Anthony Mungall
Electricity Transmission Team
Ofgem
3rd floor
Cornerstone
107 West Regent Street
Glasgow
G2 2BA

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Dear Anthony

Project TransmiT: Electricity transmission charging: assessment of options for change

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, combined heat and power plants, and energy supply to end users. We are the largest user of the transmission system from both generation and supply perspectives. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

EDF Energy welcomes the opportunity to respond to this consultation and impact assessment. Our key points are as follows:

- Redpoint's modelling for Project TransmiT provides quantified evidence that socialised charging is not appropriate for GB transmission charging.
    - The additional costs to consumers of £6.9bn by 2020 outweigh any reduced risk of failing to meet 2020 renewable targets;
    - It is apparent from these results that socialised charging results in inefficient investment decisions at the expense of existing and future customers.
- No evidence has been presented that the Status Quo charging will prevent achievement of 2020 renewables and 2030 de-carbonisation targets.
    - The modelling approach which delivers 2020 renewable targets and 2030 de-carbonisation under Status Quo charging is representative of a realistic outcome.
- We recognise the need for charging to evolve and support change where it is justified.
- Given that National Grid has identified that the future system will be planned and built on the basis of the economic trade off between transmission investment and expected constraint costs, we can see the case for the general approach of Improved ICRP.
- However, we have reservations concerning the detailed form of Improved ICRP, and in particular we believe that the justification for the use of annual load factor to adjust charges is flawed.

- The relationship used to justify this link is not strong enough and it is imperative that there is a more robust method for such a fundamental change that is sustainable.

- Redpoint's modelling indicates that Improved ICRP has the potential for increasing costs for consumers in comparison with the status quo. We hope that this might be addressed should Improved ICRP progress to a CUSC modification process.
- We welcome Ofgem's intention to publish final recommendations in spring 2012, but note that it is important that industry has a sufficient transitional period to incorporate any changes into their business plans.
- It is critical that the discussions and views of the Project TransmiT technical working group feed into any CUSC modification process for charging.
- There may be value in National Grid taking long term sustainability benefits into account, in addition to the current charging objectives, when reviewing the charging methodology.

EDF Energy agrees with Ofgem's initial view that a socialised model should be ruled out as an option for transmission charging. The analysis presented to date demonstrates that socialised charging will not meet all three Government priorities for energy, namely that it should be secure, low carbon and affordable. As these three priorities underpin the TransmiT objectives, socialised charging is not an appropriate model for GB transmission charging. Although Redpoint's work indicates that there is a greater probability that 2020 renewable targets will be met under a socialised charging model, it is clear that the costs to consumers would be inappropriate and therefore that it fails to contribute to affordability targets.

We welcome Ofgem's intention to reaffirm the principle of cost reflectivity for transmission charging. It is important for generators to be provided with appropriate signals for investment in order to deliver an efficient transmission system. Redpoint's analysis clearly demonstrates that without these signals generators might not take account of their impact on transmission build in their siting decisions. This can be seen to result in higher costs of transmission investment and constraint costs. As demonstrated by Redpoint's analysis the increased cost to consumers due to socialised charging is £6.9bn by 2020. This is a material difference and cannot be considered to be proportionate.

In our response to your call for evidence in November 2010, we discussed the importance of providing evidence that the current charging arrangements were no longer appropriate and would hamper Government priorities for energy. To date, we have seen no evidence which suggests that transmission charging is preventing low carbon projects from coming forward to the extent that 2020 renewable targets would be missed. We also noted in November 2010 the interaction between Government policy instruments to incentivise renewable and low carbon generation and transmission charging. Redpoint's approach to modelling for TransmiT has been to model Electricity Market Reform (EMR) proposals at a financial level while ensuring that renewable and low-carbon targets can be met. Given that the Government has confirmed to Ofgem that it will take account of TransmiT in implementing EMR this would suggest that the modelling approach is representative.

We recognise the need for transmission charging to evolve and can support change where it is justified. Given that National Grid has identified that the future system will be planned and built on the basis of the economic trade off between transmission investment and expected constraint costs, there might be merit in the general approach of Improved ICRP. There remains strong evidence that sufficient transmission capacity is needed to meet the needs of both generation and demand users, and so it seems appropriate to charge for transmission on this basis. We therefore agree with Ofgem that there remains a choice between Status Quo charging and Improved ICRP, which is not clear cut.

