

Catherine Williams
Head of Commercial Regulation
Ofgem
107 West Regent Street
Glasgow
G2 2QZ

27th May 2014

RE: Project TransmiT: Further consultation on proposals to change the electricity charging methodology

Dear Catherine,

Thank you for the opportunity to respond to the 'further consultation on proposals 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.

We would like to discuss our response with you and will be in touch shortly to arrange a mutually convenient time. In the meantime, please do not hesitate to contact me (email: ricky.hill@centrica.com; Tel: 07789579169) should you have questions on any aspect of this response.

Yours sincerely,

Ricky Hill
Senior Analyst
Centrica Energy

Executive summary

In August 2013, Ofgem consulted on changes to the current transmission charging arrangements, and in particular, implementation of the WACM2 proposal. Ofgem concluded that “WACM2 was the most cost reflective option presented to us and would drive more efficient decisions by market participants and policy makers. This in turn would create value for consumers. The modelling analysis suggested that implementing WACM 2 could lower consumer bills.”¹ Ofgem’s modelling showed power sector cost reductions of around £1bn in each of 2011-2020 and 2021-2030.

In response to this consultation, Ofgem received significant new evidence and analysis from industry in relation to the WACM2 proposal. This prompted Ofgem to make both changes in its conceptual arguments and changes in its quantitative modelling. Ofgem’s updated modelling now shows very low power sector benefits from the modification and continuing higher costs to customers. Despite this, Ofgem is still proposing to press ahead with the implementation of the WACM2 methodology, on the argument that it is conceptually more cost reflective, and that net benefits will result.

Centrica does not believe such a decision can be rationally supported.

Flawed arguments on cost reflectivity

Ofgem argues that WACM2 models investment costs which are close to those which would actually emerge from the investment process, and targets these costs (via the use of ALF) on those that cause them. It also argues the risk pointed out in the NERA/ICL analysis (that WACM2 will not be cost reflective when marginal transmission investments are HVDC links) is not likely to materialise.

These arguments are flawed:

- Ofgem has undertaken no separate quantitative analysis and has no empirical evidence of the extent to which the investment costs emerging from WACM 2 are cost reflective. Instead, its arguments rely on assertion from National Grid. In approving SQSS modifications which the WACM2 methodology is argued to reflect, Ofgem made clear that no investment would result directly from the changes, and that as a proxy for the real causes of investment, the changes represented only “a better *first estimate*” than the *status quo*. This is not a sound basis on which to implement changes in tariffs;
- neither has Ofgem undertaken separate analysis on the link between ALF and constraint costs. It relies on workgroup analysis which at best indicates a link in 6 or 7 out of 23 zones analysed. In other zones, the relationship is weak or absent. This finding is consistent with the analysis undertaken by the University of Bath. The analysis on which Ofgem relies simply does not support its conclusion; and
- Ofgem’s dismissal of the NERA/ICL arguments that HVDC will not be the marginal investment and so will not drive costs does not appear to be borne out by National Grid’s latest TNUoS publication, where the bootstraps are cited as one of the reasons for a significant increase in northern generator tariffs from 2016.

¹ Project TransmiT: Further consultation on proposals to change the electricity transmission charging methodology (Ofgem, 2014)

Quantitative analysis which does not support the conclusion

Ofgem argues that quantitative modelling shows a positive impact from the modification in terms of power sector costs. While it also shows an increase in customer bills, Ofgem argues that this could be offset by factors which have not been modelled. Ofgem concludes that, whilst it cannot tell whole picture, the quantitative analysis generally supports the implementation of the methodology.

