

Project Transmit: Impact Assessment Consultation (Reference 137/13) SSE Response: Appendices

10th October 2013

(1) Report from Oxera: “Review of the NERA / Imperial College London report on the impact of ‘Improved incremental cost-related pricing’” prepared for SSE, 16th July 2013.

(2) (Part A) Report from Phil Baker: “University of Bath report “Year-round System Congestion Costs – Key Drivers and Key Driving Conditions”: an alternate view”, prepared for SSE, October 2013.

(2) (Part B) *Report from Phil Baker: “Further analysis to provide a qualitative assessment of the three CMP213 Diversity options and of the potential for sharing in situations where more than one renewable technology is present” prepared for SSE, October 2013. [Note this part of the response is confidential and will be sent under separate cover to Ofgem.]*

(3) Further information in support of our response to Question 7 as regards the ‘consultation period’.

(4) Further information in support of our response to Question 1 as regards ‘ongoing change’.

(5) Report from Redpoint: “A Review of ‘Project TransmiT: Impact of Uniform Generation TNUoS prepared for RWE npower”, prepared for SSE, June 2011

Appendix 1 - Oxera Report

“Review of the NERA / Imperial College London report on the impact of ‘Improved incremental cost-related pricing’”, prepared for SSE.

Date 16th July 2013

[10 pages]

(For the avoidance of doubt, this report is a separate document which forms part of this consultation response).

Appendix 2 - Baker Report

We commissioned Phil Baker¹ to undertake two pieces of work with respect to this Impact Assessment consultation.

The two pieces of work relate to:-

Part A: a review of the report produced by the University of Bath on “Year-round System Congestion Costs – Key Drivers and Key Driving Conditions” (dated January 2013) that was commissioned by RWE npower and Centrica as part of the CMP213 process (this piece of work is referred to as *Baker Report ‘Part A’* in our response to the consultation Questions); and

Part B: a qualitative assessment of the three CMP213 Diversity options and of the potential for sharing in situations where more than one renewable technology is present (this piece of work is referred to as *Baker Report ‘Part B’* in our response to the consultation Questions).

Only Part A is contained in this Appendix. Part B is confidential and will be sent under separate cover to Ofgem.

Phil Baker is a BSC Panel member and his Elexon² biography outlines his extensive experience in the electricity industry.

(For the avoidance of doubt, this report is a separate document which forms part of the consultation response).

¹ Phil Baker “joined the [BSC] panel in 2010, following a long career in the electricity supply industry and government, starting with Manweb then moving on to the CEGB, National Grid and finally the DTI/BERR. Philip is currently a Research Fellow with UKERC/Exeter University. Philip has a Master’s degree In Electrical Power Systems Engineering from the University of Manchester, is a Chartered Electrical Engineer and a Fellow of the Institute of Engineering and Technology.”

² <http://www.elexon.co.uk/people/phil-baker/>

[Part A]University of Bath report “Year-round System Congestion Costs – Key Drivers and Key Driving Conditions”: an alternate view

Executive summary

This report has been commissioned by Scottish & Southern Energy to provide an alternative view of the issues considered by the University of Bath in their report “Year-round Congestion Costs – Key Drivers and Key Driving Conditions”, prepared for RWE and Centrica in response to the CUSC CMP213 Working Group consultation. The University of Bath focussed on two particular aspects of the CMP213 proposals a) the use of load factors as a proxy for the impact of individual generators have on the costs of congestion and b) the use of a dual background, and Bath concluded that, in combination, these simplifying assumptions produce a charging outcome that is inferior to the current TNUoS charging methodology. Other aspects considered by the CUSC CMP213 Working Group, i.e. how to take account of the HVDC “bootstraps” and potential island links, were not considered by the University of Bath’s investigation and are not considered here.

It is concluded that, while the University of Bath’s report usefully highlights some of the difficulties associated with the use of load factors as a proxy and a dual background approach, it fails to demonstrate that the use of these simplifying assumptions produce an outcome that is inferior to the existing arrangements. Therefore, in order to examine the validity of the University of Bath’s conclusions further, a simple system model³ is used to assess whether the revised TNUoS charging arrangements set out in the NGET Original proposal does in fact produce an outcome that is less cost-reflective than the status quo. In other words, would the charges be less representative of the actual costs incurred by the TO in applying SQSS criteria to the development of the transmission system than the existing TNUoS arrangements. Cost-reflectivity is a significant issue in assessing the merits of alternative charging proposals as it is central to the Direction issued by the Authority to NGET, the CUSC applicable objectives and the overall aims of Project TransmiT.

Using this simple model, the analysis suggests that, in fact, the NGET Original proposal could impose charges that are likely to be more representative of the

³ There is a limit to the robustness of the conclusions to be drawn from the simple model used, and more sophisticated modelling would be required to calculate the actual charges arising from a particular charging methodology. However, the use of a simple model that reflects the high level characteristics of the GB transmission system is capable of demonstrating charging principles and of providing useful insights into the relative merits of alternative charging proposals.

actual costs incurred by the TOs than the existing TNUoS methodology. It seems reasonable to conclude, therefore, that the NGET Original proposal is more likely to satisfy the requirements set out in the Authority's Direction than the existing TNUoS charging arrangements, in that it more closely reflects the costs likely to be incurred by the TOs in developing the system to accommodate different technologies.

Structure of the report

The remainder of this report is structured as follows;

- Section 1 set out the background to this review, and the approach taken
- Section 2 considers the aims of the University of Bath's analysis, assumptions and methodology, before going on to assess the key findings of the analysis and the conclusions drawn.
- Section 3 provides a simple analysis based on a stylised 3 bus network model of whether or not NGET's Original proposal for changes are better than baseline, i.e. are better than the existing TNUoS charging arrangements. This is crucial in assessing the validity of the University of Bath's conclusions.
- Finally, section 4 sets out the conclusions to be drawn from the analysis

1. Background to the review and approach taken

1.1 Background

Following the conclusion of Ofgem's Significant Code Review (SCR) in May 2012, NGET were directed to raise a CUSC modification proposal to address the defects identified in the existing transmission charging methodology. NGET submitted a modification proposal (CMP213) to the CUSC Modifications Panel in June 2012, who decided that the modification should be considered by a Workgroup (the CMP213 Workgroup) who were to report back to the Panel following a Workgroup consultation.

During their deliberations, the CMP213 Workgroup considered NGET's Original proposal set out in CMP 213, and identified potential options and alternatives. Ultimately, the Workgroup identified 41 potential Workgroup Alternative CUSC Modification (WACM) proposals, and voted take forward eight proposals that were considered to most improve on baseline (the status quo) or the NGET Original proposal, in terms of the CUSC applicable objectives.

The eight proposals taken forward included three variations on the NGET Original proposal that are relevant to the issues considered by the University of Bath report and this review of that report; Diversity options 1, 2 & 3. However, the University of Bath report was published at a time when the three Diversity options were still being developed by the CMP 213 Workgroup and therefore the

report only considers the NGET Original proposal. Nevertheless, it is worth noting that the three Diversity options do address some of the concerns raised by the University of Bath in their report. Subsequently, Ofgem have indicated that they are minded to approve Diversity option 1.

1.2 Approach taken

In carrying out this review, attention is paid to the original aims of Project TransmiT and the relevant element of the Direction issued to NGET in May 2012. The original aims of Project TransmiT are to ensure that transmission charging “*facilitates the timely transition to a low-carbon energy sector which continues to provide safe, secure high quality network services at value for money to existing and future customers*”, while the relevant element of the Direction is for NGET to raise a modification that “*better reflects the differing impacts (i.e. costs and benefits) of individual generators on the TO’s costs in a manner which is consistent with the principles set out in the National Electricity System Security and Quality of Supply Standard (SQSS)*”. The need for proposed modifications to the transmission charging regime to comply with these aims and Direction is a significant issue in assessing the validity of the University of Bath’s conclusions.

A further issue in assessing the University of Bath’s report and its conclusions is whether the NGET Original proposal, on which the report focuses, is better than baseline, i.e. the existing transmission charging arrangements. In order to establish whether or not this is the case, the simple stylised 3-bus network model utilised by NERA in their report commissioned by RWE and Centrica “Project TransmiT: Ofgem’s Assessment of Options for change”⁴ is used to assess the extent to which the existing transmission charging methodology and the NGET CMP213 Original proposal reflect the costs incurred by the TOs in developing the transmission system in accordance with the SQSS as revised by GSR009⁵. This is of particular relevance given the specific reference to the impact on TO costs set out in the Authority’s Direction.

