P395 'Excluding generators from BM Unit Gross Demand and the calculation of EMR Supplier Charges'

This Modification aims to replace interim arrangements with enduring BSC processes to ensure the accurate calculation of electricity supplied for the calculation of Contracts for Difference (CfD) and Capacity Market Supplier charges by excluding Imports to generation (including storage) operated by a generation licence holder.

ELEXON recommends P395 is progressed to the Assessment Procedure for an assessment by a Workgroup

This Modification is expected to impact:

- Generation Licence holders operating generation (including Storage)
- Suppliers
- Half Hourly Data Collectors (HHDCs)
- Half Hourly Data Aggregators (HHDAs)
- BSCCo
- EMR Settlement Ltd (EMRS)

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Phase

- Initial Written Assessment
- Definition Procedure
- Assessment Procedure
- Report Phase
- Implementation

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About This Document

This document is an Initial Written Assessment (IWA), which ELEXON will present to the Panel on 14 November 2019. The Panel will consider the recommendations and agree how to progress P395.

There are two parts to this document:

- This is the main document. It provides details of the Modification Proposal, an assessment of the potential impacts and a recommendation of how the Modification should progress, including the Workgroup's proposed membership and Terms of Reference.
- Attachment A contains the P395 Proposal Form.

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1 Summary

Issue

Currently the BM Unit Gross Demand Report attributes to Suppliers all electricity they have provided to generators (including storage facilities) operated by generation licensees.. The BM Unit Gross Demand Report is used by EMRS to calculate CfD and CM Supplier charges on a £/MWh basis. The BM Unit Gross Demand Report should exclude these imports, as they fall outside the definition of 'supply' in the Electricity Act 1989, but they do not.

The Department for Business, Energy and Industrial Strategy (BEIS) and Ofgem made clear in their joint Smart Systems and Flexibility Plan (published in July 2017) that the Supplier Obligation is not payable in relation to such imports.

Solution

P395 proposes to amend BSC systems and processes so that the SAA-I042 'BM Unit Gross Demand Report' only includes electricity 'supplied' to premises by licensed Suppliers, and therefore excludes electricity imported by Generators operated by a licensee for generation activities (i.e. those activities authorised by their generation licence to carry on).

To facilitate this outcome, P395 proposes that the BSC incorporates the interim solution and extends it to cover complex sites too. This solution would cover sites connected to both the distribution and transmission systems, and where the sites Metering Systems are registered in Supplier Meter Registration Service (SMRS) or Central Meter Registration Service (CMRS).

Workgroup assessment of the methodology for calculating Imports to Licensed Generation will be required, however the P395 Proposer recommends adopting elements of the solutions for BSC Modifications P344 'Project TERRE', P375 'Metering behind the Boundary Point' and P383 'Enhanced reporting of demand data to the NETSO to facilitate CUSC Modifications CMP280 and CMP281'. At a high level, P395 aims to adopt or use:

- Processes introduced by P344 that enable SVAA to request metered data for relevant Boundary Point Metering Systems from HHDAs;
- Processes being developed by P375 for collecting and processing data from asset metering (meters behind the Boundary Point Meter) by enabling SVAA to request and receive metered data for asset meters from HHDCs; and
- Processes for declaring and validating generator sites and metering systems proposed by P383 - except that this proposal would extend the P383 processes to apply to asset metering systems as well as Boundary Point Metering Systems, and would apply to all Generation operated by a generation licence holder (not just Storage).

Impacts

We expect P395 to impact:

- BSCCo and EMRS as the sender and recipient of updated BM Unit Gross Metered Data reports;

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- Suppliers and generators responsible for eligible sites seeking to participate will need to identify and maintain the registration details for eligible generator sites, in particular complex sites;
- HHDCs and HHDAs may be required to send metered data for individual Metering Systems to SVAA.

P395 will be subject to impact assessments for ELEXON and market participants as part of the Assessment Procedure.

Implementation

It is proposed that this Modification should be implemented at the same time as (or as soon as possible after) Modification Proposal P375. P375 is currently in the Assessment Procedure with no approved release date as yet, but may not be implemented until early 2021.

Recommendation

The Panel is invited to agree that P395 is submitted to the Assessment Procedure for assessment by a Workgroup.

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2 Why Change?

Background

ELEXON (as 'BSCCo') is the code manager for the electricity Balancing and Settlement Code (BSC), with responsibility for managing and delivering the end-to-end services set out in the BSC. In accordance with Section V5, this includes the provision of 'gross demand data' for purposes of Capacity Market (CM) and Contract for Difference (CfD) charging. The Government introduced these schemes in 2014 as part of their programme of Electricity Market Reform (EMR).

