



Sent by post to DNO company secretaries and by email to DNO regulation managers

*Promoting choice and value for all gas and electricity customers*

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Date: 13 July 2011

Dear colleague

### **Decision in relation to completion of CDCM approval condition – generation dominated areas**

On 20 November 2009, Ofgem published its decision to approve the Common Distribution Charging Methodology (the CDCM).<sup>1</sup> This methodology sets out the use of system (UoS) charging arrangements that apply to customers connected to the lower voltage networks.<sup>2</sup>

Our decision to approve the CDCM was subject to five conditions.<sup>3</sup> One of the conditions we set was that DNOs should review the issue of how to charge generators where the network is or will become dominated by generators as opposed to demand customers (the "Condition"). We set this Condition because the CDCM currently credits all generators for the units of energy they export onto DNOs' networks. We generally considered that it may not be appropriate for the CDCM to credit generators for their output if it drives (or may drive) reinforcement costs on the DNOs' networks.

The DNOs sent us a report last September but we did not consider it fulfilled the Condition.<sup>4</sup> The DNOs sent us a second report on 13 June 2011.<sup>5</sup> We consider that the second report provides a more detailed assessment of the issue and options available for developing the CDCM. The DNOs have also set out a timetable for developing options for modifying the CDCM by April 2013.

We consider that the DNOs have now fulfilled the requirements of the outstanding Condition to the CDCM's approval.

### **Background**

The DNOs were required to review the issue and make proposals to us by 1 September, 2010. In particular, we sought proposals to address the possibility that the CDCM may not, without adaptation, provide appropriate cost signals to generators who locate and use the

<sup>1</sup> A copy of our decision can be found here:

[http://www.ofgem.gov.uk/NETWORKS/ELECDIST/POLICY/DISTCHRG/DOCUMENTS1/CDCM%20decision%20doc%20201109%20\(2\).pdf](http://www.ofgem.gov.uk/NETWORKS/ELECDIST/POLICY/DISTCHRG/DOCUMENTS1/CDCM%20decision%20doc%20201109%20(2).pdf)

<sup>2</sup> That is, high and low voltage (HV/LV)

<sup>3</sup> We consulted on the conditions in September 2009. Please see

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=502&refer=Networks/ElecDist/Policy/DistChrgs>

<sup>4</sup> The DNOs' September report can be found on our website at

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=654&refer=NETWORKS/ELECDIST/POLICY/DISTCHRG>

<sup>5</sup> The DNOs' June 2011 report can be found on our website at

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=745&refer=NETWORKS/ELECDIST/POLICY/DISTCHRG>

network where the network is, or has scope to be, generation dominated. In general we considered that this issue needed careful consideration and prompt action due to the number of generators already connected in some areas and the projections at the time for new connections during 2010-2015.<sup>6</sup>

On 1 September 2010, the DNOs submitted a report to Ofgem on the issue of generation dominated areas. The report was intended to fulfil the Condition set as part of our decision on the CDCM. We considered that the DNOs' report did not fulfil the Condition. Consequently we wrote to the DNOs on 14 December.<sup>7</sup> We explained that we did not consider that the DNOs' report adequately assessed the issue or provided a compelling and fully reasoned case for the options they proposed and their preferred way forward.

As part of our December decision we revised the deadline for fulfilling the Condition. We explained that we required an interim report to be submitted by 1 April 2011 so that we could assess the DNOs' progress and set an achievable final deadline for fulfilling the Condition.

Following our December decision the DNOs worked with Frontier Economics to complete further analyses of the issue.

On 13 June 2011, the DNOs submitted a second final report to us. Having reviewed this report (including the accompanying report by Frontier Economics<sup>8</sup>), we consider that the DNOs have satisfied us that they have fulfilled the outstanding Condition. The remainder of this letter sets out in more detail the DNOs' findings, their proposals and the reasons for our decision.

### **Summary of DNOs' report**

The DNOs' June report is predominantly based on the findings of work they commissioned Frontier Economics to complete.

