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

Dear Ian,

Thank you for the opportunity to respond to this Impact Assessment of industry's proposals (CMP213) to change the electricity charging methodology. This is a non-confidential response, which represents the view of the Centrica group of companies, excluding Centrica Storage. Below we provide an executive summary and then provide more detail on each of our key sections in turn.

In order to assist us with our response, we commissioned Poyry Management Consultants to provide an independent report. Centrica asked Poyry to consider two aspects of the Impact Assessment published by Ofgem: a) the robustness of the modelling and wider analysis of CMP213 charging options and b) the appropriateness of proposing implementation of CMP213 WACM2. The Poyry report represents an annex to this response.

We would be delighted to provide any further details or discuss any aspect of this response with you.

Yours sincerely,

Philip Davies,

Director of Regulatory Affairs

Centrica Energy

Executive summary

We have assessed all the information provided by Ofgem in its impact assessment of 1 August. In discussing the merits of its proposal, Ofgem states that:

“We think that implementing this option will be in the interests of existing and future consumers....we consider it to be the most cost reflective of the options presented to us and therefore it drives more efficient decisions by market participants ... which creates value for consumers. This view is supported by the modelling....which suggests that between 2020 and 2030 consumer bills could be up to £8.30 per annum lower than under the current methodology. This outweighs a much lower impact in the period up to 2020 where consumer bills could be on average up to £1.60 per annum higher....This reflects the difference between short term impacts on generators’ decision making and longer term impacts where we would expect the new methodology to result in more efficient decisions on the location of generation.”¹

However, our assessment, supported by an independent analysis of the impact assessment by Poyry, is that the information presented does not provide a basis for Ofgem to safely reach these conclusions. Adopting the proposal would not enable Ofgem to successfully meet the objectives of Project Transmit.² It would also not better facilitate the objectives of the Connection and Use of System Code (CUSC),³ nor would it enable Ofgem to better meet its statutory duties. Our recommendation is that Ofgem reject the sharing proposals of WACM 2⁴, while proceeding with the HVDC and island link sections as separate modifications. We summarise here our key concerns. These are set out in more detail in our main response and in the Poyry report as follows:

1. Cost reflectivity and the SQSS: WACM 2 is not more cost reflective than the status quo and does not reflect changes to the NETS SQSS.
2. Impact assessment: Ofgem is wrong to conclude that the impact assessment supports the case for implementation.
3. CUSC objectives: The proposed methodology will not better facilitate CUSC objectives
4. Other duties: The proposal will not enable Ofgem to better meet its wider statutory and better regulation duties
5. Next steps: Ofgem should reject the sharing proposals and request that the HVDC and island link sections are progressed as separate modifications.

Cost-reflectivity and the NETS SQSS

We accept that the drivers of transmission investment are changing, reflecting the evolving generation mix. However, this falls a long way short of establishing that the existing regime is defective, and with it the implication that reform of it is an absolute imperative. Charging methodologies represent trade-offs between competing policy requirements and any new proposal must show it is superior in the round to the existing regime. In this context, the proposal fails to demonstrate that it will deliver more cost-reflective charging than the status quo.

¹ Ofgem, CMP213 Impact Assessment, p6

² Ofgem states the 3 objectives are (i) deployment of low carbon generation across GB and impact of achieving the UK government’s Renewable Energy Strategy target of 30% of generation from renewable sources by 2020 and carbon intensity goals in 2030; (ii) quality and security of supply across GB; and (iii) overall cost of the system as a whole and customer bill impacts

³ CUSC objectives are set out page X of this response.

⁴ “Workgroup Alternative Connection and Use of System Code (CUSC) Modification 2”

Crucially, the proposals appear to misinterpret the transmission investment framework set out in the NETS SQSS. Three points best illustrate this. Firstly, the “year round” tariff in the proposals does not consider the year round conditions within the NETS SQSS. The “year round” tariff is still based on a peak background, rather than year round conditions, as the charging terminology suggests it should be. Secondly, the use of Average Load Factor (ALF) in conjunction with a “year round” charge is not consistent with the NETS SQSS economic criterion that it tries to replicate. The economic criterion in the NETS SQSS, on which the proposed charging is based, only uses scaling factors rather than generator-specific load factors. Thirdly, the supposed linear relationship between incremental constraint costs and load factor is flawed.

Introducing these changes therefore distorts charges, and does not make them more cost-reflective. Indeed a full assessment of features of the SQSS investment methodology shows a huge gap between these features and the proposed “year round” tariff (for instance, the tariff should be forward looking and MW, not MWh, based). In addition to the Poyry report, work we have previously shared with Ofgem, prepared by the University of Bath, comprehensively demonstrates that ALF is not appropriate to use as a proxy in TNUoS for the “year round” assessment.

Impact Assessment

The modelling attempts to address how effectively the proposals meet TransmiT’s objectives of promoting low carbon generation, improving security of supply and minimising cost. On cost, it suggests customer bills marginally increase up to 2024. Reductions only flow thereafter. Given how much regulatory change we expect over the next decade, it is not realistic for Ofgem to claim support for the change based on highly uncertain benefits that are at least 10 years away, particularly given the acknowledged modelling limitations. For instance, the evidence for the “increased efficiency” in generation investment post 2024 includes the assumption that more onshore wind generation will be built, rather than offshore. Given all the other factors that will impact the shape of the generation mix post 2014 (e.g. planning restrictions facing onshore wind), it is not credible to suggest that the adoption of this modification will trigger the displacement of offshore wind with cheaper onshore wind.

On security of supply, the modelling suggests that up to 2020 an increase in transmission charges leads to a reduced reserve margin. This particularly affects marginal thermal plant in the south and is likely to increase prices (equivalent to a £700 million NPV cost to customers). Some of these plants are facing increases in their charges of £5 million per annum, so it is not unrealistic to believe there may be closures as a result. While Ofgem claims the security of supply impact is likely to be limited, it would be perverse to proceed with this measure at a time when NG is considering emergency measures to procure strategic energy reserve. It may be even the case that, directly as a result of this proposal, NG simply has to pay more to some plants facing mothballing or decommissioning to keep them on the system in the next two winters. If this is the case the cost/benefit would look much less favourable than it does already. The results in terms of low carbon generation do not suggest the proposals are favourable in this dimension either (the status quo is associated with more renewable generation).

