



## **DCUSA Request for Information (RFI)**

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### **DCP 268 'DUoS Charging Using HH Settlement Data'**

## 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.
- 1.2 This document is a Request for Information (RFI) issued to all DCUSA Parties and the Authority in accordance with Clause 11.14 of the DCUSA seeking industry views on DCP 268 *'DUoS Charging Using HH settlement Data'*.
- 1.3 The purpose of this document is to clarify and confirm the best option on the IT solution for this Change Proposal (CP). This will also determine whether there is a requirement for a Balancing and Settlement Code (BSC) change to be raised.
- 1.4 Parties are invited to consider the questions set out in section 8 below and submit comments using the form attached as Attachment 1 to [dcusa@electralink.co.uk](mailto:dcusa@electralink.co.uk) by **21 September 2016**.
- 1.5 Respondents are advised to note that the meeting papers for DCP 268 Working Group meetings are available on [www.dcusa.co.uk](http://www.dcusa.co.uk).

## 2 DCP 268 'DUoS CHARGING USING HH SETTLEMENT DATA'

- 2.1 DCP 268 seeks to facilitate a transition to half-hourly (HH) settlement for non-half hourly (NHH) customers by moving to a Distributor time band charging basis using the profiled HH consumption values. This will mean that the Distribution Use of System (DUoS) tariff rates and structures are identical regardless of the basis of settlement.
- 2.2 The Working Group undertook a consultation associated with this CP which closed on the 08 June 2016. One of the questions was whether there was a preference for Elexon (via the Supplier Volume Allocation Agent (SVAA)) to provide the split of consumption data in to the distribution time bands or whether they required Parties to undertake the relevant work within their internal and billing systems. The response is shown below.

Insufficient Information	Elexon (SVAA)	Distributors	No comment
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2 - Suppliers	4 - DNOs, 1 IDNO, 6 Suppliers	2 - DNOs 1 - Supplier	1 – Anonymous 1 - Elexon
2	11	3	2

2.3 The Working Group concluded that based on the responses received, and even though there was significant support for the Centralised approach, there may have been insufficient detail provided in the consultation to allow Parties to determine whether it was more beneficial for Elexon to provide the split of consumption data in to the distribution time bands or for Parties to undertake the relevant work within their internal and billing systems. The Working Group agreed to carry out a RFI for an impact assessment based on a set of proposed options. This document sets out in detail those options being considered by the Working Group and seeks industry views on the suitability of the approaches proposed and which is their preferred option.

2.4 As stated in the previous consultation there are two main approaches for consideration, namely the Centralised approach (where the work is undertaken by Elexon / SVAA) or the Distributor approach. However, within each approach there are a number of ways in which the data could be dealt with. Under all options, Distributors will be required to make changes for billing and Suppliers may need to make system changes for validation purposes.

### 3 CENTRALISED OR DISTRIBUTOR APPROACHES

3.1 Currently most Distributors utilise the Time Pattern Regime (TPR) of the supply tariff to determine the units to be charged under any NHH DUoS time of day tariff. This means that the same DUoS charges can be applied to many different time periods.

3.2 For example, the Domestic Two Rate tariff will have a single day and night rate, which could apply to all of the following:

- The variations on clock time and GMT throughout the year.
- The many ‘*Economy 7*’ variations: 22:00 – 05:00; 22:00 – 00:00 and 02:00 – 07:00; 00:00 – 07:00; 23:00 – 01:00 and 03:00 – 08:00 etc.

- The variations on the length of the 'night' period: 'E8', 'E9', 'E10', 'Weathercall' 'Warmwise' and 'Evening/Weekend', afternoon boosts.
- 3.3 There are also two Distributors that do not use the TPR to determine the units to be charged under a NHH time of day tariff and instead charge on a fixed time period basis. The Statement of Charges for Western Power Distribution in the East Midlands and West Midlands areas specifies that:
- *For all two rate NHH MPANs night is defined as 00.30 to 07.30 hours.*
- 3.4 Since DCP 268 seeks to introduce a time band charging basis for all NHH customers (regardless of the TPR), one option for implementing this change is to effectively roll out the DUoS billing approach currently in place in the East Midlands and West Midlands areas across all Distributors. This approach would use the profiled HH consumption values contained in the D0030 data flow to determine the units to be charged in each time band introduced by DCP 268.

