

**UK District Energy Association Response to the Electricity Market Reform Consultation – March 2011**

**On Behalf of:**

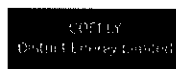
- **Southampton City Council**



- **Birmingham City Council**



- **Cofely District Energy**



- **Veolia Environmental Services**



- **Shetland Heat, Energy & Power Limited**



- **Thamesway Limited**



- **EnviroEnergy Limited**



## UK District Energy Association Response to the Electricity Market Reform Consultation – March 2011

### Prepared by:

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### Current Market Arrangements

1. Do you agree with the Government's assessment of the ability of the current market to support the investment in low-carbon generation needed to meet environmental targets?

The UK District Energy Association (the UKDEA) agrees with the posited reasons for insufficient investment signals. However it is noted that this Electricity Market Reform (EMR) consultation is "aimed at large-scale low-carbon generation". Whilst it is obviously important to design reforms for the benefit of large-scale low-carbon generation, and these reforms will not necessarily be the correct methods to incentivise smaller scale low-carbon generation, there appears to have been very little assessment of the *impacts* of these reforms on smaller scale low-carbon generation. Some of the reforms from this consultation have the potential to negatively impact on investment in decentralised low-carbon generation.

Decentralised energy will become increasingly important as part of the UK's energy mix. As recognised by the EMR consultation, reliance on the "Big 6" utilities alone is unlikely to result in investment in generation at the required scale and pace.

2. Do you agree with the Government's assessment of the future risks to the UK's security of electricity supplies?

The UKDEA declines to respond to this question.

### Options for Decarbonisation

#### *Feed-in Tariffs*

3. Do you agree with the Government's assessment of the pros and cons of each of the models of feed-in tariff (FIT)?

Further details are required on the likely implementation of each option to properly assess their pros and cons. For example, if a Contract for Difference (CfD) FIT is dependent on the average wholesale price, determining how and when this average price is set (and resultant knock-on effects on cash-flows) could have very significant effects on rates of investment.

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Whilst the increased certainty from a CfD or Fixed FIT may be more appropriate to incentivise renewable and nuclear low-carbon generation, it is important to adequately incentivise other forms of low-carbon generation including Combined Heat and Power (CHP) and Carbon Capture and Storage (CCS). CHP encompasses a range of proven technologies which can provide substantial carbon savings when compared to conventional generation. CCS is not yet a proven technique but also stands to save significant carbon emissions if effective.

Both CHP and CCS are exposed to changing fossil fuel prices and therefore neither the Fixed or CfD FITs are appropriate as they could potentially result in disproportionately negative effects on viability of these low-carbon forms of generation, where fuel prices increase; because revenues are effectively fixed whilst costs increase. Instead, a Premium FIT is most appropriate for these technologies, because it provides a revenue incentive and only exposes them to ordinary market forces rather than amplifying exposure to fossil fuel price rises (which would therefore disincentivise these important forms of emissions saving technologies).

**4. Do you agree with the Government's preferred policy of introducing a contract for difference based feed-in tariff (FIT with CfD)?**

At the smaller scale (i.e. decentralised generation scale), the most appropriate FIT incentive remains the Premium FIT (with a choice to benefit from an Export Tariff effectively resulting in a Fixed FIT), primarily due to this mechanism's simplicity and predictable cash-flows. Because it is unclear to what extent these proposed Electricity Market Reforms will impact on smaller scale low-carbon generation, the UKDEA requests that the Government make explicitly clear where proposals will (and will not) directly impact on all scales of the UK's electricity markets.

**5. What do you see as the advantages and disadvantages of transferring different risks from the generator or the supplier to the Government? In particular, what are the implications of removing the (long-term) electricity price risk from generators under the CfD model?**

The UKDEA broadly agree with the Government's assessment of the advantages and disadvantages of risk transfer, where that transfer relates to transfer of significant risk (i.e. relating to long-term effects on the majority of a project's revenue stream and costs). However, the same assessment of risk transfer is not applicable for the Carbon Price Support (CPS) proposals, where the transfer of risk only relates to a small proportion of the total costs and revenues. Therefore, there is very little benefit from any risk transfer achieved by the CPS proposals.

**6. What are the efficient operational decisions that the price signal incentivises? How important are these for the market to function properly? How would they be affected by the proposed policy?**

The UKDEA declines to respond to this question.

**7. Do you agree with the Government's assessment of the impact of the different models of FITs on the cost of capital for low-carbon generators?**

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As detailed in response to Question 4, the most appropriate FiT for smaller scale decentralised generation may remain the Premium FiT, with the *choice* to benefit from a fixed Export Tariff effectively resulting in a Fixed FiT system. This approach minimises the complexity and administrative burden, which are significant barriers to smaller scale operators and market entrants.