CUSC objectives

We do not believe the proposal better facilitates any of the CUSC objectives.⁵ The application of ALF negatively impacts cost reflectivity and competition due to the unjustified weakening of

⁵ The objectives of the CUSC are (a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity; (b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are

the locational signal in tariffs and the subsequent baseless financial transfers that would take place between parties subject to TNUoS. In this respect the proposals would unduly discriminate between market participants and would not better meet CUSC objectives a) and b). The general misinterpretation of the SQSS means that objective c) is also not better met by the proposals.

The distributional impacts of the proposals are significant and have not been explored fully. Certain generating companies will clearly lose substantially, while others will substantially gain. Ofgem explore generator profitability by region, but not by company. However geography is not a good fit with generator portfolio. Precedents suggest that when there are significant distributions between market participants this should raise the threshold of confidence required in order to justify radical change. Yet we see no evidence this principle has been reflected in this analysis or in Ofgem's recommendations.

Statutory duties

As well as its principle objective to protect the interest of existing and future customers, wherever appropriate through the promotion of effective competition, the Authority has a range of secondary duties, including the UK better regulation principles and principles for economic regulation. A key priority in promoting effective competition is to encourage investor certainty through a stable regulatory framework. These proposals do not provide this, not only because there is uncertainty about their impact but also because other potential costs and regulatory changes are not factored into Ofgem's assessment. Firstly, if this proposal results in even a small increase in investors' perceptions of the required cost of capital in power generation, this cost would dwarf the CBA, given that most estimates suggest up to £100 billion of investment is required up to 2030.

Secondly, the European Network Codes will soon require Ofgem to assess the case for an alternative solution to resolving the trade-offs between congestion and transmission investment that have prompted this review (market splitting). This would require a fundamental overhaul of transmission and energy pricing. This means that whatever proposal is agreed now, there will be soon a debate about a different enduring solution. This undermines the argument that a decision now will provide long-term certainty.

The proposal to implement these changes as of 1 April 2014 goes against the better regulation duty and precedents that Ofgem itself has established on charging. In the recent introduction of new charging arrangements for distribution EHV connected users (EDCM), Ofgem insisted on a full year between approval and implementation to "*allow customers a longer lead time to prepare for any new tariff levels that come about as a result*". The impact assessment confirms that there are no benefits to customers from early implementation.

The better regulation duty also requires Ofgem to justify the case for change based on strong qualitative and quantitative evidence which we have not seen. In addition, it is not for the industry to prove the case against the changes.

Existing generators will be unable to adjust their TEC holdings to reflect new April 2014 charges without incurring financial penalties. If the lead times do not permit market participants to adjust their behaviour in response to the new charges, the short-term outcome will simply be a significant redistribution of value between competing generators, without any of the improvement in efficiency claimed by Ofgem.

made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection); and (c) so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses.

Next Steps

The HDVC and island link sections of the proposal represent a valid solution to the issues raised. However the sharing proposals do not represent an improvement to the status quo. Ofgem should therefore reject CMP213 on that basis and request that the HDVC and island link element are progressed as separate modifications.

Introduction

Centrica has been fully engaged in Project TransmiT since its launch in September 2010, having participated in all Ofgem and National Grid / CUSC working groups. Centrica has also commissioned two external studies to inform the debate. The first is the report by Bath University, year-round system congestion costs and the second is Poyry's Review of Ofgem's Impact Assessment on CMP213. Both reports represent an annex to this response.

CMP213 is predicated on three perceived defects within the current TNUoS charging methodology, identified by Ofgem in Project TransmiT as follows:

- It does not appropriately **reflect the costs imposed by different types of generators** (in particular renewable generators) on the electricity transmission network. This is because it has not evolved to better reflect the changing generation mix and the different impact that users have on transmission investment decisions.
- It does not **reflect the development of High Voltage Direct Current (HVDC) links** that will run parallel to the onshore network. The first HVDC links is due to be commissioned in 2016 hence a modification needs to be in place by then.
- It does not **take into account potential development of Island links** which use subsea cable technology which are currently not catered for in the methodology.

We support the need to review the charging methodology to seek to incorporate appropriate treatment for new HVDC and Island links. We also think it is reasonable to consider whether changes in the underlying generation mix necessitate changes to reflect the impact of different generation types on transmission build. However, having reviewed Ofgem's proposals and its rationale for arriving at the minded-to position we conclude that the sharing proposals of WACM 2 and all of the other options should be rejected. On the other hand, we believe that the proposals for HVDC and Island links are sound and should be progressed as separate modifications in order to address these specific defects.

Below we outline our rationale of how we arrive at this conclusion. First, we argue that the "improved" ICRP proposals cannot be proven to be more cost reflective on the basis that load factor is not an accurate proxy for incremental constraint costs and that the methodology significantly misinterprets the NETS SQSS (**section 1**). Second, even taking the Impact assessment results at face value, they do not suggest WACM 2 should be implemented and furthermore, the lack of robustness of the modelling means that they lack validity (**section 2**). We then have further sections (**sections 3, 4 and 5**) on why the proposals do not better meet the CUSC objectives, Ofgem's wider statutory duties and do not reflect the principles of better regulation. We then discuss issues around implementation (**Section 6**), HVDC and island links (**section 7**) and then provide a summary of our conclusions (**section 8**)

1. WACM 2 is not more cost reflective than the Status Quo and does not accurately reflect the NETS SQSS changes

The entire case for the "improved" ICRP proposals, and Ofgem's favoured variant, WACM 2, is based on the assumption that it is more cost reflective than the Status Quo charging methodology. The argument advanced is that the increased cost reflectivity will lead to more efficient decisions by market participants and policy makers which create value for consumers.

Centrica does not believe that the sharing proposals, through the application of ALF to the year round tariff, in any way better reflect the costs imposed by different types of generators on the transmission network or the principles of the NETS SQSS. Given the significant changes to tariffs brought about by these proposals we believe they are discriminatory to those parties who are financially impacted and hence should not be progressed.