2. Comments on aims of the analysis, assumptions and methodology

In addressing their first task, the relationship between load factor and constraint costs, the University of Bath essentially covered the same ground that NGET and others have covered, i.e. what factors influence constraint costs and does load factor represent an acceptable simplifying proxy for the range of influencing factors. The Bath analysis confirmed much of the work done by NGET in terms of the factors that influence the costs of managing congestion, but came to the opposite conclusion - i.e. that the use of load factor alone could not be considered

⁴ Project TransmiT: Ofgem’s assessment of options for change. Report for RWE produced by NERA, published February 2012. [See http://www.nera.com/nera-files/PUB_Project_TransmiT_0212.pdf](http://www.nera.com/nera-files/PUB_Project_TransmiT_0212.pdf)

⁵ Amendment Report GSR009; Review of Required Boundary Transfer Capability with Significant Volumes of intermittent Generation, Report prepared by the SQSS Review Group. See http://www.nationalgrid.com/NR/rdonlyres/BC265EEB-7415-4C58-8C56-0CF580581B8C/47751/GSR009ofgemreportv1_2_.pdf

as an acceptable proxy and that the NGET Original proposal for taking account of transmission capacity sharing between generation technologies did not represent an improvement over the current charging methodology.

Overall, the University of Bath's work represents a valuable addition to the sum of analysis available on what is a particularly difficult and contentious issue, providing an alternative view using quite different techniques and data. However, as indicated below, there are concerns over the assumptions, methodology and data used in the analysis, which arguably undermine its conclusions.

2.1 Aims of the analysis

The first issue relates to the particular aims of the University of Bath's work, and indeed the CMP213 process itself, given the overall context of Project TransmiT. The report, as commissioned by Centrica and RWE, largely focuses on the costs of congestion and the factors that influence those costs rather than the recovery of transmission related costs, which is the purpose of transmission charging methodology. While the costs of congestion will clearly influence the need for transmission reinforcement, other factors are in play as well. The overall aim of the transmission charging methodology is to recover transmission related costs, while the focus of Project TransmiT is to ensure that those costs are recovered in a manner which reflects causation, facilitate the move to a low carbon energy sector and protect the interests of customers. Arguably, the University of Bath report, and the whole CMP213 process (in relation to transmission capacity sharing and diversity), might have taken this broader view, rather than focussing on congestion costs and the factors that influence them.

The second strand of the University of Bath's analysis addresses the issue of whether a dual background approach that utilises a single year round scenario can realistically address congestion conditions across GB and the costs of resolving the costs of that congestion. However, this question is arguably sidelined to some extent by the principles underpinning the revised SQSS, i.e. the use of a dual background approach, and the Authority's requirement that any new charging methodology should be consistent with those principles. The dual background approach has been shown to mimic the outcomes of a full cost benefit (CBA) approach to transmission planning while at the same time ensuring that generation can contribute to meeting peak demand when the output of intermittent generation is low⁶. The approach therefore provides a simple and transparent means of maintaining traditional levels of network security in the presence of increasing levels of intermittent generation capacity in an economically efficient fashion. As the application of the SQSS criteria effectively defines the costs incurred by TOs in developing the transmission system to accommodate various generation technologies, it is necessary for transmission charging methodology to closely mirror those criteria if transmission charges are to reflect actual costs incurred and the correct long-term economic signals given.

⁶ Amendment Report GSR009 "Review of Required Boundary Transfer Capability with Significant Volumes of Intermittent Generation", April 2011. Prepared by the SQSS Review Group for submission to the Authority. See http://www.nationalgrid.com/NR/rdonlyres/BC265EEB-7415-4C58-8C56-0CF580581B8C/47751/GSR009ofgemreportv1_2_.pdf

2.2 Methodology, data and assumptions

The analysis undertaken by the University of Bath utilises a simple network model and simplified generation/demand data. The model reflects the high level characteristics of the GB transmission system in that renewable and low marginal cost conventional generation are connected to one node (the North) with the majority of demand and higher cost generation connected to the second node (the South), and is therefore capable of providing useful and relevant insights into the parameters that impact congestion costs in the real world. However, while the nature of the model is consistent with the focus of the Bath analysis, i.e. to investigate the relationship between load factor and constraint costs and the use of a dual-background approach, it does not seem capable of providing the evidence necessary to support the University of Bath's general conclusion that the NGET Original proposal is worse than baseline. In order to support that conclusion, the model would need to compare the NGET Original proposal with the existing TNUoS methodology in terms of the Authority's Direction and the CUSC applicable objectives, which both relate, inter alia, to cost reflectivity.

In carrying out their analysis, the University of Bath appear to assume that the proposed TNUoS charging methodology will use generic technology load factors, although this is not entirely clear. While the use of technology-specific load factors was indeed an option discussed by CMP213, it was discounted in favour of an average generator-specific load factor, with the option of a hybrid arrangement that took into account forecast operation of each generator. While the use of generator-specific load factors does not entirely address the concerns raised by the University of Bath, it would result in those individual generator characteristics likely to impact on congestion costs, i.e. location, price etc, to at least be partially taken into account.

The assumption made by the University of Bath that bids and offers will reflect marginal cost of production and that the cost of curtailing wind is therefore zero, will clearly have a major impact of the relationship between load factor and congestion costs. This assumption drives the conclusion in section 2.3 of the report that congestion costs will fall once wind begins to be constrained, a conclusion that does not reflect reality and infers that increasing wind capacity will reduce the need for transmission investment, which is clearly not the case. In fact, the report itself draws attention to this point, going on to recognise that "if a premium for bids for wind generation is used then the constraint cost will rise when the curtailment of wind starts". It is not clear why the University of Bath found it necessary to make this assumption, which arguably undermines the validity of their analysis and the value of their conclusions.

Furthermore, it should be noted that the conclusion made by the University of Bath in section 2.3 that the load factor of wind and conventional generation will fall as wind penetration increases in a constrained system is not representative of how ICRP charging works. The principal behind ICRP is that the system is always in equilibrium and that no surplus or shortage of network capacity exists. ICRP implicitly assumes that network capacity will be incrementally increased in sympathy with the rising costs of congestion and the variation in wind and

conventional generation load factor discussed in section 2.3 of the University of Bath's report would not therefore occur.

Finally, while the network model, generation and demand assumptions adopted by the University of Bath are generally adequate given the remit for their analysis, the simplicity of the approach does impose some limitations in terms of the extent to which its conclusions can be considered relevant going forward. The more sophisticated modelling carried out by NGET and others using ELSI seems more appropriate given the complexity of the issues involved and the need to develop a transmission charging methodology that will be fit for purpose in a challenging and uncertain future. It is worth noting that, following their more detailed analysis, NGET concluded that, notwithstanding the imperfections in the relationship between annual load factor (ALF) and congestion costs, "it was still more cost-reflective to charge on a generators actual ALF than charging on generation capacity (TEC) alone"⁷.

2.3 Key findings and conclusions

The work undertaken by the University of Bath leads to a number of "key findings" which in turn lead to some basic conclusions. The key findings, which are summarised below under the two headings of load factor and dual background to reflect the two basic themes of the report, are;

2.3.1 Load factor

- Annual load factor is not a fixed parameter, but is sensitive to issues such as location, network and market conditions. It is therefore inappropriate to use load factor as generic to a particular technology.
- The relationship between load factor and the cost of congestion is not linear; load factor is a measure of average annual output, while congestion cost is sensitive to temporal and duration issues, location, network capacity etc.
- Employing load factor as a surrogate for the causes of congestion smears the consequences for one boundary across all boundaries and across the year

2.3.2 Dual background

- Even a simple representation of a constrained boundary requires a piecewise approach involving at least 5 separate congestion periods in order to adequately reflect the temporal nature and duration of congestion costs.
- Adopting a single "year round" condition is flawed in that it does not reflect differences in location, magnitude and location of congestion.