#### **4 CENTRALISED APPROACHES FOR GROUPING OF DATA (OPTIONS 1a-1d)**

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- 4.1 Under current arrangements, the NHH and HH data collectors provide aggregated data to the SVAA. The following data is received by the SVAA via the D0041 data flow, the description of the flow contains details of NHH Consumption per Supplier aggregated per GSP Group by Profile Class (PC), Line Loss Factor Class (LLFC) and measurement requirement which includes the Standard Settlement Class (SSC) and TPR. The SVAA then ensures that the data goes to the relevant Supplier and Distributor on the D0030

flow – ‘Aggregated DUoS Report’ and the D0242 data flow - ‘SuperCustomer DUoS Daily Statement’.

- 4.2 It is the LLFC/SSC/TPR/PC settlement combination that is being affected by this CP. For ease of reference, the options below will refer to the data items that make up the combination as “settlement combinations”.
- 4.3 The approach introduced to the BSC by P300<sup>1</sup> could be extended for DCP 268, which involves creating pseudo data within the D0030<sup>2</sup> data flows and providing them to the respective Distributor and Supplier to support the DUoS charging of the aggregated tariffs. Attachment 3 is the implementation document for P300 that contains the activities undertaken by the SVAA and Distributors in providing pseudo SSC/TPR combinations.
- 4.4 Under P300 Distributors created pseudo SSCs and TPRs linked to the distribution time bands and created new LLFCs. The Working Group has considered the potential impact of creating new LLFCs which may result in significant volumes of movement from one LLFC to another as a consequence of this CP. Consideration may need to be given to creating pseudo LLFCs by Distributors and Elexon. Distributors are asked in the RFI for their thoughts regarding LLFCs and whether, if this CP was approved, how they would prefer to deal with LLFCs under each option.
- 4.5 For the Centralised approach to provide the pseudo split of consumption data, a change to the BSC would need to be raised with a list of detailed changes required to the SVAA in order to populate the D0030 dataflow. The Working Group reached the view that there are four options under the Centralised approach; further details of three of the options are contained in Attachment 2 due to the more complex nature of the changes required, whilst the fourth is simpler to explain as shown below. For each option an example of Supplier X in GSP Group\_A is used and all the existing settlement combinations that would appear on the D0030 by the new tariff allocation are colour coded. At the bottom of the data of each sheet it shows how the different colours map

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<sup>1</sup> P272 – ‘Introduction of new Measurement Classes to support Half Hourly DCUSA Tariff Changes’ (DCP179)

<sup>2</sup> D0030 Aggregated DUoS Report

to the additional aggregations based on each type of option of the Centralised approach.

4.6 The four variants to the Centralised approach are as follows:

- Option 1a – aggregate the settlement combinations to the proposed new Distribution tariffs.
- Option 1b – aggregate the settlement combinations to the proposed new Distribution tariffs but subdivide the LV Domestic Aggregated tariff by HH aggregation and NHH aggregation and separate the non-domestic aggregated tariffs by NHH and HH.
- Option 1c – aggregate the settlement combinations by HH aggregation and NHH profiles (PC1-8 and maintain the difference between metered and unmetered profiles).
- Option 1d – retain the existing settlement combinations but replace the TPR of each combination with the distributor time band TPRs.

4.7 The level of granularity of data (segregated HH and NHH data) received via the D0030 dataflow increases from Option 1a -1d. Option 1a creates 1,008 records per supplier (7 aggregations x 3 time bands x 48 half hour periods) plus headers (i.e. 7 additional aggregations), option 1b creates 1,296 records per supplier (9 aggregations x 3 time bands x 48 half hour periods) plus headers (i.e. 9 additional aggregations) whilst option 1c creates 2,592 records per supplier (18 aggregations x 3 time bands x 48 half hour periods) plus headers (i.e. 18 additional aggregations). Please see Attachment 2 for details.

4.8 Greater transparency is achieved going down the options from 1a-1d, but at the expense of a higher number of aggregations required in the D0030.

### Option 1a

- 4.9 This option aggregates the data to the proposed new tariff structure and completely ignores the existing settlement combinations. In doing so the LV Domestic Aggregated tariff would combine both HH Aggregated data on Measurement Class F and NHH Aggregated data on some of the current settlement combinations identified in attachment 2. Similarly, for LV Non Domestic Aggregated on Measurement Class G. The advantages and disadvantages of this option are set out below:

Pros	Cons
Aligns with the distributor tariffs	De-links in its entirety from the settlement combinations thereby losing transparency of the data received on the D0041
Biggest reduction in the size of the D0030 file (approximately 10% of the existing file size)	Mixes actual HH consumption data with HH profiled data
Both suppliers and distributors receive the same data	A need to retain the existing LLFCs to match the settlement combinations and create new ones pseudo used for billing.
	The PC field would need to be populated with a pseudo PC in the D0030 dataflow. This introduces additional complexity and could cause validation issues.

