Final Modification Report

P348 'Provision of gross BM Unit data for TNUoS charging'

P348 seeks to enable the Supplier Volume Allocation Agent to provide export and import data to the Transmission Company to support proposed revisions to the Transmission Network Use of System Charging methods under Connection Use of System Code Modification Proposal 265.

The BSC Panel recommends **contingent approval** of P348 Proposed and Alternative Modifications

This Modification is expected to impact:

- Suppliers
- Half Hourly Data Aggregators
- ELEXON
- Supplier Volume Allocation Agent (SVAA)
- The Transmission Company

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Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

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About This Document

This is the P348 Final Modification Report, which ELEXON has submitted to the Authority on behalf of the BSC Panel. It includes a summary of the Workgroup's assessment, the Panel's full views and the responses to both the Workgroup's Assessment Consultations and the Panel's Report Phase Consultation. The Authority will consider this report and will decide whether to approve or reject P348.

There are six parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the draft redlined changes to the BSC for P348 Proposed Modification (Option 2).
- Attachment B contains the draft redlined changes to the BSC for P348 Alternative Modification (Option 1).
- Attachment C contains the full responses received to the Workgroup's first Assessment Procedure Consultation.

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- Attachment D contains the full responses received to the Workgroup's second Assessment Procedure Consultation.
- Attachment E contains the full responses received to the Panel's Report Phase Consultation.

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1 Summary

Why Change?

Connection Use of System Code (CUSC) Modification Proposal (CMP) 265 'Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market' looks to amend the residual element of the Transmission Network Use of System (TNUoS) demand tariff. This is to mitigate arbitrary and discriminatory TNUoS embedded benefits currently available to exemptible generation connected within Distribution Systems.

In order for the Transmission Company to calculate TNUoS charges in accordance with the prospective requirements of CMP265, a change is required to the BSC to enable ELEXON (as the Balancing and Settlement Code (BSC) Company (BSCCo)) to provide sufficient data to the Transmission Company. Therefore, if the Authority approves CMP265 a BSC Modification is required to enable the delivery of the CMP265 solution.

Solution

This Modification seeks to facilitate the implementation of CMP265. P348 will ensure that the Transmission Company receives the data it requires to calculate indicative and actual TNUoS charges based on the requirements introduced under CMP265.

Impacts & Costs

Option 1 will impact Suppliers, Half Hourly Data Aggregators (HHDAs) and the Transmission Company, while Option 2 will impact Suppliers and Transmission Company. Changes will be required to the Supplier Volume Allocation Agent (SVAA) systems, with central costs of approximately £173k for Option 1 or £117k for Option 2. The respondents to the second Assessment Consultation highlighted that there will be costs associated with developing systems changes and new processes.

Implementation

P348 Proposed Modification and P348 Alternative Modification are targeted for implementation on **22 February 2018** as part of the February 2018 BSC Systems Release.

Recommendation

The Panel agreed to adopt **contingent recommendations** as they recognised the Authority's request to have the BSC options and the CUSC options at the same time for decision. For further details please see section 11 of this paper.

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2 Why Change?

What are TNUoS Charges?

TNUoS charges are used to recover the cost of providing and maintaining shared (or potentially shared) electricity transmission assets (meaning assets that cannot be solely attributed to a single user).

TNUoS charges are recovered from all generation and demand users of the GB electricity Transmission System as required under the CUSC. These charges vary by location, reflecting the costs that users impose on the transmission network to transport their electricity.

What are embedded generation benefits?

Embedded generation is the production of electricity from power stations that are connected to a Distribution System. The Distribution Systems carry electricity from the Transmission System and embedded Generators to homes and businesses.

The main TNUoS embedded benefits are available under other industry arrangements (e.g. TNUoS). However, the ability to secure these benefits depends on a combination of the CUSC arrangements and the trading options adopted by the Embedded Exemptible Generator under the BSC.

Further information on embedded generation benefits can be found in our embedded generation guidance note.

Related Modifications

CMP265

EDF Energy raised CMP265 'Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market'.

CMP265 seeks to amend the residual element of the TNUoS demand tariff to mitigate arbitrary and discriminatory TNUoS embedded benefits currently available to exemptible generation connected within Distribution Systems.

The CMP265 Proposer contends that under the current BSC and CUSC rules, generation that is licence exemptible and connected to a Distribution System reduces the aggregate net import demand or creates an export for the Generator or Supplier who registers the boundary flow. This reduction either:

- reduces the liability of the registering Supplier to TNUoS charges, a benefit which can be shared with the Generator; or
- if registered to a Generator in its own right, can deliver a TNUoS charge credit benefit directly to the Generator.

This is mostly apparent for controllable Embedded Generators that run at peak times due to the structure of the TNUoS charge. These Generators are most likely to secure the majority of the avoided residual charge. It is these controllable embedded Generators that are also able to compete in the Capacity Market (CM) and run at similar times.

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The defect under CMP265 therefore lies in this unwarranted distortion of CM tenders. The charging treatment of these Generators is not reasonably reflecting Transmission Network costs and therefore fails against the objectives of the Transmission charging methodology. The implication of this is that it distorts competition in generation. CMP265 therefore specifically focuses on Embedded Generator Capacity Providers.

CMP264 & P349

ScottishPower raised P349 'Facilitating Embedded Generation Triad Avoidance Standstill' on 4 July 2016.

This Modification seeks to facilitate the delivery of CMP264 'Embedded Generation Triad Avoidance Standstill'. The implementation of CMP264 requires both Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA) metered data for New Embedded Generators to be provided to the Transmission Company to allow it to calculate Transmission Charges in accordance with CMP264.

CMP264 seeks to limit the detriment of a continued lack of level playing field between New Embedded Generators and other generation plant by suspending access to TRIAD avoidance for New Embedded Generators until Ofgem has completed its consideration of associated issues.

The suspension will be achieved by removing the netting of output from New Embedded Generators when calculating their demand volumes for use in the setting of tariffs for Suppliers in the Transport and Tariff model and for actual billing. As the Supplier will no longer benefit from netting the output from these Generators there will be no "TRIAD avoidance" to share with the Embedded Generator.

It was initially intended that the changes to the Transmission charging methodology proposed by CMP264 would be temporary and that no enduring difference of treatment between new and existing generation will be created. However, Ofgem stated in its open letter published on 29 July 2016, that there will be no Significant Code Review (SCR) for this defect. This means that, should P349 be approved by the Authority it will be an enduring solution.

Joint Working Groups

In order to ensure that P348 and P349 are progressed efficiently we recommended to the Panel that both Modifications be progressed to the same timetable and with the same Workgroup. Therefore, some of the information considered by the Workgroup will relate to both Modifications.

What is the issue?

In order for the Transmission Company to calculate TNUoS charges in accordance with the prospective requirements of CMP265, a change is required to the BSC to enable Suppliers (e.g. via ELEXON (as BSCCo)) to provide metered data to the Transmission Company.

Therefore, if the Authority approves CMP265 a BSC Modification will be required to enable the delivery of the CMP265 solution.

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3 Solution

Proposed solution

EDF raised P348 'Provision of gross BM Unit data for TNUoS charging' on 1 July 2016. P348 seeks to facilitate the implementation of CMP265. P348 will ensure that the Transmission Company receives the data it requires to calculate indicative and actual TNUoS charges based on the requirements introduced under CMP265.

ScottishPower raised P349 'Facilitating Embedded Generation Triad Avoidance Standstill' on 4 July 2016. P349 seeks to facilitate the delivery of CMP264. The implementation of CMP264 requires both SVA and CVA metered data for New Embedded Generators to be provided to the Transmission Company to allow it to calculate Transmission Charges in accordance with CMP264.

As such the original defects and proposed solutions described by P348 and P349 were specific to their corresponding CUSC Modification Proposal.

P348 originally sought to report Gross Demand and Gross Export specifically for sites considered to be Embedded Generation Capacity Mechanism Units. P349 sought to report on Gross Export specifically from New Embedded Generators.

Over time the overall reporting requirements for the original CMP264 and CMP265 proposals and the subsequent Workgroup Alternative CUSC Modifications (WACMs) converged. Consequently the P348 and P349 Workgroup considered developing common solutions i.e. that were not specific to P348 or P349 but would facilitate any of the CUSC options.

In summary, the overall data reporting requirements for the 43 CUSC options are:

- **Group 1** – facilitates CMP264 Original and CMP265 Original
  - 'Gross' Demand – i.e. Net sum of SVA HH settled Active Import and Grandfathered Embedded Export (see below)
  - Affected Embedded Export – i.e. SVA HH settled Active Export for specific Metering Systems defined in the CUSC as Affected Embedded Export
- **Group 2** – facilitates CMP264 WACMs 1-11 and CMP265 WACMs 1-11
  - Gross Demand – i.e. Gross sum of all SVA HH settled Active Import
  - Embedded Export – i.e. Gross sum of all SVA HH settled Active Export
- **Group 3** - facilitates CMP264 WACMs 12-23 and CMP265 WACMs 12-18
  - Gross Demand – as above
  - Affected Embedded Export – as above
  - Grandfathered Embedded Export – i.e. SVA HH settled Active Export for specific Metering Systems defined in the CUSC as Grandfathered Embedded Export

For the avoidance of doubt, the categories of Grandfathered Export and Affected Export are mutually exclusive and exhaustive (with respect to total Embedded Export).

In practice, the requirements in Group 1 can be achieved by delivering Group 3. That is, Gross Demand and Grandfathered Embedded Export can be combined to calculate 'Gross'

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Demand. National Grid confirmed that any solution under P348 and P349 should report Group 3.

Based on the reporting requirements described above, ELEXON and the P348 and P349 Workgroup developed the following BSC solution options:

- **Option 1** – Centralised DA (P348 Alternative Modification)
    - SVAA calculates values of Affected and Grandfathered Export Volumes by aggregating individual Metering System Metered Data sent to it by HHDAs. This approach would centralise the aggregation of metered data within a single BSC Agent. The centralised aggregation would be performed in parallel to the SVAA's existing Settlement function.
    - This option could satisfy all CUSC requirements described above.
- **Option 2** – Simple SVAA (P348 Proposed Modification and P349 Proposed Modification)
    - Certain CUSC proposals only require that the Transmission Company is sent gross HH embedded export and gross HH demand associated to individual Supplier Balancing Mechanism Units (BMUs). These values can be simply calculated using existing Settlement Data and processes.
    - This option would satisfy CUSC requirements in Group 2 (page 7) only – i.e. CMP264 WACMs 1-11 and CMP265 WACMs 1-11.
- **Option 3** - Existing registration processes (P349 Alternative Modification)
    - Rather than create new parallel processes for SVAA to perform, this option introduces new Measurement Classes and Consumption Component Class (CCC) IDs so that existing registration and Settlement processes can be used to identify and aggregate existing Settlement Data to calculate values of Affected and Grandfathered Export Volumes.
    - This option could satisfy all CUSC requirements described.

The Proposers of P348 and P349 agreed to adopt Option 2 as the Proposed Modification for both P348 and P349 and the Workgroup unanimously agreed to raise Option 1 as the P348 Alternative Modification and Option 3 as the P349 Alternative Modification.

ELEXON is currently in the process of raising Data Transfer Catalogue (DTC) Change Proposals[1] to create new DTC data flows for Option 1 and to modify an existing flow for Option 3.

Questions on the three options

Appendix 1 describes the three solutions in more detail, by outlining the specific business requirements for each option.

Interface from Supplier to SVAA under Option 1

Option 1 requires Suppliers to provide the SVAA with details of which Export Metering Systems are affected and which are Grandfathered, and keep this information updated

[1] Changes to the DTC are governed by the Master Registration Agreement (MRA).

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(see requirement 1.2 in Appendix 1). The Workgroup envisages that Suppliers will provide this to SVAA using a new data flow over the Data Transfer Network (DTN).

This raises the question of which Supplier should be responsible for updating SVAA on Change of Supplier. Should the losing Supplier be required to do so? Or can it be left to the new Supplier to provide updated information to SVAA?

It also raises the question of how SVAA should notify Suppliers of errors in the data (e.g. if the Supplier has provided data for a Metering System registered by another Supplier). Would a manual process for SVAA to notify the Supplier of the issue suffice, or would another DTN flow be required?

The respondents to the second Assessment Procedure Consultation responded to the question on "Which Supplier (losing, gaining or both) should be required to notify SVAA of a change of Supplier under Option 1." One respondent noted that the both losing and gaining Suppliers should be required to notify SAA of a change of Supplier. Another respondent believed that a Supplier should not be obligated to notify SAA because the activity should be managed by a central system. Two respondents noted that the obligation should be on the gaining Supplier, which is usually responsible for notifying the wider market of any change in Supplier registration. The Workgroup agree with the latter suggestion.

A Workgroup member noted that even if there is a change of Supplier, the Metering System ID (MSID) should still be traceable unless there is a disconnection with the system.

Another Workgroup member noted a concern from one of the respondents to the second Assessment Procedure Consultation. The respondent highlighted that there should be greater controls and possibly a disputes process in place for registering, amending or ending a registration for the purposes of P348 and P349. That is to ensure it is clear who is responsible for maintaining records and how errors or disputes should be handled. Ultimately the concern is that if the process is not robust then Suppliers could either lose the link to an MSID or make an erroneous change to the records held by SVAA. The member noted that this is all important because of the financial liabilities linked to accurately collecting and aggregating the metered data.

The members also suggested that the registration process under P348 and P349 should mirror the controls or the data held for normal registrations in Supplier Meter Registration Service (SMRS). In addition, the respondent suggested that the Electricity Central Online Enquiry Service (ECOES) could be used.

Having considered the concerns with the process, the Workgroup concluded that it was satisfied with the proposed legal text. The text puts a general obligation on Parties to update SVAA, and the SVAA will be designed with rules based exception management so potential conflicts are identified and reported.

ELEXON noted that disconnected sites or sites that undergo a change of Measurement Class (CoMC) or registration from SMRS to Central Meter Registration Service (CMRS) would need particular care because there is not another Supplier involved to act as counter-party to the change. The question is how we identify which MSID is actually associated with the Supplier. ELEXON noted that we could build in a stronger registration process where the gaining Supplier notifies the SVAA on its Metering System and whether this is Affected or Grandfathered. The Supplier would have the right to open a dispute resolution, to appeal or object. This is an overall obligation but there is still a question on compliance which would sit outside of the BSC. If there is a failure it needs to be identified, maybe sending an update or a correction to a registration. A Workgroup

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member noted that one respondent to the second Assessment Procedure Consultation was concerned on the transparency of the proposed process. At the moment we are not in a position to validate the Supplier responsible for a particular MSID. A Workgroup member noted that responsibility for Metering Systems can be checked through ECOES.

The Workgroup also considered publishing details of the SVAA's records so they could be monitored and challenged. However, it was noted that the rationale for not publishing the details of the SVAA's records was to prevent Suppliers from being selective in their acquisition of customers. A Workgroup member noted that transparency is not always a good thing as we need to protect customers' information.

The respondents to the second Assessment Procedure Consultation also suggested different mechanisms for SVAA to notify Suppliers of errors or discrepancies in the registration or Metering System data provided under Option 1. One respondent suggested that a manual process, such as 'email', should be appropriate. Two respondents noted that a new dataflow would be created to notify Suppliers of exceptions along the lines of the D0235 flow 'Half Hourly Aggregation Exception Report'. However, a new DTC data flow would be costly and complex. The Workgroup agreed that a manual process, using emails, should be sufficient.