The main conclusions of the DNOs' report are as follows:

- It is highly unlikely that, even under aggressive assumptions, HV/LV connected Distributed Generation (DG) will trigger network reinforcement in this decade as a consequence of ongoing use of system:
  - Based on forecast DG growth set out in DNOs' Forecast Business Plan Questionnaires (FBPQ) ,<sup>9</sup> Frontier Economics calculated that they only expect 3.2 - 3.4 per cent of primary substations to be generation dominated.
  - Based on a more dramatic growth in DG, Frontier Economics expect 4 - 6.2 per cent of primary substations to be generation dominated.
- Analysis of the issue is limited by useful available data on their HV and LV networks.
- There are regional variations between DNOs. Consequently, certain DNO areas, eg SSE's Hydro region, are more likely to contain substations that are or may become generation dominated.
- There is no case for introducing a complex location based solution for charging HV and LV generators. The costs of such a methodology are potentially very high (c.£250m over ten years).
- There may be a case for developing a simpler location based solution that applies to HV generators only. The cost of this might be c.£6m over ten years.
- There are a number of qualitative issues that should be borne in mind. That is, whether suppliers would pass on location charging signals, the negative effects of

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<sup>6</sup> On average, DNOs forecast growth in DG of about 12% per annum. According to our Connections Industry Review 2009-10 there were 94 DG connections in 2007-08, 244 in 2008-09 and 826 in 2009-10. Please see <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=55&refer=Networks/Connectns/ConnIndRev>

<sup>7</sup> <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=657&refer=Networks/ElecDist/Policy/DistChrgs>

<sup>8</sup> Frontier Economics' report can be found on the ENA's website at <http://energynetworks.squarespace.com/cdcm-structure-of-charges/>

<sup>9</sup> FBPQs are submitted to Ofgem as part of a DNO's price control review.

location based HV/LV charges on simplicity, transparency and predictability, and the interaction of developing the CDCM with other aspects of energy policy (eg competition and meeting renewable targets).

Based on the DNOs' (and Frontier's) conclusions, the DNOs propose to develop three options for modifying the CDCM, which will be considered as part of the Methodologies Issues Group's (MIG)<sup>10</sup> ongoing work. In summary, these options are:

- A simple location based charging regime for HV generators only – where depending on circumstance, DG may be charged or credited.
- A more dynamic approach to the calculation of credits for generators – ie DG would not be charged but their credits would be adjusted depending on circumstance.
- To not pay credits to generators in locations that are considered to be generation dominated.

The DNOs have set out an indicative timetable for developing and implementing any necessary change to the CDCM. They intend to propose any changes in time for them to be implemented by April 2013.<sup>11</sup>

### **Our decision**

In our December decision we set out in more detail what we expected from the DNOs in order to fulfil the Condition. In particular we explained that we expected a more detailed assessment of the issue, cost-benefit analysis of options for developing the CDCM and a well evidenced conclusion, including a clear timetable for developing the CDCM (if necessary).

We consider that the DNOs have now fulfilled the outstanding Condition to our approval of the CDCM. The DNOs have sufficiently reviewed the issues in relation to generation dominated areas, considered their options for developing (or not developing) the CDCM and have presented a way forward so that the CDCM remains fit for purpose. A more detailed summary of our reasons can be found in the attached annex.

We support the DNOs' proposed way forward to raise options with the MIG for developing the CDCM. This is the preferred forum for early discussion and development of modifications to the CDCM.

Further to the conclusions of the DNOs report, summarised above, we recognise that there are qualitative issues that may require further inspection. We consider that in the first instance the DNOs should take responsibility for identifying and assessing the relationship between developing the CDCM in relation to generation dominated areas and the qualitative issues they have identified.

