SP ENERGY NETWORKS

Network Planning & Regulation

By E-mail

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Your ref

Our Ref

Date
14th August 2017

Contact / Extension
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Dear Louise,

Proposal to make modifications to the Losses Discretionary Reward Guidance Document

This response is from SP Energy Networks. SP Energy Networks holds three electricity network licences. We own and operate the electricity distribution networks in the Central Belt and South of Scotland (SP Distribution) which serves two million customers, and Merseyside and North Wales (SP Manweb) which serves one and a half million customers. We also own and maintain the electricity transmission network in the Central Belt and South of Scotland (SP Transmission).

Thank you for the opportunity to comment on the proposed changes to the Losses Discretionary Reward (LDR) Guidance Document. We previously provided comments on the Tranche 1 process and expectations for Tranche 2 (e-mail dated 3rd October 2016) and would still welcome the opportunity to meet with Ofgem to specifically discuss the guidance for Tranche 2, either at the ENA Technical Losses Working Group or bilaterally as the Chair of this group.

The different approaches taken by DNO groups for their Tranche 1 submissions have identified the need for clarification on key areas and priorities.

We also make the following further comments on the LDR guidance:

Low Carbon Transition Impacts to be considered

There is no recognition in the guidance of the impact of the low carbon transition, and in particular increased network losses that result directly from greater network utilisation. For example, via the deployment of smart solutions to avoid reinforcement, or simply, greater demand resulting from electric vehicles or electric heat pumps.

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Collaborative working undermined

Being in direct competition for the reward has the potential to discourage and delay collaborative working. This approach is undermined by the current LDR framework, as achieving the maximum reward could be at the expense of other DNOs.

SPEN established and currently chairs the ENA Technical Losses working Group which is attended by representatives of each DNO plus National Grid. The focus of the group is to identify areas for collaboration and to further facilitate the sharing of best practice. My experience in establishing this work group has demonstrated clearly that the competitive was counter-productive to DNO collaboration as it limited the scope of joint working for several months.

Criteria Weightings

We note the addition of weightings for the four criteria and welcome this additional clarity. However, we consider that DNOs should be encouraged to explore the most beneficial actions to better understand and manage losses without the constraints of ensuring that the criteria weightings are met in all cases.

The Tranche 1 decision included references to sub-criteria which was not included within the guidance but upon which the submissions were measured. Some further detail has been included within the Tranche 2 guidance and confirmation is sought that this is complete.

We also reiterate that the criteria should recognise the road map to a potential ED2 incentive mechanism and the timing of this including (but not limited to):

- Modelling to what degree network losses are expected to rise as a consequence of the low carbon transition (**see case study below**)
- Understanding to what degree DNOs / DSOs can influence future network losses in order to calibrate any future DNO losses targets
- Understanding options for measuring or modelling losses (the strengths and weaknesses)
- Developing industry network losses models to aid understanding of the relative impact of customer adoption of low carbon technologies, DNO actions including DSO activities, and TO activities
- Validating measurements and modelling results, including the use of smart metering information, for a suitable period of time
- Understanding to what degree any proposed modifications to the network security planning standard may have on UK wide losses reduction plans

The guidance states that Tranche 2 will be both forward and backward looking. Given that the industry is expected to play a key role in facilitating and uncertainties around timing of penetration of low carbon technologies, we believe the emphasis should remain on preparing for future activities.

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Case Study

Case study (ARC LCNF project Dunbar) - Smart Solution Driving Increased Losses

- **Traditional use of typical 132kV/33kV substation with 2 x 60MVA transformers**
  - Maximum Demand (MD) 60MVA, driven by P2/6 security standard
  - Assumed load factor 50% of MD, so average transformer loading 25%
  - Transformer losses = 25%*25% = **6.25% of maximum losses**

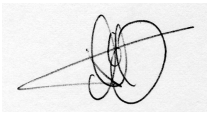
- **>170MVA of distributed generation connected to active management scheme**
  - 120MVA of export whenever network is intact (no faults or maintenance)
  - Average transformer loading 100%
  - **100% of maximum losses**
  - **16 times network losses of "traditional" use of transformers**

NOTE: This solution is proposed to be deployed by SPEN in areas where the connection of distributed generation is constrained (e.g. our Dumfries and Galloway Innovation Rollout Mechanism bid) and all other DNOs are expected to follow this approach given the BEIS and Ofgem focus on network flexibility

Finally, via the ENA Group, Ofgem have requested a Teach-in on Networks Losses. A member of my team is currently liaising with Dinker Bhardwaj to arrange a convenient date. This would be a good opportunity to discuss and clarify the many drivers of network losses and how they are expected to increase as the U.K.'s low carbon transition progresses.

Please do not hesitate to contact either me or Wendy Mantle in my team if you wish to discuss any of the points above.

Yours sincerely



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