The CfD and CM schemes are funded by licensed Suppliers, as laid out in secondary legislation:

- The Contracts for Difference (Electricity Supplier Obligations) Regulations 2014, as amended, specify payments to be made by licensed Suppliers to LCCC, in order to fund payments to CfD generators (and the costs of administering the CfD scheme).
- The Electricity Capacity (Supplier Payment etc.) Regulations 2014, as amended, specify payments to be made by licensed Suppliers to ESC, in order to fund payments to capacity providers (and the costs of administering the CM scheme).

The costs of both schemes are shared between Suppliers in proportion to their gross demand i.e. the volume of electricity that they supply to customers in GB. The actual process of calculating payments and issuing invoices is currently performed by EMR Settlements Ltd (EMRS), acting as EMR Settlement Services Provider (SSP) for LCCC and ESC.

What data does EMRS use to calculate EMR Supplier charges?

EMR Supplier charges are levied on the electricity supplied by Suppliers to their customers. EMRS uses each Suppliers' Gross Imports to its customers to calculate each Suppliers' charges.

'Supply' is defined in Section 4(4) of the Electricity Act 1989. The definition is as follows:

'"Supply", in relation to electricity, means its supply to premises in cases where—

(a) it is conveyed to the premises wholly or partly by means of a distribution system, or

(b) (without being so conveyed) it is supplied to the premises from a substation to which it has been conveyed by means of a transmission system,

but does not include its supply to premises occupied by a licence holder for the purpose of carrying on activities which he is authorised by his licence to carry on'

As the flow of all electricity to and from Distribution and Transmission Systems must be metered at the Boundary Point for Settlement purposes, EMRS uses BSC Settlement Data to identify what Suppliers have supplied and therefore to calculate EMR Supplier charges. The Settlement Data consists of gross Half Hourly Metered Data that represents the Imports to Suppliers' customers (i.e. Gross Demand). BSCCo sends this Settlement Data to EMRS using the SAA-I014 'Settlement Report' and SAA-I042 'BM Unit Gross Demand Report'.

What is Electricity Market Reform?

Electricity Market Reform is a government policy to incentivise investment in secure, low-carbon electricity, improve the security of Great Britain's electricity supply, and improve affordability for consumers

CfDs are designed as an incentive for investment in new low-carbon electricity generation. The CM is designed to ensure sufficient and reliable generation capacity and/or demand side response (DSR) when there is a high chance of insufficient electricity available on the Transmission System.

LCCC and ESC

These two private limited companies, wholly owned by the Secretary of State for Business, Energy and Industrial Strategy (BEIS), were created to deliver and operate key elements of the government's EMR Programme. LCCC was established to be the counterpart to CfDs, while ESC's role is to oversee the settlement of the Capacity Market to ensure that regular payments are made to capacity providers who have agreed to provide capacity at times of system stress.

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Gross Demand is the volume of Active Import (i.e. electrical energy entering premises from a Distribution System or Transmission system at a Boundary Point), with no adjustment made for any Active Export (i.e. electrical energy flowing from a premises onto a Distribution System or Transmission System at a Boundary Point).

What are the BSC provisions relating to EMR Settlement Data?

On 1 August 2014, the Secretary of State designated changes to the BSC in order to support the implementation and operation of EMR. This included requirements on ELEXON to provide the EMR SSP with any Settlement Data required for purposes of EMR settlement. These requirements are in Sections V5 and C11.2 of the BSC, and can be summarised as follows:

- BSCCo (or its appointed BSC Agents) must provide LCCC and ESC (or their appointed EMR SSP) with any data required for purposes of EMR Settlement ("EMR Settlement Data");
- BSCCo must provide the BSC Panel with (and publish on its website) a Schedule of EMR Settlement Data identifying the EMR Settlement Data that is being provided; and
- The EMR SSP must enter into an agreement with BSCCo, preventing them from using the data for purposes other than EMR Settlement.

Related Modifications

Modification Proposal P344 'Project TERRE'

P344 'Project TERRE implementation into GB market arrangements' was raised by National Grid on 1 June 2016 to align the BSC with the European Balancing Project TERRE (Trans European Replacement Reserves Exchange) requirements. As part of this alignment, a new type of BSC Party, a Virtual Lead Party (VLP), and BM Unit, aSecondary BM Unit, were created as a way for customers to participate in TERRE and the Balancing Mechanism without relying on their Supplier.

In order to facilitate the P344 solution a new process was introduced whereby Half Hourly Data Aggregators[3] (HHDAs) are required to send SVAA Half Hourly (HH) metered volume data for SVA Metering Systems associated with Secondary BM Units. This is a similar process to the one by which HHDAs submit metered data for Metering Systems in Capacity Market Units (CM Units) to the Electricity Market Reform (EMR) settlement process.

