SCOTTISHPOWER

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Dear Anthony,

Project Transmit: Impact Assessment of industry's proposals (CMP213) to change the electricity transmission charging methodology

Thank you for the opportunity to respond to the above consultation.

ScottishPower considers that Ofgem has conducted a thorough assessment of the impact of industry's proposals to change the electricity transmission charging methodology and is correct to conclude that change is required to the current charging methodology.

Ofgem's preferred option, WACM 2, significantly improves the cost reflectivity of the transmission charging methodology by reflecting the sharing of transmission capacity by users which is assumed when considering transmission investment. Further, WACM 2 reflects the differing impacts on transmission investment of different transmission system users through the proxy of their load factors. It also addresses the treatment of HVDC circuits and Island links which are not addressed in the current methodology.

On that basis we agree with Ofgem that WACM 2 (along with the other options supported by the CUSC panel) better meet the three Applicable Objectives of the Connection and Use of System Code (CUSC) than the current charging methodology. WACM 2 more closely reflects the criteria against which transmission investment decisions are made and is therefore more cost reflective (Applicable Objective B). As a result of being more cost reflective it would better promote competition, all else being equal (Applicable Objective A). It also better reflects developments in the transmission licensees' businesses (Applicable Objective C) as it takes account of the change in the generation mix, the increased deployment of renewable technologies and the deployment of HVDC transmission technologies.

We also agree that WACM 2 (along with the other options supported by the CUSC panel) is better aligned with Ofgem's statutory duties than the current charging methodology. This is principally because WACM 2 should deliver savings to consumers and a reduction in greenhouse emissions and will further competition in electricity generation.

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We have identified two areas where we think some of the other options supported by the CUSC panel offer further benefits and where, if Ofgem proceeds with directing that WACM 2 should be implemented, it may be appropriate for industry to bring forward further amendments in future. First, we think there may be scope for more equitable and economically efficient treatment of the cost of HVDC converter station elements. These elements perform a similar function to comparable elements of the onshore transmission system which are not charged locationally. In addition, HVDC technology offers a number of strategic system benefits over and above the bulk transfer of energy which will benefit users in many different locations.

Second, we think that the proposed Annualised Load Factor (ALF) methodology could be made more responsive to factors which are outwith the control of, and may significantly change, a controllable generator's future running pattern (such as environmental legislation, extended outage – planned or unplanned – or the trajectory of the carbon price support). Allowing generators to forecast their load factors in a "hybrid" ALF methodology would be one way of addressing this issue. We believe that further work on development of proposals to address these issues should be brought forward as soon as possible.

Notwithstanding the points above, the overall benefits to consumers of the proposed change are of such significance that we believe that CMP213 should be implemented as soon as possible. We note that WACM 2 is Ofgem's preferred option and we strongly support implementation of CMP213 on this basis from 1 April 2014.

Some stakeholders have raised objections to this timing. We think that the objections have little weight in this context. The impact of the proposed changes has been signalled to users throughout the SCR and CUSC processes and timely implementation will ensure that the wide ranging overall benefits demonstrated in the impact assessment can be realised as soon as possible. Furthermore, we believe that the scale of change in transmission charges is unlikely to be sufficiently material as to have precipitated (had it been fully known at an earlier date) earlier generator closure decisions.

Our responses to the specific questions in the Consultation document are set out in the attached Annex.

Should you wish to discuss any of these points further then please do not hesitate to contact me.

Yours sincerely,

Rupert Steele
Director of Regulation

Annex 1

PROJECT TRANSMIT: IMPACT ASSESSMENT OF INDUSTRY'S PROPOSALS (CMP213) TO CHANGE THE ELECTRICITY TRANSMISSION CHARGING METHODOLOGY

SCOTTISHPOWER CONSULTATION RESPONSE

Question 1: Do you think that we have identified the relevant impacts from NGET's modelling and interpreted them appropriately?

