

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

P402 'Enabling reform of residual network charging as directed by the Targeted Charging Review'

This Modification will ensure that data is provided to the National Electricity Transmission System Operator for setting and recovering Transmission Network Use of System demand residual charges. This proposal supports the implementation of Ofgem's Targeted Charging Review Significant Code Review Decision



The BSC Panel recommends **approval** of the P402 Alternative Modification and **rejection** of the P402 Proposed Modification



The BSC Panel **does not** believe P402 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- LDSOs
- NETSO
- Elexon as the BSCCo

Contents

1	Summary	4
2	Why Change?	8
3	Solution	13
4	Impacts & Costs	21
5	Implementation	30
6	Workgroup's Discussions	31
7	Workgroup's Conclusions	59
8	Panel's Initial Discussions	63
9	Report Phase Consultation Responses	65
10	Panel's Final Discussions	67
11	Recommendations	69
	Appendix 1: Workgroup Details	70
	Appendix 2: Glossary & References	72



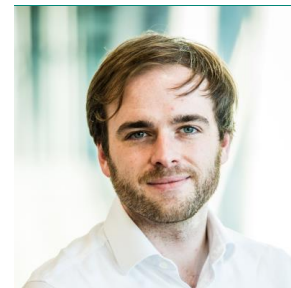
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About This Document



Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read section 1
- Have 15 mins? Read sections 1, 9 and 10
- Have 30 mins? Read all except section 6
- Have longer? Read all sections and the annexes and attachments

This is the P402 Final Modification Report, which ELEXON has submitted to the Authority on behalf of the BSC Panel. It includes a summary of the Workgroup's assessment, the Panel's full views and the responses to both the Workgroup's Assessment Consultation and the Panel's Report Phase Consultation. The Authority will consider this report and will decide whether to approve or reject P402.

There are eight 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 approved redlined changes to the BSC for the P402 Proposed Modification.
- Attachment B contains the approved redlined changes to the BSC for the P402 Alternative Modification.
- Attachment C contains the Business Requirements for the P402 Proposed Modification.

P402
Final Modification Report

15 March 2021

Version 1.0

Page 2 of 73

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- Attachment D contains the Business Requirements for the P402 Alternative Modification.
- Attachment E contains the collated responses received to the first Assessment Procedure Consultation.
- Attachment F contains the collated responses received to the second Assessment Procedure Consultation.
- Attachment G contains the full responses received to the Panel's Report Phase Consultation.

Why Change?

Following the conclusion of its [Targeted Charging Review](#) (TCR) Significant Code Review (SCR), Ofgem directed the National Electricity Transmission System Operator (NETSO) and certain¹ Licenced Distribution System Operators (LDSOs) to make changes to how residual revenues are recovered through Distribution Use of System (DUoS) and Transmission Network Use of System (TNUoS) demand charges.

The Balancing and Settlement Code (BSC) currently provides aggregated Metered Data and Metering System counts that the NETSO and LDSOs use to calculate TNUoS, Balancing Services Use of System (BSUoS) and DUoS charges.

Elexon and the Workgroup understand that the LDSOs have or can procure all data necessary to implement the TCR SCR changes, in relation to demand residual charging. However, NETSO does not have access to the relevant data. This is because NETSO relies on BSC processes to ensure it receives data it uses to calculate TNUoS and BSUoS charges. The data currently reported by BSCCo to NETSO is insufficient to enable the changes required for the TCR.

In order to maintain the BSC's existing role in providing data to NETSO, the Proposer believes the BSC must be amended in order that it ensures the provision of data that enables NETSO to set and recover TNUoS demand residual charges, in accordance with the TCR SCR decision.

Proposed Solution

The P402 Proposed Solution would introduce new reporting requirements on LDSOs and BSCCo that will ensure the provision of data to enable NETSO to set TNUoS demand residual tariffs and enable accurate billing of subsequent charges.

To ensure that NETSO receives the data it requires, the P402 Proposed Solution introduces processes that require the provision, consolidation and validation of three types of data to NETSO (Monthly Billing data, Annual Tariff Setting data and Unmetered Supplies (UMS) data), the creation of two new reports to NETSO and an update to the P0210 'TNUoS Report'.

Additionally, P402 will introduce requirements for providing, maintaining and publishing how Line Loss Factor Classes (LLFCs) are mapped to Residual Charging Bands, which is essential to correctly convert Settlement and LDSO data for the calculation of TNUoS demand residual charges.

The Proposer believes that the Proposed Solution, despite its higher costs, is the most appropriate way for NETSO to get the data it needs to recover TNUoS demand residual charges for the TCR, providing greater transparency and visibility to industry and including a level of validation that is not offered by the Alternative.

Proposed Solution Interim solution

The Proposed Solution described above is the enduring solution, unfortunately and due to delays caused by assessment of the Alternative Solution, an interim solution will be



BSUoS, TNUoS and DUoS charges

The Balancing Services Use of System (BSUoS) charge recovers the cost of day-to-day operation of the Transmission System.

The Transmission Network Use of System (TNUoS) charges recover the cost of installing and maintaining the transmission system in England, Wales, Scotland and Offshore.

The Distribution Use of System (DUoS) charges Recover the cost of installing and maintaining the local distribution networks.

P402
Final Modification Report

15 March 2021

Version 1.0

Page 4 of 73

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¹ Ofgem's direction only applies to LDSOs who are Distribution Services Providers, i.e. Distribution Network Operators (DNOs) not Independent DNOs (IDNOs). The BSC doesn't distinguish between DNOs and IDNOs.

needed to cover the period between February 2022 and the full BSC central systems solution go-live, should the Proposed Solution be approved. In order to accommodate a staggered implementation approach in the Legal Text where LDSOs are not subject to certain P402 obligations for a time-limited period, the Panel will be asked (at a later date) to determine when it wishes the enduring solution to occur, and this will be the trigger for the launch of the enduring solution.

Alternative Solution

The original, Proposed Solution requires LDSOs to send data for Tariff Setting and Billing Reports to BSCCo (via SVAA) who compliment this with data for NHH sites, and then compile it into set of monthly Billing Reports and annual Tariff Setting reports, that would be sent on to National Grid and the output data reported to industry.

The P402 Alternative sees LDSOs compiling this data themselves, sending it directly to National Grid and so not to relying on BSCCo or BSC Systems and Agents for these purposes.

This would require LDSOs to provide Billing and Tariff Setting data, including UMS data, to NETSO. Exelon will support LDSOs in the identification of CVA Registrants.

The Workgroup's discussions in developing the Alternative Solution are set out in Section 6.

The P402 Workgroup and BSC Panel believe that the Alternative Solution delivers a cheaper, simpler and more timely option to ultimately deliver the same outcome as the P402 Proposed Solution.

Initial Tariff Setting Reports

In order to set new TNUoS demand residual (TDR) charges to take effect from 1 April 2022, NETSO will require tariff setting data in October 2021. P402 will not have been implemented by this point and BSCCo will not have the data necessary to produce the Tariff Setting Report. Therefore LDSOs propose to provide, bi-laterally and directly, a one-off set of Tariff Setting Reports to NETSO in October 2021. The bilateral provision of this data sits outside this BSC Modification Proposal.

Impacts & Costs

The Proposed Solution will introduce new requirements on LDSOs to send reports to BSCCo and on BSCCo to aggregate this data and report to NETSO. This will impact LDSOs, NETSO and BSC systems and processes.

The Alternative Solution will introduce new requirements on LDSOs to send reports to NETSO. This will impact LDSOs and NETSO and will not require any changes to BSC Systems – however BSCCo will provide support to Parties who need help in aggregating data and maintaining tables.

Benefits

The primary benefit of both the Proposed and Alternative for P402 is to enable NETSO to correctly calculate TDR network charges and thus enable the realisation of the TCR in

compliance with Ofgem's direction. P402 does not improve Settlement processes therefore, taken in isolation, the benefits of the Proposed P402 Solution are difficult to assess and relate to efficiency gains with a centralised and transparent mechanism for provision of this data versus a more fragmented approach by individual LDSOs.

When combined with other Modifications resulting from the TCR, Ofgem's TCR SCR Decision estimates that significant savings to consumers of £3.8bn to £5.3bn and system benefit of £0.8bn to £2.9bn over the period to 2040 will be realised via levying residual charges in the form of fixed charges for all households and businesses.

The Authority's view is that this will have the additional benefits of the improving the fairness of residual charges and reducing harmful distortions in the electricity market related to both investment and operational decisions.

Costs

Proposed Solution Costs Estimates			
Organisation	Implementation	On-going (£k)	Impacts
Elexon	£1.5 – 2 Million (including approx £50- £75K interim to cover period between Feb 22 Release and enduring system go-live, targeted for June 22).	Minimal – estimated at £1k [per month]	Systems, documents and processes. 12 month lead time.
NGESO	Approx. £530K	Understood to be minimal	Systems and processes. 5 -6 month lead time.
Industry	14 LDSOs (supported by single service provider and able to share total costs): £20k – £35k in total (£3k - £6k each) 15 IDNOs (varied service providers with some IDNOs unable to share total costs): minimal - 20K each	Understood to be minimal	Systems and processes. 3-6 months lead time.
Total	£2 – 2.5 Million		

Alternative Solution Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
Elexon	£2k	Minimal – estimated at £1k [per month]	Documents and processes
NGESO	£795k	Understood to be minimal	Systems and processes. 6 -7 month lead time.

Alternative Solution Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
Industry	14 LDSOs (supported by single service provider and able to share total costs): £50k – £90k (£10k - £25k each) 15 IDNOs (varied service providers with some IDNOs unable to share total costs): minimal - 20K each	Understood to be minimal	Systems and processes. 4-7 month lead time.
Total	£900K		

Implementation

To ensure consistent implementation of the TCR SCR across the Distribution Connection and Use of System Agreement (DCUSA), Connection and Use of System Code (CUSC) and BSC, all changes to systems, documentation and supporting processes need to be completed in time to meet the Implementation Date of NETSO's Direction, which is **1 April 2022**. The Workgroup therefore recommend P402 is implemented in the first scheduled BSC Release before this date, which is on **24 February 2022**. The BSC Panel agree with this approach.

Due to the delay caused by the need to develop and assess the Alternative Solution, it will not be possible to implement BSC central system changes for the Proposed Solution in time for February 2022, as Elexon require a 12 month lead time and a decision is not expected until April 2021. The Workgroup recommend an implementation approach where, if the Proposed Solution for P402 is approved, the Legal Text changes are implemented in February 2022 with a gap between this and the eventual go-live for the systems.

Because National Grid need to start using data from March 2022 there will be a period of time that will need to be satisfied by an interim solution, until Elexon can start producing data from central systems.

The additional cost of delivering this interim solution is currently understood to be in the region of £50-£75K, with a lead time of approximately 5 months to deliver this element for February 2022.

Recommendation

The BSC Panel unanimously believes that the P402 **Alternative** Modification **would** better facilitate Applicable BSC Objective (c) and (d) compared with both the existing baseline and Proposed Modification and so should be **approved**.

The Panel believe P402 should be submitted to the Authority for decision (**not a Self-Governance Modification Proposal**). These views are in line with the Workgroup views and respondents to the P402 consultations.

2 Why Change?

The BSC describes processes necessary for reporting data to NETSO, which NETSO uses to calculate TNUoS and BSUoS charges. In particular, the BSC and its subsidiary documents specify the provision of the SAA-I014 'Settlement Report' and the P0210 'TNUoS Report'. Each of these reports aggregates Settlement Data (in particular Metered Data).

The BSC does not currently specify how any Party should report data to NETSO which it will require in order to implement CUSC Modification Proposals [CMP343](#), [334](#), [335](#) and [336](#). Collectively these CMPs are intended to make changes to the CUSC to give effect to Ofgem's TCR SCR decision and direction in relation to the setting and billing TDR charges.

The Proposer believes that the BSC needs to be changed in order to continue the BSC's central role in providing data to NETSO for network charging purposes. By continuing to make use of Settlement data for these purposes and handling this task centrally by BSCCo, efficiency gains can be unlocked with this approach than duplicating submission of the data to NETSO.

What is the issue?

NETSO currently relies on data provided to it by BSCCo to calculate TNUoS charges; in particular, the SAA-I014 'Settlement Report' and P0210 'TNUoS Report'. These existing BSC reports will not provide the data necessary to support proposed TCR TNUoS charging arrangements, in particular to set tariffs and bill.

The TCR SCR decision included directions on LDSOs and NETSO to make changes to the way they set and levy DUoS and TNUoS demand residual charges. In response to these directions, LDSOs and NETSO raised DCUSA and CUSC modification proposals to implement the TCR SCR decision.

In summary, NETSO will require data for performing three different processes as part of its TCR SCR solution: band setting, tariff setting and billing.

Whilst Elexon and the Proposer are led to understand that the LDSOs have or may procure all data necessary to implement the TCR SCR changes for DUoS demand residual charging, NETSO does not. Please note that the Workgroup's consideration of P402 supports ELEXON's and the Proposer's original view that LDSOs have the data they need for DUoS purposes.

The TCR SCR decision and related CUSC and DCUSA modification proposals will introduce new concepts not currently or specifically required in BSC registration details or the collection, aggregation and reporting of Settlement Data – in particular, 'Final Demand', 'Site' and 'Residual Charging Band'.

Therefore the Proposer believes a change is required to the BSC to implement the TCR SCR decision and direction.

Overall NETSO requirements

Tariff setting, band setting and forecasting requirements

In order to set residual charge tariffs, NETSO must:

- Allocate its Transmission Demand Residual (TDR)² annual allowed revenue between Charging Bands based on each bands' proportional contribution to total gross annual 'final demand' Imports;
- For each band, divide the apportioned allowed revenue by the number of Final Demand Sites in that band to derive a pounds per site (£/site) rate; and
- Divide each bands' £/site rate by the number of days in the charging year (365 normally, 366 on leap years) to derive a pounds per site per day (£/site/day) residual charging tariff.

As is proposed by CMP334, CMP335, CMP336, CMP340 and CMP343 (the TCR CUSC Modification Proposals), these steps will be set out in detail in the CUSC.

In addition to the new method proposed by CMP340 and CMP343, NETSO has an existing CUSC obligation to provide a five-year forecast of TNUoS tariffs (see CUSC paragraph 14.29). This will apply to any TDR charge introduced by CMP340, 343, 334 and 335/6.

In order to support the annual setting of tariffs (for the forthcoming charging year and forecasts for the forthcoming five years), NETSO requires an annual report, each October, to set draft charges. Each annual report must contain the latest 12 months' sum of gross annual 'final demand' Imports (MWh) per Charging Band.

NETSO requires an annual report with the sum of Final Demand (i.e. gross Imports for Final Demand Sites) over the last 12 months per Charging Band, per GSP Group.

Please note that 'Final Demand', 'Final Demand Sites' and 'Charging Bands' will be new concepts in the CUSC and BSC. Consequently the BSC neither receives data identified or aggregated using these terms, nor does it derive or aggregate data into these categories.

Billing requirements

NETSO must calculate a daily bill for each chargeable party – I.e. Registrants of Supplier BMUs and non-Supplier BMUs (e.g. for distribution connected demand facilities registered in CVA).

NETSO calculates a BMU's daily bill by multiplying the daily number of 'Final Demand' sites registered by each BMU Registrant in each Charging Band by the corresponding tariff rate (£/site/day) for the band. NETSO then sums the charges calculated for each day of the relevant month to determine a monthly bill.

In order to calculate each daily charge, NETSO requires a monthly report containing the number of Final Demand Sites per Settlement Day, per Charging Band, per Registrant, per BMU ID and per GSP Group. This report must be no less frequent than monthly.

NETSO already receives data for transmission connected sites with Metering Systems registered in Central Meter Registration Service (CMRS). Therefore this proposal's defect only applies to data related to sites connected to LDSOs' Distribution Systems with Metering Systems registered in Supplier Meter Registration Service (SMRS) or CMRS.



Proposed CUSC definitions

"Transmission Demand Residual Tariffs"

the £/site Transmission Network Use of System tariffs or £/kWh UMS Tariff that are levied on Final Demand Sites and Unmetered Supplies only

"Charging Band"

a band containing sites from one of the Residual Charging Groups created for the purpose of Transmission Demand Residual charging in accordance with 14.15.137 of the Connection and Use of System Code



What are Final Demand Sites?

DCP359 proposes that by default a Site will be defined as a single Import Metering System. However where a Site comprises more than one Import Metering System, DCP359 proposes that the Site is as defined in the Connection Agreement and that LDSOs will be responsible identifying a Site's Primary Metering System and Secondary Metering System(s). Therefore LDSOs will be responsible for only reporting the numbers of Primary Metering Systems in order not to over-count the numbers of Sites.

² TDR is a specific amount of residual revenue that NETSO recovers in relation to the electricity Imported by users of the Transmission System. By comparison, NETSO also determines a Transmission Generation Residual (TGR).

Background

Elexon (as 'BSCCo') is the code manager for the BSC, with responsibility for managing and delivering the end-to-end services set out in the BSC.

In accordance with the BSC, BSC Parties and Elexon ensure that Metered Data is collected and aggregated in order to perform imbalance Settlement.

Because the BSC clearly sets out the rules for collecting, aggregating and assuring Settlement Data, it is also used to support a variety of other industry arrangements, including the calculation of BSUoS charges and both TNUoS and DUoS network charges.

How are Network Costs Recovered?

Allowed revenue

As network companies (NETSO and the LDSOs) are monopoly businesses, Ofgem sets price controls to encourage efficiency, innovation and stakeholder engagement.

Primarily, the price control sets a limit on the amount that each network company can recover from charging its customers to cover the ongoing costs of building, maintaining and operating network infrastructure. This amount is otherwise known as 'allowed revenue'.