⁷ See section 4 of "Final CUSC Modification report – volume 1; CMP213 Project TransmiT TNUoS Developments", June 2013, at <http://www.nationalgrid.com/NR/rdonlyres/E4113B9D-FE0A-4312-9DD5-E5DC1044FD89/60493/Volume1v10.pdf>

There is little new in these key findings, which essentially reflect issues and concerns raised by the Workgroup during the CMP213 process. In terms of load factor, the CMP213 Workgroup process concluded that the use of a single, generic, value to describe the characteristics of a particular class of generator would be an over-simplification. The use of generic load factors does allow differentiation on the basis of different generation technologies. However, the use of generator-specific load factors, as proposed for the NGET Original and Diversity options 1 & 2, will better reflect the particular circumstances of an individual generator and its impact on congestion volumes and costs. The University of Bath's concerns about the non-linear nature of the relationship between load factor and congestion costs, particularly at either end of the sharing spectrum – i.e. in areas where either low-carbon or conventional generation dominate, were also generally recognised by the Workgroup, and led to the development of Diversity Options 1 & 2.

The extent to which the temporal nature of congestion costs, their duration and differences between various constrained boundaries could be covered by a single year-round condition, was also an issue discussed by the CMP213 Workgroup. However, to introduce a time of use element into the TNUoS methodology and expand the single year round condition in to a number of separate scenarios, as suggested by the University of Bath, would introduce considerable complexity, reduce transparency and make transmission charges less predictable and more volatile. In addition, there would be a break with the single pseudo-CBA background introduced into the SQSS through GSR009, thereby further compromising the ability of TNUoS charges to reflect the actual costs incurred by the TOs in developing the transmission system.

2.4 Conclusions drawn by the University of Bath

Although the key findings of the Bath report are not new and relate to issues and concerns discussed during the CMP213 process, some of the conclusions drawn from those key findings are open to challenge.

For example, on page 3, the University of Bath report concludes that *“it is thus impossible to infer that by assuming linearity between load factor and constraint costs the charging methodology will be enhanced; unless account is also taken of other factors such as location, efficiency, market conditions, and critically, the network transfer capability”*

Firstly, the adoption of generator-specific load factors as proposed in the NGET Original proposal does, at least to some extent, take account of these factors and allows differentiation between generators of the same technology. Secondly, the proposed charging methodology could presumably be considered to be enhanced if it better reflected the actual costs imposed by connecting or connected generators on the TOs in ensuring compliance with the SQSS than does the current charging methodology. In order to fully substantiate their conclusion, the University of Bath would need to demonstrate that a charging methodology assuming a linear relationship between load factor and congestion cost produced a worse outcome than the current TNUoS methodology, which

inherently assumes that congestion cost is completely insensitive to load factor. This, their report fails to do.

On page 6 of their report, the University of Bath come to the view that “*a consequence of adopting the current CMP 213 proposals for an improved ICRP methodology will be to increase congestion costs, which would be perverse given the objectives of project TransmiT . Our conclusion is that employing only two backgrounds would fail to create even the crudest representation of system performance and costs*”.

Firstly, the fact that the NGET Original proposal may result in increased congestion costs is not necessarily a bad outcome and might well be in-line with the objectives of Project TransmiT. If, for example, the NGET Original proposal, by taking account of sharing (albeit in an imperfect fashion), represented a more cost-reflective outcome in terms of the recovery of transmission costs than the existing arrangements, then the charges faced by renewable generation would fall. This could be expected to result in additional renewable capacity connecting to the system, potentially increasing congestion costs. However, this could be entirely in line with the objectives of Project TransmiT which include the development of arrangements that are more cost reflective and that facilitate the move to a low carbon energy sector. If the objective of developing more cost-reflective charging arrangements is achieved, then any increase in congestion costs resulting from those arrangements would be economically justified.

Furthermore, and as shown by NGET’s analysis⁸, increasing the deployment of on-shore renewable generation through more cost-reflective transmission charges would reduce the need for more expensive off-shore capacity required to meet the UK’s renewable obligations, therefore reducing renewable support costs and consequently reducing customer’s electricity bills.

Secondly, the conclusion that “*employing only two backgrounds would fail to create even the crudest representation of system performance and costs*” seems pejorative in nature. If the NGET Original proposal, admittedly a compromise between simplicity and accuracy, represents a more cost reflective outcome than the status quo, then it would be “less crude” and to be preferred to the current arrangements. Again, for these statements to be justified, the University of Bath would need to demonstrate that the current TNUoS arrangements are in fact superior to the NGET Original proposal, which they fail to do in their report.

In conclusion therefore, it appears that in focussing on their rather narrow remit and while highlighting the potential distortions arising from the simplifying assumptions underpinning the NGET Original proposal, the University of Bath have failed to demonstrate that the use of those simplifying assumptions lead to an outcome that is worse than that delivered by the current arrangements. Furthermore, they have arguably given insufficient attention to the general context and aims of Project TransmiT and the Authority’s Direction to NGET,

⁸ See Ofgem consultation “Project TransmiT: Impact Assessment of the industry’s proposals (CMP213) to change the electricity transmission charging methodology”, August 2013, at <https://www.ofgem.gov.uk/ofgem-publications/82542/projecttransmitinvitationstakeholderevent.pdf>.

which focus on cost reflectivity and the need to facilitate a move to a low-carbon energy sector.

It is also possible to argue that the University of Bath give insufficient weight to the need to balance accuracy in reflecting the impact that individual generators have on congestion costs, with the needs of simplicity, transparency and the need to avoid volatility in TNUoS charges. The use of load factor as a proxy for the impact of individual generators on congestion costs and the adoption of the dual background approach are an attempt to achieve that balance. If their use in NGET's Original proposal results in a worse outcome than the current TNUoS arrangements then the University of Bath's conclusions would be justified, however this has not been demonstrated and it is not believed to be the case.

A summary of the University of Bath's conclusions and the associated concerns is given in table 1 below.

Key conclusion	Potential concerns
Assuming linearity between load factor and constraint cost does not result in an enhanced charging methodology unless other factors are taken into account	<ol style="list-style-type: none"> 1. For this conclusion to be substantiated, Bath would need to show that the NGET Original proposal was worse than baseline in terms of the Project TransmiT objectives, the Authority's Direction and the CUSC Applicable Objectives, which it does not. 2. The adoption of annual load factors does implicitly take account of other factors, at least to some extent. 3. A recognition that the relationship between load factor and constraint cost is not linear in all circumstances led to the development of Diversity options 1 & 2
The NGET Original proposal will increase congestion costs.	<ol style="list-style-type: none"> 1. This may be the correct outcome. If NGET's Original proposal is more cost-reflective than baseline, then any increase in congestion costs would be justified. 2. A more cost reflective outcome, given that the existing charging arrangements tend to "overcharge" intermittent generation, could increase onshore wind capacity at the expense of offshore capacity, thereby reducing the overall cost to consumers
Employing a dual background approach fails to provide an acceptable representation of system performance and costs	<ol style="list-style-type: none"> 1. Again, the University of Bath fail to demonstrate that this approach produces an outcome that is worse than baseline. 2. The Authority's Direction requires that any new charging arrangements follow the principles adopted by the SQSS, which does use a dual background approach.

3. Adopting a more sophisticated multi-scenario approach would result in a less appropriate balance between accuracy and simplicity/transparency.

Table 1. Summary of the University of Bath's conclusions

3. A quantitative analysis of NGET's Original proposal and existing TNUoS charging arrangements.

The principal perceived defect in the current TNUoS charging methodology is that only security at the time of peak demand is considered and that there is no recognition of the role that the efficient year-round management of constraint costs plays in defining transmission investment. Consequently, in its direction to NGET, the Authority required that the industry develop options for change that, inter alia, ensure that the methods for calculating TNUoS charges "better reflect the differing incremental impacts of individual generators on the Transmission Owner's costs in a manner which is consistent with the Security and Quality of Supply Standard (SQSS)"⁹.

In its Direction, the Authority went on to require that, inter alia, the proposals for amending the methodology for calculating TNUoS charges should;

- better reflect the "year round" and "peak" backgrounds applied in the SQSS, and
- consider how provisions reflecting the year round background might best be structured and levied so as more accurately to reflect the incremental costs of transmission infrastructure investment on the efficient year round operation of the transmission system in accordance with the SQSS.

