted, fuller responses are provided below in Appendix A to the questions set out in the Call for Evidence.

Appendix A—responses to consultation questions

1. Do you have concerns about the predictability of the amount of potential volatility of CfD payments?

Yes. For suppliers to understand the levels of payments they will be called to make to support CfD FiTs it will be necessary to take a view on a number of variables over which they have no control. These include:

- generation volumes—which in the early years of the CfD FiT regime will be driven by weather factors. It will also be necessary to take account of planned and unplanned plant outages and the date of newly commissioned plant; and
- market reference prices and their volatility—this is likely to be particularly true for the yet to be introduced “GB Zone” price resulting from market coupling arrangements.

To establish the level of payments to be made independent suppliers will have to take a view on these variables well in advance of setting supply tariffs and contracts, and they will also need to estimate these values going forward so they can price year ahead and longer offers.

This introduces the risk that the difference between forecasts and outturn will result in a) suppliers under-collecting revenues from customers and therefore negatively impacting on their cash-flows or b) suppliers over-collecting, but at the cost of setting their tariffs/ contracts competitively.

Under the DECC proposals there has been no modelling of the likely cashflows under the proposals, and it is therefore impossible to assess the impacts on the supplier community as a whole and on individual suppliers in particular.

2. Does this differ based on different scenarios for how the generation mix evolves?

Yes but only to a degree. The more predictable plant there is in the CfD FiT generation mix the greater confidence of the forecast of generation volumes. However this is a second order concern compared to those factors outlined in the answer to question 1.

The longer-term view of the market reference price uncertainty would still remain, and as we have seen over recent winters the output from intermittent technologies can vary dramatically month to month, season to season, year to year.

3. How would you manage the fact that CfD payments are changeable, noting that they are inversely related to wholesale price movements, and looking at this from the perspective of variations in total costs to serve (i.e. wholesale price/other cost variations in conjunction with CfD payment variations)?

The implication of this question is that volatility does not matter because a high difference payment would be offset by a lower wholesale price. This is not correct.

There might be some hedge for those players who are able to utilise short term markets (assuming these are used as the basis for setting reference prices). However most independent suppliers will endeavour to enter into back to back hedges where they add customers, especially where significant volumes are involved. It is increasingly likely that CfD FiT volumes, over which a supplier has no control, will systematically exceed volumes committed in the forwards markets.

This is a very complicated area that requires simulation of various different contract strategies, layering over it physical offtake contracts.

More generally suppliers already face numerous third-party costs that they must take account of, often at short notice, in their price setting activity. The CfD FiT payments are likely to be a substantial element of this basket of regulated or supplier obligation costs. Experience of the small scale FiT scheme to support micro-generation has shown that a mechanism that has only a volume variable the pass through costs can be unpredictable and impact adversely on independent suppliers' cash-flows.

It is counter-intuitive and damaging to retail competition that regulated and directed industry costs are less hedgeable and stable than the commodity element of the bill. For suppliers, where margins are thin, the ability to account for these diverse charges is the key to ensuring a viable long-term business.

The impact of the government's proposed payment model to underwrite CfD FiT must also be assessed in the light of these factors.

4. Is there a hedge that suppliers can utilise that may mitigate any risks?

Not that we are aware of. This is why we advocate a fixed rate obligation.

5. Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?

It will be very detrimental to competition because of the impacts on working capital and create asymmetrical create adverse impacts for independent suppliers.

Independent suppliers will have less opportunity to absorb these costs into their business because:

- most are not credit-rated and will have to tie up significant cash-flows to cover their credit requirements. This will prevent the cash from being used to grow their businesses and raise costs;
- the extent to which the CfD FiT payment mechanism needs to be collateralised has not been sufficiently thought through, nor its impact on the wider market;
- the majority of independent suppliers will not be investing in significant volumes of CfD FiT eligible plant and therefore will not have the option to transfer costs/ revenues between generation or retail sides of their business;
- all independent suppliers, by definition, have "non-sticky" customers, and cannot benefit from the hedge that disengaged customer provide to the incumbents; and
- the work undertaken by government thus far has not sufficiently considered how this obligation sits alongside how other third-party costs are assimilated (network charges, the Renewables Obligation, Climate Change Levy, small-scale FiTs, the Energy Company Obligation, Warm Homes Discount, Green Deal).

6. What are the potential impacts on suppliers of implementing the supplier obligation, including:

- cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;
- method of data collection;

- changes to internal systems;
- and the proposed payment periods?

Credit terms for the CFD FIT supplier obligation will increase the working capital requirements of independent suppliers to a point that this could restrict growth or in extreme cases make the business unviable. Some independent suppliers have suggested to us that the increased working capital requirements could be in the order of in excess of 10% of annual turnover. As noted above, this is in addition to existing (and increasing) third-party charges.

There will be system and data collection impacts, but these pale into insignificance compared to credit and payment concerns.

The proposed settlement model looks complicated and does not take into account:

- volumes posted by suppliers in CVA; and
- eligible plant on-site that does not export onto the public system.

A simpler arrangement based around an agent acting on behalf of the CfD counterparty should be explored.

7. Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

We have set out in the covering letter three steps that could potentially mitigate the impact of the current proposals. They are:

- a fixed rate obligation – this is essential;
- a combination of the pooling of collateral, the use of average annual exposures and the recognition of good payment records is needed. A margin call approach such as that used under the BSC for uncontracted trades would be especially damaging to independent suppliers and will increase their cost of doing business relative to the incumbents; and
- more frequent settlement perhaps based around initial interim data could be used, but the cashflow impacts of this on suppliers should be very closely scrutinised. There is a clear trade-off here between credit calls and working capital that should be modelled before final decisions are taken.

Appendix B—CfD FiT supplier cost analysis

To illustrate the impact on suppliers that could arise from the obligation, we have modelled monthly payment calls in a single calendar year (2016) from a CfD FiT market with IGW of offshore wind, IGW of onshore wind and IGW of biomass plant. For each variable (generation volumes and market reference price, using historic data as a proxy), we have modelled low, medium and high scenarios to illustrate the spread of payments suppliers could be called upon to make³.

The spread-sheet based model makes the following assumptions:

- all plant is fully operational in 2016;
- for simplicity the market reference prices used are actual 2012 prices averaged for each month;
- wind technologies use the reported day-ahead wholesale price, biomass uses the average daily reported annual baseload contract price;
- supplier payments are calculated on a monthly basis, but billed in arrears, and not a half-hourly basis;
- load-factors are based on historic data; and
- the strike prices used are taken from levelised cost estimates applied in the recent RO banding review consultation.

The load factors used in the model are based on those achieved historically⁴. These are used to calculate generation volumes under low, average and high scenarios.

Low, medium and high market reference prices are also used. For illustration we have used historic wholesale power prices (from 2012)⁵. Here the low price is the lowest reported price within the calendar month, the average is the mean average of all prices throughout the month, and the high price is the maximum reported contract price for the month.

Strikes prices have not been adjusted for inflation and are presented as per the analysis that underpinned the latest RO banding review (2013-17)⁶. They are:

- offshore wind = £192/MWh;
- onshore wind = £88/MWh; and
- biomass conversion = £116/MWh.

Below we illustrate the weighted average payments for each of the technologies on a monthly basis for IGW of all technologies spread among all suppliers under a medium scenario (reference price and generation volumes).

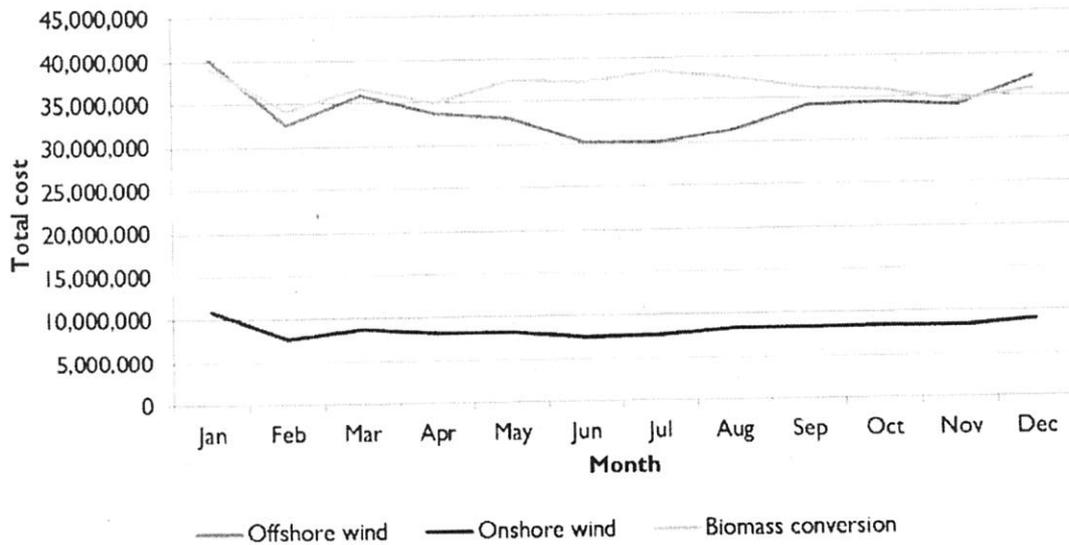
³ For reasons of space this paper generally focuses on the medium scenario. Please contact us for the low and high scenarios.

⁴ Sourced from DECC Dukes: <http://www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx> and Ofgem's Renewables and CHP Register: <https://www.renewablesandchp.ofgem.gov.uk/>

⁵ Sourced from price reporters and Cornwall Energy data. Please contact us for further details.

⁶ DECC RO banding review: http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx

Total cost of IGW of each technology across all suppliers, DECC levelised costs



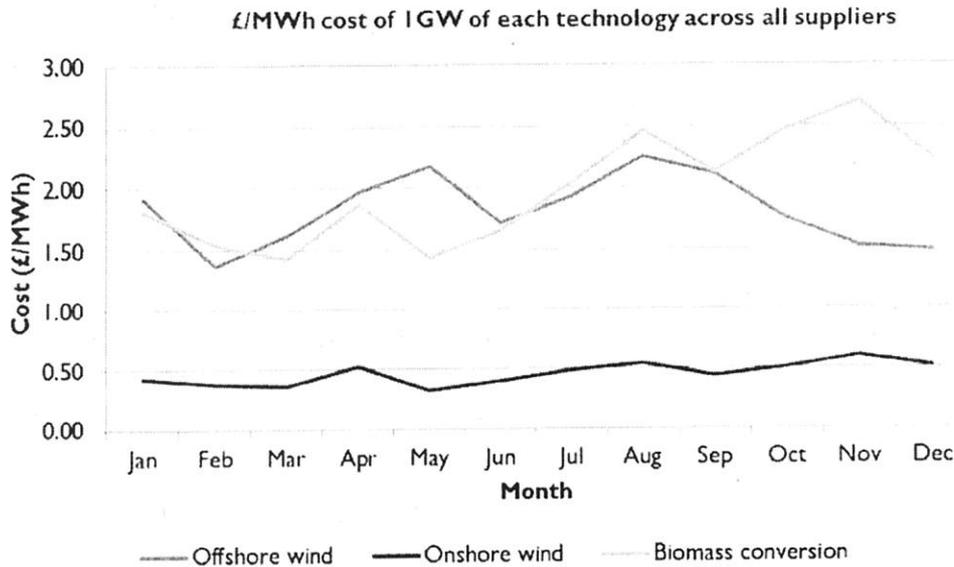
For offshore wind the general increase of costs over summer is due to lower CfD FiT payments offset by even lower supply volumes over which to distribute payments. The payments could peak in January due to greater CfD FiT costs than other winter months.

