

P386 'Corrections and Clarifications to the P344 'Project TERRE' legal text'

Two incorrect provisions, as well as a number of opportunities to add clarity and correct manifest errors have been identified in the approved P344 'Project TERRE' legal text. This Modification will ensure that the legal text accurately reflects the P344 Workgroup's intended solution, as approved by the BSC Panel and the Authority.



ELEXON recommends P386 is progressed directly to the Report Phase with an initial recommendation to approve

This Modification is expected to have a low impact on:

- BSC Parties
- ELEXON

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About This Document

This document is an Initial Written Assessment (IWA), which ELEXON will present to the BSC Panel on 9 May 2019. The Panel will consider the recommendations and agree how to progress P386.

There are three parts to this document:

- This is the main document. It provides details of the Modification Proposal, an assessment of the potential impacts and a recommendation of how the Modification should progress, including the Workgroup's proposed membership and Terms of Reference.
- Attachment A contains the P386 Proposal Form.
- Attachment B contains the P386 proposed legal text.



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1 Why Change?

Background

P344 'Project TERRE implementation into GB market arrangements' was implemented on 28 February 2019, as part of the February 2019 BSC Release. This was a substantial change, impacting 88 BSC documents. Whilst the documentation was implemented, only the provisions relating to Market Entry and registrations are currently active. The system and TERRE go live is scheduled for December 2019, when all BSC obligations will become active.

P344 'Project TERRE implementation into GB market arrangements'

Project TERRE (Trans European Reserves Exchange) was developed by a group of European Transmission System Operators (TSOs). National Grid ESO participated on behalf of Great Britain (GB). Project TERRE will implement a new Replacement Reserve (RR) balancing product. Project TERRE will fulfil incoming legal requirements on TSOs included in the European Electricity Balancing Guideline (EB GL). The EB GL requires those TSOs that use RR¹ to implement and make operational a new European platform for the exchange of energy. The TERRE product will harmonise the despatch of RR across several TSO areas including Great Britain, France, Italy, Portugal, Spain, Switzerland, Romania, Poland, Hungary and Bulgaria (Greece, Czech Republic and Norway are currently observers).

The EB GL came into force on 18 December 2017, and the legal deadline for National Grid to utilise the TERRE platform for GB balancing of RR products will be 18 December 2019 subject to intermediary proceeding.

P344 Solution

P344 aligned the BSC with the European Balancing Project TERRE requirements. This was in order to allow the implementation of the project at national level and be compliant with the first portion of obligations in the European Network Codes (ENCs).

National Grid worked in collaboration with the Department for Business, Energy and Industrial Strategy (BEIS), Ofgem and ELEXON on deciding the GB implementation approach to obligations stemming from the EB GL. The outcome of these discussions was that the GB implementation approach to the EB GL requirements seek to maximise the exchange or cross border (XB) products in a manner that is proportionate to, and recognises the specific need of GB balancing.

The TERRE product has enabled all TERRE participating Balancing Service Providers (BSPs) to submit bids (upwards or downwards) to their national TSO (i.e. National Grid for BSPs in GB) on an hourly basis to fulfil 15 minute delivery periods. The TSO will forward these Bids to a central platform (termed LIBRA) which will process them in order to meet the Replacement Reserve (RR) requirements specified by TSOs. Activations and associated delivery instructions will be passed back to the BSP via the national TSO.

P344 has implemented the TSO-BSP Settlement solution of the TERRE balancing product within the GB electricity market arrangements. It facilitates payments between National

¹ Replacement Reserves (RR) are formally defined within the legally-binding European 'Guideline on System Operation' ([Commission Regulation \(EU\) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation](#)).

Grid and GB BSPs for activations issued to GB BSPs by the LIBRA platform via National Grid. Payments to BSPs are subject to validation of expected delivered volumes against actual metered data (with any non-delivery subject to imbalance charges and potentially additional Non-Delivery Charges). Project TERRE has also introduced a TSO-TSO settlement process (which will, for example, pay National Grid for RR delivered by GB BSPs to meet a non-GB requirement); but this is outside the scope of P344 (and of the BSC).

TERRE implementation in the GB market has interlinked impacts with National Grid's Grid Code (GC) through Modification [GC0097 'Grid Code Processes Supporting TERRE'](#) which focusses on the physical balancing of the system, from bid formats to the dispatch of BSPs.