P375 'Metering behind the Boundary Point'

Under current arrangements, metering at the site Boundary Point does not allow for differentiation between the delivery of Balancing Services and other actions on site.

P375 'Settlement of Secondary BM Units using metering behind the site Boundary Point' was raised by Flexitricity on 10 December 2018 to enable a mixture of metering at the defined Boundary Point and Asset metering, enabling Settlement to determine metered volumes attributed to different activities rat complex, collocated sites and for storage facilities to to also seek relief from Final Consumption Levies and certain network charges.

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This will allow consumers to participate in the BM and other alternative balancing products, which will be settled under the BSC framework at the asset which is delivering the Balancing Service.

At the time of writing, the P375 Workgroup have developed a solution that would amend the BSC to allow Secondary BM Units to be settled at a Settlement quality Meter at a point behind the Boundary Point Meter.

Additionally, the Workgroup's solution looks to define the standards of metering for behind the Boundary Point meters, the application of Line Loss Factors methodology and establishment of assurance measures required for a VLP when performing the P375 process.

P383 'Enhanced reporting of demand data to the NETSO to facilitate CUSC Modifications CMP280 and CMP281'

P383 'Enhanced reporting of demand data to the NETSO to facilitate CUSC Modifications CMP280 and CMP281' was raised by Engie on 6 March 2019 in response to Ofgem's challenge to industry that storage facilities should be excluded from certain Transmission Network Use of System (TNUOS) and Balancing Services Use of System (BSUoS) charges.

Data produced for Settlement purposes in accordance with the BSC supports a range of non-Settlement activities, e.g. the calculation of EMR Charges and network charges, like TNUOS and BSUoS.

In order that Supplier Volume Allocation (SVA) registered storage facilities can be excluded from TNUOS and BSUOS charges, metered data for these facilities must be aggregated and reported to the NETSO.

Currently awaiting a decision from the Authority whether to approve P383, the Modification would introduce processes into the BSC and its CSDs that will enable Suppliers (on behalf of their customers, SVA Storage Facility Operators) to submit declarations to SVAA for eligible SVA Storage Facilities and for SVAA to check declarations, maintain records of valid and invalid declarations and register details of successfully declared SVA Storage Facilities.

In addition to the up-front validation of declarations, P383 will establish ongoing assurance measures, i.e. periodic review of all declarations to ensure continuing validity and provision of descriptive/performance statistics.

What is the issue?

The BSC requires BSCCo (or its appointed BSC Agents) to provide the EMR SSP with "EMR Settlement Data" required to calculate CfD and CM charges for Licensed Suppliers. This data takes the form of a BM Unit Gross Demand Report, identifying the gross Import for each Suppliers' BM Units (whether an ordinary Base BM Unit or Additional BM Unit) in each Settlement Period.

Currently the BM Unit Gross Demand report attributes to Suppliers all electricity Imported by its customers including electricity provided to generators (including storage) operated by a Generation Licencee for the purpose of carrying out a licensable activity. The issue is that electricity supplied to generators (including storage) operated by a Generation

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Licencee for the purpose of carrying out a licensable activity should be excluded as it should not be subject to the CfD and CM Supplier charges.

The Department for Business, Energy and Industrial Strategy (BEIS) and Ofgem made clear in their joint Smart Systems and Flexibility Plan (published in July 2017) that Imports to licensee-operated generators falls outside the definition of 'supply' in the Electricity Act and so the Supplier Obligation is not payable in relation to imports to generators operated by a licensee.

In October 2018, ELEXON issued a consultation on 'Aligning BSC reporting with EMR Regulations', which explained in detail the issue that this Modification seeks to address. On 8 November 2018, the BSC Panel considered responses to the consultation (see paper 284/07), and agreed that:

- In the short term, the EMR SSP should implement an interim solution to this BSC issue (to deal with straightforward sites that can be charged correctly using data from the Boundary Point Metering System, without needing data from on-site 'sub-metering'). This solution was implemented by EMRS in February 2019.
- In the longer term, an enduring solution should be implemented within the BSC to ensure that more complex sites can be charged correctly.

At the time, ELEXON advised the BSC Panel that the enduring solution would need to build upon the solutions for Modification Proposals P344 TERRE and Wider Access and P375 'Settlement of Secondary BM Units using metering behind the site Boundary Point'. It would also need to be consistent with the outcome of Ofgem's October 2017 consultation on 'Clarifying the regulatory framework for electricity storage'.

Who is affected by this issue?