For onshore wind this model shows low overall costs due to the lower load factor and lower top-up costs compared to the other technologies.

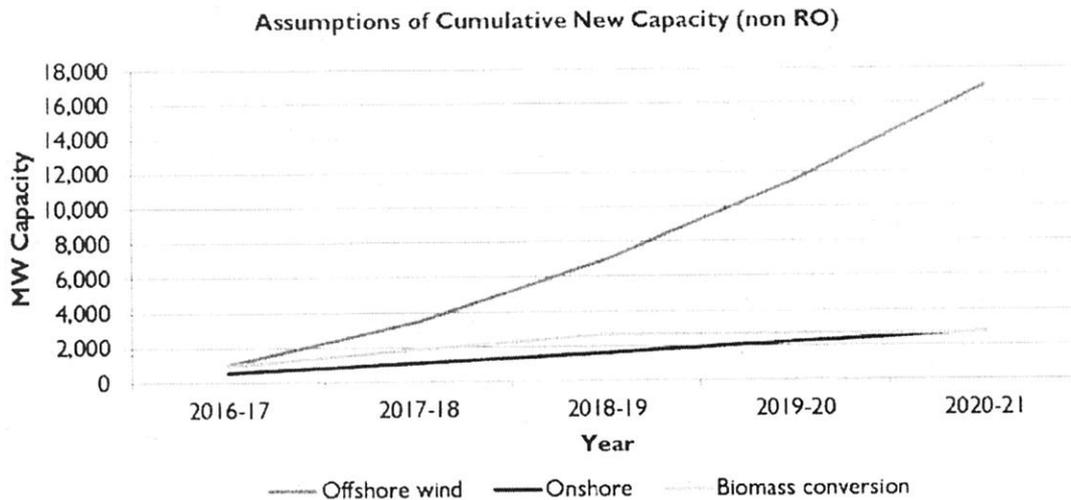
Biomass conversion plant shows the largest costs due to the very high load factors that do not change seasonally but supply volumes do. There is also a trend towards costs being cheaper in winter and more expensive in summer, due to costs being spread over more supply in winter.

The model highlights the spread of payments that could be made, which are a function of market prices and actual generation volumes. The model does not account for the cost of capital or the credit that the supplier would have to post in lieu of payment.

We also estimate the equivalent cost of supporting IGW of each of the technologies on a £/MWh supplied basis using monthly DECC DUKES data for 2012 for total energy supplied as a measure of the total market.



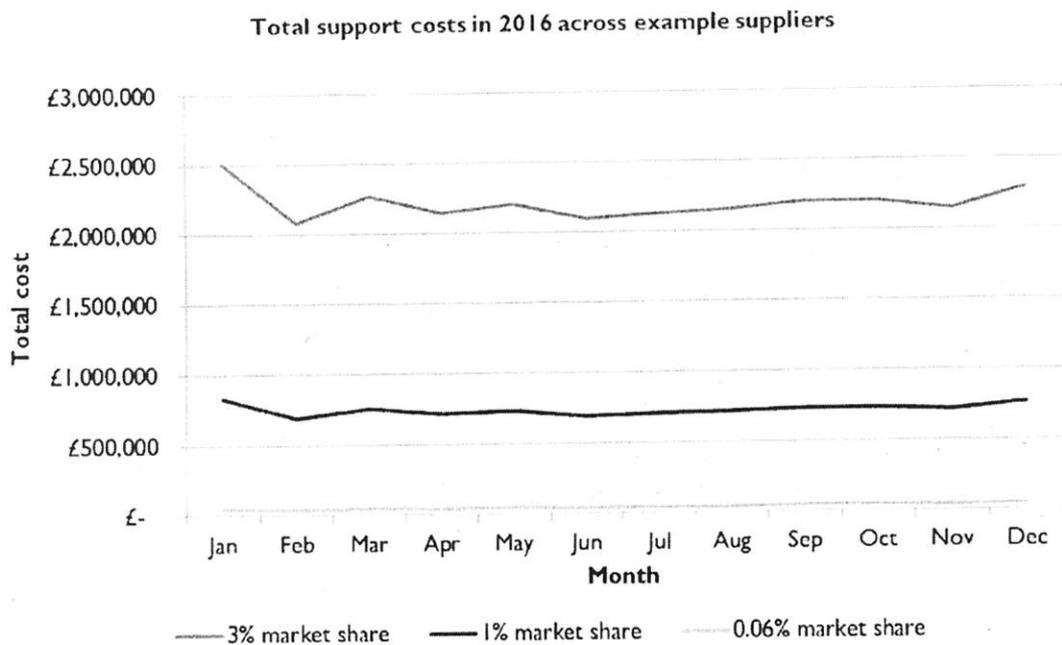
To illustrate the potential for payment variability we have modelled the cost of meeting the RO against notional new capacity that could seek CfD FiTs between 2016-17 and 2020-21. A scenario for onshore wind, offshore wind and biomass conversions has been designed using a combination of company announcements and the agreements made with National Grid in the Transmission Entry Capacity Register. We have used this to work out new capacity additions and when they are likely to arrive, this has also been filtered through our estimate of how long it will take for new capacity to be added and how much biomass conversion is likely. These assumptions are shown below.



For simplicity we have used average load factors and market reference prices as per the examples above. The actual capacity in the illustrative year for CfD approved plant is 2.5GW (1GW offshore, 550MW onshore and 950MW of biomass conversion).

Using these data and assumptions, payments calls are calculated for electricity suppliers with a 3% market share (a large independent industrial and commercial supplier), 1% market share (representing an independent supplier specialising in supply to SMEs) and 0.06% market share (around the volumes supplied by a household supplier with 50,000 accounts). We have assumed no delay between volumes generated and the calls for payments.

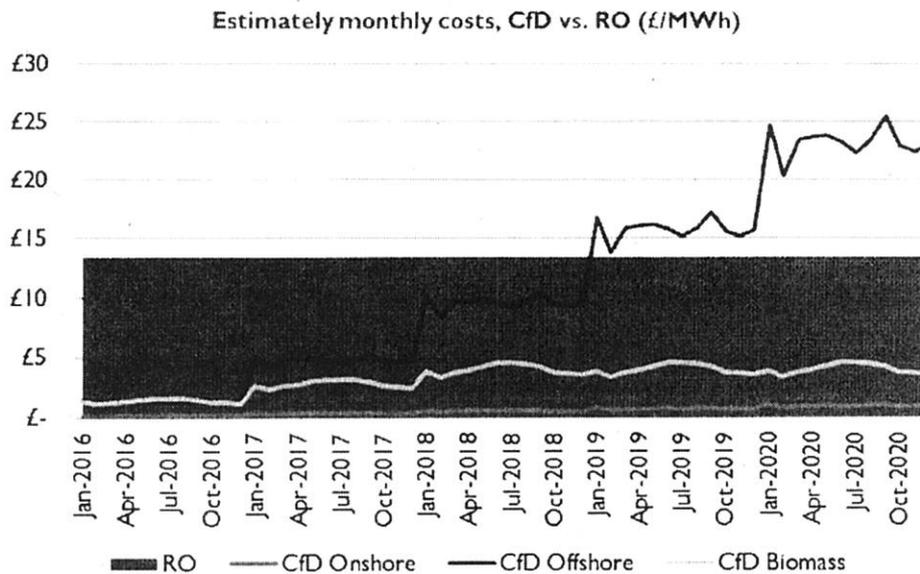
The outcome of the exercise highlights that, even in this simplified model, the range of payments to be made by suppliers will vary considerably within a single year⁷. Suppliers are faced with the choice of pricing in the high end of the potential payments to ensure they recover sufficient revenue from customers, but risk being uncompetitive on price, or pitching their pricing strategies such that they remain competitive but risk eroding working capital should payments be higher than the medium scenario.



As the RO closes for new plant from 31 March April 2017 and the target will be set using headroom we have used the Cornwall Energy Roc forecast model to assess the cost of meeting the RO expressed as a £/MWh (the product of the buy-out price and RO target).

As the graphic below highlights (not adjusted for inflation) the revenues to be recovered to ensure suppliers meet their RO remains flat (as one would expect with the headroom mechanism), whereas the CfD FiT is far more unpredictable as costs faced will depend on performance of plant and reference prices.

⁷ We have also modelled low and high scenarios, but for reasons of space we have not included these in our summary paper.



The conclusion is that, where suppliers are required to make good policy support costs from their customer base, it is not so much the amount to be recovered, but the certainty and predictability that is important to ensure non-detrimental impacts on the retail market.

Suppliers that are unable to hedge this risk will have little choice but to fold into contract and tariff offers the higher end of the cost assessment to ensure they have sufficient cash-flow to meet the collateral calls and payments.

For the three supplier examples we have also estimated the total yearly costs they could see under CfD FiTs in the period 2016-2021 and the total collateral that could be required in each year⁸.

Estimated yearly costs for suppliers and collateral required (2016-2021) (medium scenario)

		2016-17	2017-18	2018-19	2019-20	2020-21
3% market share	Total year costs	27,212,759	72,772,055	128,464,082	185,196,242	254,159,425
	Collateral (sixth of total)	4,535,460	12,128,676	21,410,680	30,866,040	42,359,904
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	Collateral (sixth of total)	90,709	242,574	428,214	617,321	847,198

We show here the total estimated cost based on average prices in 2012. Based on these very stylised assumptions, this implies a total potential liability across suppliers of £8.4bn in 2020, against a total

⁸ The total collateral is based on one-sixth of the annual costs, i.e. two months of payments.

levy control framework that is £7.6bn in current prices, but which would also need to be used to fund other subsidy schemes including the RO. If prices trended towards the historic maximum in 2012, the total CfD cost under our indicative assessment could be in excess of £10bn. In practice therefore we would expect the CfD allocation process to result in lesser volumes of plant being supported.

