



Stage 03: Impact Assessment

P300 'Introduction of new Measurement Classes to support Half Hourly DCUSA Tariff Changes (DCP179)'

P300 seeks to introduce new Measurement Classes for aggregated Half Hourly-settled customers (for current transformer and whole current metered domestic, and whole current non-domestic markets). P300 builds on [Rejected Modification P280](#) and aligns with [DCUSA DCP 179](#), which seeks to implement Half Hourly DCUSA tariff changes. P300 would enable LDSOs to charge Suppliers on an aggregated basis as well as on a site specific basis.

This Impact Assessment for P300 closes:

5pm on Monday 2 June 2014

The Workgroup may not be able to consider late responses.

This Modification is expected to impact:

- Suppliers
- Licenced Distribution System Operators (LDSOs)
- Supplier Meter Registration Agents (SMRAs)
- Half Hourly Data Aggregators (HHDAAs)
- Half Hourly Data Collectors (HHDCs)
- Supplier Volume Allocation Agent (SVAA)
- ELEXON

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

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Any questions?

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About This Document

This document is the Impact Assessment for P300. It summarises the proposed P300 solutions requirements developed by the P300 Workgroup, and summarises the changes – to the extent the Workgroup has been able to identify them – that will be required to participants' systems, BSC Central Systems, Code Subsidiary Documents and Configurable Items to implement each of the proposed solutions to P300.

We are issuing this document for impact assessment by BSC Agents (BSC Application Management and Development (AMD) service provider and Business Process Outsourcing (BPO) service provider), the Transmission Company, BSC Parties and Party Agents in order to establish the impacts, costs and lead times of P300 (including any impacts which are not identified in this document).

The P300 Workgroup will consider your responses at its next meeting. At this stage the Workgroup is not seeking your views on the pros or cons of P300, as these will be the subject of a subsequent industry consultation.

Please provide your response using the attached response form (Attachment A).

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1 Why Change?



DUoS charges and related industry changes

For Half Hourly (HH) settled customers, distribution network charges (also known as 'Distribution Use of System charges' or 'DUoS charges') are calculated on a site specific basis. With the introduction of HH capable smart and advanced Meters into the Non-Half Hourly (NHH) settled market, more NHH sites will have the ability to be settled on a HH basis. This could significantly increase the amount of sites where Licensed Distribution System Operators (LDSOs) will have to calculate site specific DUoS charges.

To ensure that LDSOs have DUoS charges that are more reflective of the use of system (UoS) to better encourage the move to HH Settlement, the industry has raised three Distribution Connection and Use of System Agreement (DCUSA) Change Proposals (DCPs) (DCP103, DCP151 and DCP179) and one BSC Modification Proposal (P280).

DCP103

[DCP103 'DUoS Charges for sub 100kw HH settled sites'](#) was raised in July 2011 but subsequently withdrawn. This sought to help facilitate the move from the NHH settled market into the HH settled market by attempting to ensure that DUoS charges would remain the same for NHH customers electing to be settled HH under Measurement Class 'E'. In conducting this work, the DCUSA consultation concluded that the industry would be better served settling HH customers on an aggregated basis rather than on a site specific basis. However, this was deemed outside of the scope of the DCP.

P280

Electricity North West raised [P280 'Introduction of new Measurement Classes'](#) on 29 November 2011. This sought to introduce new non-mandatory Measurement Classes for HH-settled customers in the 'domestic' and 'small and medium enterprise' (SME) markets, and to require the Supplier Volume Allocation Agent (SVAA) to provide LDSOs with aggregated HH consumption data for Metering Systems registered to those new Measurement Classes.

At its meeting on 10 August 2012, the BSC Panel recommended to the Authority that it approve P280. However, the Authority subsequently rejected P280, stating in its decision document (dated 6 November 2012):

"The P280 proposal alone does not facilitate any change to the way sites will be settled and charged for UoS. A change to the UoS charging methodology is required in order for any benefits to be realised. Until we are able to make an assessment of the most appropriate UoS charging structure for sites with demand below 100kW that wish to be settled HH, we do not consider we can approve this modification. This is because it is not certain whether the P280 proposed change will be required if a different approach is taken in developing the UoS charging methodology. Approving the P280 proposal may therefore result in wasted costs to the industry."

DCP151

Electricity North West raised [DCP151 'HH Aggregated tariffs'](#) in June 2012 to amend the Common Distribution Charging Methodology (CDCM) to cater for the introduction (subject

DUoS charges

The DUoS charge covers the cost of receiving electricity from the national transmission system and feeding it directly into homes and businesses through the regional distribution networks. These networks are operated by LDSOs.



Measurement Classes

The Measurement Class of a Metering System reflects how it is settled i.e. HH or NHH. There are currently five Measurement Classes:

- A: NHH metered
- B: NHH Unmetered Supply (UMS)
- C: 100kW or above HH metered
- D: HH equivalent UMS
- E: Non-mandatory HH metered

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to approval) of three HH aggregated Measurement Classes raised under P280. The resulting tariffs would have been the same in structure and rates as those currently on NHH tariffs excluding NHH preserved and NHH export tariffs. This was withdrawn when the Authority rejected P280.

DCP179

Electricity North West raised [DCP179 'Amending the CDCM tariff structure'](#) in June 2013, to amend the existing tariff structure by introducing HH metered tariffs for connections below 100kW. To enable this, it seeks to introduce new tariffs based on the receipt of HH aggregated data. It builds on the work undertaken by the Distribution Charging Methodologies Forum (DCMF) Methodologies Issue Group 22 (MIG 22), which is a sub-group that was formed by the LDSOs and Suppliers to address the anomalies between the two different cost allocation mechanisms for HH and NHH tariffs in the CDCM.

Aggregated Data

Currently, HH Data Aggregators (HHDAs) for HH sites send the D0040 'Aggregated Half Hour Data File' data flow to the SVAA. The D0040 data flow includes Consumption Component Classes (CCCs), which detail the aggregated data instead of the site specific data. However, the LDSOs only receive the site specific data through the D0036 'Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix' and D0275 'Validated Half Hourly Advances' data flows, which they receive from the HH Data Collector (HHDC).