#### Option 1b

- 4.10 This is the same as option 1a but has a subdivision of data associated with the LV Domestic Aggregated tariffs and LV Non-Domestic Aggregated tariffs by keeping the NHH data set separate to the new aggregated HH data for Measurement Classes F and G. The advantages and disadvantages of this option are set out below:

Pros	Cons
Retains the split of HH aggregation and NHH aggregation linked to the new tariffs	De-links in its entirety from the settlement combinations thereby losing transparency of the data received on the D0041

Second biggest reduction in the size of the D0030 file (approximately 10 -15% of the existing file size)	A need to retain the existing LLFCs to match the settlement combinations and create new ones used for billing
Both suppliers and distributors receive the same data	The PC field would need to be populated with a pseudo PC in the D0030 dataflow. This introduces additional complexity and could cause validation issues.

### Option 1c

- 4.11 This aggregates to each tariff by PC combinations and retains the separation for the new aggregated HH data for Measurement Classes F and G. The advantages and disadvantages of this option are set out below:

Pros	Cons
Retains the split of HH aggregation and NHH aggregation linked to the new tariffs	De-links in its entirety from the settlement combinations thereby losing transparency of the data received on the D0041
Third biggest reduction in the size if the D0030 file (approximately 20 -25 % of existing file size)	A need to retain the existing LLFCs to match the settlement combinations and create new ones used for billing
Both suppliers and distributors receive the same data	
Provides added transparency at PC level	
This option does not require the introduction of a pseudo PC.	

### Option 1d



- 4.12 This retains the existing settlement combinations apart from the TPR which is replaced by the distributor pseudo TPRs.

Pros	Cons
Retains each settlement combination apart from the TPR	Loses some transparency of the data received on the D0041
Both suppliers and distributors receive the same data	A need to retain the existing LLFCs to match the settlement combinations and create new ones used for billing
Likely to be a simpler change than options 1a, 1b and 1c	Potential expansion of the D0030 file (expected increase is 33%)
Of the Centralised options it is closest to the ' <i>status quo</i> ', so likely to have lowest implementation cost	A need to create pseudo TPRs for Black, Amber, and Green for mapping unmetered (UMS) tariffs

## 5 TRANSITIONAL APPROACH FOR OPTIONS 1a-d

- 5.1 If DCP 268 is implemented with central system changes an approach will be required for transition to the new arrangements. Settlement days prior to *the 'effective from Settlement Date'* for the new approach would require the existing D0030 data until completion of all associated Reconciliation runs. To facilitate this, Elexon have identified the following options:
- Add the new aggregations into the existing D0030, for the transition period, and let the Distributor identify the appropriate data for the Settlement Date. This option has the risk of double counting. Following the transition period, the existing D0030 data can be removed from the flow;
  - Define a new flow version. Reconciliation runs for Settlement days prior to the '*effective from*' settlement date for the new approach would get the old flow version of the D0030. Reconciliation runs for Settlement days' post to the '*effective from*' settlement date for the new approach would be provided on the new version. This option will result in system costs to accommodate the new data. No change required following transition as Distributors will only receive the new flow version;
- or

- iii. Define a new flow. Reconciliation runs for Settlement days prior to the '*effective from Settlement Date*' for the new approach would get the D0030. Reconciliation runs for Settlement days' post to the '*effective from Settlement Date*' for the new approach would get the new data flow. This new data flow could be defined to remove any redundant items not required for the aggregation (e.g. PC). This option will result in system costs to accommodate the new data. Following the transition, the D0030 will be discontinued.

Your views on your preferred approach are being requested as part of this RFI.

## 6 DISTRIBUTOR (NON-CENTRALISED) APPROACH

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- 6.1 Under this approach, the Distributor utilises the existing profiled HH consumption values contained in the D0030 data flow to determine the units to be charged under the NHH DUoS time of day (year) tariff.
- 6.2 An alternative approach was considered *and discounted* – that was all Distributors would use the incoming SSC/TPR combination to determine the appropriate unit rate to apply.
- 6.3 The Working Group considers to meet the objectives of DCP 268 there is one option for this split, which utilises existing settlement combinations with all the Distributors using the time period (together with day of week and month) in which the consumption falls, to determine which unit rate (RAG or BYG) should apply. There is no change to the D0030 data flow as a result of this approach.
- 6.4 The implications of the approach are that Distributors would need to make changes to correctly charge the DUoS using the D0030 information, however Suppliers would only need to make changes to enable them to validate the DUoS billing (if they choose). There are no transitional dataflow or system changes required (as described in paragraph 5 for the Centralised approach) as the existing tariffs apply up to the DCP 268 implementation date and the new tariffs after the date.
- 6.5 However, Distributors will be required to put in place transitional arrangements in order to appropriately invoice for reconciliations prior to the implementation date of DCP 268.

