Modification proposal:	**Distribution Connection and Use of System Agreement (DCUSA) DCP087 - Smoothing Load Characteristics and Peaking probabilities in the CDCM**		
Decision:	The Authority[1] directs that DCP087 be made[2]		
Target audience:	DCUSA Panel, Parties to the DCUSA and other interested parties		
Date of publication:	24th October 2011	Implementation Date:	1st November 2011

Background to the proposed modification

The common distribution charging methodology (CDCM) was implemented in April 2010 for calculating distribution Use of System (DUoS) charges for users connected at low-voltage (LV) and high-voltage (HV). In the October 2008 decision document[3], leading to the implementation of the CDCM, we noted that the CDCM is likely to lead to annual volatility in customers' charges. Suppliers, generators and large customers also expressed concerns around potential volatility in charges and indicated interest in developing mechanisms to mitigate potential volatility.

To address these concerns, we encouraged Distribution Network Operators (DNOs) to publish on an annual basis, long term tariff scenarios that would help increase customer awareness of the potential range of future charges. DNOs were also encouraged to work together from April 2010, to consider how the new common methodology may be modified to reduce the degree of year on year volatility and improve the transparency and predictability of the CDCM.

Work stream C (WSC) was set up by the Common Methodology Group (CMG) to look at the issues raised in our October 2008 decision document. A key aspect of WSC's mandate was to assess the CDCM inputs and establish which inputs could potentially cause volatility. A considerable amount of work has already been done to address input standardisation, improve tariff stability and provide greater information via the open governance process under the DCUSA. In addition, CMG have already made progress towards reducing volatility and improving transparency through the submission of a number of DCUSA Change Proposals (DCP's), notably DCP086 '*Introduction of the annual review pack*' and DCP088 '*Mid-year CDCM charging Model*'.[4] DCP086 was classified as a Part 2 matter[5] and has been approved, while DCP088 is currently going through the DCUSA process and if approved will be implemented from April 2012.

This change proposal (DCP087) is part of the work being done to manage year on year volatility and improve the cost reflectivity of tariffs calculated by the CDCM. It proposes that some of the more volatile input data (coincidence factors, load factors, non-half-

[1] The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] "Delivering the electricity distribution structure of charges project", Ref: 135/08 1 October 2008, available at:
[4] The change proposal for DCP088 and DCP086 can be found on the DCUSA website on http://www.dcusa.co.uk/Public/Default.aspx
[5] Part 2 Matters are defined in section 1C ;P.80 of the DCUSA which can be found in the following link: http://www.dcusa.co.uk/Public/Documents.aspx?t=11

hourly proportion of units recorded in each time band, and peaking probabilities)[6] to the CDCM is calculated using a 3-year rolling average which better reflects a customer's typical consumption pattern. For the purpose of DCP087 the identified volatile input data is collectively known as **"the relevant CDCM inputs".**

The modification proposal

The issue

DCP087 was proposed by Western Power Distribution (WPD) in March 2011 following discussions on reducing CDCM volatility at the Distribution Charging Methodology Forum (DCMF) and the WSC. The proposer contends that using single year data for "**the relevant CDCM inputs**" produces more volatile tariffs. Parties to the DCUSA considered that "**the relevant CDCM inputs**" could be quite volatile year on year with a knock on effect on tariffs. They considered these volatile tariffs are not cost reflective as they do not represent customers' typical consumption pattern and do not facilitate effective competition in the generation and supply of electricity.

Intention of DCP087

The intent of this change proposal is to reduce the year on year volatility and improve the cost reflectivity of tariffs calculated by the CDCM. DCP087 aims to achieve this by specifying that "**the relevant CDCM inputs**" are calculated using a 3-year average instead of annual data. DCP087 proposes using a 3-year average on the basis that it reduces the distorting effect of exceptional years.[7] These events could otherwise have a significant impact on the stability and cost reflectivity of the resulting CDCM tariffs.

It is anticipated that the proposal would better represent customers' typical consumption patterns and ensure that trends over time are captured. Also, the proposal would ensure a more consistent approach to the derivation of **"the relevant CDCM inputs**" by requiring that the period and method used in calculating these inputs are common across all DNOs.

