

## Stage 03: Assessment Report

What stage is this document in the process?

- 01 Initial Written Assessment
- 02 Definition Procedure
- 03 Assessment Procedure
- 04 Report Phase

# P240: Switching Plant and Apparatus between BM Units

Currently the BSC does not allow Generating Plant to be moved from one BM Unit to another in operational timescales, except by re-registering the BM Units which takes 30 working days.

P240 proposes to allow Power Park Units to be moved between BM Units in operational timescales. The arrangements would apply in the case where Exports from and/or Imports to Plant and Apparatus may be electrically switched between transmission connections.



Modification Group recommends Approval of modification P240 'Switching Plant and Apparatus between BM Units'



High Impact: Intermittent generators



Medium Impact: ELEXON and the Transmission Company



Low Impact: Impact on the Central Registration Agent and Central Data Collection Agent

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## Any questions?

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## About this document:

This document is an Assessment Report, which ELEXON will present to the Panel on 12 November 2009, on behalf of the P240 Modification Group. The Panel will consider the recommendations on the final page, and agree an initial view on whether or not this change should be made.

There are 4 documents for this Assessment Report:

- This is the **main document**. It outlines the solution, impacts, costs, benefits and implementation approach for the change. It includes the Group's recommendation as to whether the change should be approved.
- **Attachment A** provides further supporting details of how the Group's discussions have led it to its initial views. It also includes a summary of the industry responses to the Group's consultation.
- **Attachment B** contains the Group's agreed legal text for the necessary changes to the BSC.
- **Attachment C** contains the Group's agreed redlined changes to BSCP03, BSCP15 and BSCP75, which support the P240 legal text.

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## Why Change?

Currently the BSC does not allow Generating Plant to be moved from one BM Unit to another in operational timescales, except by re-registering the BM Units which takes up to 30 Working Days.

## The Issue

For offshore wind farms that have multiple connections to shore, there are a number of scenarios in which a Party may wish to switch the output of individual Wind Turbine Generators from one connection to another (e.g. in response to faults or maintenance). The rules governing BM Unit configurations in Section K of the BSC do not support this capability.

## Solution

P240 proposes to amend Section K of the code to allow plant and apparatus that comprise Power Park Strings to be moved between BM Units in operational timescales. The arrangements would apply in the case where Exports from and/or Imports to Plant and Apparatus may be electrically switched between transmission connections.

## Impacts & Costs

P240 will require changes to the BM Unit registration process, which is set out in Section K3 of the BSC to enable plant and apparatus to 'switch' between BM Units in operational timescales.

The costs of implementing these changes will be 14 man days (**£3.3K**) of ELEXON effort. The costs for BSC Agent to deliver the manual solution (that allows switching between multiple sets of Aggregation Rules) will be **£4K**.

There are no implementation costs for the Transmission Company.

## Related changes

P240 progresses one of the recommendations of the [Issue 37](#)<sup>1</sup> Group. This Group considered 4 issues with the BSC metering and BM Unit requirements, including two related Offshore generation issues that are being progressed as Modifications:

**Modification Proposal P237**<sup>2</sup> would allow an Offshore intermittent generator to register two or more of its Power Park Modules as a single BM Unit; and

**Modification Proposal P238**<sup>3</sup> would allow Offshore Power Park metering to be installed on the offshore platform at a location other than each commercial Boundary Point to determine the Exports (or Imports), provided that appropriate compensation is applied to meter readings to account for losses between the location of the metering and the commercial boundary.

## Implementation

The Group agreed that the manual solution of switching of Aggregation Rules does not require any system changes, the implementation date for BSC/BSCP changes should be **5**

**Where can I find full technical definitions of these terms?**

You can find the full BSC definitions of Power Park Module, Generating Unit and BM Unit in [Annex X-1](#) and [Section K3](#).

All Grid Code definitions are contained in the Grid Code [Glossary and Definitions](#).

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<sup>1</sup> 'Boundary Point Metering and BM Unit Issues in Section K'

<sup>2</sup> 'Standard BM Unit configuration for Offshore Power Park Modules'

<sup>3</sup> 'Removal of the requirement to meter each Boundary Point for Offshore Power Park Modules'

**WDs** after an Authority decision (in alignment with the implementation date of Mod P237/238).

## The Case for Change

The Group's final view is that implementation of P240 would better facilitate Applicable BSC Objectives (b) and (c).