It is difficult to see how Ofgem has reasonably come to this conclusion:

- the modelled impact on power sector costs (£68m to 2030) is now extremely small, having fallen by 96% from that measured previously, raising the question of how big a reduction in the modelled benefit would be required to induce Ofgem to change its mind;
- the measured benefit is a small difference between two very large numbers. Redpoint notes that sensitivity analysis indicated a range for benefits of £630m (practically a multiple of ten of the “expected” number). A reasonable person would conclude that it was not possible to say with any certainty that the benefit was measurably different to zero;

Taking a decision on such weak evidence would not be consistent with other modification decisions. In their “minded to” position in relation to CMP201, Ofgem said that in the absence of quantitative analysis to substantiate an expectation that modelled customer cost impacts would be mitigated, the modification should not be approved. And in BSC P229, Ofgem decided not to implement a change which had large distributional effects but little positive welfare benefit. Ofgem appears to have taken opposing views in relation to WACM2.

Failure to consider broader costs of change

Ofgem does not consider the broader costs of implementing WACM 2, including the reduction in regulatory stability. This is a critical omission because:

- there are drivers of further change to transmission tariffs on the near horizon (including the potential move to market splitting and the ACER opinion on generation charges) which could undo some or all of the proposed changes;
- it is clear from the level of response from the industry that incremental instability is likely to have a major cost particularly at a time when funds are required to support billions of pounds of new investment; and
- the perceived benefits associated with the modification are long dated, and with broader changes may never be realised. Therefore there may be no short term gains to be set against the very real costs of increased instability.

Ofgem’s failure to consider these costs means they end up with an unduly biased assessment of the modification.

Our suggested way forward

Centrica believes that Ofgem would fail in its primary duty of protecting customers if it were to implement WACM2. We believe that there is no rational basis, either quantitative or qualitative, that would support implementation of WACM2. Instead, we believe Ofgem should:

- Reject CMP213 on the basis that there is no sound evidence for implementing the sharing proposal; and

- Separate the change into its component parts and progress the HDVC and island link sections of the proposal represent a valid solution to the issues raised.

We expand on each point in turn below.

Cost reflectivity of the Year Round background

There has been a change in Ofgem's argumentation in relation to the cost reflectivity of the modification. In the Impact Assessment published in August 2013, Ofgem implied that the proposal including a "Year Round" tariff was cost reflective because it took into consideration "year round" conditions. For example, Ofgem stated that "[w]e consider that charges should differentiate between investment driven by peak security and investment driven by year round conditions... Alternatives featuring Diversity 3 do not include a peak security component to the tariff and do not reflect the different impacts that generators have in driving transmission investment for year round considerations"².

As we noted in our response to the Impact Assessment, it is clear that the "Year Round" tariff does not reflect "year round" conditions. In the current consultation, Ofgem now says that the "Year Round" tariff is cost reflective because it ensures tariff modelling reflects investments which would emerge from a cost benefit analysis (CBA) which would take into account the cost of transmission constraints.

The Year Round generation background mirrors the Economy background in the SQSS. When Ofgem approved the modification to the SQSS to include the Economy criterion, it stated that "*the GSR009 proposals are not expected to materially impact the level of investment in the transmission system*"³. From this, it is clear that Ofgem does not expect any new transmission to be built directly as a result of the consideration of this set of possible generation conditions. Rather, Ofgem's basis for including the change was so that the deterministic analysis in the SQSS would:

- "*provide a better starting point for considering more detailed and relevant technical solutions and comparing their relative merits*";
- "*provide greater transparency for stakeholders*"; and
- "*provide a clearer starting point for the planning of new transmission and, in particular, planning applications*"⁴.

From these statements, it is clear that Ofgem's approval of the modification was based more on the Economy criterion contributing to a design and planning process, than its ability to provide accurate analysis of future investments per se.

If material investment were driven by consideration of flows under the Economy background, it would arguably be cost reflective for tariffs to reflect the costs of such investments. However, Ofgem's GSR009 conclusion implies that tariff modelling is being modified to reflect something which will not directly drive any new transmission build.

Ofgem might argue that, even if no investment is *directly* driven by the Economy criterion, the investment derived from modelling the Year Round background is still a good proxy for investment resulting from other factors (i.e. the provision for a CBA in the SQSS).