Potential CUSC impact of Option 3

On 20 December 2016, Ofgem approved CMP266 'Removal of Demand TNUoS charging as a barrier to future elective Half Hourly settlement' WACM 1, which allows elective HH customers in Measurement Classes 'F' and 'G' to be charged on a Non Half Hourly (NHH) basis until 2020. P348/349 Option 3 proposes to introduce two new Measurement Classes, 'K' and 'L', and moving all Affected Embedded Export Metering Systems, currently assigned to 'F' and 'G' into the new Measurement Classes 'K' and 'L'. All Grandfathered Export Metering Systems currently assigned to 'F' and 'G' would remain. Consequently P348/349 would remove certain export Metering Systems from the scope of CMP266, which applies only to Measurement Classes 'F' and 'G', thereby removing the benefits of CMP266 for these customers. To address this, the Workgroup noted that a consequential CUSC Modification may be required to extend the CMP266 solution to new Measurement Classes 'K' and 'L' if Option 3 is implemented.

Legal text

The approved legal text changes to support the P348 Proposed Modification can be found in Attachment A and the approved legal text changes to support the P348 Alternative Modification can be found in Attachment B.

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Estimated central implementation costs of P348

P348 will require changes to the SVAA systems in order for the Proposed Modification to be delivered. Costs will therefore be incurred due to these system changes being developed and implemented. The central costs will be approximately:

- **£173k** for the P348 alternative solution (Option 1); or
- **£117k** for the P348 Proposed Modification (Option 2).

Indicative industry costs of P348

The Assessment Consultation responses highlighted that there will be costs associated with the implementation of P348 Alternative Modification (Option 1). All respondents indicated that they will be impacted. Some respondents identified small administrative changes but some Parties identified significant and costly impacts. One respondent has provided an initial indication of costs of approximately £2million.

Three respondents noted that they will be impacted by the implementation of P348 Proposed Modification (Option 2). However, the costs will be lower than for Option 1. One respondent noted that the solution could cost approximately £2million.

Report Phase Consultation's responses

Four respondents to the Report Phase Consultation indicated that they will be impacted by the implementation of the Proposed Modification. Whilst respondents recognised that the Alternative Modification could support any of the CUSC options, all but one strongly preferred the Proposed Modification. This is because they believed that it will be the most economic option to implement and aligns with Ofgem's minded to position on CMP264/265. One respondent noted that its systems will be impacted to accommodate the proposed changes to the P0210 'TUoS Report' file. They also appreciated the provision of historical data to support its forecasting work. Another respondent noted that the proposed solution will have a smaller impact compared to the Alternative Modification. This is because implementing this option would mean that the impacts to Suppliers would be limited to having two sets of Demand TNUoS tariffs (Import and Embedded Generation).

All respondents to the Consultation indicated that they will be impacted by the Alternative Modification. Two respondents noted that there will be medium one-off costs for development, testing and implementation. However, they noted that on-going running costs would be absorbed with other operational costs. One respondent noted that at this stage the cost of the Alternative solution has not been estimated. This will be a part of the detailed Impact Assessment that would be undertaken if this solution is approved. One respondent noted that there will be complex system changes associated with the Alternative solution which will be costly. Another respondent noted that they will need to implement changes on their current system involving a change to validation. The range of the costs provided is between £7.5k and £1.5m. By virtue of the overall network charging changes proposed by CMP264/265, all changes have an impact on Suppliers in terms of TNUoS charging and participation by Embedded Generators.

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P348 and P349 impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
Supplier	Under Option 1 and 3, new obligations will be placed on the Supplier to identify Metering Systems for sites (in accordance with requirements and definitions set out by CMP265). Suppliers may also have to instruct their Party Agents (under Option 1 only) which Metering Systems to collect, aggregate and report data for.
HHDA	Under Option 1, the HHDA may be instructed by the Supplier to report metered data for specific Metering Systems to the SVAA.

Impact on Transmission Company
We expect the Transmission Company to be impacted by the implementation of P348. Changes are likely to be required to the Transmission Company's systems to allow it to receive the updated TUoS report under the Proposed and Alternative Modifications.

Impact on BSCCo	
Area of ELEXON	Impact
Configuration Management	Implement the proposed document changes to deliver P348
Release Management	Implement the proposed system changes to deliver P348.

Impact on BSC Systems and process	
BSC System/Process	Impact
SVAA	The SVAA will be impacted by both options. Under the Alternative Modification the SVAA will receive data from the HHDA that will need to be aggregated and incorporated into the P0210 data flow (TUoS Report). The data flow will need to be amended to allow for this data to be provided.

Impact on Code	
Code Section	Impact
Section K	Please see our approved legal text in Attachments A and B.
Section S	
Section S Annex S-2	
Section V	
Section X Annex X-1	

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Impact on Code Subsidiary Documents
ELEXON is currently assessing which Code Subsidiary Documents (CSDs) are impacted by P348.

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5 Implementation

Recommended Implementation Date

The majority of respondents to the second Assessment Consultation agreed with the proposed Implementation Date of 2 November 2017. Three respondents noted that this Implementation Date will allow ELEXON to collect metered data and send them to the Transmission Company to support it setting the first set of TNUoS charges. This is in accordance with CMP264 or 265, which are expected to take effect from 1 April 2018.

One respondent disagreed with the proposed Implementation Date as they believed that such significant changes to the demand charging principle should allow a minimum of three years for systems and processes to be updated. In addition, the respondent believes this Implementation Date is not realistic given that new DTC data flows are being suggested.

The Workgroup discussed the Implementation Date options and noted that, for Option 1, there will not be any detrimental effect if we delay the Implementation Date to February 2018. In addition, the actual historic data is used by the Transmission Company to estimate charges. These are published three months in advance, so the Workgroup member noted that even if we could include this in the implementation of Option 1 to the November 2017 Release, the data would already be published. On the other hand, Option 2 does not require any new data flow to be added and, as a consequence, the system changes should be smaller and easier compared to Option 1. The Workgroup noted that this solution could be delivered in a significantly shorter timescale and could be included in the November 2017 Release.

For the reasons noted above, the Workgroup unanimously recommended an Implementation Date for:

- P348 Proposed Modification (Option 2) of 2 November 2017 as part of the November 2017 BSC System Release; and
- P348 Alternative Modification (Option 1) of 22 February 2018 as part of the February 2018 BSC System Release.

However, the November 2017 Release is no longer an option due to the amount of changes which are already targeted in this Release. Therefore, we are proposing an Implementation Date of **22 February 2018** as part of the February 2018 BSC System Release for both Option 1 and Option 2.

Implementation timeline

The Central System Impact Assessment highlighted that the lead time for implementing the three options are as follows:

- Option 1 (P348 Alternative solution): 18 weeks.
- Option 2 (P348 and P349 Proposed solutions): 19 weeks.
- Option 3 (P349 Alternative solution): 14 weeks.

Please note that the lead time of Option 2 has increased from 13 weeks to 19 weeks. This is due to the Transmission Company's request to include a requirement for ELEXON to provide three years' worth of historical data based on the specific new data items, 'Period BMU Gross HH Demand' and 'Period BMU Gross HH Embedded Export'.

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Due to the estimated implementation time, ELEXON will need to start developing and testing the new solution (in particular, the provision of historical data) by mid-summer 2017. Therefore, if the Authority makes its decision after June 2017, we may not be able to implement any of the options by February 2018 that is without starting developmental work at risk.

Report Phase Consultation' responses

Three respondents to the Report Phase Consultation agreed with the proposed Implementation Date. One respondent noted that, although the November 2017 Release would have been preferred, they agree with the proposed Implementation Date.

Two respondents disagreed with the proposed Implementation Date. One respondent noted that they would need at least three years from the date of Ofgem's decision to implement any of the BSC solutions. This is because any Modification that makes significant changes to the demand charging principles as CMP264 and CMP265 propose to do, should give the industry sufficient time to prepare for the implementation. Another member noted that a decision on CMP264 and CMP265 is outstanding (both Modifications are currently within the Consultation phase with Ofgem) and, therefore, the recommended Implementation Date of 22 February 2018 may not be achievable at this stage.

All the respondents agreed with the Panel's initial view that P348 and P349 should not be treated as Self-Governance Modifications.

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6 Workgroup's Discussions *(first consultation)*

This section provides a detailed summary of the P348 and P349 Workgroup's initial discussions. These discussions took place prior to the Workgroup issuing its first Assessment Procedure Consultation on 8 August 2016.

Please note that there have since been a number of changes to the Proposed and potential Alternative Modifications being put forward under P348 and P349.

What is an Embedded Generator Capacity Market Unit?

ELEXON advised the Workgroup that any solution will require a clear definition of what sites/Metering Systems should be reported (i.e. what is an Embedded Generation Capacity Mechanism Unit (EGCMU) and Related EGCMU Site), what metered data should be collected and how it should be reported to the Transmission Company.

Based on the original Modification Proposal and discussions at the CMP265 workgroup meetings, the P348 workgroup considered aspects of the definition for an EGCMU. In particular it considered:

- Whether an EGCMU is any generating Capacity Mechanism Unit (CMU) from 1 April 2020 onward?
    - This point is considered below under the subsection 'Will there be an activation date?'
- Whether HH CVA and SVA Metering Systems should be reported?
    - The Proposer confirmed that CMP265 will require metered data from both CVA and SVA Metering Systems. ELEXON noted that it already reports gross metered data for sites registered in CMRS to the Transmission Company. Consequently P348 has focused on developing a solution for reporting metered data for Metering Systems registered in SMRS.
- Whether specific additional Metering Systems should be included/excluded from the definition of an EGCMU Site - for example, Metering Systems at 'mixed sites' and non-Settlement Meters?
    - This question is considered below under the subsection 'Should mixed sites be included under P348 and P349?'

The following subsections describe the discussion of the Workgroup in considering the definition of an Embedded Generator Capacity Provider and the method for reporting data to the Transmission Company.

Based on discussions at the CMP265 and P348 Workgroup meetings, the Proposer has (for the time being) defined an EGCMU for the purposes of the BSC as:

- From 1 April 2020, any generating CMU with a HH Export Metering System registered in the CMRS or SMRS.

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Will there be an activation date?

A Workgroup member asked whether there will be an activation date under this Modification, meaning that the effect of CMP265 and P348 will end embedded generation benefits for specific sites from an agreed date. The Proposer responded that the intention of its Modifications is that from 1 April 2020, TNUoS embedded benefits for all embedded generation sites that have active CM agreements (regardless of when they were awarded) will end.

Should mixed sites be included under P348 and P349?

The Workgroup considered whether mixed sites should be included in the definition of an Embedded Generator Capacity Market Unit site. That is, sites which consist of an embedded generating CMU and other non-CM Generating Units or on-site demand.

Export metered data only?

Through discussion, the Workgroup recognised that sites consisting of embedded generating CMUs may also consist of non-CM generating units and on-site demand. That is, all embedded Generator sites with Metering Systems registered in SMRS will have an import Metering System and are likely to have an export Metering System. The import Metering System is used because the site may require energy from the Distribution System at times when the Generator is not generating. This on-site demand may be necessary for the operation of the Generator (e.g. backup supply to Generator assets or to run security lighting) or may be for another non-Generator requirement which is nevertheless a feature of the embedded Generator's site.

The Workgroup noted that for the configuration of on-site demand and generation, the connection/s to the Distribution System and Metering System may vary from site to site. For example, the following scenarios were considered:

- **Scenario 1**: An embedded Generator site with a single connection point with two Metering Systems - an import and export Metering System – where the on-site demand and generation are connected by a private wire below the Settlement boundary. In this instance the embedded Generator directly supplies the on-site demand through the private wire connection. In effect the volumes measured by the Settlement Metering Systems at a specific point in time represent either a gross import or export – i.e. if on-site embedded generation exceeds on-site demand then the export Metering System will record a positive value as it spills onto the Distribution System and the import Metering System will record nil; whereas if on-site demand exceeds on-site embedded generation then the import Metering System will record a positive value as it draws energy from the Distribution System and the export Metering System will record nil.

- **Scenario 2**: An alternative configuration, e.g. at a larger site, might consist of two distinct connection points – one for the Generating Unit and one for the on-site demand – with the export Metering System at one connection and the import Metering System at the other. Furthermore, the on-site embedded Generator is not directly connected by a private wire connection to the on-site demand below the boundary point. In this scenario the on-site generation may still meet the on-site demand but the Generator must export onto the Distribution System first before the on-site demand immediately imports the energy from the Distribution System. This configuration means that both Metering Systems may record import

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and exported energy simultaneously. In effect the net position of the total site in this second scenario may be the same as the first scenario, however the Metering Systems record different values.

What these scenarios identified to the Workgroup is the need to consider whether to focus specifically on gross metered data from export Metering Systems only or whether to calculate a site level net export volume for the EGCMU (i.e. subtract gross import metered data from gross export metered data).

One Workgroup member argued that the gross export data will not on its own deliver the intention of this Modification. It is the net site position that is needed for sites with both import and export metering. They noted that if you ignore the gross import, then there will be issues for Suppliers calculating their liability for Transmission charges and may result in the Transmission Company overcharging Suppliers for TNUoS. This is because relying solely on gross export metered data may overstate the embedded Generators impact on the Total System (i.e. whilst the export Metering System may record 300kWh the related import Metering System may simultaneously record 200kWh meaning that only 100kWh has impacted the wider system, rather than 300kWh). In terms of the impact on TNUoS charges (assuming CMP265 is implemented), using the gross export volume would mean the Supplier's net demand is increased by 300kWh rather than the net 100kWh and so is 'over-charged' by 200kWh.

Having considered the principle for netting gross import from export at a site level, the Workgroup considered whether only certain types of on-site demand should be included in a net calculation. For example should a net calculation include all on-site demand measured by import Metering System(s) irrespective of its purpose. Alternatively a Workgroup member asked whether only auxiliary demand (i.e. demand essential to the operation of the Generator) should be included. A member advised that it may be difficult to agree a specific definition of what a mixed site is in relation to P348, particularly if the intention is to allow for some mixed sites but not all.

The Workgroup asked how many HH export MSIDs there are in the market and how many are forecast to be connected. ELEXON advised that the exact number will need to be confirmed. A member noted that a simple estimate was considered by the CMP265 Workgroup to be around 5,500 Metering Systems.

ELEXON asked the Proposer and the Workgroup if they agreed that, for EGCMU sites with both generation and demand the net of import and export metered data for that site should be calculated. The Proposer and a general consensus of the Workgroup agreed that this would likely provide the most accurate calculation. However, some Workgroup members challenged the idea of netting on the basis that:

i) it may require a more complex and potentially costly solution; and

ii) the level of additional accuracy from netting is unclear (and if only auxiliary demand is considered, may be small).

Boundary Point Metering

In addition to considering the configuration and interaction of on-site demand and generation, the Workgroup also considered the configuration, interaction and visibility of different forms of on-site embedded generation.

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The P348 Proposer noted that under their Modification, they intend to capture embedded generation participating in the CM. They asked if it is possible for non-CM embedded generation to be on the same site as CM embedded generation.