For reconciliations relating to periods prior to implementation of the change, Distributors would need to bill in the existing manner i.e. by determining the unit rate based on existing SSC/TPR combinations, whilst simultaneously billing under the revised arrangements for reconciliations relating to periods after implementation.

- 6.6 The D0242<sup>3</sup> dataflow would present these consumptions and charges per settlement combination as existing so the split between domestic and non-domestic, profiled and actual HH data is maintained.

Pros	Cons
Both Suppliers and distributors receive the same data	A single SSC/TPR combination would potentially attract multiple unit rates (e.g. the 'day' element of an E7 tariff would likely attract all three unit rates for some of the consumption), leading to a single line of the D0242/ D0315 <sup>4</sup> data flow relating to a given settlement combination attracting more than one unit rate.
Requires no central system changes	

<sup>3</sup> D0242 - Supercustomer DUoS Daily Statement

<sup>4</sup> Embedded Network Supercustomer DUoS Daily Statement

## 7 SETTLEMENT COMBINATIONS REQUIRED IN THE D0030 DATAFLOW AS A RESULT OF THE CHOSEN OPTION

7.1 In order to progress with DCP 268, one of Options 1a-1d needs to be selected or the Distributor approach 2. The following table outlines the number of records (i.e. where a record is a set of 48 HH values) which would be needed on the D0030 for each combination, along with supporting comments.

Option	Number of new combinations on the D0030	Comments
Centralised approach - Option 1a	7	For each combination there will be 3 distribution time bands (RAG/BYG) x 48 half hour periods (1008 records) per supplier plus headers
Centralised approach - Option 1b	9	As per 1a but retaining the current records associated with Measurement Class F and G (1296 records) per supplier plus headers
Centralised approach - Option 1c	16	In addition to the current records associated with Measurement Class F and G, additional combinations will be created at profile class level. For each (2 HH plus 14 NHH) combination there will be 3 distribution time bands (RAG/BYG) x 48 half hour periods (2592 records) per supplier plus headers

Centralised approach - Option 1d	Variable depending on incoming data	Likely to represent a ~50% increase on the number of incoming settlement combinations
Distributor approach		Equal to the number of incoming settlement combinations

## 8 REQUEST FOR INFORMATION

8.1 Parties are asked to consider the following RFI questions:

Question Number	General Questions
1.	Please advise which is your preferred option? Please provide your rationale inclusive of any financial, resource or system impact or restriction.
2.	Please provide your comments on all options (Centralised approach options 1a-d and the Distributor approach) based on your priority of preference for the solution proposed? Please provide your rationale inclusive of any system impacts.
3.	What do you consider is the development timescale required for each of these options? Please provide your rationale.
4.	Distributors: What approach will you be taking to the LLFCs for each of these options? Please refer to paragraph 4.4 of this RFI
5.	If DCP 268 is implemented with central system changes (i.e. any of options 1a-1d) an approach will be required for transition to the new arrangements. Please advise which transitional approach option, i, ii, or iii is your preferred approach? Please see Section 5 of this RFI.
6.	If DCP 268 is implemented with the Distributor approach, are you able to cater for the transitional arrangements as detailed in paragraph 6.5?
7.	Are there any alternative solutions or unintended consequences that should be considered by the Working Group?

8.2 Responses should be submitted using Attachment 1 to [dcusa@electralink.co.uk](mailto:dcusa@electralink.co.uk) no later than **21 September 2016**.

8.3 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.

## 9 NEXT STEPS

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9.1 The DCP 268 Working Group will review the RFI responses with a view to making a recommendation to the DCUSA Panel.

9.2 If you have any questions about this paper or the DCUSA Change Process please contact the DCUSA Help Desk by email to [dcusa@electralink.co.uk](mailto:dcusa@electralink.co.uk) or telephone 020 7432 3017.

## ATTACHMENT

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- Attachment 1 - DCP 268 RFI Response Form
- Attachment 2 - Three Options on the D0030 Dataflow
- Attachment 3 - P300 Final Requirements
- Attachment 4 - DCP 268 Change Proposal