Allowed revenues are recovered via Use of System (UoS) charges to Suppliers (and other users of the networks) who in turn pass these costs through to end-users.

Forward-looking charges and residual charges

Electricity network UoS charges have traditionally reflected underlying forward-looking charges and residual charges.

Forward-looking charges are targeted and cost-reflective, which signal to users how their actions can either increase or decrease network costs in the future.

Residual charges are designed to recover the rest of the relevant network company's allowed revenues once forward-looking charges have been set. Residual charges are set by working out the difference between the annual revenue expected to be earned from forward-looking charges and the total annual allowed revenue that may be recovered.

Currently, the methods used to recover residual revenues through TNUoS and DUoS charges are different. Also, the methods used to set and recover TNUoS and DUoS demand residual revenues may influence behaviour, which is an unintended outcome.

Targeted Charging Review

The Targeted Charging Review, launched in 2017, is an Ofgem-led project that assessed how residual network charges should be set and recovered in Great Britain. It also sought to keep other 'embedded benefits' (i.e. the differences in charges faced by smaller distributed generators and larger generators) under review. Ofgem set up the TCR in response to the changing role of the networks as more electricity is generated from a wider range of sources and more flexible demand.

The subject matter of the overall TCR is divided between matters which were the subject of the TCR Significant Code Review and certain other matters which were considered

outside the scope of the TCR SCR, e.g. changes to the DCUSA and CUSC in relation to how Imports to storage facilities are treated within the TNUoS, BSUoS and DUoS charging arrangements.

The TCR is part of a wider review of network and system charges which includes Ofgem's 'Access and forward looking charges Significant Code Review' and an industry-led review of BSUoS charging arrangements.

As part of its TCR SCR decision, Ofgem directed NETSO and the DNOs to raise industry code modifications to give effect to the TCR SCR decision.

To summarise the findings from the TCR (with greater detail to be found in the [decision document](#)), Ofgem concluded that changes in network use and technology have meant that existing residual charging arrangements have created distortions in the electricity market related to both investment and operational decisions, allowing some consumers to avoid residual charges at the cost of other consumers. In particular:

1. Residual charges increase for consumers unable to avoid these costs to make up for lower overall revenues recovered from those users able to change their behaviour and avoid/minimise the charges; and
2. This encourages consumers to invest in technology or change their behaviour in ways which may increase rather than decrease the total costs of the system.

In its [TCR SCR decision](#) Ofgem noted that residual charges are significant, currently accounting for around £4bn/year across electricity transmission and distribution networks (around 10-15% of a typical electricity bill). Overall, '[Ofgem's] analysis indicates that [its TCR SCR] reforms will provide significant savings to consumers of £3.8bn to £5.3bn and system benefit of £0.8bn to £2.9bn over the period to 2040.'

Targeted Charging Review Decision and Direction

As communicated in the TCR final decision on 21st November 2019, in order to reduce the harmful distortions caused by the current residual charging arrangements which encourage some organisations to reduce exposure to residual charges, Ofgem has decided that:

- Residual charges will be levied in the form of fixed charges for all households and businesses; and
- Liability will be removed for the Transmission Generation Residual from Generators and making changes to one of the 'Embedded Benefits' received by Smaller Distributed Generators in relation to balancing services charges.

In accordance with Ofgem's decision and related direction, the new transmission residual charges will be implemented in April 2022 and distribution residual charges in April 2023.

In response to the Direction on the recovery of the TDR, NETSO raised CUSC Modification Proposals (CMP) [CMP332](#), [CMP334](#), [CMP335/6](#), and [CMP343](#). The table below describes how collectively these CMPs are intended to implement different parts of an overall solution for delivering TCR residual charges changes in the CUSC.



What is a Significant Code Review?

A Significant Code Review allows Ofgem to initiate wide ranging and holistic change and to implement reform of a code based issue. The Significant Code Review (SCR) process has been added to the licence in order to facilitate significant industry changes in the most efficient manner. Ofgem has the sole right to raise SCRs, but will consult on scope of the review before commencing the SCR. Once commenced the SCR will utilise a number of industry workshops to develop an SCR conclusion. The period between the SCR commencing and SCR closing is known as the "SCR Phase". Further details on the SCR process can be found in the final licence modifications.

CMP interactions	Element of TCR addressed
CMP334 – Transmission Demand Residual (TDR) Definitions	This will identify who will be liable for the TDR by defining 'Final Demand' and 'Site'.
CMP332 - TDR Methodology	Creation of a methodology to calculate the TDR, determine charging bands and set tariffs for each band.
CMP343 - Transmission Demand Residual bandings and allocation for 1 April 2022 implementation (TCR)	The Authority issued a modified Direction to NETSO requiring them to withdraw CUSC Modification Proposal CMP332 and raise a new CUSC modification, CMP343, to give effect to the TCR Decision with an Implementation Date of 1 April 2022 instead of 1 April 2021. This CMP will deliver that Decision.
CMP335/6 – TDR Application	Update all of the of 'post tariff' processes (e.g. billing, band allocation, securitisation etc.) to reflect the TDR methodology created under CMP332.
CMP340 - Consequential changes for CMP343 (TCR)	CMP340 will provide the definitions required for CMP343.

Elxon response to Ofgem's TCR consultation

On 3 October 2019, Elxon responded to [Ofgem's consultation](#) entitled 'Future Charging and Access programme - refined residual charging banding in the TCR'. At the time CUSC changes needed to **go live in April 2021, whereas now it is April 2022**. In our response we highlighted the challenge of developing and implementing cross-code modifications by April 2021 – particularly if industry code modification Workgroups were expected to develop the explicit and detailed cross-code business requirements. We also described how a BSC-based solution might work and set out a preference for using new registration details dedicated to supporting TCR rather than re-using existing details which might disrupt their current use.

P402 forms part of a programme of proposals raised to develop and implement detailed business requirements across the DCUSA, CUSC and now the BSC. In general these proposals are progressing in accordance with NETSO and LDSOs' plan published by the Energy Networks Association (ENA) on 21 December 2019.

However, it is only since the beginning of 2020, following consideration of Ofgem's TCR decision that Elxon and industry participants had begun to develop the more detailed requirements and options for reporting data necessary to deliver the TCR SCR. A consequence of this work is that **assumptions made during planning have proved not to be practical or possible to progress**. Consequently the solution proposed by this proposal became clear in mid-February 2020.

P402 will ensure that NETSO receives the Billing and Tariff Setting data it requires to calculate TDR network charges in accordance with Ofgem's TCR SCR decision and its related CUSC Modification Proposals.

Proposed Solution

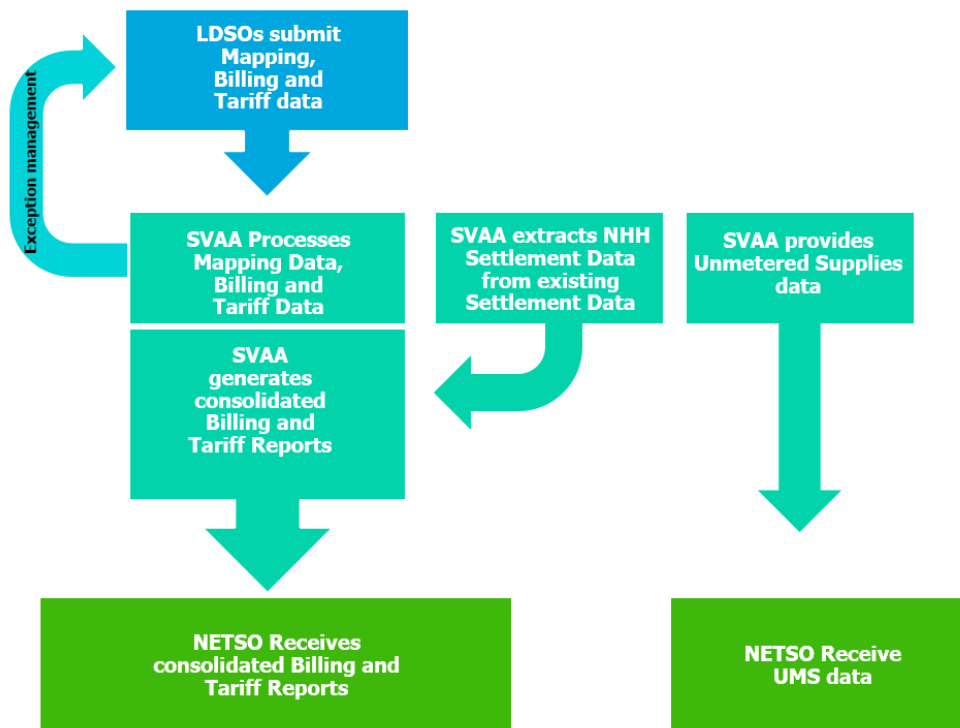
To ensure that NETSO receives the data it requires, the P402 Proposed Solution:

- Introduces processes that require the provision, consolidation and validation of three types of data - Monthly Billing data, Annual Tariff Setting data and Unmetered Supplies (UMS) data;
- Creates two new reports to NETSO (Billing and Tariff Report); and
- Includes additional UMS data in the P0210 'TUoS Report'.

The new Tariff Setting Reports and Billing Reports will be compiled following these overall steps:

1. LDSOs establish and maintain mapping tables in MDD;
2. LDSOs compile and send Billing and Tariff Setting Data for Sites with MC C and E HH MSIDs to BSCCo (SVAA) using a common file format to be specified in the SVA Data Catalogue. BSCCo extracts Billing and Tariff Setting Data for MC A, F and G MSIDs from existing Settlement data;
3. BSCCo consolidates all Billing Data (monthly) and separately all Tariff Setting Data (annually) into reports along with the NHH Settlement data obtained using existing processes/flows (the report will be specified in the SVA Data Catalogue); and
4. BSCCo will provide access to the consolidated reports to NETSO and to BSC Parties via the ELEXON Portal.

High level illustration



Key elements

The P402 Proposed Solution includes the following key elements:

- For sites with CVA Metering Systems and SVA HH Metering Systems equivalent to Measurement Classes (MC) C and E³, LDSOs send SVAA:
 - Billing Data on a monthly basis; and
 - Tariff Setting Data on an annual basis
- SVAA uses existing Settlement Data to determine Billing Data and Tariff Setting Data for sites with NHH Metering Systems equivalent to MC A and HH Metering Systems equivalent to MC F and G
- SVAA to combine Billing Data to produce a new monthly Billing Report and publish on the ELEXON Portal for NETSO, BSC Parties and those who pay for a licence to download as appropriate
- SVAA to combine HH and NHH Tariff Setting Data to produce a new annual Tariff Setting Report and publish on the ELEXON Portal for NETSO, BSC Parties and those who pay for a licence to download as appropriate
- LDSOs to provide and maintain new mapping tables in MDD, in particular:
 - An LLFC: Residual Charging Band mapping table
 - A 'dummy CVA LLFC:dummy MPID:actual CVA LLFC' table for CVA Sites
- SVAA to specifically report HH and NHH UMS data to NETSO in the P0210 'TUoS Report'

³ But excluding HH Metering Systems in Measurement Classes D, F and G.

The following sub-sections summarise these elements of the solution and the Business Requirements (see Attachment C) provide specific detail.

P402 production of monthly Billing Report

LDSOs provide monthly Half Hourly Billing Data

Each LDSO will provide Billing Data for its HH Sites⁴ to SVAA within 3 WD of the Initial Volume Allocation Run (SF) for the last Settlement Day of the most recently completed 'Reporting Period'. Billing Data will be the count of sites on each Settlement Day of the Reporting Period per Registrant, LLFC, and GSP Group.

In the context of Billing Data a reporting period is a calendar month. Therefore, for the Reporting Period of 1-30 April, each LDSO will provide Billing data within 2WD of the SF Volume Allocation Runs (VAR) for 30 April.

SVAA determines monthly Non Half Hourly Billing data

Within 2 WD of the Initial Volume Allocation Run for the last Settlement Day of the most recently completed reporting period, SVAA will determine NHH Billing Data from existing Settlement Data, using the data sent to it by NHHDA in [D0030 'Aggregated DUoS Report'](#) and by HHDAs in [D0040 'Aggregated Half Hour Data File'](#) data flows.

Elexon will be responsible for aggregating Measurement Classes A, F and G data because LDSOs rely on Elexon sending them aggregated NHH and Measurement Classes F and G Metered Data in the D0030 Aggregated DUOS Report, so it is more efficient for SVAA to derive Billing Data for Measurement Classes A, F and G at the same time as compiling D0030 reports.

SVAA produce and publish a monthly Billing Report

Within 5WD of the Initial Volume Allocation Run for the final day of the most recent Reporting Period, SVAA will publish the Billing Report containing consolidated monthly Billing Report data for NETSO and BSC Parties to obtain via a programmable interface and user access control.

P402 production of an annual Tariff Setting Report

LDSOs provide Half Hourly Tariff Setting Data each year

Each year within 3WD of the Initial Volume Allocation Run for the 30 September, each LDSO must provide Tariff Setting Data to SVAA.

HH Tariff Setting Data is the sum of gross Imports measured by HH Metering Systems (specifically MC C and E registered in SMRS and CVA Metering Systems; including the imports from lead and associated Metering Systems where appropriate), categorised by LLFC within each GSP Group for the reporting period. The LDSO will use Imports based on the most recent Settlement Run available at the time of producing the data.

⁴ Where a HH Site is a site whose lead Metering System (as determined by the LDSO) is a HH Metering System that is equivalent to Measurement Class C or E or is a CVA Metering System.

The reporting period will be the most recent 12-month period from 1 October to 30 September. For example, when producing Tariff Setting Data in October 2021 the reporting period is 1 October 2020 to 30 September 2021.

SVAA determines annual Non Half Hourly Tariff Setting Data

Each year, within 2WDs of the Initial Volume Allocation Run (SF Run) for the 30 September, SVAA will determine NHH Tariff Setting Data from Settlement Data.

NHH gross Imports are determined by summing the D0030 Daily Profiled SPM Total EAC and Daily Profiled SPM Total Annualised Advances for each Settlement Day of the Reporting Period. Also by summing gross Imports for Measurement Classes F and G Metering Systems as reported in the D0040 'Aggregated Half Hour Data File'.

Produce and publish an annual Tariff Setting Report

Within 5WDs of the Initial Volume Allocation Run for the final Settlement Day of the Reporting Period (I.e. 30 September), SVAA will publish the Tariff Setting Report on the Elexon Portal for NETSO, Parties and any other company with a licence to access and download.

Reports will be hosted on the Elexon Portal so they can be downloaded on demand or be 'pulled' from the website using a programmable interface, e.g. an API or FTP.

Validation of HH Billing and Tariff Setting Data

The SVAA will perform structural validation of Billing and Tariff Setting data provided by each LDSO. It will also perform limited business validation to determine any significant changes in the volumes reported from one period to the next. However, because the relationship between MSIDs and sites is only truly known by the relevant LDSO and so not open data, e.g. in SMRS or in Settlement Data, it is not possible for SVAA or any other person except LDSOs to validate that the numbers reported by LDSOs are accurate.

SVAA will generate and send exception reports to LDSOs if Billing or Tariff Setting Data fails structural and business validation tests, seeking to resolve any perceived discrepancies or missing data with LDSOs and reporting any outstanding exceptions to NETSO.

Mapping requirements

In order to produce Billing and Tariff Setting Reports, SVAA must aggregate Billing and Tariff Setting data received by LLFC to Charging Bands. To do this, LDSOs must provide and maintain mapping tables in MDD. In addition, Elexon will use the LDSOs' mapping tables to identify the correct relationship between Billing Data and CVA BMUs.

Whilst mapping tables will be defined in MDD, published on the ELEXON Portal and governed by the MDD change processes described in BSCP509, the mapping tables will not be added to the MDD data set sent to Parties and Party Agents using the D0269 and D0270 data flows.

Provision of NHH and HH Unmetered Supplies (UMS) data

SVAA will extract HH and NHH UMS data from existing Settlement Data and provide to NETSO without adjusting it for distribution losses or applying Group Correction Factor.

SVAA will include this UMS data in the P0210 'TNUoS Report' which will be amended to include two new data items for HH and NHH UMS uncorrected and unadjusted data.

Data retention

Data provided by LDSOs, derived by SVAA and reported to NETSO should be retained for assurance and audit purposes. In particular, the proposal is to mirror or expand the existing BSC data retention provisions in Section U 1.6, which requires that Settlement data is held for at least 28 months after a Settlement Day in a format that can be sent for use in carrying out a Settlement Run or VAR, and thereafter until 40 months after the Settlement Day in an archive or other form.

Interim P402 Proposed Solution Requirements and Implementation

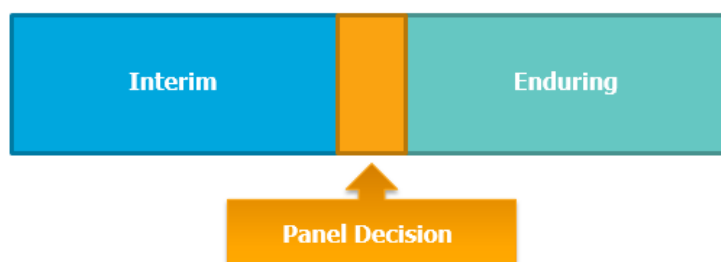
An interim solution is required to cover the period between February 2022 and the full BSC central systems solution go-live (targeted for June 2022), should the Proposed Solution be approved.

National Grid have indicated that certain P402 provisions would not be strictly necessary for this interim period. Under the temporary interim period, the scope of billing data that LDSOs send is reduced, applying to the final Settlement Day rather than the whole calendar month and with no need for updates arising between calendar months.