Notwithstanding the application of the interim solution, all Suppliers of and generators (including storage) operated by a Generation Licensee are affected by this issue.

Unless simple generator and storage facilities are declared under the interim solution, EMR SSP currently includes Imports to licensee-operated generators and storage in its calculation of charges to Suppliers. Including Licensee-operated generation that are not 'supply' as defined in the Act, leads to over-charging of Suppliers, who in turn may 'pass through' these charges to their customer. Ultimately the impact is likely borne by Licensee-operated Storage and Generation. For Licensee-operated Storage in particular, these additional Import charges may significantly impair the financial viability of some new business models.

The proposer illustrated the issue in more detail by describing a site that has a mixture of Licensee-operated Storage (e.g. battery storage); Licensee-operated Generation (e.g. a solar farm); and a 'final demand' Customer(s). See Figure 1 below:

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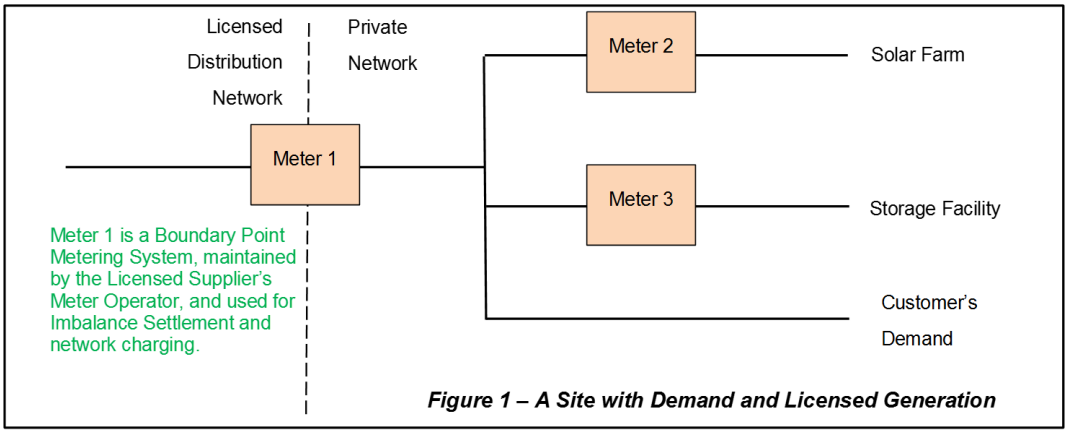

Figure 1 – A Site with Demand and Licensed Generation

Normally (i.e. in the absence of any attempt to use the EMRS interim solution) EMR processes would calculate CfD and CM levies for this site using Import metered data from the Supplier's Boundary Point Metering System (i.e. Meter 1 in Figure 1). This means CfD and CM levies would be charged on net Imports to the site. The effect of this is summarised in Table 1:

Table 1 – Current Default Approach to charging CFD and CM Levies
(CfD and CM levies calculated based on net Import at Boundary Point)

No.	Scenario	Charging Treatment
1.	Electricity imported from Total System, and used by a Licensee-operated generator (e.g. technical losses in a licensed generating unit or Storage Facility).	**Supplier charged** on Imports to Licensee-operated Generation.
2.	Electricity imported from Total System, and used for some non-generation licensed purpose (e.g. end use by a customer, or exempt generation).	**Supplier charged** on Imports to customer.
3.	Electricity imported from Total System, stored for a period of time in a generation Licensee-operated Storage Facility, and then Exported back to the Total System.	**Supplier charged** on Imports to the Storage (in relation to the Settlement Period in which the Import occurred).
4.	Electricity imported from Total System, stored for a period of time in a Licensee-operated Storage Facility, and then used on-site for some non-generation licensed purpose (e.g. end use by a customer, or exempt generation).	**Supplier charged** on Imports to the Storage (in relation to the Settlement Period in which the Import occurred).
5.	Any electricity generated on-site (from something other than electricity, i.e. not storage), regardless of whether it's used on-site, or stored and subsequently Exported.	**Supplier not charged**.

The Proposer believes Scenarios 1 and 3 in Table 1 are inconsistent with the EMR Regulations. The Supplier is being charged for Imports provided to a Licensee-operated generator for generation-related activities. Such Imports are not 'supply' under the Electricity Act, and should not be charged for.

The EMRS interim solution was not intended to deal with the type of complex site described in Figure 1. The interim solution is only intended to be used where there is an SVA Metering System that is only recording Imports to generators operated by a Generation Licensee.

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The Proposer notes that existing Settlement differencing arrangements might be used to specifically meter the different activities at a complex site. However, the proposer concluded that use of these existing BSC provisions would still result in scenarios being charged in a way that is inconsistent with the EMR Regulations. Please see the Modification Proposal form for more details.

