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Dear Mr Hull

Zonal transmission losses – response to Ofgem's "minded-to" consultation

Alcan Aluminium UK Limited is an energy intensive consumer which operates aluminium smelters at Lynemouth in the north of England and Lochaber in Scotland
The production of primary aluminium requires an uninterruptible and direct supply of electricity. A loss of power for more than 20 minutes would cause production to be lost at either of our two smelters in the UK; a power loss for more than four hours would be catastrophic, with the total loss of a smelter – incurring costs in the order of £100m. To provide this required security of supply, which cannot be met from the electricity network alone, Alcan produces its own electricity from on-site generators that it has constructed to supply its demand sites.

I write in response to Ofgem's consultation entitled 'Zonal transmission losses - the Authority's 'minded-to' decisions' published on 26 June 2007 (Ref: 153/07).

Alcan cannot understand the rationale adopted by the Authority in its support of P203, as we do not believe that the evidence supports the Authority's position. As stated in our letter to you of 10 April 2007 in response to Ofgem's RIA, Alcan is opposed to the proposed modification, as we do not consider that the evidence supports Ofgem's assertions that the benefits outweigh the costs and can justify the disproportionate redistribution of income between parties that results from its imposition which is orders of magnitude greater than any identified benefits. We believe these will have a detrimental impact on Alcan's business and on our investments in Scotland and northern England.

In this response we set out a number of material points that Alcan has raised previously and which have not been addressed satisfactorily within your 'Minded To' consultation. These points must be taken into account by the Authority in reaching its final decision on zonal transmission losses.

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- The proposals do unduly discriminate against distributed generation, as introducing zonal losses would have a greater impact on this class of generator. This issue was acknowledged by Ofgem in the 'minded-to' decision but the significance of the analysis undertaken was misunderstood and understated. In the analysis of the impact on an average Distributed Generator presented by Ofgem in paragraph 3.12, Ofgem have identified that P203 reduces the gross embedded losses benefit, which they have identified as TLM_d – TLM_g (i.e. the position of a distributed generator relative to that of a transmission generator) by 35% - a TLM value of -0.004. Ofgem then claim that this is less than 0.5% of the generator's income stream and therefore not significant. However, this dismissal of a very substantial point raised repeatedly by Alcan to Elexon and Ofgem throughout the consultation process is inappropriate. The true significance of this factor is in the context of total variable losses. Generators' share of variable losses (on which these calculations were based) amount to approximately 0.6% of generation, a factor that will not change under the proposed introduction of P203, as generators in aggregate will continue to pay 45% of total variable losses – an average TLM of 0.995 (Ofgem's paragraph 3.11). But distributed generators will see their embedded benefits reduced by over 35% (from a TLM difference of 0.011 to 0.007 (from Ofgem's Table 1). The 0.5% reduction in income to distributed generators as a direct and only consequence of introducing P203 must been seen in the context that the average cost of generators of variable losses is only 0.6% in total. Therefore far from being insignificant as Ofgem contend – the discriminatory impact on distributed generation is disproportionate to generator losses.

  We find Ofgem's presentation of its analysis on distributed generation to be disingenuous. The impact is expressed in terms of total income to a generator, rather than in the context of the magnitude of transmission losses. Furthermore the focus of the discussion is on the relative impact of the various proposals and not on the difference between uniform losses and each proposal – which must be the basis of any Authority decision on P203. This point is illustrated by the absence of any quantification of the embedded benefit under uniform losses.

  To enable the Authority to make an informed decision, the true impact on distributed generation and its proportionality to the magnitude of transmission losses must presented to each member of the Authority. Alcan is particularly disappointed that despite raising this issue, and identifying that Elexon had also failed to take it on board, no one at Ofgem contacted Alcan to seek clarification of the issue raised.

  Alcan also takes exception to the analysis suggesting that the impact on embedded generation would be of the order of £5000 per annum. Alcan provided substantial information to support its calculations that the impact of P203 on it would be significantly higher and a detailed explanation of why it will be unable to mitigate this cost.

- In our response of 10 April 2007 Alcan argued that the proposals inappropriately discriminate against particular parties, that those same parties have effectively been excluded from the consultations by the size, duration and complexity of the modification process and that the costs on those parties have not been reflected in the cost benefit analysis. This point has only been partially acknowledged by Ofgem - where you have stated that that anyone can participate directly or via

representative organisations, however, Ofgem did accept that larger parties are better resourced to do so. The omission from the cost benefit analysis of the costs incurred by non-BSC parties was not acknowledged, a factor that must be brought to the attention of the Authority in making its decision, as we contend that the addition of these excluded costs would outweigh any marginal benefit indicated in Oxera's analysis.

- Further we stated that the potential benefit alluded to is highly uncertain and is disproportionate to the real costs. Ofgem considered that the overall trend was such that annual reductions in losses would be consistently delivered, however this is not borne out by the analysis presented.
- Linked to this latter point, Alcan stated that year-to-year variations in the calculated transmission loss multipliers would produce transient and fickle signals, in direct contrast to the long-term stable signals that are required for an efficient market. Ofgem did not acknowledge this point.
- Alcan's earlier submission in response to the RIA queried the environmental benefits ascribed to fuel switching, on the grounds that these are very sensitive to fuel price assumptions and generator behaviour and not robust against a range of realistic outcomes. Ofgem have failed to address these concerns. In response Alcan has commissioned an independent assessment of the scope for fuel switching under P203 from Pöyry Energy Consulting, under a range of electricity and fuel price scenarios. Pöyry are unable to substantiate the Oxera results. Whilst they find that there may be some potential for fuel switching due to P203 during short periods, when seasonal variations in gas prices bring the costs of gas generation and coal generation close to parity, this is not the general case. During most periods analysed the price differential between gas and coal is too great for the introduction of zonal losses to have any impact on the fuel mix. Combining all the periods modelled, Pöyry conclude the volume of gas to coal fuel substitution would average less than 0.3% of annual coal burn, a value so insignificant as to be dwarfed by the modelling error associated with such an exercise.

