

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.

This Assessment Procedure Consultation for P348 closes:

5pm on Friday 26 August 2016

The Workgroup may not be able to consider late responses.



The P348 Workgroup initially recommends **approval** of P348

This Modification is expected to impact:

- Suppliers
- Half Hourly Data Collectors
- Half Hourly Data Aggregators
- ELEXON
- The Transmission Company

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

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About This Document

The purpose of this P348 Assessment Procedure Consultation is to invite Balancing and Settlement Code (BSC) Parties and other interested parties to provide their views on the merits of P348. The P348 Workgroup will then discuss the consultation responses, before making a recommendation to the BSC Panel at its meeting on 8 September 2016 on whether or not to approve P348.

There are four 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 the P348 proposed solution.
- Attachment B contains the draft redlined changes to the BSC for the P348 potential alternative solution.
- Attachment C contains the specific questions on which the Workgroup seeks your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish the Workgroup to consider.

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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 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 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

This Modification will impact Suppliers, Half Hourly Data Aggregators (HHDAs) or Half Hourly Data Collectors (HHDCs) (depending on which solution is progressed) and the Transmission Company. It is also anticipated that changes may be required to the Supplier Volume Allocation Agent (SVAA) systems.

Details of the impacts and costs associated with this Modification will be considered by the Workgroup at its next meeting, along with responses to this Assessment Procedure Consultation.

Implementation

P348 is targeted for implementation on 7 November 2019, as part of the November 2019 BSC Systems release. The implementation of the related CMP265 solution will not need to be in place until the 2020 Triad period.

Recommendation

The majority view of the Workgroup is that P348 does better facilitate Applicable BSC Objectives (a), (c) and (f) compared to the baseline and initially recommends approval of P348.

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

[CMP265 'Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market'](#) looks 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 most strongly 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. Correcting this defect needs to be addressed urgently in advance of the next CM auction (in December 2016).



Exemptible Generation

All power stations, including embedded generators, normally require a Generation Licence before they are allowed to produce and sell electricity on the wholesale market. However, they may, upon meeting certain criteria, qualify for a Class Exemption.

This removes the requirement to hold a licence.

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 in Section 6 of this document 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 will be 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.

Proposed solution

EDF raised [P348 'Provision of gross BM Unit data for TNUoS charging'](#) on 1 July 2016.

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.

In effect P348 will require Suppliers, their HHDAs and SVAA to collect and aggregate metered data (and associated line losses) from Embedded Generation Capacity Mechanism Unit (EGCMU) and Related EGCMU for every Settlement Period. This is to enable the calculation of net export energy volumes for individual EGCMU Metering Systems, which the SVAA will report to the Transmission Company.

An EGCMU in relation to the BSC will be defined as:

- Any Generating Capacity Market Unit (CMU) with a Metering System registered in the Central Meter Registration System (CMRS) or Supplier Meter Registration System (SMRS).

It should be noted that the definition of EGCMU under P348 will be influenced by the CMP265 solution. Therefore, this definition is subject to change.

The detailed requirements are set out in Appendix 1 but in summary P348 will introduce the following requirements:

- Where a Supplier is the registrant for an EGCMU Metering System or Related EGCMU Metering System, the **Supplier** must report the Supplier's Metering System Metered Consumption (SMMC) and Supplier's Metering System Metered Losses (SMML) data for these Metering Systems to the SVAA;
- Where a Supplier is the registrant for an EGCMU Metering System, the **Supplier** must identify all Related EGCMU Metering Systems and where they are not the registered Supplier for a Related EGCMU Metering System must request that the registered Supplier provide the SVAA with the SMMC and SMML data for the Related EGCMU Metering System(s);
- Upon request by its Supplier, HHDAs must report SMMC and SMML data to the SVAA;
- Suppliers** responsible for EGCMU Metering Systems should send details of all EGCMU Metering System IDs (MSIDs) and Related EGCMU MSIDs to the SVAA;
- Suppliers** must provide EGCMU Metering System Netting Rules to the SVAA to enable it to calculate Gross Period Metered Export (GPME) values for EGCMU Metering Systems;
- For each EGCMU Metering System and each Related EGCMU Metering System the **HDA** should calculate Supplier's SMML for each value of Supplier's SMMC and report these values to the SVAA;
- The **SVAA** will calculate the GPME for each EGCMU Metering System in accordance with netting rules provided to it by Suppliers;
- The **SVAA** will calculate 'Supplier's GPME' and report these values to the Transmission Company as part of the TUOS Report.