But as part of taking a decision on this modification, Ofgem has undertaken no analysis to assess whether this is the case. This is despite the fact that both the Pöyry report⁵ and the

² Project TransmiT: Impact Assessment of industry's proposals (CMP213) to change the electricity transmission charging methodology (Ofgem, 2013)

³ Minimum transmission capacity requirements in the Security and Quality of Supply Standard (Ofgem, 2011)

⁴ Ibid

⁵ Review of Ofgem's Impact Assessment on CMP213, A report to Centrica Energy (Pöyry, 2013)

NERA/ICL review⁶ suggest that the Impact Assessment does not provide sufficient evidence that the WACM2 approach is more cost reflective than the *status quo*.

Redpoint, in their report, simply rely on an assertion from National Grid. They state that “National Grid has confirmed that the approach encapsulated in the WACM2 methodology, and modelled within the TDM, is an accurate reflection of how transmission investment decisions are assessed. Hence, in our opinion WACM2 is more reflective...”⁷ They then go on to address the cost reflectivity issue further using their modelling to compare the relative impact of generators on transmission costs to the tariffs they face under the *status quo* and WACM2. This again falls short of an analysis of modelled charges and likely investment costs. This is a major deficiency, given that cost reflectivity is such a fundamental part of Ofgem’s justification for proposing the implementation of the proposal.

Furthermore, Ofgem themselves made clear at the time of the SQSS modifications that they believe the Economy background is only very weakly reflective of likely CBA outcomes. Ofgem admits that the proposal would only provide “a better *first estimate*”⁸ of investment costs. In the decision documents associated with GSR009, Ofgem makes clear that the inclusion of the Economy criterion in the SQSS was not because it would indicate directly a reasonable level of investment, but rather because providing a slightly better starting point was seen as having the potential to improve transmission planning processes.

It is one thing accepting a modification to the SQSS on the grounds that a “*better first estimate*” will improve the planning and design process. It is quite another to argue that tariffs, which have a real and immediate commercial impact, should be driven by something which is recognised as only weakly related to reality and which elsewhere Ofgem have credited with being simply “a better *first estimate*”. Customer money is not spent on the basis of the outputs of the Economy criterion analysis, and judging by the relatively weak statements in the GSR009 decision documents about the likely accuracy of analysis based on the Economy criterion, Ofgem would not have accepted the SQSS modifications if that had been the proposal.

ALF is a poor proxy for contribution to constraint costs

Ofgem states that “*significant consideration*”⁹ was given to the relationship between ALF and the cost of constraints in the workgroups. As we have noted in previous responses, this analysis appears to be the basis on which Ofgem argues that there is a “*broadly consistent, linear relationship*”¹⁰. Centrica does not believe the workgroup analysis supports this conclusion in any way.

The analysis in question looked across 23 zones. However, in many of the zones there appears to be a set of generation technologies operating at 0% load factor and having zero incremental impact on constraint costs. An example is shown in Figure 1.

⁶ Project TransmiT: Modelling the Impact of the WACM 2 Charging Model (NERA / ICL, 2013)

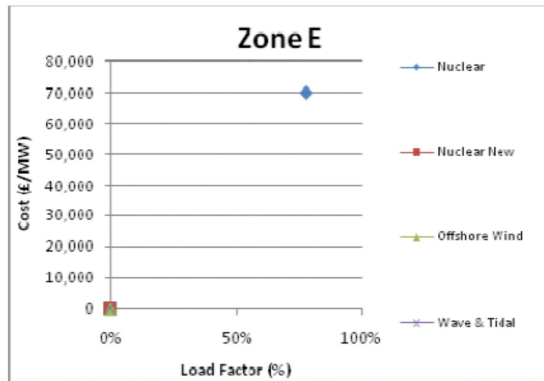
⁷ CMP213: further analysis and review of consultation responses (Redpoint, 2014)

⁸ National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS): Minimum transmission capacity requirements (GSR009) (Ofgem open letter, 2011)

⁹ Project TransmiT: Further consultation on proposals to change the electricity transmission charging methodology (Ofgem, 2014)

¹⁰ Ibid.