The Group also agreed that there are wider benefits when combined P240 with P237 and P238.

## Recommendation

**P240 Modification Group recommends the Panel to approve Modification P240 'Switching Plant and Apparatus between BM units'.**

## 2 Why Change?

The Grid Code allows for Power Park Units (PPU i.e. generating unit) to be switched from **Power Park Module** (PPM) to PPM ([Planning Code](#) A.3.2.2 (k)). This is considered an operational change, with a simple operational notification to the GB System Operator of the number of Power Park Units (PPUs) of each different type on each PPM that is changed.

However the BSC, in Appendix K3.1.3, prohibits Plant and Apparatus from being comprised in more than one BM Unit. The change of a PPU from PPM to another PPM may be seen as changing Plant and Apparatus from one **BM Unit** to another.

Under the current arrangements, the BSC would not allow strings of turbines to be switched from one transformer to another without going through a **re-registration process** (with a lead time of at least 30 Working Days)

The time scale and the need for a re-registration process may pose a significant issue for certain offshore wind farms included in the new Offshore Transmission Regime where output can be electrically switched between transmission connections.

### Background and related changes

On the 14 May 2009 we presented a paper to the BSC Panel on two issues relating to metering requirements for Combined Cycle Gas Turbine (CCGT) Modules and PPMs. One of the issues identified was the inability to switch assets between BM Units. The BSC Panel raised **Standing Issue 37** (Boundary Point Metering and BM Unit Issues in Section K). The Issue 37 Group met on the 3<sup>rd</sup> and 27<sup>th</sup> June 2009 and identified potential solutions to these issues.

The Group agreed that there are a number of scenarios in which wind farms with more than one connection to shore may wish to switch the output of certain Wind Turbine Generators from one connection to the other. This would typically occur when one of the offshore circuits cannot be used (due to faults or maintenance), and the generator therefore wishes to reconfigure the network to make full use of the remaining capacity.

The Group agreed that the BSC does not currently allow this type of operational reconfiguration and therefore agreed that the current BSC drafting will severely constrain the ability of Generators with more than one connection to shore to maximise their generation during conditions of network fault or maintenance.



#### Re-registration process

The BM Unit re-registration process takes about 30 working days, and may therefore not be a practical way to manage a short-notice operational reconfiguration (for example, in response to a fault). The BSC only allows Plant/Apparatus to be contained in one BM Unit at a time.

Modification P240 proposes that the BSC should be amended to support the Grid Code provisions for switching of Power Park Units between Power Park Modules (and hence between BM Units). Where the Grid Code permits a Power Park Unit to move from one BM Unit to another, the BSC and its associated Settlement processes should not prevent this.

Although this issue was identified in relation to Offshore Power Park Modules, it potentially applies onshore as well. The proposed P240 solution therefore applies to **all Power Park Modules**. This is also consistent with the Grid Code provisions for submission of a **Power Park Module Availability Matrix** (which is designed to achieve certainty in knowing the number of Power Park Units Synchronised to meet the Physical Notification and to achieve a Bid-Offer Acceptance) to the Transmission Company.

### Notification of When Switching Takes Place

The Modification Group discussed whether a new process was required to inform BSC Agents and/or BSC Parties when a Power Park Unit is switched between BM Units, but concluded that no new processes are required.

No change is required to Settlement as a result of switching (except when **Aggregation Rules** change, which is discussed separately in Attachment A section 2), and for that reason there would be no benefit in a new requirement to notify BSC Agents of switching.

If a switching event changes the expected output of a BM Unit, this will be notified to Parties through the existing processes for reporting of Physical Notifications and Maximum Export Limits. The Modification Group concluded that this is sufficient, and therefore no additional notification from Parties is required.