Related EGCMU Metering System

A Related EGCMU Metering System is a HH Metering System that measures imported volumes and is intrinsic to the operation of a EGCMU

Metered consumption and losses

A Supplier's Metering System Metered Consumption ($SMMC_{Zakj}$) is defined in BSC Section S Annex S-2 3.3.2.

A Supplier's Metering System Metered Losses ($SMML_{Zakj}$) is the Line Losses calculated for the corresponding SMMC. It is derived by multiplying SMMC by the relevant LLF ($SMML_{Zakj} = SMMC_{Zakj} \times (LLF_{Lj} - 1)$)

EGCMU Metering System Netting Rules

Metering System Netting Rules are rules set by a Supplier responsible for and specific to an EGCMU Metering System or group of EGCMU Metering Systems.

The rules explain how individual EGCMU Metering Systems and Related EGCMU Metering Systems are linked to each other and explain how GPME values are calculated for individual EGCMU Metering Systems.

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The detailed requirements for the P348 proposed solution can be found in Appendix 1.

Legal text

The draft legal text changes to support the P348 proposed solution can be found in Attachment A.

Assessment Consultation Question

Do you agree that the draft legal text in Attachment A delivers the intention of the proposed solution?

The Workgroup invites you to give your views using the response form in Attachment C.

Potential alternative solution

The Workgroup is seeking industry views on the merits of a potential alternative solution which is 'BSC light' by placing greater emphasis on the Transmission Company receiving and aggregating metered data from individual Metering Systems

The alternative solution requires Suppliers and their HHDCs to report metered data for EGCMU Metering Systems and Related EGCMU Metering Systems directly to the Transmission Company. The Transmission Company is then responsible for calculating SMML and applying Suppliers' netting rules to determine net export energy volumes for individual EGCMU Metering Systems.

The detailed requirements for this alternative are set out in Appendix 1 but in summary they are:

- Where a Supplier is the registrant for an EGCMU Metering System or Related EGCMU Metering System, the **Supplier** must report Supplier's Metering System Metered Consumption data for these Metering Systems to the Transmission Company;
- Where a Supplier is the registrant for an EGCMU Metering System, the **Supplier** must identify all Related EGCMU Metering Systems and where they are not the registered Supplier for a Related EGCMU Metering System request that the registered Supplier provides the Transmission Company with the SMMC data for these Metering Systems;
- Upon request by its Supplier, HHDCs must report SMMC data to the Transmission Company;
- **Suppliers** responsible for EGCMU Metering Systems must notify the Transmission Company of all EGCMU Metering System IDs and Related EGCMU Metering System IDs;
- **Suppliers** must provide EGCMU Metering System Netting Rules to the Transmission Company to enable it to calculate GPME values for EGCMU Metering Systems and 'Supplier's GPME'.

The detailed requirements for the P348 potential alternative solution can be found in Appendix 1.

Gross Period Metered Export

The sum of all Supplier's Metering System Metered Consumption and Supplier's Metering System Metered Losses for all EGCMU Metering Systems and Related EGCMU Metering Systems at the Embedded Generator Capacity Provider site calculated in accordance with the Supplier's netting rules.

Gross Period Metered Export

A Supplier's Gross Period Metered Export relates to a particular Settlement Period, Supplier and GSP Group, it is the sum of all Gross Period Metered Export values for EGCMU Metering Systems

$$(SGPMEEGCMU_{HIZj} = \sum KGPMEEGCMU_{HIZjk} / 1000)$$

CUSC requirements

Under the potential alternative the following steps may need to be specified in the CUSC as they are necessary for the Transmission Company to calculate the relevant volumes specifically for Transmission Charging purposes.

- The **Transmission Company** should calculate GPME for each EGCMU Metering System in accordance with EGCMU Metering System Netting Rules provided to it by Suppliers;
- The **Transmission Company** will calculate the Supplier's GPME

Legal text

The draft legal text changes to support the P348 potential alternative solution can be found in Attachment B.

Assessment Consultation Question

Do you agree that the draft legal text in Attachment B delivers the intention of the potential alternative solution?

The Workgroup invites you to give your views using the response form in Attachment C.

Estimated central implementation costs of P348

P348 will require changes to the SVAA systems in order for the proposed solution to be delivered. Costs will therefore be incurred due to these system changes being developed and implemented.

We are currently impact assessing the P348 proposed and potential alternative solutions. We will present these costs to the Workgroup following the Assessment Consultation.