ELEXON agrees with the Proposer's assessment of the issue and notes that resolving the issue would resolve an outstanding action on BEIS and Ofgem's Smart Systems and Flexibility Plan.

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3 Solution

The Modification Proposal form sets out in detail the Proposer's proposed solution. In light of this, the following is a summary of their proposal for Workgroup consideration. We advise you to read the Proposal Form for a full account of the Proposer's rationale.

Proposed solution

P395 proposes to amend BSC systems and processes so that the SAA-I042 'BM Unit Gross Demand Report' only includes electricity 'supplied' to the premises by the Supplier, and therefore excludes electricity imported by Generators operated by a licensee for generation activities (i.e. those activities authorised by their licence to carry on).

To avoid replicating the Proposer's solution verbatim, the following is a summary of the key elements that the Proposer believes the enduring solution should encompass:

- Registration and data collection for Asset Metering Systems in order to differentiate between different on-site activities behind the Boundary Point (i.e. 'behind the meter');
- Process for declaring Metering Systems (Boundary and Asset) associated with Licensed Generation or Storage;
- Process for sending required Metered Data to SVAA and for collecting Metered Data from Asset Metering related to a CVA Boundary Point;
- Process for SVAA and CDCA to calculate chargeable Imports;
- Processes for adjusting BM Unit Gross Demand reported to EMR SSP; and
- Winding down of Interim Solution – the proposed solution will incorporate the interim solution into an overarching BSC-based solution. This will mean that sites registered under the interim solution will be moved into the enduring solution, and interim solution systems and processes switched off.

Please see Appendix 1 for a spreadsheet model (described in further detail in the Proposal From) illustrating the steps that the Proposer believes would be suitable to apportion power flows within each settlement period.

Appendix 2 describes a proposed process that will be required to calculate Imports to Licensed Generation.

Interaction with other BSC Modification Proposals

P395 aims to incorporate elements of the solutions for BSC Modifications P344, P375 and P383 in order to develop and apply a methodology to calculate CfD and CM charges more accurately than is permitted under current BSC provisions.

At a high level, P395 aims to incorporate elements of solutions to previous Modifications by:

- Processes introduced by P344 for SVAA to request metered data for relevant Boundary Point Metering Systems from HHDAs;

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- Taking advantage of BSC processes for collecting and processing data from sub metering developed during the Assessment Procedure for P375 that enable SVAA to receive metered data for Asset Meters from HHDCs; and
- Utilise the self-declaration process introduced by P383 except that it would apply to Asset Metering Systems as well as Boundary Point Metering Systems, and all Licensed Generation (not just Licensed Storage).

Applicable BSC Objectives

Applicable BSC Objective (f)

In the opinion of the Proposer, the primary benefit of this Modification Proposal is in relation to Applicable BSC Objective (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'

Currently the EMR SSP is not able to levy CfD and CM charges on Suppliers in a manner consistent with EMR Legislation, because the EMR Settlement Data provided to the EMR SSP by SAA does not correctly identify the volume of electricity supplied to sites with Licensed Generation or Storage. Resolving this issue will allow the EMR SSP to operate these arrangements consistently with EMR Legislation.

Applicable BSC Objective (b)

By removing artificial and unintended barriers to the use of Storage, this Modification may also allow additional Storage to be integrated into the electricity system, which may positively impact Applicable BSC Objective (b): the efficient, economic and co-ordinated operation of the National Electricity Transmission System.

Applicable BSC Objective (c)

By removing a perceived barrier to the financial viability of operating Storage, this Modification may promote effective competition in the generation of electricity.

Implementation approach

We propose that this Modification should be implemented at the same time as (or as soon as possible after) Modification Proposal P375 ('Settlement of Secondary BM Units using metering behind the site Boundary Point').

As P375 is currently in the Assessment Procedure, it does not have an approved Release date yet.

What are the Applicable BSC Objectives?

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

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

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

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

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

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

(g) Compliance with the Transmission Losses Principle

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4 Areas to Consider

In this section we highlight areas which we believe the Panel should consider when making its decision on how to progress this Modification Proposal, and which a Workgroup should consider as part of its assessment of P395. We recommend that the areas below form the basis of a Workgroup's Terms of Reference, supplemented with any further areas specified by the Panel.

We anticipate that the need to differentiate between and report on different activities at a site will grow, both for Settlement and non-Settlement purposes, therefore the solution for P395 should where possible be designed flexibly to support similar initiatives.

