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Ofgem
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By email

Dear Dena,

RE: Ofgem Impact Assessment on Seasonal Zonal Transmission Losses Scheme

Thank you for the opportunity to respond to this Impact Assessment. This is a non-confidential response on behalf of the Centrica group of companies excluding Centrica Storage Ltd. We have reviewed this Impact Assessment and our position remains unchanged. However, we would emphasise that this position relates specifically to the P229 methodology and its alternative and not the wider concept of zonal transmission losses.

As a matter of principle, Centrica is supportive of well designed solutions that deliver accurate, predictable and cost reflective charges. However, we do not believe that this modification, or the alternative, will deliver the purported benefits of accurate improved cost reflectivity and efficient dispatch and we believe that it could also have some wider negative impacts:

- **Investment:** investment in new infrastructure is critical for both industry and the UK more generally if we are to meet our environmental targets and ensure security of supply at reasonable cost. We believe that P229 would have a negative impact on investment because a) it reduces long term predictability of losses allocations which will need to be factored in as additional project risk and b) introduces an unnecessarily complex losses methodology that is difficult and expensive for Users to replicate and forecast in the longer term.
- **Distributional effects**: The impact assessment does not consider any transitional arrangements. An abrupt transition from the current socialised mechanism to one which is significantly more targeted (P229) would discriminate against existing plant

which is unable to react to the signal unlike new generation that can respond.

- **Security of supply**: P229 impacts the economics of generation and significantly increases the risk of plant retiring earlier form the network at a time when we anticipate closure of plant due to old age or LCPD.
- **Load flow model accuracy**: Centrica has concerns with the accuracy of the methodology used to calculate the Transmission Loss Factors (TLFs). Significant allocation errors in estimating the actual losses cost (or benefit) on the system could have a negative rather than a positive impact on efficient dispatch.
- **Renewable Generation and Environmental Impact:** Centrica believes that the perceived environmental benefits from any reduction in losses need to be weighed against the potential negative impact on investment in renewable generation. We believe that P229 could be detrimental to renewable investment to the extent of negating the environmental benefits of the modification.

We provide more detailed comments below.

Investment

Investment in new energy infrastructure is critical. Significant amounts of new renewable and conventional generation are required to meet government's renewable targets as well as to replace plant retiring due to age or the Low Carbon Plant Directive (LCPD). In this environment, the UK needs to attract investment and should seek to avoid changes that reduce investor certainty and predictability of costs or add excessive complexity to the market and/or trading arrangements.

Centrica believes that P229:

- reduces the long term predictability of losses allocations. This is because the location and timing of generation market entry and exit, and running patterns, impact the transmission loss allocation. This makes it extremely difficulty to predict the losses allocation for an investment over the life of the project (potentially even more so for small parties); and

- adds complexity, due to the methodology to create the TLFs, requiring a load flow model that is complex and expensive for users to replicate;

As a result of the issues listed above, it is Centrica's view that compared to the existing baseline, P229 would negatively impact investment as well as disadvantage smaller parties. It would therefore be detrimental to competition and the efficient, economic and coordinated operation of the GB system. It is not clear from the Ofgem Impact Assessment document whether these concerns have been sufficiently explored.

Proportionality of distributional effects

The impact assessment does not consider any transitional arrangements. An abrupt transition from the current socialised mechanism to one which is significantly more targeted would discriminate against existing plant which is unable to react to the signal unlike new generation that can respond.

Furthermore, we believe that the proposal will result in an arbitrary reallocation (see below) of charges between users and that the magnitude of the resulting distributional effect is disproportionate to the benefit (equivalent to a NPV of £48m without SOx and NOx). This would have a detrimental impact on competition.

Security of Supply

Implementation of P229 would immediately alter the economic life of existing generation. This could have impacts for longer term security of supply where the economic life of winter peaking plant is reduced. Centrica recognises that some plant might have its "economic life" increased but, in reality, plant life extensions are predominantly dictated by the design and age of the assets whereas detrimental economics can close a plant at any age. On balance we believe this proposal is likely to be detrimental to security of supply in a period where generation is being retired relatively soon and sufficient replacement generation is yet to be commissioned.

Load flow model accuracy

Centrica also has concerns with the accuracy of the methodology used to calculate the TLFs. If the goal is to achieve more cost reflective allocation of transmission losses, there needs to be an accurate methodology to apply this concept and extract the resulting dispatch benefits. The key question is whether the proposed methodology results in a better reflection of actual impact on the system than a socialised approach (the baseline). Whilst the CBA suggests that it would on average, we believe that there is increased scope for significant allocation errors to occur. We believe that these allocation errors would occur because of the following factors:

- degree of averaging across zones and across nodes;
- use of a small set of sample settlement periods;
- ex-ante nature of the allocation;
- use of a DC model as a proxy for an AC system; and
- for any such time in the future that internal GB HVDC connections exist, identified issues with modelling DC flows.

As an example, an individual BM Unit modelled to reduce losses could perversely be allocated a TLM which reduces its credited energy. This would have a detrimental impact on the incentives that are meant to result in improved dispatch and competition.[1]

[1] For example, in 5.4 (Task 3) of the load flow modeller report, the modelled average TLM for GSP group N for the 07/08 year under P229 was 1.4% worse off than a socialised regime (0.978 and 0.992 respectively). Within GSP Group N there are some nodes which have a positive TLF which indicates that, despite being modelled as

Such inaccurate allocation for some BM Units (more-so than the current arrangements) could result in inefficient dispatch as well as market entry and exit incentives which would appear unjust and detrimental to BSC objectives (b) and (c).

Renewable Generation and Environmental Impact

We believe that P229 will, on average, be detrimental to investment. The risk factors associated with the uncertain and unpredictable transmission losses allocation over the life of the assets will increase the hurdle rate for investment in offshore windfarms. Any detrimental impact on investment in renewable generation due to uncertainty of losses allocation will mean that some greenhouse gas emitting generation will not be displaced by renewable generation.

Even with the higher estimated transmission loss savings of 2846 GWh, if a small renewable generator were to be deterred by these proposals, the benefits would be negated. We note that a single 85MW renewable generator (with a 40% load factor) would displace an equivalent amount of C02 emitting generation over the 10 year period.

We hope that these comments have been useful. If you want to discuss any element of this response, please do not hesitate to contact me on 07789 579169 or at Ricky.Hill@centrica.com.

Yours sincerely,

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decreasing losses, they would have an even greater allocation of transmission losses under P229 than a socialised regime.