National Grid's modelling of the impacts of the various Working Group Alternative Consultation Modifications (WACMs) builds upon the modelling carried out by Redpoint on behalf of Ofgem during the Project TransmiT Significant Code Review (SCR). The modelling also reflects changes in the generation background since the SCR plus developments in the government's Electricity Market Reform (EMR) and Contract for Difference (CfD) proposals. The principal impacts identified in the modelling were in five areas: transmission charges, power sector costs, consumer bills, security of supply and sustainability.

Transmission charges

The impact of the proposals on transmission charges has been to reduce the slope of the generation locational differential from north to south reflecting more accurately the impact of lower load factor generation plant upon transmission investment. The impact on demand transmission charges is less significant as the primary driver of the locational signal is transmission investment for generation.

The modelling also indicates that under WACM 2 generation transmission users north of the proposed HVDC links will still pay relatively higher charges than those connected south of the exit point but according to a more cost reflective methodology. As a result, generators at the margins of the transmission system will still pay relatively more to use the system than generators located at the centre,

Power sector costs

The modelling indicates that both the Original proposal and Diversity 1 variants deliver substantially lower power sector costs than the status quo, largely as a result of a higher proportion of onshore rather than offshore wind generation that they deliver.

This result is consistent with Oxera's November 2010 report[1] which also found that reducing the north-south TNUoS tariff gradient would result in a shift from more expensive offshore wind to cheaper onshore wind. Oxera concluded that an optimal TNUoS charging regime should not deter investment in low-carbon plant in high resource areas such as the peripheral areas of GB and should recognise that a large number of transmission investment projects will be dictated by regulatory processes separate from any signal from locational transmission prices.

[1] 'Principles and Priorities for Transmission Charging Reform', Oxera, November 2010. https://www.ofgem.gov.uk/ofgem-publications/54363/principlesandprioritiesfortxchargingreformoxera.pdf "If the UK is able to meet its renewable targets, an additional 4TWh of onshore wind could displace 4TWh of relatively more expensive offshore wind. This implies that the associated annual saving through a reduction in the obligation size to meet the UK's renewable target could be around £164m (in 2009 prices) in each year subsequent to the target being met."

It is worth noting that the modelling indicates that the amount of transmission investment within the power sector costs is similar across all the alternatives modelled as are the resultant transmission constraint costs.

Consumer bills

The modelling indicates that there may be upward pressure on consumer prices in the initial period. However, we consider that this is likely to be over stated in the modelling and we further note that overall costs reduce significantly post 2020, delivering significant benefits to future consumers compared to the status quo.

The dominant factor in the modelling of consumer bills is the wholesale cost of power including any capacity payments. In interpreting the modelling results, Ofgem notes that the short term increase in consumer bills may be overestimated by the model for two reasons. First, there are likely to be fewer plant closures in the early period than modelled, as companies will place greater weight than assumed on prospective introduction of the Capacity Market; and second, the impact of updated and lower demand forecasts would mean that more inefficient plant would close than assumed in the model. We agree with Ofgem's interpretation, and can confirm that in ScottishPower's experience, the prospective introduction of the Capacity Mechanism is an important factor already in such decision making.

Security of supply

As explained in our response to Question 6, we agree with Ofgem's assessment of the modelling results and its conclusion that the WACM 2 proposals are unlikely to present a material risk to security of supply.

Sustainability

As explained in our response to Question 3, we agree with Ofgem's assessment that proposals based on the Original proposal or Diversity 1 have the greatest potential for delivering sustainability benefits relative to the status quo.

Overall

We agree with Ofgem's overall assessment that modelling carried out by NGET is sufficient for the purposes of making a decision on the proposed modification. Even if the absolute levels of cost and benefit are subject to some uncertainty, the *relative* impact assessment of the different options is likely to be robust. Given the complexities involved, it is highly unlikely that any other model would provide materially more robust findings than the current model and we agree that it would not be proportionate to undertake more modelling.

Question 2: Do you have any further evidence of the impacts of the charging options not covered by NGET's analysis?

We do not have any further evidence on the impacts of the charging options not covered by NGET's analysis but would draw your attention to our responses to Questions 4 and 5 below.

