

## Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

## P349 'Facilitating Embedded Generation Triad Avoidance Standstill'

This Modification seeks to facilitate the delivery of Connection Use of System Code Modification Proposal 264. 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.

This Assessment Procedure Consultation for P349 closes:

**5pm on Friday 26 August 2016**

The Workgroup may not be able to consider late responses.



The Workgroup initially recommends **approval** of P349

This Modification is expected to impact:

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



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## About This Document

The purpose of this P349 Assessment Procedure Consultation is to invite Balancing and Settlement Code (BSC) Parties and other interested parties to provide their views on the merits of P349. The P349 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 P349.

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 P349 proposed solution.
- Attachment B contains the draft redlined changes to the BSC for the P349 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) [264 'Embedded Generation Triad Avoidance Standstill'](#) 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 have completed its consideration of associated issues.

In order for the Transmission Company to calculate Transmission Network Use of System (TNUoS) charges in accordance with the prospective requirements of CMP264 a change is required to the BSC to enable ELEXON (as BSC Company (BSCCo)) to provide sufficient data to the Transmission Company. Therefore, if the Authority approves CMP264 a BSC Modification is required to enable the delivery of the CMP264 solution.

## Solution

This Modification seeks to facilitate the delivery of CMP264. 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.

## Impacts & Costs

This Modification will impact Suppliers, Half Hourly Data Aggregators (HHDAs) or Half Hourly Data Collectors (HHDCs) (depending on the solution 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 29 June 2017, as part of the June 2017 BSC Systems Release.

## Recommendation

The majority view of the Workgroup is that P349 does better facilitate Applicable BSC Objectives (a) and (c) compared to the baseline and initially recommends approval of P349.

## 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 directly connected to a Distribution Network. The Distribution Network carries electricity from the Transmission Network and embedded generators to homes and businesses.

The main 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

#### CMP264

Scottish Power raised [CMP264 'Embedded Generation Triad Avoidance Standstill'](#).

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 have 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.

#### CMP265 & P348

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

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This Modification seeks to facilitate the implementation of [CMP265 'Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market'](#). 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.

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

The CMP265 Proposer contends that under the current Balancing and Settlement Code (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 (December 2016).

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 Provides.

## 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 CMP264 a change is required to the BSC to enable ELEXON (as BSCCo) to provide sufficient data to the Transmission Company.

Therefore, if the Authority approves CMP264 a BSC Modification is required to enable the delivery of the CMP264 solution.

### Proposed solution

ScottishPower raised [P349 'Facilitating Embedded Generation Triad Avoidance Standstill'](#) on 4 July 2016.

This Modification 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.

Under P348 a New Embedded Generator (NEG) is defined as any license exempt embedded generator that:

- has HH export metering system(s) registered in the SMRS or CMRS;
- has commenced exporting energy to the Distribution System; and
- is certified in accordance with Engineering Recommendation (EREC) 59

after a defined cut-off date (currently set by CMP265 as 30 June 2017).

P349 will introduce the following requirements in order to facilitate the implementation of CMP264:

- Where a Supplier is the registrant for a NEG Metering System the **Supplier** must report to the Supplier Volume Allocation Agent (SVAA):
  - Supplier's Metering System Metered Consumption (SMMC); and
  - Supplier's Metering System Metered Losses (SMML).
- Upon request by its Supplier, **HHDA**s must report SMMC and SMML data for NEG Metering Systems to the SVAA;
- **Suppliers** should send details of all NEG Metering System IDs (MSIDs) to the SVAA;
- **SVAA** will calculate Gross Period Metered Export (GPME) for each NEG Metering System identified to it by Suppliers;
- **SVAA** will calculate the Supplier's GPME; and
- **SVAA** will report Supplier's GPME values to the Transmission Company as part of the TUOS Report.

### Legal text

The draft legal text changes to deliver the P349 proposed solution can be found in Attachment A.

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#### New Embedded Generator Metering System

A NEG Metering System is a Half Hourly (HH) Metering System that measures the exported volumes from a NEG.

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#### Related New Embedded Generator Metering System

A Related NEG Metering System is a HH Metering System that measures imported volumes that are intrinsic to the operation of a NEG.