### Changes to Aggregation Rules

Where changes of Aggregation Rules are required, the Group agreed the insertion of Section R3.2.5A of the BSC (please refer to Attachment B draft Legal Text for more details) would clarify the new process:

- When first registering the Aggregation Rules, the Lead Party would provide more than one set of Aggregation Rules, each reflecting a different operating configuration;
- Each set of Aggregation Rules would be validated in accordance with normal procedures;
- When the operating configuration of the site changed, the Lead Party would fax/email the CDCA with details of which pre-validated configuration was to be used, and the time at which it would come into effect. The CDCA would then update central systems (prior to Interim Information Volume Allocation Run) to use the stated Aggregation Rule.

The BSC Agent impact assessment has identified a constraint in the CDCA software that prevents changes to Aggregation Rules from becoming effective at any time other than the start of a Settlement Day (i.e. midnight). Removing this constraint would require significant changes to the CDCA software, the cost of which has been assessed at £63k. The Modification Group do not believe that there is a clear case for making this investment, and the detailed proposed solution can be found in section 2 of Attachment A.

The Modification Group envisages the process will be invoked infrequently. If it turns out to be used more frequently, it may be appropriate to reconsider whether to amend the



#### Power Park Module Availability Matrix

You can find a Power Park Module Availability Matrix example form in [Balancing Code](#) BC1.A.1.8 of the Grid Code.



#### What are Aggregation Rules?

Aggregation Rules are rules submitted by the Lead Party of a BM Unit that specify which meter registers should be aggregated to derive the Metered Volume for that BM Unit.

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CDCA software. The Group notes that ELEXON would have the power to propose such a change (in accordance with BSCP40).

**Has the Group identified any other solutions?**

The Modification Group has not identified any alternative solution which it believes might better address the issue.

## 4 Impacts & Costs

The impact on Settlement processes of Power Park Units moving between BM Units depends to a large extent on whether the BM Unit Aggregation Rules are affected:

- If no changes to the Aggregation Rules are required, there will be minimal impact on Settlement processes. As explained in below, the view of the Modification Group is that no additional notification to Settlement will be required. For this type of BM Unit, P240 is essentially a 'documentation only' change that amends the BSC legal text to remove barriers to switching of Power Park Units between BM Units.
- Where a change of Aggregation Rules is required, additional processes will be required to support this. Example configuration 2 in section 2 Attachment A illustrates a configuration that would fall into this category (assuming metering was placed on the ownership boundary).

### BSC Impact

#### Changes to the BSC

Where changes of Aggregation Rules are required, the Group agreed the insertion of Section R3.2.5A of the BSC (please refer to Attachment B draft Legal Text for more details) would clarify the new process.

#### Changes to BSCP03<sup>4</sup>

The changes to BSCP03 include adding a new process 'data correction of a BM Unit in a Switching Group' to allow a Lead Party to request correction for an error that has occurred in Trading Charges as a result of the CDCA not applying the Aggregation Rules for a Switching Group until midnight following the time of the change.

#### Changes to BSCP15<sup>5</sup>

The changes to BSCP15 are minor and include adding a new check box 'a change in the Switching Group to which the BM Unit belongs' in BM Unit registration (BSCP75/4.1) so that the initial registration form has provision to indicate whether a BM Unit belongs to a Switching Group (per BSC Section K 3.2.3). A new table 'Switching Groups' along with an example have been added in BSCP75/4.1 'Registration of BM Unit' to allow input of which BM Units are within a Switching Group.

#### Changes to BSCP75<sup>6</sup>

The changes to BSCP75 include adding a new process 'Notification of Operational Switching'. This process is applicable to Power Park Module BM Units that are capable of operational switching.

A new form 'BSCP75/4.4 Election of Pre-Registered Aggregation Rule for Switching Group' has been added to elect to switch Aggregation Rules for the following BM Units (in order to reflect a change in operational configuration).



#### **BSCP changes**

ELEXON will consult on both the legal text and redlined BSCP changes during the **Report Phase** for P240.

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<sup>4</sup> BSCP03 – 'Data Estimation & Substitution for Central Volume Allocation'

<sup>5</sup> BSCP15 – 'BM Unit Registration'

<sup>6</sup> BSCP75 – 'Registration of Meter Aggregation Rules for Volume Allocation Units'



## Grid Code Impact

ELEXON does not anticipate that any changes will be required to the Grid Code. The Transmission Company also confirmed the P240 solution and legal text are consistent with the Grid Code requirements. Detailed Transmission Company impact assessment responses can be found [here](#).

