Power & Energy

Electricity Market Reform Consultation Document

Viridian Power & Energy Response to the Department of Energy & Climate Change

10 March 2011

Introduction

Thank you for the opportunity of responding to this consultation. This response is made on behalf of Viridian Power and Energy.

By way of background, Viridian Power and Energy (VPE) is the largest independent energy supplier on the island of Ireland. We are an integrated energy business, with a large portfolio of conventional and renewable generation. We own and operate two CCGT power stations with combined output of 747MW and we have access to a renewables portfolio approaching 740MW by 2012 through both owned and contracted assets. We therefore have an excellent track record of developing and contracting with renewable projects in both Northern Ireland (NI) and the Republic of Ireland (ROI) and have a deep understanding of the investment and market conditions in both jurisdictions.

Executive Summary

VPE fully supports the UK's commitment to delivering challenging renewable energy and carbon reduction targets for the benefit of the environment, energy security and economic competitiveness and has a vested interest in responding constructively to this consultation. However from a Northern Ireland perspective it is difficult to fully answer the questions raised because the proposals (and supporting analysis) have not considered Northern Ireland and its fundamentally important unique characteristics. This was confirmed by DECC on 24th February 2011 during an EMR workshop in Belfast. This is unfortunate but we are encouraged by the willingness of the UK Government and DECC to engage with the Devolved Administrations to ensure the investment framework for low-carbon generation across the UK remains attractive. As a key energy stakeholder in Northern Ireland VPE would like to inform and assist in this process to ensure the introduction and transition to a new mechanism that works effectively in Northern Ireland.

In the context of electricity reforms, particularly of the renewable support mechanism, Northern Ireland should be distinguished from the rest of the UK in the following fundamentally important ways:

1. The electricity sector in Northern Ireland operates within the Irish all-island Single Electricity Market (SEM) which is a gross mandatory pool market governed by short run marginal cost (SRMC) bidding principles with a universal capacity payments mechanism which is entirely different from GB markets.

2. The SEM is governed by a SEM committee, on which Northern Ireland does not have majority representation. It is furthermore dominated by generation in the Republic of Ireland (constituting approximately 75% of the market) and is hence is not under the control of the Northern Ireland government and is impacted by Irish government and regulatory policy.

3. Northern Ireland does not have access to nuclear or CCS to help achieve its carbon reduction targets, and therefore achieving a high penetration of renewable generation is all the more important. Additional complexity or uncertainty could be very damaging to Northern Ireland's drive to achieve carbon reduction through challenging renewable targets

4. It is envisaged within Northern Ireland's Strategic Energy Framework (SEF) that renewable targets of 40% by 2020 will be mostly met (through necessity) in Northern Ireland by wind generation. This presents significant challenges from a system operation perspective given the intermittency of wind and its other technical characteristics which increase the risk of curtailment and constraints, especially in a small islanded, network constrained, system like Northern Ireland. Higher levels of wind penetration in this context will mean that constraint levels in Northern Ireland are likely to be significantly higher than in GB. Market rules to compensate for constraints are yet to be developed for these high levels of penetration, and this may not fit well with some solutions proposed for the GB market.

5. High levels of wind penetration in Northern Ireland and the Republic of Ireland also has implications for wholesale prices because of the relative size of wind as a percentage of the total generation portfolio.

6. Despite its significant wind resource Northern Ireland is a small market for lenders and investors to buy into especially in competition with GB or ROI.

Given the above VPE would strongly recommend that detailed consideration be given to Northern Ireland to best understand what kind of renewable support mechanism and transition to this would work best for Northern Ireland and for the UK as a whole. Given our understanding and considerable experience of developing and operating renewable projects in Northern Ireland, and in the SEM, we would stress the following key points in respect of the proposed low carbon generation support mechanisms:

VPE's preferred option is a Premium FIT for Northern Ireland

The NIRO (and the RO) have been operating effectively for almost a decade and, within NI, have had the desired impact of significantly increasing the amount of renewable generation. Developers and lenders are fully familiar with the NIRO and

see little benefit in removing a policy which is stable and which is achieving the desired outcomes.

Due to NI's limited opportunities for grid connection, and the high level of constraints now being faced by windfarm developments, NI projects are often relatively disadvantaged in terms of development costs when compared with other GB projects, and so it is particularly important that NI maintains its investment certainty and simplicity to compete with GB.