BSC Modification Workgroups are and have been working on solutions that manage how to differentiate use at complex sites. P395 should be developed (and implemented) in conjunction with (and where appropriate compatible with) these other related Modifications, in particular P375 and P383.

The proposed solution is to use the P375 approach to require HHDCs to send Metered Data for Asset Metering Systems to SVAA and to use the existing P344 process to require HHDAs to send Metered Data for Boundary Point Metering Systems to SVAA. The Workgroup should consider whether a better solution might be to require the HHDC to report both Boundary Point and Asset Metering Systems' Metered Data to SVAA.

The proposed solution recommends building on solutions implemented or proposed by other BSC Modifications, i.e. P344, P375 and P383. However, this proposal is intended to apply to CVA registered sites and the related BSC Modifications are focused on SVA Metering Systems. The workgroup will need to develop equivalent solutions that apply to CVA Metering Systems.

Areas to consider

The table below summarises the areas we believe a Modification Workgroup should consider as part of its assessment of P395:

Areas to Consider
Which Imports should be chargeable?
Should the HHDC report both Boundary Point and Asset Metering Systems' Metered Data to SVAA?
How should Imports to Licensed Generation be calculated?
How best to transition from the interim to the enduring solution?
What are the costs and benefits of the method for apportioning the electricity Imported to a storage facility between chargeable and non-chargeable?
How will P395 impact the BSC Settlement Risks?
What changes are needed to BSC documents, systems and processes to support P395 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?
Are there any Alternative Modifications?
Should P395 be progressed as a Self-Governance Modification?
Does P395 better facilitate the Applicable BSC Objectives than the current baseline?

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5 Proposed Progression

Self Governance

This Modification Proposal is intended to have the effect of ensuring that Imports to Licensee-operated Generation and Storage (for purposes related to generation) are not subject to EMR charges.

This is desirable, and will bring EMR charging arrangements in line with EMR Regulations and the BEIS/Ofgem Smart System and Flexibility Plan; but it is therefore a material change that may materially affect existing or future electricity consumers and competition in the generation of electricity. For this reason we consider that the Modification should **not** be treated as Self-Governance.

Urgency

We believe that the Modification does **not** meet Ofgem's criteria for Urgency i.e. it is not linked to an imminent issue or a current issue that if not urgently addressed may cause:

(a) a significant commercial impact on Parties, Consumers or stakeholder(s); or
(b) a significant impact on the safety and security of the electricity and/or gas systems; or
(c) a Party to be in breach of any relevant legal requirements.

Next steps

The Modification should be assessed by a Workgroup and submitted to the Assessment Procedure.

What is the Self-Governance Criteria?

A Modification that, if implemented:

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

(b) is unlikely to discriminate between different classes of Parties.

Workgroup membership

The assessment of this Modification Proposal requires knowledge in:

- EMR processes – in particular the calculation of Supplier charges;
- BSC Settlement Calculations – in particular the registration of SVA and CVA Metering Systems, collection of CVA and SVA Metered Data and processes for aggregating Metered Data according to aggregation and differencing rules; and
- The P344, P375 and P383 solutions.

Timetable

Proposed Progression Timetable for P395	
Event	Date
Present Initial Written Assessment to Panel	14 November 2019
Workgroup Meeting	W/B 2 December 2019
Workgroup Meeting	W/B 10 February 2020
Assessment Procedure Consultation	9 March – 27 March 2020

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Proposed Progression Timetable for P395	
Event	Date
Workgroup Meeting	W/B 6 April 2020
Present Assessment Report to Panel	7 May 2020
Report Phase Consultation	11 May 2020 – 29 May 2020
Present Draft Modification Report to Panel	11 June 2020
Issue Final Modification Report to Authority	15 June 2020

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6 Likely Impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Potential Impact
Generators	Licensees operating generators may be required to declare their sites and maintain registration details to ensure their generators are excluded from the reporting of BM Unit Gross Demand
Suppliers	Suppliers of generators operated by a Generation Licensee may be required to declare these sites and maintain registration details to ensure these generators are excluded from the reporting of BM Unit Gross Demand
HHDCs	HHDCs may be instructed by SVAA to report Metered Data for Asset Metering Systems to SVAA
HHDAs	HHDAs may be instructed by SVAA to report Metered Data for Boundary Point Metering Systems to SVAA

Impact on Transmission Company
None anticipated

Impact on BSCCo	
Area of ELEXON	Potential Impact
BSC Operations	BSCCo and its Agents will be responsible for collecting and aggregating Boundary Point and Asset Metered Data to determine chargeable and non-chargeable Imports, and to report corrected BM Unit Gross Demand to EMRS. Therefore, processes for monitoring and managing this may need to updated under the P395 solution.