A Workgroup member responded that it is possible to have both a CM and non-CM generating unit on the same site. That is, a Generator may operate a site that is a combination of CM generating units and non-CM generating units. Furthermore, depending on the configuration and metering of the generating units, it may not be possible to isolate metered data for the CM generating unit(s) only. The Workgroup considered two example sites where each consists of one CM generating unit and one non-CM:

- Example 1: A site with two Generating Units that are separately with individual Settlement Meters.
- Example 2: A site with two Generating Units that share the same Settlement Boundary Meter but the CM Generating Unit is metered by an additional non-Settlement Meter (below the Boundary Point) for CM purposes.

ELEXON advised the Workgroup that there may be data collection issues for sites with CM metering behind the boundary point. We added that there are currently three configuration options available under the CM arrangements:

- Generation CMUs can register an embedded (E_) BM Unit in CMRS ("CMRS Distribution CMU");
- Generation CMU can be settled using MSID data provided to EMRS by the HHDA ("Supplier Settlement Metering Configuration Solution"); and
- Generating CMUs to be settled on non-BSC metering ("Bespoke Metering Configuration Solution" and the "Balancing Services Metering Configuration Solution").

In both scenarios the specific activity of the CM Generating Unit can be isolated, either by the Settlement or non-Settlement Meter. However, the Workgroup noted that access to non-Settlement metered data would not be possible through the BSC. A member considered whether Suppliers could be obliged to request EMRS to inform it of non-Settlement export metered data. Another member noted that this may be an issue as the obligation assumes the Supplier will have some relationship with the site and therefore know whether there is a CM generator there or not. Furthermore, a change to the CM rules may be required to enable access for non-Settlement metered CMUs. ELEXON noted that the process for making changes to the CM Rules is governed by Ofgem and are relatively new and unless a change is urgent, changes are considered as part of an annual cycle.

A member was concerned that by not including embedded generation with non-BSC metering behind the boundary point there may be a loophole introduced. There could be an incentive for Capacity Providers to Meter their embedded generation using non-Settlement metering behind the boundary point in order to avoid being reported through CMP265/P348 processes and therefore keep their TNUoS embedded benefits. However, as the metering is non-Settlement, it may not be possible to obtain data in these instances for these Generators.

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How will CM and non-CM sites be identified?

A member asked how these sites will be identified as, in the context of CMP265 there is not a distinguishing factor between non-CM and CM sites.

The Workgroup considered whether Suppliers could work with its embedded generation customers to gain access to details of whether there is a CM Generator on site or not. ELEXON noted a CUSC and/or BSC obligation could be introduced to require Suppliers to obtain such information from its customers. Furthermore, customers could supply the required metered data to the Supplier who passes it onto ELEXON. The Workgroup noted that if the Supplier is unable to obtain the non-Settlement metered data for any reason they would not be able to use it to protect the TNUoS embedded benefits for exported volumes from non-CM generating units. The member was in favour of obligating the Supplier to obtain details from their customers but noted that we will have to rely on the data being provided by the customer to be correct.

A member asked whether there may be issues relying on non-Settlement metered data that is provided by the customer and which may not be subject to BSC requirements and assurance techniques. ELEXON noted that if there is a requirement in the BSC saying that the Supplier has to obtain information from their customer then the requirement would be considered as part of the overall BSC assurance arrangements. A member asked how the BSC Auditor or Technical Assurance Agent (TAA) would check the non-BSC data. ELEXON noted that the specific nature of any assurance technique/action is unclear at this point.

A member asked if there is anything stopping a CM Generator from switching to a bespoke metering configuration. ELEXON noted that so long as the boundary point is metered in accordance with the BSC, there is nothing stopping them from using additional non-Settlement metering.

How will metered data for EGCMU sites be collected, aggregated and reported under P348 and P349?

The Workgroup considered the practical aspects of collecting, aggregating and reporting metered data to the Transmission Company for EGCMU's.

Aggregation and reporting of metered data

The Workgroup considered a number of options for apportioning responsibility for aggregating and reporting metered data. In general these ranged from Suppliers taking full responsibility for collecting, aggregating and reporting metered data to the Transmission Company for all of their EGCMU sites directly, through to Suppliers providing the raw Metering System metered data to the Transmission Company to process and aggregate. In between these extremes the Workgroup also considered Party Agents and BSC Agents (i.e. the SVAA) collecting, aggregating and reporting data to the Transmission Company on behalf of Suppliers.

A couple of Workgroup members noted that on the one hand if Suppliers are able to identify the sites/Metering Systems that should be reported under the P348 solution, and they have access to the data, then some Suppliers may prefer to collect, aggregate and report the data to the Transmission Company 'in-house'. Another member confirmed that Suppliers will have access to the metered data for Settlement Meters. However, the Group also recognised that Suppliers may need to collaborate to provide metered data for all

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Metering Systems belonging to the same site (e.g. where the exports and imports are registered with different suppliers).

The Workgroup also noted that if individual Metering System metered data were to be provided directly to the Transmission Company, the Transmission Company would need to process individual Metering System data. ELEXON pointed out that the Transmission Company does not ordinarily process individual Metering System metered data and would need direction (e.g. from Suppliers) to calculate net volumes and access to Line Loss Factor (LLF) values to ensure the correct calculation of line losses.

A Workgroup member noted that 'in house' reporting or empowering the Transmission Company to calculate volumes may limit the requirements in the BSC and need for Party and BSC Agent system changes. The member added that it is likely that most Suppliers would use their Party Agents to collect and aggregate metered data as these are processes that these agents already fulfil.

The Workgroup concluded that the main proposal should be designed on the basis that Suppliers instruct their Party Agents to collect and aggregate metered data for relevant Metering Systems and that the SVAA should aggregate this data to Supplier BMU level so it can be reported to the Transmission Company.

In response to a member recommendation, the Workgroup also proposed that an Alternative Modification be prepared whereby Suppliers are obliged to ensure that individual Metering System metered data required under P348 is submitted by their Data Collectors (DCs) directly to the Transmission Company in the most efficient and effective way. The Transmission Company would then need to process the metered data for TNUoS charging purposes.

Identification of relevant Metering Systems

A member asked the Workgroup how a Supplier will communicate to its agents which Metering Systems should be reported. ELEXON advised that this can be done via a number of ways:

- Suppliers identify and maintain own records of relevant EGCMU Metering Systems and send instructions direct to its agents outside of the DTC/DTN;
- Introduce a new flag in SMRS (and CMRS) and within registration data flows to allow Suppliers (or Distribution Network Operators (DNOs)) to identify relevant EGCMU Metering Systems; and
- Introduce new LLFC values to enable Suppliers (or DNOs) to identify relevant EGCMU Metering Systems.

ELEXON noted that all solutions will require system changes with associated costs. The difference between the options is in terms of who manages the risks and costs of those changes. On one hand avoiding changes to registration systems and the DTC may reduce central system costs but place a greater burden on individual parties and Party Agents to design and maintain their own solutions. On the other hand a more formal 'BSC Heavy' solution that introduced common processes and (Party, Party Agent and BSC) system changes may provide greater transparency, certainty and compatibility (e.g. in terms of sharing common information between Parties if an embedded Generator changes Supplier).

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A member noted that P348 and CMP265 are intended to be interim solutions whilst Ofgem completes a detailed review of embedded benefits. Therefore they considered that it may be inappropriate to incur high central costs and rather allow each Supplier the option to manage how they discharge obligations to report metered data to the Transmission Company.

Third party involvement

A member asked how having a third party involved may impact P348. They added that if the site is managed by a third party there is no Supplier to chase the customer for export data.

A member advised that a Supplier has a lot of regulatory reasons for obtaining the required data. However, a third party may not, which means ultimately we may not be able to determine whether to give TRIAD benefits to the site.

Another member advised that, if you are not a CUSC party you do not get paid TRIAD directly by the Transmission Company so it is not an issue. However, if you are a CUSC party you will be paid directly. Therefore if there is a CM and non-CM site in CVA, there needs to be CUSC arrangements to ensure the 'lead party' supplies the required data to the Transmission Company.

ELEXON asked the Proposer to provide information on this discussion to the CMP265 Workgroup to ensure it is considered.

Should gross import and gross export data for all BM Units be provided to the Transmission Company?

The BSC Panel requested that the P348 and P349 Workgroup consider whether gross import and gross export data for all BM Units be provided to the Transmission Company as part of P348 and P349.

ELEXON noted that it already reports gross import and export data to the Transmission Company for individual embedded Generator BMUs. The Workgroup also noted its understanding of CMP264 and CMP265 that the Transmission Company plan to add volumes of exported energy to Suppliers' net demand (which is already reported by ELEXON in the P0210 'TNUoS Report'). Therefore its understanding is that reporting gross import data for all BM Units will not help the Transmission Company in its calculation of TNUoS Charges should CMP264 or 265 be implemented.

The Workgroup agreed that P348 and P349 should only focus on reporting volumes of exported energy for EGCMUs.

How often should data be reported to the Transmission Company?

ELEXON asked the Workgroup how often the required export data needed to be provided to the Transmission Company. We added that there are few different options that data could be reported for:

- every Settlement Period within the TRIAD period (1 November – last day in February);
- every Settlement Period in every day across the calendar year; or

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- the Transmission Company identifies the impacted TRIAD Settlement Periods and requests metered data for specific to these Settlement Periods only.

The Workgroup considered that it may be simpler and less costly to initially specify a solution that provided data all year round, rather than being switched on and off.

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7 Workgroup's Discussion *(second consultation)*

This section provides details of the P348 and P349 Workgroup's discussions following its first Assessment Procedure Consultation in August 2016. It also provides information on the changes made to the Proposed and potential Alternative Modifications set out under P348 and P349.

At the first meeting the Workgroup discussed different options to design a solution for P348 and P349. The Workgroup was initially keen to avoid an impact on Suppliers and Supplier Party Agents. The focus was on getting the central systems to collect metered data, aggregate the data and sharing the data with National Grid. By trying to develop the solution options the Workgroup concluded that these would have been too complicated, not only due to the definition of what the system should do but also due to the impact on Suppliers and Supplier Agents. The Workgroup then designed a generic solution for both P348 and P349 that could satisfy the 43 CUSC options.

The discussion is detailed below and it is the same for P348 and P349.

Interactions between P348, P349 and P339

ELEXON advised the Workgroup that, since the August 2016 Assessment Consultation was issued, overlaps between P348, P349 and P339 'Introduction of new Consumption Component Classes for Measurement Classes E-G' have been identified by ELEXON and National Grid. P339, if approved, will introduce new CCC IDs to enable aggregation to Measurement Class level.

We noted that CMP266 (related to P339) seeks to charge smart Meter HH volumes at different rates between now and 2020 in order to remove barriers to elective HH Settlement. Therefore, if CMP266 is approved, CMP264/265 (P348/349) will need to report its metered data in such a way that is compatible with CMP266. This means enabling the Transmission Company to differentiate between Meters that are elected to be settled HH and those that are not.

In order to enable this, P348 and P349 need to ensure that metered data is reported at the Measurement Class level. This will allow for HH metered data to be differentiated between different types of Meter.

National Grid has also identified a requirement that ELEXON report all metered data by Measurement Class. P339 will support this reporting requirement because it introduces new CCCs. The Workgroup therefore concluded that P348/349 should introduce the CCCs that P339 proposes on the off chance that Ofgem does not approve P339 but does approve CMP266. However, P339 has since been approved, as the Self-Governance Appeal Window closed on 3 January 2017, removing the need for the P348/P349 legal text to introduce these CCCs.

Proposed Modification (Option 2)

ELEXON explained that of the 43 CUSC options, 22 have relatively simple reporting requirements. That is rather than differentiating between different types of exports, they will require only total gross export (i.e. the sum of all active exports only per Supplier). ELEXON suggested that Option 1 would be an inefficient way of meeting these simpler

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requirements. Therefore, ELEXON proposed a simpler Option 2 which aims to aggregate all exports Meter data using existing Settlement processes and standing data.

The Workgroup considered Option 2, which will implement a simple 'SVAA only' solution. This SVAA only solution will satisfy the reporting requirements under scenario 3, i.e. reporting total gross demand and total gross export, and will likely be more efficient to implement than the 'centralised data aggregator' option, that satisfies scenarios 1 and 2. That is, SVAA already receives all necessary data to calculate gross demand and export based on the data reported to it by DAs for normal Settlement purposes. Therefore, we recommend that both the 'centralised data aggregator' and 'SVAA only' solutions be developed for Ofgem to consider.

In terms of the BSC Objectives, such Option 2 could be seen as being better than the baseline and the Proposed Modification should Ofgem approve a WACM that requires its implementation. Furthermore, submitting both solutions to Ofgem for decision is the most efficient and pragmatic approach for allowing the CUSC Modification (whichever is approved) to be implemented.

Option 3

When the Workgroup first met it discussed options for implementing P348/349 and decided to try and avoid making costly changes to existing Settlement processes and systems. However, having developed an option that tries to avoid changes to existing processes and systems (i.e. Option 1), the Workgroup rallied behind a third option whereby we use existing Settlement processes to collect and aggregate metered data to calculate Affected and Grandfathered Exports.

The Workgroup considered the implications of implementing Option 1, noting its complexity and potential associated costs. As a consequence the Workgroup reconsidered whether a solution that used existing Settlement processes would be more efficient. That is existing Settlement processes are already designed to collect and aggregate Meter data and could be adapted to aggregate export Meter data to the level required for CMP264 and CMP265.

What lessons can be learned from P260?

The Workgroup agreed that, whilst no specific lessons may be learnt, P260 'Extension to data provided to the Transmission Company in the TUoS Report' did provide a starting point for considering how to develop a P348/349 solution. In the end the P348/349 solution has been tailored to the specific needs of CMP264/265.

D0081 option

Under Option 2, the Workgroup noted that both total gross import and gross export data will be provided to the Transmission Company by Supplier BM Unit. One member suggested making the Transmission Company a recipient of the D0081 'Supplier Half Hourly Demand Report'. The D0081 already contains all the data necessary to derive the data items described in the legal text on Option 2 (total gross import and export) at Supplier level.

One member suggested providing gross import and gross export data at CCC level through the D0081 instead of aggregating the CCC level data and including it in an updated P0210.

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The D0081 data flow already contains all the necessary data items described in the legal text of Option 2 (gross import and export) at Supplier level. These data flows are sent through the DTN Network which is not used by the Transmission Company. Therefore, the SVAA will still need to develop a way to send the data to the Transmission Company. The Workgroup member noted there may be additional benefits to sending the existing D0081 data flow to the Transmission Company rather than using the P0210, i.e. to support data requirements being developed under CMP271 'Improving the cost reflectivity of demand transmission charges' and CMP274 'Winter TNUoS Time of Use Tariff (TToUT) for Demand TNUoS'. The Transmission Company took an action to assess the impacts of using the D0081 flow rather than the P0210. The Transmission Company noted that they will take away this option to assess the potential impact. ELEXON noted that this solution would require a change to Balancing and Settlement Code Procedure (BSCP) 508 'Supplier Volume Allocation Agent' and this can be progressed through a consequential Change Proposal (CP). The estimated central costs of this option will be approximately £4k.

After the Workgroup meeting, the Transmission Company provided ELEXON with their views on the use of the D0081. They noted that due to the much higher volume of data they would need to handle and more fundamental system architecture changes needed, this option is not preferred as it will require considerable costs. The Transmission Company also felt that due to the complexity of the proposal, this would not be implementable by April 2018. Also, this would need to feed into their billing system and existing processes, for which the impact cannot be fully costed in the short timeframe available.