With the rollout of smart and advanced metering, there is the potential for the percentage of the market settled HH to increase substantially. Without any mechanism for LDSOs to utilise and bill Suppliers on an aggregated basis, they will need to use site specific billing for these customers. This will be disproportionately expensive and not reflective of the actual UoS

There are also benefits to Settlement for moving to HH metered, as this is considered more accurate.

Impacts on P272

It is now mandatory (since 6 April 2014) that all sites in Profile Classes (PCs) 5-8 must have an advanced (i.e. HH capable) Meter regardless of when installation took place. This is not to say that these HH capable Meters must be settled HH. However, Suppliers can elect to settle these Metering Systems HH if they wish (or if the customer wishes them to do so).

Smartest Energy raised [P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'](#) on 20 May 2011. P272 proposed mandatory HH Settlement for PCs 5-8 from 1 April 2014. P272 contends that to settle such sites on average profiled data, rather than on HH data, leads to inaccuracies in Settlement and masks individual customer behaviour. The P272 Workgroup put forward an alternative solution with an Implementation Date of April 2015.

The Panel made its final recommendation that P272 should be rejected at its meeting on 13 December 2012. P272 is currently with the Authority for decision, but on 6 February 2014 it [directed the Panel to consult again on the Implementation Date](#). The Authority has advised that it is minded to approve P272.

DCP179 (and P300) enables more reflective DUoS charges to be put in place. This would mean that current NHH PC 5-8 Metering Systems that move to HH Settlement won't be penalised through DUoS charges. It is hoped that having the reflective DUoS charges in place will reduce a known barrier to elective HH Settlement but would also support the transition period for implementing P272. The Authority directed the BSC Panel to consult on a revised Implementation Date for P272 to allow its decision to take account of ongoing changes to distribution network charging.

What is the issue?

The BSC contains a number of provisions for providing LDSOs with the metered data they need for charging purposes. However, these don't provide a mechanism for distinguishing between HH-settled customers whose network charges should be calculated on a site specific basis, and those whose network charges should be calculated on an aggregated basis. P300 supports DCP179 by proposing to create new Measurement Classes associated with HH aggregation under the BSC.

Proposer's proposed solution

P300 builds on the solution put forward under P280 and aligns to the requirements of DCP179. It proposes the following:

- To divide the current Measurement Class 'E' into three Measurement Classes (for HH Metering Systems that are not 100kW Metering Systems). It does this by renaming Measurement Class 'E' and introducing two new Measurement Classes for HH sites, which will be used for aggregated DUoS billing as follows:
 - rename Measurement Class 'E' to reflect that it is intended for non-domestic HH current transformer (CT) metered Metering Systems that have site specific DUoS billing and are not 100kW Metering Systems.
 - new Measurement Class 'F' for domestic HH CT and whole current (WC) Metering Systems that have aggregated DUoS billing and are not 100kW Metering Systems; and
 - new Measurement Class 'G' for non-domestic HH WC metered Metering Systems that have aggregated DUoS billing and are not 100kW Metering Systems.
- Mandate Suppliers in the BSC to use the new Measurement Classes, and may still use Measurement Class 'C' and the redefined Measurement Class 'E'.¹
- Measurement Classes 'F' and 'G' will use the same CCCs as Measurement Class 'E' be it for import or export customers.
- Mandate HHDA's to implement the changes and process the proposed amendments to the D0040 and D0298 'BM Unit Aggregated Half Hour Data File' data flows.
- Mandate LDSOs to specify which Standard Settlement Configuration (SSC) should be used to report aggregated HH data for each relevant Line Loss Factor (LLF) Class (LLFC), since the D0030 'Non Half Hourly DUoS Report' data flow requires consumption data to be reported against an SSC.
- Require the SVAA system to process the amended data flows and the mapping information in order to include the relevant data in the D0030 data flow that the LDSOs use for aggregated DUoS billing.
- Mandate that HHDCs must not send D0036 and D0275 data flows to LDSOs for the new Measurement Classes, but will instead be required to send a D0010 'Meter Readings' data flow, and allow the option for the Suppliers to receive the D0010 data flow instead of the D0036 and D0275 data flows.
- The Performance Level for Measurement Classes 'E', 'F' and 'G' will be 99% of energy settling on actual data at the First Reconciliation Settlement Run (R1) with subsequent Settlement Runs at 99%.

¹ However, DCP179 is seeking to mandate the use of the appropriate Measurement Class for DUoS billing purposes.

Workgroup's alternative solution

During its discussions on who should carry out the aggregation, the P300 Workgroup came up with an alternative solution. Under the alternative solution, the HHDA would receive information from Supplier Meter Registration Agents (SMRAs) on which LLFCs were applicable for aggregation. The HHDA would then aggregate the HH data before submitting the aggregated data to the Supplier and LDSO using two new data flows.

This means that the LDSO will have to process the data in their billing system to the appropriate times bands associated with each DUoS tariff instead of this activity being undertaken by the SVAA. The LDSO will send two new data flows, one to any embedded LDSOs within the host LDSOs network and one to the Supplier. Likewise Suppliers will have to process the new flows together with any validation they wish to undertake. Otherwise, the solution is the same as the proposed solution.

Implementation approach

Due to the interaction with DCP179, the Proposer is seeking a joint implementation approach; however, it is believed that this cannot be achieved. Whilst DCP179 is currently seeking to implement on 1 April 2015, the DCP179 Working Group is aware of the likely progression timescales for P300 and the previous responses for P280, which sought a 12-month lead time for industry to implement. However, it is expected that P300 can be implemented in November 2015. Whilst DCP179 can be implemented without P300, the full realisation of the benefits of DCP179 will require P300. To this end DCP179 is considering how the legal text can be drafted to cater for the potential six month delay.

ELEXON attends the DCP179 Working Group, so is able to provide that group with updates on the progression of P300 and will include the DCUSA Code Administrator on any relevant communications. We also provide updates to the Master Registration Agreement (MRA) Development Board (MDB) on the progression of P300 through our attendance at that meeting in regards to any consequential changes to the Data Transfer Catalogue (DTC).