As indicated above, the outcome of the CMP213 process was the NGET Original proposal and 41 alternative options for change which, following a CMP213 Workgroup vote, were reduced to eight options considered being the most likely to meet the Authority's Direction and the applicable CUSC objectives¹⁰. Within these eight alternatives were three "diversity" options that attempted to address Workgroup concerns that the NGET Original proposal did not adequately reflect

⁹ Directions issued to NGET in relation to the SCR under Project TransmiT, Open letter from Ofgem, 25 May 2011. See <https://www.ofgem.gov.uk/publications-and-updates/direction-national-grid-electricity-transmission-plc-relation-significant-code-review-under-project-transmit> and <https://www.ofgem.gov.uk/ofgem-publications/54063/final-direction-25-may-2012.pdf>

¹⁰ The CUSC applicable objectives are;

- (a) the efficient discharge by the licensee of the obligations imposed upon it under the Act under its licence;
- (b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity

the reduced ability of low carbon and conventional generation to share transmission capacity when one or the other technology dominated, and over the use of a dual background approach. These alternatives are not considered further at this point as they did not feature in the University of Bath's report. However, it is worth noting that these alternatives were designed to address a number of the issues raised by the University of Bath.

It is clear from the modelling carried out as part of the CMP213 process that the NGET Original and the Diversity options have a considerable redistributive impact in terms of the transmission charges seen by different generation technologies in different locations. It is also clear that the NGET Original proposal has the greatest impact in this regard, leading to a significant reduction in the TNUoS charges seen by northern connected generation, particularly intermittent generation, and an increase in charges seen by generation in the South.

The redistribution of TNUoS charges arising from the NGET Original proposal and the fact that overall consumer costs are reduced, mainly through a reduction in renewable support costs, can be considered to be consistent with the wider aims of Project TransmiT, i.e. to deliver arrangements that facilitate a timely move to a low-carbon energy sector and the protection of consumers. It is not immediately clear however, that the revised transmission charges that would flow from the NGET Original better reflect the costs imposed by particular generation on the TOs in developing the transmission system, which is itself a condition of the direction issued to NGET by the Authority in May 2012. To understand this issue better, there is a need to compare the charges imposed on generators by the NGET Original proposal with the costs incurred by the TOs in developing the transmission system in accordance with the SQSS.

3.1 SQSS and Modification Proposal GSR009

The SQSS sets out the criteria to which the GB transmission system must be designed and operated. In particular, section 4 of the SQSS describes the criteria that TOs must use when planning developments to the system and determining the transmission boundary capability required given a particular generation profile. In November 2009, these criteria were substantially revised following Ofgem's approval of SQSS Modification Proposal GSR009, which concluded a consultation process that considered how the transmission planning methodology should change to reflect the growing presence of intermittent generation. Following the approval of GSR009, the SQSS now require TOs to design the transmission system in a manner that ensures two criteria are met;

- A peak demand security criteria that requires ACS peak demand to be satisfied, with no contribution from intermittent generation and all other generation scaled to match demand.
- An economic or “year round” criteria requiring ACS peak demand to be satisfied, with intermittent, nuclear and pumped storage generation scaled by specific factors and all other generation apart from peaking plant scaled to meet demand. Peaking plant is assumed not to contribute to the “year round” criteria.

The scaling factors set out in the SQSS to be used in assessing transmission boundary capability against the two criteria are shown in table 2 below;

Technology	Demand Security Criteria	Economic Criteria
Peaking plant	Variably scaled	0%
Wind, wave & tidal	0%	70%
Nuclear	Variably scaled	85%
Pumped storage	Variably scaled	50%
Interconnectors	0%	100%
Other	Variably scaled	Variably scaled

Table 2; Scaling Factors used in SQSS Planning Criteria

Source, SQSS Version 2.02.

For simplicity and transparency of application, the SQSS as revised by the adoption of GSR009 continues the deterministic approach of the previous methodology. However the revised SQSS is the result of a comprehensive cost benefit (CBA) analysis and, in the view of the SQSS Review Group, produces an outcome that is no less accurate than a full CBA approach itself.¹¹

3.2 Investment costs arising from the application of the SQSS

In order to illustrate the investment costs incurred by the TOs in accommodating different generation technologies, the following paragraphs replicate and develop the analysis used by NERA in their report to RWE “Project TransmiT: Ofgem’s Assessment of Options for change”. The analysis applies the dual criteria of the revised SQSS to the simplified three-node transmission system illustrated in Figure 1. Node 1 connects 10,000MW of wind capacity and 10,

¹¹ See Amendment Report GSR009; “Review of Required Boundary Transfer Capability with Significant Volumes of intermittent Generation”, prepared by the SQSS Review Group at http://www.nationalgrid.com/NR/rdonlyres/BC265EEB-7415-4C58-8C56-0CF580581B8C/47751/GSR009ofgemreportv1_2_.pdf

000MW of conventional coal/CCGT capacity to the system. At node 2, 40,000MW of conventional coal/CCGT, 10,000MW of nuclear and 10,000MW of peaking plant is connected to the system. All demand is assumed to be located at node 3, which is connected to nodes 1 and 2 by circuits that are 400km and 100km in length, respectively.

There is clearly a limit to the robustness of the conclusions that can be drawn from such a simplified representation. However, the model does reflect the basic characteristics of the GB transmission system in that wind generation is mostly connected in the North together with some conventional generation, while the majority of demand and conventional generation is situated in the South. The model is therefore sufficient to demonstrate charging principles and of providing some useful insights into the extent to which the existing and proposed charging methodologies reflect the actual costs incurred by TOs.

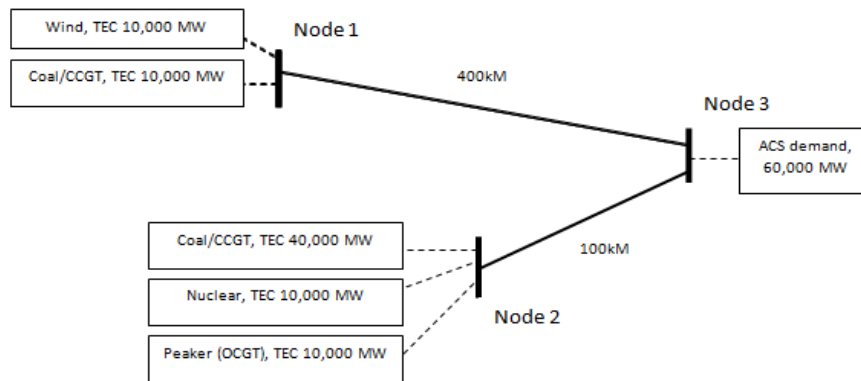


Figure 1, Simplified Transmission network

Applying the SQSS peak security criteria to the model, the wind capacity connected to node 1 is assumed not to contribute and all other generation is scaled to meet demand. With this dispatch profile, the flow on circuit 1-3 is 8571 MW, while the flow on circuit 2-3 is 51429 MW. Applying the SQSS economic criteria or “year round” background to the model, the wind capacity connected to node 1 is assumed to operate at 70% capacity, the nuclear capacity connected to node 2 operates at 85% capacity, the peaking capacity is assumed not to contribute at all and the coal/CCGT generation is variably scaled. With this dispatch, the flows on circuit 1-3 and circuit 2-3 are 15900 MW and 44100 MW respectively.

As the highest flow on circuit 1-3 occurs under the economic criteria background, the circuit is assigned to that background. Similarly, circuit 2-3 is assigned to the demand security criteria background as the dispatch under these

criteria results in the higher circuit flow. It should also be noted that, for the simplified transmission system to comply with the requirements of the revised dual background SQSS precisely, the TO would need to ensure that circuit 1-3 had a capacity of 15900 MW (to satisfy the economic criteria background) and that circuit 2-3 had a capacity of 51429 MW (to satisfy the demand security background).

If now an additional 1 MW of wind capacity is added to node 1, wind output would increase under the economic background criteria by 0.7 MW (scaling factor of 70%). However, as the output of all other generation operating in this background would reduce slightly in order to just satisfy demand, the flow on circuit 1-3 would increase by just 0.56 MW. Assuming that the unit cost of network capacity is £12.5/ MWkm¹², the cost of providing an extra MW of wind capacity at node 1 is therefore 0.56 x £12.5/MWkm x 400 km = £2800, or £2.8/kW. Similarly, an additional 1MW of coal/CCGT capacity at node 1 would increase the flow on circuit 1-3 under the economic criteria background by 0.71 MW, resulting in a cost to the TO of 0.71 x £12.5/MWkm x 400 km = £3550, or £3.55/kW.