National Grid confirmed via assessment consultation that:

- P240 will not impact National Grid's ability to discharge its obligations efficiently under the Transmission Licence. Allowing wind energy to export onto the National Electricity Transmission System which would otherwise have been 'sterilised' due to outage conditions will have no additional effect on National Grid's ability to operate an efficient, economical and co-ordinated system when compared with the situation that would have prevailed had the energy not been sterilised in the first place;
- P240 will not impact National Grid's systems or processes, with the exception of a potential desire for additional information provision under the Grid Code;
- P240 will not introduce any additional issues relating to security of supply. National Grid does not expect to incur additional operational costs or benefits as a result of the implementation of P240 over and above those that would have been incurred anyway were it not for the fact that, without P240, an outage would sterilise some of the energy capability of an offshore power park module. National Grid does not expect to incur any implementation costs associated with P240; and
- National Grid is considering whether it desires additional information regarding offshore power park module availability configurations over and above those catered for in Grid Code BC1.A.1.8.1. Note that any such Grid Code changes would be stand-alone and the implementation of P240 would not be contingent on them being in place.

## Generation Capacity Impact

Section K3.4 requires the Lead Party of a BM Unit to notify a Generation Capacity that represents its view 'in good faith and as accurately as it reasonably can' of the maximum expected generation for a BSC Season.

If unexpected switching of Power Park Units between BM Units causes one of the BM Units to exceed its notified Generation Capacity, the existing provisions of K3.4.3 will require the Party to re-notify a higher value. The Modification Group believe that these existing provisions are adequate, and that no changes to the process are required (particularly as Generation Capacity data is no longer used for assessing Generator's Credit Cover requirements, following implementation of Modification P215 'Revised Credit Cover Methodology for Generating BM Units').

## BSC Costs

The costs of implementing P240 are 14 man days (**£3.3K**) of ELEXON effort to implement the BSC/BSCP changes.

## BSC Party Costs

The Lead Party for a BM Unit would be required to notify CDCA when the operating configuration of the site changed. The Lead Party would fax/email the CDCA with details of which pre-validated configuration needed to be used, and the time at which it would come into effect. The only impact would be for BSC Parties with BM Units that have additional Aggregation rules to update their internal processes for notifying CDCA.

## BSC Agent Costs

The BSC Agent has provided an impact assessment that sets out how a change in Aggregation rules arising from a switching event would impact the CDCA systems.

The Group used an assumption that no more than 10 switching events per year would be made and therefore the assessment included a manual solution as well as an automated solution to understand the difference in costs. The assumption of 10 events is based on the fact that there are very few configurations that could currently switch and that switching would occur for maintenance and occasional faults.

The Group's preference is for a manual solution to enable the switching of Aggregation Rules with an ability to make changes effective from times other than midnight in a manual process. The cost of this solution will be £4K. Further information is provided below:

- The BSC Agent provided the two options for supporting switching between multiple sets of Aggregation Rules:

Solutions that allow switching between multiple sets of Aggregation Rules		
Option	Description	Cost
1) Manual Solution for Switching of Aggregation Rules	P240 implementation with no system changes. Aggregation rules to change on a Settlement Day basis only (i.e. from Settlement Period 1 on the day after the switching event occurred)	<b>£1.3K</b>
2) Semi Manual Solution	Introducing functionality that would make use of the existing copy function within the CDCA system to simplify the process of switching to an alternative rule as all rules would be entered into the system and only need copying forwards upon notification to use an alternative rule.	<b>n.a. <sup>7</sup></b>

- As the BSC Agent Impact Assessment indicated that the cost of option 2 would be disproportionately high, the Modification Group chose option 1 over option 2.
- The impact assessments also identified a constraint in the current system that requires Aggregation Rule changes to come into effect at midnight. Two options for addressing this were identified:

Solutions that allow Aggregation Rule changes to come into effect within day		
Option	Description	Cost
3) System Changes for Switching Within Day	Introducing Period boundary for Aggregation Rules processing into the CDCA System.	<b>£63K</b>
4) Manual Solution for Switching Within Day	Using meter reading estimation to correctly allocate energy between BM Units for Settlement Periods where the 'incorrect' rule was present in the system. This would only be done where the incorrect allocation of	<b>£2.7K</b>

<sup>7</sup> In order to allow BSC Agent to store multiple rules on the CDCA system, a coding change on the Maintain Aggregation Rule Form would be required. The cost for this change will be substantive and could not be justified by the Group. No firm price was therefore provided.