Furthermore, ELEXON noted that there may be additional challenges for the Transmission Company or ELEXON to provide assurance on the provision of and potential future changes to the D0081 file. For example, ensuring that all D0081s are transmitted/received/loaded to ensure an accurate aggregation of imports and exports, and to ensure that the Transmission Company, who does not ordinarily use DTC flows, remain informed of any changes to the D0081.

In light of the Transmission Company's concerns and ELEXON's observations regarding assurance, the Workgroup agreed to not include the use of the D0081 as a formal alternative to Option 2.

Following the last Workgroup meeting and as part of considering the implications of using the D0081, the Transmission Company asked that, as part of Option 2 only, ELEXON provide an extract of historical data. This will be based on the specific new data items, 'Period BMU Gross HH Demand' and 'Period BMU Gross HH Embedded Export', that cover the past three years. Our Service Provider confirmed the feasibility of this option with costs included in the estimated cost of Option 2 (~£117K). This requirement was added to the Business Requirements (2.4) in Appendix 1.

What is the impact of P348 and P349 on consumers?

The Workgroup noted that all the Modifications have costs and therefore they will have an impact on consumers. However, one Workgroup member highlighted that the CUSC Modifications will bring a saving of around £7.2billion to the industry. The Workgroup agreed that the impact on consumers is highlighted in the Assessment Consultation responses, as an impact related to the implementation of the proposed changes. In terms of the BSC Modifications, the Workgroup believed there are no direct impacts for consumers but they are expected to cost up to £2million to implement and these costs will be passed on to consumers.

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Workgroup's conclusion

The Workgroup noted that, although Option 2 is the preferred option as it is simpler, cheaper and has a shorter implementation timeline, this Option does not cover all the WACMs. Nevertheless, the Workgroup agreed that Option 2 should be considered by the BSC Panel and by the Authority. Therefore, the Proposers of P348 and P349 agreed to adopt Option 2 as a Proposed Modification for both P348 and P349 and recommend approval of the P348 and P349 Alternative Modifications (Option 1 and Option 3). This will enable the BSC Panel and the Authority to consider all three options as potential solutions once the outcome of CMP264 and CMP265 is clear.

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Do P348 and P349 better facilitate the Applicable BSC Objectives?

Following the second Assessment Procedure Consultation, the Workgroup unanimously agreed that P348 Proposed and Alternative Modifications and P349 Proposed and Alternative Modifications better facilitate Applicable BSC Objective (a). The P348 Proposer believes that P348 Proposed and Alternative Modifications and P349 proposed and Alternative Modifications better facilitate Applicable BSC Objective (c) while the majority are neutral. The Workgroup is unanimously neutral in regards to Applicable BSC Objectives (b), (d), (e), (f) and (g).

Do P348 proposed and Alternative Modifications better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	• Yes -allows the Transmission Company to efficiently discharge its obligations enabling it to better develop a cost reflective charging methodology.	• Yes – agree with the Proposer.
(b)	• Neutral	• Neutral
(c)	• Yes - it will promote effective competition in the generation and supply of electricity as it will address a growing disparity in charging arrangements for different types of generation.	• Neutral - not enough evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.
(d)	• Neutral	• Neutral
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Do P349 proposed and Alternative Modifications better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	• Yes - allows the Transmission Company to efficiently discharge its obligations enabling it to better develop a cost reflective charging methodology.	• Yes – agree with the Proposer.
(b)	• Neutral	• Neutral
(c)	• Neutral	• Neutral by majority; one member believes that it will promote effective competition in the generation and supply of electricity as it will address a growing disparity in charging arrangements for different types of

What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

(g) Compliance with the Transmission Losses Principle

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Do P349 proposed and Alternative Modifications better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
		generation.
(d)	• Neutral	• Neutral
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Second Assessment Consultation respondents' views

Four of the five respondents agreed that Option 1 (now P348 Alternative Modification) better facilitates the Applicable BSC Objectives compared to the current baseline. One respondent noted that this Modification **does better facilitate BSC Applicable BSC objective (a)** by allowing the Transmission Company to efficiently discharge its obligations. Two respondents noted that Option 1 **does better facilitate Applicable BSC Objective (c)** by allowing effective competition and resolving the inequality in charging arrangement for different categories of generation. One respondent advised that Option 1 **does better facilitate Applicable BSC Objective (d)** by introducing a process whereby the SVAA is responsible for the calculations of Affected and Grandfathered Embedded Export Metering System.

One respondent believed that Option 1 **does not better facilitate the Applicable BSC Objectives**:

- **(b)** as the development of systems and data flows to support CMP265 are likely to be disproportionately costly in terms of the terms of the temporary and partial nature of the benefits they will deliver when implementing the solution suggested;
- **(c)** as it introduces different rules for different Embedded Generators (CM vs non CM);
- **(d)** as it delivers at significant expense for a limited time period only; and
- **(g)** as the decision Ofgem makes on CMP265 will make a difference to investment decisions and therefore will impact on Transmission losses (T-losses) in the long term.

Four of the five respondents to the P348 Assessment Procedure Consultation agreed that Option 2 (now P348 and P349 Proposed Modifications) does better facilitate the Applicable BSC Objectives compared to the current baseline. One respondent noted that Option 2 **better facilitates Applicable BSC Objectives (a) and (c)** for the same reasons detailed above for Option 1. The respondent noted that, as Option 2 facilitates CMP265 WACMs 1 to 11 but not CMP265 original, if CMP265 original were approved, then the Authority would need to approve Option 1. On the other hand, if variants 1 to 11 were approved, then P348 Option 2 could work. Conversely, Option 1 would cover all variants.

One respondent noted that Option 2 would result in an accurate reflection of TNUoS charging across the market, which **better facilitates Applicable BSC Objective (c)**. One respondent disagreed that this Option will facilitate the relevant BSC objectives. However, this respondent noted that Option 2 would be the most suitable to deliver this change since it would mean that the impacts to Suppliers would be limited to having two

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sets of Demand TNUoS tariffs (Import and Embedded Generation). The respondent added that Option 2 is also in line with the Ofgem minded to position on CMP265.

What are the Self-Governance criteria?

A proposal that, if implemented:

a) is unlikely to have a material effect on:
   i. existing or future electricity consumers; and
   ii. competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and
   iii. the operation of the national electricity transmission system; and
   iv. matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
   v. the Code's governance procedures or modification procedures, and
b) is unlikely to discriminate between different classes of Parties

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Information necessary to make a recommendation

The BSC Panel's initial discussion primarily focussed on concerns that it was lacking important information necessary for it to consider and make recommendations on the Proposed and Alternative Modifications against the BSC Objectives. In particular, some Panel Members were concerned that they lacked information in two key areas: impacts and costs on Parties and consumers, and the Authority's decision in relation to CMP264 and CMP265. In light of these concerns and the sensitivity associated to the related CUSC Modifications, Panel Members noted the risk that a Party or Parties may challenge the Authority's decisions and agreed the need to follow due process carefully.

One Panel Member noted that whilst P348 and P349 facilitate CMP264 and CMP265, the Panel's duty is to consider whether the BSC Modifications better facilitate the Applicable BSC Objectives compared against the current BSC baseline and not against the costs and benefits of non-BSC changes and their related impacts.

Consideration of P348 and P349 in the absence of a CMP264 or CMP265 Authority Decision

One Panel Member noted that he had not encountered a Modification Proposal that aimed to cater for so many different related Modification outcomes (outside of the BSC). ELEXON explained that the Proposers raised the BSC Modification Proposals to be developed in parallel to the CUSC proposals and so the Workgroup defined the solutions in order to cater for all potential CUSC outcomes rather than waiting for a specific, approved CUSC solution. This approach was adopted to fulfil the Authority's desire for the CUSC Modifications to take effect from 1 April 2018 and so the Authority can consider all CUSC and BSC Modification Proposals together. Nevertheless, ELEXON noted that the development of the BSC Modification Proposals had fallen behind the CUSC Proposals. In the end, this was because there was a need to wait for the CUSC data requirements to be finalised before ELEXON and the P348 and P349 Workgroup could finalise BSC options to cater for all CUSC options. A Panel Member also noted that neither CUSC Modifications were approved against the current baseline. This made it difficult to know whether the BSC Proposed or Alternative Modifications were better.

Some Panel Members were concerned that without an Authority decision on CMP264 and CMP265, it was not possible to determine which of the Proposed and Alternative BSC Modifications would be necessary and would therefore best achieve the Applicable BSC Objectives.

One Panel Member noted there is a possibility that the Authority does not approve any of the CUSC proposals, and instead rolls them up into its proposed Targeted Charging Review. The Panel noted that should the Authority reject all CUSC proposals, then it should reject all related BSC proposals too. Only CMP264 or CMP265 is expected to be approved and consequently only P348 and P349 would be needed. Alternatively, neither CUSC Modifications could be approved by the Authority and then, neither of the BSC Modifications would be needed.

The Ofgem representative declined to comment on whether it could make a decision on CMP264 and CMP265 before ELEXON submitted P348 and P349 for decision.

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Panel's views on the impact of P348 and P349 on Parties and consumers

Some Panel members were concerned that P348 and P349 could have an impact on consumers and that the nature of this impact was not clear enough from the assessment of the Modification Proposals to date. These impacts may be direct (e.g. a failure to follow the proposed BSC processes leading to an incorrect allocation of metered data) or indirect (e.g. because the BSC Modifications facilitate changes to the Transmission charging arrangements by CMP264 or CMP265 which will affect embedded benefits received by embedded generators). ELEXON noted that whilst CMP264 and CMP265 propose to make changes to Transmission charging arrangements, which affect embedded benefits, the BSC proposals by themselves do not affect embedded benefits.

A Panel member noted that the CUSC Modifications would have an impact on consumers and non-BM participants. In the first instance there will be costs associated with the implementation of the CUSC changes. Furthermore Suppliers could incorrectly identify Affected and Grandfathered Embedded Generator Metering Systems which would risk embedded generators, consumers and non-BM participants being charged incorrectly or not receiving all embedded benefits that they might be otherwise due.

One Panel Member noted that Ofgem's impact assessment of the benefits of CMP264 and CMP265 suggests a potential saving to consumers of up to £7.2billion. However, the Panel Member noted that he was not entirely confident of Ofgem's assessment, as he believed some of the assumptions to be questionable. Another Panel Member noted that the costs of the BSC solutions appeared modest by comparison. Moreover, the member noted that the consideration for the Panel was whether P348/P349 would better facilitate the Applicable BSC Objectives and not to assess Ofgem's impact assessment and its cost-benefit analysis, rather this was the role for the CUSC panel.

The Panel also noted that the protracted process and lack of Authority decision meant that Parties, stakeholders and consumers faced an uncertain future. Consequently, Parties, stakeholders and consumers are not able to effectively assess, plan and implement commercial, process and system changes.

ELEXON noted that, in order for P348 and P349 to be implemented in February 2018 (so that the Transmission Company will be able to use the report data from 1 April 2018), we need the Authority to make a decision by the end of June 2017.

The Authority representative acknowledged the comments and concerns raised by Panel Members. However, he noted that, in order to take a holistic and robust view of the impacts of all related changes, the CUSC Modifications and the BSC Modifications should be with the Authority at the same time and that it would be inappropriate for him to comment on the Authority's plans.

A Panel Member challenged the need for the Authority to decide on the BSC and CUSC proposals at the same time, on the basis that the BSC Modifications are in place to facilitate the CUSC changes and, as a consequence, a decision on P348 and P349 should be made after knowing the Authority's decision on CMP264 and CMP265. Another Panel Member also noted that if the Authority's decision on the CUSC Modifications was known, then there was an argument for Applicable BSC Objective (d) better facilitating the current baseline.

The Panel also considered not making a decision on 13 April 2017 and waiting until the Authority makes a decision on the CUSC Modifications. ELEXON noted that the Panel is allowed, under the BSC Section F 'Modification Procedures', 2.2.5, to defer consideration of

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the issue if the Panel considers that there is insufficient information available to it to enable it to take a decision.

Costs of implementing P348 and P349

Some Panel members were concerned that they lacked information necessary to make a robust decision on[2] P348 and P349. In particular, some Members felt they were lacking details about the costs for Parties to implement the different BSC options. ELEXON noted that only the Transmission Company provided an estimate of the costs to the Assessment Procedure Consultation to implement the BSC options. This respondent had estimated the costs of implementing any of the changes as being £2million. ELEXON noted that these costs could be related to both BSC Modifications and CUSC changes and we took an action to check this. All other respondents provided simple, qualitative assessments of the impacts as is typical in other Modification responses.

Some Panel Members noted that the Central System costs were not included in the second Assessment Procedure Consultation. This was because the impact assessment to obtain this information was conducted in parallel with the Assessment Procedure Consultation. Therefore, some Panel Members were concerned that respondents to the consultation did not have all information on which to be able to provide a full assessment of the impacts and costs of P348 and P349.

One member believed that another Assessment Procedure Consultation with the central implementation costs should be conducted. The Panel considered whether to consult on the proposals again to collect more information on the impacts and costs, and delay making a recommendation against the Applicable BSC Objectives. ELEXON noted that the proposals, and associated Central System costs, will be consulted on as part of the Report Phase Consultation once the Panel had provided its initial recommendations. Therefore, the Panel agreed that the Report Phase Consultation should include specific questions on costs. A Panel member advised that, for the purpose of P348 and P349, the consultation should draw out the costs related to the BSC changes rather than the CUSC changes.

As the central systems costs were not included in the Assessment Procedure Consultation, the Panel suggested adding a question to ask Parties whether these costs might affect their views on the BSC options.

Panel's conclusions

Six Panel members agreed that the P348 and P349 Proposed Modifications (Option 2) and the P348 and P349 Alternative Modifications (Option 1 and Option 3 respectively) **do better facilitate Applicable BSC Objective (a)** as they will help the Transmission Company to discharge its obligations efficiently. Three Panel members abstained to vote as they believe they did not have enough information to enable them to vote (for the reason explained above).

Panel Members noted the Workgroup's conclusions. That is, they preferred Option 2 but because Option 2 would only facilitate half of the CUSC options, recommended approving Options 1 and 3. Five Panel members agreed that **Option 1 and Option 3 should be approved** and **Option 2 should be rejected,** as Options 1 and 3 satisfy all CUSC

[2] Where central implementation costs are not included in the Assessment Procedure Consultation, they are included in the Assessment Report to the Panel and in the Report Phase Consultation.

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requirements. However, four Panel Members abstained to vote because they felt that any decision on these Modifications was going to be subject to challenge.

The Panel members also agreed:

- that these Modifications should not be treated as Self-Governance Modifications;
- with the proposed Implementation Date; and
- with the draft proposed legal texts.

The Panel agreed by majority to submit the P348 and P349 options to the Report Phase Consultation and agreed to increase the number of consultation period from 10 to 13 Working Days. As a consequence, the Draft Modification Reports will be presented to the Panel, at its meeting on 11 May 2017, as a late paper.

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10 Report Phase Consultation Responses

This section summarises the responses to the Panel's Report Phase Consultation on its initial recommendations. You can find the full responses in Attachment E.