At present we cannot give our unequivocal support to the form of Improved ICRP that has been presented. In particular the evidence presented to date suggests that the use of annual load factor as a tariff adjustment factor is insufficiently robust and could be inherently unsound.

Any amendment to the transmission charging methodology through a Significant Code Review (SCR) must be able to endure for sufficient time to ensure that transmission users can reflect the charging signal into both medium and long-term investment plans. Any changes to the charging arrangements should be based on sound principles and provide an enduring basis for charging, so that there will not be further significant changes within investment timescales. On these grounds the present Improved ICRP option does not have sufficient justification to warrant implementation. This option also increases costs for consumers in comparison with the Status Quo. It would therefore be helpful to understand the relativity size of this increase in percentage terms. At present we would be uncomfortable should this option progress through to the industry change processes, without these additional costs being considered and potentially addressed by further refinement of the proposal.

General remarks

We welcome your intention to provide industry with final recommendations from this SCR in Spring 2012. On the expectation that these recommendations will include a direction to National Grid to raise appropriate code modifications, it is critical that the work that has already been undertaken by the industry in discussing future charging arrangements can be integrated into the industry process for development of the proposal(s). However, the implementation of a step change in charging, particularly where there are potential impacts on demand tariffs, must be carefully transitioned.

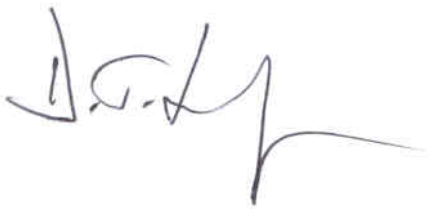
Finally, we note your intention to consider clarifying National Grid's charging objectives with respect to sustainability. This has the potential to align the principles of charging with wider industry codes and regulation.

We have included further detailed remarks and responses to your consultation questions as attachments to this letter.

Should you wish to discuss any of the issues raised in our response or have any queries, please contact my colleague Stefan Leedham on 0203 126 2312, or myself.

I confirm that this letter and its attachments may be published on Ofgem's website.

Yours sincerely,



Denis Linford
Corporate Policy and Regulation Director

Attachment 1

Project TransmiT: Electricity transmission charging: assessment of options for change

EDF Energy further detailed remarks

Justification for use of annual load factor to adjust tariffs

We recognise the need for charging to evolve and support change where it is justified. Given National Grid (NG) has identified the future system will be planned and built on the economic trade off between transmission investment and expected constraint costs there might be merit in the general approach of Improved ICRP. However, we are unconvinced by the analytical evidence produced by NG which has been used to justify the use of annual load factor within Improved ICRP. In NG's proposal the transmission system is effectively divided into two by separating the transmission requirements for winter peak demand and transmission requirements for year round use of the system. This premise is based on the new arrangements within the National Electricity System Security and Quality of Supply Standards (NETS SQSS) for wider transmission investment described in GSR009. Given that the current charging arrangements are based around the principles described in the SQSS (prior to the implementation of GSR009) it seems sensible that Improved ICRP should be based on the updated principles of the SQSS.

NG's proposal then takes the division of the transmission system into winter peak and year round requirements to calculate two tariffs to be applied to generators in different ways. The peak tariff is not applied to intermittent generators on the basis that they cannot be controlled to operate at winter peak whereas the year round tariff applies to all generators. However, NG's proposal assumes that a generator's historic annual load factor is a reasonable proxy to reflect their use of the transmission system in the future and is therefore used to adjust their year round tariff.

The premise that annual load factor is a reasonable proxy is flawed and in its current form we do not support the justification presented to date by NG. This simplification for full demand and load curve analysis does not apply on a locational basis as it relies on a sufficiently diverse plant mix. We further consider that actual year on year system usage can be driven by factors outside of a generator's control e.g. prices and system margins.