### BSC Agent Impact Assessment

More detailed BSC Agent Impact Assessment can be found in section 3 of Attachment A.

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- The impact assessment also flagged up the second (unrelated) question of whether there should be a mechanism for making changes effective at times other than midnight. The options here are: Only allow changes at midnight (i.e. option 1 only), in which case there's the potential for material impact on Trading Charges (e.g. non-delivery charges). The Group felt that this would be inappropriate, as Parties could (on rare occasions) be exposed to spurious charges through no fault of their own.
- An automated solution for making changes effective at times other than midnight (i.e. option 1 + option 3). The Group felt that this would also be inappropriate, as the situation the solution is trying to address is too rare to justify an expensive automated solution.
- A manual solution for making changes effective at times other than midnight (i.e. option 1 + option 4). This is relatively inexpensive, and avoids the risk of exposing Parties to spurious charges, and is therefore the preferred solution.

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<sup>8</sup> BSCP03 - 'Data Estimation and Substitution for Central Volume Allocation'



### Recommendation

Modification Group recommends approval of the P240 and invites the Panel to approve the BSC and BSCP changes.

### When will P240 be implemented?

The Group's final view is that the Implementation Date of P240 should be **5 Working Days** after Approval is received from the Authority. All the consultation responses support this approach as no central system changes should be required.

**The Group has developed the BSCP03, BSCP15, BSCP 75 and BSC changes during the Modification Process, and invites the Panel to approve these changes (Attachment C) alongside the BSC legal text (Attachment B).**

### Examples of Offshore Aggregation Rules to BSCP75

The Modification Group also noted BSCP75 contains example Aggregation Rules for various different configurations of generator Plant and Apparatus. These include configuration diagrams which show how the location of metering, and the number of BM Units, affects Aggregation Rules.

At present, BSCP75 only includes example Onshore configurations. However, ELEXON and the Group agree that it would be useful for the BSCP to also include some Offshore examples, to give Offshore generators guidance on how to submit their Aggregation Rules.

The Group notes that what these examples will look like depends on whether P237 and/or P238 are also approved by the Authority. For example, P238 will affect where the metering is shown in the diagrams.

**The Group therefore agrees with ELEXON's suggestion that, once it has received the Authority's decisions on each of the current Offshore Modification Proposals, ELEXON will raise a separate Change Proposal to add examples of Offshore Aggregation Rules to BSCP75.**

The Group notes that, since the diagrams shown in the BSCP are only guidance, the absence of Offshore examples in the interim will not significantly impact Offshore development.

## 6 The Case for Change

### Group's discussions

The Group notes that the Grid Code allows for plant to be switched if it forms part of a Power Park Module. The BSC rules currently conflict with these provisions. There is no clear reason why the Settlement rules should prevent switching for Power Park Modules, particularly as the operational requirements allow for switching to occur.

This is a clear benefit to both the System Operator (SO) and the BSC Party in having its generated output made available to the system. Preventing switching could deprive the SO of volumes that could assist in managing the system. Additionally the Party can ensure the maximum available output can be delivered allowing it to meet any contractual obligations. Loss of output from a Power Park Module will impact the amount of energy that would be delivered from renewable sources, thus impacting broader energy efficiency targets.

In relation to the circumstance where a change in Aggregation rules would be required the Group noted that the Code already allows for multiple aggregation rules to be held for Range CCGT Modules<sup>9</sup> (Section R 3.2.5).

However the Central Registration Agent has never been asked to apply multiple aggregation rules for a CCGT unit. The systems cannot currently automatically process changes to the Aggregation Rules for a BM Unit.