Summary of P348 Report Phase Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial majority recommendation that P348 Alternative Modification should be approved and P348 Proposed Modification should be rejected?	1	5	0	0
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of P348 Proposed Modification?	6	0	0	0
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of P348 Alternative Modification?	5	0	0	1
Do you agree with the Panel's recommended Implementation Date?	3	2	0	1
Do you agree with the Panel's initial view that P348 should not be treated as a Self-Governance Modification?	6	0	0	0
Will your organisation be impacted by the implementation of the P348 proposed solution?	4	2	0	0
Will your organisation be impacted by the implementation of the P348 alternative solution?	6	0	0	0
Will your organisation incur any costs due to the implementation of the P348 proposed solution?	4	2	0	0
Will your organisation incur any costs due to the implementation of the P348 alternative solution?	6	0	0	0
If your business is impacted by the implementation of any of these BSC options, can you please provide best estimate of the costs and details of how you will be affected?	3	1	0	2
The central implementation costs, included in the Assessment Report to the Panel, are £173K and £117K for options 1 (Alternative Modification – Initial Panel recommendation for approval) and 2 (Proposed Modification) respectively. Does this information change your answer to question one?	0	5	0	1
Do you have any further comments on P348?	3	3	0	0

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Industry's comments

We received six responses to the Report Phase Consultation. One respondent agreed with the Panel's majority view that, as the Proposed Modification does not cover all proposals raised in accordance with CUSC Modifications, the P348 Alternative Modification (Option 1) is better than the Proposed Modification and therefore should be approved. However, the respondent noted that, depending on which CUSC option is approved by the Authority, the Proposed Modification may provide the most effective solution.

Five respondents disagreed with the Panel's initial view that the Alternative Modification is better than the Proposed Modification. The respondents believe that the Proposed Modification is the preferred option as it is a common solution for P348 and P349, has the lowest costs, lowest impact on the industry and is aligned with Ofgem's minded to position. One respondent added that Option 2 does support Applicable BSC Objective (a) as it will help the Transmission Company to discharge its obligations efficiently. One respondent noted that it appears that ELEXON and the BSC Panel are not aligned with Ofgem's views, as Ofgem have clearly stated that Grandfathering, as set out in the WACMs, would be unlikely to better facilitate the CUSC objectives.

One respondent noted that P348 and P349 have been raised to cope with potential CUSC changes that have yet to be approved. Therefore it is difficult to see P349/P348 having any merit on their own, against the Applicable BSC Objectives at this stage. Therefore the respondent cannot support P348 or P349 Alternative solution based on the information provided so far. Another respondent noted that the P348 Proposed Modification (Option 2) is the preferred solution as it meets the requirements of the Modification with minimum number of industry Parties and Agents involved in the change. It is also the lowest cost option.

Two respondents noted that it would have been better for the BSC Panel to wait until Ofgem's final decision on the CUSC Modifications had been published to consult on P348 and P349, so that the industry would have the opportunity to reply holistically to the CUSC and BSC Modifications.

All the respondents agreed with the proposed changes to the draft redlined text.

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Panel's view

Before the Panel considered the Report Phase Consultation responses, it asked Ofgem to comment on the concerns raised about the Panel making a recommendation on P348 or P349 before Ofgem has made a decision on the CUSC Modifications. Ofgem noted that receiving the BSC options and the CUSC options at the same time will be beneficial. They also noted that they were bound by the 'purdah' rules so cannot make a decision on the CUSC Modifications until after the general election on 8 June 2017. Consequently, they wanted the final reports of P348 and P349 to be sent by the end of May 2017 to avoid further delay. Ofgem added that the Cross Code dependency is likely to increase and, therefore, they felt that there would be an increasing need to make 'contingent' recommendations. Whilst recognising the Panel's discomfort, Ofgem did not agree that there were issues in making contingent recommendations and they encouraged the Panel to do so in this case. ELEXON noted that, although the BSC does not explicitly allow contingent decisions, there is equally nothing in the BSC explicitly preventing the Panel from making its recommendation contingent on Ofgem's decision on the related CUSC Modifications, provided there is no uncertainty in that recommendation. However, the Panel was concerned that it had never made a contingent recommendation before and adopting this approach, in the absence of an explicit right to do so, could potentially lead to further issues. For examples, some members were concerned that this approach would require new processes to be defined and could increase the risk of its recommendation being challenged.

The Panel added that its main concern was the difficulty of forming a view as to whether the Modifications better facilitate the Applicable BSC Objectives when the CUSC Modifications have yet to be approved by Ofgem. Ofgem also suggested recommending approval of the options which have the wider scope and that can satisfy all the CUSC options (Option 1 and 3). The Panel noted that, whilst Options 1 and 3 cover most bases, Option 2 would be most efficient if WACM 1-11 will be chosen by Ofgem. The Panel was concerned that against the current baseline they may make a recommendation that is more costly than needed by the chosen CUSC Modification that will be approved by Ofgem.

One Panel member noted that there are MRA changes linked to the BSC Alternative Modifications. The Panel recognised the need to make a clear recommendation in order to provide clear direction for the MRA changes as there will be costs associated with the development and implementation of the MRA changes.

In light of its concerns and Ofgem's comments, the Panel considered several approaches for progressing P348 and P349 which are listed below.

Defer the recommendation on P348 and P349

The Panel considered the possibility of deferring making a recommendation on P348 and P349 until Ofgem had made a decision on the CUSC Modifications. ELEXON noted that at this stage deferring the decision is not allowed under the BSC because the Panel has already consulted on the Draft Modification Report and the only circumstances in which the Panel can now defer the recommendation depends on Ofgem approving a changed timetable. ELEXON also highlighted that, due to the imminent election, Ofgem will not be able to make any decision before the end of June 2017. Therefore, any delay in the Panel recommendation (and therefore in Ofgem's decision) will have an impact on ELEXON's

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ability to implement the changes according to the proposed Implementation Date of 22 February 2018 (please see section 5 for further clarification).

Rerun the Report Phase Consultation

One Panel member noted that the Report Phase Consultation did not include a specific question asking for views on the Panel making contingent recommendations. ELEXON acknowledged that whilst the Draft Modification Report did not include explicit questions seeking views on a contingent recommendation, it did make clear the relationships between the Proposed and Alternative Modifications and the related CUSC Modifications and noted that the view of the majority of the respondents to the Report Phase Consultation was clearly in favour of recommending approval of Option 2. Some respondents highlighted that Option 2 is aligned with Ofgem's minded to position, is the simpler and the least costly option. Therefore, recommending approval of Option 2 with the condition that 'CMP264 WACMs 1-11 or CMP265 WACMs 1-11 will be approved by Ofgem' was consistent with the view of the majority of the respondents. The Panel agreed that there was nothing new being flagged by the respondents to the Report Phase Consultation and therefore they agreed there was no basis to conduct a further consultation.

Contingent recommendations

Although the Panel was not completely comfortable with this approach, it took into account Ofgem's view on its need to have both the BSC and the CUSC Modifications for decision at the same time, Ofgem's steer on the efficacy of contingent recommendations and the desirability of greater cross Code co-operation, and decided to adopt a pragmatic solution. Consequently, the Panel decided to develop contingent recommendations which were structured so as to eliminate any uncertainty.

Consideration against Applicable BSC Objective (a)

As Option 2 is cheaper, simpler and aligned with Ofgem's minded to position (WACM 4), the Panel agreed to add the recommendation below:

> *If the Authority approves either of CUSC CMP264 WACM 4 or CMP265 WACM 4,* ***AGREE*** *that the P349 Proposed Modification* ***DOES*** *better facilitate Applicable BSC Objective (a).*

The Panel unanimously agreed with this recommendation.

Three Panel members noted that the recommendation should be made on which option better facilitates the CUSC Modifications, not on which option better facilitate Ofgem's minded to position. Therefore, the recommendation should not refer specifically to WACM 4 but more generally to WACMs 1-11 (which are the CUSC options covered by Option 2). Another Panel member disagreed with the suggestion as the respondents to the Report Phase Consultation specifically referred to WACM 4 and we should develop the recommendation accordingly with the Consultation responses. In addition, a Panel member noted that Ofgem's minded to position is the closest thing to certainty, so making recommendations related to other CUSC options was unwarranted as it was less clear they whether would be approved. The majority of the Panel agreed to add another contingent recommendation which refers to WACM 1-11 as follows:

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*If the Authority approves either of CUSC CMP264 WACMs 1-11 or CMP265 WACMs 1-11, **AGREE** that the P348 Proposed Modification **DOES** better facilitate Applicable BSC Objective (a).*

Six members agreed with the recommendation and four members abstained to vote for the reasons explained above.

The Panel noted that the recommendation should also include a contingency that allowed for Ofgem approving any of the other CUSC options that are currently before Ofgem. The Panel's view for this contingency was that the Alternative Modification better facilitated Applicable BSC Objective (a) by allowing the Transmission Company to efficiently discharge its obligations:

*If the Authority approves any of CUSC CMP264 Proposed Modification, CMP264 WACMs 1-23, CMP265 Proposed Modification or CMP 265 WACMs 1-18, **AGREE** that the P348 Alternative Modification **DOES** better facilitate Applicable BSC Objective (a).*

One Panel member abstained as they believed that the recommendation should not include this level of detail. They noted that the recommendations went too far and that the Panel should not specifically refer to all the CUSC options. The Panel member was happy to remain silent on the other options, as he did not feel he had a basis to make a recommendation for the other options.

Which BSC option is better?

As previously highlighted, the Panel agreed that P348 Proposed (Option 2) is the preferred option as it is the cheapest, it has the lowest impact on Industry and it facilitates Ofgem's minded to position. The Panel questioned if P348 Proposed (Option 2) satisfies all of the requirements of WACMs 1-11. ELEXON confirmed that this is correct. The main difference between the CUSC Modifications is that WACMs 1-11 do not differentiate between Metering Systems belonging to different types of generators (and neither does Option 2), while all other CUSC Modifications differentiate between Metering Systems belonging to different types of generators (as do Options 1 and 3).

The Panel unanimously agreed to add the recommendation below which highlights that Option 2 is aligned with Ofgem's minded to position and therefore should be approved if Ofgem approves WACM 4:

*If the Authority approves either of CUSC CMP264 WACM4 or CMP265 WACM4, AGREED a recommendation that P348 Proposed Modification should be **approved** and P348 Alternative Modification is **rejected**.*

Seven Panel members agreed to also add a recommendation which refers to WACMs 1-11 (for the reasons explained above):

*If the Authority approves any of CUSC CMP264 or CMP265 WACMs 1-11, AGREED a recommendation that P348 Proposed Modification should be **approved** and P348 Alternative Modification is **rejected**.*

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Three Panel members abstained as they believed it was wrong to consider all the CUSC options but the recommendations should just refer to Ofgem's minded to position (please see above).

The Panel agreed by majority (7 members agreed and 3 members abstained) that:

> *If the Authority rejects all CMP264 and 265 Proposed Modification and WACMS, AGREED a recommendation that both P348 Proposed and Alternative Modifications should be **rejected**.*

In case the Authority did not decide in accordance with its minded to position and chose a CUSC solution that is not compatible with Option 2, the Panel agreed by majority (7 members agreed and 3 members abstained) that:

> *If the Authority approves any of CUSC CMP264 Proposed Modification, CMP264 WACMs 12-23, CMP265 Proposed Modification or CMP 265 WACMs 12-18, AGREED a recommendation that P348 Alternative Modification should be **approved** and P348 Proposed Modification is **rejected**.*

Potential new CUSC WACMs

One Panel member noted that there is a risk of Ofgem sending back the CUSC Modifications which could result in a new WACM (i.e. WACM 24). The Panel agreed that, in this scenario, there was no basis for it to make a recommendation in respect of the new WACM so the Panel agreed to add a further default recommendation:

> *If the Authority approves a CMP264 or CMP265 WACM which is not one of CMP264 WACMs 1-18 or CMP265 WACMs 1-23, **AGREE** a recommendation that both P348 Proposed and Alternative Modification should be **rejected**.*

The Panel unanimously approved the draft legal texts, the Implementation Date and the P348 and P349 Modification Reports.

Consideration against Applicable BSC Objective (d)

One Panel member also noted that all the BSC options are detrimental to Applicable BSC Objective (d) as they introduce costs not depending on Settlement. However, the Panel accepted that if WACM 4 was approved by Ofgem then, in respect of P348 Proposed, Objective (a) would outweigh Objective (d).

> ***AGREE** that both P348 Proposed and Alternative Modification are **DETRIMENTAL** against Applicable BSC Objective (d).*

One member abstained to vote and nine members voted in favour. The abstention was driven by the view that there is no need to make the recommendation at this level of detail.

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12 Recommendations

The BSC Panel recommends to the Authority:

a) If the Authority approves either of CUSC CMP264 WACM 4 or CMP265 WACM 4, **AGREED** that the P348 Proposed Modification **DOES** better facilitate Applicable BSC Objective (a);

b) If the Authority approves either of CUSC CMP264 WACMs 1-11 or CMP265 WACMs 1-11, **AGREED** that the P348 Proposed Modification **DOES** better facilitate Applicable BSC Objective (a);

c) If the Authority approves any of CUSC CMP264 Proposed Modification, CMP264 WACMs 1-23, CMP265 Proposed Modification or CMP 265 WACMs 1-18, **AGREED** that the P348 Alternative Modification **DOES** better facilitate Applicable BSC Objective (a);

d) **AGREED** that both P348 Proposed and Alternative Modification are detrimental against Applicable BSC Objective (d);

e) If the Authority approves either of CUSC CMP264 WACM4 or CMP265 WACM4, **AGREED** a recommendation that P348 Proposed Modification should be approved and P348 Alternative Modification is rejected;

f) If the Authority approves any of CUSC CMP264 or CMP265 WACMs 1-11, **AGREED** a recommendation that P348 Proposed Modification should be approved and P348 Alternative Modification is rejected;

g) If the Authority rejects all CMP264 and 265 Proposed Modification and WACMS, **AGREED** a recommendation that both P348 Proposed and Alternative Modifications should be rejected;

h) If the Authority approves any of CUSC CMP264 Proposed Modification, CMP264 WACMs 12-23, CMP265 Proposed Modification or CMP 265 WACMs 12-18, **AGREED** a recommendation that P348 Alternative Modification should be approved and P348 Proposed Modification is rejected;

i) If the Authority approves a CMP264 or CMP265 WACM which is not one of CMP264 WACMs 1-23 or CMP265 WACMs 1-18, **AGREED** a recommendation that both P348 Proposed and Alternative Modification should be rejected;

j) **APPROVED** an Implementation Date for the Proposed and Alternative Modifications of 22 February 2018;

k) **APPROVED** the draft legal text for the Proposed and Alternative Modifications; and

l) **APPROVED** the P348 Modification Report.

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Appendix 1: Business Requirements

Overall Business Requirements

There are three options for making changes to the BSC that between them will facilitate all CMP264 and 265 options. All BSC options must fulfil the following common Overall Business Requirements.

OBR 1
Use Settlement Data because it is subject to robust validation, assurance and governance.