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#### Metered consumption and losses

A Supplier's Metering System Metered Consumption ( $SMMC_{Zakj}$ ) is defined in BSC Section S Annex S-2 3.5.12

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 ( $SMML_{Zakj} = SMMC_{Zakj} \times (LLF_{lj} - 1)$ )

### Assessment Consultation Question

Do you agree that the draft legal text in Attachment A delivers the intention of the P349 proposed solution?

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

## Potential alternative solution

The Workgroup are seeking industry views on the merits of a potential alternative solution which is 'BSC light' and instead requires additional actions to be taken by the Transmission Company:

- Where a Supplier is the registrant for a NEG Metering System, the **Supplier** must report SMMC data for these Metering Systems to the Transmission Company;
- Upon request by its Supplier, **HHDCs** must report SMMC data for NEG Metering Systems to the Transmission Company; and
- **Suppliers** responsible for NEG Metering Systems must notify the Transmission Company of all NEG Metering System IDs (MSIDs) and Related NEG MSIDs.

## CUSC requirements

Under the potential alternative the following steps should 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 NEG Metering System; and
- The **Transmission Company** will calculate the Supplier's GPME.

## Legal text

The draft legal text changes to deliver the P349 potential alternative solution can be found in Attachments B.

### Assessment Consultation Question

Do you agree that the draft legal text in Attachment B delivers the intention of the P349 potential alternative solution?

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

### Gross Period Metered Export

GPME relates to a specific Settlement Period and NEG Metering System. It is the net sum of all SMMC and SMML for all NEG Metering Systems and Related NEG Metering Systems at the NEG site, calculated in accordance with the Supplier's netting rules.

### Supplier's Gross Period Metered Export

Supplier's GPME relates to a particular Settlement Period, Supplier and GSP Group. It is the sum of all GPME values for NEG Metering Systems ( $SGPMENEGH_{zj} = \sum KGPMENEGH_{zjk} / 1000$ ).

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## 4 Impacts & Costs

### Estimated central implementation costs of P349

The P349 proposed solution will require changes to the SVAA systems in order for it to be delivered. Costs will therefore be incurred due to these system changes being developed and implemented.

ELEXON are currently impact assessing the P349 proposed and potential alternative solutions. ELEXON will present these costs to the Workgroup following the Assessment Consultation.

### Indicative industry costs of P349

This Modification is expected to impact Suppliers, the Transmission Company and HHDCs or HHDA (depending on the solution progressed). However, the costs of these impacts are currently unknown. ELEXON therefore requests further information from the industry as part of this consultation to help determine the impacts and costs of implementing P349.

Assessment Consultation Questions
Will your organisation be impacted by the implementation of the P349 proposed solution?
Will your organisation incur any costs due to the implementation of the P349 proposed solution?
Will your organisation be impacted by the implementation of the P349 potential alternative solution?
Will your organisation incur any costs due to the implementation of the P349 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 NEG metering systems (in accordance with requirements and definitions set out by CMP264 and in the BSC). Suppliers may also have to instruct their Party Agents which metering systems to collect, aggregate and report data for.
HHDC	Under the proposed solution, the HHDA may be instructed by the Supplier to report metered data for specific metering systems to the SVAA.
HHDA	The HHDA 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 P349. Changes may be required to systems to allow the Transmission Company to receive the updated TUoS report under the proposed solution and metered data for individual metering systems under the potential alternative solutions. 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 P349.
Release Management	Implement the proposed system changes to deliver P349.

### 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 P349.
Section S Annex S-2	
Section V	
Section X Annex X-1	
Section X Annex X-1	

### Impact on Code Subsidiary Documents

CSD	Impact
ELEXON are currently assessing which Code Subsidiary Documents (CSDs) are impacted by P349.	

## 5 Implementation

### Recommended Implementation Date

P348 is targeted for implementation on 29 June 2017, as part of the June 2017 BSC Systems Release.

Implementing this Modification as part of the June 2017 release will ensure that the P349 solution is implemented ahead of the 30 June 2017 cut-off date proposed in the definition of a New Embedded Generator. It will also allow for this Modification to be delivered as part of a scheduled BSC Systems release.

### Assessment Consultation Question

Do you agree with the recommended Implementation Date for P349?

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

### What is a New Embedded Generator?

ELEXON advised the Workgroup that any solution will require a clear definition of what sites/metering systems should be reported (i.e. what is a New Embedded Generator and NEG Site), what metered data should be collected and how it should be reported to the Transmission Company.