Figure 1. Example of risk of spurious relationships

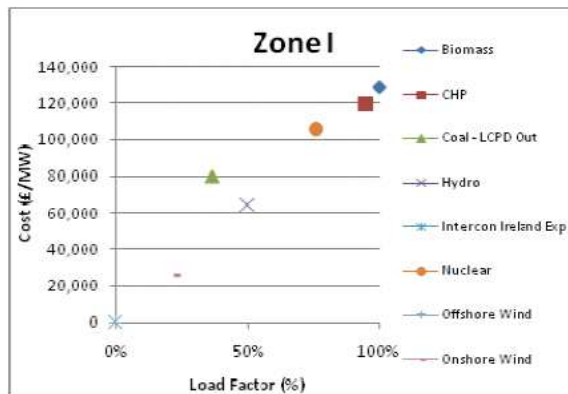


Source: Final Modification Report, Annex 9

Unless it is to be expected that new plant connects to the system with the anticipation of not running at all, it is not clear that using this as a valid datapoint in estimating whether a linear relationship exists is appropriate.

Excluding zones with just a “zero” point and one other datapoint leaves 15 out of the 23 zones. We then looked at the claim of a linear relationship in these zones. It is true that in some of the zones, a linear relationship appears to exist – for example, in zone I, shown in Figure 2. Zone I is just north of the B4 constraint.

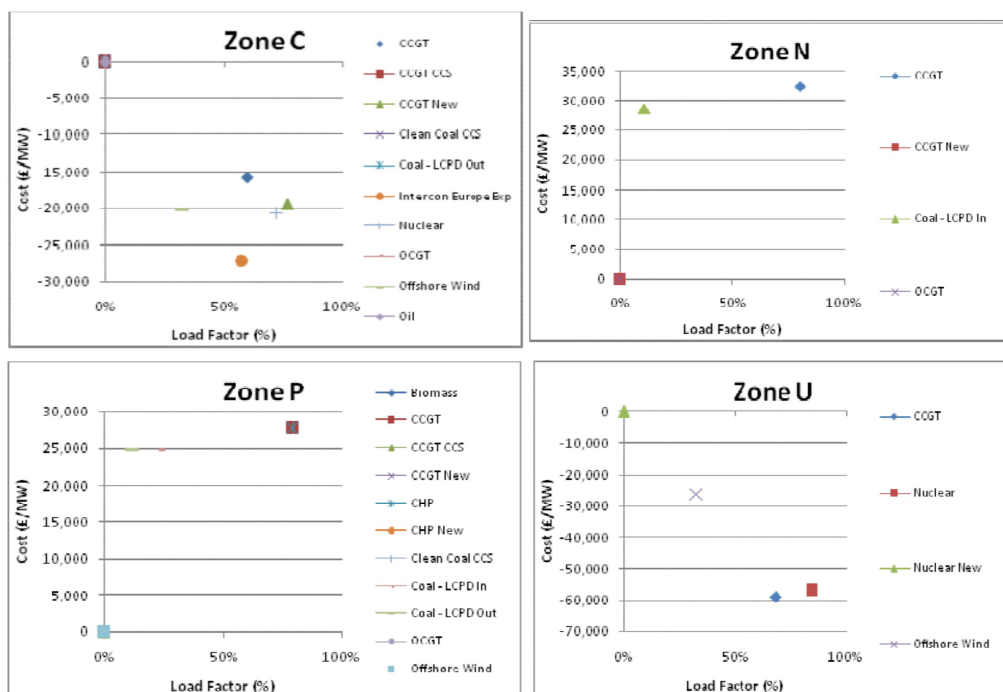
Figure 2. Zone I results



Source: Final Modification Report, Annex 9

However, there are also plenty of zones which (once the datapoint(s) at the origin are removed) show a very ambiguous relationship between load factor and constraint costs. Some examples are shown in Figure 3. In most of these cases, the relationship between load factor and incremental constraint costs would appear very weak.

Figure 3. Weak or absent relationships



Source: Final Modification Report, Annex 9

Of the 15 remaining zones, we judge that 6 or 7 could be said to show a “strong” linear relationship, and 8 or 9 show little or no clear linear relationship. Put another way, the analysis supports a linear relationship in less than a third of all the zones studied.

