



To distributors, customer groups
and other interested parties

*Promoting choice and
value for all customers*

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Date: 1 August 2007

Dear colleague,

Electricity Distribution Network Planning – Engineering Recommendation P2/6

Introduction

Engineering Recommendation P2/6 (ER P2/6) is the current distribution network planning standard. The Distribution Network Operators (DNOs) have a licence obligation¹ to plan and develop their systems in accordance with ER P2/6. The standard is also referenced in the Distribution Code². The standard and its predecessor ER P2/5 have helped to deliver secure distribution networks for the last 30 years, resulting in quality of supply indices that compare favourably with other European countries.

While fully recognising this success, a number of questions have been raised recently that we consider need to be addressed by industry stakeholders. These questions include the following:

- Is the licence sufficiently clear about what is required of licensees? Does it create a requirement to comply with the core terms of ER P2/6 (table 1)?
- Is there sufficient clarity in the technical drafting of ER P2/6 itself and are its underlying methodology and assumptions still fit-for-purpose?
- Do changes in demand characteristics, particularly reduced differences between the summer and winter peak loading conditions, and the need for network access for asset replacement, warrant any changes to ER P2/6 to ensure overall supply security is maintained?
- Will ER P2/6 continue to be an appropriate standard as distribution networks become more actively managed with higher levels of distributed generation and customer interaction?

To help us to address these questions, we commissioned a preliminary review of ER P2/6 which has been carried out by KEMA and Imperial College (KEMA/IC). Their report is published alongside this open letter. This letter initiates a consultation process intended to engage stakeholders in this discussion.

¹ Standard Licence Condition 5 of the Electricity Distribution Licence

² <http://www.dcode.org.uk/>

Our primary purpose in doing this is to establish, on behalf of customers:

- (a) whether changes are required to the licence condition or to ER P2/6 to ensure that appropriate practice as already applied or as is necessary to meet current conditions is consistent with the legal position; and
- (b) whether there is a sufficient case to initiate a review of ER P2/6.

We intend to form a view as to whether actions need to be taken and if so, over what timescale and with what priorities.

Issues to be addressed in the short term

Is there adequate clarity in the licence drafting?

Ofgem has noted certain issues regarding the clarity and consistency of intent between the obligations under Standard Licence Condition 5 (SLC5), paragraph 1, of the electricity distribution licence and ER P2/6 itself. This licence condition requires the licensee to "plan and develop its distribution system in accordance with a standard not less than that set out in Engineering Recommendation P2/6". However, ER P2/6 describes itself as a "guide to system planning" rather than a planning standard. While the intent appears clear, there may be less than complete clarity about the extent to which system development should be in accordance with the planning guidelines in ER P2/6 to provide licence compliance.

While KEMA/IC's report focuses on ER P2/6, not on SLC5 (1), it does provide useful background to assist the debate about the roles of output performance standards and input design standards. We do not consider that KEMA/IC's report demonstrates conclusively that it is in consumers' interests to retain an obligation to comply with the input design standard ER P2/6. However, it does demonstrate that ER P2/6 remains the main driver of network design at distribution voltages above 11kV, and that removal of a requirement to comply with ER P2/6 would be likely to reduce security at those voltage levels. Removal of a requirement to comply with ER P2/6 would be a major change and would require an impact assessment.

In parallel with these developments we have implemented a self-regulatory approach for demand groups A to C as set out in ER P2/6 (demand groups less than 60MW)³. This is consistent with KEMA/IC's view that ER P2/6 is not usually the relevant consideration for planning for such demand groups (being superseded by quality of supply incentives).

In the light of these considerations, we have identified a number of options for SLC5 (1). These are:

- i. Do nothing.
- ii. Delete the SLC5 (1) reference to ER P2/6 and rely on quality of supply output incentives to drive network design.
- iii. Retain the SLC5 (1) reference to ER P2/6 but encourage changes to the wording of P2/6 to remove the present ambiguity about enforceability.
- iv. Change SLC 5 (1) to refer to more specific obligations rather than to ER P2/6 in general. For example, one option might be to replace the reference to ER P2/6 in SLC5 with reference to a new document that addresses only the larger load groups as a firm requirement rather than guidance (e.g. a cut-down ER P2/6 for load groups D & E only). The original ER P2/6 would then revert to being solely an industry recommendation under the distribution code.

³ Available on the electronic public register. <http://epr.ofgem.gov.uk/index.php?pk=folder100985>

We welcome views on these options.

Issues raised by KEMA/IC to be addressed in the short term

KEMA/IC's report has helped to highlight the following issues that could 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?
- 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?
- 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 year⁴ but no Grid Code change proposals have, as yet, resulted from this work.

Early experience of ER P2/6 on 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.

Issues to consider for longer term

We would also welcome views on the following longer term issues:

- How might the standard be updated to accommodate developments such as active networks, demand side management and virtual power plants (VPP)?
- Would there be significant value in re-examining the reliability calculations which underpin ER P2/6?
- 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?
- 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?
- How should environmental and sustainability issues be considered in the design standard?
- 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 aspects of these issues may be progressed in the short term. Again, we would welcome views here.

⁴ <http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/workinggroups/p25wg/>

Stakeholders may well have additional thoughts on this important subject and we would encourage them to engage in this consultation process.

We note that DNOs may be reluctant to make changes to ER P2/6 that would materially increase their costs without simultaneous changes to their revenues to compensate for this. We note that it is unlikely that fundamental changes to ER P2/6 would be progressed in time for the forthcoming price control review. However, we note that the KEMA/IC report does not provide a compelling case for fundamental change in the short term. We therefore consider that the first step is to gather views on the need and timing of such change before turning to the impact on costs. Some of the changes under consideration could reduce rather than increase costs.

Next Steps

As already stated, the primary purpose of this consultation is to establish whether there is a sufficient case to amend SLC5 (1) or ER P2/6 in the short term, or to launch a full review of ER P2/6.

It is our intention to hold a workshop at Ofgem on 14 September 2007. Please register for the workshop by emailing Richard Coates (richard.coates@ofgem.gov.uk) on or before 24 August 2007.

We would welcome responses to this letter, particularly to the options set out above by 21 September 2007. In addition, we would be interested in any comments on the recommendations and analysis in KEMA/IC's report. Responses should be sent to me or Richard Coates, preferably electronically. All responses will be published on our website unless confidentiality is requested.

Please do not hesitate to contact me on the above number if you have any queries in relation to the issues raised in this letter or alternatively contact Richard Coates on 020 7901 [7400].

Yours faithfully,



John Scott
Technical Director

Signed on behalf of the Authority and authorised for that purpose by the Authority