3 Summary of Likely Impacts

Who is likely to be impacted by P300?

The **proposed solution** will impact the following participants in the BSC arrangements:

- **ELEXON**, who would need to amend the relevant BSC documentation and manage the implementation of P300.
- **BSC Agents** (specifically the SVAA):
 - The **BSC Application Management and Development (AMD) service provider** would need to design and implement the required changes to the SVAA systems, including receipt and validation of the relevant data flows from the HHDA's.
 - We anticipate that the **Business Process Outsourcing (BPO) service provider** would need to receive, enter, validate and send the relevant data flows.
 - In both cases, the relevant document changes and testing will be required.
- **Performance Assurance Reporting and Monitoring System (PARMS) AMD service provider** will need to include new data items in PARMS and the Supplier Charges application.
- **HHDA's**, who would need to amend systems to recognise the new Measurement Classes and be able to send the amended D0040 and D0298 data flows to the SVAA and the Supplier.
- **HHDC's**, who will need to send a D0010 alternative dataflow instead of the D0036 and D0275 to the LDSO and, if the Supplier requests this, to the Supplier.
- **HH Meter Operator Agents (HHMOAs)**, who will need to be able to process the new Measurement Classes within their systems.
- **Suppliers**, who will need to receive the revised D0040 and D0298 data flows if they have any Metering Systems registered to the new Measurement Classes. In addition, they will be impacted if they choose to specify the receipt of the D0010 alternative data flow instead of the D0036 and D0275 data flows.
- **LDSOs**, who will need to change the way they operate to send data to the SVAA and receive a D0010 alternative data flow instead of the D0036 and D0275. LDSOs may need to amend billing systems. In addition, depending upon when the change is implemented, all LDSOs may need to make mid-year re-submissions for their LLFs.
- **SMRAs**, who will need to ensure their systems can accept registrations to the new Measurement Classes and ensure that the associated LDSO SSCs aren't included.

The **alternative solution** would impact the following participants in the BSC arrangements:

- **ELEXON**, who would need to amend the relevant BSC documentation and manage the implementation of P300.

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- **PARMS AMD service provider** will need to include new data items in PARMS and the Supplier Charges application.
- **HHDA**, who would need to amend systems to recognise the new Measurement Classes and to send the new data flows to the Supplier and LDSO.
- **HHDC**, who will need to send a D0010 alternative data instead of the D0036 and D0275 to the LDSO and, if the Supplier requests this, the Supplier.
- **HHMOAs**, who will need to be able to process the new Measurement Classes within their systems.
- **Suppliers**, who will need to receive the new HHDA data flow if they have any Metering Systems registered to the new Measurement Classes. In addition, they will be impacted if they choose to specify the receipt of the D0010 alternative data flow instead of the D0036 and D0275. Furthermore, they will need to refer to the LDSO timebands contained in a new daily statement data flow.
- **LDSOs**, who will need to receive the D0010 alternative data flow instead of the D0036 and D0275 and receive new HHDA data flows. LDSOs may need to amend billing systems. In addition, they will need to send two new daily statement data flows, with embedded LDSOs receiving and processing a new daily statement data flow. Furthermore, depending upon when the change is implemented, all LDSOs may need to make mid-year re-submissions for their LLFs.
- **SMRAs**, who will need to provide the LLFC to the HHDA.

What else is likely to be impacted by P300?

Both the proposed and alternative solutions will require changes to:

- the BSC, particularly:
 - Section S 'Supplier Volume Allocation',
 - Section S Annex S-1 'Performance Levels and Supplier Charges',
 - Section S Annex S-2 'Supplier Volume Allocation Rules',
 - Section W 'Trading Disputes' and
 - Section X Annex X-2 'Technical Glossary';
- Code Subsidiary Documents, particularly:
 - BSCP501 'Supplier Meter Registration Service',
 - BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS',
 - BSCP503 'Half Hourly Data Aggregation for SVA Metering Systems Registered in SMRS',
 - BSCP509 'Changes to Market Domain Data',
 - BSCP533 'PARMS Data Provision, Reporting and Publication of Peer Comparison Data',
 - BSCP533 - Appendix A 'PARMS Data Provider File Formats'

- BSCP533 - Appendix B 'PARMS Calculation Guidelines',
- BSCP536 'Supplier Charges' and
- the SVA Data Catalogue; and
- the PARMS and the Supplier Charges application.

The proposed solution will also require changes to BSCP508 'Supplier Volume Allocation Agent' and the SVAA System Documentation.

For the purposes of this Impact Assessment, you should assume that the changes to the BSC and Configurable Items will be drafted by the Workgroup, consulted on and agreed by the Panel as part of the P300 progression process before the Modification is sent to the Authority for decision.

You can find a full list of the likely impacts in Section 5. Please highlight in your response if you believe there are any additional impacts not identified in this impact assessment.

What does this impact assessment seek?

This impact assessment seeks to identify the full impacts of the proposed solutions to P300. Where applicable, we seek separate information on the costs and lead time for all proposed solutions. Respondents to the industry impact assessment should respond using the accompanying form.

At this stage the Workgroup is not seeking your views on the pros or cons of P300, as these will be the subject of the Workgroup's subsequent Assessment Procedure Consultation.

4 Detailed Requirements

Solution requirements

The Workgroup has identified the following solution requirements for P300.

The proposed solution will consist of requirements 1-5 only. The alternative solution includes requirements 1, 2 and 5 and replaces requirements 3 and 4 with requirement 6. Requirements 3 and 4 are mutually exclusive with requirement 6.

Solution	Req. 1	Req. 2	Req. 3	Req. 4	Req. 5	Req. 6
Proposed Solution	✓	✓	✓	✓	✓	
Alternative Solution	✓	✓			✓	✓

Solution requirements for the proposed solution

The proposed solution will consist of the below Requirements 1-5 only.