Indicative industry costs of P348

This Modification is expected to impact Suppliers, the Transmission Company and HHDCs or HHDA's (depending on the solution progressed). However, the costs of these impacts are currently unknown. We therefore request further information from the industry as part of this consultation to help determine the impacts and costs of implementing P348.

Assessment Consultation Questions
Will your organisation be impacted by the implementation of the P348 proposed solution?
Will your organisation incur any costs due to the implementation of the P348 proposed solution?
Will your organisation be impacted by the implementation of the P348 potential alternative solution?
Will your organisation incur any costs due to the implementation of the P348 potential alternative solution?
The Workgroup invites you to give your views using the response form in Attachment C.

P349 impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
Supplier	Under both the proposed and alternative solutions, new obligations will be placed on the Supplier to identify Metering Systems for EGCMU sites (in accordance with requirements and definitions set out by CMP265). Suppliers may also have to instruct their Party Agents which Metering Systems to collect, aggregate and report data for.
HHDA	Under the proposed solution, the HHDA may be instructed by the Supplier to report metered data for specific Metering Systems to the SVAA.
HHDC	The HHDC is only impacted by the alternative solution. The HHDC may be required to report metered data for specific Metering Systems to the Transmission Company.

Impact on Transmission Company

We expect the Transmission Company to be impacted by the implementation of P348. Changes may be required to systems to allow the Transmission Company to receive the updated TUoS report under the proposed and metered data for individual Metering Systems under the potential alternative solution. However, under the alternative solution only the Transmission Company will be required to manipulate the data before it can be used for TNUoS charging. This will not be required under the proposed solution.

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 only be impacted by the proposed solution. Under the proposed solution the SVAA will receive data from the HHDA that will need to be aggregated and incorporated into the P210 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 S	Changes will be required to implement P348.
Section S Annex S-2	
Section V	
Section X Annex X-1	
Section X Annex X-1	

Impact on Code Subsidiary Documents

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

5 Implementation

Recommended Implementation Date

P348 is targeted for implementation on 7 November 2019, as part of the November 2019 BSC Systems Release.

P348 will not need to be implemented until the 2020 Triad period (November 2020 to February 2021 inclusive). Implementing P348 as part of the November 2019 Release will allow for this Modification to take effect ahead of the 2020 triad period.

Assessment Consultation Question

Do you agree with the recommended Implementation Date for P348?

The Workgroup invites you to give your views using the response form in Attachment C.

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 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 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 half hourly exporting Metering System registered in the CMRS or SMRS.

Will there be an activation date?

A Workgroup member asked whether or not 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?

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 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 because the site may require energy from the Distribution System at times when the generator is not generating. This onsite 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 the configuration of on-site demand and generation, the connection/s to the Distribution System and metering may vary from site to site. For example, consider the following scenarios:

- **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 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).

On the one hand a 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 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, that is they estimated the number 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).

Assessment Consultation Question

Please validate (if possible) the accuracy and frequency of Scenarios 1 and 2 (discussed by the Workgroup on page 14) and identify additional scenarios that highlight complex configurations that require net data to be provided.

[The Workgroup invites you to give your views using the response form in Attachment C.](#)

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.

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.

Assessment Consultation Question

Please validate (if possible) the accuracy and frequency of Examples 1 and 2 (discussed by the Workgroup on page 15) and identify additional scenarios that highlight complex configurations that require net data to be provided.

The Workgroup invites you to give your views using the response form in Attachment C.

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 MPAN 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, that they 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 in these instances it may not be possible to obtain data for these generators.

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 notes that we will have to rely on the fact that the data provided by the customer is 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 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 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 direct to the Transmission Company, the Transmission Company would need to process individual Metering System data. ELEXON pointed out that the Transmission Company doesn't 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.

Whilst '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, a Workgroup member noted 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 solution be prepared whereby Suppliers are obliged to ensure that individual Metering System metered data required under P348 is submitted by their 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 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
- 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 the 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).

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 directing, 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 TUOS 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, 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

- 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.

Potential alternative solution

The Workgroup are seeking industry views on the merits of the following potential alternative solution:

- Supplier identifies EGCMU Metering Systems and related Metering Systems and communicates these to the DC
- DC collects the required metered data and provides it to the Transmission Company
- Transmission Company applies LLFs to the metered data and calculates net export values for use in its TNUoS charging processes

Details of the potential alternative solution can be found in Section 2 and Appendix 1 of this document.