OBR 2	
Derive and report data to the Transmission Company in accordance with CMP264 and CMP265. Specifically for one of the following groups of data items:	
2.1	Group 1 – CMP264 Original and WACMs 12-23, and CMP265 Original and WACMs 12-18 • Gross Demand – i.e. SVA HH settled Active Import per Settlement Period, Supplier BMU and MC • Affected Embedded Export – i.e. SVA HH settled Active Export for specific Metering Systems defined in the CUSC as Affected Embedded Export - per Settlement Period, Supplier BMU and MC • Grandfathered Embedded Export – i.e. SVA HH settled Active Export for specific Metering Systems defined in the CUSC as Grandfathered Embedded Export
2.2	Group 2 – CMP264 WACMs 1-11 and CMP265 WACMs 1-11 • Gross Demand – i.e. SVA HH settled Active Import per Settlement Period, Supplier BMU and MC • Embedded Export – i.e. SVA HH settled Active Export for all exporting Metering Systems - per Settlement Period, Supplier BMU and MC

OBR 3	
Ensure compatibility with CMP266	
3.1	Ensure the data reported to National Grid facilitates implementation of CMP266 WACM1 (approved by Ofgem on 20 December 2016), which allows Domestic and Whole Current-metered elective Half Hourly sites to be settled as Non Half Hourly until 2020.

OBR 4
Ensure all new data items listed in OBR 2 are based on loss adjusted and GSP Group corrected Settlement Data

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OBR 5
Aggregate all new data items in OBR 2 by Supplier BMU, Settlement Day, Settlement Period and Measurement Class

OBR 6
Report all new data items to the Transmission Company using an amended version of the existing P0210 TUoS Report

OBR 7
Report all new data items to the Transmission Company in accordance with existing latency and frequency requirements for the P0210, i.e. SD+14 and four days before each reconciliation run, in accordance with BSCP508

OBR 8
Where possible use BSC validation processes to ensure that volumes calculated for P348/P349 purposes are aggregated consistently with volumes for Settlement purposes.

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Assumptions

- Suppliers responsible for determining whether Metering Systems are 'Affected' or 'Grandfathered' and ensuring metered data reported
- Frequency and Latency facilitates existing Aggregation and P0210 reporting timescales
    - Although NG only require data twice a year – to set and to levy charges
- BSC Assurance only applies to existing calculations and reporting of data for Settlement purposes
    - I.e. not the identification of relevant Metering Systems or additional/new calculations for non-Settlement purposes
- HHDAs and the SVAA will perform equivalent levels of validation as for normal Settlement processes, i.e. checking that metered data is not duplicated
- LDSOs will not differentiate between Affected and Grandfathered Metering Systems for DUOS purposes.
- SVAA will report new MCs in the same was as their equivalent MCs. That is, MC 'K' and 'L' will be reported as though they are MC 'F' and 'G'.

Preferences

- National Grid
    - SVAA aggregates metered data from individual meters
    - SVAA reports volumes to NG using amended P0210 flow
    - BSC Assurance framework applies to all aspects of reporting new data items, i.e. identification of Metering Systems, and accurate collection, aggregation and reporting of data
- Workgroup
    - Use new dataflows for reporting between Supplier, Party Agents and BSC Agent to minimise impact to existing processes
    - Use a centralised DA function to minimise impacts on individual HHDAs' systems and processes

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P348 Alternative Modification - Specific Requirements – Option 1 'Centralised DA'[3]

Requirement 1.1		OBR Mapping
Each Supplier must report metered data to SVAA for each of its HH exporting Metering Systems.		OBR 1, 2, 3, 5 and 8
1.1.1	Each Supplier (through its HHDA(s)) will report Half Hourly metered data and associated line losses to SVAA for each HH Exporting Metering System it is the Registrant for.	
1.1.2	Half Hourly metered data should be reported by the HHDA after being allocated to a Consumption Component Class. This is the data item defined by the existing BSC legal text as: • Allocated Supplier's Metering System Metered Consumption ($ASMMC_{HZaNLKj}$) for those HHDAs who report data to SVAA by Supplier and GSP Group – see Annex S-2 3.5.9; or • Allocated BM Unit's Metering System Metered Consumption ($ABMMMC_{iaNLKj}$) for those HHDAs who report data to SVAA by Supplier BM Unit – see Annex S-2 3.6.2	
1.1.3	The associated line losses are derived by multiplying the half hourly metered data by (LLF-1), where LLF is the relevant Line Loss Factor.	

Requirement 1.2		OBR Mapping
Registrants of HH exporting Metering Systems must identify and notify the SVAA of Metering Systems that are Affected Embedded Export Metering Systems[4] and Grandfathered Embedded Export Metering Systems[5].		OBR 2 and 5
1.2.1	Depending on the CMP264 or 265 solution that is approved, an 'Affected Embedded Export Metering System' is either: • a HH Metering System that measures exported volumes that the CUSC considers to be 'Affected Embedded Exports'[6]; or • a HH Metering System that measures exported volumes that the CUSC considers to be 'Embedded Exports'[7].	
1.2.2	Depending on the CMP264 or 265 solution that is approved, a 'Grandfathered Embedded Export Metering System' is either • a HH Metering System that measures exported volumes that the CUSC considers to be 'Grandfathered Embedded Exports'[8]; or • a HH Metering System that is not an 'Affected Embedded Export Metering System'[9].	

[3] This option only applies to CMP264 Original and WACMs 12-23 and CMP265 Original and WACMs 12-18. CMP264 WACMs 1-11 and CMP265 WACMs 1-11 are covered by Option 2 below.
[4] For ease of reference, we have used the term Affected Metering Systems.
[5] For ease of reference, we have used the term Grandfathered Metering Systems.
[6] CMP264 WACMs 12-23 or CMP265 WACMs 12-18
[7] CMP264 Original Proposal or CMP265 Original
[8] See footnote 6
[9] See footnote 7

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Requirement 1.2		OBR Mapping
1.2.3	Registrants of HH exporting Metering Systems must identify (upon implementation of this Modification and following the subsequent registration of any HH export Metering System) which Metering Systems are Affected Metering Systems and which are Grandfathered Metering Systems.	
1.2.4	Registrants of HH exporting Metering Systems must notify the SVAA of the HH exporting Metering System IDs (i.e. MSIDs) that belong to Affected Metering Systems or Grandfathered Metering Systems.	
1.2.5	For each MSID it reports, the Registrant must provide the following details to SVAA (via the new Dxxxx dataflow): • MSID • Supplier ID • BMU ID • Supplier's Registration Effective from date • Supplier's Registration Effective to date • Affected/Grandfathered classification • Affected/Grandfathered classification - Effective from date • Affected/Grandfathered classification - Effective to date Supplier's Registration Effective from date is the date the Supplier last became the registrant for the MSID The Classification Effective from date is either the date the MSID is first registered by the Supplier in SMRS or the date the Supplier identifies a change to the MSID's classification. The Effective to date is either the date the MSID ceases to be either an Affected or Grandfathered Metering System is deregistered by the Supplier).	
1.2.6	If, following notification to SVAA, an Affected Metering System becomes a Grandfathered Metering System or vice versa, the Registrant must notify the SVAA of the change and the effective from date of the change.	
1.2.7	If, following notification to SVAA, a Registrant of an Affected Metering System or Grandfathered Metering System disconnects or becomes aware that such a Metering System has been or will be disconnected: • converts the Metering System to a NHH system (i.e. by Change of Measurement Class); or • re-registers the Metering System in CMRS the Registrant must provide details of the MSID and the Effective to Date (i.e. the date on which the Metering System was/will be disconnected, converted or re-registered).	

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Requirement 1.2		OBR Mapping
1.2.8	The Registrant of an Affected Metering System or Grandfathered Metering System must send any notification to the SVAA within five working days of the Registrant registering such a Metering System or becoming aware of a change in its status (per 1.2.4, 1.2.6 and 1.2.7).	
1.2.9	Registrants must use the new SVA Data Catalogue flow 'Dxxxx' to notify the SVAA of its Metering Systems.	

Requirement 1.3	OBR Mapping
SVAA must be able to receive notifications (including updates and corrections) and maintain details of all HH Exporting Metering Systems from Suppliers, via a new DTC flow	

Requirement 1.4		OBR Mapping
HHDAs must report metered data and associated line losses for all HH exporting Metering Systems to SVAA.		OBR 1, 2, 3, 5 and 8
1.4.1	Following normal checks and defaulting rules in accordance with BSCP503, HHDAs must send successfully validated 'Allocated Supplier's Metering System Metered Consumption' or 'Allocated BM Unit's Metering System Metered Consumption' values for all Settlement Periods for all Settlement Days to SVAA for each HH exporting Metering System it is appointed to in accordance with timescales for providing HH Aggregation Files as set out in BSCP01.	
1.4.2	Requirement 1.4.1 also applies to any HH exporting Metering Systems that is the subject of a Shared SVA Meter Arrangement.	
1.4.3	Based on validated 'Allocated Supplier's Metering System Metered Consumption' or 'Allocated BM Unit's Metering System Metered Consumption', HHDAs must calculate the associated line losses for every Settlement Period and Settlement Day for each HH exporting Metering System that it is appointed to.	
1.4.4	Requirement 1.4.3 also applies to Metering Systems subject to Shared SVA Meter Arrangements.	
1.4.5	HHDAs must send 'Supplier's Metering System Metered Losses' to SVAA for all Settlement Periods and Settlement Days for each HH exporting Metering System in accordance with timescales for providing HH Aggregation Files as set out in BSCP01.	
1.4.6	HHDAs must send validated 'Allocated Supplier's Metering System Metered Consumption' or 'Allocated BM Unit's Metering System Metered Consumption' (and associated line losses) to SVAA in a new DTC flow 'Dyyyy', the structure of which will be based on the D0357. HHDAs must report corresponding CCC IDs for each consumption and line loss value.	

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Requirement 1.5		OBR Mapping
SVAA must calculate Period BMU Gross HH Demand		OBR 1, 2, 3, 4 and 5
1.5.1	'Period BMU Gross HH Demand' is the sum of all HH settled Active Import Corrected Components (CORC) per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
1.5.2	'Period BMU Gross HH Demand' for each relevant Measurement Class should be derived by summing the CORC for the relevant CCC IDs (i.e. those related to Half Hourly Active Import). Currently the relevant CCC Ids are as follows (although these should not be hard-coded into systems): • Measurement Class C – CCC IDs 1, 3, 4, 9, 11, 12 • Measurement Class D - CCC IDs 2, 5, 10, 13 – Measurement Class E - CCC IDs 23, 25, 26, 28, 30, 31 • Measurement Class F - CCC IDs 42, 43, 44, 45, 46, 47 • Measurement Class G - CCC IDs 54, 55, 56, 57, 58, 59 –	

Requirement 1.6		OBR Mapping
SVAA must calculate Period BMU Affected Embedded HH Export		OBR 1, 2, 3, 4 and 5
1.6.1	'Period BMU Affected Embedded HH Export' is the sum of all GSP Group corrected and loss adjusted HH settled Active Exports for Affected Metering Systems per Settlement Day, Settlement Period, Supplier BMU and Measurement Class, i.e. the sum of HH AE CCC ID CORCs based on metered data for Affected Metering Systems.	
1.6.2	SVAA must be able to calculate equivalent values of C_{ij}, $CLOSS_{ij}$ and $CORC_{ij}$ for Affected Metering Systems only, using the metered data provided by HHDAs using the new Dyyyy (see Requirement 1.4) and with reference to the SVAA's register of Affected and Grandfathered Metering Systems (see Requirement 1.3).	

Requirement 1.7		OBR Mapping
SVAA must calculate Period BMU Grandfathered Embedded HH Export		OBR 1, 2, 3, 4 and 5
1.7.1	'Period BMU Grandfathered Embedded HH Export' is the sum of all GSP Group corrected and loss adjusted HH settled Active Exports for Grandfathered Metering Systems per Settlement Day, Settlement Period, Supplier BMU and Measurement Class, i.e. the sum of HH AE CCC ID CORCs based on metered data for Grandfathered Metering Systems..	
1.7.2	SVAA must be able to calculate equivalent values of C_{ij}, $CLOSS_{ij}$ and $CORC_{ij}$ for Grandfathered Metering Systems only, using the metered data provided by HHDAs using the new Dyyyy (see Requirement 1.4) and with reference to the SVAA's register of Affected and Grandfathered Metering Systems (see Requirement 1.3).	

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Requirement 1.8		OBR Mapping
SVAA must validate metered data		OBR 8
1.8.1	SVAA must perform the following checks: • For every Settlement Period, check that it has received metered data for all Affected and Grandfathered Metering Systems notified to it by Suppliers; • For every Settlement Period and Supplier BMU, check that the sum of all related Affected and Grandfathered Exports equals the sum of all HH export Corrected Components.	
1.8.2	SVAA must produce exception reports in the following circumstances: • Where SVAA does not receive metered data when it is expecting it for a particular Metering System and Settlement Period, report exception to HHDA and registered Supplier. • Where SVAA receives metered data for MSIDs it has no record of or for a Settlement day that is after the most recent ETD for that MSID, report exception to HHDA and Supplier identified in Dyyyy from HHDA. • Where SVAA receives metered data for the same MSID, Settlement Day and Settlement Period but from different DAs, report exception to HHDA and all Suppliers included in HHDAs conflicting messages • Where SVAA receives metered data for an MSID but the SVAA's record of the related Supplier does not match the Supplier reported in the HHDA's Dyyyy, report exception to HHDA and both Suppliers • Where sum of a Supplier BMU's Affected and Grandfathered Exports does not equal sum of all HH export Corrected Components for that Supplier BMU for a particular SP report exception to the Transmission Company and the Supplier.	

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Requirement 1.8		OBR Mapping
1.8.3	SVAA must use the following default rules: • Where SVAA does not receive metered data when it is expecting it for a particular Metering System and Settlement Period, use/calculate a default value calculated using rules equivalent to those in BSCP503. • Treat metered data for MSIDs it has no record of as though the MSID were an Affected Embedded Export Metering System registered to the Supplier reported in the HHDAs message. • Where SVAA receives Metered data or Losses for the same MSID and Settlement Period from different DAs, accept most recently received data • Reject Metered data or Losses where the MSID and Supplier in the HHDA's message do not match the SVAA's record of MSID and Supplier	
1.8.4	SVAA will use a new SVA Data Catalogue flow, Paaaa, to report exceptions to Suppliers and the Transmission Company.	
1.8.5	If a Supplier provides updated data, the SVAA must be able to update its records and update calculations as part of the next scheduled Settlement Run. Nb errors in the calculation of values that are not strictly for Settlement Purposes will not be the subject of a Settlement Error and treated as such.	

Requirement 1.9		OBR Mapping
SVAA must report 'Period BMU Gross HH Demand', 'Period BMU Affected Embedded HH Export' and 'Period BMU Grandfathered Embedded HH Export' values to the Transmission Company.		OBR 1, 2, 3, 4 and 5
1.9.1	SVAA must report 'Period BMU Gross HH Demand', 'Period BMU Affected Embedded HH Export' and 'Period BMU Grandfathered Embedded HH Export' values and continue to report using the TUoS Report in accordance with existing timescales.	