Impact on EMRS
EMRS may receive an updated version of the SAA-I042, i.e. including specific calculations of chargeable and non-chargeable Imports

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Impact on BSC Settlement Risks
The activities proposed by this proposal may impact the following risks, because Parties, Party Agents and BSC Agents are being asked to take on additional responsibilities, which may impact ability to fulfil existing BSC Settlement responsibilities and so increase the risk of error in Settlement. In particular, the following risks on the Risk Evaluation Register may be affected: SVA risks: 009 - Data Aggregator processes Metered Data 029 - SAA calculation 034 - SVAA data processing New Risk - that registration details for eligible Generators are stored incorrectly affecting the accurate/correct aggregation of metered volumes CVA risks: 019 – Registration 021 - Retrieval and processing of Metered Data 026 - Aggregation rules New Risk - that registration details for eligible Generators are stored incorrectly affecting the accurate/correct aggregation of metered volumes.

Impact on BSC Systems and processes	
BSC System/Process	Potential Impact
SVAA	SVAA will be required to process Boundary Point and Asset Metering System Metered Data to determine chargeable and non-chargeable Imports

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Potential Impact
SAA	SAA will be required to incorporate SVAA and CDCA's calculation of non-chargeable Imports into its calculation of BM Unit Gross Demand.
CDCA	CDCA will be required to process Boundary Point and Asset Metering System Metered Data to determine chargeable and non-chargeable Imports

Impact on Code	
Code Section	Potential Impact
BSC Section V	Reflect that BM Unit Gross Demand report will determine and account for chargeable and non-chargeable Imports.

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Impact on Code Subsidiary Documents	
CSD	Potential Impact
BSCP502 – Half Hourly Data Collection	Changes may be required to implement this Modification.
BSCP503 – Half Hourly Data Aggregation	
BSCP508 – Supplier Volume Allocation	
SVAA Service Description	
SVAA User Requirement Specification	
SVA Data Catalogue	
Interface Definition Document	
SAA Service Description	
SAA User Requirement Specification	
CDCA Service Description	
CDCA User Requirement Specification	

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Data Transfer Catalogue	Possible impact – expectation is P375 will propose necessary changes
Master Registration Agreement	Possible impact – if MPAS is used to store Metering System registration details for eligible generators

Impact on a Significant Code Review (SCR) or other significant industry change projects
None

Impact on Consumers
This Modification will directly impact those consumers who operate Storage or Generation Facilities, and hold a Generation Licence (by removing incorrect charges to which they are currently exposed). It may benefit consumers more generally by removing barriers to the use of electricity Storage, and hence helping consumers realise the benefits that Storage can bring to the electricity system. According to the BEIS/Ofgem Smart Systems and Flexibility Plan these include helping to integrate low carbon generation, reduce the costs of operating the system, and help avoid or defer costly reinforcements to the network.

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Impact on the Environment
By removing barriers to the use of electricity storage, this Modification may assist in realising the environmental benefits of incorporating storage into the electricity system (such as allowing more low carbon generation to be integrated into the system).

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7 Recommendations

We invite the Panel to:

- **AGREE** that P395 progresses to the Assessment Procedure;
- **AGREE** the proposed Assessment Procedure timetable;
- **AGREE** the proposed membership for the P395 Workgroup; and
- **AGREE** the Workgroup's Terms of Reference.

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Appendix 1: Calculation Example

This worksheet illustrates the apportionment of power flows to users within a site (i.e. Step 1 of the calculations proposed by Modification Proposal P395).

INPUTS - METERED DATA		
	Gross Import	Gross Export
Boundary Point	2.5	0.3
Licensed Generation	0	1.8
Licensed Storage	1.3	0.2

STEP 1A - NET IMPORTS AND EXPORTS (calculated by differencing for the customer)		
	Import	Export
Boundary Point	2.2	0
Licensed Generation	0	1.8
Licensed Storage	1.1	0
Customer Demand	2.9	0

STEP 1B - APPORTION BOUNDARY POINT FLOWS BETWEEN USERS		
	Import	Export
Licensed Generation	0	0.3
Licensed Storage	0.6875	0
Customer Demand	1.8125	0

STEP 1C - REMAINING NET POWER FLOWS WITHIN SITE		
	Import	Export
Licensed Generation	0	1.5
Licensed Storage	0.4125	0
Customer Demand	1.0875	0

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Appendix 2: Calculating Imports to Licensed Generation

The solution requires a new process for categorising Imports at the Boundary Point into:

- Imports to a Licensee-operated generator (for purposes of carrying out activities authorised by their licence), which are not 'supply' under the Act (and are therefore not subject to CfD and CM levies) – i.e. non-chargeable Imports; and
- Other Imports (i.e. Imports that are not to a Licensee-operated generator, or are to a Licensee-operated generator for purposes other than generation) which are 'supply' and are therefore subject to CfD and CM levies.