As circuit 2-3 is allocated to the peak security criteria background, any increase in generation capacity at node 2 has no impact on the costs of complying with the economic criteria background. All generation other than wind is variably scaled in the peak demand criteria background and an increase of 1MW in the nuclear, coal/CCGT or peaking capacity connected to node 2 results in the same increase of 0.12 MW in the flow on circuit 2-3, irrespective of technology. Again, assuming that the cost of network expansion is £12.5/MWkm, the cost incurred by the TO in accommodating this additional 1 MW of generation capacity at node 2 is therefore 0.12 x £12.5/MWkm x 100 km = £150, or £0.15/kW.

Node	Generation	Incremental reinforcement required by SQSS(MW)			Associated incremental cost (£/kW)		
		Peak	Economic	Total	Peak	Economic	Total
1	Wind	0	0.56	0.56	0	2.8	2.8
1	Coal/CCGT	0	0.71	0.71	0	3.55	3.55
2	Coal/CCGT	0.12	0	0.12	0.15	0	0.15
2	Nuclear	0.12	0	0.12	0.15	0	0.15
2	Peaker	0.12	0	0.12	0.15	0	0.15

Table 3; Incremental reinforcement required by SQSS and associated cost

¹² National Grid TNUoS Tariff Statement for 2013/14. See http://www.nationalgrid.com/NR/rdonlyres/E1CC114B-4815-447D-BDE9-39D2FC31D08B/58728/FinalTNUoSTariffsin13_14.pdf

3.3 Transmission charges arising from the current TNUoS charging methodology

In applying the existing TNUoS transmission charging arrangements (the status quo) to our stylised network, two simplifying assumptions are made; namely the generation/demand split is ignored and the security factor is taken to be 1.0. On this basis, if an additional 1 MW of wind or coal/CCGT capacity is connected to node 1 and demand at node 3 is increased by 1 MW to compensate, then the flow on circuit 1-3 increases by 1 MW or 400 MWkm, while the flows on circuit 2-3 are unchanged. Assuming a network expansion cost of £12.5/MWkm as before, the charge applied to generation connected to node 1 under the existing charging methodology is $£12.5/\text{MWkm} \times 400\text{MWkm} = £5000$, or £5/kW. An additional 1 MW in coal/CCGT, nuclear or peaking capacity at node 2 together with a compensatory increase in demand at node 3 results in a 1 MW or 100 MWkm increase in flow on circuit 2-3. Again, the flow on circuit 1-3 is unchanged. Under the existing charging methodology, generators connected to node 2 would therefore face a charge of $£12.5/\text{MWkm} \times 100\text{MWkm} = £1250$, or £1.25/kW

3.4 Transmission charges arising from the NGET Original proposal

Unlike the existing charging methodology, which assumes only a peak demand background and levies charges solely on the basis of TEC, the NGET Original proposal applies a dual peak security/year round background, which reflects the SQSS methodology as revised by GSR009. In applying this approach, charges arising from the year round background are scaled by a generator-specific load factor to account for the impact of intermittent and conventional generation technologies “sharing” transmission capacity.

Adding 1 MW of generation capacity at node 1 and a compensating 1 MW of demand at node 3 increases the flow on circuit 1-3 by 400 MWkm in both backgrounds, with the flow on circuit 2-3 being unchanged. As the flow on circuit 1-3 is highest under the economic or “year round” background, the circuit is allocated to that background. Again assuming a network expansion cost of £12.5/MWkm, the £5/kW charge is factored by each generator’s annual load factor. Assuming that northern wind generation has a load factor of 30%, the year round charge applied to wind capacity connected to node 1 would be $30\% \times £5/\text{kW} = £1.5/\text{kW}$. Assuming that the conventional generation connected to node 1 had an annual load factor of 60%, the charge applied would be $£5/\text{kW} \times 60\% = £3/\text{kW}$. The peak security charge of generation connected to node 1 would be £0/kW, as circuit 1-3 is allocated to the year-round background.

Adding 1 MW of generation at node 2 and a corresponding increase in demand at node 3 would increase flows on circuit 2-3 by 100MWkm in both backgrounds, with the flow on circuit 1-3 unchanged. Because circuit 2-3 is allocated to the

peak security criteria background, the peak demand charge is set at £1.25/kW, with the year- round charge set at £0/kW.

3.5 A comparison of charges arising from the existing TNUoS and the NGET Original proposal methodologies with costs incurred via the SQSS.

Table 4 compares the charges arising from the existing TNUoS methodology and the NGET Original proposal for wind, conventional, nuclear and peaking plant with the actual reinforcement costs arising from the application of the SQSS. It can be seen that, with the existing TNUoS methodology, the charges applied to generation connected to node 1 significantly exceed the actual costs incurred by the TO in reinforcing the system in accordance with the revised SQSS, particularly in the case of wind. All generation connected to node 2 also pay higher charges than the incremental cost they impose on the system.

Node	Generation	Incremental SQSS Reinforcement		Existing TNUoS charges		NGET Original TNUoS charges	
		MW	£/kW	£/kW	Difference from SQSS cost £/kW	£/kW	Difference from SQSS cost £k/W
1	Wind	0.56	2.8	5.0	+2.2	1.5	-1.3
1	Coal/CCGT	0.71	3.55	5.0	+1.45	3.0	-0.55
2	Coal/CCGT	0.12	0.15	1.25	+1.1	1.25	+1.1
2	Nuclear	0.12	0.15	1.25	+1.1	1.25	+1.1
2	Peaker	0.12	0.15	1.25	+1.1	1.25	+1.1

Table 4; Comparison of TNUoS charges arising from the existing and NGET Original proposal methodologies with reinforcement cost Incurred via the SQSS

Under the NGET Original TNUoS methodology, wind generation connected to node 1 is charged rather less than the incremental costs imposed, although the discount is lower than the premium paid under the existing TNUoS methodology. In the case of conventional plant connected to node 1, the reduced charge is close to the actual costs imposed via the SQSS, which is a consequence of the assumed load factor being close to the scaling factor used in applying the SQSS year round criteria.

4. Conclusions

It is concluded that, while the report produced by the University of Bath usefully highlights some of the difficulties associated with the use of load factors and a dual background approach, it fails to demonstrate that the use of these simplifying assumptions produces an outcome that is inferior to the existing

TNUoS methodology. In order to test the validity of the University of Bath's conclusions, this review used a simple system model originally developed by NERA to assess whether the revised TNUoS charging arrangements set out in the NGET Original proposal produced an outcome that is more cost-reflective than the existing TNUoS charging arrangements. In other words, does the proposal better reflect the actual costs incurred by the TO in applying SQSS criteria to the development of the transmission system - cost-reflectivity being central to the Direction issued by the Authority to NGET, the CUSC applicable objectives and the overall aims of Project TransmiT.

Notwithstanding the high level nature of the system model used, the analysis does suggest that the NGET Original proposal could impose charges that are likely to be more representative of the actual costs incurred by the TO in applying the SQSS than the existing TNUoS methodology, although the match is not perfect. It therefore seems reasonable to conclude that the NGET Original proposal is more likely to satisfy the requirements set out in the Authority's Direction than the existing TNUoS methodology, in that it more closely reflects the costs likely to be incurred by the TOs in developing the system to accommodate different generation technologies. The fact that the charges applied to low carbon generation would no longer exceed the actual costs incurred by TOs is in line with the overall aims of Project TransmiT, which include the timely transition to a low carbon energy sector.

This being the case, the conclusions reached by the University of Bath that "*it is impossible to infer that assuming a linear relationship between load factor and congestion costs could lead to an enhanced charging methodology*" and that "*employing only two backgrounds would fail to create even the crudest representation of system performance and costs*" are brought into question. From the admittedly simple analysis above, the NGET Original proposal, which *does* assume a linear relationship between load factor and congestion costs and *does* apply only two backgrounds, appears to be capable of delivering an outcome that is more cost reflective than the existing arrangements and is in line with both the Authority's Direction and the overall aims of Project TransmiT.

Clearly, further analysis using a more sophisticated model would be necessary to come to a definitive conclusion as to whether or not NGET's Original proposal is superior, given the aims of Project TransmiT and the Authority's direction, to the existing TNUoS charging methodology. However, the simple analysis set out in this report suggests that, it may well be.