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P348 Proposed Modification and P349 Proposed Modification - Specific Requirements – Option 2 'simple SVAA'[10]

Requirement 2.1		OBR Mapping
SVAA must calculate Period BMU Gross HH Demand		OBR 1, 2, 3, 4 and 5
2.1.1	'Period BMU Gross HH Demand' is the sum of all HH settled Active Import Corrected Components (CORC) per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
2.1.2	'Period BMU Gross HH Demand' for each relevant Measurement Class should be derived by summing the CORC for the relevant CCC IDs (i.e. those related to Half Hourly Active Import). Currently the relevant CCC Ids are as follows (although these should not be hard-coded into systems): • Measurement Class C – CCC IDs 1, 3, 4, 9, 11, 12 • Measurement Class D – CCC IDs 2, 5, 10, 13 • Measurement Class E – CCC IDs 23, 25, 26, 28, 30, 31 • Measurement Class F – CCC IDs 42, 43, 44, 45, 46, 47 • Measurement Class G – CCC IDs 54, 55, 56, 57, 58, 59	

Requirement 2.2		OBR Mapping
SVAA must calculate Period BMU Gross HH Embedded Export		OBR 1, 2, 3, 4 and 5
2.2.1	'Period BMU Gross HH Embedded Export' is the sum of all HH settled Active Export Corrected Components (CORC) per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
2.2.2	'Period BMU Gross HH Embedded Export' for each relevant Measurement Class should be derived by summing the CORC for the relevant CCC IDs (i.e. those related to Half Hourly Active Export). Currently the relevant CCC Ids are as follows (although these should not be hard-coded into systems): • Measurement Class C – CCC IDs 6, 7, 8, 14, 15, 16 • Measurement Class E – CCC IDs 36, 37, 38, 39, 40, 41 • Measurement Class F – CCC IDs 48, 49, 50, 51, 52, 53 • Measurement Class G – CCC IDs 60, 61, 62, 63, 64, 65	

Requirement 2.3		OBR Mapping
SVAA must report 'Period BMU Gross HH Demand' and 'Period BMU Gross HH Embedded Export' values to the Transmission Company.		OBR 1, 2, 3, 4 and 5
2.3.1	SVAA must report 'Period BMU Gross HH Demand' and 'Period BMU Gross HH Embedded Export' values and continue to report the TUoS Report in accordance with existing timescales.	

[10] This option only applies to CMP264 WACMs 1-11 and CMP265 WACMs 1-11. CMP264 Original and WACMs 12-23 and CMP265 and WACMs 12-18 are covered by Option 1 above and Option 3 below.

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Requirement 2.4		OBR Mapping
SVAA must provide the Transmission Company with an extract of historical data.		OBR 1, 4 and 5
2.4.1	A report or reports (to be agreed with the Transmission Company) containing values of 'Period BMU Gross HH Demand' and 'Period BMU Gross HH Embedded Export' for all Settlement Periods between 1 September 2014 and 31 August 2017.	
2.4.2	SVAA must report the historical data described in 2.4.1 by Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
2.4.3	SVAA should use the most up to date Settlement Data available for each Settlement Period within the range described in 2.4.1, e.g. RF data, otherwise R3, then R2 and so on.	
2.4.4	SVAA must report the historical data using a CSV file in a format/structure to be agreed with the Transmission Company.	
2.4.5	SVAA must report the historical data to the Transmission Company by 7 September 2017.	

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P349 Alternative Modification - Specific Requirements – Option 3 'Existing registration processes'[11]

Requirement 3.1		OBR Mapping
Suppliers must assign and maintain the correct Measurement Class for all existing and future HH export Metering Systems		
3.1.1	Registrants of HH exporting Metering Systems must identify (upon implementation of this Modification and following the subsequent registration of any HH export Metering System) which Metering Systems are Affected Embedded Export Metering Systems and which are Grandfathered Embedded Export Metering Systems.	
3.1.2	Suppliers must assign Affected Embedded Export Metering Systems to new Measurement Classes 'H', 'J', 'K' and 'L' – see requirement 3.2.1 below.	
3.1.3	Suppliers must assign Grandfathered Embedded Export Metering Systems to Measurement Classes 'C', 'E', 'F' and 'G'.	
3.1.4	Depending on the CMP264 or CMP265 solution that is approved, an 'Affected Embedded Export Metering System' is either: • a HH Metering System that measures exported volumes that the CUSC considers to be 'Affected Embedded Exports'[12]; or • a HH Metering System that measures exported volumes that the CUSC considers to be 'Embedded Exports'[13].	
3.1.5	Depending on the CMP264 or CMP265 solution that is approved, a 'Grandfathered Embedded Export Metering System' is either • a HH Metering System that measures exported volumes that the CUSC considers to be 'Grandfathered Embedded Exports'[14]; or • a HH Metering System that is not an 'Affected Embedded Export Metering System'[15].	

[11] This option only applies to CMP264 Original and WACMs 12-23 and CMP265 and WACMs 12-18. CMP264 WACMs 1-11 and CMP265 WACMs 1-11 are covered by Option 2 above.
[12] CMP264 WACMs 12-23 or CMP265 WACMs 12-18
[13] CMP264 Original Proposal or CMP265 Original
[14] See footnote 6
[15] See footnote 7

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Requirement 3.2		OBR Mapping
The BSC must introduce new Measurement Classes 'H', 'J', 'K' and 'L'.		
3.2.1	The BSC will be modified to introduce the following new Measurement Classes: • 'H' – Half Hourly Metering Equipment at above 100kW Premises (export only) • 'J' – Half Hourly Metering Equipment at below 100kW Premises with current transformer (export only) • 'K' – Half Hourly Metering Equipment at below 100kW Premises with current transformer or whole current, and at Domestic Premises (export only) • 'L' – Half Hourly Metering Equipment at below 100kW Premises with whole current and not at Domestic Premises (export only)	
3.2.2	These new Measurement Classes should only be used in relation to export Metering Systems that are Affected Embedded Export Metering Systems	

Requirement 3.3		OBR Mapping
The BSC must introduce the new CCC Ids for Measurement Classes 'H', 'J', 'K' and 'L'.		
3.3.1	The BSC will be modified to introduce new CCC Ids and describe their relationship to the existing Measurement Classes. See the proposed legal text for option 3.	
3.3.2	The new CCCs will be entered into Market Domain Data for use by participants.	
3.3.3	HHDAs and SVAA will need to be able to process the new CCC Ids within their systems.	

Requirement 3.4		OBR Mapping
HH Active Export metered data must be submitted into Settlement using the new or existing CCC Ids as applicable.		
3.4.1	HHDAs will need to be able to allocate Metering System Identifications (MSIDs) to the new CCC Ids	
3.4.2	HHDAs must be able to submit data to the SVAA, should they be appointed to a Metering System that is registered to Measurement Classes 'C', 'E', 'F', 'G', 'H', 'J', 'K' or 'L', using the D0040 and D0298 data flows.	
3.4.3	The SVAA must be able to receive the D0040 and D0298 data flows with additional rows reflecting the new CCC Ids	

Requirement 3.5	OBR Mapping
The SVAA must aggregate data for Measurement Classes 'H', 'J', 'K' and 'L', processing the amended D0040 and D0298 data flows into the existing D0030 and D0314 data flows.	

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Requirement 3.5		OBR Mapping
3.5.1	The SVAA must report HH Aggregated data on the D0030 and D0314 data flows against Profile Class (PC) "0".	
3.5.2	The SVAA must include the HH export data for the CCC Ids and Measurement Classes in the existing D0030 and D0314 data flows, with no changes made to the structure of the flows.	
3.5.3	When compiling the D0030 and D0314, SVAA must apply existing rules for reporting HH data for MCs F and G to CCC IDs for new MCs 'K' and 'L', i.e. volumes associated to MC 'K' should be included with those for MC 'F' and volumes associated to MC 'L' should be included with those for MC 'G'.	

Requirement 3.6		OBR Mapping
SVAA must calculate Period BMU Gross HH Demand		
3.6.1	'Period BMU Gross HH Demand' is the sum of all HH settled Active Import Corrected Components (CORC) per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
3.6.2	'Period BMU Gross HH Demand' for each relevant Measurement Class should be derived by summing the CORC for the CCC IDs as specified below: • Measurement Class C – CCC IDs 1, 3, 4, 9, 11, 12 • Measurement Class D – CCC IDs 2, 5, 10, 13 • Measurement Class E – CCC IDs 23, 25, 26, 28, 30, 31 • Measurement Class F – CCC IDs 42, 43, 44, 45, 46, 47 • Measurement Class G – CCC IDs 54, 55, 56, 57, 58, 59	

Requirement 3.7		OBR Mapping
SVAA must calculate Period BMU Affected Embedded HH Export		
3.7.1	'Period BMU Affected Embedded HH Export' is the sum of all HH settled Active Export Corrected Components (CORC) for Affected Metering Systems per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
3.7.2	'Period BMU Affected Embedded HH Export' for each relevant Measurement Class should be derived by summing the CORC for the relevant CCC IDs (i.e. those related to Half Hourly Active Export). Initially the relevant CCC Ids are as follows (although these should not be hard-coded into systems): • Measurement Class H – CCC IDs 66, 67, 68, 69, 70, 71 • Measurement Class J – CCC IDs 72, 73, 74, 75, 76, 77 • Measurement Class K – CCC IDs 78, 79, 80, 81, 82, 83 • Measurement Class L – CCC IDs 84, 85, 86, 87, 88, 89	

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Requirement 3.8		OBR Mapping
SVAA must calculate Period BMU Grandfathered Embedded HH Export		
3.8.1	'Period BMU Grandfathered Embedded HH Export' is the sum of all HH settled Active Export Corrected Components (CORC) for Grandfathered Metering Systems per Settlement Day, Settlement Period, Supplier BMU and Measurement Class.	
3.8.2	'Period BMU Grandfathered Embedded HH Export' for each relevant Measurement Class should be derived by summing the CORC for the relevant CCC IDs (i.e. those related to Half Hourly Active Export). Initially the relevant CCC Ids are as follows (although these should not be hard-coded into systems): • Measurement Class C – CCC IDs 6, 7, 8, 14, 15, 16 • Measurement Class E – CCC IDs 36, 37, 38, 39, 40, 41 • Measurement Class F – CCC IDs 48 ,49, 50, 51, 52, 53 • Measurement Class G – CCC IDs 60, 61, 62, 63, 64, 65	

Requirement 3.9		OBR Mapping
SVAA must report 'Period BMU Gross HH Demand', 'Period BMU Affected Embedded HH Export' and 'Period BMU Grandfathered Embedded HH Export' values to the Transmission Company.		OBR 1, 2, 3, 4 and 5
3.9.1	SVAA must report 'Period BMU Gross HH Demand', 'Period BMU Affected Embedded HH Export' and 'Period BMU Grandfathered Embedded HH Export' values and continue to report using the TUoS Report in accordance with existing timescales.	

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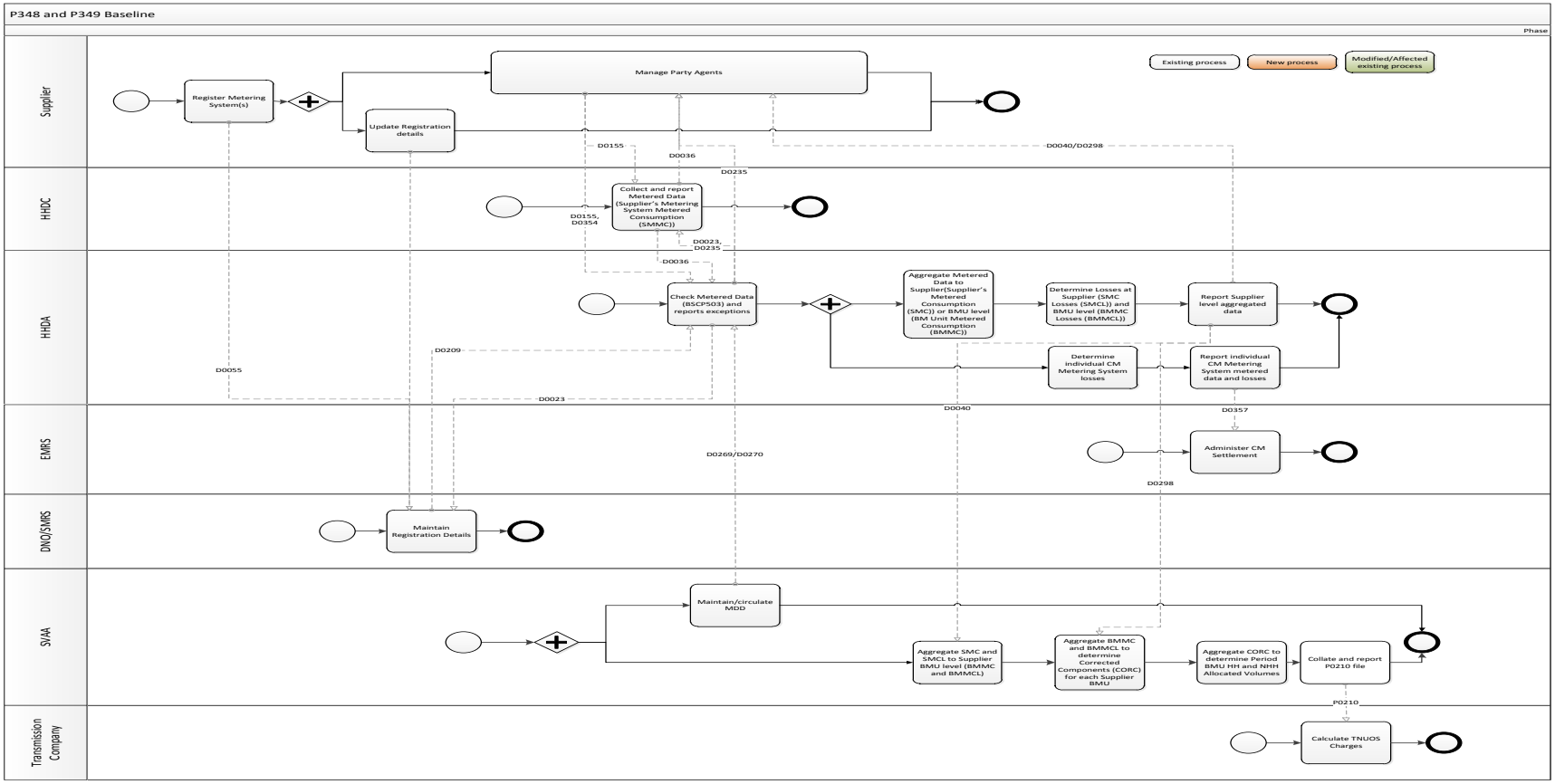
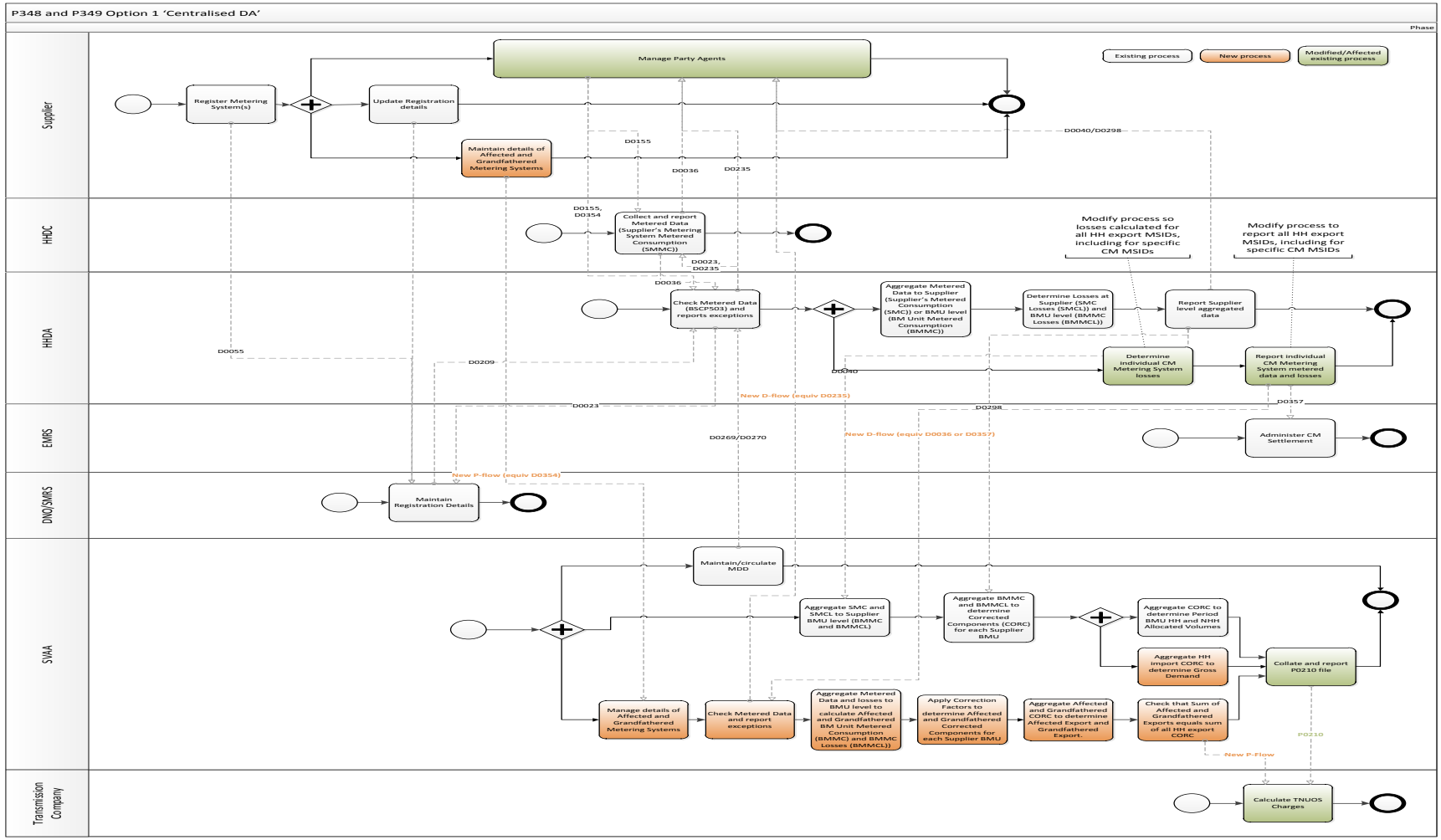
Appendix 2: Illustrative Process Diagrams *(indicative)*