A Premium FIT is the preferred option insofar as it is simple to implement and understand and would operate in a similar fashion to the RO such that investors and lenders would be familiar and confident with the mechanism.

VPE does not consider a FIT with CfD appropriate for Northern Ireland

A CfD mechanism would be a complex solution in a small market like Northern Ireland. This would put it at a relative disadvantage to the much larger GB market, and it would be less attractive to lenders and investors. The high renewable penetration targets in Ireland of 40% by 2020 is likely to mean significantly higher constraint levels with the possibility of curtailment, which would be a significant difference from GB arrangements.

Our view is that a CfD in the Single Electricity Market (SEM) will be an additional complexity by comparison to the GB market, and that investors and lenders will see Northern Ireland as relatively less attractive. As Northern Ireland does not have access to nuclear or CCS to help achieve its carbon reduction targets, achieving high renewable penetration is all the more important. Reducing the pool of lenders and investors goes contrary to this.

In addition, the CfD arrangement as proposed will reference the 'average' wholesale price. This will not work for wind which Northern Ireland is reliant upon to meet its renewable and carbon targets because wind generators cannot control their generation profile and market prices are driven down by high wind (especially in the SEM which has a relatively large portfolio of wind).

VPE does not consider a Fixed FIT appropriate for Northern Ireland –

A Fixed FIT would require power to be purchased outside of the market. The SEM is a gross mandatory pool which requires power to be sold into the market, or through certain permitted intermediaries. It is not clear that a central buyer for NI renewable output would be a permitted intermediary. In addition a move to outside of market arrangements would be a reversal of UK market led policy for the last 2 decades.

Finally we strongly urge DETI to extend the NIRO until 2037 in line with GB support under the RO.

A more detailed response to the questions asked in the consultation paper is provided (where appropriate) in Annex 1

Annex 1 – VPE response to Selected Consultation Questions

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)?

VPE Response

Northern Ireland is very different and has not been considered. The pros and cons of each of the models of FIT needs to be assessed specifically in the Northern Ireland context, where simplicity and understandability will be key in such a small market for lenders and investors to bother with it.

Our view is that a CfD in the Single Electricity Market (SEM) will be an additional complexity by comparison to the GB market, and that investors and lenders will see Northern Ireland as relatively less attractive. As Northern Ireland does not have access to nuclear or CCS to help achieve its carbon reduction targets, achieving high renewable penetration is all the more significant. Reducing the pool of lenders and investors goes contrary to this.

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

VPE Response

Not for Northern Ireland which is part of a very different electricity market and is unique in other important and relevant respects from GB that needs to be separately considered and analysed.

The SEM is a gross mandatory pool market governed by short run marginal cost bidding principles and has a universal capacity payments mechanism which is entirely different from GB markets. SEM is governed by a SEM committee, on which Northern Ireland does not have majority representation. Our clear preference is for a premium FIT for Northern Ireland.

If we were to comment on the preferred policy of FIT with CfD in the GB context it would be that a FIT referenced to the „average" wholesale price is totally inappropriate to wind generation which will never see average prices and has minimal control over its dispatch to sell output above the average price.

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?

VPE Response

Removing price risk from generators under the CfD model needs to be considered in the Northern Ireland context. A CfD model in Northern Ireland brings new risks and complexities that would be damaging to renewable investment in Northern Ireland.

For example wind is far more important in Northern Ireland than in GB and a CfD based on the „average" wholesale price is not appropriate to wind because wind generators cannot control their generation profile and market prices are driven down by high wind hence wind generators have an exposure to the average price. In Northern Ireland, the wholesale price would have to reference the SEM rather than BETTA and this brings further complexity and new risks. The SEM wholesale price is not within the control of the NI Government as 75% of SEM generation is based in the Republic of Ireland and SEM policy and market outcomes are very much influenced by ROI government and regulatory policy. Furthermore the SEM is governed by the SEM Committee which has three voting parties for decision making, only one of which specifically represents Northern Ireland. Moreover, higher levels of wind penetration in both parts of Ireland will mean that constraint levels on a small islanded network are likely to be significantly higher than in GB, and this suggests that a one-size-fits- all approach will not work in Northern Ireland vis-à-vis the GB market.