  Furthermore, the greater flexibility of coal plant and the requirement for some coal plat to run for security of supply requirements (including notably Alcan's Lynemouth facility), are likely to mean that modelled results based on economic despatch will overstate fuel switching, with the implication that deliverable environmental benefits will be considerably less than indicated.

  Alcan therefore contends that the environmental benefits Ofgem claim from fuel switching are an anomaly of the scenario modelled by Oxera and are not a robust general case. We find that there is no evidence to support the inclusion of carbon savings from fuel switching within the cost benefit analysis.

Alcan is extremely concerned to discover within Ofgem's 'Minded To' paper that all the TLMs and analysis presented in the RIA related only to variable losses. Whilst we accept that the relative locational signals are only related to variable losses, we cannot accept that this mitigates a misrepresentation of the impact on introducing zonal losses. Alcan, along with most other parties, calculated the impact on its own operations of P203 by comparing our present costs/benefits under historic uniform losses (which included fixed losses) against the TLMs provided in the Oxera, Elexon and Ofgem papers all of which excluded fixed losses (but failed to identify they had done so). This was a reasonable assumption for Alcan to make, as TLMs are defined on the basis of total losses, not just variable. As fixed

losses account for approximately 30% of total losses, this would suggest that the TLMs provided for P203 understated the financial impact on parties by around 30%. As it is the Authority's duty to consider the merits of P203 against the present arrangement (and not the other Mods.) it is critical that responses provided by all parties are able to appreciate fully the magnitude of the impact on their operations. This has not been the case throughout the consultation process on the Modifications. The failure of Elexon and Ofgem to provide parties impacted by these proposals with a like-for-like comparison between the cost of transmissions losses on them under historic and present uniform losses and under each of the Modification proposals represents a lack of due process.

In addition to the points raised above, we provide the following responses to the specific questions asked within the 'Minded To' consultation.

CHAPTER: Two
Question 1: Do respondents consider that we have appropriately summarised the key themes of the responses to Ofgem's impact assessment on zonal losses?

No

Question 2: Are there any other themes which respondents considered should have been highlighted?

CHAPTER: Three
Question 1: Do respondents consider that the additional analysis we have provided addresses the concerns expressed by respondents to the impact assessment regarding analytical gaps in the impact assessment?

No. See our comments on the distributed generation analysis above.

Question 2: Do respondents consider that there are any remaining aspects on the modification proposals that require to be addressed analytically?

Yes. Impact on parties of total zonal losses not just variable losses. Whilst including fixed losses will not change the relative location signals it is the only basis on which an individual party is able to assess the impact of the proposals on their operations.

Question 3: Do respondents have any additional analysis in relation to the impact of the modification proposals that they wish to bring to the attention of the Authority?

Yes. Alcan has commissioned independent analysis on extent of any fuel switching from coal to gas as a result of the introduction of P203. A summary paper of that analysis is attached to this response, which concludes that any fuel switching benefit would be insignificant, in contradiction to the Ofgem/Oxera analysis.

CHAPTER: Four
Question 1: Do respondents consider that the modification proposals have been appropriately assessed against the applicable BSC objectives?

No. Ofgem is confused in its interpretation of objective (c) on promoting competition, in which its sites that improvements in efficiency (already attributed to objective (b)) will necessarily promote competition. This is not so. Whilst highly competitive markets will generally improve efficiency, the opposite does not follow. For example, if zonal transmission losses improved locational signals to the extent that generation became concentrated in the south between a small number of generators, who could then exert some market power, then the modification would be detrimental to objective (c). Ofgem has failed to provide any evidence to suggest that competition would be improved.

Question 2: Do respondents consider that there are any aspects of the modification proposals that have not been adequately assessed in relation to the applicable BSC objectives?

Ofgem has failed to recognise that the year-to-year variation in TLMs predicted by the Oxera analysis fails to provide a long-term signal necessary to provide both efficiency and promote competition. Parties will be unable to accurately predict future TLMs prior to their publication 3 months ahead of the start of the year, which will hinder the provision of long-term supply and offtake contracts, thereby hindering competition.

CHAPTER: Five

Question 1: Do respondents consider that the Authority has appropriately assessed the modification proposals against the applicable BSC objectives when considered collectively?

No. The failure to recognise the discrimination against distributed generation, the omissions in the cost benefit analysis and the overstatement of competition benefits, as described above.

Question 2: Do respondents consider that there are any aspects on the modification proposals that have not been adequately assessed in relation to the applicable BSC objectives when considered collectively?

Yes, the various points raised above.

CHAPTER: Six

Question 1: Do respondents consider that the Authority has appropriately assessed the modification proposals against its duties?

No. The environmental benefits from fuel switching have been overstated and Ofgem has failed to ensure that all parties have been fully represented, with the prolonged modification process discriminating against smaller and non-BSC parties, whose costs were excluded from the cost benefit analysis.

Summary of Alcan's position

In summary, Alcan does not believe that the Authority has been presented with a full and complete picture of the impact of zonal transmission losses. Material points that we have raised in earlier submissions have failed to be addressed; analysis presented by Ofgem in

relation to the impact on distributed generation has grossly misrepresented its proportionality; and there remain manifest errors in the analysis.

To summarise, the case for implementing any of the zonal losses proposals remains unproven, and thus a change to the BSC cannot be justified.

Yours sincerely

Bob Nicholson