The P344 solution allows customers and independent aggregators (as mandated by the EB GL) to participate in the TERRE balancing product (using embedded generation or demand side response to deliver RR, independently of their electricity Supplier). The BSC changes for P344 have removed all BSC barriers to customers and independent aggregators participating directly in the existing Balancing Mechanism (BM)¹, although there may be other restrictions outside the BSC (e.g. in the Grid Code).

What is the issue?

The [P344](#) legal text was implemented on 28 February 2019 as part of the February 2019 BSC Release, with the go-live date for the balancing product scheduled for December 2019.

P344 was the largest Modification to be approved under the BSC and impacted 88 BSC documents. As the P344 implementation activities have progressed, inaccuracies, manifest errors and minor ambiguities have been identified that did not accurately reflect the Workgroup's intentions. Adding clarity will assist BSC Party understanding of the TERRE / Wider Access processes.

Proposed solution

This Modification proposes to correct the errors in the P344 legal text, detailed below, as well as provide clarification in time for December 2019, when the TERRE product will go live, and all BSC obligations become active.

This Modification will ensure that the legal text accurately reflects the P344 Workgroup's intended solution, as approved by the BSC Panel and the Authority, as detailed in the P344 Business Requirements. We believe the clarifications and corrections are self-evidently wrong or ambiguous.

The proposed solution to deliver P386 will:

P386 Proposed solution		
BSC Section	Type of Change	Description
J3.9.5	Manifest Error	Amend to clarify that Virtual Lead Parties (VLPs) (like other BSC Parties) are not able to benefit from the J3.9 provisions relating to Derogations (which are intended only for Party Agents).
K8.1.2	Clarification	Amend to clarify that only Half Hourly Metering Systems (as opposed to Non Half Hourly Metering Systems) can be registered in Secondary BM Unit.
K8.1.4	Clarification	Amend to include additional detail of the existing K8.1.3 requirement that Secondary BM Units can be classified as Production or Consumption.
Q4.3.2	Clarification	Added a reference to the specific Grid Code section (B4.5) that governs the submission of specific GC obligation omitted
S10.2.1 – 10.2.3	Clarification	Clarify that Metering Systems included in MSID Pairs must be Half Hourly Metering Systems. Consequential change from K8.1.2 (see above).
S11.2.3(d)	Manifest Error	Corrected to refer to BSC Procedure BSCP507 ('Supplier Volume Allocation Standing Data Changes) rather than BSCP508.
Annex S-2, 7.2.4 and 7.2.5	Manifest Error	Amend algebra to include correct subscripts
T1.2.2	Manifest Error	Corrected to refer to (i) to (vii) rather than (i) to (v).
T3.4.2A	Correction	Algebra amended to bring it in line with the intent of P344 business requirement 20.1 (from the Final Modification Report), and deliver the intent of the solution. The business requirement includes a check that: $ \text{Acceptance Volume MW value} < \text{RR Schedule MW value} $

		and the algebra has been amended to clarify that the MW values referred to are the deviation from the baseline, not the absolute level of the instruction.
T3.18.1	Clarification	Clarify that $DSP_{it}^j(t)$ is to be defaulted to $DSP_{it}^{j-1}(t)$
T4.2A.1	Manifest Error	Remove unnecessary 'and' (typo)
T4.3B.4	Correction	Removed TLM_{ij} from the calculation of QSD_{ij2} , in order to avoid this volume being adjusted twice for transmission losses.
T4.4.2(a) T4.4.3(a)	Manifest Error	Amended to correctly balance the brackets.
T4.5.1	Clarification	Amended to clarify that Credited Energy Volume (QCE_{iaj}) is required in relation to Primary BM Units only.
T4.6.1	Clarification	Amended to clarify that Account Credited Energy Volume ($QACE_{aj}$) includes volumes for Primary BM Units only.
T4.6.4	Manifest Error	Amended to include Virtual Balancing Accounts
T4.7.1	Clarification	Amended to clarify that Energy Imbalance Cashflow is required for Virtual Balancing Accounts, as per P344 business requirements.
T4.8.3 – 6 T4.8.11	Clarification	Clarification that accepted offer ranked set includes DSPO and IOD (as specified in 4.8.3)
T4.8.7 – 10 T4.8.12	Clarification	Clarification that accepted bid ranked set includes DSPB and IBD (as specified in 4.8.7)
T4.8.17-18 T4.8.20-21	Clarification	Brackets added around data item names.
Annex X-1	Clarification	Add 'Half Hourly' to MSID Pair description
Annex X-2	Manifest Error	Add acronym (RRAP _j) for Replacement Reserve Action Price, which was omitted in error.
Annex X-2	Manifest Error	Add acronym (RRAUSB _j) for Replacement Reserve Aggregated Unpriced System Buy Action, which was omitted in error.
Annex X-2	Manifest Error	Add acronym (RRAUSS _j) for Replacement Reserve Aggregated Unpriced System Sell Action, which was omitted in error.