Working Group Analysis

The proposal was assessed by a Working Group. Their analysis included the following:

- The first piece of analysis (carried out by the WSC) sought to verify the extent to which **"the relevant CDCM inputs"** are volatile and require "smoothing". To verify volatility, the group assessed the changes in net revenue recovered for a tariff group as a result of changes in consumption data over a period.[8] The result of the analysis

[6] **Coincidence factors:** the load of a user group at the time of system simultaneous maximum load, relative to the maximum load level of that user group. Coincidence factors are numbers between 0 and 1**. Load Factors**: the average load of a user group over the year, relative to the maximum load level of that user group. Load factors are numbers between 0 and 1. **Time band**: DNOs are required to determine three distribution time bands, labelled red, amber and green. **Peaking probability:** represents the probability that an asset at a particular network level would experience maximum load during a distribution time band. More information about these inputs can found in the following link: http://energynetworks.squarespace.com/cdcm-structure-of-charges/

[7] Examples of exceptional years might include (but are not limited to) years of extreme weather conditions or economic recession.

[8] This analysis was performed by UKPN. It assessed the effect of changes in consumption data (04-05 to 08-09) for some profile classes (e.g. profile class one -domestic unrestricted tariff) on net revenue values in the April 2010 CDCM for the SPN region. Consumption data are the underlying data sets used for calculating "the relevant CDCM inputs".

showed that the parameters feeding into the calculation of "**the relevant CDCM inputs"** showed some volatility; with maximum consumption increasing by about 9% between some years, and some years showing negligible changes in maximum consumption values.

- An impact assessment of the change proposal on annual customer tariffs was carried out by the DCP087 Working Group.[9] The table below summarises the findings: it demonstrates the maximum, minimum and average impact of smoothing each of the "**relevant CDCM inputs"** on an average annual tariff (£/MPAN/year)[10], across all tariff groups and DNOs. For example, the maximum change in annual tariff (Max £/MPAN/year) observed across all DNOs as a result of using a "smoothed" load factor was £11,688.00[11], representing 3.49% change in net revenue for this customer class.

Table 1: Impact Assessment of DCO087 on annual customer tariffs

Relevant CDCM Inputs	Max £/MPAN/Year (Corresponding % change in Net revenue)	Min £/MPAN/Year (Corresponding % change in Net revenue)	Average £/MPAN/Year
NHH use of Time Band	£982.53 (0.49%)	(£9,345.54) -0.64%	-£9.28
Coincidence Factors	£3,703.36 (2.68%)	(£29,401.85) -1.98%	-£48.69
Load Factors	£11,688.00 (3.49%)	(£3,586.77) -0.24%	-£20.90
Peaking Probabilities	£982.53 (0.35%)	(£2,989.56) -1.34%	-£3.58

- The Working Group also examined the impact on customer tariffs when changes to all of "the relevant CDCM inputs" were made at the same time. This analysis is more reflective of the changes that would occur as a result of the implementation of the change proposal. The analysis examined the impact on tariffs (across tariff groups and DNOs) between:

    a. the 2010/11 CDCM ("the base case") and

    b. the CDCM in 2011/12, first with "the relevant CDCM inputs" calculated using a single year of data ("case 1") and then with "the relevant CDCM inputs" calculated using three years of data ("case 2").

- The analysis showed that in 88 per cent of cases, "case 2" presented lower impacts on tariffs than "case 1." Moreover, in the 12 per cent of cases where "case 2" presented higher impacts on tariffs, the impact was modest relative to the occurrences where "case 1" presented the higher impact.

[9] DCUSA change report (1 September 2011), p.5. This analysis made a comparison between a base case set of tariff data (using the April 2010 CDCM) and an adjusted tariff data, computed using averaged "**relevant CDCM inputs "**. The impact of each averaged "**relevant CDCM input**" on tariffs was assessed in turn, whilst leaving the other inputs unchanged.

[10] Meter point Administration Number (MPAN) is used to represent each entry and exit point on a DNO's Network.

[11] This change was observed in WPD West's LV UMS (Pseudo HH metered) tariff. The observed impact on this tariff class reflects larger numbers of unmetered supplies captured by a single MPAN.

DCUSA Parties' recommendation

The Change Declaration for DCP087 indicates that DNO, IDNO/OTSO, Supplier and Distributed Generation (DG) parties were eligible to vote on DCP087. In each party category where votes were cast there was unanimous support for the proposal and its proposed implementation date.