There are three key reasons why the proposals would actually lead to a distortion in charges rather than an improvement to cost reflectivity:

- a) The “year round” tariff in the CMP213 proposals do not consider the “under year round conditions” within the NETS SQSS
- b) The use of ALF in conjunction with a “year round” charge is not consistent with the economic criterion in the NETS SQSS
- c) The supposed linear relationship between incremental constraint costs and load factor is flawed

Below we summarise each of the three issues. Please view section 4 of the Poyry report for further explanation.

1a. The “year round” tariff in the CMP213 proposals does not consider the “under year round conditions” within the NETS SQSS

There appears to be a significant anomaly between the NETS SQSS and the proposed charging methodology. This is because the “year round” tariff in WACM 2 links to the “Economy” background in the NETS SQSS, rather than the ‘conditions in the course of a year of operation’ background. The Economy Background approach outlined in the NETS SQSS is explicitly indicated as a methodology for determining transmission investment at time of peak demand and assuming an intact system rather than “year round” considerations. The proposals will therefore not have the desired effect of reflecting year round considerations.

The NETS SQSS guidance for assessing transmission investment “under year round conditions” is stated in paragraphs 4.7-4.10 and Appendix G. The explicit purpose of this guidance is to enable economic justification of non-peak driven investment in transmission equipment under the overarching condition that:

“additional investment in transmission equipment and/or the purchase of services would normally be justified if the net present value of the additional investment and/or service cost are less than the net present value of the expected operational or unreliability cost that would otherwise arise”

The proposed purpose of introducing the dual approach (i.e. the “year round” tariff, to complement the current “peak” tariff) under CMP213 is precisely to reflect year round conditions. However, there appears to be no direct link to this NETS SQSS methodology in any of the CMP213 options and their development. This suggests a fundamental underlying misalignment of the CMP213 “year round” tariff methodology with the NETS SQSS.

Furthermore, Paragraph 4.7.1 of the NETS SQSS clearly states that:

“Conditions on the national electricity transmission system shall be set to those which ought reasonably to be foreseen to arise in the course of a year of operation. Such conditions shall include forecast demand cycles, typical power station operating regimes and typical planned outage patterns”

Whilst key requirements in Appendix G of the NETS SQSS include:

“due regard should be given to the expected duration of an appropriate range of prevailing conditions....”, and

“all costs should take account of future uncertainties”

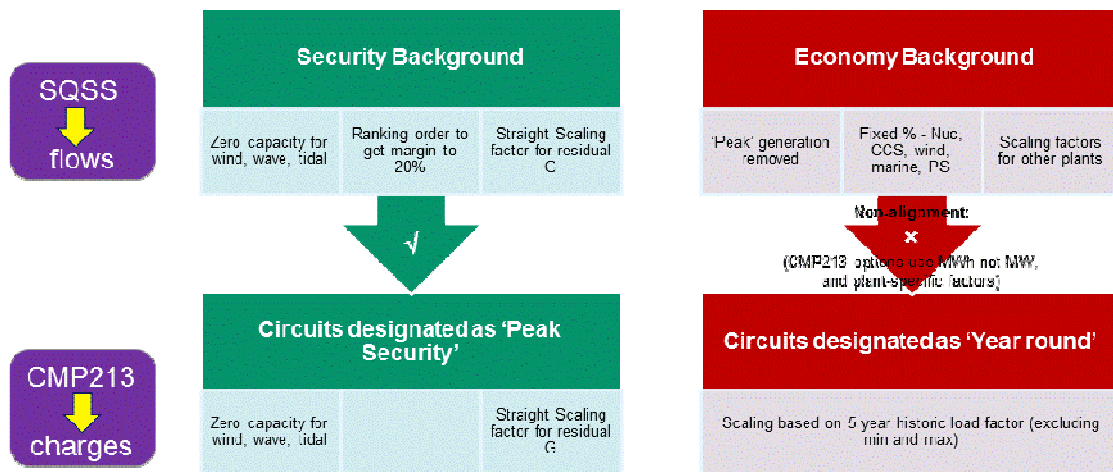
These guidance statements highlights in particular there are five key features of the NETS SQSS investment methodology for assessing transmission investment requirements “under year round conditions”, specifically:

- it is forward looking - i.e. it takes a forward view of behaviour and costs;
- it is MW based - i.e. examines the market situation at different time snapshots;
- it takes account of (planned) generation outages – i.e. the impact of forecast/assumed generation outages is a key element of the assessment;
- it takes account of a non-intact network – i.e. the impact of forecast/assumed (planned) network outages is a key element of the assessment; and finally
- it considers a range of futures/uncertainties – i.e. both uncertainties in physical behaviour and cost behaviour need to be addressed.

None of the CMP213 options for deriving the “year round” tariff incorporates any of these key features and hence we do not understand how Ofgem can conclude that this approach recognises “Year Round considerations”.

1b. The use of ALF in conjunction with a “year round” charge is not consistent with the economy criterion in the NETS SQSS

The CMP213 proposals (with the exception of Diversity 3) seek to reflect the GSR009 changes in paragraphs 4.4 to 4.6 of the NETS SQSS document which stipulates that investments can be made (1) to provide peak security or (2) because further capacity is justified to reduce constraint costs (“Economy criterion”). The proposed charging methodology does this through a dual tariff approach which introduces a ‘peak security’ tariff and a “year round” tariff (which is split into shared and non-shared). Whilst the peak security tariff largely replicates the NETS SQSS peak security background, the “year round” tariff does not replicate the ‘Economy’ background, particularly because it applies load factor to generators’ charges. In other words, as we have argued in 1a that the charging proposals should not be replicating this Economy background in order to reflect year round conditions, even in doing so, it does it incorrectly.



Source: Poyry

The 'Economy' background in the NETS SQSS specifies that the capacity Transmission Owners are required by their licences to build depends on the backgrounds in the SQSS, which scale generators' output by fixed percentage scaling factors. In other words, according to the NETS SQSS, annual load factor does not factor in TOs' investment decisions and hence the application of ALF to transmission charges is not cost reflective. Rather it is actually a distortion of charges.