These new risks and complexities specific to Northern Ireland would make Northern Ireland relatively less attractive to renewable investors and lenders compared with GB.

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?**

VPE Response

It is important to keep generation linked to market prices where possible. The proposed policy has not been considered in the Northern Ireland context and therefore it is impossible to say anymore than this at this stage.

Renewables have priority dispatch rights and therefore the price signal is relatively unimportant to unit dispatch.

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?**

VPE Response

This needs to be considered in the Northern Ireland context which is a much smaller market than GB for investors and lenders to buy into. Simplicity and understandability of the support mechanism is key for Northern Ireland.

In the context of the GB proposals we would stress that referencing the „average" wholesale price is entirely inappropriate to wind generation and can only raise the cost of capital for these projects.

A FIT with CfD brings additional complexity and risk to Northern Ireland which would far outweigh any potential risk reducing benefits of this approach.

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?**

VPE Response

Without detailed Northern Ireland specific analysis it is impossible to comment on this. Generally speaking the availability of finance in Northern Ireland will be contingent upon the simplicity and understandability of the scheme given the small size of the market. The FIT with CfD in the context of SEM would be the most complex option and therefore be the least optimal for financing investments.

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?**

VPE Response

We need a solution that works for the small and very different Northern Ireland market. An obvious question to ask for example is who would buy a fixed FIT and how would this work in the context of a gross mandatory pool relevant to Northern Ireland? A central buyer would have to become a permitted intermediary and there are restrictions on intermediaries acting for price makers for example. The SEM committee would have to determine whether such an intermediary was acceptable and this is not in the control of NI decision makers.

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?**

VPE Response

Northern Ireland SEM market is entirely different from the GB market arrangements. A detailed assessment would need to be carried out to assess the implications for liquidity of the proposals.

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

VPE Response

Again this question needs to be considered in the Northern Ireland context where there are considerable grid constraint issues that need to be urgently addressed with over £1 billion of investment in grid infrastructure and upgrade and significant improvements to dispatch control systems and forecasting.

In light of the above, it is appropriate for payments to be based on availability if the generator is constrained off or curtailed as a consequence of network or system operation problems, because this is beyond the control of the generator.

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?

VPE Response

There is a clear need for Northern Ireland tailored solutions. The government package does not fully apply in Northern Ireland.

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

VPE Response

As above, Northern Ireland needs to be considered separately.

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?

VPE Response

Without detailed analysis considering Northern Ireland and the options that would be applicable to Northern Ireland it is impossible to answer this question.

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

VPE Response

How they interact in the context of Northern Ireland has not 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?

VPE Response

Northern Ireland needs to be considered separately as it is fundamentally different from GB.

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?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a feed-in-tariff because they increase development risk, have a poor track record, have stop-go consequences, and increase transaction costs

Under the current regime a renewable developer can invest in the processes required to gain consent and grid connection safe in the knowledge that they can gain access to the RO and the level of support it provides. An auction system removes this certainty since the developer may fail to secure a contract through the auction process or may not achieve the level of support required.

Experience of the NFFO mechanism indicates that auctions did not deliver the desired outcomes in terms of increased renewable generation. Experiences were similar in ROI where the AER process was also unsuccessful. Evidence from other countries also indicates a poor success rate with auctions.

Projects reach project readiness at different time and auctions do not cater for this. Under the NFFO, uncertainty about the timing of auction rounds was one of the key difficulties with that system. Tenders or auctions have stop-start consequences, with developers having to wait until the next tender round before proceeding with projects.

There is also considerable transaction costs associated with participating in tenders or auctions which could potentially disadvantage smaller developers.

i. Can auctions or tenders deliver competitive market prices that appropriately reflect the risks and uncertainties of new or emerging technologies?

VPE Response

No, as discussed above auctions or tenders .

ii. Should auctions, tenders or the administrative approach to setting levels be technology neutral or technology specific?

VPE Response

The level of support should be technology specific but should not determined using auctions or tenders.

iii. 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?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a premium.

iv. Are there other models government should consider?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a premium.

v. Should prices be set for individual projects or for technologies?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a premium.

vi. Do you think there is sufficient competition amongst potential developers / sites to run effective auctions?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a

vii. 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?