SVAA will determine NHH Billing Data from existing Settlement Data, as with the enduring P402 Proposed Solution, but again only for the final Settlement Day and again with no need for updated NHH billing data.

In order to accommodate a staggered implementation approach in the Proposed Legal Text where LDSOs are not subject to certain P402 obligations for a time-limited period, the Panel will be asked (at a later date) to determine when it wishes the enduring solution to occur, and this will be the trigger for the termination of the interim and launch of the enduring solution.

High level illustration



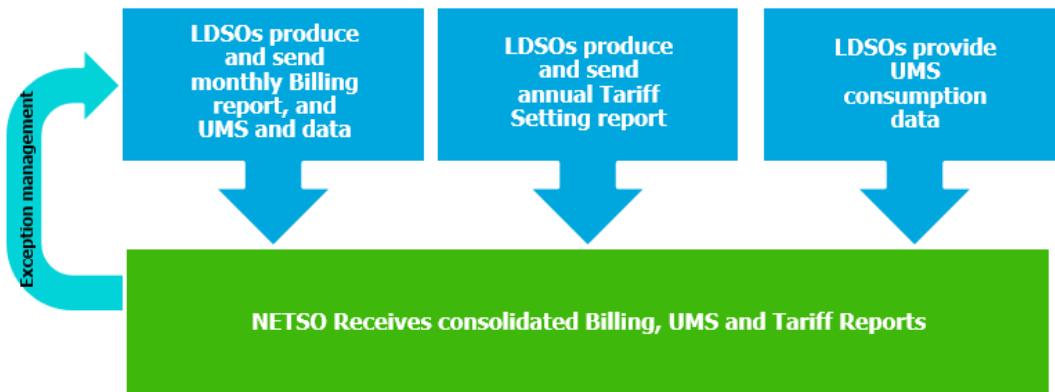
P402 Alternative Solution

The original, Proposed Solution requires LDSOs to send data for Tariff Setting and Billing Reports to BSCCo (via SVAA) who compliment this with data for NHH sites, and then compile it into set of monthly Billing Reports and annual Tariff Setting reports, that would be sent on to National Grid.

The P402 Alternative sees LDSOs compiling this data themselves, sending it directly to National Grid and so not to relying on BSCCo or BSC Systems and Agents for these purposes.

This would require LDSOs to provide Billing and Tariff Setting data, including UMS data, to NETSO. It would draw upon existing BSCCo capability of data analysis to support LDSOs in the identification of CVA Registrants.

High level illustration



The following sub-sections summarise key elements of the Alternative Solution and the Business Requirements (see Attachment D) provide specific detail.

LDSOs provide monthly combined data to NETSO

Within 5 Working Days of receiving the D0030 'Aggregated DUOS Report' data flow sent as part of the Initial Volume Allocation Run (SF) for the last day of a calendar month, each LDSO must provide the following data to NETSO in a single report for each day of the calendar month:

- 1) Count of Final Demand Sites
- 2) UMS data for Single Sites (HH and NHH)

LDSOs provide updated monthly billing data to NETSO

Within 5 Working Days of receiving the D0030 'Aggregated DUOS Report' data flow sent as part of the Initial Volume Allocation Run (SF) for the last day of a Reporting Period, each LDSO must provide updated billing data to NETSO for applicable Reporting Periods that occurred before the Reporting Period being reported to NETSO.

That is, LDSOs must resend the most up to date site counts and UMS Import data for each day of a reporting period(s) where the last day of the reporting period(s) was the subject of a Reconciliation Volume Allocation Run since the last time the LDSO generated a report.

When reporting updated billing data for a reporting period(s) LDSOs must identify the Volume Allocation Run Type that occurred for each day of the reporting period(s).

LDSOs provide an annual report of Final Demand Site Import data

Each year, within 5 WD of receiving the D0030 'Aggregated DUOS Report' data flow sent as part of the Initial Volume Allocation Run (SF) for the last day of September, LDSOs must send NETSO a report containing the sum of the last twelve months' actual metered Imports (MWh) to Final Demand Sites connected to the LDSO's Distribution System (excluding UMS), which are measured by Metering Systems registered for CVA or SVA, by each combination of Charging Band, Distributor ID and GSP Group.

The twelve month period to be reported must be the period running from 1 October to 30 September.

LDSOs must use Imports based on the most recent VAR available at the time of producing the report and exclude exports, i.e. it must not provide a net value of imports by subtracting exports.

Common file formats and interface

A single agreed file format must be used by all LDSOs to provide the billing report data, monthly billing data and annual tariff setting data to NETSO. The format will be set out in the relevant Code Subsidiary Documents.

LDSOs will send the data using the common file formats described above to NETSO using SFTP or by another means as may be agreed between the LDSO and NETSO.

Data Retention

LDSOs must retain billing and tariff setting data provided to NETSO, for a minimum of 14 months from the provision of this data to NETSO.

Initial solution for initial Tariff Setting Reports

Ofgem's Direction to NETSO requires that its TCR SCR decision is implemented and takes effect from 1 April 2022 (formerly April 21). In order to set new TDR charges to take effect from 1 April 2022, NETSO will require Tariff Setting Data in October 2021.

Elexon indicated to NETSO during the preparatory work for this proposal that changes to BSC Systems would be unlikely to support reporting requirements before April 2022.

Consequently, P402 proposes that, for both the Proposed and Alternative Solutions, LDSOs provide a one-off set of Tariff Setting Reports directly to NETSO in October 2021 and October 2022. LDSOs must provide data in October 2021 because P402 will not have been implemented by this point. LDSOs must provide data in October 2022 because even though P402 will have been implemented, a full 12-months of Import data using the correct TCR LLFCs will not be available. Following discussions with the Workgroup, it was agreed that this will be handled bi-laterally between NETSO and LDSO's, falling outside the scope of this Modification's solution/change to the BSC.

BSCCo will provide its first Tariff Setting Report to NETSO in October 2023 and its first Billing Report to NETSO in March 2022.

Legal text

The approved redlined changes to the BSC to deliver the P402 Proposed Solution can be found in Attachment A.

The approved redlined changes to the BSC to deliver the P402 Alternative Solution can be found in Attachment B.

Responses to the first Assessment Consultation

Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P402 Proposed Solution?			
Yes	No	Neutral/No Comment	Other
8	0	1	0

Respondents unanimously agreed with the Workgroup that the draft legal text in Attachment A delivers the intention of P402 Proposed Solution, or remained neutral with no further rationale provided.

One respondent commented that they did not believe that there needs to be a requirement for distributors to provide mapping data, as Distributors are required by licence to publish charging statements which include the tariffs that will be applied and the LLFCs that map to that tariff. The respondent felt that this provides the information required and therefore it is inefficient to place an additional obligation on Distributors.

Responses to the second Assessment Consultation

Are you satisfied that you understand the obligations and interfaces for the P402 Alternative Solution via its Business Requirements, without the addition			
Yes	No	Neutral/No Comment	Other
9	0	0	0

Due to the late-breaking requirement to develop and consult on an Alternative Solution, draft Legal Text for the Alternative Solution had not been included in the second industry consultation, however all respondents were satisfied that they could understand the Alternative Solution via its Business Requirements, and the Workgroup have since reviewed the Alternative Solution Legal Text.

Code Subsidiary Documents

Further process-level descriptions of the processes will be developed and defined during the implementation phase of P402, following approval of either the Proposed or Alternative Solution. We expect to issue these documents for industry review by **Autumn 2021**, subject to planning.

Estimated central implementation costs of P402 Proposed Solution

Elexon's costs to implement the P402 Proposed Solution are approximately £1.5 million to £2 million. These costs are driven by the BSC Central System development costs, along with costs to amend internal processes and documents.

The costs to BSCCo and its service provider are indicative at this stage and assessed on the current baseline under a series of assumptions that does not reflect in flight changes to the baseline such as [P376 'Utilising a Baselining Methodology to set Physical Notifications'](#) that has yet to be finalised but is also targeting an implementation date around the same time. We recognise that until a formal decision is made to approve these changes it is challenging to make assumptions about their likely combined impacts.

As such, there are lots of baseline permutations, resulting in uncertainty and risk being reflected in the estimated costs.

It will not be possible to implement central system changes for the Proposed Solution in time for February 2022, as the Proposed Solution requires at least a 12 month lead time and a decision is not expected until April 2021.

To ensure that National Grid receive the data that it needs during this interim period, the industry Workgroup recommend a staggered implementation approach where, if the Proposed Solution for P402 is approved, the Legal Text changes are implemented in February 2022 to ensure that the legal obligations are in place for Ofgem's Direction date of 1 April 2022.

The gap between this and the eventual go-live for the full systems solution will need to be covered by an interim solution until Elexon can start producing data from central systems, which is targeted for go live in June 2022.

The additional cost of delivering this interim solution is currently understood to be in the region of £50-£75K, with a lead time of approximately 5 months.

Indicative industry impacts of P402 Proposed

The Proposed P402 Solution will introduce new requirements on LDSOs to send reports to BSCCo and on BSCCo to aggregate this data and report to NETSO. This will impact LDSOs, NETSO and BSC systems and processes.

NETSO must be able to receive and use the required datasets so that it can recover residual TNUoS charges from Parties in accordance with the new arrangements.

Proposed Solution Costs Estimates					
Organisation	Item	Implementation (£k)	On-going (£k)	Lead times	Notes and Assumptions
Elexon	Systems	£1.5 – 2 Million	-	12 months	This includes estimated interim solution costs of £50k to £75k and 5 months lead time
	Documents	£1k -£2k	-	2-4 Working Days	-
	Other	£13-16k	£1k-£2k [per month]	1-2 months	Gathered via internal impact assessment
NGESO	Systems and processes.	Approx. £530K	Understood to be minimal	5-6 months	Gathered via Assessment Consultations.
Industry (LDSOs)	Systems and processes.	£20k – £35k in total (£3k - £6k each)	Understood to be minimal (manual administration impacts)	3-6 months	LDSOs (14 in total) are supported by single service provider and share this total cost amongst a consortium.
Industry (IDNOs)	Systems and processes.	Minimal - £20K each	Understood to be minimal (manual administration impacts)	3-6 months	<p>From the 4 IDNOs (15 in total) that responded to the consultations, impacts were varied, ranging from none to a £20k system change.</p> <p>Unlike LDSOs, not all IDNOs use the same billing provider and are unable to share costs in the same way.</p> <p>Several pay a regulatory change premium to ensure compliance, with no additional cost for P402.</p>
Total		£2.1 – £2.6 million			

Responses to the Assessment Consultations - Impacts

Will the P402 Proposed Solution impact your organisation?				
	Yes	No	Neutral/No Comment	Other
First Consultation	8	0	1	0
Second Consultation	8	1	0	0

All respondents, apart from a Supplier respondent, identified impacts incurred by the Proposed Solution.

Impacts described by LDSOs centred on the provision of monthly Billing Data and annual Tariff Setting data, but also working with Elexon to ensure that data for both reports is correctly aggregated for CVA sites and that mapping data between LLFC and the residual charging band is correctly submitted.

One IDNO stated that submitting HH data to SVAA within desired timescales would incur a manual administration impact. This IDNO would not incur any system costs as their current billing system can support the requirement without a change in functionality.

Another IDNO stated that, regardless of which solution is implemented, changes would be required to their billing system to extract the required data in the specified format.

Finally, while the Supplier responded with 'no', they described an indirect impact on Suppliers as the data the P402 solution provides would ultimately inform the TNUoS charges that NGESO produce.

Responses to the Assessment Consultations - Costs

Will your organisation incur any costs in implementing the P402 Proposed Solution?				
	Yes	No	Neutral/No Comment	Other
First Consultation	8	0	1	0
Second Consultation	8	1	0	0

A majority of respondents identified costs in implementing the Proposed Solution. These responses are in line with the impacts identified in the table above.

Benefits

The P402 Proposed Solution provides greater transparency and visibility to industry than the baseline by publishing the output data and making it available to other Parties, who will be able to see what Elexon have aggregated and sent to National Grid and therefore what National Grid will be using for billing.

The Proposed solution includes a level of validation and check and balance that is not offered by the baseline or the Alternative Solution. This is not comparable to the level of validation and assurance of Settlement data and does not include any accuracy testing (as a consequence of this data being held in LDSOs' systems vs a more widely available public

registration systems) but does represent an improvement on what is offered by the Alternative solution.

For Settlement purposes, the data in and data out can be tracked and validated via a robust Risk Assurance Framework. However, this doesn't apply to non-Settlement activities and so both the Proposed and Alternative P402 Solutions do not benefit from the full rigour the BSC would normally bring to Settlement activities.

Implementing this aspect of the TCR direction via the BSC offers benefits, as NETSO (and LDSOs) currently relies on BSC interfaces and on aggregated Settlement Data provided to it by BSCCo to calculate TNUoS and BSUoS charges, and BSC processes and systems already provide a centralised mechanism for collecting, aggregating and sharing data with NETSO and LDSOs for network charging purposes.

By building on existing BSC-based arrangements that support network charging arrangements, the Proposed Solution can take advantage of existing set of processes and interfaces and use Settlement and registration data.

Estimated costs and impacts of P402 Alternative

The Alternative Solution will introduce new requirements on LDSOs to send reports to NETSO. This will impact LDSOs and NETSO and will not require any changes to BSC Systems – however BSCCo will provide support to Parties who need help in aggregating data and maintaining tables as part of Business as Usual (BAU).

Alternative Solution Costs Estimates					
Organisation	Item	Implementation (£k)	On-going (£k)	Lead times	Notes and Assumptions
Elexon	Systems	None	-	-	-
	Documents	£1k -£2k	-	2-4 Working Days	-
	Other	£1k-£2k	£1k-£2k [per month]	1 Month	Gathered via internal impact assessment
NGESO	Systems and processes.	£795k	NGESO anticipate 2 additional FTEs needed to manage data exceptions.	6-7 months	Gathered via Assessment Consultations. NGESO believe this is currently achievable in similar timeframes to the Proposed but has an increased risk of taking longer than expected, therefore placing a greater risk on NGESO failing to implement the

					changes for April 2022.
Industry (LDSOs)	Systems and processes.	£50k – £90k in total (£10k - £25k each)	Understood to be minimal (manual administration impacts)	4-7 months	LDSOs (14 in total) are supported by single service provider and share this total cost amongst a consortium.
Industry (IDNOs)	Systems and processes.	Minimal - £20K each	Understood to be minimal (manual administration impacts)	4-6 months	From the 4 IDNOs (15 in total) that responded to the consultations, impacts were varied, ranging from none to a £20k system change. Unlike LDSOs, not all IDNOs use the same billing provider and are unable to share costs in the same way. Several pay a regulatory change premium to ensure compliance, with no additional cost for P402.
Total		£800-910K			

Responses to the second Assessment Consultation

Will the P402 Alternative Solution impact your organisation?			
Yes	No	Neutral/No Comment	Other
8	1	0	0

All respondents apart from a Supplier identified impacts incurred by the Alternative Solution. LDSO impacts include the initial development and initiation of reports, including user testing and setting up SFTP links. An LDSO respondent stated that, once the processes are established, they would envisage minimal operational impacts.

IDNOs stated that they would be impacted by the Alternative Solution as providing a report by Charging Band would require a system change to billing engines to extract the required data in the specified format and increase the administration required to generate and provide the report to NETSO within the timescales.

NGESO's response described additional impacts when compared to the Proposed Solution, describing increased complexity and cost involved in charging customers and posting revenue, due to the need to establish relationships with each LDSO (under the Alternative) rather than with one party (Elexon - under the Proposed Solution). NGESO described assurance needs to be provided and SOX (Sarbanes-Oxley) control requirements met. Under the Proposed Solution, assurance is gained from one party (Elexon) with whom NGESO has an established relationship. Under the Alternative, this will need to be established with each LDSO – this will add complexity and cost in meeting SOX compliance requirements (such as auditing of LDSOs). In the event of any issue with the data, the ESO would need to identify the source of the issue, requiring additional reporting so NGESO can identify which LDSO to contact to resolve the issue, and NGESO anticipate that two additional full time employees would be required to deal with LDSOs, external auditors and customers who challenge the data used for billing.

National Grid highlighted that the Alternative Solution will require additional work to implement and whilst this is currently achievable in similar timeframes to the Original solution, it has an increased likelihood of taking longer than expected, therefore placing a greater risk on NGESO failing to implement the changes for April 2022 than the Original.

Responses to the second Assessment Consultation

Will your organisation incur any costs in implementing the P402 Alternative Solution? If so, what do you estimate these to be?			
Yes	No	Neutral/No Comment	Other
8	1	0	0

All respondents, apart from a Supplier respondent, identified costs incurred by the Alternative Solution. These responses are in line with the impacts identified in the table above.

Benefits

The Workgroup (by majority) believe that P402 Alternative Solution offers cost benefits by delivering a cheaper, simpler and more timely option than the Proposed Solution and improves on the baseline by capturing obligations in the BSC. Although recognising that the Proposed solution offers greater transparency, a majority of the Workgroup do not feel that the extra costs justify this when compared to the Alternative.

P402 impacts

Proposed Solution Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
LDSOs	The Proposed solution will introduce new reporting requirements on LDSOs to provide monthly Billing Data and Tariff Setting Data to Elexon.

Proposed Solution Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
Alternative Solution Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
LDSOs	The Alternative solution will introduce new reporting requirements on LDSOs to provide monthly Billing Data and Tariff Setting Data to Elexon.

Proposed Solution Impact on the NETSO	
Impact	
The Proposed solution will require updates to NETSO's systems to recover residual TNUoS charges from Parties in accordance with the new arrangements.	
Alternative Solution Impact on the NETSO	
Impact	
The Alternative solution will require updates to NETSO's systems to recover residual TNUoS charges from Parties in accordance with the new arrangements, along with additional complexity and cost to establish relationships with LDSOs and reconciling any issues with data.	