Assessment Consultation Question

Do you believe that the P348 potential alternative solution will facilitate the Applicable BSC Objectives better than the baseline and the proposed solution?

The Workgroup invites you to give your views using the response form in Attachment C



Initial views against the Applicable BSC Objectives

The Workgroup has provided its initial views against the Applicable BSC Objectives. Details of the Proposer and Workgroups views can be found in the table below.

The majority view of the Workgroup is that P348 does better facilitate Applicable BSC Objectives (a), (c) and (f) compared to the baseline and initially recommends approval of P348.

Please note that the Workgroup's views against the Applicable BSC Objectives are the same for both the proposed and potential alternative solutions. Following their consideration of Assessment Procedure Consultation responses, the Workgroup will agree whether:

- the proposed solution is better than the baseline;
- the potential alternative solution is better than the baseline; and
- the potential alternative solution is better than the proposed.

Does P348 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views ¹
(a)	<ul style="list-style-type: none"> • Yes - allows the Transmission Company to efficiently discharge its obligations enabling it to better develop a cost reflective charging methodology. • allows the Transmission Company to discharge obligations enshrined in the SLC C13 by forming part of an enduring solution to the issue of a disparity in charging arrangements for different types of generation. 	<ul style="list-style-type: none"> • Yes (majority) – agree with proposer. • Neutral (minority) – not enough evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.
(b)	<ul style="list-style-type: none"> • Neutral 	<ul style="list-style-type: none"> • Neutral
(c)	<ul style="list-style-type: none"> • Yes - 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. 	<ul style="list-style-type: none"> • Yes (minority) - agree with proposer. • Neutral (minority) - not enough evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.
(d)	<ul style="list-style-type: none"> • Neutral 	<ul style="list-style-type: none"> • Neutral
(e)	<ul style="list-style-type: none"> • Neutral 	<ul style="list-style-type: none"> • Neutral
(f)	<ul style="list-style-type: none"> • Yes - There are wider Capacity Market implications that P348 will 	<ul style="list-style-type: none"> • Yes (majority) - agree with proposer. • Neutral (minority) - not enough

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

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¹ Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.

Does P348 better facilitate the Applicable BSC Objectives?

Obj	Proposer's Views	Other Workgroup Members' Views ¹
	address including promoting investment in capacity to ensure security of electricity supply as well as facilitating the efficient operation and administration of the Capacity Market.	evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.

Assessment Consultation Question

Do you agree with the Workgroups initial majority view that P348 facilitates the Applicable BSC Objectives better than the baseline?

The Workgroup invites you to give your views using the response form in Attachment C

Appendix 1: Detailed Solution Requirements

Proposed solution

Requirement 1	
Each Supplier may report metered data and associated losses to SVAA for each Embedded Generator Capacity Provider Metering Systems and Related EGCMU Metering Systems.	
1.1	Each Supplier may report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' data to SVAA for each 'Embedded Generator Capacity Provider (EGCMU) Metering System' and 'Related EGCMU Metering System' it is the Registrant of.
1.2	'Embedded Generator Capacity Provider Metering System' is a HH Metering System that measures the exported volumes from an 'Embedded Generator Capacity Provider' (as defined in the CUSC).
1.3	'Related EGCMU Metering System' is a HH Metering System that measures imported or exported volumes that are intrinsic to the operation of an 'EGCMU'.
1.4	'Supplier's Metering System Metered Losses' is the Line Losses calculated for corresponding 'Supplier's Metering System Metered Consumption'. It is derived by multiplying 'Supplier's Metering System Metered Consumption' by the relevant Line Loss Factor.

Assessment Consultation Question

Do you believe that the proposed changes to the BSC should be prescriptive or allow Suppliers the flexibility to use non-BSC approaches for reporting metered data and associated losses to the SVAA?

The Workgroup invites you to give your views using the response form in Attachment C

Requirement 2

Suppliers must identify all Related EGCMU Metering Systems.

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| 2.1 | For each EGCMU Metering System, the Registrant must identify all Related EGCMU Metering Systems. |
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Requirement 3

Where Registrant of EGCMU Metering Systems reports metered data and losses to SVAA it must request that the Registrant of the Related EGCMU Metering System(s) reports metered data and associated losses data to SVAA.