15 January 2013

Funding the Contract for Difference Feed-in Tariff: Supplier Obligation

Cornwall Energy welcomes this opportunity to present views and analysis on the proposed mechanism to fund contract for difference feed-in tariffs (CfD FiTs) and the supplier obligation.

The contents of this response have been discussed with the members of our Independent Energy Supplier Forum¹. This letter does not purport to represent a view from the group members, but the arguments set out here are supported by many of the individual members. Most members will be submitting their own responses to this consultation and would like to engage with officials.

The introduction of an obligation on suppliers to make good payments for eligible CfD FiT generators, in its proposed form, creates significant issues and risks for the supply community. Many of these risks are difficult to manage a point already made publicly by two of the Big Six. These problems are exacerbated for independent suppliers.

This response makes a number of general comments and highlights specific concerns. Detailed responses to the DECC questions are at Appendix A.

Transfer of risk to suppliers

One of the arguments put forward by government for introducing CfD FiTs is to reduce the risk (and therefore the cost of capital) for investors in new low-carbon plant. The avoided price risk is significant, but this has simply been passed through to consumers. In practice, the risk sits with suppliers between the point at which the subsidy is collected and the point at which that cost is recovered from the customer. These new risks are significant. However, suppliers, as collection agents, are not well placed to absorb or mitigate these, which as we demonstrate below is likely to be particularly significant for non-credit rated independent suppliers with relatively small "non-sticky" customer bases.

Furthermore, under the Renewables Obligation, where suppliers can be confident (within a small margin) of their exposure and therefore can price this into their tariffs and contracts and collect revenues from customers prior to meeting their obligation. In contrast the CfD FiT supplier obligation as proposed does not allow for this, and it will under DECC's proposals be based on a variable charge reflective of day-ahead prices. In a world of increasing intermittency the day-ahead price is likely to be very volatile, potentially going negative. The potential liability for difference payments by suppliers will therefore be extremely difficult to quantify and to price into retail offers.

Particular problems for independent suppliers

Under the current CfD FiTs proposals, all suppliers will have to post credit probably sufficient to cover two months of maximum exposure to difference payments. These amounts will be significant. Constraining cash-flows for independent suppliers by tying it up in collateral will detrimentally impact on their working capital requirements.

CfD FiTs should not be seen in isolation. There are a raft of other obligations on suppliers that are already diverting scarce working capital, especially relative to the current baseline under the RO. Taken in the round, these are placing real limits on the ability of the independent supply community to grow. In turn this

¹ <http://www.es-net.org.uk/>

will inevitably frustrate ministerial expectations regarding competition in the market and the ability of credible competitors to the Big Six to emerge.

Competitive distortions

Unlike their larger counterparts most independent suppliers are not credit-rated, so their cost of working capital will be higher than their competitors. Neither do independent suppliers have the luxury of a large, stable and diverse customer book over which they can defray third-party costs. Furthermore independent suppliers are unlikely to be significant investors in CfD FiT plant. In contrast significant volumes will be brought forward by the vertically integrated incumbents, which of course will have greater ability to shift revenues around their corporate structure and so dampen any "shocks" on the retail side of the market.

In combination these factors will materially undermine the ability of independent suppliers to compete, and further tilt the playing field to the Big Six.

Forecasting the unforecast-able

To understand its exposure each supplier must have a view of:

- the amount of CfD FiT approved plant and project commissioning;
- future generation volumes, which will largely be a function of the prevailing weather as round three plant is installed ahead of more predictable baseload stations;
- day-ahead market reference prices and their volatility; and
- the impacts of these on cash-flow and working capital requirements across the entire business.

To ensure sufficient revenues can be collected from customers to cover CfD FiT payments, suppliers will have to have a view of the above factors over at least one year out and possibly up to three years ahead, even though many will not have generation interests themselves.

Historic data shows that the load factors for renewables can vary significantly due to dry and still periods versus wet and windy conditions. In the case of offshore wind (which we assume will dominate CfD FiTs at least until the early 2020s), recent data from Barrow offshore wind farm shows that the load factor for May 2011 was exceptionally high at 60%, yet two months later it had dropped to 19%.

Many (but not all) suppliers will be more comfortable with assessing wholesale prices. Although all suppliers will employ different wholesale purchasing and hedging strategies, it is reasonable to assume that most will seek to enter the short-term (and specifically the day-ahead) wholesale markets to refine their positions provided they post the appropriate credit. However, attempting to assess day-ahead prices over a time-frame of a year or more will always be fraught with uncertainty.

This situation is compounded by the proposal to use as a reference price for intermittent CfD FiTs the "GB Zone" price resulting from market coupling arrangements under the Single Target Model, which is not yet established or well defined. This will inevitably introduce new variables over which GB independent suppliers have little knowledge. It will also introduce new risks from step changes when new links are commissioned or where new price zones are created within markets already linked.

As with any uncertainty, the risks will be priced into supplier offers to end customers. The risk is greater to independent suppliers owing to their generally higher cost of borrowing, their tightness of working capital and the fact they do not have diversified business models to spread the risk. It follows that DECC's proposals will place them at a further competitive disadvantage.

Analysis

To illustrate the impact on independent suppliers that could arise from the obligation and validate these comments, we have modelled monthly payment calls in a single year (2016) and over a longer period (2016-21) from a CfD FiT market. We have:

- constructed cost benchmarks using what we believe to be the three main renewables technologies in terms of new capacity likely to be brought forward in the period to 2020-21—onshore wind, offshore wind and biomass conversions. We have modelled IGW of new capacity for each of these technologies for initial cross-comparison and used levelised cost estimates from DECC² to calculate the cost per unit (MWh) supplied for the technologies;
- set out a notional build out scenario for the three technologies in the period 2016-2021 to estimate a credible weighted average cost to support the technologies under CfD FiTs in the period;
- estimated the total cost to the supplier community and then looked at how this will impact individual suppliers—a small domestic supplier with around a 0.6% market share (50,000 customers), an independent supplier specialising in supply to SMEs with around a 1% market share and a larger commercial supplier with around 3% market share; and
- also compared the notional costs incurred by the supplier under CfD FiTs with those of the Renewables Obligation, to indicate the extent of the residual obligation that will exist under those arrangements.

Further details can be found at Appendix B.

The paper shows:

- on a like-for-like basis biomass conversions will be the most expensive to support on a monthly basis given their relatively high levelised costs (and therefore strike prices) and load factors;
- assuming 2.5GW of CfD plant is accredited in 2016 (1GW offshore, 550MW onshore and 950MW of biomass conversion), the monthly cost for a supplier with 3% market share could peak at more than £2.5mn. A supplier with 1% market share could see monthly costs of around £800,000 and a small domestic supplier (0.06% market share) could have to stump up as much as £50,000 in a month. There will be significant variances in monthly payments required due to changes in production, reference prices and the volumes that costs are spread across in a particular month; and
- where suppliers are required to make good policy support costs from their customer base, it is not so much the amount to be recovered, but the certainty and predictability that is important to ensure non-detrimental impacts on the retail market. Suppliers that are unable to hedge this risk will have little choice but to fold into contract and tariff offers the higher end of the cost assessment to ensure they have sufficient cash-flow to meet the collateral calls and payments.

Mitigating measures

We believe the following mitigating measures should be assessed.

A fixed charge

A fixed-charge obligation should be introduced to allow suppliers to price in the cost of meeting their CfD FiT payments at a rate that is transparent and de-risked (as far as possible) for the paying customer, and be set annually. As with other regulated cost elements (such as network charges), any regulatory over/ under

² DECC's Renewables Obligation Banding Review levelised costs:
http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx

recovery can be dealt with in the following charging year. Assuming the CfD counterparty is government owned, it can make good any shortfall within year (at a lower cost of capital available to suppliers) and any balance would then be recovered from suppliers.

This time frame and mechanism would allow independent suppliers to better manage their working capital and reduce competitive distortions arising from incumbents being able to smear costs across large customer bases with significant numbers of "sticky customers". A fixed-charge obligation would also provide much needed transparency for customers on the cost of supporting low-carbon technologies through their bills.

The Renewables Obligation operates such that the market is notified in advance of each compliance period of the buy-out cost and government's view of generation volumes (similar to the DECC current approach as part of the headroom calculation). Therefore a fixed-charge obligation would build on this, albeit with the actual £/MWh charge confirmed by government (rather than inferred as is the case for the Renewables Obligation).

Pooling collateral

The CfD FiT counterparty (probably through the BSC-style settlement agent) would have access to 100% of all potential default funds, which would result in unnecessary collateralisation for the industry. Instead other models should be explored, such as those in place for electricity distribution network charges that extend credit to parties that can demonstrate their creditworthiness and reduce the amount of collateral that has to be posted.

Others failing to meet an agreed standard could provide letters of credit as required, but to meet the assessed average liability over the twelve month period, but not the theoretical maximum exposure.

Shorter reconciliation periods

More frequent settlement perhaps based around initial interim data could be used, but the cashflow impacts of this on suppliers should be very closely scrutinised. There is a clear trade-off here between credit calls and working capital that should be modelled before final decisions are taken.

Answers to questions

As noted, fuller responses are provided below in Appendix A to the questions set out in the Call for Evidence.

Appendix A—responses to consultation questions

1. Do you have concerns about the predictability of the amount of potential volatility of CfD payments?

Yes. For suppliers to understand the levels of payments they will be called to make to support CfD FiTs it will be necessary to take a view on a number of variables over which they have no control. These include:

- generation volumes—which in the early years of the CfD FiT regime will be driven by weather factors. It will also be necessary to take account of planned and unplanned plant outages and the date of newly commissioned plant; and
- market reference prices and their volatility—this is likely to be particularly true for the yet to be introduced “GB Zone” price resulting from market coupling arrangements.

To establish the level of payments to be made independent suppliers will have to take a view on these variables well in advance of setting supply tariffs and contracts, and they will also need to estimate these values going forward so they can price year ahead and longer offers.

This introduces the risk that the difference between forecasts and outturn will result in a) suppliers under-collecting revenues from customers and therefore negatively impacting on their cash-flows or b) suppliers over-collecting, but at the cost of setting their tariffs/ contracts uncompetitively.

Under the DECC proposals there has been no modelling of the likely cashflows under the proposals, and it is therefore impossible to assess the impacts on the supplier community as a whole and on individual suppliers in particular.

2. Does this differ based on different scenarios for how the generation mix evolves?

Yes but only to a degree. The more predictable plant there is in the CfD FiT generation mix the greater confidence of the forecast of generation volumes. However this is a second order concern compared to those factors outlined in the answer to question 1.

The longer-term view of the market reference price uncertainty would still remain, and as we have seen over recent winters the output from intermittent technologies can vary dramatically month to month, season to season, year to year.