Based on discussions at the CMP264 and P349 Workgroup meetings, the Proposer has (for the time being) defined a NEG for the purposes of the BSC as any license exempt embedded generator that:

- has HH export metering system(s) registered in the SMRS or CMRS;
- has commenced exporting energy to the Distribution System; and
- is certified in accordance with Engineering Recommendation (EREC) 59

after a defined cut-off date (currently set by CMP265 as 30 June 2017).

ELEXON advised the Workgroup that the Transmission Company should already receive metered data for metering systems registered in CMRS (i.e. BMU data). Therefore the focus of P349 should be on metering systems registered in the SMRS.

Nevertheless, ELEXON confirmed that the P349 solution will explicitly reference both CVA and SVA metering systems.

### Cut-off date

Currently, the proposed definition of New Embedded Generator under CMP265 includes embedded generation units commissioned after 30 June 2017.

ELEXON advised the Workgroup that if this date changes under CMP265 it will need to be amended under P349 as well. The Workgroup noted this and agreed that the cut-off date under P349 will be aligned with CMP265.

### Should mixed sites be included under P348 and P349?

The CMP265 proposal does not state whether CMP265 covers embedded generation in the CM where there is mixed demand on site. A CM rule change would be required if gross generation data from the embedded CM-participating generation within these sites is needed, as such data is in most cases not BSC-accessible even via a BSC mod. Another member asked how these sites will be identified.

### 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.

In relation to P348, the Workgroup discussed the potential for there being both non-CM embedded generation and CM embedded generation on the same site. **A summary of**

**the P348 discussions is below, with full details of these discussions set out in the P348 Assessment Consultation document.**

Two example sites were considered by the Workgroup in relation to P348:

- 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.

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.

### Site evolution

The Workgroup considered how the evolution in a site's configuration and use might change its status. In particular, the Workgroup considered the following scenarios:

- Scenario 1: existing site is a demand customer only;
- Scenario 2: existing site is a mixture of demand and embedded generation but net import with export meter but never exported;
- Scenario 3: existing site is a mixture of demand and embedded generation but net import with export meter and exported pre cutoff; and
- Scenario 4: existing generation site, exported pre-cutoff but installation of additional capacity receives G59 certificate and new metering.

#### Assessment Consultation Question

Please validate (if possible) the accuracy and frequency of Scenarios 1-4 discussed by the Workgroup 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.

## How will sites exempt from embedded benefits be communicated under P348 and P349?

A member asked the Workgroup how the Supplier will communicate to their agents which Metering Systems they need to provide data for. ELEXON advised that this can be done a number of ways:

- Supplier sends a direct message from its agents outside of the DTC/DTN
- Introduce a new flag in SMRS and CMRS within registration data flows to allow Supplier (or DNO) to identify the Metering Systems effected by or reported on under this Modification
- Introduce new LLFC values to enable the Supplier (or DNO) to show which Metering Systems they need to report on

ELEXON advised that any solution with system impacts will have costs associated. However, the beauty of a more formal 'BSC Heavy' solution is that there is more transparency. Furthermore, things like system flags will remain and any new Supplier inheriting the site will be satisfied that the exclusion of embedded benefits was taken into account prior to registering with the customer.

A member advised that, given P348 and CMP265 are not seen to be enduring solutions it seems unnecessary to incur high costs when the Supplier has the option to communication with its Agents how it wishes.

## 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 the Metering Systems exemptible from embedded benefits 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 aggregates it for use in the 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 P349 does better facilitate Applicable BSC Objectives (a) and (c) compared to the baseline and initially recommends approval of P349.**

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.

**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

Does P349 better facilitate the Applicable BSC Objectives?		
Obj	Proposer’s Views	Other Workgroup Members’ Views <sup>1</sup>
(a)	<ul style="list-style-type: none"> <li>• <b>Yes</b> – The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence</li> <li>• The proposed Modification will enable the processes and information flows required to deliver CMP264 in an efficient, economic and co-ordinated manner.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Yes (majority)</b> - agree with Proposer.</li> <li>• <b>Neutral (minority)</b> - not enough evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.</li> </ul>
(b)	<ul style="list-style-type: none"> <li>• <b>Neutral</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Neutral</b></li> </ul>
(c)	<ul style="list-style-type: none"> <li>• <b>Yes</b> – The existence of large non-cost reflective Triad avoidance values is likely to distort investment decisions in a CM context (in particular) by favouring small generation units over large ones that may be more efficient. This could cause more efficient investments which do not benefit from Triad avoidance to be abandoned or deferred while less effective ones, which do so benefit, go ahead. This would increase total system costs, which is likely to lead to higher costs for consumers. Cost reflective</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Yes (majority)</b> – agree with Proposer.</li> <li>• <b>Neutral (minority)</b> - not enough evidence at this time so show that this Modification will better facilitate the Applicable BSC Objectives better than the baseline.</li> </ul>