Developing more cost reflective charging methodologies is important for encouraging more efficient use of DNOs' networks and in helping tackle climate change. Whilst we note the DNOs analysis of generation dominated areas has concluded that it is unlikely to become a significant issue over the next ten years and that forecasts of DG growth have regularly been overestimated, we note that the issue may become more prevalent in specific DNOs' areas. For example, according to Frontier's 'even' DG growth assumption, c.24 per cent of the primary substations in SSE's Hydro area will be generation dominated, whereas about 1 per cent of all other primary substations in all other network areas will be generation

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<sup>10</sup> The MIG is a sub-committee of the Distribution Charging Methodologies Forum. Its purpose is to consider specific issues in relation to DNOs charging methodologies. Typically the MIG consider options for developing the charging methodologies.

<sup>11</sup> Implementation of any modification of the CDCM is subject to approval from the Authority as a Part 1 matter under the DCUSA. Any CDCM change proposal submitted to the Authority for decision is assessed by the Authority on its merits within the relevant decision framework, ie charging methodology objectives and wider statutory duties etc. For the avoidance of doubt, anything in this document does not fetter the discretion of the Authority to accept or reject any change proposal.

dominated. Bearing in mind these points, developing charging arrangements to take account of generation dominated areas may be necessary to ensure that the relative costs and benefits that generators impose on networks are appropriately reflected in DNOs' UoS charges. In this respect DNOs have a critical role in reviewing and leading the development of charging arrangements to appropriately take account of generation dominated areas.

If you have any questions or would like to discuss the issues raised in this letter, please contact Nicholas Rubin on 020 7901 7176 or at [nicholas.rubin@ofgem.gov.uk](mailto:nicholas.rubin@ofgem.gov.uk).

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Rachel Fletcher', is written over a light grey rectangular background.

**Rachel Fletcher**

**Partner, Distribution**

Signed on behalf of the Authority and authorised for that purpose

## **Annex - Rationale for our decision**

The DNOs, with support from Frontier Economics, have completed a more detailed analysis of the likely prevalence of generation dominated areas over the next ten years. Their analysis concludes that the materiality of generation dominated areas is low and unlikely to grow significantly over the next ten years. Based on DNOs' forecasts of DG growth, it is likely that between c.3.2 and 3.4 per cent of primary substations will be dominated by DG capacity over the next ten years. The worst case scenario suggests that in the next ten years there will be c.6.2 per cent of all primary substations dominated by DG capacity. The worst case scenario assumes that DG growth will be 1.5 times the growth forecast by DNOs in their FBPQs.

Based on the likely prevalence of generation dominated areas, the DNOs concluded that a complex change to the CDCM, which could cost c.£250m over ten years, was not value for money. Instead they propose to develop a simpler solution that may cost up to c.£6m over ten years.

We consider that the DNOs' analysis of the likelihood that DG will drive network reinforcement costs provides a useful summary of the extent of the issue. We also consider that their analysis supports their proposed way forward. That is, the potential costs of delivering a complex option for charging HV and LV DG and the likely necessary reduction in DG growth to make the solution viable are not reasonable. Whereas, their proposal to develop a simpler option is likely to be more proportionate to the issue.

We note that the DNOs report indicates that the rollout of smart meters may improve access to network data and that this may in future facilitate more detailed analysis of the issue and the viability of a more complex option.

In our December decision we highlighted concerns with the tests used by the DNOs to determine whether an area was generation dominated or not. Our concerns were particularly based on a lack of clear justification. As part of their report, Frontier reviewed the DNOs original tests and developed their own. Whilst Frontier's tests for determining generation dominated areas are largely based on the same tests the DNOs originally devised, they have been more clearly explained and have also taken into account points we raised as part of our December decision and as part of informal correspondence since.

Another criticism set out in our December decision was that the DNOs presented a limited range of options for developing the CDCM. We also considered that those options had not been robustly assessed. Whilst the DNOs' June report does not provide a detailed cost-benefit analysis of options, we are satisfied that in conjunction with Frontiers' report, a reasonable effort has been made to review additional options and consider the likely costs of those options. We are happy that the DNOs have committed to raising three options with the MIG for consideration and development. We will monitor the progress of the DNOs work here and contribute where necessary.