Section C	Housekeeping	Replace references to Transmission Company with
Section F		NETSO to reflect intent of implemented Modification
Section H		<u>P369</u> 'National Grid Legal Separation changes to BSC'
Section Q		
Section S		
Annex S-2		
Section T		
Section X		
Annex X-1		
Section X		
Annex X-2		
BSCP15		
BSCP508		
CVA Data		
Catalogue		
Annex A		
CVA Data		
Catalogue		
Annex B		
CVA Data		
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CVA Data		
Catalogue		
SAA SD		
SVA Data		
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Double Accounting of Transmission Losses in the Approved P344 Solution

As described above we are correcting a manifest error in T4.3B.4 to remove Transmission Loss Multiplier TLMij from the calculation of Period Secondary BM Unit Supplier Delivered Volume (QSDij2), in order to avoid this volume being adjusted twice for Transmission Losses. This is because BSC Section T4.3B.4 was introduced by Modification P344, and calculates the Period Secondary BM Unit Supplier Delivered Volume (QSDij2) i.e. the energy delivered by a Secondary BM Unit as a result of receiving an acceptance from National Grid. As part of this calculation the Transmission Loss Multiplier (TLMij) is applied, to account for transmission losses:

$$QSDij2 = (QSDi2j * TLMij) * SPij2$$

Unfortunately this leads to double charging of transmission losses, because the TLMij adjustment will be applied again (for a second time) later in the settlement calculation:

- The QSDij2 value is aggregated (across all relevant Secondary BM Units) to give a Period Supplier BM Unit Delivered Volume (QBSDij) for each Supplier BM Unit (T4.3B.5).
- The QBSDij value is included in the value of QBSij for the Supplier BM Unit (BSC Section T4.3.2). Note that none of the other quantities included in QBSij have yet been adjusted for transmission losses (and therefore QBSij is a mixture of adjusted and non-adjusted values).
- The QBSij value is then multiplied by TLMij and aggregated across all of the Supplier's BM Units, to give the Account Period Balancing Services Volume (QABSaj) – see T4.6.2. At this point the element of QBSij that came from QBSDij has had TLMij applied to it twice (double-correcting for transmission losses).

This was not an intended feature of the P344 solution. There is no reason for any energy volume in Settlement to be adjusted for Transmission Losses twice. To correct the issue, BSC Section T4.3B.4 must be amended to remove the adjustment for transmission losses:

$$QSDij2 = (QSDi2j * TLMij) * SPij2$$

Bids Offers Acceptance (BOA) and Replacement Reserve (RR) interaction

We have amended T3.4.2A for correction purposes to align with the Business Requirements for P344. P344 business requirement BR20 (developed by the P344 Workgroup) is intended to ensure that Settlement works appropriately when an RR Schedule (derived from the results of the TERRE auction) is in the same direction (up or down) but larger in magnitude than a previously-issued BOA. For example, consider a scenario in which:

- The Final Physical Notification (FPN) is 40 MW
- The BM Unit receives a 100 MW RR Activation (and associated RR Schedule) increasing its output from 40 MW to 140 MW)
- A 60 MW Bid Offer Acceptance (BOA) is issued to the BM Unit, before it receives the results of the Auction, increasing its output from 40 MW to 100 MW

In this situation, BR20 requires that the RR Activation should take precedence in Settlement (so the BM Unit is paid for increasing its output at the TERRE auction price, not the Offer Price).

The above scenario is handled correctly by the P344 legal text, but other scenarios are not. For BR20 to work correctly in all cases, the magnitude of the BOA and the RR Schedule (used in testing whether the BR20 applies) must be calculated from the correct baseline (i.e. the Final Physical Notification, as modified by any previous instructions). The P344 legal text does not do this, but instead uses the absolute magnitude of the acceptance (i.e. measured from a baseline of zero). The following scenario illustrates the problem:

- The Final Physical Notification (FPN) is 80 MW
- The BM Unit receives a 40 MW downwards RR Activation (and associated RR Schedule) decreasing its output from 80 MW to 40 MW
- A 70 MW Bid Acceptance is issued to the BM Unit, before it receives the results of the Auction, decreasing its output from 80 MW to 10 MW

In this case we understand that the intent of the Workgroup was that the Lead Party should pay for the 40 MW RR Activation at the TERRE Clearing Price, and the additional 30 MW of Bid Acceptance at the Bid Price. However, because the Bid takes the BM Unit to 10 MW (which is smaller in magnitude than the 40 MW level of the RR Schedule), the current legal text would entirely disregard the Bid i.e. the only payment would be for the 40 MW RR Activation. The revised legal text resolves this issue by measuring the size of a BOA or RR Schedule based on its difference from the baseline (not the absolute level to which the BM Unit was despatched), in order to achieve the intent of the Workgroup.