Requirement 1	
The Balancing and Settlement Code (BSC) will split current Measurement Class 'E' into three Measurement Classes.	
1.1	The BSC will be modified to introduce new Measurement Class 'F' for domestic HH CT and WC Metering Systems that have aggregated DUoS billing and are not 100kW Metering Systems.
1.2	The BSC will be modified to introduce new Measurement Class 'G' for non-domestic HH WC metered Metering Systems that have aggregated DUoS billing and are not 100kW Metering Systems.
1.3	The BSC will be modified to amend the title of Measurement Class 'E' to reflect that it is intended for non-domestic HH CT metered Metering Systems that have site specific DUoS billing and are not 100kW Metering Systems.
1.4	SMRAs must ensure that their Supplier Metering Registration Service (SMRS) systems are capable of accepting new Measurement Classes.
1.5	Suppliers will have the option of utilising the new Measurement Classes. However, it is the intention of DCP179 to ensure that Suppliers register the Metering Systems in the appropriate Measurement Classes to have the benefit of the applicable DUoS tariffs.
1.6	HHDAAs, HHDCs and HHMOAs will need to be able to process the new Measurement Classes within their systems.
1.7	The standing data items in the Market Domain Data (MDD) database will be updated with the new Measurement Classes.

Requirement 2	
The BSC will be modified to reflect that Measurement Classes 'E', 'F' and 'G' will have the same CCCs and Performance Levels.	
2.1	The BSC will be modified to reflect that the six Import CCCs for Measurement Class 'E' and the six Export CCCs used for Measurement Classes 'C' and 'E' would also be used for Measurement Classes 'F' and 'G'.

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Requirement 2

2.2	The BSC will be modified to reflect that the Performance Level for Measurement Classes 'E', 'F' and 'G' will be settling 99% of energy on actual data at R1 with subsequent Settlement Runs at 99%.
2.3	The PARMS will report the performance of settled energy on actual data for Measurement Class 'E', 'F' and 'G' against PARMS Serial SP08c.
2.4	Supplier Charges will be amended in line with changes to Performance Levels.

Requirement 3

HHDAs must ensure that all impacted parties receive data for all Metering Systems.

3.1	The BSCCo will raise a DTC Change Proposal (CP) to amend the D0040 and D0298 data flows to include new record types for the new Measurement Classes. These new record types will be similar to the existing D0040 and D0298 data flows. However, the consumption will be broken down by the J0189 'Distributor Id' and J0147 'Line Loss Factor Class Id' data items in addition to the J0084 'Supplier Id', J0066 'GSP Group Id' and J0160 'Consumption Component Class Id' data items (please see appendix 1 for how this may be presented). Because the new record types introduced into the D0040 and D0298 data flows apply only to the new Measurement Classes, a Supplier who is not using them will receive the D0040 and D0298 data flows with no data for the new record types.
3.2	HHDAs must be able to submit data to the SVAA, should they be appointed to a Metering System that is registered to one of the new Measurement Classes, using the amended D0040 and D0298.
3.3	The SVAA must be able to receive the revised D0040 and D0298 data flows.

Requirement 4

The SVAA will aggregate data for Measurement Classes 'F' and 'G', processing the amended D0040 and D0298 data flows into the existing D0030 and D0314 'Non Half Hourly Embedded Network DUoS Report' data flows. (Please also see appendix 2).

4.1	Each LDSO should provide the SSC and Time Pattern Regimes (TPR) combinations for reporting each relevant LLFC, which LDSOs would fax or email to the SVAA. They should also provide a default SSC for reporting any consumption that comes in on other (unexpected) LLFCs (such as map all LLFCs to the unrestricted SSC 0393).
4.2	The SVAA must populate the data into a new data entry screen, which it will need to then validate.

Requirement 4

4.3	<p>The SVAA must perform the following processing for each combination of J0084, J0066 and J0160 data items that has HH data:</p> <ul style="list-style-type: none"> Look up the appropriate SSC from the new database table (if each LDSO has specified a default). Identify the TPR associated with the SSC, and the Period Time Pattern States associated with each TPR on that Settlement Day. (Period Time Pattern States are the flags indicating whether the TPR is treated as 'ON' or 'OFF' in each Settlement Period.) For each TPR, include a 'VMR' record, an 'SPX' record and a 'TOT' record in the output D0030 data flow: <ul style="list-style-type: none"> The VMR record will identify the J0189 and J0147 data items, plus the SSC from the lookup table, and the TPR. The PC will be reported as '0'. The EAC/AA data² and SPM Default EAC MSID Count will be '0'. The SPM Total EAC MSID Count and SPM Total AA MSID Count will be populated from the estimated and actual Data Aggregator HH MSID Counts provided by HHDAs on the new data flows (summing across all HHDAs and all relevant non-losses CCCs). The SPX record will report 46/48/50 HH consumption values. For periods where the TPR is 'ON', this will be the data provided by the HHDAs (summed across all HHDAs and all relevant CCCs). For periods where the TPR is 'OFF', this will be '0'. The TOT record will have the totals of the daily values on the SPX record. Map HH Counts from the revised D0040 and D0298 to the daily Counts in the D0030. <ul style="list-style-type: none"> If Sum of Count of Estimated CCC > 0 then Daily Count = 1, else 0. <p>Conversely if sum of Actual Count = no of periods in day the Daily Count = 1, else 0.</p>
4.4	The SVAA must report the HH Aggregated data on the D0030 data flow against PC '0'.
4.5	The SVAA will include the HH data for the new Measurement Classes in the existing D0030 and D0314 data flows (used to report NHH consumption to LDSOs), with no changes made to the structure of the data flows.
4.6	SMRAs will not include the SSCs for Metering Systems on the new Measurement Classes in SMRS.
4.7	PC '0' and any related data will not be added into MDD, which is consistent with current practice.

² EAC/AA data (i.e. SPM Total All EACs and SPM Total Annualised Advance Report Value fields) could potentially be populated with aggregated HH data (instead of set to zero) but these data items are defined as holding annualised EAC/AA data; putting daily totals into annualised fields would create a risk of misunderstanding and error. In any case the daily totals of aggregated data will be made available on the TOT record (in the Daily Profiled SPM Total EAC and Daily Profiled SPM Total Annualised Advance fields).