Proposed Solution Impact on BSCCo	
Area of ELEXON	Impact
Settlement and Invoicing	Exception Handling & Escalations/Incident Management. Updating LWIs & training materials and communicating the change to Parties
Participant Management	Exception Handling. Updating LWIs & training materials and communicating the change to Parties. Initial mapping of tables.
Alternative Solution Impact on BSCCo	
Area of ELEXON	Impact
Analysis and Insight	Under the Alternative solution, BSCCo will provide support to Parties who need help in aggregating data and maintaining tables as part of Business as Usual (BAU).

Impact on BSC Settlement Risks	
P402 potentially influences risks related to LDSOs and the SVAA as it may affect the LDSOs and SVAAs ability to carry out normal Settlement duties due to the undertaking of new tasks. However, the Workgroup and Elexon do not expect this risk to be materially significant.	

Proposed Solution Impact on BSC Systems and process	
BSC System/Process	Impact
SVAA	Under the proposed solution SVAA is responsible for receipt and loading of the Billing and Tariff Setting data from LDSOs (i.e. define the flows as P-flows in SVA Data Cat), referencing mapping data maintained in MDD, extracting relevant NHH data from D0030 and D0040 source data and for the ongoing aggregation of data to generate the reports and send these to NETSO.
MDD	Existing MDD processes will be used to receive, validate and publish LLFC: Band and Pseudo-MPID: Supplier mapping details. BSCCo will be responsible for working with LDSOs to validate the MPID: Supplier mapping.
Alternative Solution Impact on BSC Systems and process	
Party/Party Agent	Impact
N/A	No impact.

Proposed Solution Impact on BSC Agent/service provider contractual arrangements	
BSC System/Process	Impact
SVAA	Service Providers will be responsible for the operation of SVAA systems and manual processes necessary to support this proposal.
Alternative Solution Impact on BSC Agent/service provider contractual arrangements	
Party/Party Agent	Impact
N/A	No impact.

Impact on Code	
Code Section	Impact
Section S – Supplier Volume Allocation	General description of processes and obligations necessary to support this proposal.
Section V - Reporting	
Section X Annex X-1 – General Gallery	

Impact on EBGL Article 18 terms and conditions
No impacts on EBGL Article 18 terms and conditions have been identified with the P402 solutions by the Workgroup or respondents to either of the industry consultations.

Impact on Code Subsidiary Documents	
CSD	Impact
BSCP508 – Supplier Volume Allocation	<p>Detailed descriptions of processes and interfaces necessary to support the proposal.</p> <p>Elexon will develop redlining for these CSDs and submit such redlining for industry review as part of the implementation phase of this Modification, subject to its approval. We expect to issue these documents for industry review by Spring 2021.</p>
BSCP509 - Changes to Market Domain Data	
SVAA Service Description (SD)	
SVAA User Requirement Specification (URS)	
SVA Data Catalogue	

Impact on other Configurable Items	
Configurable Item	Impact
None identified	

Impact on a Significant Code Review (SCR) or other significant industry change projects
P402 supports Ofgem’s direction to implement the TCR SCR. Ofgem confirmed that they consider P402 to be outside scope of any open SCR on 10 March 2020.

Impact on Consumers
No detrimental impacts anticipated. Ofgem’s TCR SCR Decision estimates that significant savings to consumers of £3.8bn to £5.3bn and system benefit of £0.8bn to £2.9bn over the period to 2040 will be realised via levying residual charges in the form of fixed charges for all households and businesses.

Impact on the Environment
This Modification is neutral against the net zero target.

Recommended Implementation Date

The BSC Panel recommends an Implementation Date for P402 of **24 February 2022** as part of the February 2022 BSC Release.

This approach will allow implementation of P402 in alignment with Ofgem's direction for TCR changes to be implemented by 1 April 2022.

In order to support the **Proposed** Solution, **a decision to approve it must be reached by 27 May 2021.**

In order to support the **Alternative** Solution, **a decision to approve it must be reached by 24 June 2021.**

Our current understanding is that Ofgem expect to be able to deliver a decision on P402 in good time, within their stated KPI of 5 weeks.

Need for Proposed Solution interim solution

Due to the delay caused by the need to develop and assess the Alternative Solution in November 2020, it will not be possible to implement central system changes for the Proposed Solution in time for February 2022, as the Proposed Solution requires at least a 12 month lead time and a decision is not expected until April 2021.

To ensure that National Grid receive the data that it needs during this interim period, the industry Workgroup recommend a staggered implementation approach where, if the Proposed Solution for P402 is approved, the Legal Text changes are implemented in February 2022 to ensure that the legal obligations are in place for Ofgem's Direction date of 1 April.

The gap between this and the eventual go-live for the full systems solution will need to be covered by an interim solution until Elexon can start producing data from central systems. We expect to be able to launch the full systems solution in June 2022.

Responses to the Assessment Consultations

Do you agree with the Workgroup's recommended implementation approach?				
	Yes	No	Neutral/No Comment	Other
First Consultation	8	0	1	0
Second Consultation	8	0	1	0

Respondents unanimously agreed with the Workgroup's recommended implementation approach or remained neutral with no further rationale provided.

P402 Workgroup meetings were held on 31 March 2020, 6 May 2020, 5 August 2020, 28 September 2020, 2 November 2020, 25 November 2020 and 17 December 2020.

Throughout the Assessment Procedure for P402, discussions focused on the need for balancing the solution's principal goal of providing NETSO with the data it requires against considerations of impact on Distributors' processes and systems and providing assurance to both NETSO and Parties. There is an additional timescale consideration that was acknowledged throughout the assessment of P402, with a recognition that the Modification must provide the most optimal solution for the time available for industry to develop and implement the necessary changes, whilst not necessarily representing the optimal long term solution if time were not an issue and taking account of other policy initiatives that are being developed.

P402 Delivery Requirements

Withdrawal of CMP332 and new P402 timetable

P402 was initially raised under circumstances where Ofgem directed that the TCR TNUoS changes be implemented and take effect from 1 April 2021.

As described in the [IWA](#) for P402, the timetable set by the original TCR SCR decision meant that the development and assessment of P402 would have to be quick and efficient to allow Ofgem to reach a decision in enough time for market participants to amend systems and operations in time for the modification to take effect by April 2021.

Shortly prior to the first Workgroup, however, the P402 Proposer (also the CMP332 Proposer) informed Elexon that they had made an application to withdraw CMP332, citing the risks to market participants of an April 2021 implementation highlighted in CMP332 Workgroup discussions and responses to the CMP332 Workgroup Consultation.

In accordance with CUSC paragraph 8.17A2 and paragraph 4 of the TCR SCR Direction, NGESO can only withdraw CMP332 with Ofgem's consent.

The Proposer clarified to the P402 Workgroup its intention for seeking to withdraw CMP332, confirming that this related to concerns raised by Suppliers and other industry participants that implementation timescales may not give industry time to make contractual and pricing changes, rather than concerns about making changes to LDSO, NETSO and BSCCo systems.

The Proposer also confirmed their intention was to raise a new CUSC modification proposal that in effect continued the work under CMP332 except that it reflected a new timeline for delivery to be specified by Ofgem.

In their acceptance of CMP332's withdrawal, Ofgem provided a new delivery date of 1 April 2022; one year later than previously required.

The Group recognised that the extension to the CUSC process offered an opportunity to reconsider the nature of the proposed P402 solution. In particular, the original P402 solution was intentionally pragmatic in order to take account of the limited time to develop and implement it by April 2021. Knowing that there may be more time to develop and implement P402, Elexon suggested the Workgroup might consider more enduring and transparent solutions at its next meeting.

The withdrawal of CMP332 and the incorporation of work to date into CMP343 lead the Workgroup to discuss whether there would be any governance concerns resulting from how scope of the issue as originally defined by the P402 Modification's Proposer in the Modification Proposal Form.

The group noted that they did not believe there are any hard dependencies between P402 and CMP332 within the defined P402 defect, which instead references a broad set of requirements introduced by the TCR decision. References to specific CUSC modifications are made to provide context to how these broad set of requirements interact, but the scope of P402 to change the BSC "to ensure it continues to facilitate the provision of data necessary for TNUOS charging" gave comfort that P402 could continue in the face of CMP332 withdrawal.

Ongoing need for swift modification development

The Workgroup was mindful, that even though a one year extension to the P402 delivery in theory bought more time to consider more optimal P402 solutions, there was a need for industry, particularly Suppliers and LDSOs to have certainty over the P402 solution as soon as possible. The Workgroup noted that CMP332's withdrawal had been driven by concerns from Suppliers about insufficient time to implement. In addition they noted that even if P402 was implemented later in 2022, there was still a need to ensure all related TCR code modifications were submitted to Ofgem in good time could consider all modifications as a package and to allow sufficient implementation lead time.

The Group also noted that P402 would be implemented during a period of significant industry change, not just driven by the TCR – e.g. Faster Switching, Market Wide Half Hourly Settlement (MHHS) and likely implementation of the Access and Forward Looking Charges SCR decision.

Outcome:

Following the news that CMP332 was withdrawn, the Workgroup agreed that alternative approaches to addressing the P402 solution should be considered.

Ultimately, the Proposer and Workgroup acknowledged that while circumstances have changed, these are chiefly related to timescales for implementation rather than the issue that P402 is trying to solve, and believed that there was still value in assessing the proposed solution and its requirements.

The Workgroup agreed that Elexon should present alternative options at its next meeting. The Workgroup's consideration of these options is described in more detail below.

The Workgroup also noted that despite the extension, there was still a need to adhere to tight timescales in order to achieve the revised Ofgem direction.

Implementation approach

Considering the requirements of NETSO and the pressures on NETSO, LDSOs and other participants from various market wide changes, the Workgroup discussed the most sensible implementation approach for P402.

The Workgroup noted that NETSO requires the first Billing Report at the beginning of March 2022 that will cover Site Counts for the February 2022 reporting period.

The Workgroup considered whether the February 2022 release or a standalone release was best. On the one hand the group noted the benefits to industry of sticking with the well-established BSC Release Schedule. They noted that the standard Releases provides a predictable and widely understood approach and timetable for when changes would be implemented. It may also benefit from being implemented alongside other changes, i.e. in terms of sharing common development and implementation resources.

On the other hand, a dedicated and earlier release, e.g. in January 2022, would mean that the P402 solution could be implemented early and so the legal framework would be in place providing certainty for LDSOs to begin to collect Billing Data to be reported at the beginning of March 2022. However, the group noted that should P402 be approved, this would provide certainty to LDSOs that they should prepare to send Billing Data in March 2022 even if P402 was implemented as part of the standard February Release.

Outcome:

Given the likely impact on Parties that would need to be accounted for in advance of implementation, the group thought it best to target the standard February 2022 Release, noting that it also offered some cost saving due to efficiencies when bundling P402 with other changes in a distinct Release.

Data retention provisions

The Group also considered data retention provisions. Initially the solution recommended that reports would be made available for up to 12 months from their date of publication. As part of developing the detailed requirements ELEXON pointed out that the BSC already specifies obligations for retaining data for at least 28 months and up to 40 months in an archive or similar format. ELEXON recommended that these provisions are extended or mirrored for P402 and apply not only to the output reports but also to input data provided by LDSOs. The Group considered whether retaining data for 28 months and 40 months would provide NETSO with sufficient access to historical data. ELEXON noted that NETSO may only need data up to the Final Reconciliation VAR. That is, TNUOS is not recalculated beyond RF.

Responses to the first Assessment Consultation

Is the proposed approach to data retention appropriate? Do you have a preference for expanding existing Section U1.6 provisions to apply to non-Settlement data and processes or for creating new retention requirements that mirror Section U1.6?

Yes	No	Neutral/No Comment	Other
5	0	4	0

Respondents agreed that the data retention provisions were appropriate or otherwise remained neutral. Those in favour described it as sufficient, appropriate and in line with the settlement timetable.

One neutral respondent stated that, providing data retention is in line with relevant data protection requirements such as GDPR, they do not have a view on this.

Elxon clarified that, while for the Proposed solution data retention provisions were extended to 28 months to tie in with existing BSC data provisions, the P402 Alternative described 14 months because this is the point at which RF is complete.

The group were comfortable with the explanation. The Proposer suggested adding wording to reference “a minimum of 14 months” so it would be overly not prescriptive should a party wish to hold data for a longer period and Elxon agreed.

P402 Proposed Solution Development

The original P402 proposal included a solution that relied exclusively on LDSOs providing Billing and Tariff Setting Data to SVAA. SVAA would then aggregate this data and report it to NETSO.

Following the decision to withdraw CMP332 and extend the NETSO direction to implement the TCR SCR decision until April 2022, the group considered the original solution described in the IWA and two additional options. The group’s consideration of these three options is described below.

Consideration of original solution

Due to the original time pressures around delivery by April 2021, Elxon had worked with the Proposer and LDSOs to prepare a solution that could speed up the process of raising and developing a BSC Modification Proposal. Furthermore, in order to progress the Modification swiftly, Elxon prepared a set of Business Requirements for the first Workgroup to consider.

The original solution proposed to introduce new BSC obligations on LDSOs to produce and send new Tariff Setting Reports and Billing Reports (covering all Sites connected to LDSOs’ distribution systems) to BSCCo, which BSCCo would aggregate and report to NETSO.

This solution relied exclusively on LDSOs correctly reporting the number of sites and their related consumption. This is because existing requirements to store Registration Data in SMRS does not identify how Metering Systems, and therefore related consumption, is related to a site (as defined by the DCUSA and CUSC TCR modifications). Unless additional registration data items were added to SMRS, LDSOs are the only Parties that understand the relationship between Metering Systems and TDR sites.

In the original approach both the Tariff Setting Reports and Billing Reports would be compiled following these overall steps:

1. LDSOs compile and send HH and NHH reports to BSCCo (SVAA) using a common file format to be specified in the SVA Data Catalogue;
2. BSCCo consolidates each LDSO’s report into a single report using the same or a similar file format to the one used by the LDSOs (also specified in the SVA Data Catalogue); and
3. BSCCo sends the consolidated report to NETSO.

In general, the group were comfortable with the overall approach and the detailed processes described in the draft Business Requirements. However, some Workgroup members raised concerns about the timescales proposed for LDSOs to provide Billing Data, i.e. within 2WDs of SF for the last day of the calendar month being reported. In particular

that for some LDSOs they may not have loaded Settlement Data they would ordinarily load for billing purposes within 2WDs of SF for the last day of the most recently completed month.

Given that Ofgem's revised direction deadline allowed for more time to consider alternative approaches, the Workgroup agreed that Elexon should follow up with a wider range of IDNOs that had joined the Workgroup and consider any alternative approach to addressing P402.

Alternative options

Elexon presented two alternative proposals to the Workgroup:

1. An alternative, centralised approach to processing NHH data proposed by IDNOs;
2. A "Party Agent approach" that relies on new registration items enabling Party Agents to use or mirror familiar Settlement aggregation processes and interfaces.

Option 1 - Alternative approach to NHH data

Following the first P402 Workgroup, Elexon arranged to discuss the proposal with the IDNOs (who had not been widely involved in the preparatory work before P402 was raised). It was noted that some LDSOs' systems are currently configured to load data for billing that would be incompatible with the original P402 requirements (i.e. within 2WDs of the SF run for the last day of a calendar month) and so would likely require costly system changes to load the data earlier in their billing cycles. Additionally, they saw little perceived benefit in making these changes aside from ensuring compliance by LDSOs with the BSC. That is, P402 is only necessary to support NETSO's calculation of TDR charges not the LDSOs'.

The IDNOs pointed out that requiring LDSOs to process NHH data may be unnecessary as the NHH data LDSOs would use is provided to them by Elexon (i.e. via the D0030 and D0314) and so it would be more efficient for Elexon to use this data to determine NHH Billing and Tariff Setting Data. They noted that if Elexon were to use the existing Settlement NHH data it would help to reduce the P402 costs for LDSOs to load and report it.

Based on this point, the IDNOs proposed the following alternative approach:

- SVAA uses existing NHH Settlement data (i.e. Supplier Purchase Matrix data received in D0041) to determine NHH Billing data and NHH Tariff Setting Data;
- LDSOs continue to report Billing and Tariff Setting Data for sites with HH Metering Systems (SVA and CVA) and to provide LLFC: Band and CVA MPID mapping tables; and
- Elexon continues to consolidate the NHH and HH data into monthly Billing and annual Tariff-setting Reports.

Elexon noted that relying on D0041 MSID counts would require the solution to assume a 1:1 relationship between NHH Metering Systems and sites. Elexon asked the Workgroup whether this was correct, noting that it was aware of some customers with multiple Metering Systems to support Economy 7 supply tariffs.

LDSO representatives noted that in such scenarios, NHH Metering Systems at a single site are given different LLFCs. Therefore, Elexon would be able to identify which Metering Systems to exclude from the Billing and Tariff Setting Reports based on the LLFC: Charging Band mapping tables provided by LDSOs.

Elexon highlighted that LDSOs would not be able to accurately allocate Imports for 'related MSIDs' to Charging Bands. An LDSO member noted that LDSOs planned not to report the volumes for related MSIDs at all. The Workgroup noted that this issue was likely to represent a very small proportion of Imports (~0.02%). The Workgroup were therefore not unduly concerned that there would be missing Imports from the allocation of NHH consumption to Charging Bands, noting that the issue is a diminishing one as legacy arrangements wind-down (e.g. RTS) and NHH meters are replaced with Smart Meters.

The group considered that this approach would offer greater transparency and efficiency for BSC Parties who could recreate the count of NHH MSIDs and therefore Sites. Also, because BSCCo would process NHH Data it already receives for Settlement, this would reduce the operational and system impact (and costs) on LDSOs by P402.