We note the National Grid argument that, in charging, generator-specific ALF is required, in addition to the scaling factors, in order for the charges to be cost reflective. In other words, it is necessary to go back to the original CBA approach upon which the background scaling factors are based and allocate charges on this basis. We do not accept this argument for three reasons:

1. The proposed charging methodology reflects the pseudo-CBA element of the NETS SQSS which states that TOs invest on the basis of scaling factors, not load factor. Applying ALF to charges would therefore represent an attempt to be more cost reflective than the NETS SQSS. This is not a legitimate objective for a charging methodology
2. ALF is evidently not reflecting actual CBA because there is no relationship between constraint costs and Load Factor (see University of Bath study) and
3. ALF is based on backward looking data whereas the NETS SQSS is intended to represent a forward-looking process

No robust evidence has been put forward to demonstrate that applying ALF is more cost reflective. National Grid has not undertaken any retrospective analysis with the NETS SQSS to see if it would accurately relate to historic investment and its drivers. This issue was considered by NERA in its February 2012⁶ report which provided some analysis comparing the costs imposed to comply with the NETS SQSS planning standards, with the "improved ICRP" charges. The results showed a significant divergence between costs TOs would incur and those resulting from the tariff model providing further evidence that the proposed charging methodology is not cost reflective. We recognise that WACM 2 differs from the 'Original' in that it contains a diversity factor for areas containing more than 50% low carbon. However, we would not expect this to significantly alter the results given the similarity in tariffs emerging from the Original and WACM 2.

1c. The supposed linear relationship between incremental constraint costs and load factor is flawed

The lynchpin of the proposed charging methodology is that a strong relationship exists between a generator's load factor and incremental constraint costs. It is argued that incremental constraint costs represent a proxy for network investment and hence load factor through ALF should be factored into TNUoS charges. This would, it is argued, mimic the original CBA approach upon which the NETS SQSS background scaling factors are based. Centrica does not believe that the relationship between load factor and incremental constraint costs exists in the way that has been described in the CMP213 proposals. Furthermore, neither National Grid nor Ofgem have undertaken any analysis on a retrospective basis to test

⁶ NERA, Project TransmiT: Ofgem's Assessment of Options for Change, February 2012

whether it is actually more cost reflective of network investment drivers and as such is an appropriate proxy for a CBA.

As part of the workgroup process we asked Bath University to test the efficacy of its proposals (please see Bath University report in annex for more detail). When investigating the possible relationships between “year round” congestion cost and annual load factor, Bath University investigated how a change in wind penetration level, transmission capacity and generation price characteristics might impact load factor and congestion costs.

The University of Bath study clearly indicates that congestion costs not only vary over time and duration (different backgrounds), but also vary significantly between boundaries. On the back of their research, Bath University concluded “the relationship between load factor and congestion cost most certainly cannot be assumed to be linear”. “Load factor is a measure of an average output of a generation technology over the year; whilst congestion cost is sensitive to time (backgrounds), duration elements and boundary locations. The relationship between load factor and congestion cost varies greatly with transmission transfer capabilities, demand profiles and generation mixes, efficiency, controllability and their locations in the system.....it is 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”.⁷

In summary, for “year round” conditions there is very limited commonality between the proposals set out in CMP213 and the investment methodology prescribed in the GB NETS SQSS. In particular, the “year round” tariff reflects a peak background in the NETS SQSS rather than the background for year round conditions. In addition, in attempting to replicate the Economy peak background in charging it does so inaccurately by applying load factor to charges. This NETS SQSS Economy peak background only features scaling factors, rather than scaling factors and load factor as the proposed charging methodology assumes. These points, in addition to having demonstrated that the proposed relationship between generators’ load factor and constraint costs is unfounded, mean that applying ALF to transmission charges would not represent an improvement to cost reflectivity. Rather this would represent a distortion to charges. WACM 2 does therefore not better reflect the changing electricity generation mix and the impact different users have on transmission investment. It would therefore not drive more efficient decisions by market participants and policy makers. In our view, these proposals would lead to a cross subsidy to northern generators without justification which in our view would be discriminatory to those parties adversely financially impacted. Therefore the proposals should be rejected.

2. Ofgem is wrong to conclude from the Impact assessment that the proposals should be implemented

Ofgem’s Impact Assessment examines the charging options against the three broad aims of the Project TransmiT: (i) deployment of low carbon generation across GB and impact on achieving the UK government’s Renewable Energy Strategy target of 30% of generation from renewable sources by 2020 and carbon intensity goals in 2030, (ii) quality and security of supply across GB, and (iii) overall cost of the system as a whole and customer bill impacts. We conclude that based on these three key measures, WACM 2 either fares worse than the Status Quo methodology or the results are inconclusive as set out below. As such we do not see a basis for Ofgem to arrive at the conclusion that WACM 2 should be implemented based on these findings. Besides the face value results, there are wider issues with the modelling

⁷ Bath University, Year-round system congestion costs, p3-6

which make the credibility of the results questionable as an input into the decision-making process for CMP213 even if just used as guidance. The specific issues with the robustness of the modelling are explored in detail in section 3 of the Poyry report.

2a. Deployment of low carbon / renewable energy

A key goal of Project TransmiT was to ensure that arrangements are in place to facilitate the timely move to a low carbon energy sector. On this measure alone, the Status Quo methodology should be retained and WACM 2 rejected; throughout the modelling period Diversity 1 (which is used within WACM 2) has the lowest renewable penetration throughout the period and Status Quo run has the highest. In addition, Diversity 1 has the highest carbon intensity alongside Diversity 2. Nevertheless, we do not believe these results to be reliable as the assumed strike prices are likely to be the key driver of CO₂ generation levels rather than TNUoS charges as identified in the Impact Assessment.

2b. Quality and security of supply across GB

The impact assessment results show that between 2017 and 2020 plant margins tighten by an extra 1 percentage point under WACM 2 relative to the Status Quo methodology. Whilst recognising this reserve margin impact, Ofgem concludes it does not believe that security of supply would be materially affected by this or any other of the proposals. However, we do not believe that Ofgem has assessed the impact on individual generators in such a way as to be able to reach the conclusion that there would be no material risk to security of supply.

For example, Ofgem claims that the “redistribution of costs is not disproportionately high for any of the CMP213 options”⁸ but it is entirely unclear how this conclusion has been reached as the analysis of distributional effects in the Impact Assessment is incomplete. The Impact Assessment shows two bar charts illustrating the annual changes in total generator profits relative to the status quo in particular regions. However, the power stations of different generation companies are generally not geographically evenly dispersed. If they were, redistribution of profits would matter less. Hence, to fully analyse distributional effects and security of supply, Ofgem needs to calculate impacts by industry player to understand the real impact on parties.