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| 3.1 | Where the Registrant of an EGCMU Metering System intends to report Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' data to SVAA but is not the Registrant of the Related EGCMU Metering System(s), the Registrant of the EGCMU Metering System must request that the Registrant of the Related EGCMU Metering System(s) reports 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' data to SVAA for the Related EGCMU Metering System(s). |
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Requirement 4

Registrants of EGCMU Metering Systems and Related EGCMU Metering System may instruct its HHDA to report metered data and associated losses data to SVAA.

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| 4.1 | Registrants of an EGCMU Metering System who is also responsible for the Related EGCMU Metering System(s) may instruct its HHDA to report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' for these Metering Systems to SVAA. |
| 4.2 | Upon request from a Supplier that is the Registrant of an EGCMU Metering System, any Supplier that is the Registrant of a Related EGCMU Metering System must instruct its HHDA to report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' for these Metering Systems to SVAA. |

Requirement 5

Suppliers must identify all Related EGCMU Metering Systems.

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| 5.1 | Where Registrants of EGCMU Metering Systems intend to report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' data to SVAA, they must send details of all of their EGCMU Metering System IDs (i.e. MSIDs) and Related EGCMU Metering System IDs to the SVAA. |
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Requirement 6

Registrants of EGCMU Metering Systems must determine 'Netting Rules' and provide these to SVAA.

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| 6.1 | Where Registrants of EGCMU Metering Systems intend to report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' data to SVAA, they must determine 'EGCMU Metering System Netting Rules' and provide these to SVAA to enable it to calculate 'Gross Period Metered Export (EGCMU)' values for EGCMU Metering Systems. |
| 6.2 | <p>'EGCMU Metering System Netting Rules' are a set of rules set by a Supplier that is the registrant of an EGCMU Metering System(s) and which are specific to a particular EGCMU Metering System or group of EGCMU Metering Systems. The rules should explain how for individual EGCMU Metering Systems, it and Related EGCMU Metering Systems are related to each other and explain how 'Gross Period Metered Export (EGCMU)' values are calculated for individual EGCMU Metering Systems.</p> <p>Suppliers' netting rules must ensure that where imported volumes > exported volumes in a Settlement Period, the Gross Period Metered Export value is defaulted to '0'</p> |
| 6.3 | 'Gross Period Metered Export (EGCMU)' for a specific Settlement Period and EGCMU Metering System, is, in accordance with the Supplier's netting rules, the net sum of all 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' of all EGCMU Metering Systems and Related EGCMU Metering Systems at the 'Embedded Generator Capacity Provider' site. |

Requirement 7

HHDAs must report metered data and losses to SVAA.

7.1	Upon request, for each EGCMU Metering System and each Related EGCMU Metering System the appointed HHDA must calculate 'Supplier's Metering System Metered Losses' for each value of 'Supplier's Metering System Metered Consumption' and report 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' to the SVAA.
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Requirement 8

SVAA will calculate 'Gross Period Metered Export (EGCMU)' for each EGCMU Metering System in accordance with netting rules provided to it by Suppliers

Requirement 9

SVAA will calculate the 'Supplier's Gross Period Metered Export (EGCMU)'

9.1	'Supplier's Gross Period Metered Export (EGCMU)' for a particular Settlement Period, Supplier and GSP Group, is the sum of all 'Gross Period Metered Export (EGCMU)' values for EGCMU Metering Systems
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Requirement 10

SVAA must report 'Supplier's Gross Period Metered Export (EGCMU)' values to the Transmission Company as part of TUOS Report.

Potential alternative solution

Requirement 1

Each Supplier may report metered data to the Transmission Company for EGCMU Metering Systems and related EGCMU Metering Systems.

1.1	Where a Supplier is the registrant for an 'Embedded Generator Capacity Provider Metering System', or 'Related EGCMU Metering System', the Supplier may report 'Supplier's Metering System Metered Consumption' data for these Metering Systems to the Transmission Company.
1.2	'Embedded Generator Capacity Provider Metering System' is a HH Metering System that measures the exported volumes from an 'Embedded Generator Capacity Provider' (as defined in the CUSC).
1.3	'Related EGCMU Metering System' is a HH Metering System that measures imported or exported volumes that are intrinsic to the operation of an 'EGCMU'.

Requirement 2

Suppliers must identify all Related EGCMU Metering Systems.