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

Does P349 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views <sup>1</sup>
	charges would lead to better investment decisions in a CM context (in particular) and lower costs for consumers.	
<b>(d)</b>	• <b>Neutral</b>	• <b>Neutral</b>
<b>(e)</b>	• <b>Neutral</b>	• <b>Neutral</b>
<b>(f)</b>	• <b>Neutral</b>	• <b>Neutral</b> ( <i>unanimous</i> ) – agree with Proposer.

**Assessment Consultation Question**

Do you agree with the Workgroups initial majority view that P348 facilitates the Applicable BSC Objectives better than the baseline?  
*Please provide your rationale.*

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

## Appendix 1: Details Solution Requirements

### Proposed solution

Requirement 1	
Each Supplier may report metered data and associated losses to SVAA for each NEG 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 'New Embedded Generator (NEG) Metering System' it is the Registrant of.
1.2	'New Embedded Generator Metering System' is a HH Metering System that measures the exported volumes from a 'New Embedded Generator' (as defined in the CUSC).
1.3	'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?

*Please provide rationale.*

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

### Requirement 2

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

- |     |                                                                                                                                                                                                            |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | Registrants of an NEG Metering System 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. |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Requirement 3

Where Registrants of NEG Metering Systems intend to report 'Supplier's Metering System Metered Consumption' data to SVAA, they must send details of all of its NEG Metering System IDs (i.e. MSIDs) to the SVAA.

### Requirement 4

HHDAs must report metered data and losses to SVAA.

- |     |                                                                                                                                                                                                                                                                                                                      |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1 | Upon request, for each NEG 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. |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Requirement 5

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

5.1	'Supplier's Gross Period Metered Export (NEG)' for a particular Settlement Period, Supplier and GSP Group, is the sum of all 'Supplier's Metering System Metered Consumption' and 'Supplier's Metering System Metered Losses' values for NEG Metering Systems
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#### Requirement 6

SVAA must report 'Supplier's Gross Period Metered Export (NEG)' 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 NEG Metering Systems.

1.1	Where a Supplier is the registrant for a 'New Embedded Generator Metering System' the Supplier may report 'Supplier's Metering System Metered Consumption' data for these Metering Systems to the Transmission Company.
1.2	'New Embedded Generator Metering System' is a HH Metering System that measures the exported volumes from an 'New Embedded Generator' (as defined in the CUSC).

#### Requirement 2

Registrants of NEG Metering Systems may instruct its HHDC to report metered data to the Transmission Company.

2.1	Registrants of an NEG Metering System may instruct its HHDC to report 'Supplier's Metering System Metered Consumption' for these Metering Systems to the Transmission Company.
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#### Requirement 3

Where Registrants of NEG Metering Systems intend to report 'Supplier's Metering System Metered Consumption' to the Transmission Company, they must send details of all of its NEG Metering System IDs (i.e. MSIDs) to the Transmission Company

#### Requirement 4

HHDCs must report metered data to the Transmission Company.

4.1	Upon request, for each NEG 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 solution the following steps should 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 NEG Metering System; and
- 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