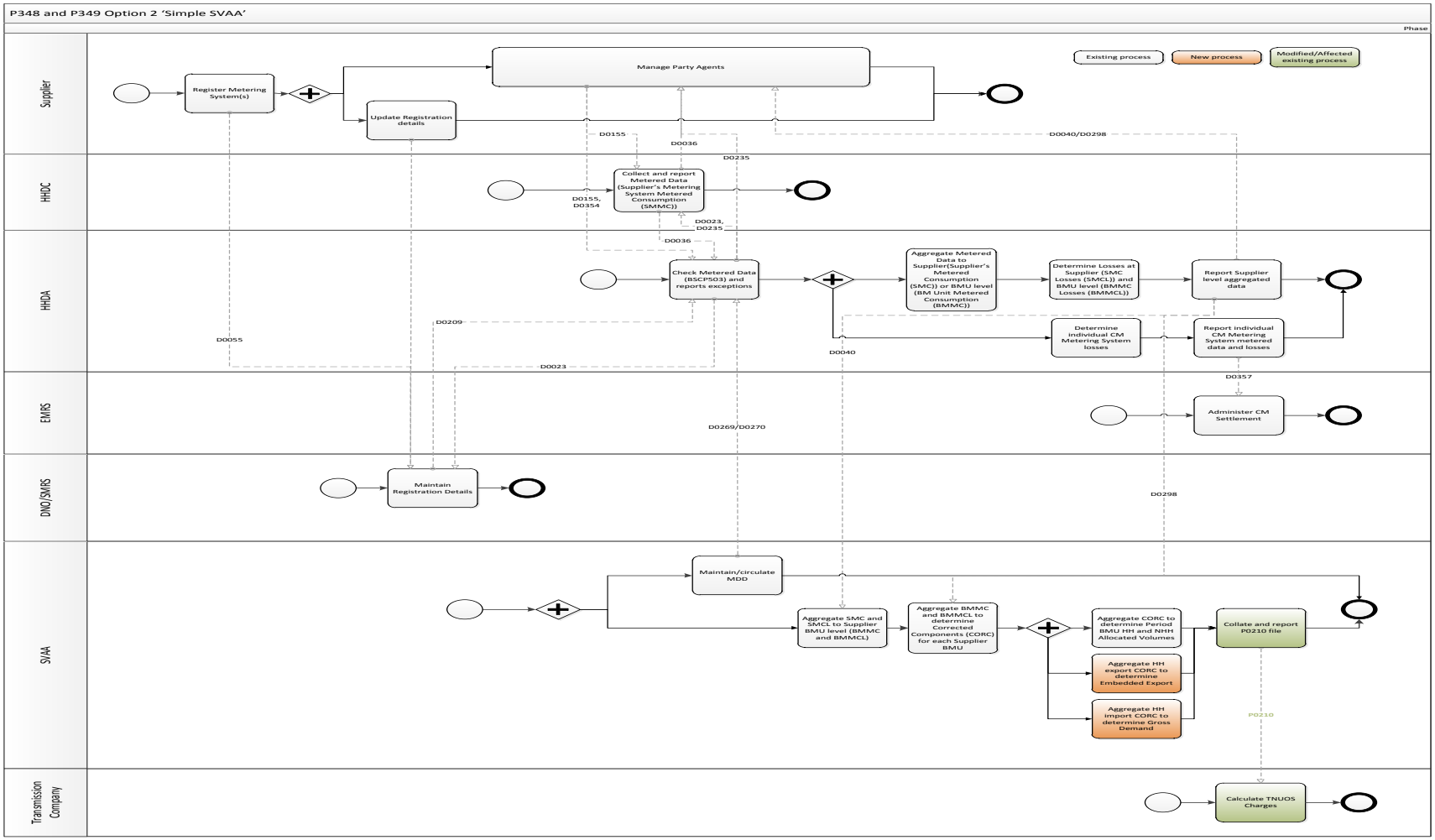
Baseline process



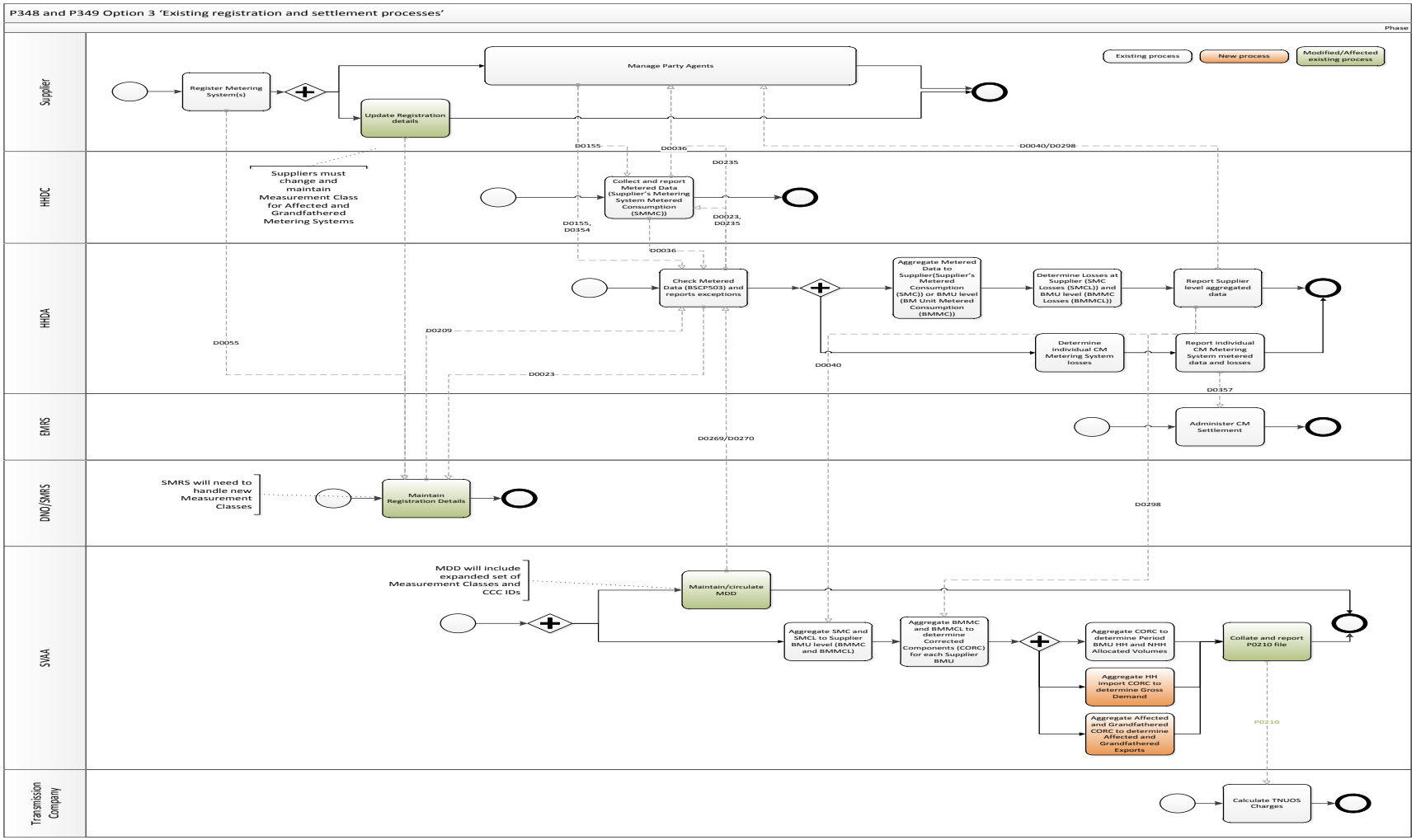
Option 1 'Centralised DA'



Option 2 'Simple SVAA'



Option 3 'Existing registration and settlement processes'



Appendix 3: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P348 Terms of Reference
What lessons can be learned from P260?
Should gross import and gross export data for all BM Units be provided to the Transmission Company?
What changes are needed to BSC documents, systems and processes to support P348 and what are the related costs and lead times?
Are there any Alternative Modifications?
Does P348 better facilitate the Applicable BSC Objectives compared with the current baseline?

Assessment Procedure timetable

P348 Assessment Timetable	
Event	Date
Panel submits P345 to Assessment Procedure	4 July 16
Workgroup Meeting 1	12 Jul 16
Industry Impact Assessment and Assessment Consultation	29 Jul 16 – 19 Aug 16
Workgroup Meeting 2	31 Aug 16
Workgroup Meeting 3	12 Oct 16
Workgroup Meeting 4	7 Dec 16
Second Impact Assessment and Assessment Consultation	17 Feb 17 – 10 March 17
Workgroup Meeting 5	20 Mar 17
Panel considers Workgroup's Assessment Report	13 Apr 17

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Workgroup membership and attendance

P348 Workgroup Attendance						
Name	Organisation	12 Jul 16	31 Aug 16	13 Oct 16	7 Dec 16	20 Mar 17
Members						
David Kemp	ELEXON *(Chair)*	✓	✓	✗	✗	✗
Royston Black	ELEXON *(Chair)*	✗	✗	✗	✗	✓
Talia Addy	ELEXON *(Lead Analyst)*	✓	✓	✓	✓	✗
Giulia Barranu	ELEXON *(Lead Analyst)*	✗	✗	✗	✗	✓
Paul Mott	EDF Energy (P348 Proposer Representative)	✓	✓	✓	☎	✓
Stuart Noble	ScottishPower (P349 Proposer Representative)	✓	✓	✗	☎	✓
Andrew Colley	SSE	✗	✗	✓	☎	✓
Philip Russell	Independent	✓	✓	✓	☎	✓
Bill Reed	RWE Supply & Trading GmnH	✓	✓	✓	☎	✓
Attendees						
Nick Rubin	ELEXON *(Design Authority)*	✓	✓	✓	✓	✓
Nicholas Brown	ELEXON *(Lead Lawyer)*	✓	✓	✓	✗	✗
Guy Philips	Uniper UK Limited	✓	✗	✗	✗	✗
Ian Tanner	UK Power Reserve ltd.	✓	✓	✓	✗	✗
Lars Weber	Neas Energy Ltd.	✗	✓	✗	✗	✗
Paul Wakeley	National Grid	✓	✗	✗	✗	✗
Urmi Mistry	National Grid	✗	✗	✗	✗	✓

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Appendix 4: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
BSC	Balancing and Settlement Code
BSCCo	BSC Company
CCC	Consumption Component Class
CM	Capacity Market
CMP	CUSC Modification Proposal
CMRS	Central Meter Registration Agent
CMU	Capacity Market Unit
CUSC	Connection Use of System Code
CVA	Central Volume Allocation
DC	Data Collector
DNO	Distribution Network Operators
DTC	Data Transfer Catalogue
DTN	Data Transfer Network
ECOES	Electricity Central Online Enquiry Service
EGCMU	Embedded Generation Capacity Market Unit
GPME	Gross Period Metered Export
HH	Half Hourly
HHDA	Half Hourly Data Aggregator
HHDC	Half Hourly Data Collector
LLF	Line Loss Factor
MRA	Master Registration Agreement
MSID	Metering System ID
SMMC	Supplier's Metering System Metered Consumption
SMML	Supplier's Metering System Metered Losses
SMRS	Supplier Meter Registration Agent
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent
TAA	Technical Assurance Agent
TNUoS	Transmission Network Use of System
TUoS	Transmission Use of System

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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
4, 5	CMP265 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/
5	Embedded Generation Guidance Note	https://www.elexon.co.uk/wp-content/uploads/2016/01/Embedded_Generation_v7.0.pdf
6, 7	P349 page of the ELEXON website	https://www.elexon.co.uk/mod-proposal/p349/
6	CMP264 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/
6	Ofgem Open letter: Charging arrangements for embedded generation	https://www.ofgem.gov.uk/publications-and-updates/open-letter-charging-arrangements-embedded-generation
7	P348 page of the ELEXON website	https://www.elexon.co.uk/mod-proposal/p348/
10	CMP266 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP266/
24	P339 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p339/
25	P260 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p260-extension-to-data-provided-to-the-transmission-company-in-the-tuos-report/
25	D0081 flows	https://dtc.mrasco.com/DataFlow.aspx?FlowCounter=0081&FlowVers=1&searchMockFlows=False
25	CMP271 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP271/
26	CMP274 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP274/
26	BSCPs page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/5/?show=10&type
32	BSC page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/

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