On this basis, we cannot see how this evidence can be used by Ofgem to claim that there is a “broadly consistent, linear relationship across all zones”. Indeed, given that there is little or no relationship in the majority of cases, it seems clear that this analysis should not be used as justification for changing the charging arrangements.

This conclusion is backed up by modelling undertaken by the University of Bath¹¹ which demonstrated that under different network, generation and demand conditions the relationship between constraint costs and load factor varies significantly and which led them to conclude that “it is impossible to infer that by assuming linearity between load factor and constraint costs the charging methodology will be enhanced”.

Consistency with National Grid TNUOS charges

NERA / ICL’s analysis indicates that charges under WACM 2 will not reflect long run marginal costs once the need for HVDC bootstraps to reinforce the transmission system between Scotland and England is triggered. Ofgem argues that the risk of this situation occurring is low.

We note that this view does not appear to be consistent with National Grid’s latest view on TNUOS charges, in which they state that “Locational Generation and Demand tariffs see increased locational variances in 2016/17 due to the completion of the Western HVDC link...

¹¹ Year-round System Congestion Costs – Key Drivers and Key Driving Conditions (University of Bath, 2013)

*The HVDC link generally increases Generation tariffs in the North and decreases Generation tariffs in the South*¹². National Grid's indicative tariffs from 2016 show that the HVDC link is being modelled as the marginal transmission build and the tariffs are being affected accordingly. It would therefore seem that Ofgem's dismissal of the NERA / ICL analysis is not appropriate, and that NERA / ICL's finding that the WACM 2 methodology is not cost reflective may indeed be accurate.

The quantitative analysis provides poor evidence the proposal is beneficial

Ofgem concludes that *"the actual impact of implementing WACM 2 is likely to be long term benefits to consumers not all of which have been captured in the impact assessment modelling."*¹³

Ofgem is wrong to draw this conclusion for several reasons:

- the results of the quantitative modelling are insufficient to support Ofgem's conclusion and;
- the approach which is taken to draw conclusions from the modelling is at odds with precedents in other modifications and will therefore undermine perceptions of regulatory decision making.

We discuss each point in turn below.

The results of the quantitative modelling are insufficient to support Ofgem's conclusion

The modelled benefits of WACM 2 have fallen by 96% (from £1,949 million to £68-69 million) since Ofgem's August 2013 consultation. It is unclear that any reasonable person faced with a reduction in benefits of 96% would proceed undeterred.

The relative scale of the latest estimate of power sector cost reduction is extremely small, about 1.3% (=£69/£5,200) of transmission reinforcement costs to 2030.¹⁴ Considering all of the system costs potentially affected by a change to WACM 2 (transmission reinforcement, congestion and losses, the capacity cost of new generation and generation operating costs), the cost reduction is a very small fraction of a percentage saving.

The benefit of WACM 2 therefore represents an almost infinitesimally small difference between two very large numbers. A small change to assumptions, the approach to modelling or EMR design could result in WACM 2 bringing negative net benefits. Demonstrating this, Redpoint notes that the *"range in power sector cost across the sensitivities in the period 2021-30 is £630m and for consumer costs is £1,016m."*¹⁵ Supposing that the mid-point of that range were centred on £69 million, Ofgem is minded to approve a change that its own consultant has shown could result in additional power sector costs of £246 million.

Ofgem's own conclusions from the modelling also appear inconsistent. Ofgem defends its decision to ignore the modelling results that show a £1 billion increase in costs to consumers by stating that *"[i]t is not possible to capture the complexity of the energy market and how*

¹² Forecast TNUOS tariffs from 2014/15 to 2018/19 (National Grid, 2014).

¹³ Project TransmiT: Further consultation on proposals to change the electricity transmission charging methodology (Ofgem, 2014)

¹⁴ Redpoint, *CMP213: further analysis and reviews of consultation responses*, Apr 2014. See Figure 35 onwards.