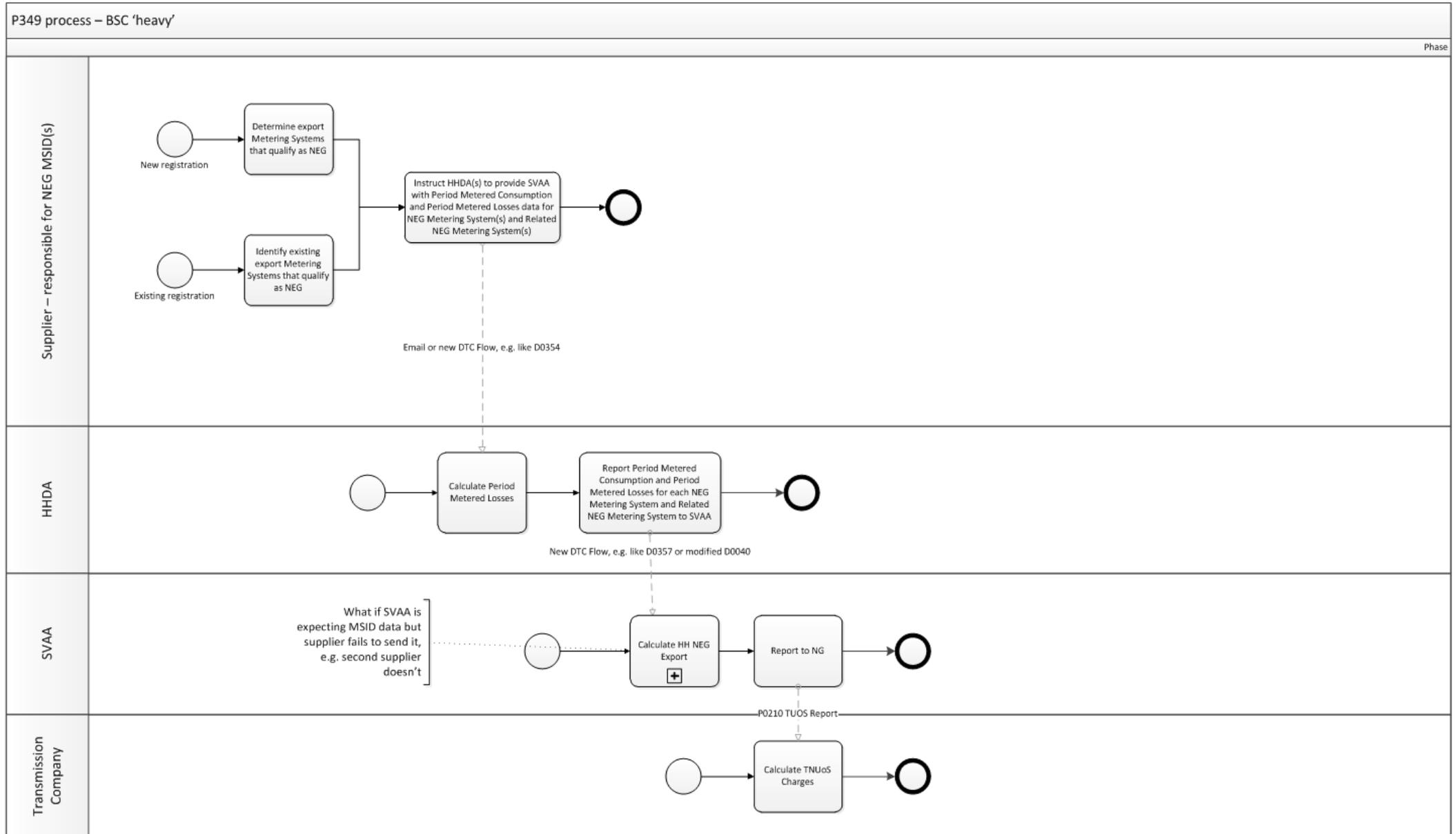
Do you believe that the Transmission Company requirements needed for the calculation of relevant volumes for Transmission Charges should be included in the BSC or are they better placed under the CUSC?