VPE Response

In our view auctions or tenders would be highly inappropriate in setting the price for a premium.

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

VPE Response

This question is not applicable to Northern Ireland

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?

VPE Response

The (unintended) consequences of a FIT in Northern Ireland would need to be given special consideration.

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

VPE Response

Our view is that the risks to delay are minimised by maintaining the current RO system until 31 March 2017. Running an alternative system in parallel will cause confusion and uncertainty. The best way to ensure project delivery proceeds until the new system commences is to avoid having parallel systems, but ensure a new system is fully clarified in detail by 2013 to ensure project investments can be made on that basis, due to long lead in times for project delivery.

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?

VPE Response

Maintaining the current RO system until 31 March 2017 will minimise uncertainty and confusion. Running an alternative system in parallel will cause confusion and uncertainty.

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:

    i. All new renewable electricity capacity accrediting before 1 April 2017 accredits under the RO;
    ii. 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.

VPE Response

We would favour (i) all new renewable electricity capacity accrediting before 1 April 2017 accredits under RO, and not the choice option. In addition, the NI RO will need to be extended to 2037 in line with GB.

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:
    i. 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?
    ii. Carry out an "early review" if evidence is provided of significant change in costs or other criteria as in legislation?
    iii. 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?

VPE Response

We suggest move them out of the vintaged RO scheme (option iii)

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

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

VPE Response

We would be against fixing the ROC price for existing and new generation as this will undermine the current financing arrangements.

Statnett

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Our date: 9th March 2011

Consultation on The Electricity Market Reform

Statnett is the Transmission System Operator in Norway, and a partner with National Grid International Limited in the North Sea Network (NSN) project, a subsea interconnector between Norway and Great Britain. Statnett welcomes the opportunity to participate in DECCs consultation process on the Electricity Market Reform.

Statnett operates four subsea DC interconnectors and we are involved in several new projects for additional DC interconnection capacity, partnering with various TSOs.

In Norway around 95 percent of the electricity production is hydro power, and there is a storage capacity of approximately 213 of the yearly Norwegian consumption. Combining the flexible Norwegian hydro power system with the GB generation mix will increase the overall efficiency of the two power systems. The NSN interconnector can also contribute to reduce greenhouse gas emissions from the GB electricity market, by enabling more wind power to be introduced in the GB market.

The increased penetration of wind power in GB will reduce the thermal production and thus the possible providers of spinning and other reserves. It's likely that this will increase the cost of reserves. In addition to ordinary energy trade, we believe it can benefit Brittish consumers if it is allowed to use part of the interconnector to transmit reserves from Norway to GB. This can reduce balancing costs since a low cost resource is introduced in to the market. Further, it will increase competition in the reserve market and thereby reduce the costs.

For the new interconnector between western Denmark and Norway, Statnett and Energinet.dk has agreed to trade automatic reserves. This trade will be very profitable, benefitting from the difference in the generation technology mix on each side of the interconnector. Analysis shows that the welfare economic value of this trade is significantly higher than that for ordinary energy trade. As the volumes in the balancing markets are much lower than in the total energy markets, it is however likely that only a smaller part of the capacity should be allocated to exchange reserves. Between Denmark and Norway, we plan to allocate 100 MW out of a total of 1700 MW to this purpose. This has been accepted by both the Norwegian and Danish regulator, with a yearly evaluation.

We are positive to the proposed reserve market. A more transparent market for reserves may enable a market test for the optimal allocation of transmission capacity between ordinary energy trade and trade with reserves.

It's important that a capacity mechanism doesn't remove the incentives for investing in an interconnector between Great Britain and Norway. If a targeted mechanism is introduced, it's essential to minimize the

impact on the market. Statnett belives that it can be difficult to avoid market distortion with a targeted capacity mechanism. This is a concern with the Swedish peak load reserve, and it has thus been the intention from the beginning that this mechanism will only be temporary. If a market-wide capacity mechanism is introduced, it will be suboptimal to discriminate interconnectors, as they may be competitive participants in this market.

Statnett believes that it's in the interest of Great Britain to facilitate realization of new interconnectors. An optimal use of the flexible Norwegian hydro power, both in the energy market and in reserve markets, can contribute in reaching the Governments objectives; Security of supply, decarbonisation and affordability.

Yours faithfully

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