¹⁵ *Ibid.*

*generators responded to changing signals and effects in a single model.*¹⁶ In the very next paragraph Ofgem relies on the modelling results that show a £68-69 million reduction in costs to support its minded to position, stating that *“the results show a small reduction in power sector costs under WACM 2. We think this illustrates the benefits of improved cost reflectivity.”*

Ofgem’s approach is at odds with precedent

Ofgem’s approach to interpreting quantitative analysis is at odds with precedent from other modifications.

The impact assessment modelling for CMP201 showed that domestic consumers would face an increase in their average annual household bill in the region of £2.00-£2.50. Ofgem notes that in the longer term *“higher returns [...] on GB generation should encourage greater investment [and this would] mitigate some of the detrimental effect on GB consumers.”*¹⁷ However, Ofgem notes that the Final Modification Report does not provide *sufficient quantitative evidence* to substantiate this expectation, and largely on this basis rejected the proposed modification.

In contrast, in relation to WACM2 where there is a complete absence of quantitative evidence to support the hypothesis that the modelled increase in customer costs may be offset by other factors, Ofgem is considering approving the modification.

Similarly, in relation to BSC P229, Ofgem concluded that a modification which had significant distribution impacts but low net welfare benefits should be rejected. Yet in relation to WACM2, Ofgem is considering approving a modification with similar characteristics.

Consistency in decision making is required in order to maintain the reputation of a regime for clear, objective and well-evidenced decision making. Any move away from this will increase the cost of capital of the industry, at a time when massive new investment is required.

Ofgem has failed to consider all of the relevant costs of change

Ofgem’s decision fails to balance appropriately the identified benefits of the modification with the full costs which are associated with it. In particular, Ofgem does not consider the cost of instability resulting from the introduction of new arrangements which may, in a very short time, be subject to further change.

Looking over the short to medium term, there are several sources of further change in the area of transmission tariffs.

First, Article 39 of the Capacity Allocation and Congestion Management Network Code (which is currently going through Comitology)¹⁸ requires that the efficiency of the current configuration of price zones be assessed every two years. In its Forward Work Programme, Ofgem states that the Future Trading Arrangements Forum *“identified the need to provide a framework for considering the configuration of bidding zones in GB. We will develop and consult on our views.”*¹⁹

¹⁶ Project TransmiT: Further consultation on proposals to change the electricity transmission charging methodology (Ofgem, 2014)

¹⁷ Impact assessment on CMP201 - proposal to remove balancing charges from generators (Ofgem, 2013)

¹⁸ Network Code on Capacity Allocation and Congestion Management (ENTSO-E, 2012)

¹⁹ Forward Work Programme 2014-15 (Ofgem, 2014)

A move away from the current single bidding zone in GB would result in market prices for each hour sending a locational signal related to the incidence of congestion on the network. The implementation of market splitting would render the current debate about transmission charging largely pointless. Since locational signals (reflecting constraints) would be sent via energy prices, transmission charges would be likely to become more postage stamp in nature.

Second, ACER has recently published an opinion²⁰ on the “appropriate range of transmission charges paid by electricity producers”. In this opinion, ACER makes clear that they believe charges to generators which recover anything more than the incremental cost of connecting a generator to the network are inconsistent with European legislation.

It is not clear how ACER’s opinion will be implemented and how that will affect GB transmission tariffs. While Ofgem might believe that the GB tariff structure is compliant with ACER’s opinion, it is perfectly possible that further change (either to the cost recovery element or the locational element) will be brought about by ACER’s opinion – for example, it at least brings into question the requirement to recover 27% of charges from generation.

The proposed modification risks being overtaken by these more significant events. Particularly since the majority of the modelled benefits are in the long term, this would imply that the implementation of the methodology would impose a net cost and furthermore constitute a damaging increase in instability, increasing costs for the sector as a whole at a time when the sector requires massive injections of new funds. Ofgem has failed to consider this issue at all, which is a major omission and renders the assessment of benefits to customers incomplete.

