



## **DCUSA CONSULTATION**

### **DCP 222 - Non billing of Excess Reactive Power Charges**

## 1 PURPOSE

- 1.1 The Distribution Connection and Use of System Agreement (DCUSA) is a multi-party contract between electricity Distributors and electricity Suppliers and large Generators. Parties to the DCUSA can raise Change Proposals (CPs) to amend the Agreement with the consent of other Parties and (where applicable) the Authority.
- 1.2 This document is a Consultation issued to Distribution Network Operators (DNO), Independent Distribution Network Operators (IDNO), Suppliers, Citizens Advice, Elexon, any other interested Parties and the Authority in accordance with Clause 11.14 of the DCUSA seeking industry views on 'DCP 222 – Non billing of excess Reactive Power charges' (Attachment 1). Respondents are invited to consider the questions set out below and submit comments using the form provided as Attachment 2.
- 1.3 Responses should be submitted online or emailed to [DCUSA@electralink.co.uk](mailto:DCUSA@electralink.co.uk) by 2 April 2015.

## 2 Background of DCP 222 – Non billing of excess Reactive Power charges

- 2.1 This CP intends to change Schedule 16 of the DCUSA to allow Network operators to not charge reactive power charges to generators who are charged in accordance with the Common Distribution Charging Methodology (CDCM) who operate, at the instruction of the network operator, with a power factor less than 0.95.
- 2.2 As highlighted in the System Operability Framework issued by National Grid in September 2014, there is currently a rapidly emerging issue around falling variable demand leading to high voltage levels on the National Electricity Transmission System operated by National Grid under low load conditions. Following recent Statement of Works Applications to National Grid under the Connection and Use of System Code (CUSC) DNOs are adding connection conditions to generation connection offers to operate to help control reactive flows. These may result in generators being required to operate outside of the 0.95 power factor limit to help with this system wide voltage control issue. As such those generators would currently be charged an excess reactive power charge. This is unfair given that those generators would be doing so for wider system benefits of all customers. The removal of the excess reactive power charge would therefore be

appropriate where a DNO requests a generator to operate outside of the 0.95 power factor limit.

### 3 Working Group Assessment of DCP 222

- 3.1 The DCUSA Panel established a Working Group to assess DCP 222. This Working Group consists of DNO, Supplier and Ofgem representatives.
- 3.2 The Working Group felt the change was required due to the unfair excess reactive power charge being charged to generators that are being required by the DNO to operate outside of the 0.95 power factor limit.
- 3.3 Although it is not believed to be an issue in all DNO areas at the current time, it is believed to be an issue in more than one DNO area. The Working Group discussed the solution presented in the change proposal (Option 1) and agreed that an alternative option (Option 2) should be raised which does not introduce new tariffs or require additional Line Loss Factor Classes (LLFCs) to be created, in order to offer an option which may potentially be easier to implement.

#### Option 1

Insert new tariffs with no reactive power charges being applied to them into Section 16; Table 7 of DCUSA and insert a new note 7, which states that “Where a DNO has requested a generator to operate with a power factor of less than 0.95, excess reactive power charges will not be applicable.”

For clarity please see the relevant part of DCUSA below.

Table 1: Half-hourly metered generation tariffs				
Point Connection	Of	Unit Rate Time bands	Other Charges	Tariff Name
LV	One		Fixed and Reactive Power	LV Generation Intermittent
LVS				LV Sub Generation Intermittent
LV	Three			LV Generation Non-Intermittent
LVS				LV Sub Generation Non-Intermittent
HV	One			HV Generation Intermittent
HV	Three			HV Generation Non-Intermittent

Table 1: Half-hourly metered generation tariffs				
Point Connection	Of	Unit Rate	Other Charges	Tariff Name
LV	One	Fixed		LV Generation Intermittent no RP charge
LVS				LV Sub Generation Intermittent no RP charge
LV	Three			LV Generation Non-Intermittent no RP charge
LVS				LV Sub Generation Non-Intermittent no RP charge
HV	One			HV Generation Intermittent no RP charge
HV	Three			HV Generation Non-Intermittent no RP charge

Note 1: A single-rate tariff is applied to NHH settled generation, as there is no readily available and accurate information about the time at which units are delivered.

Note 2: Intermittent generation is defined as a generation plant where the energy source of the prime mover cannot be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. These include wind, tidal, wave, photovoltaic and small hydro. The operator has little control over operating times therefore, a single-rate tariff (based on a uniform probability of operations across the year) will be applied to intermittent generation.

Note 3: Non-intermittent generation is defined as a generation plant where the energy source of the prime mover can be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. The generator can choose when to operate, and bring more benefits to the network if it runs at times of high load. These include combined cycle gas turbine (CCGT), gas generators, landfill, sewage, biomass, biogas, energy crop, waste incineration and combined heat and power (CHP). A three-rate tariff will be applied to generation credits for half-hourly settled non-intermittent generation.