Requirement 5

The HHDC will provide the LDSO with Cumulative Register reads using the D0010 data flow rather than the D0036 and D0275 data flows for Metering Systems using the new Measurement Classes 'F' and 'G'.

5.1	HHDCs must send the D0010 data flow to the LDSO rather than the D0036 and D0275 data flows for Measurement Classes 'F' and 'G'. For the avoidance of doubt, the HHDC will continue to send the D0036 and D0275 data flows for Measurement Classes 'C' and 'E'.
5.2	The HHDC will still send the D0036 and D0275 data flows to the Supplier, but the Supplier may opt to receive the D0010 data flow instead for Metering Systems registered to Measurement Classes 'F' and 'G' Metering Systems.
5.3	For the avoidance of doubt, the HHDC will still send the D0036 data flow, and not the D0010 data flow, to the HHDA.
5.4	HHDCs must send the D0010 data flow for Measurement Classes 'F' and 'G' on either a monthly or quarterly basis (yet to be determined by the P300 Workgroup). Suppliers will still receive all relevant D0010s as per the current process, but these may be more frequent.
5.5	The applicable BSCPs will be amended to reflect that a Supplier has the option to specify whether to receive the D0010 data flow, or the D0036 and D0275 data flows.
5.6	If a Supplier wishes to receive the D0010 data flow rather than the D0036 and D0275 data flows, then the Supplier must inform the HHDC of the number of registers and associated times.
5.7	If the Supplier has specified the D0010 data flow, then the HHDC must send the D0010 data flow rather than the D0036 and D0275 data flows for Measurement Classes 'F' and 'G' to the Supplier.
5.8	Suppliers can validate to ensure that they don't receive site-specific invoices for Measurement Classes 'F' and 'G' Metering Systems, though this is not a mandatory requirement that would be imposed by implementation of P300.

Solution requirements for the alternative solution

The alternative solution will consist of requirements 1, 2 and 5 above supplemented with the below Requirement 6.

Requirement 6

HHDA rather than the SVAA will aggregate the HH data for Measurement Classes 'F' and 'G'.

6.1	The SMRA must inform HHDA of applicable LLFCs that require aggregation using the D0209 'Instruction(s) to Non Half Hourly or Half Hourly Data Aggregator' data flow.
6.2	HHDA must perform a separate aggregation for Metered Consumption and Export, but not the Losses component. This will be by Supplier, Distributor, GSP Group and LLFC and likely to be similar to requirement 4.3 above.
6.3	HHDA must add up the Import and Export that relate to each embedded distribution network in each GSP Group. This will be summed per Distributor ID per LLFC ID per GSP Group ID.
6.4	HHDA must send the aggregated HH data to the Supplier and LDSO using the two new Dxxxx and Dyyyy data flows, which will be based on the D0030 and

Requirement 6	
	D0314 data flows respectively. The Dyyyy will be populated from the calculation under requirement 6.3.
6.5	LDSOs and Suppliers must be able to receive and process the new Dxxxx Data Flow.
6.6	LDSOs must be able to receive and process the new Dyyyy data flow.
6.7	In response to the new Dxxxx data flow, the LDSO will send the new Daaaa data flow, which will be based on the D0242 'Supercustomer DUoS Daily Statement' data flow, to the Supplier.
6.8	In response to the new Dyyyy data flow, the host LDSO will send the new Dbbbb data flow, which will be based on the D0315 'Embedded Network Supercustomer DUoS Daily Statement' data flow, to any embedded LDSOs on its network.

Impact on BSC Parties and Party Agents

Party/Party Agent	Impact
Suppliers	<p>Under the proposed and alternative solutions:</p> <ul style="list-style-type: none"> The Supplier will have the option of receiving billing based upon aggregated and site specific data. In the case of gaining a site that is utilising one of the new Measurement Classes, the Supplier will need to either re-register it (fulfilling any other requirements associated with that Measurement Class, such as ensuring applicable Metering Equipment installed appropriate to the Measurement Class) or amend its systems to accept the appointment. If the Supplier wishes to receive the D0010 rather than the D0036 and D0275, then the Supplier will need processes for informing the HHDC. The Supplier may wish to validate its DUoS bills to ensure that it doesn't receive site-specific invoices for Measurement Class 'G' and 'F' Metering Systems. <p>Under the alternative solution, the Supplier will need to ensure that it can receive the new data flows.</p>
LDSOs	<p>Under the proposed and alternative solutions, LDSOs will need to change the way they operate and may need to amend billing systems. This may require new LLFCs and associated LLFs. In addition, depending upon when the change is implemented, all LDSOs may need to make mid-year re-submissions for their LLFs.</p> <p>Under the alternative solution, the LDSO will need to send and receive new data flows.</p>
SMRAs	<p>Under the proposed solution, the SMRAs will need to ensure that the SSC for Metering Systems using the new Measurement Classes are not populated in SMRS.</p> <p>Under the alternative solution, the SMRAs will need to inform HHDA's of the applicable LLFCs that require aggregation for DUoS billing.</p>
HHDA's	<p>Under the proposed solution, HHDA's will need to change the way they generate aggregated data for submission to the SVAA.</p> <p>Under the alternative solution, HHDA's will need to process and send aggregated data for HH Metering Systems to the Supplier and LDSO.</p>
HHDCs	<p>Under the proposed and alternative solution, HHDCs will need to change what data flows they send to LDSOs, as well as to Suppliers where these have opted for such.</p>
HHMOAs	<p>Under the proposed and alternative solution, HHMOAs will need to be able to process the new Measurement Classes within their systems.</p>

Impact on Transmission Company

No impact.

Impact on BSCCo

Area of ELEXON	Impact
Market Domain Data (MDD)	Under the proposed and alternative solutions, add new valid values to MDD and process MDD Change Requests to enter the new Measurement Classes into MDD.
LLFs	Under the proposed and alternative solutions, and depending upon the timing of the change, there will potentially be a need to process mid-year re-submissions for LDSOs LLFs.
Change Implementation	Under the proposed and alternative solutions, BSCCo will implement document and system changes, including updating guidance notes.