Option 2 - the Party Agent approach

As part of Ofgem's TCR SCR and prior to P402 being raised, Elexon had advocated an approach that relied on Party Agents (rather than LDSOs) to collect and aggregate site counts and consumption data before reporting to BSCCo to aggregate and report to NETSO.

This proposal requires the introduction of new Metering System registration details to be held in SMRS and CMRS, e.g. Residual Charging Band, Final Demand Site ID/Indicator, Primary/Secondary MSID Indicator.

These new registration details would enable Party Agents and BSC Agents to aggregate Metering Systems and consumption in a similar way to how they already aggregate MSID Counts and consumption for Settlement using existing registration details.

Under this option, LDSOs would simply be responsible for maintaining these new Registration details in SMRS and provide details to Elexon to ensure CVA Metering Systems were clearly identified in CMRS.

The group noted that this approach would build on existing interfaces and Party Agent roles, provide greater transparency to industry of the relationship between MSIDs and Sites for Network Charging purposes and offer greater opportunity to perform independent assurance checks.

It would also reduce the burden on LDSOs by removing the need to provide Billing and Tariff Setting Data and to maintain mapping tables. Instead, LDSOs would only be responsible for ensuring Metering System registration details remained up to date.

The Workgroup also noted that introducing new registration details might establish a more durable baseline for other forthcoming industry changes. For example, the MHHS project is considering the long-term use of existing Settlement registration items, including LLFCs. In particular it is well recognised that whilst originally a Settlement registration item, LLFCs are used for a variety of other purposes, notably for identifying how Metering Systems are treated for DUoS charging. In order to restore the dedicated role of a loss adjustment factor, the MHHS project may conclude that LLFCs are no longer necessary in their current form. Therefore creating a dedicated set of Network Charging registration items might

help to reduce or even divorce the reliance on LLFCs for non-Settlement purposes and provide a foundation on which MHHS can build.

Also, the forthcoming Access and Forward Looking Charges SCR is considering more targeted DUoS charges which might require LDSOs to group MSIDs together based on new characteristics, currently not described in the BSC or in registration details.

However, it was felt that there was unlikely to be enough time to develop and then to implement this solution. That is, Ofgem expects to assess all TCR related code modifications altogether, which means that there is very little time as part of the Assessment Phase to develop the solution. Furthermore, it is likely that this solution would require extra time to be implemented, which may not provide parties with the certainty and visibility of indicative charges – which are reasons for why CMP332 was withdrawn.

Whilst it might put in place a more enduring and transparent solution, ultimately it was felt that this option would not be possible until other industry initiatives such as the Access SCR were more fully developed, by which it would be too late to incorporate. Finally, it was recognised that this approach would also likely incur more costs to implement, and it was agreed not to pursue this option as part of the P402 solution.

Accurate determination of Non Half Hourly Billing data

Elxon highlighted that based on the Proposed solution LDSOs would not be able to accurately allocate NHH Imports for associated MSIDs' to the same Charging Bands as their Lead MSIDs. An LDSO Member confirmed that because LDSOs cannot accurately match associated MSIDs to the correct Charge Band, LDSOs planned not to report the volumes for related MSIDs at all.

The Workgroup noted that this issue was likely to represent a very small proportion of Imports (~0.02%). The WG were therefore not concerned that there would be missing Imports from the allocation of NHH consumption to Charging Bands, noting that the issue is a diminishing one as legacy arrangements wind-down (e.g. a large proportion of associated NHH MSIDs are used for Radio Teleswitch services which are being retired) and NHH Meters are replaced with Smart Meters.

Responses to the first Assessment Consultation

Is the approach to treating NHH MSIDs (and MC F and G MSIDs as described below) reasonable under the circumstances? Are there alternative approaches the Workgroup should consider?			
Yes	No	Neutral/No Comment	Other
8	0	1	0

Respondents believed that the approach for treating NHH MSIDs is reasonable, recognising that the approach to treating NHH MSIDs is not ideal but this is believed to be the only suitable option given the small (and shrinking) scale of the issue and the timescale restrictions compared to the benefits this Modification will provide.

On respondent noted that the approach adopted for NHH MSIDs is a positive development which contains reporting efficiencies for LDSOs and the SVAA compared to the initial P402 proposal that had been proposed as part of the Initial Written Assessment.

Outcome:

The group agreed that the alternative approach (Option 1) by which BSCCo extracts NHH data from existing Settlement datasets and sends this data in a consolidated report to NETSO is preferable for the Proposed Solution.

It would reduce the operational and system impact on LDSOs and would be more efficient for Elexon to process existing Settlement Data it holds rather than wait for LDSOs to process it and send it back to Elexon.

The Proposer agreed that this seemed a more efficient approach for industry and agreed to adopt the centralised BSC Agent approach to aggregating NHH Settlement Data as part of the proposed P402 solution.

The Workgroup agreed on this amended P402 solution, noting that it better addressed concerns about undue impact on some BSC Parties by offering a more centralised approach to the provision of NHH data, however they welcome industry views on the merits of Elexon consolidating NHH D0030 Data on behalf of LDSOs.

The Workgroup considered that the approach to aggregating NHH and MC F and G MSIDs is a proportionate approach. Whilst it will result in an underreporting of Imports to NHH MSIDs, this should only be a small and diminishing volume.

Treatment of measurement classes F&G (smart meters and advanced Meters)

Elexon noted that they had initially assumed that Measurement Classes F and G MSIDs should be included in HH Billing and Tariff Setting data, as Measurement Classes F and G represent HH MSIDs. However, LDSOs treat these classes as NHH, even though they are technically HH Settled. Furthermore, LDSOs do not receive Metered Data for individual MC F and G Metering Systems. Instead they rely on Elexon aggregating Measurement Classes F and G Settlement Data and including it with aggregated NHH Settlement Data in the D0030 and D0314 reports.

Using the same arguments in support of Elexon aggregating NHH data, it was agreed that Elexon should also aggregate Measurement Classes F&G data when determining NHH billing and tariff data.

This issue described above relating to the accurate allocation of Imports for NHH MSIDs also applies to MC F and G MSIDs. Based on correspondence with Workgroup Members representing LDSOs, LDSOs treat MC F and G MSIDs similarly to NHH MSIDs. That is, lead MSIDs and associated MSIDs are given different LLFCs and the associated MSIDs will not be mapped to chargeable Charging Bands.

Given that Smart Meters are replacing traditional NHH Meters, this may mean that the volume of Imports measured by associated MSIDs not being accurately reported will grow. However, an LDSO Workgroup Member pointed out that where Smart and Advanced Meters are replacing multiple NHH Meters at a single site, rather than installing multiple smart/advanced meters, Suppliers are able to configure different registers on the same Smart Metering System. Therefore the rollout of Smart and Advanced Meters ought to improve the reporting of Imports to NHH and MC F and G MSIDs.

P402 Mapping

The proposal was for mapping tables to be maintained using MDD governance. The Workgroup considered that MDD governance is generally well understood and provides 'off the shelf' rigour, certainty and transparency. It would also enable LDSOs to make targeted changes to individual LLFC to charging band relationships because each relationship in MDD has its own Effective From Date (EFD) and Effective To Date (ETD) rather than EFD and ETDs that relate to the entire data set. Therefore MDD governance would enable LDSOs to make changes to specific combinations, rather than have to apply the same EFD and ETD to the entire dataset.

The Workgroup considered different options for establishing Mapping Tables. In particular they considered different means of identifying CVA Sites so that SVAA would be able to correctly attribute Billing Data to a specific BMU and Registrant.

The original solution envisaged Elexon and LDSOs working together to agree mapping tables that matched registration details held by LDSOs with registration details held in BSC Central Systems. This approach would require a level of intervention between ELEXON and each LDSOs to agree the correct mapping.

As part of developing the detailed solution Elexon recognised that it would be simpler for LDSOs to identify how the billing records they use to populate Billing Data (I.e. Dummy LLFC and Dummy MPID details) map to actual CVA MSIDs. This way ELEXON could use the CVA MSID to easily match LDSO's Billing Data to BMU and Registrant details held in BSC Central Systems without needing any liaison with the LDSO.

Outcome:

The Group and Proposer adopted Elexon's simplified CVA mapping approach.

P402 Validation

The Proposer was keen that the solution provided National Grid and Parties with assurance that the data reported to it is collected in accordance with the rules set out by P402.

Consequently the P402 Proposed solution proposes both structural and business validation.

However, because the solution relies heavily on LDSOs to determine which HH Metering Systems are lead Metering Systems and this information is only known by interrogating LDSOs' billing systems, the Group considered that it would be impossible for SVAA to use Settlement Data to accurately validate the accuracy of LDSOs' submissions.

One Workgroup member was concerned that the solution does not provide enough visibility of Sites and MSIDs base registration details to allow Parties to independently validate the data sent by LDSOs and ultimately reported to NETSO. ELEXON pointed out that its preferred solution would be to create new registration details that provided clear records showing the relationship between Lead and associated MSIDs, and how MSIDs relate to Sites. As summarised above, the Group considered there was not enough time to develop and implement such a solution

Outcome:

Recognising the limited opportunity to validate the accuracy of LDSOs submissions, the group were comfortable with a level of basic validation and exception handling that BSCCo (via SVAA) could be expected to perform, noting that it would likely be limited to checking that a file met expectations for format and uniformity of data entry for a given Billing or

Tariff setting period, with BSCCo (via SVAA) seeking to resolve this within 2WDs of identifying the validation failure.

Residual Charging data transparency, retention and publication

The Workgroup also considered how to maximise the transparency of the data provided to SVAA by LDSOs and the reports produced by SVAA. The National Grid representative noted that transparency is desirable if the data is not commercially sensitive and their ideal scenario would involve publishing on input, calculations, final figures and bands.

The Workgroup considered whether there are reasons Elexon should not make Billing and Tariff Setting Reports available to any person, e.g. for commercial or confidentiality reasons. The Workgroup were satisfied that Tariff Setting Reports, which aggregates Tariff Setting Data to Charging Bands and is not attributed to any one person or company or Party, is not sensitive and could be published for all to access. They also concluded that whilst Billing Reports contain Site Counts for individual Parties, that this was likely not to be commercially sensitive and may be derived from other sources anyway. One Workgroup member noted that they believed that if it wasn't made public now, it would likely be made public in future.

The Workgroup overall agreed that both Billing and Tariff Setting Reports should be published on the Elexon Portal and made available to all BSC Parties and others who pay for a licence to access this data.

Responses to the first Assessment Consultation

Do you agree with the Workgroup that both Billing and Tariff Setting Reports should be published on the Elexon Portal and made available to all Parties and those who pay for a licence? Would publishing the output data (in particular the Billing Reports) be commercially sensitive?			
Yes	No	Neutral/No Comment	Other
7	2	0	0

A majority agreed that both Billing and Tariff Setting Reports should be published on the Elexon Portal and made available to all Parties and those who pay for a licence, while minority disagreed with this approach.

It was felt by some that publishing the data will help the energy industry to make data more open and accessible. One respondent stated that they believed that the Tariff Setting Report should be freely available (i.e not require a Licence for non-BSC Parties to access it).

There was broad support for transparency where it is efficient. National Grid supported the principle of making suitable data transparent and accessible however added that this is only beneficial if it is economic to provide this data and it will be used.

Two respondents disagreed, being unconvinced there is genuine benefit in publishing additional information and did not think the additional information publication, beyond what was published pre-P402, was justified.

No respondents identified any commercially sensitive concerns with publication of this data, as billing data is aggregated and not split out to identify an individual company. National Grid's understanding was that this data is already available for individual metering

systems and could be created if a party was willing to create this dataset from individual records.

Outcome:

The Workgroup and Proposer agreed that both Billing and Tariff Setting Reports should be published on the Elexon Portal and made available to all BSC Parties and others who pay for a licence to access this data.

Publication of input billing data

The Workgroup also considered whether input Billing and Tariff Setting Data sent to SVAA by LDSOs should be published and made accessible by all. In general the group considered that for similar reasons to publishing the output reports, the input data could be published. However, Elexon pointed out that this was not part of the requirements in the Impact Assessment carried out by its service provider. However, Elexon agreed to investigate the potential impact of expanding the solution requirements however this would be impossible to do before consulting. In the meantime the group agreed that this consultation should seek views on whether input billing data should also be published alongside output reports.

Responses to the first Assessment Consultation

Should input billing data also be published alongside output reports so that Parties can trace how input data is transformed? Would publishing the input data be commercially sensitive?			
Yes	No	Neutral/No Comment	Other
5	3	1	0

A majority supported the idea that input billing data also be published alongside output reports. One respondent was of the view that, given the sentiments towards Open Data and Modification P398 that is currently in progress, he supported the view that it should be available to non-BSC Parties.

3 respondents disagreed, stating that they did not understand what benefit this would offer, other than transparency for transparency's sake.

One respondent also noted that, as this option has not been included in the impact assessment, indicative costs provided were likely to see a further cost impact on the industry.

No commercial confidentiality concerns were identified, as billing data is aggregated and not split out to identify an individual company.

Workgroup Discussions:

A Workgroup member commented that Suppliers would want visibility of the input data to check invoices and validation against in instances of disputes.

Supplier members of the group expressed a strong preference for adding this as a requirement, but it was noted that this addition would push out the timescales and cost of the Proposed Solution even further. Ultimately, the group recognise the benefits to

Supplier validation but are comfortable that it is not a central part of the P402 Proposed Solution (P402 can function without it) and this requirement can be added via a Change Proposal at a later date that focuses purely on publication of the input data.

The Proposer agreed, noting that he supported data transparency in principle but that this addition risked timing out the Modification.

UMS Data

The Workgroup also considered whether the UMS data to be added to the P0210 should be published as well. This would ensure that all data used by NETSO to set and bill TDR charges is available to Parties.

ELEXON noted that the P0210 is not currently published. The Group considered whether because the P0210 provides a Settlement Period breakdown of Supplier BMU Imports and Exports by Measurement Class that making it widely accessible might be commercially sensitive.

The Group considered alternative approaches for publishing the UMS data. One suggestion was to include it in the Billing and Tariff Setting Reports. ELEXON pointed out that the UMS data would need to be reported at SP level which would not be compatible with the Billing and Tariff Setting Reports which would provide Billing Data at Settlement Day level or for a whole 12 month period. Another option might be to publish a dedicated UMS report that then gave Parties visibility of the UMS data reported to NETSO in the P0210.

All of the options had only been considered by the Workgroup at its latest meeting and so had not been formally assessed alongside other proposed changes to central systems. Consequently the Group agreed not to include requirements to publish UMS at this stage. Nevertheless they welcome views on whether and how to publish UMS data that NETSO will use to set and recover TDR charges.

Responses to the first Assessment Consultation

Should the P402 solution include a requirement to publish UMS data that SVAA will send to NETSO? If so, why and how would you recommend that this data is published?			
Yes	No	Neutral/No Comment	Other
1	3	5	0

Respondents were mostly indifferent to UMS data being published, with several respondents disagreeing as they felt it unclear if any other parties outside of NETSO would benefit from having this data available.

Outcome:

The Workgroup are comfortable that UMS data will not be published under P402 Proposed Solution.

Interim solution development

At the final P402 Workgroup meeting on 17 December 2020, the group reflected on the fact that an Ofgem decision would not be possible by the time that Elexon's service provider needs to start work to deliver the P402 Proposed Solution in February 2022.

This was an unfortunate consequence of having to take the time to develop and assess the Alternative Solution (formally raised by a majority of the group on 2 November 2020), delaying the ability to handover the Assessment Report to the Panel and the Draft Modification Report to Ofgem under previously understood timescales. At the time of raising the Alternative, Elexon had flagged this impact on the viability of delivering the P402 Proposed Solution system changes to February 2022.

Given that an Ofgem decision is not expected until April 2021, the group were advised that any P402 system changes may not be implemented until May or June 2022 under the best case scenario. The group were invited to discuss whether to consider an alternative Implementation Date based on Ofgem likely decision date, or to develop an interim solution to "cover the gap".

Because National Grid will need to start using P402 data from March 2022 (and seeing no other route to enabling this under the Proposed Solution), the Proposer and Workgroup agree that operating an interim solution in between the P402 Proposed Solution legal and systems go live is the preferable approach.

Noting that developing requirements and assessing this interim solution as part of the P402 Modification would push out timescales for the Modification even further, Workgroup members were comfortable with leaving Elexon and National Grid to agree the requirements and communicate this to industry after the Assessment phase of P402 had closed.

An additional potential problem with both the Proposed and Alternative was also identified in that LDSOs will not have a full 12 months of gross imports by LLFC (therefore by charging bands) for the first year of Tariff Setting, and would therefore need to give NETSO best estimates. A bilateral approach between LDSOs and National Grid was felt to be the only way to address this.

Outcome:

In order to ensure that the legal obligations are in place for TCR go live (April 2022), the Workgroup and Proposer believe that the Legal Text for the P402 Proposed Solution should be implemented in the February 2022 release, with an interim (manual) solution that would address the gap between this and the eventual full systems solution.

For the avoidance of doubt, this interim solution is **only required for the P402 Proposed Solution**, should it be approved. There are no BSC Systems changes for the Alternative Solution, and industry have indicated that they can complete consequential system changes in time for February 2022.

Alternative Solutions proposed by respondents to the Assessment Procedure Consultations

Responses to the Assessment Consultations

Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P402 which would better facilitate the Applicable BSC Objectives?				
	Yes	No	Neutral/No Comment	Other
First Consultation	4	4	1	0
Second Consultation	9	0	0	0

Shortly prior to the 5th Workgroup, and after the issuing of the first P402 Assessment Consultation, Elexon learned that an alternative approach to the handling of the TCR Decision had been developed by some LDSOs and referenced in replies to the P402 Consultation - centring around LDSOs issuing data directly to National Grid, rather than centrally via SVAA.