Note 4: LV Sub Generation applies to customers connected to the DNO Party's network at a voltage of less than 1 kV at a substation with a primary voltage (the highest operating voltage present at the substation) of at least 1 kV and less than 22 kV, where the current transformer used for the customer's settlement metering is located at the substation.

Note 5: not used.

Note 6: Note 4 above for LV generation substation tariffs will be applied for new customers from 1 April 2010.

**Note 7: Where a DNO has requested a generator to operate with a power factor of less than 0.95, excess reactive power charges will not be applicable.**

## Option 2

This proposal would look to use the existing calculated tariff only and apply the excess reactive power charge for those Customers which the DNO determines should have a zero charge applied. This would likely be achieved by a change to the CDCM model to allow the DNO to indicate the expected number of Customers where this arrangement would apply, which would likely be included as part of input table 1053 (Volumes), in addition the methodology would need to be revised in order to allow for the non-application of part of a published tariff for certain Customers.

The WG noted that either option could have an impact on internal IT systems which would need to be considered. However, it was felt that this was less relevant to Option 2.

#### 4 Assessment against the DCUSA Objectives

4.1 For a DCUSA Change Proposal to be approved it must be demonstrated that it better meets the DCUSA Objectives. There are five General DCUSA Objectives and five Charging Objectives. The full list of objectives is documented in the CP form provided as Attachment 1.

4.1 The Working Group has assessed the CP against the DCUSA objectives and the Working Group members agree that the following DCUSA Objective is better facilitated by DCP 222.

- **General Objective One** - The development, maintenance and operation by the DNO Parties and IDNO Parties of efficient, co-ordinated, and economical Distribution Network

4.2 The Working Group has assessed the CP against the DCUSA charging objectives and the Working Group members agree that the following DCUSA Objective is better facilitated by DCP 222.

- **General Objective Three** - The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences
- **Charging Objective One** - That compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence

- 4.3 Charging Objective 1 and General Objective 3 are both better facilitated as a result of this change proposal by ensuring that the wording within DCUSA does not create an inconsistency with the Distribution Licence, which would be in place at that time.
- 4.4 The Working Group has assessed the CP against the DCUSA objectives and the Working Group members agree that the following DCUSA Objective is better facilitated by DCP 222.

## 5 Implementation Date

- 5.1 The proposed implementation date for DCP 222 is 1 April 2016.

## 6 DCP 222 – Consultation Questions

- 6.1 The Working Group is seeking responses to the following consultation questions.

No.	Question
1	Do you understand the intent of DCP 222?
2	Do you agree with the principles of DCP 222?
3	Are there any unintended consequences of this proposal?
4	The Working Group considers that DCUSA General Objectives 1 <sup>1</sup> and the DCUSA charging objectives General Objective 3 <sup>2</sup> and Charging Objective 1 <sup>3</sup> are better facilitated by DCP 222, do you agree with this opinion? Please provide supporting comments on this and any other DCUSA Objective you feel may be impacted by DCP 222.
5	Should a customer who has been asked during the charging year to move Line Loss Factor Class (LLFCs) and operate under these conditions, have their charge be moved retrospectively?
6	Should a customer who has been asked to operate outside the 0.95 power factor for a short duration benefit from not being charged for the reactive element for the full year?
7	The CP suggests that new LLFCs are needed to achieve its intent (Option 1); do you think there is a better way of achieving the intent of the CP?

<sup>1</sup> The development, maintenance and operation by the DNO Parties and IDNO Parties of efficient, co-ordinated, and economical Distribution Network

<sup>2</sup> The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences

<sup>3</sup> That compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence

	If so, please provide further details? Do you believe the alternative option, Option 2, to be a viable alternative?
8	Do you foresee any implementation issues with either of the two options proposed?
9	Are there any alternative solutions or matters that should be considered?
10	Are you supportive of the proposed implementation date?
11	Please state any other comments or views on the Change Proposal.

6.2 Responses should be submitted using Attachment 2 to [dcusa@electralink.co.uk](mailto:dcusa@electralink.co.uk) no later than 2 April 2015.

6.3 Responses, or any part thereof, can be provided in confidence. Parties are asked to clearly indicate any parts of a response that are to be treated confidentially.

## 7 NEXT STEPS

7.1 Responses to the Consultation will be reviewed by the DCP 222 Working Group who will use the responses to aid them in the progression of the CP.

7.2 If you have any questions about this paper or the DCUSA Change Process please contact the DCUSA by email to [DCUSA@electralink.co.uk](mailto:DCUSA@electralink.co.uk) or telephone 020 7432 3016.

## ATTACHMENTS

- Attachment 1 – DCP 222 Change Proposal
- Attachment 2 – Consultation Response Form