

21st September 2007

John Scott
Office of Gas and Electricity Markets
9 Millbank
London SW1P 3GE

John.scott@ofgem.gov.uk



18 Stanhope Place
Marble Arch
London W2 2HH
T+44 (0)20 7706 5100
F+44 (0)20 7706 5101
info@energynetworks.org
www.energynetworks.org

Dear John

Electricity Distribution Network Planning – Engineering Recommendation P2/6

Thank you for your open letter dated 1st August 2007 regarding Engineering Recommendation (ER) P2/6. ENA welcomes this opportunity to respond.

ENA accepts Kema's view in its report that ER P2/5 and P2/6 and the regulatory incentive arrangements have been effective in delivering secure and reliable networks to date. Given the changing nature of networks and evolving technologies the need to review and update security of supply and planning arrangements is recognised.

However, ER P2/6 is a relatively new issue (July 2006) which takes account of the recent developments in distributed generation. As such it is apparent that little experience in this area is available to date to evaluate fully the effectiveness of the changes made in updating P2/6. Significant additional effort was also made in providing clarification with the associated ETR 130 document.

As expected, there are wide and varying views from across the DNOs as to the extent of clarification or changes needed. We welcome the opportunity to assist in this debate and recognise the need for further analysis and discussion in a number of areas and in particular with construction outages and the high impact low probability events. The question of flexibility in interpretation of the standard and its definitions, as it potentially impacts compliance for regulatory purposes, may be a separate issue for some companies.

There is recognition that in some cases network designs currently exceed the requirements of P2/6. Where changes to networks are planned, for example for asset replacement purposes, there may be some increase in the risk of interruption to customers, although still remaining P2/6 compliant.

WELLCONNECTED

While ENA welcomes the recent discussions on the issue of clarity of Engineering Recommendation (ER) P2/6, there are widely varying opinions, ranging from there being little deficiency to more clarity being required. Previous and current versions of ER P2 benefit from their relative simplicity embracing a wide range of network design approaches by DNOs. These have effectively met the historical requirements of a security standard, avoiding for example overly complex modelling, but still maintaining an overall balance between risk and cost.

In relation to SLC5 (1), ENA supports identification of possible improvements to P2/6 within your option (iii). Any changes to P2/6 should consider both the ENA response to Martin Crouch "DPCR5 – looking ahead", dated 10th August 2007 and the outcome from the new project on High Impact Low Probability events.

Some additional observations have been included below.

ENA will be pleased to continue working with Ofgem and the DNOs to progress improvements in network standards and look forward to facilitating with the HILP work groups.

Yours sincerely,

Alan Claxton
Director of Engineering
(Sent via email)

Issues to be addressed in the short term

- *ER P2/6 makes reference to Group Demand and Transfer Capacity. During the review of ER P2/5 it was noted that these terms could be more clearly defined. The KEMA/IC report has also raised this issue. Can these terms be better defined for today's highly loaded and often more complex networks?*

The terms Group Demand and Transfer Capacity are both defined in ER P2/6 with further guidance being provided in the associated ETR 130. ENA accept that these terms are subject to local variations in interpretation and that further discussion may be appropriate.

Consideration is required so as not to over-complicate the existing process. A balanced approach that achieves effectively the overall objective of ER P2/6 including requirements of grid supply point data submission to transmission companies is desirable. Additionally there may be issues of interpretation with Class E second circuit outage consumers at 2/3 Group Demand, and demands associated with single large customers with no firm connection.

- *ER P2/6 makes reference to Average Cold Spell loading conditions for network capacity assessments – in light of increasing summer loads, should this be replaced by a broader reference to the critical loading conditions for the network?*

ER P2/6 does provide assessment for peak Group Demands whether they occur during winter or summer periods. However, the impact of summer loading on plant maintenance periods is now creating concern and further consideration of the risks and critical network constraints could be considered to provide further clarification.

- *Can substation design at GSPs be better co-ordinated? The Grid Code Review Panel established a Working Group to review data flows between DNOs and NGET relating to ER P2/6 compliance at Grid Supply Points. The Working Group published its report earlier this year but no Grid Code change proposals have, as yet, resulted from this work.*

ENA supports the view that coordination at the interface and consistency in the way demand data is used in assessing contribution from distributed generation by the DNOs and NGET at Grid Supply Points are important factors.

Early experience of ER P2/6 in the treatment of distributed generation

- *We would welcome views on the changes introduced into ER P2/6 and early experience of their application in assessing the contribution of distributed generation to the capacity of a network to meet group demand*

ENA believe that there has only been limited opportunity to date to assess the success of ER P2/6 in respect of the contribution of distributed generation to meet group demand.

Issues to be addressed in the longer term

- *How might the standard be updated to accommodate developments such as active networks, demand-side management and virtual power plants (VPP)?*

Further consideration needs to be given to the purpose and scope of a network planning security standard as the distribution system becomes more active. Scenarios need to be developed but there are also matters relating to potential impact of generation constraints as distribution networks become more active.

- *Would there be significant value in re-examining the reliability calculations which underpin ER P2/6?*

It is considered that although there may be some deficiencies in the calculations underpinning P2/6 as described in the KEMA report, the view is that re-examining them would make little material impact. Experience to date demonstrates the success of the current document.

- *Should the standard be updated to take account of longer construction outages as well as maintenance outages, and the additional risk to consumers that these outages may present?*

Increases in construction work, due to enlarged asset replacement and new development programmes, lead to increased risk from extended outages for construction purposes, as opposed to maintenance. This would merit further discussion to determine suitable approaches as cost implications may also be involved and questions of an appropriate trade off between cost and risk. Including consideration of additional or separate security arrangements associated with the Central Business Districts (CBD) during this process may be appropriate, as well as the inclusion of long term outages to large numbers of customers outside the CBD. It is recognised that under certain circumstance outages or some form of rota disconnection could last for many weeks and cause a major impact on large communities.

The high impact low probability type events have political, social and economical as well as long term investment implications, requiring a far wider debate than the security standard.

ENA looks forward to facilitating the work of High Impact Low Probability Working Group. However, at this stage we do not have a view whether or how this would relate to P2/6.

- *Is there scope to remove the requirement of the design standard for smaller sizes of group demand (e.g. demand groups up to 60MW) and rely purely on output incentives (IIP) as the network design driver for these demand groups?*

For the different group demands, the view as to the degree to which the design standard and incentives schemes drive investment will vary widely across the industry, but where there are common approaches there may be scope to provide amendments to standards.

The future consideration of High Impact Low Probability incidents may also influence the determination of how P2/6 should apply to various sizes of group demand.

- *How should environmental and sustainability issues be considered in the design standard?*

Environmental issues require consideration at all stages of network management, but there is likely to be more scope for greater impact of environmental issues at the design stage. This includes full life cycle asset management, which may initially involve higher cost schemes. Another measure of success will be in the way the Engineering Recommendation enables the appropriate development of networks to provide for Distributed Generation, Active Networks and other innovations.

- *How should the standard be updated to take account of climate change, in particular higher summer loadings and reduced ratings of plant due to higher ambient temperatures?*

Some of the issues have been considered above under critical loading, but should also include use of probabilistic demand levels in designing a network. Analysis and application of meteorological data and assessments of climate change to identify potential risks and impacts on networks and plant should be considered. It would be desirable to obtain the best possible advice to understand the most likely outcomes of global warming for the UK.