VEOLIA
ENVIRONMENTAL SERVICES

Electricity Market Reform Project
Department of Energy & Climate Change
4th Floor Area E
3 Whitehall Place
London
SW1A 2AW

9th March 2011

Dear Sir or Madam

Consultation on Electricity Market Reform

Veolia Environmental Services is tone of the UK's most substantial waste management companies, delivering environmental services to more than 16 million people. Conscious of our social and environmental responsibilities, we promote the use of sustainable waste treatment methods to recover valuable raw materials to our 73,000 commercial and industrial customers, and 100 local authority partners. This includes recovery of energy from waste and in this respect we generate over 100MW of low-carbon energy to the grid, with hope of increasing this in the near future, including a development of our distributed heat provision, which at the moment is restricted to our EFW plant in Sheffield.

Veolia Environmental Services welcomes the opportunity to comment on the DECC Consultation on Electricity Market Reform and we hope that our comments will add value to the consultation process.

We generally support the Governments approach to adopting a new approach to the electricity market, and look forward to greater recognition of waste as a source of low-carbon energy than has been the case in the past. Our comments on the Government's consultation are attached and hope you find these of value. In considering these, however, we would also draw to your attention the response from the Environmental Services Association (ESA).

If you would like to discuss any of these matters further with a Veolia Environmental Services representative, please do not hesitate to contact me.
Yours faithfully,

[redacted]

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RESPONSE OF VEOLIA ENVIRONMENTAL SERVICES (UK) PLC TO THE GOVERNMENT'S CONSULTATION ON ELECTRICITY MARKET REFORM (EMR).

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?**

VES supports the proposed reforms, and believes that that the current form of energy subsidy structure will not encourage sufficient investment in capital intensive low carbon generation at the level and rate required to meet the Auk's climate change and renewable energy objectives. In the current market, dominated by fossil fuel generation, fuel prices and electricity price are closely linked. We believe it is necessary to decouple this relationship and reduce the wholesale price risks faced by investors in low carbon plants in order to reduce the cost of capital and hence promote investment.

VES is a major developer of Energy From Waste generation plants, most of which are constructed under PFI contracts with local authorities. Energy from Waste could be a significant contributor to the UK's renewable base load – with potential provide up to 30% of renewable generation capacity at 2020 – and Government will be foolish to ignore this resource. In bidding for these public sector contracts that enable the generation infrastructure to be developed we find ourselves having to tender for a fixed-price gate fee, but at the same time take risk on the generation revenues that will be produced by the plant. With no long-term security on electricity market price available, the investor must risk the volatility of the market. As a result many potential investors are reluctant to invest. We are sure that a similar situation occurs with other renewable sources.

We believe that the proposed feed-in tariff (FIT) is key to the reform package and will play a large part in promoting low carbon generation. However, we do have some detailed comments:

a) We have described above the situation we find ourselves in as a waste management company, with preference for access to a contract for difference. It is probable, however, that those in a more open market situation would have a preference for a more speculative market price. We feel, therefore, that "one size" will not fit all, and Government should consider the peculiarities of the different sectors – Waste-to-Energy, onshore wind, offshore wind, nuclear, etc.

b) The reform package is complex, and that complexity may in itself delay its implementation and act as a barrier to entry.

c) The EMR does not extend to the design of the wholesale market and the bilateral principles of BETTA will be left unchanged. This a lack of transparency in wholesale power prices and gives rise to uncertainty for new entrants.

d) More attention needs to be given to the European perspective and interaction with EC policy, particularly the Emissions Trading Scheme. It is essential that the UK has a clear strategy regarding Europe and a well-defined vision of the role that EMR in that respect.

e) The lack of detail on governance arrangements in the consultation is of concern. For the smaller generators, the body best served to act as counter-party to the feed-in tariffs would be a non-government public body. This

would unlikely be Ofgem, however, as it would be conflicted between market design & regulation. Hence, we would support the formation of a new, independent body.