We have continued to engage positively with NG on this topic since it was proposed and endeavoured to share an understanding of the impact of generation technology on transmission constraint costs using the Electricity Scenarios Illustrator (ELSI) model. In this work we have examined the modelling approach at a macro level and agreed with NG where there were issues to be resolved. Our key observation of this work is that the only binding constraint on the transmission system is the B6 i.e. Scotland – England boundary. At present we consider that the strong relationship between constraint costs and load factor as presented by NG may not be as firm as has been suggested. It is clear to us that

further analysis is required to investigate remaining modelling issues and to determine if a relationship between generation technology and constraints exists. Only if it can be proven robust is it appropriate for application to transmission charging.

This issue was discussed by the Project TransmiT technical working group and it would have been useful if Ofgem had provided further detail of the issue in this Impact Assessment. We note that Ofgem consider the basis of the tariff calculation for the year round system should remain subject to further industry clarification (should Improved ICRP form part of any final recommendations).

Results from modelling of policy variants

Improved ICRP variant – excluding HVDC convertor station costs

We welcomed the decision from Ofgem to include additional scenario modelling in its analysis of TransmiT. The Project TransmiT technical working group discussed various views on the treatment of HVDC convertor stations. At present the only convertor stations within transmission charging methodology are those relating to local assets for offshore users. These costs are reflected back to the offshore generator and so there seems to be a precedent that all convertor station costs should be treated similarly, i.e. cost reflectively. In the case of HVDC 'bootstraps' it is clear that these are for wider transmission use and might be considered to be for the benefit of the system and all users, suggesting that convertor costs perhaps should be socialised through residual charging. However, the Redpoint results from modelling this variant do not show any demonstrable benefit of sharing the costs in that there is no significant impact on renewable deployment or accelerated commissioning of HVDC links. The analysis also shows that there are increased costs for consumers if the costs of convertors are socialised. It would be useful if the regulator were to identify what evidence they would require to establish the treatment of HVDC cables in transmission charging. Without this understanding it seems that there is some evidence to maintain cost reflectivity in the methodology.

Socialisation variant – retaining local generation tariffs

This modelling variant did have some support from members of the Project TransmiT technical working group. In principle, we consider local charges to be a worthwhile element of cost-reflective charging however the results from this variant clearly demonstrate that socialising wider transmission costs while retaining local charges is costly to consumers. The overall impact on both power sector costs and consumer bills remains wholly disproportionate at £1,424m and £4,772m respectively. It is therefore apparent that any form of socialised charging should be ruled out.

Key issues for the CUSC modification process

Basis of the year round charge

One of the key issues that the CUSC workgroup will need to address is the issue of the derivation of the year-round charge. As previously noted we have significant concerns with NG's proposal to adjust the year round charge based on historic annual load factors. Ofgem's decision therefore to leave this open for further development and discussion by the industry through the CUSC workgroup process is welcomed. However, we note that the Project TransmiT technical working group also considered different options for the derivation of the year round charge and this should help focus discussions through the CUSC workgroup process. In addition to the review of load factors to derive the year round charge, it would appear the key issues to consider are:

- The use of a MW or MWh charge for the year round component: We would highlight that all of the academic reports into TransmiT found that there was a strong link between investment and capacity bookings. Further, GSR009 also uses capacity bookings as the method of deriving the minimum transmission investment requirements. We continue to believe that all elements of a TNUoS charge should be based on capacity bookings and so a MW charge should be applied.
- Ex ante or ex post derivation of year round charges: Depending on the options developed by the workgroup for calculating the year round charge, consideration should be given as to whether this uses ex ante or ex post data and the impact that any arrangement may have on the ability to develop predictable charges. We note that this was a key issue for many respondents to the call for evidence, as predictability of charges are important when making long term investment decisions, as well as shorter term operational decisions including customer pricing.

Onshore versus offshore issues

The Project TransmiT technical working group discussed how offshore charging in relation to the local works were derived. This was portrayed as an onshore versus offshore issue, although we note that the current charging methodology does not include this distinction. Local charges are faced by numerous generators, both onshore and offshore and are applied equally depending on the connection of the generator to the Main Interconnected System (MITS). We continue to support the use of cost reflective charges and based on the evidence presented to date there does not appear to be any reason to move away from the application of local charges to onshore and offshore generators. We therefore welcome the fact that Ofgem has decided to keep this issue whole in the Improved ICRP option and this should form the basis of any CUSC workgroup discussions.