Appendix 3 – Consultation Period

This Appendix relates to our response to Question 7, part (vii) ‘Consultation Period’. It sets out the detailed reasons why the consultation period for this Impact Assessment should have been less than eight (or indeed ten) weeks.

Background

It has come to our attention, following the Ofgem 6th September 2013 workshop in London and the Ofgem open letter¹³ of 13th September 2013 that one party has written to Ofgem with respect to the consultation period for the ‘Project Transmit’ Impact Assessment consultation published on 1st August 2013.

It is our understanding that the party believed that the guidance issued by the Authority requires longer than eight weeks for such a consultation.

However, we feel that this is an erroneous interpretation of the guidance.

In coming to this view we are mindful of two documents in particular; namely the Authority’s “*Guidance on Ofgem’s approach to consultation*”¹⁴ (Reference 186/11, dated 20th December 2011) relevant extracts of which are shown in Annex 1 and the Authority’s “*Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs)*”¹⁵ (dated 11th August 2010) relevant extracts of which are shown in Annex 2.

We note that on 1st October 2013 Ofgem published its “*Impact Assessment Guidance*”¹⁶. Whilst not directly relevant here (as the Impact Assessment for CMP213 has already been issued – on 1st August 2013) we note that the reference (in this 1st October 2013 document) to consultation period(s) appears in Chapter 4 and in particular paragraphs 4.6-4.7 and that these are, in every material respect, the same as the wording which appears in the Authority’s “*Guidance on Ofgem’s approach to consultation*” from December 2011.

Guidance on Ofgem’s approach to consultation

It appears that the party in question is relying (in the main, although we cannot be certain) on paragraph 23 in the “*Guidance on Ofgem’s approach to consultation*” (and perhaps paragraph 29).

Paragraph 23 lists the three time frame options (12 / 8 / 4 weeks) and says, about an eight week period that:

eight weeks for consultations on issues that are less likely to have a very wide impact or be the subject of substantial interest. This will be the usual timescale for

¹³ <https://www.ofgem.gov.uk/ofgem-publications/83209/projecttransmit2weekextensionforresponsestoourconsultationoncusmodificationproposal213.pdf>

¹⁴ <https://www.ofgem.gov.uk/ofgem-publications/37043/guidance-ofgems-approach-consultation.pdf>

¹⁵ <https://www.ofgem.gov.uk/publications-and-updates/ofgem-guidance-launch-and-conduct-significant-code-reviews-scrs>

¹⁶ <https://www.ofgem.gov.uk/publications-and-updates/impact-assessment-guidance>

consultations on a subject matter where no earlier, related formal consultation or other reasonable stakeholder engagement has occurred

For us the key element of the statement is the second sentence, and especially “...on a subject matter where no earlier, related formal consultation or other reasonable stakeholder engagement has occurred”.

We have reviewed, and listed in Annex 4, all the previous Project Transmit ‘related formal consultation or other reasonable stakeholder engagement [that] has occurred’ up to the 31st July this year (i.e. the day prior to the Authority’s ‘Project Transmit’ Impact Assessment consultation being published).

By our estimation (as summarised in Annex 3) there have been in the order of 255 working days of stakeholder engagement either in the form of consultation days or stakeholder events¹⁷. This, when combined with the 50 working days being allowed for this latest consultation amounts to some 296 working days of consultation (plus a further ten days of associated stakeholder events – i.e. 306 in total).

Put another way there will have been, since the start of the Project Transmit consultation process, with the ‘Call for Evidence’, just over three years ago (22nd September 2010 – 10th October 2013) in excess of 59 weeks (or in excess of one year, one month, three weeks) of consultations (which excludes the two weeks of associated stakeholder events).

This equates to over 37% of the entire three year period (rising to circa 39% if the two weeks of associated stakeholder events are included) being taken up in formal consultation with stakeholders.

It is also possible that the party in question might also have made reference to paragraph 29 of the Authority’s “*Guidance on Ofgem’s approach to consultation*”.

“We try to avoid publishing documents just before or during holiday periods.”

Our assessment is that there have been at least six Project Transmit consultations,¹⁸ prior to this latest one, undertaken during the Easter / summer / Christmas-New Year holiday periods totalling some 159 working days (out of the 246 working days of consultation prior to this latest consultation).

Whilst we can generally sympathise with consultation respondents being required to respond over the holiday period, we would be interested to understand how many times, if at all, the party in question has written to Ofgem on this matter (with respect to Project Transmit consultations over holiday periods) on the four previous occasions (under Project Transmit) that Ofgem has consulted over a holiday period?

It’s our understanding that these six (holiday) consultation periods during Project Transmit have been extended (beyond the ‘norm’) specifically to allow parties additional time to respond (in order to take account of the holiday period).

¹⁷ Some, but not all, stakeholder events have occurred during consultation period – hence we show both separately for clarity.

¹⁸ Numbers 3, 5, 9, 12, 16 and 18 of those listed in Annex 3 and 4.

For example, the two CUSC consultations would, according to the Code Administrators Code of Practice (CACoP), be expected to be for a minimum of 15 working days. In fact one was for 25 working days and the other for 20 working days – both extensions (beyond the 15 working days ‘norm’) were, according to the CUSC Panel deliberations, due to the consultation(s) being over the holiday period(s).

In our view this has also happened here with this latest consultation where; if there were to be an Impact Assessment consultation at all; the four week period has already been extended (to eight) to reflect the summer holiday period. Extending it again would, therefore, be nugatory and disproportionate (as the eight week period was already designed to take account of the summer holiday period).

It would, furthermore, imply that all future Authority SCR Impact Assessments would be for a similar period (beyond eight weeks) where undertaken during the holiday period. For the reasons we set out elsewhere in this Appendix, that would imply (with the 25 working day Authority KPI decision period) and the time needed, by Ofgem staff, to review the Panel’s FMR and prepare the Impact Assessment itself that the entire ‘less than six month industry code process phase’ would be taken up just with the Authority aspects (ignoring totally the ‘actual’ industry led part of this phase of work).

Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs)

In addition to our comments with respect to paragraphs 23 and 29 in the “*Guidance on Ofgem’s approach to consultation*” we are also mindful of the diagram on page 1 and the statement on page 5 of the Authority’s “*Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs)*”.

The diagram on page 1 of the Guidance shows an indicative timeframe, for the ‘industry code process’ phase (from the raising of the CUSC Modification to the SCR Modification decision being issued by the Authority) of less than 6 months whilst the wording on page 5 refers to the Authority aiming “...to make a decision [on the SCR Modification] within 25 working days...”.

With respect to the ‘industry code process’ phase we are mindful of the time needed (i) to establish a (CUSC) Workgroup to assess the directed Modification; (ii) for a Workgroup Consultation (for a minimum of 15 working days, as per the CACoP); (iii) for the Panel to consider the Workgroup report; (iv) for the Code Administrator consultation (again, for a minimum of 15 working days, as per the CACoP); (v) for the Panel vote and submission of the Final Modification Report and (iv) for the Authority’s (KPI) 25 working days to make a decision.

Taking this into account we find it difficult to see how all this, plus an Impact Assessment consultation (of whatever duration), could all reasonably be completed within the (SCR) ‘industry code process’ phase of less than 6 months set out in the relevant Ofgem Guidance.

In our view it is clear that an Impact Assessment (and associated consultation period) was not envisaged by the SCR process. The Authority, in this Project Transmit case,

has provided a period of consultation (eight weeks) for an Impact Assessment which is over and above what would have been expected with an SCR directed Modification (such as CMP213).

Notwithstanding that it is clear, from this Ofgem Guidance, that in light of the preceding consultations (during the ‘Ofgem led process’ phase of the overall SCR) that if there were to be such an Impact Assessment consultation, during the ‘industry code process’ phase, that it would be short.

We note that under the current timetable, given the Authority’s 25 working days KPI, that stakeholders might expect a decision from the Authority (on CMP213) on or around 14th November 2013.

Notwithstanding our comments in this Appendix if there had been a further four week extension (to 14 weeks) this implies a decision (from the Authority) in mid December this year. Not only would this give National Grid little (if any?) time to meet the various obligations it has to publish updated TNUoS forecasts and draft tariffs, it would also be some six months after the FMR report was submitted by the Panel to the Authority (in mid June).