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

VES agrees that there is a risk that insufficient conventional capacity will be available to complement intermittent generation such as wind and solar. Of particular concern is that the economic downturn delays the construction of sufficient gas powered CCGT capacity to replace the closing nuclear and coal plant s in 4 or 5 years time. This is where Energy from Waste can play an important role, as it is not intermittent and can form a base load. There are a large number of facilities that are frustrated in their development due to planning difficulties and lack of market structure to bring them forward. In the absence of a reliable non-intermittent base load, it is likely that volatile pricing will occur with a suppressed wholesale price, leading to a further reluctance to invest.

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

We welcome the recognition of the advantages of long-term, fixed price contracts in attracting investment. As stated above the particular FIT model preferred is likely to depend on the trading situation faced by the generator and more that one type of FIT may need to be deployed. The other advantage of FIT is its simplicity. We believe that the consultation does not place sufficient emphasis on this.

We believe that the consultation has missed the opportunity of extending FITs to the demand side, and their role in the retail market. This would enable engagement with the majority of electricity users and enable a link to current Government initiatives such as the Green Deal. We also agree that improved energy efficiency has a major part to play in substantially reducing the costs of delivering a low carbon power system. A mechanism should be devised that incentivises energy efficiency – unlike the current RO that provides substantial subsidies to less efficient technologies (such as gasification) but ignore more efficient ones (such as incineration).

VES urges Government to explore carefully the relative merits of each of the instruments proposed. Our brief comments on each are as follows:

Fixed FITs
The simplicity of a fixed FIT will be an advantage for a wide range of renewable energy projects.

Contracts for Differences (CFD)
VES believes that this will be most suitable for the waste industry developing Energy from Waste generation. We also believe that EFW plants can achieve the efficient dispatch that the Government is seeking. However, CFD based on the annual average wholesale price still leaves variable renewable generators exposed to market risk, especially to the nuclear generators.

Premium FITs
Premium FITs would be simple to administer and would suit best the larger scale development of well-proven technologies. VES agrees with the Government,

however, that Premium FITs would leave investors exposed to wholesale market risk and they do not offer long-term price security or enhanced opportunities for new entrants. The exception to this may be biomass as the fuel is storable and the generation dispatchable. Biomass generation is subject to a variable fuel cost, and therefore may be better placed within a conventional wholesale market.

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

Yes, but we also recognise that it will not suit all technologies. Certainly for Energy from Waste, this is the best form of tariff.

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?**

VES believes that there is a clear case for socialising wholesale price risks associated with electricity markets dominated by fossil fuel generators for some categories of low carbon generation, such as Energy from Waste, nuclear and probably wind, as they are high capital cost, but low marginal cost and have no control over wholesale prices and cannot respond to changes in price dictated by fossil fuels. Hence they are exposed to a risk that debt cannot be serviced during periods of low fossil fuel prices, which cannot be predicted and could be extensive in duration. Furthermore, as is the case under the RO and the Premium FIT model, where a premium for low carbon generation is paid on top of wholesale price, irrespective of the level of the wholesale price, when fossil fuel prices are high, the consumer will be paying more than necessary prices for their power.

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?**

Energy investment is long-term in nature. The key requirement is for stable long-term pricing that encourages long-term behaviour. FIT with a CFD can adjust the market to reward long-term thinking. providing the process is transparent and does not favour vertically integrated companies whose decisions mirror other large rivals rather than favouring diversity of supply.

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?**

VES has not modelled the impact of removing price risk on capex, as our recent reaction to the lack of predictable electricity market was to hedge through NFFO agreements (now running out) or where possible, to pass the risk back to the public sector.