Four respondents agreed with the Workgroup that there are no other potential Alternative Modifications within the scope of P402, while four disagreed and one remained neutral.

Respondents who disagreed noted that the basic P402 defect is that NGESO does have the data it needs to produce the relevant invoices or set tariffs, and that the relevant data can only be provided by third parties, believing that this defect could be alternatively solved by DNOs providing the data directly to NGESO.

Several respondents described this alternative approach whereby LDSOs compile data for Tariff Setting and Billing Reports themselves, sending it directly to National Grid and so not to relying on BSCCo or BSC Systems and Agents for these purposes.

Workgroup's discussions on raising an Alternative Solution

Noting that the alternative approach avoided using BSC Systems and processes and the fact that the obligations needed to underpin this approach could sit just as easily under the DCUSA or Grid Code as the BSC, the Workgroup discussed whether to raise the proposal as an official BSC P402 Alternative Solution or whether to progress via a new CUSC modification or otherwise non-BSC route.

The group wished to proceed with raising a BSC Alternative to give visibility of the proposal to the BSC Panel and ultimately Ofgem, also noting that this approach would draw out the costs and benefits of the approach.

Outcome:

The group voted by majority to raise an Alternative Solution for P402 on the basis that it better facilitated BSC Objective (d) than the original solution.

Could Elexon perform the aggregation under the Alternative Solution?

For the 2nd Assessment Consultation all respondents agreed that there seem to be no more potential Alternative Modifications would better facilitate the Applicable BSC Objectives. One respondent mentioned the possibility of a descoped P402 Proposed solution that would present a "middle ground" option whereby LDSOs perform the

transformation and Elexon perform the aggregation. Elexon agreed to investigate the split of cost and effort of aggregation and transformation and presented the results at the final industry Workgroup meeting.

This indicative view of costs was based on the assumptions that DNOs would provide all of the data needed, that DNO data is pre-mapped to charging bands, that nothing is needed from SVAA or MDD and that the scope would be to load the DNOs monthly and annual files and add them up without referencing anything, with the reports available on the Portal.

The high level estimate of cost for Elexon to perform the aggregation side of the Alternative was felt to be somewhere in the range of £675,000 - £900,000, compared to National Grid's assessment of £295,000 to do that aggregation work.

Outcome:

The Workgroup identified a clear cost benefit for National Grid to undertake the aggregation piece under the Alternative Solution, and agreed that this would be reflected in the requirements

Development of P402 Alternative Solution

Once the group had agreed by majority to raise an Alternative Solution, the group immediately focused on developing requirements for this new solution so that they could be assessed and costs gathered via a second industry consultation as quickly as possible to reduce further delays to the schedule.

National Grid requirements for provision of consumption data for tariff setting

In response to some challenges from some of the LDSOs in the Workgroup that National Grid could make do with forecast data instead of the latest actual data in order to set tariffs, National Grid were invited to explain the rationale behind its data requirements, in particular why it requires historical "actual" consumption data in rather than make use of forecast consumption data that is already published by LDSOs.

National Grid explained the methodology and mechanism for TNUOS which is used to recover the maximum Allowed Revenue on behalf of all Transmission Owners in Great Britain. National Grid are not financed to carry the financial burden of the estimated £233 million that it must pay TOs each month and so, to mitigate that, they charge TNUOS in advance of time.

Because of all the data that is required to feed in to the transport model that calculates TNOUS and because National Grid bill in advance, one of the key principles for TNUOS is that National Grid bill using forecast data and reconcile this liability using "actual data" further down the line.

The representative also added that the TCR didn't remove any parts of the TNUoS methodology, but instead introduced some complexity and that Demand Residual charges need to be a "£ per site per day charge" while still acting as that mop up mechanism to make sure National Grid collect the correct amount of TNUOS. Effectively what we need to implement that "£ per site per day charge" is site count of consumption, of Final Demand

Sites by charging band, and that this is fundamentally this is what P402 is looking to achieve.

He clarified that P402 data will be used to allocate what percentage of TNOUS is to be recovered from each charging band. Site counts will have a triple purpose of tariff setting, forward billing and reconciling those forward bills.

He noted that CUSC provisions are very prescriptive and that for reconciling, they must use latest data (CUSC 14.17.24 and 14.28) and invoice/credit within 30 days (3.13.6a).

Furthermore – he explained that the P402 will introduce a new type of data will be the only data used in Tariff Setting that isn't calculated by NGESO and can't be validated by NGESO for accuracy, thus introducing a new risk into the TNOUS methodology and that believe using the latest actual data presents less risk for industry than using forecast data which could present uncontrollable forecast error.

A Workgroup member pointed out that, as the TCR Direction was an instruction on NGESO and DNOs to bring forward whatever Modifications are necessary, it would in fact be perfectly possible to change the TNOUS methodology as described in the CUSC in service of a practical solution. The National Grid representation agreed in theory but pointed out that rewriting the TNOUS methodology is unlikely to be practical in comparison with either the P402 Proposed or Alternative Solutions.

A Supplier representative commented that he would prefer for National Grid to be able to set tariffs using actual data rather than forecast data.

Outcome:

Ultimately the LDSO members of the group were mostly comfortable with accepting this requirement as actual data is available in their systems for them to send, depending on the timing of this data provision for Tariff Setting in case pulling it out at the end of the month places an extra burden on systems at the same time they're doing ordinary billing runs. An LDSO member described feedback from their service provider that strongly advised an annual timetable, rather than monthly, to avoid undue strain on their billing system and to make sure this requirement is deliverable.

National Grid responded that they would only need this data annually, and the group reached a consensus position of an annual report of actual consumption data, because it gives National Grid the data that it says it needs for tariff setting and satisfies a Supplier representative. Additionally, the annual aspect helps to minimise risks to existing billing processes and systems for LDSOs. This was felt to be the lowest risk and highest reward outcome for now, and it was agreed that reporting site counts would be aggregated on a monthly basis and consumption on an annual basis for the P402 Alternative.

Report by Charging Band or LLFC?

The group considered 2 options for the reporting of data. 1 option was for LDSOs to report by LLFC. This would mean National Grid would have to convert the site counts and consumption from LLFC to Charging Band and would require National Grid to receive some instructions and support related to mapping. An identified downside of this approach could be a potentially significant amount of extra cost and implementation time that would need to be added to the P402 Alternative Solution.

Another approach was discussed whereby LDSOs use their mapping understanding to report the site counts and consumption by charging band so as to minimise the cost and effort for National Grid and likely end up with a cheaper solution overall.

LDSO members discussed the impacts this 2nd option could incur and felt that it may not be onerously expensive, however took issue (as a point of principle) with the shouldering of costs by LDSOs for a National Grid obligation. On this point National Grid responded that they were looking for the cheapest solution for the industry as a whole, rather than passing costs on to other Parties.

There was some debate around this point, with several group members maintaining reservations about the strength of National Grid's counterargument. In the absence of consensus, ultimately, the group had to choose a position to gather views, costs and benefits against, and went with "reporting by Charging Band" as the P402 Alternative Solution default, but acknowledged that this position may change in the future once costs are better understood. In order to draw out the costs and make it clear which option is more or less costly, the group agreed to ask a specific consultation question on this point to draw out the costs and implications of each approach.

A benefit of DNOs transforming data to Charging Bands was drawn out, in that a report that is "by LLFC" will be much larger to collate and send – "by charging band" will be slimmer which could be beneficial for smaller IDNOs with bespoke systems.

Responses to the second Assessment Consultation

Do you agree with the Workgroup that data should be aggregated and reported by Charging Band? What are the costs and implications of aggregating and reporting by Charging Band for your organisation?			
Yes	No	Neutral/No Comment	Other
5	3	1	0

A majority agreed with the Workgroup that data should be aggregated and reported by Charging Band.

LDNOs reported that providing the information by Charging Band would require changes to the Durabill billing system, costing a minimum of £10k and maximum of £50K more to deliver a report by Charging Band rather than by LLFC. It was noted that additional resource would be required to maintain this data in Durabill, estimated at £20k per annum. While accepting that the costs to them were relatively small, they reiterated that as a point of principle NGESO, as the benefiting party, could and should undertake the LLFC to charging mapping.

An IDNO responded that reporting by Charging Band would require a system change, estimated to cost approximately £20,000 for the total P402 Alternative Solution. They considered an option of a manual process which would reduce system costs but place a manual administration burden, estimated to be an extra 1 WD to collate data and report within timescales.

Exelon followed up with another IDNO who had responded that they were awaiting Impact Assessment from their billing provider and were advised that P402 costs would be met under this IDNO's annual regulatory change premium which they pay to

ensure compliance with all upcoming industry changes that affect billing, causing no additional cost to them.

National Grid's response stated that they strongly support that data is provided by Charging Band, believing it to be a more cost effective and robust approach for data to be processed by LDSOs. They noted that LDSOs are likely to need a conversion table to enact billing by band for DUoS regardless of P402 and reporting by band would avoid a duplication of effort. Workgroup discussions led them to view this is largely a marginal cost for LDSOs to do this processing and highlighted that it would cause a significant amount of cost for a third party to do this, leading it to be more costly for industry compared to LDSOs undertaking this function.

Responses to the second Assessment Consultation

What would be the costs and implications of aggregating and reporting data by Line Loss Factor Class for your organisation?			
Yes	No	Neutral/No Comment	Other
5	0	4	0

For LDNOs, this would also require changes to the Durabill billing system, saving a minimum of £10k and maximum of £50K less to deliver a report by LLFC rather than by Charging Band.

An IDNO responded that production of a report to support reporting by LLFC would require a system change to their billing engine, as with Charging Band. However, the change required one new report only as the LLFC is already held in the billing engine. The estimated cost is expected to be approximately £500 and with a smaller increase in manual administration, estimated to be half a Working Day.

National Grid reiterated that believe this data should be provided by Charging Band, and highlighted LLFCs are not used in any CUSC methodology or processes run by NGESO and that providing the data by LLFC therefore transfers a 'conversion risk' to NGESO from LDSOs who are better placed to manage this risk and confirm the conversion has correctly occurred. This would result in additional system development costs which could be avoided if it is managed by LDSOs at the time they create the LLFC.

Workgroup discussion:

A Supplier representative noted that it would be an expensive and impactful process for Grid to receive aggregated LLFCs, leading to additional work to update the MDD and map to a national set of LLFCs, ultimately requiring a significant amount of extra standing data to be able to validate data and that this extra work wouldn't be necessary if data was received in an aggregated form and reported by Charging Band.

At the meeting following the consultation, National Grid reported that receiving a report aggregated and reporting data by Line Loss Factor Class, instead of by Charging Band, would cost an additional £200K.

DNO representatives reiterated that, though they did not consider the cost to themselves of aggregating by Charging Band to be material, they wanted to specifically have it noted

that some members object to having to cover the cost of National Grid's obligation and believe that this is something Ofgem should address.

Having established the costs and considered the benefits to this approach, the group are comfortable that the report shall contain data aggregated and reported by Charging Band, rather than by LLFC.

Outcome:

The group agree that data will be provided by Charging Band for the Proposed and Alternative solutions, however some members object to having to cover the cost of National Grid's obligation and believe that this is something Ofgem should address. Some members believe that, as a point of principle, costs that are associated with P402 should be recompensed by National Grid.

Timescales for sending data to NETSO

Under the default Proposed Solution, LDSOs provided data within 2 Working Days of receipt of the D0030.

In consideration of the Alternative P402 Solution requirements, LDSOs challenged the proposed timings of 2WD for the sending of data to National Grid, describing them as restrictive and wanting to make sure they would be practical in application.

An IDNO member described the proposed 2 Day as problematic, as the turnaround time between receiving the final D030 flow, committing this data and sending it on National Grid could become an undue burden for some market participants linked to a commercial decision of when to bill, and this could be an unachievably harsh timescale.

The group noted the benefits associate with newer, more recent data but felt that holding LDNOs to a 2 Day turnaround would not be practical or pragmatic, so the group considered a wider window in which to send data.

The IDNO member who had raised this concern felt that 10 Days would be definitely achievable. When challenged if 5 Days would also be achievable, the IDNO member stated that 5 Days could be achievable but that her preference would be for 10.

NETSO's concern with this approach is that they may require Suppliers et al to put up extra security money because NETSO are having to wait longer to bill.

The group considered whether to adopt 5 or 10 WD as the default for the Alternative Solution, hearing from different members representing LDSOs, National Grid and Suppliers and noting the challenged each face. They note that a 10 Day period appears to overlap with National Grid's billing arrangements and may be unworkable, but decided by majority that there is value in setting it at 10 days for National Grid to provide their rationale for or against this timescale via the consultation. This is on the basis that it works around system constraints, which in effect challenges National Grid to justify why it should be shorter.

Responses to the second Assessment Consultation

For the P402 Alternative, do you agree with the Workgroup that each LDSO should provide data within 10 Working Days of receipt of the D0030?

Yes	No	Neutral/No Comment	Other
8	1	0	0

The majority of respondents agreed each LDSO should provide data within 10 Working Days of receipt of the D0030, while the System Operator disagreed.

Most respondents considered that 10 WD would be sufficient in the face of a lack of business case for a tighter timescale. An IDNO requested clarification on the need for urgency for this report and wondered why the timescales could not be extended further, for example to 30 WD.

NGESO's response clarified that they issue TNUoS billing on the 1st day of the calendar month mainly based on Suppliers' forecast. Based on the business requirements at the time, the LDSOs are likely to have all of the previous month's data around the 23rd day of the month. With provision of data to NGESO within 2 working days (as per Proposed Solution at the time), this means National Grid obtains the data within the same month that LDSOs receive the data.

NGESO expanded with an example - for the month of April, LDSOs will get data for all of April around 23rd May and this is provided to NGESO by 27th May for billing on 1st June. With LDSOs providing the data within 10 Working Days (as per the Alternative Solution), this would mean April's data would not be billed until July.

Consequently, to mitigate the financial risk this adds to NGESO, National Grid would require Suppliers to secure an additional month of TNUoS liability, doubling the amount current required and so add an additional ~£100m financial security requirement on the Supplier community (noting that individual amounts will vary by Supplier).

NGESO also noted that this disconnects the amount of financial security that is required to be provided by individual Suppliers from the risk they pose, especially Suppliers with rapidly growing or shrinking portfolios, and given the reduced number of days in February, LDSOs providing data to Grid in timescales over 2 working days would mean invoicing on 1st March, which would not be possible.

Finally, National Grid accept that 2 WDs (under the Proposed Solution) may be a tough timeframe for LDSOs to provide the necessary data and are they are open to discuss how this can be relaxed slightly to make it more manageable. We would however note that no LDSO has said that provision within 2 WDs cannot be done and the direction of travel within the industry is for data to be provided quicker.

Finally NGESO noted that it may be possible to avoid the issues described above, if the billing data was provided at a fixed time of the month that avoided DNO billing cycles (for example, some point between the 15th and 20th of each month) and included all data provided/updated since the last report. This would provide certainty when data was to be provided and what should be included while avoiding interactions with existing processes. It would require NGESO to bill based on the snapshot of the latest data provided by this day and Suppliers being accommodating of this.

Workgroup discussion:

The Workgroup noted the subject of timescales for receiving data and its implications on Supplier credit as central to the Modification, with the same basic issue applying to both the Proposed and Alternative.

The group explored different scenarios under varying timescales in order to illuminate their understanding of the operational processes and implications this could have due to limitations around provision of data to the ESO.

National Grid described how any increase in the timeframe between the SF data becoming available and sending it to NGESO increases the risk of NGESO not having the data in time to bill, with Suppliers having to end up covering that gap in order for NGESO to be sure of having enough liquidity and protect against Supplier's failing during that period.

As indicated in their response, the Proposer suggested an alternate approach of picking a fixed day in middle of the month to avoid coinciding with billing runs and, based on that fixed point, looking back and reporting on every other Settlement Day since the last report (whatever updated Settlement Day-based data you have available to you, reporting site counts and UMS metered volumes).

An IDNO member highlighted, however, that it was a question of not only "when they do their billing" but also "when and how they commit data to system to make it available for P402 reporting", pointing out that some billing systems don't commit the data to the database until you've done the billing run. In order to be able to report out of it, she warned against an "almost impossible" task of completing validation checks and doing initial billing runs as a draft in 2WD. So while reporting in a period that doesn't coincide with the billing run might relieve some strain, it may not be any better in terms available data that you have available as data is only committed to the system once a month, and you would still have to commit the data 2 to 3 WD before then to have the data available.

The group considered the impacts of reporting by 5 or 10 WDs following the D030 at SF for the last day of the most recent calendar month.

It was noted that setting to 5WD could cause problems with February data, but for every other month it would come in before the 1st of the month for TNouS billing and better meet NGESO's desired timescales than 10WD.

One member accepted February would be challenging, but pointed out that in reality that's only an extra few days in delays to billing. It was felt that this outweighed the alternative option of having to carry an additional £40 million worth of Credit Cover across the Supplier market.

The Proposer noted that a 5WD period could cause complications and may require a CUSC Modification that requires a reduced 12 day payment period in February, then this was preferable to 10WD.

Outcome:

For the Alternative Solution: The group, by majority, voted to adopt 5WDs as the period in which LDSOs should provide data from receipt of the D0030. 2 WDs was felt to be unachievable for many, while 5WD seemed a reasonable compromise given limitations around NGESO's processes for billing.

For the Proposed Solution: National Grid (as the Proposer) would strongly prefer to have data as soon as possible, but accepted that 2 WDs could be a tough timeframe for LDSOs

to provide the necessary data and were happy to relax this requirement to 3WD to make it more manageable.