Impact on BSC Systems and process

BSC System/Process	Impact
SVAA	The proposed solution will need to introduce system changes to aggregate data. There will be no impact from the alternative solution.

Impact on Code

Code Section	Impact
Section S	Under the proposed and alternative solutions, reference revised data collection and provision requirements.
Section S Annex S-1	Under the proposed and alternative solutions, reference performance levels for the new Measurement Classes and any changes to Supplier Charges.
Section S Annex S-2	Under the proposed and alternative solutions, changes are required to implement the solution.
Section W	Under the proposed and alternative solutions, reference the new Measurement Classes and show which classes are relevant for NHH Trading Disputes.
Section X Annex X-2	Under the proposed and alternative solutions, reference the new Measurement Classes and applicable CCCs.

Impact on Code Subsidiary Documents

CSD	Impact
BSCP501	Under the proposed and alternative solutions, capture changes in respect to SMRS.

Impact on Code Subsidiary Documents	
CSD	Impact
BSCP502	Under the proposed and alternative solutions, capture changes in respect to HHDC.
BSCP503	Under the proposed and alternative solutions, capture changes in respect to HHDA's. For the alternative solution, this will be to reflect that the HHDA's will report consumption to LDSOs on an aggregated basis.
BSCP508	Under the proposed solution, this BSCP will need to reflect the reporting of consumption to LDSOs on an aggregated basis.
BSCP533	Under the proposed and alternative solutions, amend the Performance Level for Measurement Class 'E' and include Measurement Classes 'F' and 'G' in PARMS serial SP08c for PARMS reporting.
BSCP533 Appendix A	
BSCP533 Appendix B	
BSCP536	Under the proposed and alternative solutions this BSCP will need to reflect changes to Supplier Charges.
SVA Data Catalogue	If P300 is approved, ELEXON will develop and consult on the necessary redlined changes as part of the implementation project to reflect any changes under the DTC.

Impact on other Configurable Items	
Configurable Item	Impact
PARMS User Requirement Specification	Under the proposed and alternative solutions, amend the Performance Level for Measurement Class 'E' and include Measurement Classes 'F' and 'G' in PARMS serial SP08c for PARMS reporting and Supplier Charges.

Impact on Core Industry Documents and other documents	
Document	Impact
Distribution Connection and Use of System Agreement	As per DCP179
Master Registration Agreement	Amendments to certain data flows under the DTC

Appendix 1: Proposed Revisions to Data Flows for Req. 3

The following data flows have not undergone the MRA DTC change process and therefore will be subject to change.

D0040 Revised

Flow Name:	Aggregated Half Hour Data File
Flow Description:	Aggregated line loss adjusted HH consumption figures by Supplier and GSP Group. Where this flow is intended for the Supplier, the set of Suppliers will be limited to that Supplier only.
Flow Ownership:	BSC

From	To	Version
HHDA	Supplier	3.0
HHDA	SVAA	6.0

Data Items:

Reference	Item Name
J0185	Aggregated Supplier Consumption
J0186	Aggregated Supplier Line Loss
J0160	Consumption Component Class Id
J0241	Data Aggregator HH MSID Count
J0189	Distribution Id
J1104	GSP Group
J0147	Line Loss Factor Class Id
J1087	Run Number
J1086	Run Type Code
J0146	Settlement Code
J0073	Settlement Date
J0074	Settlement Period Id
J0084	Supplier Id

Flow Structure:

Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
ZPD	Data File Additional Header	1		G	1							Settlement Date
					1							Settlement Code
					1							Run Type Code
					1							Run Number
					1							GSP Group
SUP	Supplier	0-*		G	1							Supplier Id
CCC	Consumption Component Class	0-*			G							
						1						Consumption Component Class Id

J0147	<u>Line Loss Factor Class Id</u>
J1087	Run Number
J1086	Run Type Code
J0146	Settlement Code
J0073	Settlement Date
J0074	Settlement Period Id
J0084	Supplier Id

Flow Structure:

Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
ZPD	Data File Additional Header	1		G								
					1							Settlement Date
					1							Settlement Code
					1							Run Type Code
					1							Run Number
					1							GSP Group
SUP	Supplier	1-*		G								
					1							Supplier Id
BMU	BM Unit	1-*		G								
						1						BM Unit Id
CCC	Consumption Component Class	0-*				G						
							1					Consumption Component Class Id
<u>XXX</u>	<u>New Group XXX</u>		<u>If Consumption</u>				G					
								1				<u>Distribution Id</u>
								1				<u>Line Loss Factor Class Id</u>
								1				<u>Settlement Period Id</u>
								1				<u>Data Aggregator HH MSID Count</u>
								1				<u>Aggregated Supplier Consumption</u>
<u>YYY</u>	<u>New Group YYY</u>		<u>If Line Loss</u>				G					
								1				<u>Distribution Id</u>
								1				<u>Line Loss Factor Class Id</u>
								1				<u>Settlement Period Id</u>
								1				<u>Data Aggregator HH MSID Count</u>
								1				<u>Aggregated Supplier Consumption</u>
SET	Settlement Period / Data Aggregator HH MSID Count	0-*					G					
								1				Settlement Period Id
								1				Data Aggregator HH MSID Count
ABE	Aggregated BM Unit Energy	1	If consumption or generation					G				
									1			Aggregated BM Unit Energy
ABL	Aggregated BM Unit Line Losses	1	If Line Loss					G				
									1			<u>Distribution id</u>
									1			<u>Line Loss Factor Class Id</u>
									1			Aggregated BM Unit Line Losses

Appendix 2: Examples and Clarifications for Req. 4

It could be that the LDSO uses a billing system that assumes no link between tariff and SSC (and bills Suppliers using the profiled Half Hourly data on the SPX record of the D0030 data flow). In this case it would not matter which SSC the consumption was reported against, and the LDSO could submit a single row of standing data instructing the SVAA to report all aggregated HH data against a dummy SSC (such as the unrestricted SSC 0393):