Question 3: Do you agree with our assessment of the options in terms of the strategic and sustainability impacts? In particular, are there any impacts that we have not identified?

Yes, we agree with Ofgem's assessment of the options in terms of the strategic and sustainability impacts. We are not aware of any material impacts which have not been identified.

In terms of security of supply (and associated risks of extreme prices and price volatility), we would note that the capacity margins identified by the model do not vary significantly across the various options modelled due to the simplifying assumptions made in the model. We agree with Ofgem's assessment[2] that the small reduction in capacity margin for the CMP 213 proposals may be overstated, given that generators are likely to anticipate the introduction of the Capacity Market in 2018 and the additional revenue stream that this would provide.

In terms of sustainability, all options have been modelled to meet the government's 2020 and 2030 low-carbon objectives. However, we agree with Ofgem's observation that options which require lower levels of CfD support for low-carbon generation have a lower risk of not meeting these policy targets[3]. The increasing political focus on consumer bills since Ofgem published its consultation underlines this point. On that basis, proposals based on the Original proposal or Diversity 1 have a greater potential for delivering sustainability benefits relative to the status quo.

Question 4: Do you think that socialising some of the cost of HVDC converter stations could lead to other wider benefits, such as technology learning? If so, please provide further evidence in this area.

HVDC is a relatively new technology and has not been used to date on the Main Interconnected Transmission System. However, its benefits in terms of cost, environmental impact and deliverability have been identified and its use is already planned to reinforce the onshore transmission system together with providing links to island generators.

HVDC technology, in both Current Source Converter (CSC) and Voltage Source Converter (VSC) forms, offers a number of strategic system benefits over and above the bulk transfer of energy which may not be fully identified and exploited until the technology is deployed.

For example, HVDC has a bi-directional capability that is not easily achievable using AC and the Western HVDC 'bootstrap' link between Scotland and England will provide up to 2GW of 'import' capacity to provide essential security of supply for the benefit of all Scottish electricity consumers. Furthermore, as the link provides for fast acting real time response, it can also provide important system benefits to consumers in England and Wales.

There are also system benefits of using HVDC control systems, such as power oscillation damping and post-fault capacity enhancement by providing fast ramping. HVDC VSC technology, which is being considered for the potential Eastern HVDC link, can also provide dynamic voltage control with significant system benefits. These wider benefits justify the socialisation of a proportion of the HVDC converter station costs.

Furthermore, socialising some of the cost of HVDC converter stations could potentially result in earlier deployment of HVDC technology through soliciting early commitment from

[2] Impact Assessment para 6.72
[3] Impact Assessment para 5.9

generator connectees and earlier exploitation of its system operation benefits particularly enhanced security of supply.

In addition, accelerated deployment of HVDC technology should result in economies of scale and technology learning and development thus reducing capital and operating costs and cost of capital as risk reduces. All of this should, in turn, result in lower overall costs to transmission users and consumers, who should also realise social benefits from the enhanced security of supply. In turn, this may allow transmission licensees to identify other areas where it may be appropriate to deploy HVDC technology.

Question 5: Do you agree with our assessment of the options against the Relevant CUSC objectives? Please provide evidence to support any differing views.

Applicable CUSC Objective A - Facilitation of effective competition

We agree with Ofgem that in more closely reflecting the criteria against which transmission investment decisions are made, the CMP213 proposals, particularly the Original and Diversity 1 proposals, are more cost reflective than the status quo and would therefore facilitate effective competition all else being equal.

Compared to the current charging methodology the CMP213 proposals better recognise that the different operating regimes of different generating plants have different effects upon the operation of the transmission system (including constraint costs) and therefore drive different levels of transmission investment. By incorporating a dual background in the transmission charging methodology, WACM 2 reflects the different drivers of transmission investment as identified in the GBSQSS. (We agree with Ofgem that the current approach, which only recognises peak security as a driver of transmission investment, is discriminatory in effect.)