2.1	For each EGCMU Metering System, the Registrant must identify all Related EGCMU Metering Systems.
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Requirement 3

Where the Registrant of EGCMU Metering Systems intends to report metered data to the Transmission Company, it must request that the Registrant of the Related EGCMU Metering System(s) reports metered data to the Transmission Company for the Related EGCMU Metering System(s)

3.1	Where the Registrant of an EGCMU Metering System intends to report 'Supplier's Metering System Metered Consumption' data to the Transmission Company but is not the Registrant of the Related EGCMU Metering System(s), it must request that the Registrant of the Related EGCMU Metering System(s) reports 'Supplier's Metering System Metered Consumption' data to the Transmission Company for the Related EGCMU Metering System(s).
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Requirement 4

Registrants of EGCMU Metering Systems and Related EGCMU Metering System may instruct its HHDC to report metered data to the Transmission Company

4.1	Registrants of an EGCMU Metering System who is also responsible for the Related EGCMU Metering System(s) may instruct its HHDC to report 'Supplier's Metering System Metered Consumption' for these Metering Systems to the Transmission Company
4.2	Upon request from a Supplier that is the Registrant of an EGCMU Metering System, any Supplier that is the Registrant of a Related EGCMU Metering System must instruct its HHDC to report 'Supplier's Metering System Metered Consumption' for these Metering Systems to the Transmission Company.

Requirement 5

Registrants of EGCMU Metering Systems intends to report 'Supplier's Metering System Metered Consumption' data to the Transmission Company, it must send details of all of its EGCMU Metering System IDs (i.e. MSIDs) and Related EGCMU Metering System IDs to the Transmission Company

Requirement 6

Registrants of EGCMU Metering Systems must determine 'Netting Rules' and provide these to the Transmission Company

6.1	Where Registrants of EGCMU Metering Systems intend to report 'Supplier's Metering System Metered Consumption' data to the Transmission Company, they must determine 'EGCMU Metering System Netting Rules' and provide these to the Transmission Company to enable it to calculate 'Gross Period Metered Export (EGCMU)' values for EGCMU Metering Systems.
6.2	'EGCMU Metering System Netting Rules' are a set of rules set by a Supplier that is the registrant of an EGCMU Metering System(s) and which are specific to a particular EGCMU Metering System or group of EGCMU Metering Systems. The rules should explain how for individual EGCMU Metering Systems, it and Related EGCMU Metering Systems are related to each other and explain how 'Gross Period Metered Export (EGCMU)' values are calculated for individual EGCMU Metering Systems.

Requirement 6

6.3	'Gross Period Metered Export (EGCMU)' for a specific Settlement Period and EGCMU Metering System, is, in accordance with the Supplier's netting rules, the net sum of all 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' of all EGCMU Metering Systems and Related EGCMU Metering Systems at the 'Embedded Generator Capacity Provider' site.
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Requirement 7

HHDCs must report metered data to the Transmission Company.

7.1	Upon request, for each EGCMU Metering System and each Related EGCMU Metering System the appointed HHDC must report 'Supplier's Metering System Metered Consumption' to the Transmission Company.
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CUSC requirements

Under the potential alternative the following steps may need to be specified in the CUSC as they are necessary for the Transmission Company to calculate the relevant volumes specifically for Transmission Charging purposes.

- The **Transmission Company** should calculate GPME for each EGCMU Metering System in accordance with EGCMU Metering System Netting Rules provided to it by Suppliers;
- The **Transmission Company** will calculate the Supplier's GPME

ELEXON are seeking industry views on whether or not the above requirements should sit within the BSC or are better placed in the CUSC.