Input LLFC		Effective Date	Output SSC
LDSO	LLFC		
XXXX		01-10-2013	0393

Alternatively, the LDSO may use a billing system that assumes a link between the DUoS tariff time bands and the SSC selected by the Supplier (because it bills Suppliers using data aggregated to time band level on the VMR record of the D0030 data flow). In this case the LDSO would need the SVAA to aggregate the HH data for each LLFC into appropriate time bands. The LDSO would enable this by specifying an appropriate SSC for each LLFC in the standing data provided to the SVAA:

Input LLFC		Effective Date	Output SSC
Distributor Id	LLFC		
XXXX	200	01-10-2013	0393
XXXX	201	01-10-2013	0154
XXXX	400	01-10-2013	0393
XXXX	401	01-10-2013	0154
XXXX		01-10-2013	0154

In the above example, the LDSO has specified SSC 0154 for LLFCs 201 and 401 because the TPRs of SSC 0154 (that is 23:30-06:30 and 06:30-23:30) match its billing requirements. The standing data tells the SVAA to produce a D0030 data flow that (for these LLFCs) contains separate VMR records for each TPR:

- VMR records for TPR 00039 will contain the total consumption for time band 23:30-06:30; and
- VMR records for TPR 00221 will contain the total consumption for time band 06:30-23:30.

LLFCs 200 and 400 are associated with the unrestricted SSC 0393, and so data for these LLFCs will be reported against the single unrestricted TPR 00001. The row with no LLFC specified is a default, and indicates that any consumption on 'unexpected' LLFCs (for Measurement Classes 'F' and 'G') should also be reported against SSC 0154.

The LDSOs would have the option to specify a unique SSC ID to the LLFC ID associated with each of the new Measurement Classes. This would facilitate the SVAA system aggregating the daily HH data into the number of time periods defined by the SSC.

The SSC chosen by the LDSO for reporting purposes will be a clock time SSC with switching times on HH boundaries. Note that this restriction only applies to how the data is

aggregated for reporting on the D0030 data flow. Suppliers are still free to use SSCs with switching times in GMT or not on HH boundaries.

The SVAA system will be amended to include a new database table that holds the mapping from LLFC to SSC. This will be populated via manual data entry. BSCP508 will be amended to include a paper form, which LDSOs would fax or email to the SVAA. The SVAA would then type the data into a new data entry screen.

Appendix 3: Proposed Revisions to Data Flows for Req. 6

The following data flows have not undergone the MRA DTC change process and therefore will be subject to change.

New data flow Dxxxx

Flow Reference: DXXXX

Flow Version: 001

Status: Operational

Flow Name:	Aggregated Half Hourly DUoS Report
Flow Description:	A report of aggregated HH consumption per Supplier for Line Loss Factor Class Ids that relate to HH Supercustomer billing. The Distributor will receive one report per Supplier. In part two where the information is sent to the Distributor it will contain all Suppliers, whereas where the information is sent to the Supplier it will contain only data pertaining to that Supplier.
Flow Ownership:	BSC

From	To	Version
HHDA	Distributor	0.1
HHDA	Supplier	0.1

Data Items:

Reference	Item Name
J0020	Actual/Estimated Indicator
J0244	BSC Trading Party Id
J0160	Consumption Component Class Id
Jcccc	Daily Supplier Aggregated HH DUoS Consumption
J0189	Distributor Id
J0323	Distributor Name
J0066	GSP Group Id
J0269	GSP Group Name
J0147	Line Loss Factor Class Id
J0103	Measurement Quantity Id
J0164	Metered/Unmetered Indicator
J0146	Settlement Code
J0073	Settlement Date
J0074	Settlement Period Id
J0084	Supplier Id
J0248	Supplier Name
Jaaaa	Total Supplier Aggregated HH DUoS Consumption
Jbbbb	Total Supplier Aggregated HH DUoS MSID Count

Flow Structure:

Group	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
	1		G								
				1							Settlement Date
				1							Settlement Code
SUP	1	If Report is for Supplier	G								
				1							Supplier Id
				1							Supplier Name
				1							BSC Trading Party Id
DIS	0-*		G								
					1						Distributor Id
					1						Distributor Name
GPI	0-*				G						
						1					GSP Group Id
						1					GSP Group Name
	0-*				G						
							1				Line Loss Factor Class Id
							1				Actual/Estimated Indicator
							1				Metered/Unmetered Indicator
							1				Measurement Quantity Id
	0-*						G				
								1			Settlement Period Id
								1			Total Supplier Aggregated HH DUoS Consumption
								1			Total Supplier Aggregated HH DUoS MSID Count
TOT	1						G				
								1			Daily Supplier Aggregated HH DUoS Consumption
SUP	0-*	If Report is for Distributor	G								
				1							Supplier Id
				1							Supplier Name
				1							BSC Trading Party Id
DIS	1		G								
					1						Distributor Id
					1						Distributor Name
GPI	0-*				G						
						1					GSP Group Id
						1					GSP Group Name
	0-*				G						
							1				Line Loss Factor Class Id
							1				Actual/Estimated Indicator
							1				Metered/Unmetered Indicator
							1				Measurement Quantity Id
	0-*						G				
								1			Settlement Period Id
								1			Total Supplier Aggregated HH DUoS Consumption
								1			Total Supplier Aggregated HH DUoS MSID Count
TOT	1						G				
								1			Daily Supplier Aggregated HH DUoS Consumption

New data flow Dyyyy

Flow Reference: **Dyyyy**

Flow Version: **001**

Status: Operational

Flow Name:	Aggregated Half Hourly Embedded Network DUoS Report
Flow Description:	A report of aggregated a. HH consumption per IDNO for Line Loss Factor Class Ids that relate to HH Supercustomer billing This report is sent to Host LDSOs (as defined in BSC Procedure BSCP128), and includes data for all embedded networks within their distribution services area.
Flow Ownership:	BSC

From	To	Version
HHDA	Distributor	10.1

Data Items:

Reference	Item Name
Jcccc	Daily Aggregated HH DUoS Consumption
J0189	Distributor Id
J0323	Distributor Name
J1724	Embedded Distributor Id
J1741	Embedded Distributor Name
J0066	GSP Group Id
J0269	GSP Group Name
J0147	Line Loss Factor Class Id
J0103	Measurement Quantity Id
J0164	Metered/Unmetered Indicator
J0146	Settlement Code
J0073	Settlement Date
J0074	Settlement Period Id
Jaaaa	Aggregated HH DUoS Consumption
Jbbbb	Aggregated HH DUoS MSID Count

Flow Structure:

Group	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
ZPD	1		G								
				1							Settlement Date
				1							Settlement Code
84G	0-*		G								
				1							Embedded Distributor Id
				1							Embedded Distributor Name
DIS	1			G							
					1						Distributor Id
					1						Distributor Name
GPI	0-*				G						
						1					GSP Group Id
						1					GSP Group Name

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85G	0-*					G						
							1					Line Loss Factor Class Id
							1					Actual/Estimated Indicator
							1					Metered/Unmetered Indicator
							1					Measurement Quantity Id
XXX	0-*					G						
							1					Settlement Period Id
							1					Aggregated HH DUoS Consumption
							1					Aggregated HH DUoS MSID Count
TOT	1					G						
							1					Daily Aggregated HH DUoS Consumption

Notes:	<p>The references to Embedded Distributor Id in Group 84G should be populated with the Distributor identified as operating the relevant sub-network i.e. having the relationship with the Supplier for the Metering Point(s).</p> <p>In all other instances, the Distributor should be populated as that operating as the Host LDSO (as defined in the BSC Procedure BSCP128).</p>
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Version History:

Catalogue release change takes effect	CP No.	Brief description of the change and its reason

New data flows Daaaa and Dbbbb

Requirement 6 will also require two additional new daily statement data flows, which the LDSO will send. The Daaaa 'Aggregated HH Supercustomer DUoS Daily Statement' will be sent by the LDSO to the Supplier and will be based on the D0242. The Dbbbb 'Embedded Network HH Aggregated Supercustomer DUoS Daily Statement', which the host LDSO will send to any LDSOs embedded on its network, will be based on the D0315.

These two new data flows will be populated from the Dxxxx and Dyyyy, so will likely include the new data items from those flows. These may also include a 'distributor time band', which will be equivalent to the TPR, to define the three time bands associated with the tariffs, and which may require an equivalent 'distributor SSC'. These data flows may require time band unit count' (instead of the 'settlement class unit count') and 'time band unit charge' data items. In addition, it is unlikely that the new data flows will include the PC, SSR Run Number, SSC, Statement Total MSID Count and TPR.

Appendix 4: Glossary & References

Glossary of defined terms

Acronyms and other defined terms used in this document are listed in the table below.

Glossary of Defined Terms	
Acronym	Definition
AMD	BSC Application Management and Development
BSC	Balancing and Settlement Code
BSCCo	BSC Company
BPO	Business Process Outsourcing
CCC	Consumption Component Class
CP	Change Proposal
CT	Current Transformer
CDCM	Common Distribution Charging Methodology
DCMF	Distribution Charging Methodologies Forum
DCP	DCUSA CP
DCUSA	Distribution Connection and Use of System Agreement
DTC	Data Transfer Catalogue
DUoS	Distribution UoS
HH	Half Hourly
HHDA	HH Data Aggregator
HHDC	HH Data Collector
HHMOA	HH Meter Operator Agent
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
LLFC	LLF Class
MDB	MRA Development Board
MDD	Market Domain Data
MRA	Master Registration Data
MSID	Metering System ID
NHH	Non Half Hourly
PARMS	Performance Assurance Reporting and Monitoring System
PC	Profile Class
R1	First Reconciliation Settlement Run
SSC	Standard Settlement Configurtaiion
SME	Small and Medium Enterprise
SMRA	Supplier Meter Registration Agent

Glossary of Defined Terms	
Acronym	Definition
SMRS	Supplier Meter Registration Service
SP08c	PARMS Serial SP08c Percentage of non-mandatory HH Energy Settled on Actual Readings
SVAA	Supplier Volume Allocation Agent
TPR	Time Pattern Regime
UoS	Use of System
WC	Whole Current

DTC data flows and data items

DTC data flows and data items referenced in this document are listed in the table below.

DTC Data Flows and Data Items	
Number	Name
D0010	Meter Readings
D0030	Non Half Hourly DUoS Report
D0036	Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix
D0040	Aggregated Half Hour Data File
D0209	Instruction(s) to Non Half Hourly or Half Hourly Data Aggregator
D0242	Supercustomer DUoS Daily Statement
D0275	Validated Half Hourly Advances
D0298	BM Unit Aggregated Half Hour Data File
D0314	Non Half Hourly Embedded Network DUoS Report
D0315	Embedded Network Supercustomer DUoS Daily Statement
J0066	GSP Group Id
J0084	Supplier Id
J0147	Line Loss Factor Class Id
J0160	Consumption Component Class Id
J0189	Distributor Id

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
1, 4	DCP179	http://www.dcusa.co.uk/Public/CP.aspx?id=201

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External Links		
Page(s)	Description	URL
1, 3	Rejected Modification P280	http://www.elexon.co.uk/mod-proposal/p280-introduction-of-new-measurement-classes/
3	DCP103 'DUoS Charges for sub 100kw HH settled sites'	http://www.dcusa.co.uk/public/cp.aspx?id=123
3	directed the Panel to consult again on the Implementation Date	https://www.ofgem.gov.uk/publications-and-updates/balancing-and-settlement-code-bsc-p272-direction-bsc-panel-consult-revised-implementation-date-p272
4	DCP151 'HH Aggregated tariffs'	http://www.dcusa.co.uk/Public/CP.aspx?id=161
4	P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'	http://www.elexon.co.uk/mod-proposal/p272-mandatory-half-hourly-settlement-for-profile-classes-5-8/