How Ofgem should proceed

Centrica believes that Ofgem would fail in its primary duty of protecting customers if it were to implement WACM2. We believe that there is no rational basis, either quantitative or qualitative, that would support implementation of WACM2. Instead, we believe Ofgem should:

- Reject CMP213 on the basis that there is no sound evidence for implementing the sharing proposal; and
- Separate the change into its component parts and progress the HDVC and island link sections of the proposal represent a valid solution to the issues raised.

The analysis of WACM 2 as whole shows very weak evidence that it is beneficial. The correct solution from an economic perspective is to consider each element separately and that only those elements that bring clearly substantiated benefits should be approved and the other elements rejected.

This means Ofgem should reject WACM 2 in its entirety and seek three separate modification proposals from industry, one for each element of WACM 2. Ofgem would then be able to consider each element separately and approve only those that were clearly beneficial. Given the current evidence, this is likely to mean ultimately proceeding only with the changes regarding the costs of the HVDC bootstraps and island links.

Even accepting Ofgem’s current view that the proposals are more cost reflective (which, as we have noted above, is difficult to maintain) Redpoint’s quantitative results show that there is a net cost of WACM 2 in the period from 2011 to 2020 and that net benefits accrue during the period 2021 to 2030. As such, even if Ofgem remains convinced that WACM 2 is cost

²⁰ ACER Opinion on the appropriate range of transmission charges paid by electricity producers (ACER, 2014)

reflective, we do not understand how there could be any reasonable basis for implementing it before 2020.

Conclusion

As we stated at the outset, Centrica does not understand how Ofgem can rationally maintain its decision to implement WACM2. In this concluding section, we set out our responses to the questions in the consultation document.

Question 1: Do you agree with our interpretation of benefits to consumers of implementing WACM 2, including revised impact assessment modelling?

Response: Centrica strongly disagrees.

The results of the impact assessment modelling do not support Ofgem's minded to position. Benefits have fallen 96% since Ofgem's August 2013 consultation, the benefits are very small and uncertain, and Ofgem relies on subjective qualitative analysis to dismiss the modelling result that WACM 2 will increase consumer bills by over £1 billion.

Ofgem is inconsistent in its interpretation of the modelling results by ignoring the £1 billion additional cost to consumers while suggesting the small cost reduction indicates improved cost reflectivity.

Question 2: Do you agree that the revised impact assessment modelling captures concerns raised during August 2013 consultation about the NGET modelling?

Response: Centrica disagrees.

The revised impact assessment does not capture continued concerns around the cost reflectivity of WACM 2. The reduction in power sector costs is too small and uncertain to be used as credible evidence of improved cost reflectivity. Ofgem has undertaken no detailed analysis to assess whether the Year Round background would be cost reflective, has not undertaken a serious analysis of the relationship between ALF and constraint costs and Ofgem's arguments against the NERA/ICL conclusions appear to be inconsistent with the latest set of TNUOS charges published by National Grid.

Question 3: Do you agree with our minded-to position in light of new evidence discussed below and the responses to the consultation set out in Appendix 2?

Response: Centrica disagrees.

Ofgem is minded to proceed with a change on the basis of weak evidence and an underlying pre-supposition that the change will bring benefits. The quantitative evidence suggests that the most likely outcome of the change will be to harm consumers. Proceeding on the basis of such weak evidence could serve to undermine the credibility of the regulatory regime. In addition, Ofgem has failed to consider the costs of change, in particular the costs of the instability resulting from broader developments in relation to transmission tariffs.

Question 4: Do you agree with our minded-to position to implement in April 2016?

Response: Notwithstanding the strong case not to proceed with WACM 2, implementation should be no earlier than April 2016. It is imperative that generators are able respond to any change within the notification period required by the user commitment arrangements, and that suppliers have sufficient lead time ahead of implementation. Notwithstanding that, given that Redpoint's quantitative results show that there is a net cost of WACM 2 in the period from

2011 to 2020 and that net benefits accrue during the period 2021 to 2030 we do not understand the rationale behind implementation as early as 2016.