The outcome of the weighted vote procedure is set out in the table below:

DCP087	Weighted Voting (%)							
	DNO		IDNO/OTSO		SUPPLIER		**DG**[12]	
	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
Change solution	100%	0%	100%	0%	100%	0%	N/A	N/A
Implementation date	100%	0%	100%	0%	100%	0%	N/A	N/A

The Authority's decision

The Authority has considered the issues raised by the proposal, the Change Report and the Change Declaration[13] issued on 20th September 2011. We have also considered and taken into account the views of the DCUSA Parties in response to the DCUSA Panel's consultation and Request for Information (RFI), and the DCUSA Parties' recommendation. We note that the overall intent of the proposal has received unanimous support.

The Authority has concluded that:

1. DCP087 should be implemented
2. Implementation of change proposal DCP087 will better facilitate the achievement of relevant objective (3.1.2) of the DCUSA; and in particular charging objectives (3.2.2) and (3.2.3).
3. Directing that the change is approved is consistent with the Authority's principal objective and statutory duties.[14]

Reasons for the Authority's decision

The Authority's assessment of DCP087 against the DCUSA objectives is set out below:

We consider that DCUSA objective (3.1.2) and charging objective (3.2.2) are engaged. Since both engage the competition objective, we have considered them together below:

DCUSA objective (3.1.2) – The facilitation of effective competition in the generation and supply of electricity and (so far as is consistent with that) the promotion of such competition in the sale, distribution and purchase of electricity

Charging Objective (3.2.2) That compliance by each DNO party with the charging methodology facilitates competition in the generation and supply of electricity and will not restrict, distort or prevent competition in the transmission or distribution of electricity or in the participation in the operation of an interconnector (as defined in the Distribution Licence).

[12] No votes were cast in this category of Parties

[13] All documents can be accessed via the DCUSA website: http://www.dcusa.co.uk/Extranet/CP.aspx?id=93

[14] The Authority's statutory duties are wider than matters that the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended as well as obligations arising under EU legislation.

The intent of DCP087 seems well understood and the majority of consultation respondents are supportive of its principles. We agree that the smoothing of the identified CDCM inputs as set out in the proposal could better facilitate competition in the supply of electricity by mitigating volatility in tariffs, improving predictability and reducing risk to suppliers. In particular, the additional predictability and stability provided by the DCP087 proposal could make it easier for smaller suppliers without a large portfolio of customers to manage DUoS risks.

A number of respondents however stated that the legal wording of the proposal should give more guidance for circumstances where DNOs do not have the specified data available. A respondent suggested for example, that DNOs should be allowed to use a two year average to smooth inputs, if three years of data is not available and inform the DCUSA parties exactly how inputs have been calculated. One DNO party suggested that in making reasonable endeavours to analyse data for the most recent 3 years, DNOs should exclude clearly abnormal years and use the 3 year average of most recent normal years in their analysis.

Regarding the availability of specified data, we expect DNO should make all reasonable endeavours to provide data relating to their operations and non availability of data should be an exception. This view is supported by the majority of respondents to the DCUSA panel consultation. We however appreciate that there may be unforeseen circumstances that may prevent DNOs from accessing the required data sets within the timescales required for pricing. We believe that the change proposal legal drafting adequately caters for these circumstances by specifying that "parties" use the most recent 3 year period for which data is available".

Charging objective (3.2.3) – That compliance by each DNO party with the Charging Methodology results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflects the costs incurred, or reasonably expected to be incurred, by the DNO party in its Distribution Business.

In our assessment of Charging objective (3.2.3) we note that the change proposal will result in an allocation of costs to individual customers based on their "typical" rather than their "most recent" consumption pattern. This allocation can be argued to be more cost reflective by reducing the weight on exceptional, unrepresentative, data. We consider that the proposal is cost reflective to the extent that it smoothes out the effect of unrepresentative data, but, if there is a change in behaviour, it takes longer for the impact of this to feed through. On balance, we believe that the change proposal does not necessarily present a trade off between cost reflectivity and stability of charges and achieves the set out objectives.

Decision notice

In accordance with SLC 22.14 of the Electricity Distribution Licence the Authority hereby directs that change proposal DCP087 'Smoothing Load characteristics and peaking probabilities in the CDCM' be made.

Rachel Fletcher
Acting Senior Partner, SG & G Distribution

Signed on behalf of the Authority and authorised for that purpose