The Impact Assessment results also appear illogical in that they do not show any impact on margin before 2017. However, it is precisely the years before the introduction of the Capacity Market where the impact is most likely to be seen. It should be noted that many of these stations most affected by the TransmiT proposals are marginal gas plant in the South, with some annual TNUoS costs increasing by £5 million. Even with much smaller increases in TNUoS costs, this could lead to the closure of some plants before the introduction of the Capacity Market or any other mitigating measures given the difficult economic conditions facing many gas-fired power stations at present.

To illustrate the matter, because of low spark spreads, Centrica’s thermal fleet is currently making significant losses. Although our fleet is run to be cash neutral (i.e. short run costs are met by income), this is not sustainable for a business in the long term. In this financial environment an increase in TNUoS charges will have a significant impact on the viability of our stations. Even though the actual TNUoS increase may appear to be relatively small, this could move stations from being cash neutral to cash negative. In the meantime, the capacity mechanism will not be available to address this until 2018 and there is no clarity on other interim measures. The stations that could close are the type of flexible plant that is most required to support the increase in renewables and the mid-decade capacity crunch. Given that generally many new built decisions are on hold until there is more certainty in the market,

⁸ Ofgem, CMP213 Impact Assessment, p48

they would not be available in short timescales required to fill forecast capacity crunch.

In summary, given the context of concerns around generation margin, early implementation of these proposals would appear to be taking a significant risk with security of supply which has not been robustly considered.

2c. Overall cost of the system as a whole and customer bill impacts

Ofgem states that “implementing this option will be in the interests of existing and future consumers” and that “this view is supported by the modelling analysis submitted to us by industry which suggests that between 2020 and 2030 consumer bills could be up to £8.30 per annum lower than under the current methodology”.⁹ We note the estimated benefits to consumers appear from 2024 to 2030, but given the lack of certainty of estimates this far into the future, the various modelling issues, and Ofgem’s view that the relative modelled impacts of WACM 2 “only provide an approximate guide as to the likely ‘real world’ impacts of the different proposals”¹⁰ we believe it would be wholly inappropriate to implement WACM 2 based on these suggested benefits.

3. The proposed charging methodology would not better facilitate the CUSC objectives

Based on our analysis of the proposals above, we have assessed the WACM 2 proposals against the CUSC objectives. We have concluded that WACM 2 does not facilitate any of the CUSC objectives. Our rationale is provided under the CUSC objectives below:

(a) Facilitate competition in the sale, distribution and purchase of electricity

(b) Reflect the costs incurred by transmission licensees

(c) Take account of the developments in transmission licensees' transmission businesses

On CUSC objectives (a) and (b), we conclude that application of Annual Load Factor (ALF) to charges would negatively impact cost reflectivity and competition due to the unjustified weakening of locational signal in tariffs and the subsequent baseless significant financial transfers that would take place between parties subject to TNUoS. The fact that WACM 2 is based on a misinterpretation of the NETS SQSS and hence does not reflect actual transmission drivers is an additional factor why the proposals are not cost reflective and hence would be discriminatory to affected parties and have a negative impact on competition.

In addition, the distributional impacts of the proposals are significant and have not been explored fully. Certain generating companies will clearly lose substantially, while others will substantially gain.

The general misinterpretation of the changes to the NETS SQSS means that WACM 2 does not take into account developments in transmission licensees' businesses and hence CUSC objective (c) is not better met. Firstly, as the proposals use ALF in addition to the scaling

⁹ Ofgem, CMP213 Impact Assessment, p6

¹⁰ Ofgem, CMP213 Impact Assessment, p20

factors, the “year round” tariff does not replicate the Economy background in the NETS SQSS. Secondly, by linking the “year round” tariff in CMP213 to the “Economy” background in the NETS SQSS it actually replicates a peak background rather than “the “under year round conditions” within the NETS SQSS.

There is an additional reason why we do not believe the proposals take into account developments in transmission licensees' transmission businesses. The assumption of a linear relationship between load factor and incremental constraint costs is based on the supposition that the network has been built on an optimal basis. The size of the transmission network relative to generation is not uniform across the country which is why the level of congestion across the network is not uniform, as we have proven. Also, the Connect and Manage policy which enables generation to connect before sufficient wider transmission is built is another reason why the network is not currently built on an optimal basis.

4. The proposed charging methodology would not enable Ofgem to better meet its statutory duties

We have assessed Ofgem’s proposals against its statutory duties. We do not believe that the introduction of WACM 2 is consistent with Ofgem meeting these duties and therefore there is no robust case for implementing this modification. Below we summarise why Centrica does not believe that the charging proposals help in terms of (a) reduction of greenhouse gas emissions; (b) security of supply; (c) furthering competition; (d) consumer bill impacts. We refer the reader to section 46.2 of the Poyry report for more detail in these areas.

Consumer bill impacts - Short-term increases in consumer bills are discounted on the basis of uncertain future reductions. Hence, current consumers are being asked to pay now for potential savings in the future which may not materialise

Reduction of greenhouse gas emissions - No material benefits in terms of greenhouse gas emissions are shown through the assessment and implications for costs of low carbon support are uncertain given the differences in generation mix between the methodology variants

Security of supply - The changes will tighten margins in the short-term, with uncertain implications in the long-term. Ofgem cannot safely reach the conclusion that there would be no material risk to security of supply given that it has not assessed the financial impact on different generation companies

Furthering competition - Negative implications for competition are downplayed and proposals are not shown to be more cost-reflective than the status quo

5. Implementing the proposed charging methodology would not enable Ofgem to meet its better regulation duty

Ofgem has a statutory duty to have regard to the Government's better regulation principles and principles for economic regulation in regulatory decision making. This is particularly relevant in terms of predictability, proportionality, accountability, consistency and coherence. The key areas where we believe that the proposals fall short are a) Ofgem’s assessment does not consider the impact on regulatory risk b) Project TransmiT considered TNUoS in isolation from other transmission charges and related policy areas, c) the decision would be inconsistent with the P229 transmission losses decision and d) the flawed process to develop and consult on the proposals.