We agree that, in principle, a fixed FIT is the lowest risk option, followed by a CFD, These are likely to be preferred by the institutional investors and are by ourselves as they de-risk the revenue stream from the market uncertainty. VES normally funds its projects from corporate finance during construction into operation when it will then consider re-financing. In most cases a premium FIT will not de-risk as much as a fixed FIT or CFD. However, how the relative merits of the various models are viewed by the wider market will depend on the type of investor, the type of technology and where they are in the project development cycle. Even in our own case, we are faced with a different risk case with older, more mature projects than is the case with new projects, and the preference given here is one of balance between them. On balance, the prime function of VES – and indeed that of the waste industry in general - is to provide a waste management service and not to speculate on the electricity wholesale market. The creation of FIT schemes will facilitate the entry of more risk-averse investors, lower the cost of capital, release equity for re-investment and encourage more low carbon schemes to come forward. Having said that, issues around grid connection and access and the need for counter-parties to any FIT/CFD will also need close attention and could counter the benefit of FIT/CFD if not addressed.

It should also be noted that for some technologies, the technological risk may exceed any price risk.

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 existing the investor base?**

See answer to Q7. Complex and high risk projects such as Energy from Waste plants, nuclear power stations and offshore wind farms tend to attract more risk-averse investors than other projects such as solar and biomass. The Consultation does not recognize the potential for different requirements for different types of project and investor.

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?**

See responses above.

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?**

Greater liquidity is important to all three options. In the absence of a clear reference price, the level of support needed is difficult to determine. Prices under the balancing mechanism may not be fully representative of wholesale prices, whilst bilateral contracts within vertically integrated utilities are not transparent as that which would exist under an independent spot market or electricity pool.

If a CFD mechanism is introduced, there will need to be greater transparency over average price, as hidden pricing will give rise to potential for market participants to manipulate perceived prices and gaming will occur.

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

The FIT should be paid on output rather than availability. If necessary, available generators could be compensated for during periods of curtailment by the system controller.

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?**

VES believes the Emissions Performance Standard to be an important part of EMR, but does not think a Carbon Price support is necessary under EMR if an appropriate FIT mechanism is introduced. Energy from Waste plants have operated for years to more stringent emissions control (being subject to the Waste Incineration Directive (WID)) than fossil power stations (coil, oil and gas), and we would welcome a more level playing-field. Any regulation implemented on EMS should, however, be carefully thought through to ensure that any possibility of gaming is eliminated. We are aware that the major generators

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?**

VES has no particular view on this. Energy from Waste operates effectively at the emissions levels defined in the WID.

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?**

VES accepts that it may be difficult to apply EPS to existing plant and would be easier to apply to new plant. We agree, however, that it should be grandfathered at the point of consent. The actual economic life of a power station is never known and plant fife extension programmes can often double the design life. Consideration should be given to basing the EPS on a standard economic life of 25 or 30 years based on a predictive financial model used as a baseline.

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?**

VES supports the application of EPS to plants that undergo significant life extension. As suggested in our response to Q14 a predictive financial model of the life extension could be made to provide the anticipated financial performance of the EPS applied to that extension.

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

Yes

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

Yes, EPS should be reflected in any treatment of biomass, as to date the true environmental impact is not always accounted for.

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

VES does not believe in exceptions to good environmental performance and feels that although Government may be tempted by short-term expedients, to compromise will prove costly in the long-term. We believe that EPS must apply even in the event of long-term energy shortfalls, as it will force market innovation which will address the issue.

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

VES believes that a capacity mechanism is required to give assurance that sufficient capacity will be installed to give the required security of supply. The alternative will be to continue to rely on increasingly volatile prices in the wholesale market, which will increase the cost of capital and potentially discourage investment. As the proportion of intermittent generation increases, this will become more important. Beyond this, VES has no particular view on the design of capacity mechanisms, so accepts the Government's assessment of the pros and cons.

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

Yes, see response to Q19.

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

VES has not assessed this.

22. Do you agree with Government's preference for a 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.**

As stated above, VES has not assessed the potential design of a capacity mechanism, but is inclined towards supporting the Government's preference in this respect.

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?