3. How would you manage the fact that CfD payments are changeable, noting that they are inversely related to wholesale price movements, and looking at this from the perspective of variations in total costs to serve (i.e. wholesale price/other cost variations in conjunction with CfD payment variations)?

The implication of this question is that volatility does not matter because a high difference payment would be offset by a lower wholesale price. This is not correct.

There might be some hedge for those players who are able to utilise short term markets (assuming these are used as the basis for setting reference prices). However most independent suppliers will endeavour to enter into back to back hedges where they add customers, especially where significant volumes are involved. It is increasingly likely that CfD FiT volumes, over which a supplier has no control, will systematically exceed volumes committed in the forwards markets.

This is a very complicated area that requires simulation of various different contract strategies, layering over it physical offtake contracts.

More generally suppliers already face numerous third-party costs that they must take account of, often at short notice, in their price setting activity. The CfD FiT payments are likely to be a substantial element of

this basket of regulated or supplier obligation costs. Experience of the small scale FiT scheme to support micro-generation has shown that a mechanism that has only a volume variable the pass through costs can be unpredictable and impact adversely on independent suppliers' cash-flows.

It is counter-intuitive and damaging to retail competition that regulated and directed industry costs are less hedgeable and stable than the commodity element of the bill. For suppliers, where margins are thin, the ability to account for these diverse charges is the key to ensuring a viable long-term business.

The impact of the government's proposed payment model to underwrite CfD FiT must also be assessed in the light of these factors.

4. Is there a hedge that suppliers can utilise that may mitigate any risks?

Not that we are aware of. This is why we advocate a fixed rate obligation.

5. Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?

It will be very detrimental to competition because of the impacts on working capital and create asymmetrical create adverse impacts for independent suppliers.

Independent suppliers will have less opportunity to absorb these costs into their business because:

- most are not credit-rated and will have to tie up significant cash-flows to cover their credit requirements. This will prevent the cash from being used to grow their businesses and raise costs;
- the extent to which the CfD FiT payment mechanism needs to be collateralised has not been sufficiently thought through, nor its impact on the wider market;
- the majority of independent suppliers will not be investing in significant volumes of CfD FiT eligible plant and therefore will not have the option to transfer costs/ revenues between generation or retail sides of their business;
- all independent suppliers, by definition, have "non-sticky" customers, and cannot benefit from the hedge that disengaged customer provide to the incumbents; and
- the work undertaken by government thus far has not sufficiently considered how this obligation sits alongside how other third-party costs are assimilated (network charges, the Renewables Obligation, Climate Change Levy, small-scale FiTs, the Energy Company Obligation, Warm Homes Discount, Green Deal).

6. What are the potential impacts on suppliers of implementing the supplier obligation, including:

- **cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;**
- **method of data collection;**
- **changes to internal systems;**
- **and the proposed payment periods?**

Credit terms for the CFD FIT supplier obligation will increase the working capital requirements of independent suppliers to a point that this could restrict growth or in extreme cases make the business unviable. Some independent suppliers have suggested to us that the increased working capital requirements could be in the order of in excess of 10% of annual turnover. As noted above, this is in addition to existing (and increasing) third-party charges.

There will be system and data collection impacts, but these pale into insignificance compared to credit and payment concerns.

The proposed settlement model looks complicated and does not take into account:

- volumes posted by suppliers in CVA; and
- eligible plant on-site that does not export onto the public system.

A simpler arrangement based around an agent acting on behalf of the CfD counterparty should be explored.

7. Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

We have set out in the covering letter three steps that could potentially mitigate the impact of the current proposals. They are:

- a fixed rate obligation – this is essential;
- a combination of the pooling of collateral, the use of average annual exposures and the recognition of good payment records is needed. A margin call approach such as that used under the BSC for uncontracted trades would be especially damaging to independent suppliers and will increase their cost of doing business relative to the incumbents; and
- more frequent settlement perhaps based around initial interim data could be used, but the cashflow impacts of this on suppliers should be very closely scrutinised. There is a clear trade-off here between credit calls and working capital that should be modelled before final decisions are taken.

Appendix B—CfD FiT supplier cost analysis

To illustrate the impact on suppliers that could arise from the obligation, we have modelled monthly payment calls in a single calendar year (2016) from a CfD FiT market with IGW of offshore wind, IGW of onshore wind and IGW of biomass plant. For each variable (generation volumes and market reference price, using historic data as a proxy), we have modelled low, medium and high scenarios to illustrate the spread of payments suppliers could be called upon to make³.

The spread-sheet based model makes the following assumptions:

- all plant is fully operational in 2016;
- for simplicity the market reference prices used are actual 2012 prices averaged for each month;
- wind technologies use the reported day-ahead wholesale price, biomass uses the average daily reported annual baseload contract price;
- supplier payments are calculated on a monthly basis, but billed in arrears, and not a half-hourly basis;
- load-factors are based on historic data; and
- the strike prices used are taken from levelised cost estimates applied in the recent RO banding review consultation.

The load factors used in the model are based on those achieved historically⁴. These are used to calculate generation volumes under low, average and high scenarios.

Low, medium and high market reference prices are also used. For illustration we have used historic wholesale power prices (from 2012)⁵. Here the low price is the lowest reported price within the calendar month, the average is the mean average of all prices throughout the month, and the high price is the maximum reported contract price for the month.

Strike prices have not been adjusted for inflation and are presented as per the analysis that underpinned the latest RO banding review (2013-17)⁶. They are:

- offshore wind = £192/MWh;
- onshore wind = £88/MWh; and
- biomass conversion = £116/MWh.

Below we illustrate the weighted average payments for each of the technologies on a monthly basis for IGW of all technologies spread among all suppliers under a medium scenario (reference price and generation volumes).

³ For reasons of space this paper generally focuses on the medium scenario. Please contact us for the low and high scenarios.

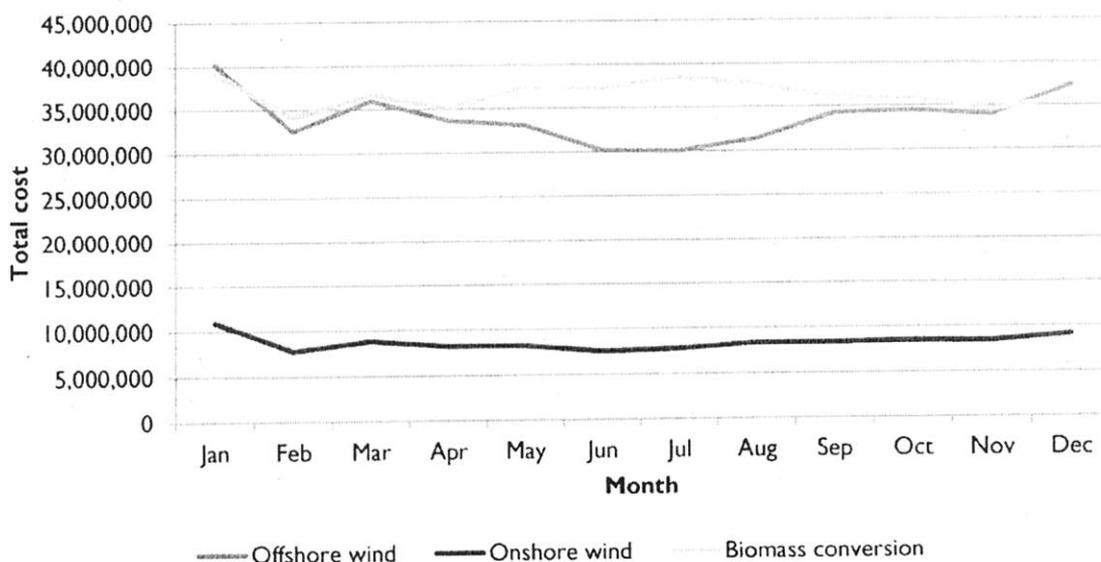
⁴ Sourced from DECC Dukes: <http://www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx> and Ofgem's Renewables and CHP Register: <https://www.renewablesandchp.ofgem.gov.uk/>

⁵ Sourced from price reporters and Cornwall Energy data. Please contact us for further details.

⁶ DECC RO banding review:

http://www.decc.gov.uk/en/content/cms/consultations/cons_ro_review/cons_ro_review.aspx

Total cost of IGW of each technology across all suppliers, DECC levelised costs



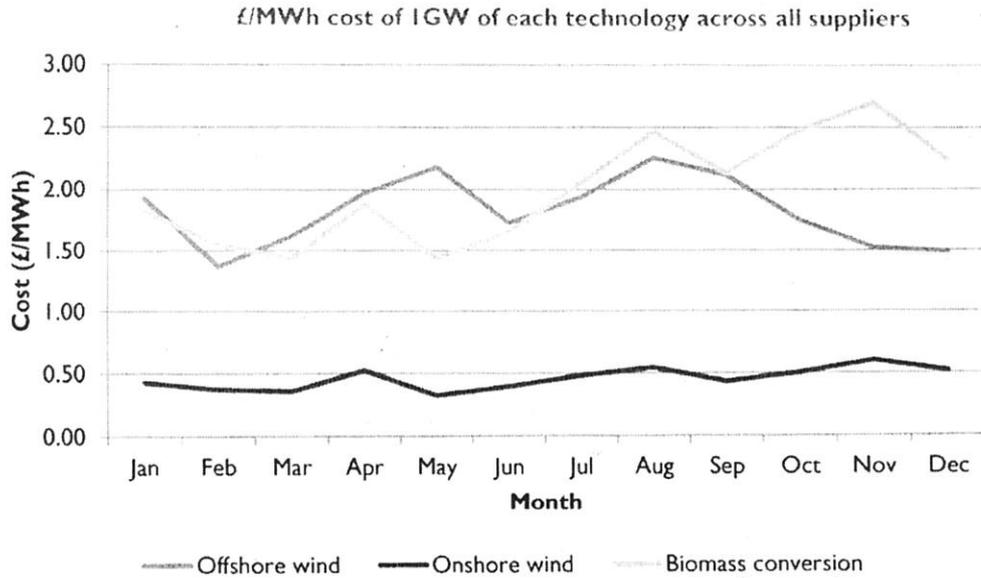
For offshore wind the general increase of costs over summer is due to lower CfD FiT payments offset by even lower supply volumes over which to distribute payments. The payments could peak in January due to greater CfD FiT costs than other winter months.

For onshore wind this model shows low overall costs due to the lower load factor and lower top-up costs compared to the other technologies.