5a. Ofgem’s assessment does not consider the impact on regulatory risk

A key priority in promoting competition is to promote investor certainty through a stable and consistent regulatory environment. Regulatory change is currently progressing at a rapid pace and such a change in the charging methodology, which in our view is unjustified, will only serve to increase the perception of regulatory risk. Furthermore, given the current speed of regulatory change, there is a strong likelihood that these proposals would need to be amended or removed altogether soon after implementation. For example, the European Network Codes will require Ofgem to assess the case for an alternative form of sending locational signals (market splitting). This will potentially provide a solution to resolving the trade-offs between congestion and transmission investment that have prompted this review. If this reform were to occur, this would mean that a new charging regime adopted now could be subject to much more radical reform within two years, as it would be inappropriate to implement market splitting alongside full national locational TNUoS. Ofgem’s suggestion that these proposals are still helpful because they recognise that European law requires cost-reflective pricing is not correct. Market splitting, if implemented, will require a fundamental overhaul of transmission and energy pricing in GB and there is no sense in which this proposed reform would make that transition easier. Rather, it introduces change and instability for participants when further instability is potentially on the horizon.

The impact on regulatory risk does not appear to have been taken into account in Ofgem’s Impact Assessment. Given that most estimates suggest up to £100 billion of investment is required up to 2030, if the perception of increased regulatory risk results in even a small increase in investors’ perceptions of the required cost of capital in power generation, the cost benefit analysis could be very different.

5b. Project TransmiT considered TNUoS in isolation from other transmission charges and related policy areas

Project TransmiT considers TNUoS in isolation from other charges and policy areas which risks resulting in the implementation of proposals which are inconsistent with regard to the wider electricity market. Ofgem excluded BSUoS from the review without justification and has not sufficiently considered related policy areas such as ‘connect and manage’. This appears to go against the spirit of Ofgem’s own guidance on SCRs which describes Ofgem’s role as holistically reviewing a code based issue.¹¹

This development of the proposals in isolation from other policy areas is particularly problematic for CMP213 because of the direct link it makes with reflecting constraint costs. The NETS SQSS allows TOs to make an economic trade-off between the costs of transmission investment and congestion management and hence TNUoS and BSUoS both represent access to the network. If the proposed TNUoS charges are more cost reflective (through applying ALF to reflect a generator’s impact on incremental constraint costs), then presumably, in order to be consistent, the BSUoS regime should also be amended in a similar vein to ensure that generators’ impact on constraint costs is reflected back to the generator through locational BSUoS. However, as we have argued, the proposed charging methodology is not more cost reflective, and hence generators with reduced TNUoS costs will both be receiving two benefits: an unjustified reduction in their TNUoS and a socialised BSUoS charges which does not reflect their true impact on the network.

¹¹ Ofgem guidance on the launch and conduct of Significant Code Reviews (SCRs), P1

There are further links with Connect and Manage and the associated socialised BSUoS policy. The key tenet of the CMP213 proposals is that a generator's load factor has an impact on constraint costs and hence network investment. National Grid's CUSC Modification Report states that "the use of each generator's Annual Load Factor (ALF) as a surrogate for the incremental cost of transmission network investment (driven by constraint cost) is at the heart of the Original proposal"¹² and that the proposed charging methodology reflects changes to the "NETS SQSS (GSR-009) and the increasing amount of transmission investment justified on the basis of avoided future constraint costs"¹³ In other words, within the proposed charging methodology there is a direct relationship between the constraint costs a generator is deemed to cause on the network and its TNUoS. If Ofgem adopts this proposals it will contravene National Grid's condition 26 licence condition 'Requirements of a connect and manage connection'. This condition prohibits the targeting of constraint costs.¹⁴ We would also note the Minister for State's letter to Lord Mogg stressing that "any changes transmission charging arrangements that are introduced as part of Project TransmiT will need to be consistent with the GB network connection policy introduced through the 'Connect and Manage' regime".¹⁵

A further issue is that the electricity transmission charges have been reviewed in isolation from the gas exit transmission capacity charges. The introduction of the WACM 2 proposals would mean that the gas and electricity charging principles run counter to each other and distort the economic decision of where to locate. The current gas charges¹⁶ mirror the principles of the current electricity charging in that they are based on peak usage (i.e. akin to MW in electricity) and do not, as the WACM 2 proposals, reflect KWh usage. The consistency between the two means that although generators in the south west pay high gas charges to reflect that they are far from gas entry terminals, this is countered by the fact that they receive a more favourable TNUoS tariff to reflect the electricity transmission investment savings they provide by being located where they are. In other words, generators make an economic decision where to locate based on the two consistent cost reflective transmission charges. Inconsistency between the two will only further distort transmission charging signals and accentuate the already negative impacts of WACM 2.

5c. The decision to implement WACM 2 would be inconsistent with the P229 transmission losses decision

Ofgem's minded-to decision to implement WACM 2 is inconsistent with its decision to reject the BSC modification. P229 (seasonal Zonal Transmission Losses) was rejected on the basis that:

1. The CBA on P229 showed a small NPV benefit to consumers over the following ten years which was not significant when measured against the large distributional transfer between parties that this mod would have created.
2. There is uncertainty due to the upcoming changes surrounding the integration of European electricity markets and in particular 'market splitting'.

The same issues are equally valid for the CMP213 proposals.

First, on the CBA for WACM 2, the modelling actually shows a disbenefit to consumers over the following 10 years due to the implementation of WACM 2. We note that the estimated benefits to consumers in the long term, (from 2024 to 2030) but given the transmission losses

¹² National Grid, CMP213 Project TransmiT TNUoS Developments, P31

¹³ National Grid, CMP213 Project TransmiT TNUoS Developments, P4

¹⁴ C26 states "use of system charges resulting from transmission constraints costs are treated by the licensee such that the effect of their recovery is shared on an equal per MWh basis by all parties liable for use of system charges."

¹⁵ Letter from Charles Hendry to Lord Mogg, Report on the enduring 'Connect and Manage' grid access regime

¹⁶ We note that a gas charging review is underway. However, at the current time the scope has yet to be defined and as such it is not clear whether gas exit capacity charges will be the subject of review.

decision we do not believe that Ofgem should place undue weight on these potential long term benefits. Similar to the transmission losses modification, the CMP213 proposals would create significant transfers of value between parties relative to any potential benefit.