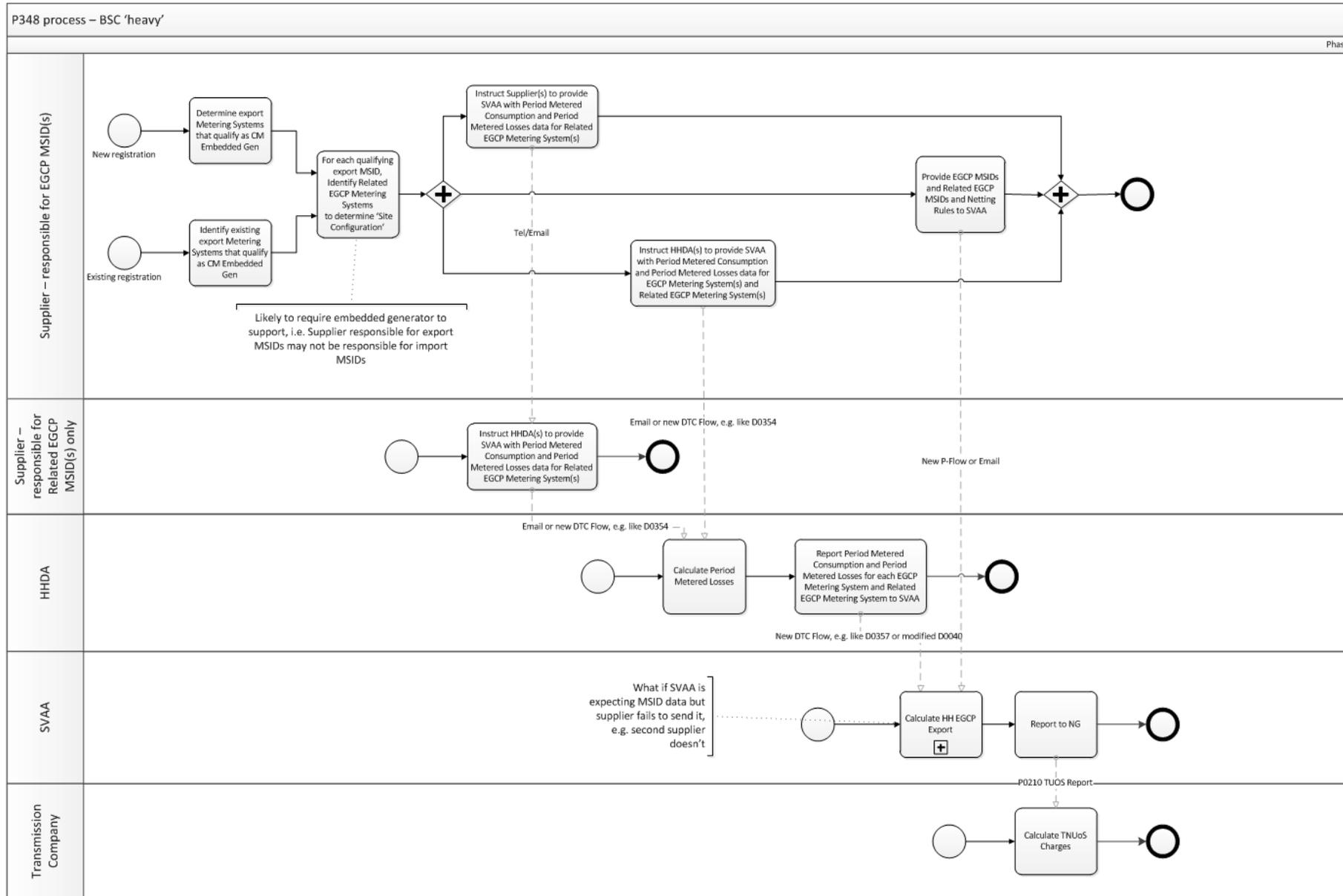
Assessment Consultation Question

Do you believe that the Transmission Company requirements needed for the calculation of relevant volumes for Transmission Charges should be included in the BSC or are they better placed under the CUSC?