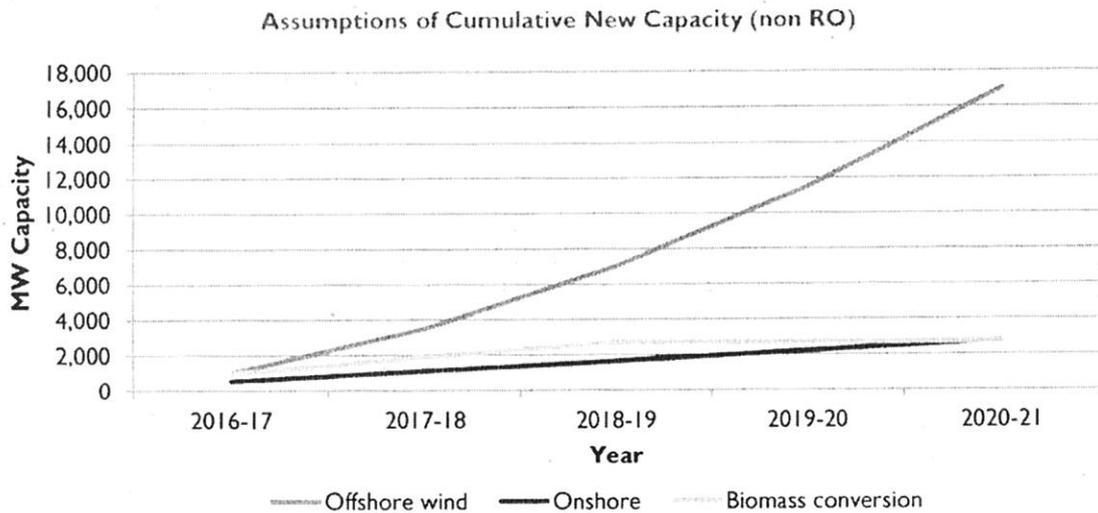
Biomass conversion plant shows the largest costs due to the very high load factors that do not change seasonally but supply volumes do. There is also a trend towards costs being cheaper in winter and more expensive in summer, due to costs being spread over more supply in winter.

The model highlights the spread of payments that could be made, which are a function of market prices and actual generation volumes. The model does not account for the cost of capital or the credit that the supplier would have to post in lieu of payment.

We also estimate the equivalent cost of supporting IGW of each of the technologies on a £/MWh supplied basis using monthly DECC DUKES data for 2012 for total energy supplied as a measure of the total market.



To illustrate the potential for payment variability we have modelled the cost of meeting the RO against notional new capacity that could seek CfD FiTs between 2016-17 and 2020-21. A scenario for onshore wind, offshore wind and biomass conversions has been designed using a combination of company announcements and the agreements made with National Grid in the Transmission Entry Capacity Register. We have used this to work out new capacity additions and when they are likely to arrive, this has also been filtered through our estimate of how long it will take for new capacity to be added and how much biomass conversion is likely. These assumptions are shown below.

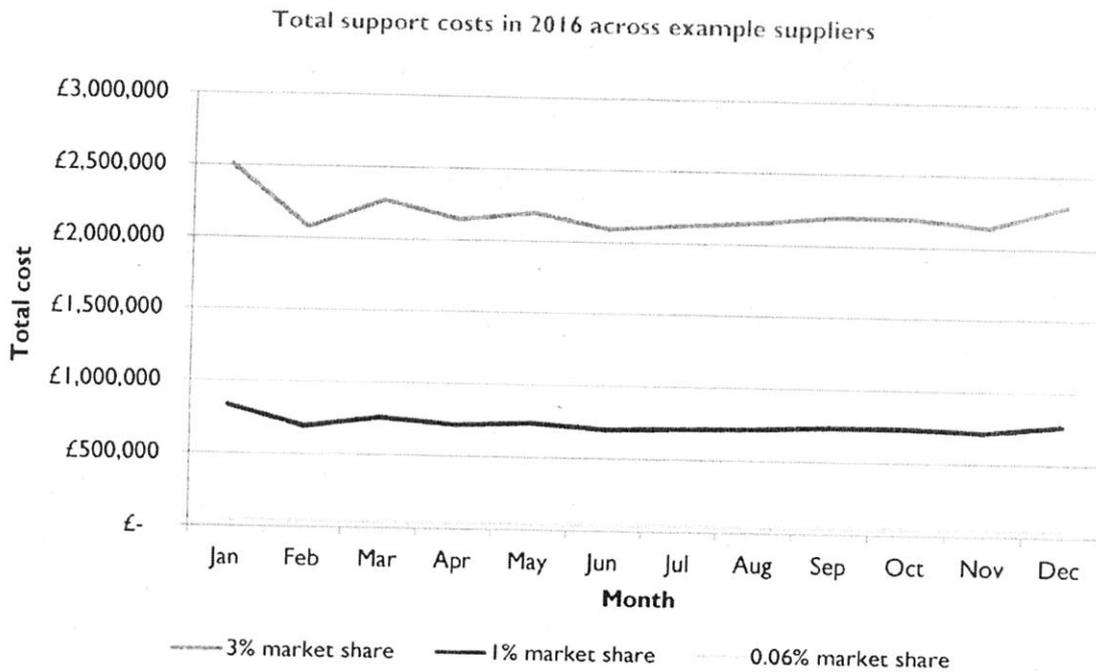


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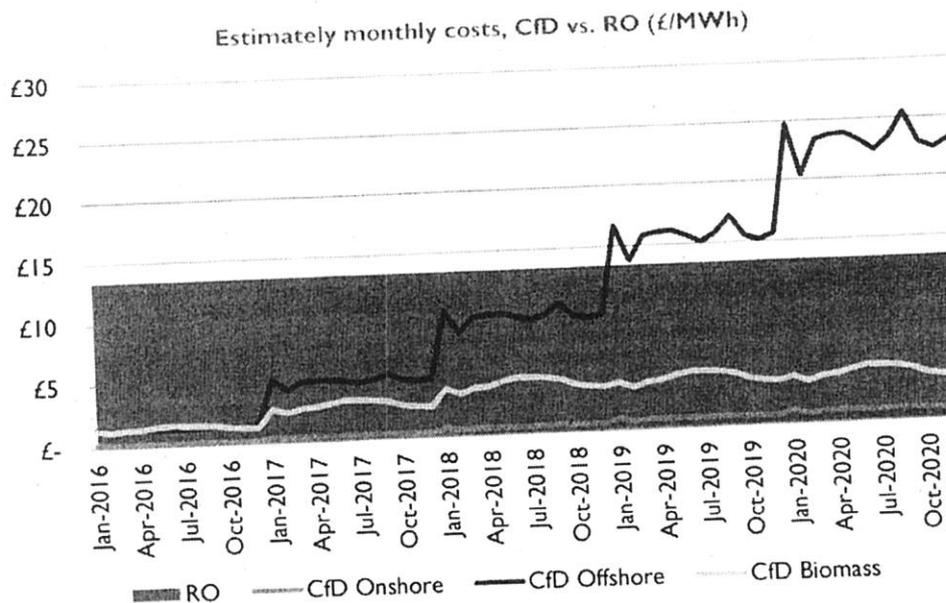
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We show here the total estimated cost based on average prices in 2012. Based on these very stylised assumptions, this implies a total potential liability across suppliers of £8.4bn in 2020, against a total levy control framework that is £7.6bn in current prices, but which would also need to be used to fund other subsidy schemes including the RO. If prices trended towards the historic maximum in 2012, the total CfD

⁸ The total collateral is based on one-sixth of the annual costs, i.e. two months of payments.

cost under our indicative assessment could be in excess of £10bn. In practice therefore we would expect the CfD allocation process to result in lesser volumes of plant being supported.

DONG ENERGY RESPONSE TO DECC CALL FOR EVIDENCE ON SUPPLIER OBLIGATIONS

DONG Energy is a Danish utility company and one of the leading energy groups in Northern Europe. Our business is based on procuring, producing, distributing, and trading in energy and related products in Denmark and Northern Europe. We have approximately 6,000 employees and generated £6.2bn revenue in 2011. With more than 20 years' experience in the wind power industry, DONG Energy is one of the leading offshore wind farm developers in the world. We have installed half of the world's largest offshore wind farms. The UK is one of DONG Energy's primary markets for developing offshore wind, having invested over £3 billion in UK renewable since 2005.

We currently have five offshore wind farms generating power in the UK and a stake in a number of sites pending construction, also a strong pipeline of future projects.

In thermal generation, DONG Energy is operating the highly efficient CCGT Severn power station near Newport in South Wales which has the capacity to generate up to 824 MW of electricity.

DONG Energy UK oil and gas exploration activities started in 2001 with the award of three exploration licences. Today the portfolio includes over 20 UK licences. DONG Energy is one of the largest acreage holders West of Shetland and we are a partner in the Laggan and Tormore gas discoveries and have a number of other West of Shetland developments in the pipeline.

In May 2012, DONG Energy established DONG Energy Sales UK¹ to supply natural gas to the non-domestic sector. With around 11% market share of the non-domestic sector, DONG Energy Sales UK supplies gas to around 5,000 customers from SMEs to large industrial. In addition, DONG Energy will begin providing electricity to the non-domestic sector during 2013.

DONG Energy supports the introduction of the Energy Bill and the proposed reform of the electricity market. Whilst we are broadly in agreement with the Energy Bill, we await the detail that will be contained in the secondary legislation and we welcome the opportunity to respond to DECC's Call for Evidence on the proposed approach for the supplier obligation.

Question 1

Do you have concerns about the predictability of the amount of potential volatility of CfD payments?

The CFD payments are likely to be subject to some degree of volatility and as a consequence, are likely to cause some level of cash flow management for supply companies. The extent of the volatility of CFD payments is unclear but it will mean the supplier needs to levy a variable amount on the customer. However, it should be possible to determine a cap for any supplier based on the volume of generation requiring support, the applicable CFD and the day ahead price. It should also be possible to be more precise in the shorter term by applying an appropriate load factor to the renewable generation.

The potential volatility around a CFD payment may act as a barrier to entry for new entrants to the electricity supply market as new entrants to the electricity supply market in the UK will not hold customer data which could help to manage some of the potential volatility for the customer.

¹ Previously Shell Gas Direct

A direct consequence of the potential volatility will be the impact on the consumer who may perceive that he has no control or understanding of his energy bills. Whilst the energy supplier can go some way towards explaining and communicating proposed policy, it would be helpful if Government is able to endorse or lead in this area.

Question 2:

Does this differ based on different scenarios for how the generation mix evolves?

Paragraph 301, Annex A highlights that reference prices for CFD payments could prove unpredictable and that this could increase when combined with a changeable generation mix. With all wind, wave and solar generation, there is an element of unpredictability based on weather patterns although this is less so for those low carbon generators receiving a baseload CFD. As such, if there is a greater proportion of baseload CFDs granted than intermittent CFDs, there is likely to be a lower level of volatility in the CFD payments. In addition, over time, it can be expected that prediction of intermittent generation output should become more sophisticated and could potentially lead more accurate management of any volatility that does arise.