Second, given the significant development of the CACM code since 2011, it could be argued that the potential for “market splitting”, and hence the introduction of a locational signal through energy prices, is more likely now than when Ofgem rejected P229. The lack of consideration of “market splitting” runs contrary to Ofgem’s decision on P229, in part on the grounds that changes in EU policy could be introduced before the supposed benefits of the proposal could be realised:

“the P229 proposals are being decided in the context of a changing external environment, in which an approved transmission losses proposal may be superseded before the full benefits have been realised. In particular, at a European level, there is an active debate for greater integration of electricity markets focused on market splitting approaches that create multiple price areas within a national system and implies “locational” energy prices. This could be implemented as early as 2015”¹⁷

5d. Tight timescales for the CUSC process has led to underdeveloped alternatives and flawed National Grid impact assessment

The various alternative charging proposals were not developed to the same level as the Original due to the small amount of time dedicated to them within the Working Group. In our view this limited Ofgem’s options when assessing the proposals. At a high level, the key issues with the alternatives that were not fully explored in the working group are that they either only account for diversity in exporting zones (method 1) or contain arbitrary 50% capping of the sharing element (methods 2 and 3). There were similar time pressures on the impact assessment which led to National Grid only releasing the results to work group members the Friday evening before the final working group vote on the Monday. In our opinion this led to a poor decision making process and seriously inhibited working group members in concluding whether the options better meet the CUSC objectives. In the event, Impact Assessment results turned out to contain flaws and had to be resubmitted by National Grid, after the vote.

Ofgem’s Impact Assessment also deviated substantially from its own guidelines on timing which limited our ability to assess the proposals and the legal text. Ofgem’s proposed guidance on conducting impact assessments states that an eight week timeframe is reserved for consultations on issues that are less likely to have a very wide impact or be the subject of substantial interest, whereas a twelve week timeframe is applied to consultations on issues that are expected to be of wide significance and interest. Whilst we recognise Ofgem’s granting of a two week extension on the back of Centrica and industry’s feedback, we believe the new consultation timetable is still inconsistent with Ofgem’s guidance on Impact Assessments and Consultations.

6. An April 2014 implementation date is unjustified because it is too short to enable an efficient response in 2014/15

¹⁷ Ofgem, Decision on “Balancing and Settlement Code (BSC) P229: Introduction of a seasonal Zonal Transmission Losses scheme (P229)” p6

Centrica disagrees with Ofgem's assessment that there are no compelling arguments that suggest implementing after April 2014 (as recommended by the CUSC panel) would benefit customers and better meet Ofgem's duties. We believe the logic Ofgem has used to arrive at this judgement is flawed on a number of levels. We discuss these issues both from the point of view of the impact on generators and the impact on retail businesses.

6a. Impact of April 2014 implementation on generation

Ofgem argues that implementing a more cost-reflective charging methodology in April 2014 rather than later will ensure that the benefits are achieved as early as possible. However, as there are no benefits before 2024 it is not clear what benefits would be achieved by early implementation. Taking a decision now and implementing new charges in 2016 or 2017 would still provide the desired signal. Implementation by April 2014 will not even send an efficient signal to existing generators as generators would be unable to reduce their TEC holding by April 2014 without facing a financial penalty and is not sufficient notice to make changes to other commercial contracts (e.g. PPAs).

A further reason Ofgem puts forward to justify an April 2014 implementation date is that parties have foresight of tariffs from April 2014. This is, it is argued, due to the fact that indicative tariffs were published as part of Ofgem's Impact Assessment and that NGET will produce further updates on the tariffs throughout the remainder of 2013 and early 2014. Whilst this is true, the various iterations of the tariffs that have been published vary significantly from each other and hence we do not believe they provide us with any real foresight or confidence as to the likely final charges. National Grid has provided two updates since the Impact Assessment tariffs.

Finally, Ofgem's conclusion that "NGET's analysis of the anticipated tariff movements suggest that the impact on TNUoS tariffs for a thermal generator is within the range of historical changes in tariffs since 2009/10 suggesting that the impact might not be as significant in the context of other recent changes that were unrelated to changes in the methodology"¹⁸ appears to lack any evidence and is, as far as we can see, incorrect in many cases. For example, the largest year-on-year change in wider tariff increase our Langage power station has seen since 2009 under the current methodology equates to a change of £1.2mn. However, we forecast show that Langage's effective charge for 2014/15 under WACM 2 would increase by £4.7 million relative to the most recent NGET forecast¹⁹ under the status quo methodology. It should be noted that many of stations most affected by the TransmiT proposals are marginal gas plant in the South. Furthermore, given the scale of these increases in costs we also dispute Ofgem's conclusion that "that the redistribution of costs is not disproportionately high."²⁰

6b. Impact of April 2014 implementation on energy retail businesses

We are also concerned about the level of disturbance and uncertainty in the demand tariffs produced by the CMP213 proposals. Indicative demand tariffs have fluctuated throughout the development process and we currently have no confidence over the final impact on prices this modification. It has consistently been argued by National Grid that the effect of the CMP213 proposals would be of no or limited impact on demand tariffs. However, as set out at the National Grid Transmission Charging Methods Forum on 10th September, the indicative

¹⁸ Ofgem, CMP213 Impact Assessment, p62-63

¹⁹ NGET, Quarterly update of forecast TNUoS tariffs for 2014/15, July 2013

²⁰ Ofgem, CMP213 Impact Assessment, p48

WACM2 tariffs in North Scotland show an increase of 25% if WACM2 is implemented, whilst Southern Scotland sees an increase of 14%. As we believe is now generally recognised, allowing such short-term uncertainty due to regulatory decisions is an unnecessary risk the costs of which are likely, ultimately, to be borne by customers.