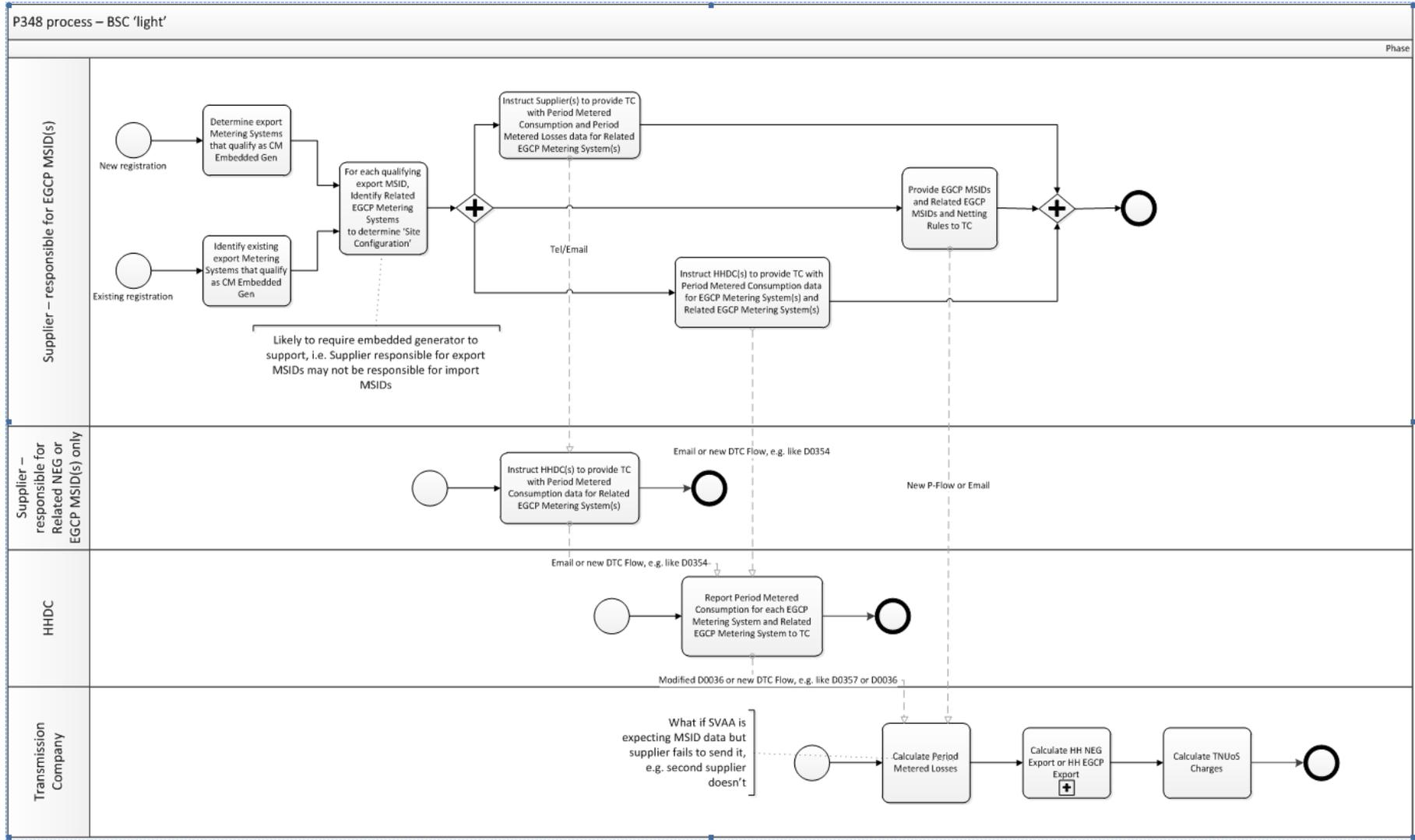
The Workgroup invites you to give your views using the response form in Attachment C

Appendix 2: Illustrative Process Diagrams

Proposed Solution



Potential alternative solution



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	W/C 22 Aug 16
Panel considers Workgroup's Assessment Report	8 Sep 16

Workgroup membership and attendance

P349 Workgroup Attendance		
Name	Organisation	12 Jul 16
Members		
David Kemp	ELEXON (<i>Chair</i>)	✓
Talia Addy	ELEXON (<i>Lead Analyst</i>)	✗
Natasha Ranatunga	EDF Energy (P348 Proposer)	✗
Paul Mott	EDF Energy (P348 Proposer Representative)	✓
Paul Carman	ScottishPower (P349 Proposer)	✗
Stuart Noble	ScottishPower (P349 Proposer Representative)	✓
Lars Weber	Neas Energy Ltd.	✗
Philip Russell	Independent	✓
Ian Tanner	UK Power Reserve Ltd.	✓
Bill Reed	RWE Supply & Trading GmnH	✓
Guy Philips	Uniper UK Limited	✓
Leonida Bandura	E.ON UK Plc	✗
Attendees		
Nick Rubin	ELEXON (<i>Design Authority</i>)	✓
Geoff Norman	ELEXON (<i>Lead Lawyer</i>)	✓
Paul Wakeley	National Grid	✓
Joseph Underwood	Drax Power	✗
Stuart Noble	ScottishPower	✓

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
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
DNO	Distribution Network Operators
EGCMU	Embedded Generation Capacity Market Unit
GPME	Gross Period Metered Export
HHDA	Half Hourly Data Aggregator
HHDC	Half Hourly Data Collector
LLF	Line Loss Factor
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
TNUoS	Transmission Network Use of System

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
3,4,6	CMP265 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/

External Links		
Page(s)	Description	URL
4	Embedded Generation Guidance Note	https://www.elexon.co.uk/wp-content/uploads/2016/01/Embedded_Generation_v7.0.pdf
5	P349 page of the ELEXON website	https://www.elexon.co.uk/mod-proposal/p349/
5	CMP264 webpage	http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/
6	P348 page of the ELEXON website	https://www.elexon.co.uk/mod-proposal/p348/