Question 5

Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?

DECC is currently proposing a variable rate obligation as it offers the most efficient approach to raising funds for the CFD counterparty. The variable rate obligation would enable the precise amounts owed by the generators under the CFDs in a given period are collected by the CFD counterparty from suppliers as soon as possible after that period and passed through to generators. This would mean that suppliers would have to manage the risk of over or under collection from consumers arising from the unpredictability and volatility in generation volumes. The only way to mitigate this risk would be to develop 'real time pricing' for consumers. However, this would be a costly option for both consumers and suppliers from a systems perspective. Neither of these options is viable option for a small supplier where the margins and, potentially, the number of customers are limited.

DONG Energy's preference is for the alternative proposal, a fixed rate obligation. However, the Government has concerns the risk of underpayment could damage investor confidence which could only be mitigated by over collection. A fixed rate would be derived from predictions of the likely payments arising from the generator's CFDs in a future period and prediction of supplier market share, and a reconciling mechanism to make up any under or over payment. A fixed rate obligation allows a supply company to manage the risk of under payment from consumers and reduces the level of administration required. However, the CFD Counterparty would need to be able hold funds to ensure generator payments if the fixed rate option were pursued.

Paragraph 288, Annex A proposes that Suppliers will be obliged to post collateral for the forthcoming payment they are due to make. The amount of collateral will depend on the frequency of obligation payments, and how far in arrears the payments are made. It could also depend on the expected size of the payment, i.e. would require a view of prices for the relevant period.

It is not stated in the document whether monthly payments will mean monthly calculations of market share, but if this is the case there may be further invoicing required to ensure the correct amounts are paid, as supply data is not finalised until around 15 months after the point of supply.

Overall, the larger, more established suppliers who are able to make appropriate adjustments via their trading platforms and/ or their generation arms will find it easier to manage and absorb the financial and operational risks.

Question 6

What are the potential impacts on suppliers of implementing the supplier obligation, including:

- *cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;*
- *method of data collection;*
- *changes to internal systems;*
- *and the proposed payment periods?*

Clearly, there will be an increase in costs for suppliers to implement the supplier obligation, although at this stage it is not possible to determine the level of the increased costs for the variable rate option, it will be considerably cheaper to implement the fixed rate obligation

DONG Energy is supportive of using an existing approach, such as the Balancing and Settlement Code (BSC), to collecting data. This approach would include the regulation of relevant parts by Ofgem and open industry governance, as appropriate.

DONG Energy is supportive of longer payment periods, for example, monthly.

Question 7

Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

To both mitigate risks to the industry and to reduce the timescale for implementation, DONG Energy supports fixed rates.

16 January 2013

EMR Team
Department of Energy &
Climate Change
3 Whitehall Place
London SW1A 2AW

Ecotricity Group Ltd
Unicorn House
Russell Street
Stroud
GL5 3AX

15th January 2013
Ecotricity Reference No.
ecotricity.co.uk

The Renewable Energy Company Ltd (Ecotricity)
Response to Call for Evidence on The Supplier Obligation

Dear EMR Team,

Ecotricity is an independent renewable energy supplier and generator. We have around 70,000 domestic and non-domestic customer accounts; 53 windmills and the country's first solar park.

As an independent supplier, CfD-FiTs will have a substantial effect on our business. Although we are vertically integrated, our generation arm is only 30% of our supply. Therefore, any potential benefits that CfD-FiTs could offer us as a generator would be substantially lower than the detriment that they would cause us as a supplier. We welcome this opportunity to comment on the supplier obligation proposals. We previously commented on the December 2010 EMR Consultation and our Director of Wholesale, gave evidence to the Energy and Climate Change Select Committee on the Draft Bill this June and will be doing the same to the Energy Bill Committee on 17th. In September we wrote to DECC in response to initial proposals for the counter party model and in October we wrote to DECC and DECC on the our concerns over the proposed variable obligation.

Our response is divided into two parts:

- 1) Answers to the questions outlined in the consultation; and
- 2) Our conclusion.

1) Answers to particular questions outlined in the consultation

Question 1: *Do you have any concerns about the predictability of the amount of potential volatility of CfD Payments?*

Yes we do.

Under the proposed variable rate model, the supplier obligation will be a highly volatile liability. The amount owed by suppliers in a given period (currently assumed to be monthly) will vary substantially on a month to month basis depending on total generation by CfD eligible plants and movements in the market reference price. As well as accounting for these two factors, both of which will be very difficult to forecast; suppliers will need to account for new generators coming under the CfD scheme and the different strike prices allocated to different generators (depending on the technology and time of allocation). The difficulty of predicting these payments will make effective financial planning very difficult and expose suppliers to a high level of risk.

The timetable for payment under CfDs, compounds this risk due to the high cash flow implications. Unlike under the RO; in which suppliers have over a year between the notification of their liability and the required fulfilment of the obligation; CfDs must be paid "as soon as possible" after notification (expected to be within a month of invoicing). The effect of this is that suppliers will have no opportunity to account for this liability at the point when it is known. Under the RO, not only is the cost more predictable in the first place, but the time allowed for payment following notification of obligation due enables suppliers to adjust their tariffs accordingly and so lower their risk.

The immediacy of required payment under CfDs will require suppliers to raise prices in advance, based on our best forecast of our liabilities under CfD payments. The lack of certainty with which we can make such forecasts will require us to set our tariffs higher than we otherwise would, which counteracts one of the aims of the Electricity Market Reform: minimising cost to consumers.

It is important to note the differences between the effects that this cash-flow impact will have on independent suppliers will be substantially higher than the incumbent suppliers. The Big Six incumbents are vertically integrated so the liabilities on their supply side will be mitigated by the CfD income on their generation side, particularly those that have large nuclear generation. In addition, these suppliers all have credit ratings and can therefore easily access cheap credit to smooth the effect of liabilities until revenue can be collected from their customer base. Therefore, the risk and the need to raise prices ahead of known payments will be substantially higher for independents than it will be for the Big Six. For these reasons we believe that independent suppliers should be exempt from the requirement to pay CfDs. Such an exemption could be set for suppliers that have fewer than 250,000 customers.

If such an exemption is not possible, it is essential that the supplier obligation is redesigned to make liabilities predictable and enable us to account for them in advance and apply different collateral requirements to independents. We strongly favour a fixed rate monthly obligation, based on central generation forecasting for that year and using the year ahead price for the purposes of setting the supplier obligation. This would allow the total amount owed by all suppliers to be estimated and divided among suppliers according to their market share. A given supplier's monthly payments would be a 12th of their share. This would allow suppliers to know what their monthly obligation would be within a given year 2

months before the start of that year. The differences between forecast and actual generation; changes in suppliers' market share; and differences between the year ahead and day ahead market price could be reconciled in the following year. If this is not possible then a similar model set on a quarterly timeframe should be considered as a compromise.

We have included a graph showing the variability in the day a head market price in 2012 to give an example of the volatility in supplier payments. Note that this does not address the variation in generation, which will depend on an unknown generation mix and therefore in reality the variation will be greater.

The reasons that DECC lists for favouring of the variable rate obligation over a fixed rate include: that it enables the CfD counterparty body to meet the precise payments needed when required; that it allows actual rather than estimated data in calculating the amount owed to generators; and that it does not lead to surplus or deficit in the amounts collected and minimises the need for adjustment payments.

These arguments are not about a total increase in efficiency and risk reduction, but about which party bears the risk and inefficiencies. Suppliers will still need to forecast potential future payments and internally allocate predicted future payments in advance; it is only at the point of actual payment that this will be based on actual generation. Surpluses and deficits are a fact of the energy industry and Government revenue: FITs; the RO; the BSC and general taxation all operate under with the assumption that future reconciliation will be needed. Why should CfDs be any different?

One way of operating a fixed obligation would be to allow the CfD counterparty to raise its own working capital and to give a Government underwriting to it. This would be a far more efficient way of managing the variation in the obligation than putting this requirement on suppliers. A Government underwritten counterparty would also increase investor confidence in the robustness of CfDs, making it easier for generators to raise finance and lower the cost of the scheme to consumers.

Question 2: *Does this differ based on different scenarios of how the generation mix evolves?*

The higher the proportion of intermittent generation, the less predictable the absolute payment amount would be. Despite this, we do not advocate a strategy that favours baseload generation over intermittent generation. It is essential that the UK's strong natural advantage in wind power is fully exploited: it is the best way to increase our energy independence and reduce greenhouse gases.

Question 3: *How would you manage the fact that CfDs are changeable, noting that they are inversely related to wholesale power movements, and looking at this in terms of variation in total cost to serve?*

This question assumes that suppliers always purchase at market rate: this is an unrealistic assumption. Suppliers purchase power in many ways and at various prices including: their own generation, long term PPAs usually at fixed or discount to market rates; forward trading; day ahead; and within day trading. Therefore, the relationship between the supplier's costs for purchasing power and the cost of the supplier obligation is not as straightforward as DECC assumes. Although some power will be traded near reference price, this will not account for the majority of our trades. Therefore, the fact that the

obligation will be inversely related to the market reference price will only marginally reduce our risk.

As stated in response to Question 1, we would manage this through forecasting the market, future generation and new CfD eligible generation; and accounting for it when setting our tariffs. To minimise our risk, we would need to assume a worst case scenario and set our tariffs accordingly.

Question 4: *Is there a hedge that suppliers can use that may mitigate risk?*

The only potential hedge we see is through the use of financial products such as derivatives, to offset the risk. This would substantially increase the complexity of supplier trading practices and the market as a whole; therefore it is not a desirable move. Furthermore, engaging in financial trading require suppliers to be regulated by the FSA and as such impose a high regulatory burden on them.

Question 5: *Overall what are your views on the proposed variable rate obligation and are there any other issues that we should be considering?*

Overall we do not support the supplier obligation being variable and strongly advocate a fixed rate alternative. We do not agree that DECC's arguments against a fixed rate obligation are sufficient to justify such a high level of risk for suppliers.

An additional issue that the Government must consider is the effect of requiring all suppliers to fund all types of "low carbon" generation under CfDs. As a renewable energy supplier, many of our customers do not wish to support nuclear. Under current proposals they will have no choice but to do so, despite having made an express decision not to in choosing to be with us. We have already received communication from our customer base expressing their wish not to have anything to do with nuclear and their fear that their bills will need to increase to support nuclear once CfDs come into effect.

Furthermore, the inclusion of nuclear will substantially increase the overall cost of the scheme and the liability to suppliers. Ecotricity has repeatedly stated that, as a mature technology, nuclear should not receive public subsidies under CfDs or any other programme. We maintain this view.