VES it will have a positive impact and increase investment in demand-side response and storage. It may have an indirect positive impact on efficiency as a result to the improved thermal cycle some storage technologies can provide, but this is likely to be a secondary factor and a bonus rather than the mechanism driving efficiency.

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

- **Last-resort dispatch; or**
- **Economic dispatch**

VES has no view on this.

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

VES has no view on this.

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?

VES believes that feed-in tariffs tailored to specific technologies – and especially Energy from Waste - coupled with a capacity mechanism, will promote investment in low carbon generation and ensure security of supply. All the incentives for low carbon generation can be captured through the FIT and there will then be no need carbon price support to the EMR.

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

Of the four packages described in Chapter 5 of the Consultation, VES supports a FIT – and for Energy from Waste one with CFD – although, as stated above, we believe the FIT mechanism will work best if the type of FIT available can be varied to suit the technology and the particular stage that a project may be in its development. Hence we support a blend of Options 2, 3 and 4. We do accept, however, that once a choice is made, the particular model chosen will need to be applied for the duration of the off-take contract. We believe that Option 1 - carbon price support, EPS, targeted capacity mechanism - will be less effective, and that a one-size fits all will not provide optimal encouragement to low carbon generation capacity.

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?

VES has no view on this.

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

Please refer to the responses above.

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 key risk will be complexity of the package and uncertainty surrounding its implementation leading to absence of investment. Government must ensure it keeps the package as simple and transparent as possible.

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?

Tenders are not necessarily connected to auctions. Evaluating bids on a non-auction basis where the quality of the bid as well as the price is considered, is well established in the energy area and other regulated sectors – e.g. offshore wind. Auctions can have unpredictable outcomes and maybe consideration should be given to an administered price, as has successfully been implemented in some other countries. This will have the advantage of bringing price transparency to the market. Various methods can be used to determine FIT prices and as stated above, a single method will not suit all situations.
Auctions can be an appropriate and cost effective means to deliver capacity or services, but are best conducted when tendering for projects based on well known technologies, in a diversified and competitive market with a well developed supply chain. They are not, however, well suited to setting support levels for relatively high risk emerging technologies, where costs may be based upon estimates rather than experience. In addition, where the supply chain is limited, (as can be the case with Energy from Waste) the costs of major components and that of construction is not always known accurately from the outset.

On the other hand, in auctions participants may make unrealistically low bids in order to win contracts (as occurred under NFFO). If this methodology is adopted, penalties for non-delivery should be considered.

We believe that FITs based on an administered price but with de-gression to drive down prices may be a better solution.

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

VES believes it will be necessary to set up an independent body to administer the price setting and to divorce it from the regulatory role carried out by Offgem.

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?

The largest distortion under RO that VES is aware of its tendency to favour less energy efficient schemes such as gasification (through the award of a double ROC) over more efficient combustion technologies (that can only earn 0.5 ROC – and then only if in CHP mode). This distortion must be avoided under EMR.

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

Yes

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?

Without doubt, the EMR process will create short-term uncertainty and Government must seek to implement reform in a way that gives as much certainty to the market as is possible. The target for implementation of the EMR is 2017 and this is already within the planning and development timescale of many projects and the challenge for Government is to bring these projects to realization and avoid hesitation until post-2017. Government must, therefore, be prepared to give clear undertakings regarding the security of arrangements entered into pre-2017 and grandfathering thereafter. Without these in place, investors will fear that future remuneration levels will be more generous than they are now and retrospective changes will result in unintended consequences post-2017. The tendency will be for them to hold back and wait.

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**

The government should make it clear that developers should not expect the new arrangements to be more generous than the old, but VES does favour all new renewable electricity capacity accrediting after the introduction of the low-carbon support mechanism but before 1 April 2017 having a choice between accrediting under the RO or the new mechanism.

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?**

VES believes that Energy from Waste by combustion should be one technology subject to review and incorporated into the new scheme. We have no preference whether this is by a banding review of the RO or by early introduction of the new scheme.

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.**

Fix the price of a ROC.