We would note that the Diversity 3 proposals lack this dual background and are therefore less cost reflective. In addition, the cap on the level of sharing under Diversity 2 has not been justified and is also therefore less cost reflective than the either Original and Diversity 1 options.

In improving the cost reflectivity of charges, the Original and Diversity 1 options remove potential barriers to entry for intermittent generation in peripheral areas of GB with high renewable resources, thus furthering competition in the generation of electricity.

Overall, we agree with Ofgem that the Original and Diversity 1 options meet Applicable CUSC Objective A better than the alternative options, and certainly better than the status quo.

Applicable CUSC Objective B – Cost reflectivity

As outlined above, we believe that the Original and Diversity 1 options are significantly more cost reflective than the status quo (and Diversity options 2 and 3) and therefore better meet Applicable CUSC Objective B.

However, we would note that there are two areas where further improvements in cost reflectivity could be achieved. In each case we would hope that industry will be able to take forward the appropriate amendments in future to achieve these improvements:

- Socialisation of HVDC costs: evidence was produced in the CMP213 Workgroup Report (paras 5.29 to 5.45) to show that much of the equipment in an HVDC converter station performs a similar function to elements on the onshore transmission

system whose costs are not charged locationally. We therefore believe that a proportion of HVDC converter station costs should be socialised to improve cost reflectivity and competition. As this new technology has still to be commissioned on the MITS, we hope that further evidence of its comparability with onshore transmission elements (substations and QBs) will become available during deployment, and that this will enable industry to address the equity of treatment with existing transmission plant at a future date. We refer you to our response to question 4 for our further views on the benefits to be realised from socialisation of HVDC costs.

- Load factor calculation: We are concerned that the historical methodology proposed for calculating ALF does not take sufficient account of factors which significantly change a controllable generator's future running pattern, eg environmental legislation, extended outage (planned or unplanned due to breakdown), the trajectory of the carbon price support or other factors. We believe that industry should pursue further development of the load factor setting process as a refinement to the WACM 2 proposal without adding undue complexity to the tariff setting process. This could include consideration of the use of a shorter trailing average period (than the 5 years in WACM 2) or a profiling / regression methodology which gives greater weight to the most recent years' generation output. Another option would be to allow generators to submit a forecast of their load factor for the tariff calculation (the "hybrid" approach).[4]

Applicable CUSC Objective C – taking account of developments in Transmission licensees' business

We agree with Ofgem that all the CMP213 proposals supported by the CUSC Panel better reflect developments in the transmission licensees' businesses (Applicable Objective C) as they take account of the change in the generation mix, the increased deployment of intermittent generation technologies and the deployment of HVDC transmission technologies. In particular, the Original and Diversity 1 proposals better meet Objective C.

Question 6: Do you agree with our assessment of the options against our statutory duties? Please provide evidence to support any differing views.

ScottishPower agrees with Ofgem's assessment of the CMP213 options against its statutory duties. In the long term, generation and transmission investment decisions based upon cost reflective charges for the use of the transmission system should further competition and deliver the most efficient economic outcome to the benefit of both existing and future consumers.

Reduction in greenhouse gas emissions

As outlined in our response to Question 3, we believe that options based upon Diversity 1 offer the highest probability of delivering the government's low-carbon targets due to the lower level of CfD support required in the modelling (and therefore the lower risk of financial constraints biting) and thus further the reduction in greenhouse gas emissions.

[4] Ofgem notes a concern that this would introduce an incentive to change generators' dispatch decisions (Impact Assessment para 6.23), but we do not believe this is necessarily a problem. Generators would simply price the cost of exceeding their forecast TEC requirement into their offers into the wholesale market and balancing mechanism, and if the penalty for submitting inaccurate forecasts reflects the costs incurred by exceeding the forecast then efficient dispatch would still be achieved.

Security of supply

The modelled capacity margins in Figure 12 show a small reduction (circa 1 percentage point) between 2017 and 2020. Thereafter, Diversity 1, as used in WACM 2, delivers higher capacity margins than Diversity 2 and the Status Quo in the period to 2030.