*Please provide your rationale.*

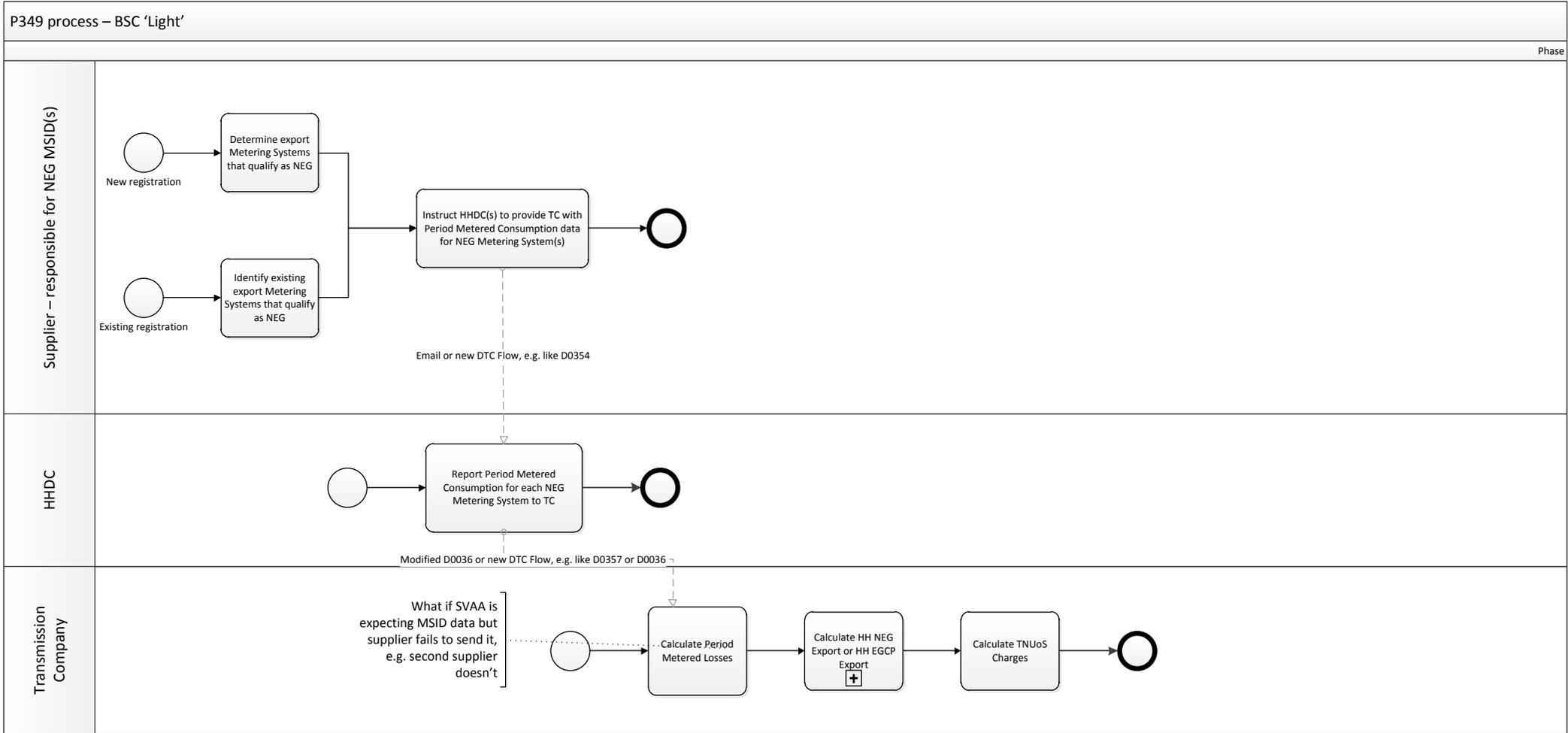
The Workgroup invites you to give your views using the response form in Attachment C

# Appendix 2: Detailed Process Diagrams

## Proposed Solution



# Potential alternative Solution



### Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P349 Terms of Reference

What is the most efficient and effective way for HHDA's to send the required data to the Transmission Company?

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

#### P349 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
<b>Members</b>		
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)	✓
<b>Paul Carman</b>	ScottishPower (P349 Proposer)	✗
<b>Stuart Noble</b>	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	✗
<b>Attendees</b>		
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
4	CMP264 webpage	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/</a>

External Links		
Page(s)	Description	URL
4	Embedded Generation Guidance Note	<a href="https://www.elexon.co.uk/wp-content/uploads/2016/01/Embedded_Generation_v7.0.pdf">https://www.elexon.co.uk/wp-content/uploads/2016/01/Embedded_Generation_v7.0.pdf</a>
4	P348 page of the ELEXON website	<a href="https://www.elexon.co.uk/mod-proposal/p348/">https://www.elexon.co.uk/mod-proposal/p348/</a>
4	Ofgem's open letter on charging arrangements for embedded generation	<a href="https://www.ofgem.gov.uk/publications-and-updates/open-letter-charging-arrangements-embedded-generation">https://www.ofgem.gov.uk/publications-and-updates/open-letter-charging-arrangements-embedded-generation</a>
5	CMP264 webpage	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/</a>
6	P349 page of the ELEXON website	<a href="https://www.elexon.co.uk/mod-proposal/p349/">https://www.elexon.co.uk/mod-proposal/p349/</a>