Indeed, we recognise that Ofgem has demonstrated a commitment to improving the certainty of tariffs and we particularly welcome the decision relating to managing the volatility arising from Price Control determinations. Ofgem has also in recent times consistently acted to ensure users have adequate lead time before the implementation of significant changes to fully understand the impact and adjust commercial arrangements necessarily²¹. We are therefore surprised to see Ofgem acting in a contrary fashion in the case of this modification. In the recent introduction of new charging arrangements for Distribution EHV-connected users ('EDCM'), Ofgem insisted on a full year between the proposals being submitted for approval (April 2011) and implementation (April 2012) 'To allow customers a longer lead time to prepare for any new tariff levels that come about as a result of the introduction of the EDCM.'²² There are similarities between Project Transmit and the EDCM in that the outputs have varied considerably meaning users cannot have certainty over the costs they are likely to face until final proposals are submitted to Ofgem. We agree with the conclusion at EDCM to allow a longer lead time and do not understand why Ofgem has not reached the same conclusion in relation to Project Transmit.

Ofgem's Distribution team continue to demonstrate due regard to appropriate lead times. Indeed, in August, whilst the Ofgem Transmission team were proposing an April 2014 implementation for this significant change to the Transmission charging arrangements, the Ofgem Distribution team were informing the DCMF Methodologies Issues Group that, with regards to proposed changes to the calculation of EDCM Network Use Factors (NUFs), 'Ofgem is broadly happy with the [NUF] proposals that the DNOs have submitted. However, it is Ofgem's view that it would not be appropriate to aim to implement the proposals in time for April 2014.'

Even when proposals and their impacts were well understood and it could be reasonably argued that a longer lead was not necessary, as with recent changes to the AUGE methodology, Ofgem still decided that it was suitable to delay providing the benefit to customers to ensure all parties could react to the change arguing 'We consider that whilst UNC456 may allow for the more timely and accurate allocation of some unidentified gas costs in the short term, this would come at the expense of additional volatility and market uncertainty'²³. We believe that implementing these proposals for April 2014 would also come at the expense of additional volatility and market uncertainty and believe that, as a minimum, a lead time of at least a year should be maintained following the submission of firm proposals to Ofgem, in line the EDCM implementation.

7. The HVDC and island link proposals are robust and should be progressed as separate modifications

Centrica agrees that the absence of a methodology to calculate charges for HVDC and island links in the current arrangements requires change. We believe that the arrangements set out

²¹ Examples include Ofgem's decisions on the timing of recovery of the PPL term of the DPCR4 losses incentive (25th April 2013, 20th December 2012 and 25th July 2012) and Ofgem's decision on the timing of the recovery of Price Control Re-opener revenues for Scottish Power Energy Networks, 30th November 2012

²² Decision on revised submission and implementation dates for the EHV Distribution Charging Methodology (EDCM), 22nd September 2010

²³ Ofgem decision on UNC 456 – 28th June 2013

in WACM 2 provide a robust cost reflective methodology for calculating charges for HVDC and island links and should be progressed.

On HVDC links we understand that calculating impedance is essentially an arbitrary process. We believe that using a ratio of average power flows across the relevant AC boundaries is a pragmatic way to assume power flows on HVDC links. We believe that using a specific expansion factor per HVDC link, as proposed, ensures that the resulting charges will have a high degree of cost reflectivity and we also agree that it is not appropriate to socialise any of the associated converter station costs as no strong evidence was uncovered to do so and that any specific levels of socialisation would be arbitrary.

Similarly to HVDC links, we support the proposals being set out to accommodate island links. Given the high cost and specific nature of these links it is appropriate that the MITS definition was changed to ensure that the majority of the links are classed as 'local' and that specific expansion factors are calculated for each AC technology and each individual HVDC circuit. As with general HVDC links, it is right that none of the converter stations be socialised.

8. Centrica concludes that Ofgem should reject the sharing proposals and request that the HVDC and island link sections are progressed as separate modifications

We have argued above that the implementation of WACM 2 would be a retrograde step in charging and inappropriate for the following reasons:

The Impact Assessment does not demonstrate that the proposals should be implemented

It is impossible to infer from Ofgem's Impact Assessment that WACM 2 should be implemented. The Impact Assessment shows that overall costs to consumers would increase until 2024. Although the modelling suggests savings thereafter, there is a high range of uncertainty around this, not least because the consumer benefits post 2024 are said to result from bigger generation margins. This is nonsensical in an EMR era where Government will set their desired capacity margin. The modelling also shows that the proposals do not show any improvement in GB reaching its sustainability or carbon goals. Indeed, on this measure the current methodology is shown to perform the strongest. In addition, we also believe there is a serious question mark over security of supply which has not been addressed in this Impact Assessment.

The 'sharing' element of the proposals should be rejected

HVDC and islands aside, WACM2 does not solve the defect Ofgem is trying to solve. As we have demonstrated above, the sharing element of the proposals have not been proven to be more cost reflective than the current methodology and actually distorts charges. The use of ALF does is not cost-reflective and discriminatory to those parties adversely financially impacted without benefits to competition. Furthermore, WACM 2 (as do the other options) woefully fails to replicate the NETS SQSS both in terms of the way in which it applies ALF to the Economy background of the NETS SQSS (which is based on peak) and fails to replicate the NETS SQSS "conditions in the course of a year of operation".

Implementing WACM 2 would not enable Ofgem to better meet its statutory duties

Ofgem has a range of statutory duties which would not be better met by implementing the WACM 2 proposals. This adds further weight to our view that the proposals should not be

implemented. These include 1. Ofgem's assessment does not consider the impact on regulatory risk. 2. The proposals only address TNUoS and the other transmission charges. 3. Ofgem's rejection of P229 seasonal transmission losses sets precedent in that it was rejected by Ofgem because of the uncertain benefit to consumers and the upcoming changes surrounding the integration of European electricity markets and in particular 'market splitting'. 4. Tight timescales for the CUSC process has led to underdeveloped alternatives and flawed National Grid impact assessment. Finally, Ofgem's proposed implementation date of April 2014, rather than a later date, is without robust justification and, if implemented, risks amplifying all of the negative features of the proposals.

We therefore conclude whilst the HVDC and island link sections of the CMP213 modification represent a valid solution to that specific issue, in no way does the dual background / sharing element of the proposals represent an improvement to the status quo. Rather, we believe in all areas we have considered this element of the proposals would be a retrograde step. Ofgem should therefore reject CMP213 on that basis and request that the HVDC and island link elements are progressed as separate modifications.