8. What impact do you think the different models of FiTs will have on the availability of finance for low-carbon electricity generation investments from both new investors and the existing investor base?

Across all FiT models, the most significant potential to reduce the availability of finance is by undermining trust in lifetime support from the FiT.

Demonstrating cross party support in the FiT mechanism and reducing the potential for later political interference (as far as is possible) is central to the success of any FiT mechanism. Above all, tariffs should be grandfathered (either with or without degression rates as appropriate) so that there can be certainty in the long-term revenues. Unexpected reviews occurring on short timescales (such as the recently announced review of solar PV FiTs) significantly undermine investor confidence.

To counter this situation, sufficient protection could be placed into the FiT's implementation to ensure that unexpected changes cannot be made to tariff levels in a shorter space of time than is required for project development. This would result in a reduction in the wait-and-see approach that can currently stall low-carbon development supported by FiTs.

9. What impact do you think the different models of FiTs will have on different types of generators (e.g. vertically integrated utilities, existing independent gas, wind or biomass generators and new entrant generators)? How would the different models impact on contract negotiations/relationships with electricity suppliers?

Any undue complexity of the proposed FiT methods will act as a barrier to new market entrants and smaller market players. Unfair benefit for large-scale market incumbents should therefore be avoided by keeping proposals and implementation methodologies as simple and transparent as possible.

10. How important do you think greater liquidity in the wholesale market is to the effective operation of the FiT with CfD model? What reference price or index should be used?

The UKDEA declines to respond to this question.

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### **11. Should the FIT be paid on availability or output?**

The FIT should be paid on output to ensure that low-carbon incentives are only paid for low-carbon generation. This avoids any possibility of perversely incentivising unfeasible low-carbon generation projects (which would come with the additional negative impacts of creating negative perception for low carbon industries).

### *Emissions Performance Standards*

### **12. Do you agree with the Government's assessment of the impact of an emission performance standard on the decarbonisation of the electricity sector and on security of supply risk?**

Similar to CCS, Combined Heat and Power can also achieve significant carbon emissions savings, where it is implemented correctly and genuinely utilises the waste heat from power generation. Such supplies of low-carbon heat from power stations can be utilised in district heating networks to supply a wide consumer area; providing a far more substantial carbon saving than would be achieved by each of those consumers undertaking individual measures. Therefore, the UKDEA suggests a derogation from the Emissions Performance Standard (EPS) for CHP, provided that the heat is utilised and overall efficiency standards are met, such as ensured by the CHPQA programme. In this way, the EPS would not restrict the carbon emissions achievable by wider implementation of CHP at power stations.

The scale of plant to which the EPS applies must be clearly set out, to ensure that investment in smaller scale low-carbon combustion plant is not damaged by uncertainty.

### **13. Which option do you consider most appropriate for the level of the EPS? What considerations should the Government take into account in designing derogations for projects forming part of the UK or EU demonstration programme?**

As discussed in response to Question 12 above, the UKDEA suggests that a derogation should be provided for CHP plant, provided minimum efficiency standards are met by ensuring useful heat is delivered to consumers and not dumped.

### **14. Do you agree that the EPS should be aimed at new plant, and 'grandfathered' at the point of consent? How should the Government determine the economic life of a power station for the purposes of grandfathering?**

Yes, the EPS should not be applied to plant retrospectively and should be grandfathered at the point of consent, to provide certainty for investors.

### **15. Do you agree that the EPS should be extended to cover existing plant in the event they undergo significant life extensions or upgrades? How could the Government implement such an approach in practice?**

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A longstop date, after which even existing plant is required to meet the EPS could be an appropriate mechanism. Echoing the point made in response to Question 12, it is vitally important that the scale of plant caught by the EPS is clearly set out, to reduce uncertainty.

16. Do you agree with the proposed review of the EPS, incorporated into the progress reports required under the Energy Act 2010?

The UKDEA declines to respond to this question.

17. How should biomass be treated for the purposes of meeting the EPS? What additional considerations should the Government take into account?

As is the case under the Renewable Obligation, sustainability standards can be applied to biomass just as they are applied to bioliquids under the Renewable Energy Directive (RED).

Biomass fuelled power plant should not be subjected to the EPS, provided that minimum sustainability standards are met, (including indirect land use change being adequately dealt with, within those sustainability standards).

18. Do you agree the principle of exceptions to the EPS in the event of long-term or short-term energy shortfalls?

The UKDEA declines to respond to this question.

### **Options for Market Efficiency and Security of Supply**

19. Do you agree with our assessment of the pros and cons of introducing a capacity mechanism?

The UKDEA declines to respond to this question.

20. Do you agree with the Government's preferred policy of introducing a capacity mechanism in addition to the improvements to the current market?

The UKDEA declines to respond to this question.