Virtual Balancing Accounts

BSC Section T4.7.1 has been amended correct that Energy Imbalance Cashflow is required for Virtual Balancing Accounts, as per the P344 business requirements. The intent of the P344 Workgroup (as documented in the Business Requirements and Modification Report) is that Virtual Lead Parties (VLPs) should be exposed to Imbalance Charges on any Bid Offer Acceptance or RR Activation that they do not deliver (in the same way that a Supplier or Generator would be). BSC Section T4.6.3 has therefore been amended to calculate an Imbalance Volume for Virtual Balancing Accounts as well as Energy Accounts. Unfortunately the same change was not made to the calculation of Energy Imbalance Charges in T4.7.1. This Modification includes Virtual Balancing Accounts in T4.7.1, in order to provide clarity that VLPs are subject to Imbalance Charges (on non-delivered volumes).

P369 'National Grid Legal Separation'

On the 1 April 2019 a new legal entity National Grid Electricity System Operator (NGESO) was established within the National Grid (NG) Group, that is legally separate from the transmission owner, NG Electricity Transmission (NETSO) to take on the role of the Electricity System Operator (ESO).

The Modification [P369 'National Grid Legal Separation'](#) introduced a definition for the term 'National Electricity Transmission System Operator' and abbreviation 'NETSO' to refer to the entity named National Grid Electricity System Operator Limited. There are a number of instances in the BSC where this update was not done. Therefore, we have taken the opportunity in this Modification to amend reference to the Transmission Company and replace them with NETSO.

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Applicable BSC Objectives

Impact of the Modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence	Neutral
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	Neutral
(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	Neutral
(d) Promoting efficiency in the implementation of the balancing and settlement arrangements	Positive
(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]	Neutral
(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation	Neutral
(g) Compliance with the Transmission Losses Principle	Neutral

This Modification will better facilitate Applicable BSC **objective (d)** as it will promote efficiency in the implementation of the balancing and settlement arrangements by adding clarity and correcting errors in the P344 solution. This will enable P344 to be better aligned with the Workgroups intention.

Implementation approach

Implementation of this Modification should be on **7 November 2019**, as part of the BSC November Release. This will allow clarifications to be made to the P344 solution, before the TERRE product will go live, and all BSC obligations become active. This is the next available BSC Release.

3 Proposed Progression

Next steps

This Modification is not a housekeeping change as we are proposing to add material changes to better align with Workgroup intentions, particularly in Section T.

The Proposer requests that this Modification be sent directly to the Report Phase and hence be subject to the Report Phase Consultation. This is because the solution of this Modification has been derived from the P344 'Project TERRE' solution, which has been subject to industry consultation. Further, this Modification is clarifying and correcting manifest errors in the legal text, to accurately reflect the Workgroup's solution. These corrections are self-evidently needed.

Self-Governance

The Proposer requests that this Modification be progressed as a Self-Governance Modification as this Modification is supporting the P344 solution. This Modification does not require any changes to the solution ELEXON is implementing, and we do not anticipate it to impact market participants. Therefore, P386 does not have a detrimental material effect on the Self-Governance Criteria.

At this time we **do not believe** this proposal, if sent directly to the Report Phase, should be treated as Urgent.

Timetable

This table below displays the proposed progression of the Modification.

Proposed Progression Timetable	
Event	Date
Present Initial Written Assessment to Panel	9 May 2019
Report Phase Consultation (14WDs)	13 May – 31 May 2019
Present Draft Modification Report to Panel	13 June 2019
Final modification Report published	17 June 2019
Self- Governance Appeal Window (15 Working Days)	15 June - 3 July 2019



What is the Self-Governance Criteria?

A Modification that, if implemented:

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

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4 Likely Impacts

P386 Estimated Costs

Implementing the changes into the relevant BSC Sections required by this Modification will cost approximately £1800.

Anticipated Industry Costs

We do not anticipate there to be any market participant impact or costs arising from the implementation of this solution as the changes impact central system processes and not Party obligations. We seek clarification of this via the Report Phase Consultation.