Question 6: *what are the potential impacts on suppliers of implementing the supplier obligation, including:*

- *Cost effects of posting collateral both for the CfD obligation alongside other requirements in the electricity market;*
- *Method of data collection;*
- *Changes to internal systems; and*
- *The proposed payment periods?*

It is important to note that unlike the Big 6, who will be able to present a letter of credit as collateral, independent suppliers such as Ecotricity, will need to post collateral in the form of cash.

The effect of having to post collateral for CfDs in addition to other collateral requirements will reduce the amount of working capital we have available for other areas of our business, such as construction of our own renewable generation. It will also decrease the ability of all independent suppliers to manage risk and therefore increase the likelihood of supplier

insolvency. In conversations with [redacted] from DECC about the new Energy Suppliers Administration Regime for, it was noted that the energy industry is already highly collateralised. We were told DECC would be open to exploring ways of reducing this level of collateralisation for independent suppliers and thus reducing the potential for an insolvency event. These proposals go in the opposite direction and increase potential for an independent supplier becoming insolvent. This strengthens the case for an independent supplier exemption as outlined in response to Question 1.

The effect of the method of data collection and changes to internal systems will be affected by the fact that there will be a need to manage a new set of relationships with the CfD counterparty, settlement agent and System Operator.

We have no objection to the proposal to make the payment period one month, but as detailed in response to Question 1, the requirement to pay immediately on notification of the exact amount due will be highly risky for suppliers.

Question 7: *are there any factors to consider to mitigate risks or shorten the timescale for implementation?*

We propose a reporting obligation on all physical trades, which should include the price and volume of each trade. This would be reported to a central body such as Elexon, which would be the only body to see the raw data. Elexon could produce a report on overall volumes and prices traded and send this to Ofgem, which could publish it in a form that would protect confidential information. Such an obligation and report would not only enable a more robust reference price, but could also be used by suppliers and any central forecasting body to better predict movements in reference price and therefore their potential liability.

Improvements in Elexon's accounting of embedded generation should also be considered. This is currently inadequate and does not include many power purchase agreements. If these were included and the accounting of embedded generation improved, then the increase in collateral requirements under CfDs would be lower.

2) Conclusion

In summary, the currently proposed variable rate obligation will be very difficult for suppliers to forecast and presents a high risk, particularly to independent suppliers. The fact that payment will be required "as soon as possible" after notification of the amount owed will have highly detrimental cash-flow impacts. Unlike under the current Renewables Obligation, we will not have the opportunity to retrieve these costs between the time that we know the full liability and the payment due date. As an independent supplier without a credit rating, our only option will be to raise our tariffs in advance to a level based on our "worst case scenario" forecast.

This cash-flow risk will be compounded by the fact that we will need to put up collateral to cover CfD payments. For independent suppliers this will mean collateral in the form of cash, which not only reduces our ability to manage risk, but also ties up cash that could be used elsewhere in our business.

For this reason we believe that DECC should give serious consideration to having a minimum threshold of 250,000 customers for the supplier obligation.

It is important to note that independent suppliers are currently only around 1% of the supply market. Excluding independents from the obligation will therefore have a very low impact on the cost for other parties, whilst including them substantially increases the risk of insolvency, which is costly for the entire industry. Furthermore, such an exclusion would have a substantial advantage in terms of ensuring continued competition in the market and keeping costs down for consumers.

If such an exemption is not possible, then a fixed obligation set out far in advance and reconciled year on year should be chosen. This should be combined with a Government backing to the CfD counterparty and the ability for it to raise its own working capital and smooth differences in the amount raised from suppliers and the amount owed to generators. Such an arrangement would substantially reduce risk.

Ecotricity welcomes the opportunity to respond and hope you take our comments on board. We also welcome any further contact in response to this submission. Please contact ecotricity.co.uk.

Yours sincerely,

Head of Regulation, Compliance & Projects



Department of Energy & Climate Change
3 Whitehall
London
SW1A 2AW

15 January 2013

Energy Bill: Annex A - Feed-in Tariff with Contracts for Difference: Operational Framework

Call for Evidence on the Supplier Obligation

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

Before considering the specific issues about the feed-in tariff with contracts for difference (CfD) Supplier Obligation, we must recognise that its purpose and need may appear complicated to many customers. It will therefore be essential that the Government and industry work together to ensure customer trust by providing clear and simple information about the cost of the CfD Supplier Obligation.

The CfD Supplier Obligation will form part of the payment model underpinning the CfD Operational Framework. The Operational Framework must strike the right balance in terms of allocation of risk between low carbon generators and suppliers.

We welcome the changes in the payment model since the draft Operational Framework was published in May 2012. However, there are a number of areas where the payment model can be further strengthened. We expect some of these improvements to be introduced during the Parliamentary scrutiny of the Energy Bill. We believe that care must be taken to ensure that any revision to the Supplier Obligation, arising from this Call for Evidence, does not undermine the robustness of the payment model to the detriment of vital investment in low carbon generation.

EDF Energy believes that concerns over the potential volatility of CfD payments need to be set in context. The introduction of a large capacity of intermittent generation is likely to lead to a significant increase in the volatility of spot power market prices (by a factor of five times or more) over the next two decades. This will occur whatever support mechanism is in place and will require suppliers to develop new risk management strategies.

EDF Energy

The key issue for suppliers will not be the exposure to volatility in CfD payments but their exposure to volatility in total costs (including power purchase costs and CfD Supplier Obligation costs). The initial conclusion of our internal analysis is that there will be a natural hedge between the volatility in power purchase costs and the volatility of CfD Supplier Obligation costs.

In view of this, we believe that DECC's proposed variable rate obligation is a sound approach to deliver the payment for CfDs. It will help to achieve one of the fundamental objectives of feed-in tariffs with contracts for difference, which is to stabilise the costs of low carbon generation charged to suppliers and customers.

Suppliers' risks will be greatly increased by any uncertainties in the policy framework that could give rise to sudden changes in costs that could not be forecast or hedged. The Government should therefore help suppliers and customers by ensuring that there is adequate notice of information that may lead to changes in costs.

We believe that further thought is required about the proposal to provide exemption from the costs of the Supplier Obligation with respect to Energy Intensive Industries (EIIs). The cost impact on other customers should be considered, and we believe there would be merit in deferring a decision on any exemptions until 2016 when the potential economic impacts will be clearer.

We note that several organisations have suggested the adoption of a fixed rate supplier obligation as an alternative. A fixed rate obligation does provide certainty and transparency about the cash costs being incurred by suppliers to support CfD payments in the short term. We have considered the issues associated with the fixed rate obligation in some detail, and recognise that it may be possible to develop a workable form. However, while this may be superficially attractive, we do not believe it would provide any better risk protection for customers and suppliers than a variable rate supplier obligation. For example, it may lead to greater instability in the longer term if large step changes in the fixed rate between years become necessary.

We would encourage the Government to develop further details of the way in which the Supplier Obligation is intended to work (especially settlement timescales) as soon as possible, to ensure smooth and timely implementation. The Government should establish a close dialogue with low carbon generators and suppliers to discuss the implementation plans and design details and resolve issues at the earliest possible stage.

Our detailed responses are set out in the attachment to this letter. Should you wish to discuss any of the issues raised in our response or have any queries, please contact
on _____ or myself.

Attachment

Energy Bill: Annex A - Feed-in Tariff with Contracts for Difference: Operational Framework

EDF Energy's response to your questions

Q1. Do you have concerns about the predictability of the amount of potential volatility of CfD payments?

EDF Energy has modelled some possible scenarios of the development of the market, and believes that concerns over the potential volatility of CfD payments need to be set in context.

The introduction of a large capacity of intermittent generation is likely to lead to a significant increase in the volatility of spot power market prices (the standard deviation of spot prices could be multiplied by a factor of five times or more) over the next two decades; this will occur whatever support mechanism is in place.

Suppliers will be unable to avoid a significant exposure to the prompt power market:

- They will need to trade in this market to manage demand shape and to balance short term fluctuations in demand.
- With perhaps 30% of total generation in 2030/31 coming from intermittent wind generation that can only be scheduled in the short term, it is inevitable that most suppliers will have to take some exposure to this market unless they pay a premium to an intermediary to take prompt market risk on their behalf.

We therefore believe that the key issue is not the exposure to volatility in CfD payments but a supplier's exposure to volatility in total costs (including power purchase costs and CfD Supplier Obligation costs).

EDF Energy's initial conclusion is that there will be a natural hedge between the volatility in power purchase costs and the volatility of CfD Supplier Obligation costs. We have concerns about the increased volatility of both of these components and believe that, over the course of the next two decades, suppliers will need to develop new forecasting, hedging and pricing strategies for managing this volatility.

Q2. Does this differ based on different scenarios for how the generation mix evolves?

While EDF Energy has not modelled every possible scenario for how the generation mix could evolve, our work leads us to believe that the most significant driver of the increased volatility is likely to be the increase in intermittent wind generation.



I confirm that this letter and its attachment may be published on DECC's website.

Yours sincerely,

Corporate Policy and Regulation Director

Q3. How would you manage the fact that CfD payments are changeable, noting that they are inversely related to wholesale price movements, and looking at this from the perspective of variations in total costs to serve (i.e. wholesale price/other cost variations in conjunction with CfD payment variations)? Does the drafting reflect our policy decisions?

The two key drivers of CfD Supplier Obligation payments will be the volume of CfD-supported generation and the associated reference prices. It will therefore be necessary to manage both volume and price risks. Furthermore, volume and price will be correlated to some extent - all other things being equal, power prices are likely to be lower at times of high wind output and higher at times of low wind output.

The fact that CfD payments are inversely related to wholesale price movements would provide a natural hedge to suppliers against the volatility of their energy purchase costs and enable them to adopt hedging strategies that could reduce the variability in total costs. In effect, a supplier could manage most of the price risk arising from wind intermittency in this way but would remain exposed to some volume risk.

However, the development of PPAs, under which the offtaker took some exposure to wind output, could provide suppliers with more effective tools for hedging their exposure.

Q4. Is there a hedge that suppliers can utilise that may mitigate any risks?

EDF Energy believes that the development of much greater levels of intermittent wind generation will require suppliers to develop new risk management strategies, regardless of the form of support mechanism and cost recovery adopted. We expect these strategies will evolve in parallel with the evolution of the generation mix.

Different approaches to risk management are likely to be appropriate for different types of customers. In some instances, the most cost-effective strategy from the customers' perspective may in fact be for the customers to bear some of the risk themselves.

However, we believe that it will be possible for suppliers to develop risk management strategies, including forecasting, hedging and pricing strategies to manage the proposed variable rate obligation.

Q5. Overall what are your views on the proposed variable rate obligation and are there any other issues we should be considering?