Reporting BM Units

When discussing the requirement for LDSOs to send monthly combined data to NETSO, the group discussed whether reporting by BM Unit is efficient and/or practical.

The National Grid representative clarified that they would prefer a field for BM Unit but would be able to use Supplier ID if necessary. It was suggested that LDSOs would prefer to just report the Registrant ID, which would be the Supplier ID for SVA and Party ID for SVA.

Additionally it was noted that the simplest solution would likely be for LDSOs to pull the SVA Party ID out of the various CDCA and CRA data that Elexon send to suppliers, however this would mean that Grid would have to work with the 8 character Party Id. A member commented that National Grid would end up converting everything from 4 character to 8 character Party Id for the invoice, and National Grid confirmed that they could live with either 4 or 8 characters for the reporting of sites.

Which Code's definitions to point to for P402?

In consideration of P402, the group considered whether to rely on DCUSA or CUSC definitions.

The default approach had been to use the CUSC definitions for "Single Site", "Final Demand Site", "Non-Final Demand Site" and "Charging Band" in reference to the P402 Alternative Requirements, however the group examined whether this was the most appropriate route.

Feedback from members suggested making sure CUSC and DCUSA definitions are the same or at least comparable so there aren't differences in what LDSOs produce vs what NGESO need.

It was noted how there are differences in some of these definitions between the two, but that the CUSC definitions use the DCUSA as the source of their base meaning (adding to them to cover transmission-connected sites where necessary).

On the one hand – P402 could foreseeably tie to CUSC because P402 supports CUSC requirements drawn out in their parent Modifications. It was felt to not matter too much as long as it is clearly referenced and therefore LDSOs clear on what they are expected to do, with National Grid clear on what they expect to receive.

On the other hand it was noted that DCUSA may be less risky for LDSOs as any changes to it would have to pass through the DCUSA governance process.

One member noted that, as P402 deals with LDSO obligations it should naturally align to DCUSA as the most logical relationship.

The impact of any changes to definitions in DCUSA was considered as any changes to DCUSA would mean that LDSOs would then be reporting inconsistently with what the CUSC is expecting. In order to resolve this, either National Grid or LDSOs would need to raise both a BSC and CUSC Modification to bring reporting requirements in line with what

CUSC needs or to otherwise find a workaround to make sure that LDSOs don't find themselves non-compliant with both BSC and DCUSA.

It was noted that DCUSA doesn't have an explicit defined term for "charging band". Charging bands are instead defined within a schedule, so the requirements would have to link to the paragraphs in the DCUSA that describe the charging bands.

Outcome:

For the Alternative Solution: Ultimately it was felt that it would be better to refer to DCUSA definitions for the P402 Alternative, with the rationale being that the obligations are on LDSOs. The content of what is in their systems is, in the first instance, is defined in the DCUSA, therefore this was felt to be the more logical relationship.

For the Proposed Solution: The Legal Text for the Proposed solution will also tie to the DCUSA, with the Proposer agreeing that the same arguments apply equally to both and that consistency between the Alternative and Proposed solutions is beneficial.

P402 Proposed and Alternative Solution Comparison

Having gathered industry costs for both the Proposed and Alternative Solutions, the group compared the costs, impacts and benefits to each approach to help them come to a decision.

Costs

Noting that the P402 Alternative appears to cost less than the Proposed, the P402 Proposer provided some additional rationale for their support for the Proposed Solution. From NGESO's perspective, they prefer the Proposed but confirmed that the Alternative is acceptable, but highlighted several key differences:

- In the Proposer's view, the P402 Proposed Solution provides greater transparency and visibility to industry by publishing the output data and making it available to other Parties, who will be able to see what Elexon have aggregated and sent to National Grid and therefore what National Grid will be using for billing).
- Additionally, the Proposed solution includes a level validation and offers a level of check and balance that is not offered by the Alternative. This is not comparable to the level of validation and assurance of Settlement data and does not include any accuracy testing (as a consequence of this data being held in LDSOs' systems vs a more widely available public registration systems) but does represent an addition to what is offered by the Alternative solution.
- Additionally, there is some concern from NGESO's revenue and financial team about the robustness of the Alternative in regards to the audit process (highlighted in their consultation response) and that the Proposed better fulfils obligations imposed on NGESO via the transmission licence but recognise that these are benefits that not everyone is going to necessarily appreciate. The Proposer described how assurance needs to be provided and SOX (Sarbanes-Oxley) control requirements met. Under the Proposed Solution, assurance is gained from one party (Elexon) with whom NGESO has an established relationship. Under the Alternative, this will need to be established with each LDSO – this will add complexity and cost in meeting SOX compliance requirements (such as auditing of LDSOs).

- Furthermore, and depending on outcomes from the [Access and Forward-Looking Charges SCR](#), National Grid believe that the Proposed Solution is more enduring than the Alternative, which they see as “sticking plaster” approach that is not as robust as the Proposed, which they feel offers a level of future-proofing that could have a longer term benefit of establishing some of the centralised means of determining final demand sites once greater certainty into the outcomes of Access and Forward Looking SCR becomes apparent, depending on how Ofgem see the direction of travel for the market.
- Ultimately, NGESO understand that the Proposed Solution is more expensive but believe that the additional benefits it offers make it a better solution than the Alternative, and wish to present both options to Ofgem for their decision.

The Workgroup do not agree with this view, and unanimously recommend the Alternative Solution, believing that the benefits do not outweigh the higher costs for the Proposed Solution. They also noted the Access and Forward-Looking Charges SCR, but feel that because it could significantly change how the industry maintains registration data, there is benefit in choosing the cheaper option in the face of this risk and spending more prudently later, should a consequential change be required.

Benefits and Risks

The group considered the benefits and risks of both the P402 Alternative and Proposed.

It was noted that both solutions lack independent validation of the data that is reported by LDSOs. For Settlement purposes, the data in and data out can be tracked and validated via a robust Risk Assurance Framework. However, this doesn’t apply to non-Settlement activities and so both the Proposed and Alternative P402 Solutions do not benefit from the full rigour the BSC would normally bring to Settlement activities.

Ultimately, the relationships between sites are only held within LDSO systems, and there is no feasible way for National Grid to check that they are being accurately reported.

The Proposer stated that the Proposed Solution could be seen as more futureproof in the face of any future changes resulting from the Access SCR or Faster Switching Programme, because you can change the input sources for P402 file whereas under the Alternative it would continue ad infinitum. Not all members shared this view, however, as it was pointed out that the Alternative could provide a nimbler solution should changes be required, and was expected to cost significantly less than the P402 Proposed Solution.

In their response to the second consultation, National Grid highlighted that the Alternative Solution would require additional work for them to implement and whilst this is currently achievable, it has an increased likelihood of taking longer than expected, therefore placing a greater risk on NGESO failing to implement the changes for April 2022 than the Proposed Solution.

Benefits of a Solution under the BSC

During the course of assessment of P402, the group considered the benefits and drawbacks of NETSO implementing this aspect of the TCR direction via the BSC.

The Proposer described their rationale for seeking a BSC-based solution, noting that NETSO (and LDSOs) currently relies on BSC interfaces and on aggregated Settlement Data provided to it by BSCCo to calculate TNUoS and BSUoS charges.

The Proposer considered that the BSC processes and systems provide a centralised mechanism for collecting, aggregating and sharing data with NETSO and LDSOs for network charging purposes.

By building on existing BSC-based arrangements that support network charging arrangements, the Proposed Solution can take advantage of existing set of processes and interfaces and use Settlement and registration data to deliver an efficient and robust solution via the BSC.

However, this view was not universally shared among the Workgroup. One Member expressed a view that P402 passes liabilities to acquire and process data from National Grid on to LDSOs and effectively transfers the cost of delivering licence obligations onto other Parties.

Recognition of potential impact on IDNOs

The need for consideration of any undue impacts on the systems of smaller IDNOs was consistently emphasised by the Workgroup.

The need to uncover costs and implications for all affected participants is undoubtedly important and a central purpose for the second consultation was to give visibility of the Solutions and to allow IDNOs to judge and report impacts of the P402 Alternative on their systems.

As discussed among the Workgroup, 10 of the IDNOs are believed to be supported by a single service provider but not all are. While LDNOs have a shared billing cost system (and can therefore spread the cost of system changes among many), the group understand that no such system exists for IDNOs and therefore the cost is applied individually for some, which has the potential to have a large impact on them.

In consideration of the costs borne by LDSOs as a result of regulatory change such as P402, the group considered the potential impact on smaller market participants such as IDNOs.

As part of the Durabill consortium, DNO members were comfortable that the identified costs would be split across members of the consortium and therefore not present a material hit to individual organisation. However, the option to share costs across multiple organisations is not a luxury that all IDNOs have, and Workgroup members were concerned that a 20K cost could remove a significant chunk of their profitability for some IDNOs.

P402 has received responses from several IDNOs and counted several IDNO representatives among its membership. However, despite concerted efforts to reach out to a wider variety of IDNOs, not every IDNO responded to give their views on the P402 Solutions and therefore the group recognise that it is difficult to draw firm conclusions based on this limited view of its impact on smaller market participants.

In the absence of more information, the group were unable reach consensus on the impact to IDNOs as they could not validate assumptions that only the smaller IDNOs could offer insight on. They note that this could be a material issue but acknowledge that, to date, no IDNOs have protested, although recognising that smaller market participants may not have resources to respond to consultations and participate in Workgroup meetings.

The group noted the potential for variable cost impacts on different Parties and considered methods whereby IDNOs might be able to recover costs resulting from this regulatory

change, noting unless an IDNO alters the costs that it offers to connect parties to its network, it would have to bear those costs fully.

A member described how the Relative Price Control could mean that a 20K cost impact could cost a IDNO a gross margin of a 1000 customers, and so could well be material to some organisations.

The group considered whether it might be possible for a Party to be recompensed under the BSC for any system costs, however this was felt to be impractical and unachievable within the P402 scope and timescales.

Outcome:

Despite concerted efforts to reach out to and receive feedback from a wider variety of IDNOs, the two consultations for P402 received limited responses from IDNOs. The group wish to flag to Ofgem that they are concerned about the potential impacts of smaller parties such as IDNOs being asked to fund the costs of implementing regulatory change with no clear method of funding or cost recovery for the results of the TCR ruling.

Some members believe that a mechanism should be put in place in the future that takes into account how smaller companies can cope with the costs of delivering regulatory change by factoring in cost involvement relative to their size.

Initial reporting arrangements that will enable NETSO to set residual tariffs in October 2021 and October 2022.

The Workgroup noted that, in order to set new TDR charges to take effect from 1 April 2022, NETSO will require Tariff setting data in October 2021. P402 proposes that LDSOs provide a one-off set of Tariff Setting Reports bi-laterally and directly to NETSO in October 2021. The provision of this data by LDSOs would be defined outside the scope of the P402 solution.

The need for this standalone provision of data is because P402 will not have been implemented in October 2021 and BSCCo will not have the data necessary to produce a Tariff Setting Report in October 2021 (i.e. 12 months of consumption using newly introduced LLFCs), therefore LDSOs agreed to each provide, bi-laterally and directly, a one-off set of Tariff Setting Data to NETSO in October 2021.

Responses to the first Assessment Consultation

Whilst P402 will not have been implemented nor will sufficient data be available to ELEXON to produce a Tariff Setting Report, do industry participants agree that the definition of and provision of data for setting Tariffs in October 2021 be agreed by LDSOs and NETSO outside the P402 solution?			
Yes	No	Neutral/No Comment	Other
9	0	0	0

Respondents had no issue completing this element of P402 bilaterally, as it was not obvious that there is any other way of doing it. One respondent commented that they were concerned that if this sits outside of the official requirements it could go unnoticed by some parties, but recognised that documenting these processes would be potentially complex and have no lasting value as this would be a one off process.

National Grid responded to state their initial preference for Elexon to produce this data but accepted that is not possible and agreed that this data should be provided by other means in October 21. They believe that the data provision obligation including the scope, quality and timescale should be recorded to ensure that all parties involved are clear about the requirements.

Workgroup discussions:

The group discussed the practicality of including this obligation within the P402 Legal Text, given that the implementation of P402 will occur after this initial data provision. It was felt that, while the group are comfortable with this requirement sitting outside the Legal Text for P402, it should be noted as part of the development of the P402 solution and therefore captured in the P402 reports to the BSC Panel and Ofgem. This way the requirement is at least documented, even if does not form a formal part of the P402 solution and Legal Text.

It was noted that any further discussion of how best to fulfil this reporting requirement and manage any risk would be raised at the TCR Implementation Steering Group⁵.

Outcome:

The Workgroup (including LDSO representatives) and Proposer agreed to progress with the bilateral approach for the initial provision of Tariff setting data, noting that it would provide LDSOs and NETSO flexibility to agree what data was appropriate and how best to provide it.

Related impacts on MDD necessary to deliver the TCR

Elexon noted that the related DCUSA and CUSC TCR modification proposals will require LDSOs to create approximately 16,000 new LLFCs and 320,000 new valid sets in MDD. This will result in a very large increase in the size of the MDD and LLFC data sets used in Settlement. The BSC Panel, SVG, industry participants and ELEXON have raised concerns that Central Systems and participants' systems may not handle the enlarged datasets. Some have suggested that the impacts of increasing the numbers of LLFCs and Valid Sets should be assessed under P402.

Elexon pointed out that the impact on MDD and systems would exist irrespective of P402, I.e. the need to create new LLFCs and valid sets exists to support the other CUSC and DCUSA modification proposals and is not a direct requirement of P402. The group agreed and confirmed that they consider the wider impacts on MDD and systems to be outside the scope of P402 and should therefore be assessed and considered independently. At the time of writing ELEXON had published an update on its separate work to assess the impacts of increasing the MDD and LLFC data sets – see the ELEXON website [here](#).

Any EBGL Impacts?

No impacts on EBGL Article 18 terms and conditions have been identified with the Proposed or Alternative Solutions.

⁵ A group established by NETSO, DNOs and some IDNOs and supported by the ENA. Elexon and ElectraLink are members too.

Responses to the Assessment Consultations

Do you agree with the Workgroup's assessment that P402 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?				
	Yes	No	Neutral/No Comment	Other
First Consultation	8	0	1	0
Second Consultation	9	0	0	0

Respondents unanimously agreed with the Workgroup's assessment that P402 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC or remained neutral with no further rationale provided.

Elexon also clarified that, while at the time of the first consultation there had been a question about whether Section U provisions needed to be expanded, this has since been resolved, with Elexon confirming that the existing Legal Text had been drafted with the need for data retention in mind.

Any GDPR Concerns?

The group are comfortable that the P402 solutions are unlikely to conflict with GDPR restrictions as it is concerned with aggregated information from organisations, rather than collecting and sharing data on individuals.

Workgroup views on Self Governance

The Workgroup unanimously believes that P402 should not be progressed as a Self-Governance Modification, on the basis that it is likely to materially impact criteria iii) 'the operation of the national electricity transmission system' and potentially iv) 'matters relating to sustainable development, safety or security of supply or the management of market or network emergencies'; depending on level of costs to parties involved.

The Workgroup consider that, as the proposals calls for new obligations to be placed on LDSOs, Ofgem should consider the proposal as the default approach.

7 Workgroup's Conclusions

The Workgroup provided its views on both the P402 Proposed and Alternative Modifications against the Applicable BSC Objectives.

The **majority** of the Workgroup believes that P402 **Alternative** Modification would overall better facilitate the Applicable BSC Objectives compared with both the existing baseline and Proposed Modification and so should be approved.

Members' views against each of the Applicable BSC Objectives are summarised below.

Does the P402 Proposed Solution better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	• Positive	• Positive (unanimous)
(b)	• Neutral	• Neutral
(c)	• Neutral	• Neutral
(d)	• Positive	• Positive (Minority) • Neutral (Majority)
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Does the P402 Alternative Solution better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	• Positive	• Positive (unanimous)
(b)	• Neutral	• Neutral
(c)	• Neutral	• Neutral
(d)	• Positive	• Positive (unanimous)
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Proposed Solution

Applicable BSC Objective (a)

The Proposer believes that the Proposed Solution better facilitates Applicable BSC Objective (a) as NETSO has been directed by Ofgem to give effect to Ofgem's TCR SCR Decision by raising changes to the CUSC and 'any such consequential proposals for modification to ... other industry codes'. P402 is intended to enable related CUSC modifications and therefore is necessary for the Proposer to comply with Ofgem's Direction, thereby better enabling NETSO to comply with its license.



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 administering 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

P402
Final Modification Report

15 March 2021

Version 1.0

Page 59 of 73

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The Workgroup members unanimously agree with this assessment of Objective (a), noting a clear impact and obligation on the Transmission Licence that the P402 Proposed Solution addresses.

Applicable BSC Objective (d)

The Proposer confirmed that they believe the P402 Proposed Solution better facilitates Applicable BSC Objective (d), noting that BSC processes and systems already provide a centralised mechanism for collecting, aggregating and sharing data with NETSO and LDSOs for network charging purposes. This approach has been maintained by industry because it provides a consistent, secure, efficient and cost effective means of enabling both Settlement and non-Settlement processes.

A majority of Workgroup members disagree that P402 Proposed Solution is positive against Objective (d), feeling that the high cost involved with making this change could not justify it as efficient. One Member noted that if central systems processed more of the data and provided greater visibility of how MSID and Sites were reported and aggregated, then arguments for efficiency would be justifiable, but that at present, bearing in mind the costs of implementation, he considered P402 a 'post-box' for Half Hourly data and did not support the solution.

Other group Members were sympathetic to this view on the limited benefits of P402, with others stating that the Access SCR may entirely overwrite the solution in a few years – leading to potentially wasted costs to implement the Proposed Solution as describing it as an “expensive sticking plaster”.