BSC Central Systems

This is a document only change for ELEXON. Some of the clarifications to Section T relate to the P344 changes that the ELEXON service provider is currently making to the Settlement Administration Agent (SAA) system. No re-work to the system design will be needed, because the Modification is aligning the legal text with the service provider's design. In most cases this was because the intent of P344 was already clear to the ELEXON service provider from the P344 business requirements and legal text. In the specific case of the clarification to Section T4.3B.4 it was because ELEXON requested the service provider to include the clarification in their design in order to avoid a manifest error in Imbalance Charges. None of the clarifications introduced by this Modification have other impacts and they are not thought to impact ELEXON processes in any way.

Impact on BSC Parties and Party Agents

Party/Party Agent	Potential Impact
Parties /Party Agents	A Party/ Party agent that has modelled their calculations based on the current Section T drafting, which are not correct will be required to amend this. This understanding should be verified via the Modification consultation(s).

Impact on Transmission Company

None

Impact on BSCCo

Area of ELEXON	Potential Impact
None	None

Impact on BSC Settlement Risks

None

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Impact on BSC Systems and processes	
BSC System/Process	Potential Impact
SAA	No impact, as proposed clarifications are consistent with the design for P344 changes to SAA.

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Potential Impact
None	None

Impact on Code	
Code Section	Potential Impact
Section X1	Clarification and correcting manifest errors.
Section S	
Section S2	
Section J	
Section K	
Section X2	
Section T	
Section Q	
Section X2	
Section C	
Section F	
Section H	

Impact on Code Subsidiary Documents	
CSD	Potential Impact
None	None

Impact on other Configurable Items	
Configurable Item	Potential Impact
None	None

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Ancillary Services Agreements	

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Impact on Core Industry Documents and other documents	
Document	Potential Impact
Connection and Use of System Code	None
Data Transfer Services Agreement	
Distribution Code	
Distribution Connection and Use of System Agreement	
Grid Code	
Master Registration Agreement	None
Supplemental Agreements	
System Operator-Transmission Owner Code	
Transmission Licence	
Use of Interconnector Agreement	

Impact on a Significant Code Review (SCR) or other significant industry change projects
We don't believe that this Modification impacts any ongoing SCRs. We requested SCR exemption from the Authority on 2 May 2019. We have not received a response yet, therefore we will be verbally updating the BSC Panel on 9 May 2019.

Impact on Consumers
The day to day operation of Balancing and Settlement would remain unaffected so there would be no direct impact to consumers.

Impact on the Environment
The day to day operation of Balancing and Settlement would remain unaffected so there would be no direct impact to the environment.

5 Recommendations

We invite the Panel to:

- **AGREE** that P386 progresses directly to the Report Phase;
- **AGREE** that P386:
 - **DOES** better facilitate Applicable BSC Objective (d);
- **AGREE** an initial recommendation that P386 should be **approved**;
- **AGREE** an initial Implementation Date of:
 - 7 November 2019
- **AGREE** the draft legal text;
- **AGREE** an initial view that P386 should be treated as a Self-Governance Modification; and
- **NOTE** that ELEXON will issue the P386 draft Modification Report (including the draft BSC legal text) for a 14 Working Day consultation and will present the results to the Panel at its meeting on 13 June 2019.

Appendix 1: Glossary & References

Acronyms

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

Acronym	
Acronym	Definition
BEGCT	Balancing Energy Gate Closure Time
BEIS	Department for Business, Energy and Industrial Strategy
BSC	Balancing and Settlement
EB GL	Electricity Balancing Guideline
ENC's	Energy Network Codes
ESO	Electricity System Operator
HH	Half Hourly
IWA	Initial Written Assessment
RR	Replacement Reserve
SAA	Service Description for Settlement Administration
TERRE	Trans European Replacement Reserves Exchange
TSO	Transmission System Operator
MSID	Metering System Identifier
VBA	Virtual Balancing Accounts
VLP	Virtual Lead Parties
XB	Cross Border

DTC data flows and data items

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

DTC Data Flows and Data Items	
Number	Name
None	

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
3	P344 'Project TERRE'	https://www.elexon.co.uk/mod-proposal/p344/

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External Links		
Page(s)	Description	URL
3	European 'Guideline on System Operation'	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1485&from=EN
4	GC0097 'Grid Code Processes Supporting TERRE'	https://www.nationalgrideso.com/codes/grid-code/modifications/gc0097-grid-code-processes-supporting-terre

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