Treatment of HVDC costs

As previously noted the Project TransmiT technical working group also considered how the HVDC bootstrap and converter stations should be incorporated into the wider transmission charging arrangements. These discussions and decisions should be used to

form the basis of any further discussions in the CUSC workgroup process to ensure these arguments are not lost. To facilitate this it may be beneficial were a summary produced on each topic identifying discussions that have taken place and the assumed starting point for the CUSC workgroup. There would also be a benefit were Ofgem to identify what further evidence they would require, or the issues they believe the workgroup should consider.

Islands Charging

The issue of Island charging has been one of the issues that have attracted significant debate and views as part of TransmiT. It would therefore appear appropriate that the CUSC workgroup considers how this is addressed. As identified by Ofgem, one of the key issues to consider is the appropriate security factor for Island charging in the event that there is no redundancy in the cable connection. In particular, the CUSC workgroup should consider what compensation is available to Island generators if the reduced redundancy in the connection is reflected in a reduced transmission charge.

Generation: Demand split

We note Ofgem's initial views that the current split of TNUoS revenue of 27% generation and 73% demand should be retained, but kept under review until it becomes clearer that the EU Guidelines on generator charges is breached. We are aware that under the scenarios that NG presented to the Project TransmiT technical working group there is a risk that the average cap of €2.50/MWh may be breached in 2015, depending on wider developments in transmission charging and the price control process. It would seem reasonable to keep this under review, but we note that both suppliers and generators need sufficient notice of this change to ensure that this can be incorporated into business plans so that the risks and impacts on consumers are minimised. We would therefore urge that any proposed change in this split is provided with sufficient notice. As previously noted a minimum lead time of two years, and preferably three, would be required for this change.

Transition for implementation

As noted above, generators and suppliers require sufficient notice of any change in transmission charging to ensure that these changes can be incorporated into their investment and business plans. We therefore acknowledge Ofgem's preference for a timely implementation following their decision at the end of the CUSC process. We continue to support a timely decision from Ofgem to provide certainty to investors on the path of transmission tariffs; however, it remains important that sufficient time is provided to the industry to ensure that any distributional impacts are minimised.

Attachment 2

Project TransmiT: Electricity transmission charging: assessment of options for change

EDF Energy responses to Consultation Questions

CHAPTER: Four

Question 1: Do respondents consider that we have appropriately identified and where possible quantified the impacts of the Project TransmiT options?

Yes, we welcome the approach which has been taken by Ofgem and Redpoint to analyse the impact of charging arrangements and welcome the quantification which has been given to the results.

Question 2: Do respondents consider that there are additional impacts which we should take into account in the decision making process and, if so, what are these?

We consider that an amendment to transmission charging has the potential to impact significantly on generators, suppliers and ultimately consumers. We welcome the quantification which has been given to the potential cost impacts for consumers but note that within the different users of the transmission system there is the potential for a significant distributional impact. This aspect has received limited focus within the impact assessment and we would welcome a greater understanding of how these risks might be managed. This becomes particularly relevant for implementation timescales. While we acknowledge Ofgem's preference for timely implementation following their recommendation it is important that transition and or advance notice of change is provided to transmission system users to ensure that the change is appropriately reflected in all relevant aspects of the financial and business management if their company.

Question 3: Do respondents consider that we have appropriately identified the potential interactions of the Project TransmiT options?

Yes, we consider that the interactions are identified and particularly welcome the clear approach to the modelling in respect of interactions with EMR.

Question 4: Do respondents consider that we have appropriately identified the likely impacts and consequences of these interactions?

Yes.

CHAPTER: Five

Question 1: Do respondents consider that we have appropriately identified and taken account of the key sustainability issues?

Yes.

Question 2: Do you think there may be long term and strategic benefits associated with the development of HVDC technology, in particular the treatment of converter station costs for links that parallel the AC network, which Project TransmiT modelling has not fully considered because of the timeframe of the modelling (i.e. 2030) and the limited nature of the bootstrap options?

Operational learning for use of HVDC has not been within the scope of the SCR. We would wish to understand what further evidence would be required to establish how any further consideration could be reflected in the modelling in order to establish the appropriate treatment.

Question 3: Do you have any supporting evidence for a different treatment of the converter station costs for the planned bootstrap HVDC options?

Please see our answer to Question 2.

EDF Energy
February 2012