A minority agreed that the P402 Proposed Solution better facilitates Applicable BSC Objective (d), noting that they believed it more efficient than the counterfactual example of National Grid having to establish a relationship with every customer to get the information they require.

Assessment Consultation respondents' views against the Applicable BSC Objectives

Do you agree with the Workgroup's initial majority view that the P402 Proposed Solution does better facilitate the Applicable BSC Objectives than the current baseline?				
	Yes	No	Neutral/No Comment	Other
First Consultation	5	2	2	0
Second Consultation	7	2	0	0

A majority of respondents agreed with the Workgroup's view that P402 Proposed Solution does better facilitate the Applicable BSC Objectives than the current baseline.

Objective (a) was largely felt to be more demonstrably achieved, as P402 clearly supports NGESO's obligation to deliver the Direction, noting the current baseline does not meet NGESO's data requirements for calculating TNUoS charges and the demand residual element of Ofgem's TCR Direction. There was wider debate around Objective (d), with

arguments for and against centring around the relative benefits and efficiencies achieved by the central approach in providing the necessary data to NGESO. One respondent highlighted the need to assess this change in isolation and therefore ignore potential inefficiencies related to wider change on the horizon resulting from the Access and Forward-Looking Charges Significant Code Review (the 'Access SCR'), and noted the benefits associated with a central systems approach in providing the necessary data to NGESO.

Some respondents described the solution as overly complex and too costly to better facilitate (d), describing the central systems costs as extremely high.

Alternative Solution

Applicable BSC Objective (a)

The Proposer and Workgroup unanimously agree that the P402 Alternative Solution better facilitates Objective (a) for the same reasons as given for the Proposed.

Applicable BSC Objective (d)

The Proposer and Workgroup unanimously agree that the P402 Alternative Solution better facilitates Objective (d).

The Workgroup believe that the P402 Alternative Solution offers a cost effective solution that positively impacts efficiency in the implementation of the balancing and settlement arrangements.

It was noted that the view of whether P402 (Proposed or Alternative) better facilitates (d) rests on an interpretation of how broad each individual's view is of the "balancing and settlement arrangements". Confining the scope of this phrase to strictly BSC activities would leave most as neutral on this point, as P402 will not directly affect Settlement. However, the group took a broad enough view of this, to encompass activities around balancing and Settlement (such as invoicing) and the wider value chain of Settlement arrangements to be able to form an opinion on the impacts each Solution would have in relation to this objective.

Do you agree with the Workgroup's initial majority view that the P402 Alternative solution does better facilitate the Applicable BSC Objectives compared with the current baseline?			
Yes	No	Neutral/No Comment	Other
9	0	0	0

Respondents unanimously agreed that the Alternative Solution is positive against Applicable BSC Objectives (a) and (d).

Which solution should be approved?

The **majority** of the Workgroup (all except the Proposer) believe that P402 **Alternative** Modification would overall better facilitate the Applicable BSC Objectives compared with both the existing baseline and Proposed Modification and so should be approved.

Do you agree with the Workgroup's initial majority view that the P402 Alternative solution does better facilitate the Applicable BSC Objectives compared with the P402 Proposed solution and so should be approved?			
Yes	No	Neutral/No Comment	Other
8	1	0	0

A majority of respondents agree with the Workgroup. Those in favour say the Alternative solution seems to offer a significant cost saving in the development and provision of the required data, describing it as a significantly cheaper and more timely option to ultimately deliver the same outcome as the P402 Proposed solution.

One respondent stated that when considering changes that are likely to be directed under Ofgem's Access & Forward-Looking Charges SCR, they feel that it is highly likely that the data requirements for TNUoS charging will require a significant overhaul in the next 2-3 years, although acknowledging the outcome of that SCR is still not yet certain.

The System Operator (who is the P402 Proposer) disagrees, believing the Proposed to provide additional benefits to industry compared to the Alternative that make it more robust and futureproof solution. The Proposer believes that the Proposed Solution, despite its higher costs, is the most appropriate way for NETSO to get the data it needs to recover TNUoS demand residual charges for the TCR, providing greater transparency and visibility to industry by publishing the output data and making it available to other Parties and offering some level of validation that is not offered by the Alternative. Depending on outcomes from the Access and Forward-Looking Charges SCR, National Grid believe that the Proposed Solution is more enduring than the Alternative, establishing some of the centralised means of determining final demand sites, depending on how Ofgem see the direction of travel for the market.



What is the Self-Governance Criteria?

A Modification that, if implemented:

- (a) does not involve any amendments whether in whole or in part to the EBGL Article 18 terms and conditions; except to the extent required to correct an error in the EBGL Article 18 terms and conditions or as a result of a factual change, including but not limited to:
 - (i) correcting minor typographical errors;
 - (ii) correcting formatting and consistency errors, such as paragraph numbering; or
 - (iii) updating out of date references to other documents or paragraphs;
- (b) 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;

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

P402
Final Modification Report

15 March 2021

Version 1.0

Page 62 of 73

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The P402 Assessment Report was presented to the Panel at its meeting on 11 February 2021 ([Panel 311/04](#)).

Panel Discussions on P402

Validation under P402

A Panel Member sought to understand the Workgroup and consultation respondents' views on the levels of validation offered by the Proposed and Alternative Solutions.

Exxon clarified that National Grid's view as both the system operator and P402 Proposer was that the enhanced level of validation within the Proposed Solution made it the preferable option from their point of view. However, the Panel were reminded that this level of assurance is not comparable to Performance Assurance that Exxon would apply to other aspects of core Settlement and is limited in P402 to business validation (checking that files are received and that they are populated properly) rather than checking the accuracy of the content of those files.

Consideration of the Proposed and Alternative Modification

The National Grid representative confirmed that they still consider the Proposed Solution to be a better option overall and expressed regret that the lateness of raising the Alternative Solution (with its consequential delay on delivering the Assessment Report) had affected the perceived viability of the Proposed Solution. He urged the Panel to evaluate each solution on its merits rather than viability due to timescales and noted that Exxon and National Grid had been working together to develop an interim solution for the Proposed Solution, giving comfort that it would be a viable option should it be approved.

A Panel Member noted these frustrations but reminded the National Grid representative that the purpose of a Workgroup is to seek industry views and develop an Alternative Solution if that is what it feels it needs to do.

It was noted that the significant cost difference between the two solutions had been particularly influential in steering Workgroup and consultation respondents' views towards the Alternative, and a Panel member noted that he did not feel the Proposed offered a great deal of additional validation in return for its higher costs.

Views from IDNOs

Exxon drew attention to the Workgroup's desire to better understand the views from IDNOs, explaining that it strove to engage with as wide a representation as possible via the consultations and other means, but only received a handful of responses and so could not get a full and complete view of their position on P402. This was noted by the Panel.

Interim costs

After voting on the recommendations, the Panel noted that Exxon would return cost estimates for the interim solution at the next Panel meeting (11 March 2021). Given that the Panel currently recommend approval of the Alternative Solution as a more economic

and efficient solution regardless of this assessment, the working assumption is the level of cost will have no bearing on their later views. Similarly, the Modification Secretary sought clarification from the Panel that even if the Proposed solution could be fully implemented in time for the February 2022 Release (and did not require an interim solution) it would not alter the view that the Alternative was better. The Panel confirmed this was the case and clarified that the main driver was costs and the views of the Workgroup and consultation responses.

Panel Recommendations

The Panel unanimously agreed that the P402 Proposed Modification better facilitates Applicable BSC Objective (a) and that the P402 Alternative Modification better facilitates Applicable BSC Objectives (a) and (d).

The Panel unanimously agreed that the P402 Alternative Modification is better than the P402 Proposed Modification, and agreed an initial recommendation that the **P402 Alternative Modification should be approved** and that the P402 Proposed Modification should be rejected, for the reasons provided by the Workgroup.

The Panel unanimously agreed an initial view that P402 should not be treated as a Self-Governance Modification, identifying a material impact on criterion (iii) 'the operation of the national electricity transmission system'.



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 administering 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

P402

Final Modification Report

15 March 2021

Version 1.0

Page 64 of 73

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9 Report Phase Consultation Responses

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

Summary of P402 Report Phase Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial unanimous recommendation that the P402 Alternative Solution should be approved, and the P402 Proposed Solution should be rejected?	5	1	0	0
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of P402?	6	0	0	0
Do you agree with the Panel's recommended Implementation Date?	6	0	0	0
Do you agree with the Panel's initial view that P402 should not be treated as a Self-Governance Modification?	6	0	0	0
Do you agree with the Panel's initial recommendation that P402 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?	6	0	0	0
Do you have any further comments on P402?	3	3	0	0

Respondents unanimously agreed with the implementation approach, that the Legal Text delivers the intention of P402, that it should not be treated under Self Governance and identified no impact on the EBGL conditions.

A majority of respondents (all except the System Operator) agreed with the Panel that the P402 Alternative Solution should be approved, and the P402 Proposed Solution should be rejected. Arguments for and against this view were in line with previous responses to P402 consultations.

The Alternative Solution was felt by a majority to be the simplest approach and providing greater value to customers than the Proposed Solution, offering higher cost efficiencies across the industry.

National Grid ESO reiterated several points for consideration by the Panel and Ofgem, describing how the Proposed Solution:

- Offers greater visibility and transparency of how metering systems are mapped to 'Sites'.
- Establishes the importance of this data to ensure it is factored in to future designs.

- Noted the benefits to other industry reforms (such as BSUoS reforms) of making this data more widely available with Central Systems providing the most transparency and supporting an easier route for continuous improvement for industry development in their view.

The System Operator noted a common weakness between the Proposed and Alternative Solutions, in that all LDSOs have different billing processes which interact with the provision of P402 data, meaning that any changes which look to accelerate or change when 'Site' data is provided will inevitably require some LDSOs to revise their billing processes.

10 Panel's Final Discussions

Exelon presented the P402 Draft Modification Report to the BSC Panel on 11 March 2021 to gather its final views ([312/05](#)).

The Panel noted that the cost difference between the Proposed and Alternative Solution had played a key part in their preference for the Alternative.

The National Grid representative restated points for consideration by the Panel and Ofgem that they had raised in their reply to the P402 Report Phase Consultation, noting forward-looking cost-based benefits to future industry reforms offered by the Proposed Solution.

One Panel Member stated that it was very difficult to quantify the cost benefits to potential future initiatives described by National Grid and noted that it would be helpful to better understand these.

The National Grid representative responded that this principally related to likely changes arising from the Access and Forward Looking Charges Significant Code Review alongside future BSoUS reforms among other industry initiatives, recognising that costs remained nebulous rather than specific at this point. Nevertheless, he felt that these developments could likely present a need for the same sort of data requirements that the Proposed Solution addresses via BSC Central Systems, and so would potentially be better able to support via the approval of the Proposed Solution.

Exelon responded to note that clear benefits to future initiatives were possible in theory but, without knowing in more detail what the future Access SCR and wider review of registration details in the context of Market Wide Half Hourly Settlement requirements might look like, it was very difficult to come to a definitive conclusion on which solution is better in this regard.

The Panel unanimously:

- **AGREED** that the P402 Proposed Modification:
 - **DOES** better facilitate Applicable BSC Objective (a);
- **AGREED** that the P402 Alternative Modification:
 - **DOES** better facilitate Applicable BSC Objective (a); and
 - **DOES** better facilitate Applicable BSC Objective (d);
- **AGREED** that the P402 Alternative Modification is better than the P402 Proposed Modification;
- **AGREED** a recommendation that the P402 Alternative Modification should be **approved** and that the P402 Proposed Modification should be **rejected**;
- **APPROVED** an Implementation Date for the Proposed Modification of:
 - 24 February 2022 if an Authority decision is received on or before 27 May 2021 (noting that the enduring system changes will be implemented at a later date);
- **APPROVED** an Implementation Date for the Alternative Modification of:
 - 24 February 2022 if an Authority decision is received on or before 24 June 2021;

- **APPROVED** the draft legal text for the Proposed Modification;
- **APPROVED** the draft legal text for the Alternative Modification; and
- **APPROVED** the P402 Modification Report.

11 Recommendations

The BSC Panel recommends to the Authority:

- That the P402 Alternative Modification should be **approved** and that the P402 Proposed Modification should be **rejected**;
- That the P402 Proposed and Alternative Modifications **do not** impact the EBGL Article 18 terms and conditions held within the BSC;
- An Implementation Date for the P402 Proposed Modification of:
 - 24 February 2022 if an Authority decision is received on or before 27 May 2021 (noting that the enduring system changes will be implemented at a later date);
- An Implementation Date for the P402 Alternative Modification of:
 - 24 February 2022 if an Authority decision is received on or before 24 June 2021;
- The BSC legal text for the P402 Proposed Modification; and
- The BSC legal text for the P402 Alternative Modification.

Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P402 Terms of Reference	Conclusion
Can LDSOs deliver the data that National Grid require?	Addressed and incorporated into the P402 solution.
Specific definition of what needs to be reported and how frequently it needs to be reported.	Addressed and incorporated into the P402 solution.
How should the reporting specified by this proposal handle data or process errors and disputes?	Addressed and incorporated into the P402 solution.
Consider whether and if so how a one-off set of Tariff Setting Reports should be provided to NETSO before 1 April 2022, in order to set tariffs to take effect from 1 April 2022.	LDSOs will provide, bi-laterally and directly, a one-off set of Tariff Setting Reports to NETSO in October 2021.
How to ensure the P402 solution is compliant with GDPR regulations?	Following assessment, the group are comfortable that the P402 solution is compliant with GDPR regulations

Assessment Procedure timetable

P402 Assessment Timetable	
Event	Date
Panel submits P402 to Assessment Procedure	12 March 2020
Workgroup Meeting 1	31 March 2020
Workgroup Meeting 2	8 May 2020
Workgroup Meeting 3	5 August 2020
Workgroup Meeting 4	28 September 2020
Assessment Procedure Consultation	7 October – 27 October 2020
Workgroup Meeting 5	2 November 2020
Workgroup Meeting 6	25 November 2020
Second Assessment Procedure Consultation	2 December 2020 = 15 December 2020
Workgroup Meeting 7	17 December 2020
Panel considers Workgroup's Assessment Report	11 February 2021

Workgroup membership and attendance

P402 Workgroup Attendance								
Name	Organisation	31 March 2020	08 May 2020	05 August 2020	28 September 2020	2 November 2020	25 November 2020	17 December 2020
Members								
Lawrence Jones	Elxon(<i>Chair</i>)				x	x	x	x
Claire Kerr	Elxon(<i>Chair</i>)	x	x	x				
Ivar Macsween	Elxon (<i>Lead Analyst</i>)							
Grahame Neale	National Grid ESO (<i>Proposer</i>)							
Phil Russell	Consultant							
Donna M Townsend	ESP Electricity Limited							
Richard Ellis	Western Power Distribution						x	x
Ian Hall	IMServ		x	x	x	x	x	x
Lee Stone	E.on						x	
Andy Colley	SSE		x			x		x
Lee Wells	Northern Power Grid	x	x		x			
Tony McEntee	Electricity North West					x		
Stacey Buck	BU-UK		x	x				
Attendees								
Nick Rubin	Elxon (<i>Design Authority</i>)							
Aditi Tulipe	Elxon (<i>Lead Lawyer</i>)	x			x	x	x	x
Shamaila Jawaid	Elxon			x			x	
Kayt Button	Ofgem	x	x	x	x	x	x	x
Ankita Mehra	Ofgem	x	x	x	x	x	x	
Kundai Matiringe	BU-UK		x	x	x	x	x	x
Tom Cadge	BU-UK						x	x

Appendix 2: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
BSC	Balancing and Settlement Code
BSCCo	Balancing and Settlement Code Company
BMU	Balancing Mechanism Unit
BSUoS	Balancing Services Use of System
BTM	Behind The Meter
CfD	Contracts for Difference
CM	Capacity Market
CMP	CUSC Modification Proposal
CSDs	Code Subsidiary Documents
CUSC	Connection and Use of System Code
CVA	Central Volume Allocation
DUoS	Distribution Use of System
ECOES	Electricity Central Online Enquiry Service
EMR	Electricity Market Reform
HH	Half Hourly
HHDA	Half Hourly Data Aggregators
MSID	Metering System Identifiers
SCR	Significant Code Review
SOX	Sarbanes-Oxley
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent
TCR	Targeted Charging Review
TDR	Transmission Demand Residual
TNUoS	Transmission Network Use of System
TUoS	Transmission Use of System
UoS	Use of System Charging

DTC data flows and data items

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

P402
Final Modification Report

15 March 2021

Version 1.0

Page 72 of 73

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DTC Data Flows and Data Items	
Number	Name
P0210	Use of System (TUoS) Report
D0030	Aggregated DUoS Report
D0040	Aggregated Half Hour Data File
D0041	Supplier Purchase Matrix Data File

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
2	Targeted Charging Review Direction	https://www.ofgem.gov.uk/system/files/docs/2019/11/cusc_direction_1.pdf
2	Targeted Charging Review: decision and impact assessment	https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf
3	CMP332	https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/cmp332-transmission-demand-residual
3	CMP334	https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/cmp334-transmission-demand-residual
3	CMP335/6	https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/cmp335-transmission-demand-residual-billing
3	DCUSA Change Proposal 359	https://www.dcusa.co.uk/change/ofgem-targeted-charging-review-implementation-customers-who-should-pay/
7	Elxon response to Future Charging and Access programme – consultation on refined residual charging banding in the Targeted Charging Review	https://www.Elexon.co.uk/documents/industry-consultations/2019-industry-consultations/Elxons-response-to-ofgems-consultation-on-refined-residual-charging-banding-in-the-targeted-charging-review/