The CfD Supplier Obligation will form part of the payment model underpinning the CfD Operational Framework. It is important that the Operational Framework strikes the right balance in terms of allocation of risk between low carbon generators and suppliers.

We welcome the changes in the payment model since the draft Operational Framework was published in May 2012. However; there are a number of areas where the payment model can be strengthened further. We expect some of these improvements to be introduced during the current Parliamentary scrutiny of the Energy Bill. We believe that

care must be taken to ensure that any revision to the Supplier Obligation, arising from the Call for Evidence, does not undermine the robustness of the payment model to the detriment of investment in low carbon generation.

We believe that DECC's proposed variable rate obligation is a sound approach to deliver the payment for CfDs. It will help to achieve one of the fundamental objectives of feed-in tariffs based on contracts for difference, which is to stabilise the costs of low carbon generation charged to suppliers and customers. However, we believe it carries some risks that need to be managed:

- A variable rate supplier obligation may appear complicated to many customers. It will therefore be important that Government and industry work together to reassure customers by providing clear simple information about the cost of the CfD Supplier Obligation.
- Suppliers' risks will be greatly increased by any uncertainties in the policy framework that could give rise to sudden changes in costs that could not be forecast or hedged. The Government should therefore help suppliers and customers by establishing clear and mandatory obligations on the relevant organisations to ensure adequate information provision to suppliers throughout the year through the following measures:
 - Effective management of the CfD Delivery Plan with clear visibility of the planned volumes and associated strike prices of CfD-supported generation.
 - Reporting obligations on generators to ensure that the market has clear visibility of the risks associated with the commissioning of new CfD-supported plant; these would complement the existing requirements on operational generation plant under the Grid Code and REMIT;
 - Processes for managing the implementation of any changes to CfD strike prices (arising, for example, through the operation of "Change in Law" provisions) to ensure that suppliers are not exposed to cost "shocks" without adequate notice.
- Although it is generally assumed that the Supplier Obligation will represent a requirement on suppliers to pay money to the CfD counterparty, and for the CfD counterparty to pay money to low carbon generators, the cashflows may sometimes go in the opposite direction. This should be reflected in the drafting of legislation and the design of business processes and systems.
- We believe that further thought is needed with regard to the proposal to provide exemption from the costs of the Supplier Obligation in respect of some Energy Intensive Industries (EIs), and we note that the Government intends to consult separately on this proposal.

- From a policy perspective, it is important to consider the impact of an exemption for ELLs on the costs that will be borne by other customers.
- We also believe that there is every chance that we will have a more robust international framework for mitigating climate change by 2015, or soon thereafter. In view of this, we believe that the Government should reserve its position on how other EMR related costs should be dealt with until 2016 when it is scheduled to consider a carbon intensity target for the electricity sector. Deferring a decision on EMR-related costs will allow the Government to make a much better assessment of the impacts that it believes it should protect against, and will also provide a better understanding of the potential for trans-boundary distortions.
- It would also be necessary to consider the practical implementation issues arising from such an exemption, which may create significant complexity for suppliers in identifying the supplies which are covered by such an exemption, whether this is done by customer, by site or even by meter.
- EDF Energy notes that several organisations have suggested the adoption of a fixed rate obligation as an alternative. A fixed rate obligation does provide certainty and transparency about the cash costs being incurred by suppliers to support CfD payments in the short term. We have considered the issues associated with the fixed rate obligation in some detail, and recognise that it may be possible to develop a workable form. However, while this may be superficially attractive, we do not believe it would provide any better risk protection for customers and suppliers than a variable rate supplier obligation.
- Firstly, there are a number of practical design details that would need to be decided for a fixed rate obligation:
 - How often would it be revised? The general assumption appears to be that it would be revised annually. However, more frequent revisions would make it operate more like the variable rate obligation. In the discussion below, it has been assumed that it would be subject to an annual revision.
 - How much notice would be given of any revision? Suppliers would require sufficient notice of changes to be able to take account of them in setting tariff or contract prices. However, if the notice period is too long, there is likely to be a significant variance from year (n-1) that would not be recovered in year (n) which would need to be carried forward to year (n+1). This increases the potential size of future reconciliation adjustments.
 - If there is an annual revision of the fixed price, when would it occur? If the rate, for example, were reset from 1 April, it would usually be the case that the CfD counterparty would over-recover from suppliers in the summer, with this over-recovery being absorbed during the winter. This could make

it easier for the CfD counterparty to manage cashflows. However, because the greatest volatility in wind output and power price is likely to occur in winter, it is more likely that there would be a large unreconciled year (n-1) variance arising from the previous winter.)

- How would the fixed rate be set? We note that the assumption is that the rate would be set to over-recover to minimise the risk of under-recovery. It is doubtful whether it would be fair to customers to set the rate so high as to ensure that there would always be an over-recovery under any circumstance.
- It would clearly be unacceptable for the cash flow variations arising from the fixed rate obligation to be borne by CfD generators, and so they would have to be borne by the CfD counterparty. This means that the fixed rate obligation is clearly inconsistent with the "pay when paid" approach and would require the CfD Counterparty to have the operational capability and the borrowing capacity to carry significant surpluses or deficits of working capital to manage over and under-recoveries.
- From a supplier's perspective, the application of a fixed rate obligation would mean that the CfD Supplier Obligation could not be used as a direct hedge against prompt price volatility.
- The fixed rate obligation would, however, provide the supplier with certainty over the cost of the CfD Supplier Obligation for the current year (until the next revision date for the obligation.) There would be little difference in a supplier's ability to manage their total cost risk in the current year between a variable rate and a fixed rate obligation. However, the hedging strategies employed would be different.
- Due to uncertainties about how the fixed rate obligation would be revised, it is likely to be more difficult for a supplier to manage its risk beyond the current year (i.e. after the next revision of the fixed rate obligation). A supplier would be unable to hedge this risk and so we believe that a supplier may actually be exposed to greater risk under a fixed rate obligation than under a variable rate obligation.
- A fixed rate obligation may also give rise to additional accounting complexities for suppliers. There may be a requirement for advance recognition of levy expenses in suppliers' accounts, or indeed, for advance recognition of expected under/over recoveries.
- The fixed rate obligation could give rise to anomalies that the Government and industry may find very difficult to explain to customers. This might, for example, be driven by swings in gas prices that will be reflected in power prices. If there is a sharp fall in gas prices and, as a result, reference prices are much lower than expected, then generators receive higher difference payments than expected. If gas prices rise in the following year, customers may face a double increase in

prices both to enable suppliers to recover higher power purchase costs, and also to make up for a shortfall in Supplier Obligation payments.

- Situations such as this may lead to future Governments influencing the setting of the fixed rate obligation for political reasons. If so, this could damage investors' confidence in the robustness of the cash flows to support low carbon generation, as recent experience in some other countries has shown.
- In addition to the safeguards recommended above with respect to the variable rate obligation, some additional measures would be necessary if the fixed rate obligation were to be adopted. In particular, the CfD counterparty should:
 - Publish clear details of the calculation to be used to set the fixed rate in future years.
 - Publish regular (monthly) updates of the relevant data to enable suppliers to make an informed estimate of future changes in the fixed rate obligation.

Q6. What are the potential impacts on suppliers of implementing the supplier obligation, including:

- **cost effects of posting collateral both for the CfD obligation and alongside other requirements in the electricity market;**
- **method of data collection;**
- **changes to internal systems;**
- **and the proposed payment periods?**

There will clearly be a cost to suppliers of providing collateral, whether in the form of cash or Letters of Credit, and this cost will ultimately be passed on to customers. Nevertheless, we recognise that it is important to manage credit risk effectively, including the risk that suppliers may incur costs as a result of the mutualisation of losses. We therefore support the requirement to post collateral, provided that it is calculated fairly.

We also believe that there are further measures that could be taken to ensure robust management of credit risk. It is our view that the provisions contained in the Energy Bill are insufficient to provide assurance to investors that the Supplier Obligation will be sufficiently robust. In particular, it is not clear that the CfD counterparty will have direct enforcement rights against suppliers over payment of money due, and whether enforcement will instead be through industry codes enforced by Ofgem on a discretionary basis. The enforcement provisions of the Energy Bill should be strengthened to give the CfD counterparty enforcement rights, so that it is able to enforce payment of default amounts under the Supplier Obligation directly against suppliers, and is obliged to enforce such rights.

We agree with DECC's proposals to collect data by making use of existing systems, wherever possible. We also note that over the next decade the introduction of smart

metering will lead to changes in collection of consumption data, making it possible to calculate actual consumption more accurately at an earlier stage.

At this stage, the requirements for the operation of the Supplier Obligation have not been identified in detail. In the absence of further information, we have not yet attempted to assess the extent of changes to internal systems. In our answer to Question 7, we make some recommendations about how DECC can assist suppliers to manage these changes.

We believe that a monthly settlement period would be sensible. On the one hand, it is desirable to keep the settlement period short to minimise credit risk for the benefit of all parties. On the other hand, the design of the mechanism should ensure that there is no perverse incentive to move demand away from periods of high wind output to avoid liability for high CfD Supplier Obligation payments. This could occur if the settlement period is too short. However, we do not believe this will be a problem if a monthly settlement period is adopted.

It would be a reasonable objective to aim to calculate settlement amounts, and for the CfD counterparty to collect and pay out money within one month of the end of the settlement period. However, this may require the use of some estimated consumption data to calculate the Supplier Obligation, with subsequent reconciliation.

Q7. Are there any factors to consider in order to mitigate risks or shorten the timescale for implementation?

The following points will help to ensure smooth and timely implementation:

- Develop further details of the way in which the Supplier Obligation is intended to work (especially settlement timescales) as soon as possible.
- Establish a close dialogue with low carbon generators and suppliers to discuss implementation plans and design details and resolve issues at the earliest possible stage.
- Ensure that the mechanisms use existing industry processes where possible and keep the processes simple.
- Ensure that any accounting implications of the proposed approach are identified, and are discussed, with the accounting bodies and other stakeholders before design decisions are finalised.
- If the Government decides to implement an exemption for EIs, it is important that the practical issues associated with the detailed rules specifying eligibility for this exemption are clarified in good time to enable smooth implementation.

- Work in conjunction with expected changes arising from the implementation of smart metering. However, care must be taken to avoid additional complexity from dependence on developments that have yet to be fully implemented.
- We do not expect that the Supplier Obligation should give rise to any specific reporting requirement on customers' bills. However, if such a requirement were envisaged, there should be early consultation on this.
- Ensure that the programme includes adequate time for testing and trialling new processes and systems before they go live.
- Take advantage of the build up of the volume of CfDs from initially small volumes to ensure that any implementation problems are resolved at an early stage.

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