

Proposed variation:	Distribution Connection and Use of System Agreement (DCUSA) DCP143 – Estimating missing reactive data		
Decision:	The Authority ¹ has decided to reject proposal DCP143 ²		
Target audience:	DCUSA Panel, Parties to the DCUSA and other interested parties		
Date of publication:	21 May 2013	Implementation Date:	N/A

Background to the modification proposal

Distributors invoice suppliers and generators for the cost of distributing electricity from the point of generation to consumption. Distribution Use of System (DUoS) charges are incorporated into the total electricity bill that the consumer receives from their supplier.

Some consumers (eg those with a half-hourly meters) are billed on a site-specific basis. This means that one bill is generated for each meter point. The DUoS charges for these customers are based on metering data provided by the supplier.³ This includes data on the appropriate reactive power factor. Reactive power is the background energy movement in an Alternating Current (AC) system arising from the production of electric and magnetic fields. Most equipment connected to the electricity network will generate or absorb reactive power. Reactive power is not used to power electrical equipment but can reduce capacity for active power to flow across the distribution network efficiently.

Where suppliers have failed to provide reactive power data, distributors are able to estimate the value.⁴ Currently some distributors estimate missing reactive data in order to invoice suppliers, whilst others wait until this data becomes available from the supplier. Where distributors do estimate missing reactive data, different approaches are used to calculate the estimated value.

The modification proposal

This modification was raised by E.ON ('the proposer') following discussions at a DUoS billing forum⁵. It aims to ensure that all distributors adopt a common approach to billing DUoS charges.

Under this change proposal, where the supplier fails to provide half-hourly reactive power data, the distributor would estimate reactive power data by applying a standardised reactive power factor of 0.9 to the half-hourly active consumption data, to calculate DUoS charges. The proposed power factor comes from a British Electrotechnical and Allied Manufacturers Association (BEAMA) report.⁶

The proposer considers that this change proposal will help ensure that distributors adopt a common approach to calculating and billing DUoS charges for customers where the supplier does not provide a reactive power factor value. The proposer believes that this will make it easier for suppliers to build validation routines and provide transparency on billing for new entrants.

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 In accordance with section 29.3 of DCUSA.

⁴ In accordance with section 21.2 of DCUSA.

⁵ Distribution Charging Methodologies Forum (DCMF) Methodology Issues Group (MIG) Billing Supergroup

⁶ <http://www.beama.org.uk/download.cfm/docid/9D5335F5-1CF3-4EB6-AB6D0BAEC3EE2AFF>

DCUSA Parties' recommendation

The Change Declaration for DCP143 indicates that DNO⁷, IDNO⁸/OTSO,⁹ Supplier and DG¹⁰ parties were eligible to vote on DCP143. In each party category where votes were cast (no votes were cast in the DG party category), there was not majority (>50%) support for the proposal. In accordance with the weighted vote procedure, the recommendation to us is that DCP143 is rejected. The outcome of the weighted vote is shown in the table below:

DCP143	WEIGHTED VOTING (%)							
	DNO		IDNO/OTSO		SUPPLIER		DG ¹¹	
	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
CHANGE SOLUTION	41	59	0	100	42	58	N/A	N/A
IMPLEMENTATION DATE	54	46	0	100	42	58	N/A	N/A

Our decision

We have considered the issues raised by the proposal and the Change Declaration dated 17 April 2013. We have considered and taken into account the vote of the DCUSA Parties on the proposal which is attached to the Change Declaration.

We have concluded that implementation of the change proposal DCP143 will not better facilitate the achievement of the DCUSA General Objectives.¹²

Reasons for our decision

We consider that this modification has a marginally positive impact on objective 3.1.2. However, this is outweighed by a negative impact on DCUSA General Objective 3.1.1.

DCUSA General Objective 3.1.1 - the development, maintenance and operation by each of the DNO Parties and IDNO Parties of an efficient, co-ordinated, and economical Distribution System

Parties had differing views on what an appropriate reactive power factor should be. The proposer and some suppliers and distributors supported a reactive power factor of 0.9. It was noted that some distributors already estimated the reactive power factor as 0.9.

However, several distributors considered that using a default power factor value for customers where the supplier did not provide a reactive power factor value would not accurately represent the different levels of reactive power across the network (eg if customers had installed equipment to reduce levels of reactive power). Several distributors suggested that using a standardised reactive power factor was therefore not cost reflective. Several parties considered that distributors should be allowed to estimate reactive power value based on their own assessment of the network.

One DNO suggested that choosing a default reactive power factor value of 0.887 might be more accurate (according to the BEAMA bulletin, 0.887 is the average reactive power factor without any corrective equipment installed). Two suppliers and two distributors suggested that an alternative reactive power factor value of 0.95 would be more accurate and more consistent with the assumptions contained in the Common Distribution

⁷ Distribution Network Operator

⁸ Independent Distribution Network Operator

⁹ Offshore Transmission System Operators

¹⁰ Distributed Generation

¹¹ No votes were cast in this category of Parties

¹² The DCUSA General Objectives (Applicable DCUSA Objectives) are set out in Standard Licence Condition 22.2 of the Electricity Distribution Licence and are also set out in Clause 3.1 of the DCUSA.

Charging Methodology (CDCM). They considered that a reactive power factor value of 0.9 was excessive and one supplier noted that it did not take into account any power factor correction equipment that may have been installed to reduce excess reactive power charges.

Overall, we consider that requiring distributors to use a standardised reactive power value, for customers where the supplier does not provide a value, may not accurately reflect actual levels of reactive power across the network. The proposed approach might result in DUoS charges which are less cost reflective than the current approach. We therefore consider that this change proposal has a negative impact on DCUSA General Objective 3.1.1.

DCUSA General 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

The proposer considers that this change proposal will facilitate DCUSA General Objective 3.1.2. We agree that ensuring that distributors adopt a common approach to calculating and billing suppliers for DUoS charges for customers where the supplier does not provide a reactive power factor could help to facilitate competition by ensuring transparency and consistency for suppliers. This may have proportionately greater benefits for new market entrants and smaller suppliers therefore helping to improve competition.

The working group noted that suppliers are already required to provide reactive power data under paragraph 21.2.1 of the DCUSA. Even where actual data are not yet available, the supplier's relevant data collector may estimate data in accordance with the Balancing and Settlement Code (BSC).

If suppliers and their data collectors ensure that they provide reactive power data values in a timely manner, then distributors will not need to estimate missing data. We therefore consider that the potentially positive impact on DCUSA General Objective 3.1.2 is marginal as increased transparency and consistency for suppliers could be achieved under the current DCUSA provisions.

Overall we consider that this change proposal has a negative impact on the DCUSA General Objectives.

Decision notice

In accordance with standard licence condition 22.14 of the Electricity Distribution Licence, the Authority has decided that modification proposal DCP143: *'Estimating Missing Reactive Data'* should not be made.

Andy Burgess

Associate Partner – Transmission and Distribution Policy

Signed on behalf of the Authority and authorised for that purpose