21. What do you think the impacts of introducing a targeted capacity mechanism will be on prices in the wholesale electricity market?

The UKDEA declines to respond to this question.

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22. Do you agree with Government's preference for the design of a capacity mechanism:

- a central body holding the responsibility;
- volume based, not price based; and
- a targeted mechanism, rather than market-wide.

The UKDEA declines to respond to this question.

23. What do you think the impact of introducing a capacity mechanism would be on incentives to invest in demand-side response, storage, interconnection and energy efficiency? Will the preferred package of options allow these technologies to play more of a role?

The UKDEA declines to respond to this question.

24. Which of the two models of targeted capacity mechanism would you prefer to see implemented:

- Last-resort dispatch; or
- Economic dispatch.

The UKDEA declines to respond to this question.

25. Do you think there should be a locational element to capacity pricing?

The UKDEA declines to respond to this question.

### Analysis of Packages

26. Do you agree with the Government's preferred package of options (carbon price support, feed-in tariff (CfD or premium), emission performance standard, peak capacity tender)? Why?

Whilst the Government's plans for Electricity Market Reform are expected to improve the landscape for large scale generators, the UKDEA has very significant concerns regarding the treatment of smaller scale generation and decentralised energy plant. The majority of the proposals in the consultation document are clearly aimed at large scale generation but there is very little clarity on what measures may also directly impact on decentralised low-carbon generation.

The large scale generators alone cannot provide the level of decarbonisation required to meet the UK's carbon emission saving targets. A comprehensive view of the energy industry is now required to genuinely incentivise low carbon energy systems at all scales. Proposals must therefore be absolutely clear both where they are intended to incentivise one area of the industry and also where there may be unintended effects on other areas of the industry. Currently, the proposals for large scale generation seem almost entirely divorced from treatment of the decentralised energy industry, both in terms of intended consequences and knock-on effects.

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In addition to incentivising renewable energy, other low-carbon technologies, such as gas-fired CHP, must also be promoted. The intended final outcome of carbon emission savings cannot be achieved by incentivising one technology over another but instead, all low-carbon technologies are required, not just to successfully decarbonise the UK's electricity and heat supplies but also to provide the genuinely sustainable, diverse and secure system the UK needs.

### **27. What are your views on the alternative package that Government has described?**

The UKDEA believes that Package 1 is inappropriate because it relies solely on the Carbon Price Support (CPS) to drive investment. As discussed in detail in the UKDEA's response to the CPS consultation, this is an inadequate way to drive investment, relying almost entirely on rising electricity prices to stimulate low-carbon investment and therefore resulting in significant fuel poverty issues.

Packages 2, 3 and 4 are more appropriate because they genuinely incentivise low-carbon development through their low-carbon FiT mechanisms. However the phrase in paragraph 23 of the consultation document "if the Government changed the carbon price support mechanism to increase the target carbon price", highlights the very heart of the problem for investors; it indicates that Government is unwilling to transparently develop a long-term investment landscape but instead is creating new methods of generating tax revenue over which they will have a level of short term control which damages long-term investor confidence. Therefore, the UKDEA maintains that the CPS is not an appropriate mechanism to incentivise low-carbon generation and should not be taken forward as part of the Government's package of reforms.

### **28. Will the proposed package of options have wider impacts on the electricity system that have not been identified in this document, for example on electricity networks?**

It is insufficiently clear what scale of plant these reforms are intended to affect. Clarity is needed to identify what measures are intended for what scales of plant, all the way down to district energy and smaller decentralised systems.

The current proposals will serve to further marginalise gas-fired CHP, reducing the carbon emissions savings achievable by this important low-carbon industry. Therefore, the UKDEA suggest that the low-carbon FiT should be used to support all low-carbon technologies, including both gas-fired and renewable CHP.



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29. How do you see the different elements of the preferred package interacting? Are these interactions different for other packages?

It is acknowledged in the consultation document that a Carbon Price Support (CPS) mechanism is unlikely to provide sufficient incentive to deliver low-carbon generation. It is also recognised that a low-carbon FIT is the most cost-effective method for incentivising low-carbon generation. Therefore, the UKDEA suggest that the CPS is an inappropriate mechanism to employ which achieves little, even in conjunction with the other mechanisms, and causes significant fuel poverty issues. The UKDEA suggests that modelling should take place for a "Package 5" which analyses the benefit of all the proposed measures *without the CPS*. Until this modelling has taken place, the true range of options has not genuinely been considered.

### Implementation Issues

30. What do you think are the main implementation risks for the Government's preferred package? Are these risks different for the other packages being considered?

The UKDEA suggest that the assumption in modelling that there is perfect competition fails to take account of the powerful position of large scale market incumbents. Potential effects on smaller scale operators do not appear to have been adequately considered, which is surprising given the increasing importance of decentralised generation in moving towards the UK's low-carbon targets.