This implies that most of the time period set out in diagram 1, for the ‘industry code process’ phase, of less than 6 months (for the whole CUSC Modification process) would, with respect to CMP213, be taken up just with the Authority’s assessment / decision making stage.

If an Impact Assessment consultation during the SCR were to take place, its clear, in the “*Guidance on Ofgem’s approach to consultation*”, that a short (less than four weeks?) period would apply as “...[Ofgem] are working to a timescale which is constrained by a licence or other regulatory or statutory requirement..”; where the ‘other regulatory requirement’ is set out in the “*Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs)*” which envisages a less than six month period for the whole ‘industry led process’ phase.

It is clear to us, therefore, that the party in question should, on any reasonable interpretation, not have expected any Impact Assessment consultation for this SCR directed Modification (CMP213) but that if there were to be such a consultation that it would be no greater than for a four week consultation period (for this latest consultation) if not shorter.

Notwithstanding the compelling arguments set out above, even if we were to totally ignore the preceding comprehensive consultation undertaken by Ofgem (such a view would, of course, run counter to Ofgem’s Guidance in this regard) and just focus on the consultation on CMP213 in isolation we note that there has been nine weeks of industry consultation (five week for the Workgroup stage and four weeks for the Code Administrator stage) already which, when combined with the ten weeks associated with this latest consultation results in nineteen weeks of consultation on this proposed change.

This, as we are sure parties are aware, is a period that is greater than many other (substantial) industry code changes, even though the SCR process, at conception,

envisaged a 'tighter' timeframe for the 'industry code process' phase (due, in no small part, to the preceding 'Ofgem led process' phase consultation / stakeholder engagement).

Furthermore, if a further extension to the latest consultation period (to sixteen weeks) were to have been granted in this case then it would appear to undermine the core rationale for the Authority of taking the 'Significant Code Review' powers; namely to "...speed up industry reform" (top of page 1 of the Ofgem SCR Guidance) and avoid industry seeking to frustrate (and delay) the industry code change process for their own advantage, when the change was clearly beneficial to others.

Conclusion

In conclusion, for the reasons we set out in this Appendix 3 (and detail in the separate four annexes to this Appendix) there was an overwhelming body of evidence to support the consultation period for the Project Transmit Impact Assessment not being extended beyond the eight weeks (i.e. not beyond 26th September 2013). Indeed, as we have noted, there was a strong case to be made for a shorter than eight week period apply.

However, as stated in Ofgem's open letter of 13th September 2013, a two week extension was granted in this case.

Appendix 3 Annex 1

Guidance on Ofgem's approach to consultation

Reference: 186/11

Publication date: 20 December 2011

[*extract*]

22. We fully appreciate that stakeholders need sufficient time to consider our documents and prepare and agree their responses. Our consultation policy is based on three distinct consultation periods, which we will aim to follow as far as possible.

23. Each period described below recognises a differing degree of urgency, complexity, impact and likely interest in a proposal. The periods are:

twelve weeks for consultations on issues that are expected to be of wide significance and interest. This is the maximum consultation period that we would normally expect to allow

eight weeks for consultations on issues that are less likely to have a very wide impact or be the subject of substantial interest. This will be the usual timescale for consultations on a subject matter where no earlier, related formal consultation or other reasonable stakeholder engagement has occurred

four weeks for consultations on issues that are urgent, or which represent minor changes to existing policies, or where we are working to a timescale which is constrained by a licence or other regulatory or statutory requirement, or set by a third party.

24. Consultations that follow on from earlier consultations on the same matter are likely to fall into the four week category unless the matter is of wide significance and interest. If the matter is of wide significance and interest we may consult for between four and eight weeks or longer.

25. Where consultations coincide with a holiday period we may, unless the matter is urgent, allow a longer period for consultation.

26. Ofgem consultation documents and letters will set out the most significant factors that have been considered in setting the timescale for responses. Where relevant, this will include an explanation of why a timescale differs from the usual eight week period.

27. The following are some examples of consultations that may have relatively short durations:

on a policy issue where Ofgem is seeking to adhere to a timetable set by another organisation, for example on corporate transactions such as mergers;
Guidance on Ofgem's approach to consultation

investigations under competition or sectoral legislation which by their nature are likely to be urgent and where a timetable will need to be agreed on a case-by-case basis (for further details see our separate enforcement guidelines); or

consultation in accordance with our statutory duties that set out requirements on the duration of the consultation (such as for making licence modifications where legislation prescribes a 28-day period for representations to be made).

28. These exceptions are not intended to be comprehensive; there may be other factors that prompt us to set a deadline of four weeks. In any event, we will clearly explain in the consultation document our reasons for doing so.

29. We try to avoid publishing documents just before or during holiday periods. We operate a moratorium on publishing documents during the Christmas and New Year period. In addition, where consultation periods coincide with holidays, we may reflect this in the timescale period.

Appendix 3 Annex 2

Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs)¹⁹

Publication date 11th August 2010

[extract, page 5]

□ *How will Ofgem decide on SCR-related code changes?*

After the code panel submits a final modification report on a SCR-related proposal(s) to Ofgem, we will aim to make a decision within 25 working days in line with our existing performance indicator, taking into account:

all submissions made during the SCR process (and thereafter once a proposal(s) has been raised through the modification processes) on the need for a modification and the form of the proposed change(s);

the panel's recommendation and its reasons as reflected in the final modification report; and

any new information presented to Ofgem prior to the making of an Authority decision which may be relevant to that decision.

¹⁹ <https://www.ofgem.gov.uk/publications-and-updates/ofgem-guidance-launch-and-conduct-significant-code-reviews-scrs>

Appendix 3 Annex 3 – Project Transmit stakeholder engagement summary

No.	Organisation	Date	Consultation	Event
			Days	
1	Ofgem	22/9/10	41	
2	Ofgem	11/11/10		1
3	Ofgem	14/12/10	28	
4	Ofgem	4/3/11		1
5	Ofgem	22/3/11	28	
6	Ofgem	27/5/11	20	
7	Ofgem	30/6/11		1
8	Ofgem	11/8/11		1
9	Ofgem	12/8/11	30	
10	Ofgem	9/9/11	X	X
11	Ofgem	17/11/11		1
12	Ofgem	12/12/11	28	
13	Ofgem	20/12/11	16 ^{*20}	
14	Ofgem	27/1/12		1
15	Ofgem	6/2/12		1
16	CUSC	7/12/12	25	
17	CUSC	11-12/12/12		2
18	CUSC	10/4/13	20	
Sub Total			246	9
19	Ofgem	1/8/13	50 (was 40)	
20	Ofgem	6/9/13		1
Grand Total			296 (was 286)	10

²⁰ *Note consultation 12 and 13 overlapped. The 16 working days shown under 13 are the extra days (over and above the 28 working days under 12 to avoid ‘double counting’).

Appendix 3 Annex 4 Project Transmit stakeholder engagement

1) Project Transmit: A Call for Evidence²¹

Project TransmiT is Ofgem's independent and open review of transmission charging and associated connection arrangements. This open letter invites views on the scope of and priorities for the review and calls for evidence from interested parties.

Publication date 22nd September 2010

Closing date 17th November 2010

2) Project TransmiT - Stakeholder Event Invite²²

Ofgem is holding a stakeholder engagement event for Project TransmiT on Thursday, 11 November, 2010. This letter provides information and invites expressions of interest.

3) Consultation on the issue of timely connection to the electricity transmission network²³

This open letter consultation seeks views from industry and stakeholders more widely on what 'timely connection' to the electricity transmission network should mean in the context of the new Connect and Manage regime.

Publication date 14th December 2010

Closing date 25th January 2011

4) Scope of Project TransmiT and summary of responses to our call for evidence²⁴

This letter sets out the immediate scope TransmiT, following responses to our call for evidence. It also invites expressions of interest to attend our roundtable event in March [4th March 2011].

5) Project TransmiT: next steps on connections issues²⁵

This letter seeks views on the electricity connection issues under Project TransmiT.

Publication date 22nd March 2011

Closing date 3rd May 2011

²¹ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-call-evidence>

²² <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-stakeholder-event-invite>

²³ <https://www.ofgem.gov.uk/publications-and-updates/consultation-issue-timely-connection-electricity-transmission-network>

²⁴ <https://www.ofgem.gov.uk/publications-and-updates/scope-project-transmit-and-summary-responses-our-call-evidence>

²⁵ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-next-steps-connections-issues>

6) Project TransmiT – approach to electricity transmission charging work²⁶

This letter sets out our approach and options for the electricity transmission charging work under Project TransmiT. It seeks views on our proposed Significant Code Review to assess changes to National Grid’s transmission charging methodology.