Ofgem's notes that the small reduction in the period 2017 to 2020 may well be over-stated as the assumed plant closure decisions lying behind the reduction might not be taken if generators took account of prospective Capacity Market revenues. We can confirm that in our experience, generators would take account of such prospective revenues and we agree with Ofgem that the WACM 2 proposals are unlikely to present a material risk to security of supply.

Furthering competition

As discussed in our response to Question 5 we believe that in more closely reflecting the criteria against which transmission investment decisions are made, the Diversity 1 methodology as contained in WACM 2 is more cost reflective than the status quo and would therefore promote competition all else being equal.

Consumer bill impacts

We agree with Ofgem's conclusion that the long term benefits demonstrated in the modelling are likely to outweigh considerably the short term disbenefits as regards consumer bills (and that these short term disbenefits are likely in any event have been overstated). From Table 9, Consumer bills will be significantly lower under Diversity 1 than either the Status Quo or Diversity 2 options.

Diversity 3 can be disregarded from this analysis as it fails to address the defect identified in the current methodology due its lack of cost reflectivity (failing to reflect the different impact that different generators have upon the cost of operating the transmission system and upon transmission investment).

Therefore, overall, we believe that WACM 2 better facilitates the Authority's statutory duties than the current charging methodology or the alternative proposals that were not supported by the CUSC Panel.

Question 7: Do you agree with our assessment that it is appropriate to implement WACM 2 in April 2014? Please provide evidence to support any alternative implementation date.

ScottishPower believes that implementation should be in as short a timescale as practicable to realise the significant consumer benefits of WACM 2 and we therefore strongly support Ofgem's proposed implementation date of April 2014.

Importance of early signalling

Investors in GB's electricity industry are facing a great deal of change in the medium term (eg banding reviews within the RO, implementation of EMR policies such as CfD and Capacity Market, EU Network Codes and uncertainty over the future of the Carbon Price Floor). To support investment decisions and to ensure no hiatus in deployment of generation, it is imperative that investors are given certainty over future charging regimes from the earliest possible date, otherwise this will add to the existing uncertainties. Failure to

signal the future course of transmission charges by delaying implementation of CMP213 could lead to sub-optimal investment decisions.

Fairness – adequacy of notice

The main objection to an early implementation date stated by some stakeholders is that this would unfairly disadvantage parties whose transmission costs will increase, since they would have had insufficient notice to mitigate these increases. We consider that generators have had ample notice of the likely changes.

The review of transmission charging under Project TransmiT was launched in September 2010. In the Authority's Direction of 25 May 2012, industry was urged "to expedite this process and submit a final CUSC modification proposal report, with all the requisite justification and evidence, in a timely manner ***to ensure benefits are realised as quickly as possible***". Indicative tariffs under the "improved ICRP" methodology were provided as part of the SCR process.

During the CMP213 Workgroup Consultation and again in the Code Administrator Consultation, indicative tariffs under the various options were published to enable industry to evaluate the potential impacts of any change. As recently as 10 September 2013, National Grid published indicative TNUoS tariffs for 2014/15 based upon the Diversity 1 methodology which Ofgem is minded to implement. Industry has therefore had clear and frequently updated visibility of the impact of the proposed changes.

Furthermore, a comparison of the difference in 2014/15 generation tariffs between National Grid's Quarterly update in July 2013 (status quo methodology) and the indicative tariffs under Diversity 1 published in September 2013 indicates that the average increase in transmission charge (or reduction in discount) faced by an adversely affected 1GW thermal power station with a 70% load factor would be around £1.1m. From ScottishPower's experience, transmission charges form a significantly smaller proportion of the cost base of generators in the zones facing increased TNUoS charges and an increase in costs of this scale is unlikely to be of sufficient materiality to have precipitated a decision to close an affected station one year earlier than previously planned.

We are therefore of the opinion that there is not a strong case to delay implementation from April 2014 either on the grounds of security of supply concerns or on the basis that generators would otherwise have given notice of TEC reduction in time to take effect before the new charges apply.

ScottishPower
10 October 2013