Table 4 below summarises in more detail the Proposer's understanding of which Imports are chargeable and which are not - it is the Proposer's desire for the Workgroup to discuss and confirm this:

Table 4 – Proposed Approach to charging CfD and CM Levies (subject to discussion and confirmation by Workgroup)

No.	Scenario	Proposed Treatment
1.	Electricity imported from the Total System, and used by a Licensee-operated generator (e.g. technical losses in a licensed generating unit or Storage Facility).	**Not chargeable** (as the electricity was supplied to a licensee-operated generator for activities authorised by their Generation Licence).
2.	Electricity imported from the Total System, and used for some non-licensed purpose (e.g. end use by a customer, or exempt generation).	**Chargeable** – the electricity was supplied to the premises by a Supplier, and is therefore subject to EMR levies.
3.	Electricity imported from the Total System, stored for a period of time in a Licensee-operated Storage Facility, and then Exported back to the Total System.	**Not chargeable** (as the electricity was supplied to a licensee-operated generator for activities authorised by their Generation Licence).
4.	Electricity imported from the Total System, stored for a period of time in a Licensee-operated Storage Facility, and then used on-site for some non-licensed purpose (e.g. end use by a customer, or exempt generation).	**Chargeable** – the Licensee-operated generator has not just stored the electricity, but has also provided it to an on-site Customer. This is an exempt supply activity (not a Licensed generation activity), and therefore the original supply to the premises (which was stored) is supply (for the purposes of the Act). EMR levies should be charged on this supply (in relation to the Settlement Period it was supplied to the premises, not the Settlement Period in which the generator subsequently sold it on).
5.	Any electricity generated on-site (from something other than electricity), regardless of whether it's subsequently Exported, used on-site or stored.	**Not chargeable** (as it was not supplied to the premises).

In order to amend BSC systems and processes in accordance with Table 4, we propose that SVAA will need a two-stage process as follows:

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Step 1 – Establishing Power Flows within each Settlement Period

Compare metered data from the Boundary Point Metering System with metered data for Licensee-operated generation and storage, in order to establish the source and destination of electricity flows within that Settlement Period (e.g. how much electricity the Customer is Importing from the Distribution System, and how much from the Licensed Storage Facility); and

Step 2 – Categorise Imports as Chargeable or Non-Chargeable

Categorise the Imports from the Distribution System as chargeable or non-chargeable, in accordance with Table 4. For most flows this is straightforward e.g. a flow from the Distribution System to the Customer is always chargeable, and a flow from the Distribution System to the Licensee-operated (non-Storage) generation is always non-chargeable.

A more difficult case is a flow from the Distribution System to the Licensed Storage Facility, where the correct treatment depends on how it will ultimately be used. We propose to handle this using a historic usage factor e.g. if 30% of the electricity stored in the Storage Facility over the past month, for example, was ultimately used by the Customer, 30% of any Imports from the Distribution System to the Licensed Storage Facility should be treated as chargeable.

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Appendix 3: Glossary & References

Data flows and data items

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

DTC Data Flows and Data Items	
Number	Name
SAA-I014	Settlement Report
SAA-I042	BM Unit Gross Demand Report

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	BEIS and Ofgem joint Smart Systems and Flexibility Plan	https://www.gov.uk/government/publications/upgrading-our-energy-system-smart-systems-and-flexibility-plan
5	Contracts for Difference (Electricity Supplier Obligations) Regulations 2014, as amended	http://www.legislation.gov.uk/uksi/2014/2014/contents/made
5	The Electricity Capacity (Supplier Payment etc.) Regulations 2014, as amended	The Electricity Capacity (Supplier Payment etc.) Regulations 2014, as amended
5	BSC Section V 'Reporting'	https://www.elexon.co.uk/the-bsc/bsc-section-v-reporting/
6	BSC Section C 'BSCCo and its Subsidiaries'	https://www.elexon.co.uk/the-bsc/bsc-section-c-bscco-subsidiaries/
7	P383 'Enhanced reporting of demand data to the NETSO to facilitate CUSC Modifications CMP280 and CMP281'	https://www.elexon.co.uk/mod-proposal/p383/
7	P375 'Metering behind the Boundary Point'	https://www.elexon.co.uk/mod-proposal/p375/
8	P344 'Project TERRE implementation into GB market arrangements'	https://www.elexon.co.uk/mod-proposal/p344/

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