Publication date 27th May 2011

Closing date 24th June 2011

7) Project TransmiT – stakeholder event invitation²⁷

Ofgem is holding a stakeholder engagement event for Project TransmiT on Thursday, 30 June 2011. This letter invites expressions of interest to attend.

8) Project TransmiT: invitation to stakeholder event - progress update²⁸

Ofgem is holding an open event on 11 August 2011 on the progress of our work on transmission charging options under Project TransmiT. This letter gives details of the event and invites expressions of interest.

9) Project TransmiT: update on connections issues and consultation on timely connections reporting obligation²⁹

This letter discusses the electricity user commitment and timely connections issues under TransmiT. It seeks views on a proposed reporting obligation to inform our thinking on potential framework changes for timely connections.

Publication date 12th August 2011

Closing date 23rd September 2011

10) Project TransmiT: electricity transmission charging Significant Code Review update³⁰

This letter gives an update on the transmission charging ‘significant code review’ and explains why we are extending the timetable.

Publication date 9th September 2011

11) Project TransmiT: invitation to stakeholder event-progress update³¹

Ofgem is holding an open event on 17 November 2011 on the progress of our work on transmission charging options under Project TransmiT.

²⁶ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-%E2%80%93-approach-electricity-transmission-charging-work>

²⁷ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-%E2%80%93-stakeholder-event-invitation>

²⁸ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-invitation-stakeholder-event-progress-update-0>

²⁹ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-update-connections-issues-and-consultation-timely-connections-reporting-obligation>

³⁰ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-electricity-transmission-charging-significant-code-review-update>

³¹ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-invitation-stakeholder-event-progress-update>

12) Project Transmit – conclusions on connection issues and statutory consultation on timely connections reporting obligation³²

This letter focuses on the electricity connection issues under Project Transmit and includes a statutory consultation to modify the electricity transmission licence to include a reporting obligation in relation to timely connections.

Publication date 12th December 2011

Closing date 23rd January 2012

13) Project TransmiT - Electricity transmission charging: assessment of options for change³³

This document discusses potential options for change to the TNUoS charging arrangements and our assessment of the impacts.

Publication date 20th December 2011

Closing date 14th February 2012

14) Project TransmiT Modelling Demonstration Event 27 January 2012 - Redpoint slides³⁴

On 27 January 2012 Ofgem will hold a Project TransmiT Modelling Demonstration Event to allow stakeholders to comment on the detail of the modelling work and to receive a demonstration on the operation of the model.

15) Project TransmiT: invitation to stakeholder event – progress update³⁵

Ofgem is holding an event to provide stakeholders with an update on the progress of our work on potential transmission charging options under Project TransmiT. The event will be held on Monday 6 February 2012 from 1pm to 4pm at Ofgem's Millbank offices.

16) CMP213 Project TransmiT TNUoS Developments – Workgroup Consultation³⁶

This document contains the discussion of the Workgroup which formed in July 2012. Any interested party is able to make a response in line with the guidance set out in Section 10 of this document.

Published on: 07 December 2012

³² <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-%E2%80%93-conclusions-connection-issues-and-statutory-consultation-timely-connections-reporting-obligation>

³³ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-electricity-transmission-charging-assessment-options-change>

³⁴ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-modelling-demonstration-event-27-january-2012-redpoint-slides>

³⁵ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-invitation-stakeholder-event-%E2%80%93-progress-update>

³⁶ <http://www.nationalgrid.com/NR/rdonlyres/A5ACA38F-EE6B-4FB8-A4FE-51957E52C36A/57975/WorkgroupConsultation11.pdf>

Responses by: 15 January 2013

17) CMP213 Industry Stakeholder Seminars – 11th and 12th December 2012³⁷

18) CMP213 Project TransmiT TNUoS Developments – Code Administrator Consultation³⁸

Published on: 10 April 2013

Responses by: 9 May 2013

19) Project TransmiT Impact Assessment of CMP213 options³⁹

This document consults on proposals to amend the electricity transmission charging methodology that have been submitted to us by industry as part of CUSC modification proposal 213 (CMP213). It sets out our impact assessment and minded-to position.

Publication date 1st August 2013

Closing date 26th September 2013 (extended to 10th October 2013 by Ofgem's open letter of 13th September 2013⁴⁰)

20) Project TransmiT: invitation to stakeholder event – CMP213 impact assessment⁴¹

We are holding an open event to discuss our impact assessment and minded to position in respect of CUSC Modification Proposal ('CMP') 213. The event will be held from 10:30 – 13:30 on Friday 6 September [2013] at BIS Conference Centre, 1 Victoria Street London, SW1H 0ET.

³⁷ http://www.nationalgrid.com/NR/rdonlyres/8A16A50C-8F8A-491F-A16E-C0F3A66EE430/57698/CMP213_StakeholderSeminars_DraftAgenda.pdf

³⁸ http://www.nationalgrid.com/NR/rdonlyres/1BB69C6E-BC24-49DF-B3AE-C6BE0BBEEF6B/60057/WRV01_FinalCAConsultation_V10.pdf

³⁹ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-impact-assessment-cmp213-options>

⁴⁰ <https://www.ofgem.gov.uk/ofgem-publications/83209/projecttransmit2weekextensionforresponsestoourconsultationoncuscmoficationproposal213.pdf>

⁴¹ <https://www.ofgem.gov.uk/publications-and-updates/project-transmit-invitation-stakeholder-event-%E2%80%93-cmp213-impact-assessment>

Appendix 4 – Ongoing Change

(i) Background

As outlined in our response to Question 1, it has been suggested that there are many ongoing changes in addition to this Impact Assessment and that these too should be taken into account by the Authority.

We outlined under Question 1 why this should not be the case, and refer as an example to the proposed Scottish island specific CfD strike price, as addressed in the very recent consultation⁴² issued by DECC on 15th September 2013.

(ii) Analysis

We note that this is a 'minded to' position on the part of DECC, rather than a final conclusion, so could be subject to change. According to that consultation document DECC has taken account of the Authority's Project Transmit Impact Assessment 'minded to' position with respect to WACM2⁴³.

This is entirely appropriate as the DECC proposal is to, in essence, amend the (EMR) proposed CfD strike price to reflect the higher transmission charges experienced by the Western Isles, Orkney and Shetland. Put simply, the proposed uplift in the proposed CfD strike price of £15-20 (from £95-100 to £115) is designed to reflect the higher transmission charges. As such the Authority's Project Transmit Impact Assessment, with its 'minded to' position, has, demonstrably, a material impact on transmission charges on those islands in the order of 15-20%.

If Ofgem were to decide to approve one of the other CMP213 options instead of WACM2 then this could necessitate the need for a reassessment) by DECC as it's proposed £15-20 uplift may no longer appropriately reflect the differential in transmission charges for those islands.

However, the converse is NOT the case - this DECC proposal (as currently being consulted) will have a very minor, if any, effect indeed on the overall Ofgem Project Transmit decision.

The reason for this is that, as DECC makes clear on page 17 of its consultation⁴⁴, the proposed Scottish Island Groups support is linked to 400MW of generation on the islands. In comparison the Project Transmit proposal relates to the overall GB transmission system, which connects around 78GW⁴⁵ (in the winter of 2013/14, rising to 83.6GW in 2018/19) of generation; e.g. 400MW equates to circa 0.5% of the

⁴²

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/240393/consultation_additional_support_island_renewables.pdf

⁴³ See, for example, the notes on Table 2, page 14, of the DECC consultation document.

⁴⁴

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/245381/scottish_islands_additional_support_consultation.pdf

⁴⁵ page 30 Ofgem's Capacity Assessment 2013 <https://www.ofgem.gov.uk/ofgem-publications/75232/electricity-capacity-assessment-report-2013.pdf>

78GW. So the effect (of DECC's 'minded to') could reasonably be considered to be none material for the Authority's Project Transmit decision.

Appendix 5 - Redpoint Report

“A Review of ‘Project TransmiT: Impact of Uniform Generation TNUoS prepared for RWE npower”, prepared for SSE.

Date June 2011

[24 pages]

(For the avoidance of doubt, this report is a separate document which forms part of this consultation response).