31. Do you have views on the role that auctions or tenders can play in setting the price for a feed-in tariff, compared to administratively determined support levels?

- Can auctions or tenders deliver competitive market prices that appropriately reflect the risks and uncertainties of new or emerging technologies?
- Should auctions, tenders or the administrative approach to setting levels be technology neutral or technology specific?
- How should the different costs of each technology be reflected? Should there be a single contract for difference on the electricity price for all low-carbon and a series of technology different premiums on top?
- Are there other models government should consider?
- Should prices be set for individual projects or for technologies?
- Do you think there is sufficient competition amongst potential developers /sites to run effective auctions?
- Could an auction contribute to preventing the feed-in tariff policy from incentivising an unsustainable level of deployment of any one particular technology? Are there other ways to mitigate against this risk?

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The failure of the EUETS to adequately incentivise low-carbon development would indicate that auctions or tenders are unlikely to be as effective as administratively fixed rates of support. Predictable, grandfathered rates of support provide the optimum investment scenarios, provided that the support rate is sufficient to genuinely incentivise investment.

Auctions or tenders may result in a blanket approach that does not take into account the diverse range of technologies required. Differing technology premiums could be appropriate, provided the support rate is sufficient to incentivise investment and future revenues are predictable. Technology rates, rather than individual project support rates, are appropriate to minimise administrative burdens.

**32. What changes do you think would be necessary to the institutional arrangements in the electricity sector to support these market reforms?**

The UKDEA declines to respond to this question.

**33. Do you have view on how market distortion and any other unintended consequences of a FIT or a targeted capacity mechanism can be minimised?**

Transparent modelling in development of the support mechanisms is a requisite; enabling peer review of the calculations used to derive the proposals would result in far more robust proposals which can be trusted to fairly provide the level of incentive which is required across all sectors. Without this level of transparency, it is more difficult to genuinely predict where unintended consequences may occur.

**34. Do you agree with the Government's assessment of the risks of delays to planned investments while the preferred package is implemented?**

The UKDEA agrees that the risk of a "wait and see" approach from industry is genuine. Additionally, the UKDEA would like to stress that one of the single biggest factors undermining investor confidence is trust in the Government to develop genuinely long-term support mechanisms. For example, the recent announcement of a rushed review of solar PV's Feed in Tariff support has effectively halted investment in this area and also damaged investor confidence in all of the other feed in tariff supported technologies, because investors are wary of a change in support levels once they have begun projects which may have significant lead-times. Incentives must be developed so that they are genuinely grandfathered and free from undue Government interference.

**35. Do you agree with the principles underpinning the transition of the Renewables Obligation into the new arrangements? Are there other strategies which you think could be used to avoid delays to planned investments?**

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The UKDEA is pleased to see that the Government intends to honour commitments to grandfathered support. To provide the best possible transition, it is important to ensure that new support mechanisms have been fully laid out before existing mechanisms are closed down. Ideally, a choice of support mechanism during the handover period would allow any teething issues to be dealt with before all parties are obliged to gain support through the new mechanism.

36. We propose that accreditation under the RO would remain open until 31 March 2017. The Government's ambition to introduce the new feed-in tariff for low carbon in 2013/14 (subject to Parliamentary time). Which of these options do you favour:

- All new renewable electricity capacity accrediting before 1 April 2017 accredits under the RO;
- All new renewable electricity capacity accrediting after the introduction of the low-carbon support mechanism but before 1 April 2017 should have a choice between accrediting under the RO or the new mechanism.

Following the response to Question 35, the UKDEA would prefer the choice between mechanisms to be made available. This would minimise "wait and see" behaviour of investors.

37. Some technologies are not currently grandfathered under the RO. If the Government chooses not to grandfather some or all of these technologies, should we:

- Carry out scheduled banding reviews (either separately or as part of the tariff setting for the new scheme)? How frequently should these be carried out?
- Carry out an "early review" if evidence is provided of significant change in costs or other criteria as in legislation?
- Should we move them out of the "vintaged" RO and into the new scheme, removing the potential need for scheduled banding reviews under the RO?

As highlighted by the issues surrounding the recently announced FiT review for solar PV, it is imperative that the Government sticks to scheduled banding reviews. Early reviews significantly undermine investor confidence, cause "wait and see" behaviour and result in projects being abandoned after investment has taken place.

There should be a *choice* to switch to the new scheme, to reduce the risk of early adopters being penalised.

38. Which option for calculating the Obligation post 2017 do you favour?

- Continue using both target and headroom
- Use Calculation B (Headroom) only from 2017
- Fix the price of a ROC for existing and new generation

The UKDEA declines to respond to this question.