The Group discussed whether the switching activity should be restricted to **Lead Party** and concluded that since the Lead Party takes responsibility to inform changes to the BM Units, P240 should only apply to BM Units of the same Lead Party (i.e. you cannot switch generating units between two Parties). The Transmission Company and all respondents to the Group's consultation support this approach.

Further, the Group noted all respondents supported proposed solution, and the changes to the BSC and subsidiary documents.

### Potential Benefits

For offshore wind farms, the inability to 'switch' under the current arrangement could cause significant loss of revenue due to being restricted from re-directing its output.

The Modification Group quantified the benefits for P240 as follows. In the circumstance where a fault prevents the output from a number of the turbines on a Power Park Module and this fault took 30 Working Days (hence 42 calendar days as the turbines turn everyday) to fix, the following loss in revenue could occur.

Assume the combined output is 150MW and the load factor (average output of energy) is 40% at a price of £50 per MWh the loss would be:

**$\text{£}50/\text{MWhour} \times 150\text{MW} \times 40\% \times 24 \text{ hours/day} \times 42 \text{ days} = \text{£}3 \text{ million per switching event}$**

Switching output ensures that the appropriate Renewable Obligation benefits can be available to the generator (and purchaser of ROCs) for the available volumes.



#### What is Lead Party?

Lead Party is the Party registered or to be registered in respect of the BM Unit.

<sup>9</sup> A CCGT Module where there is a physical connection by way of a steam or hot gas main between that CCGT Module and another CCGT Module or other CCGT Modules, which connection contributes (if open) to efficient modular operation, and which physical connection can be varied by the operator.

## Group's views of P240 benefits

The Group believes that P240 will better facilitate the achievement of **Applicable BSC Objectives (b) and (c)**. Further details are given in the table below.

Group's view of benefits of P241 against the Applicable BSC Objectives	
Description of Objective	Identified benefit
a) Efficient discharge of the obligations of the Transmission Licence.	None identified.
b) Efficient, economic and co-ordinated operation of the GB transmission system.	By allowing the assets to be switched between BM units for operational reasons, P240 will promote the efficient, economic and co-ordinated operation of the national electricity transmission system.  Availability to System Operator of volume that would otherwise be unavailable to help balancing due to inability to switch.
c) Promoting effective competition in the generation and supply of electricity and in the sale and purchase of electricity.	P240 would remove issues related to the re-registration process (in order to allow Generating Plant to be switched between BM units) for some new Offshore Transmission Regime where output can be electrically switched between transmission connections (as this will comprise most new build of PPM).  Parties can sell their output through switching volumes, and not incur loss of revenue.
d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.	None identified.

The Group identified an equal weighting between Objective (b) and (c).

One Group Member highlighted the environmental benefit of P240 after assessment consultation. For offshore wind farms, the inability to 'switch' under the current arrangement restricts the generation of the renewable energy. Since P240 proposes to remove such restriction from re-directing offshore wind farms' output, therefore would help to reduce the **carbon emission** caused by non-renewable energy. The Group agreed with this benefit and all respondents of the assessment consultation believed it would better facilitate Objective (b).

## Group's views regarding benefits of P240 when combined with P237/P238

The P240 Modification Group has also assessed two other proposals relating to the configuration of BM Units for Offshore Power Park Modules (P237) and the requirements for Metering for Offshore Power Park Modules (P238). The Assessment and Report consultations for these Modifications have been issued and responses from industry indicate that the ability to switch can be more effective if it is combined with the less onerous requirements for registering BM Unit configurations and Metering.

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The Group agreed that there are wider benefits when combine P240 with P237 and P238. For example, the number of occasions requiring the use of P240 will be reduced if P237 is approved, as the switching of plant and apparatus between power park modules might be able to take place within the same BM Unit. If P238 is approved, the potential for impact on meter aggregation may be reduced.

The Group remains convinced that, whilst P240 is an appropriate change in isolation it can deliver wider benefits when combined with P237/238. The discussion and examples of where the combined benefits can occur are detailed here:

[P237 Assessment Report](#) (page 14)

[P238 Assessment Report](#) (page 11 to 12)

## 7 Recommendations

The P240 Modification Group invites the Panel to:

- AGREE an initial recommendation that Proposed Modification P240 should be made;
- AGREE an initial Implementation Date for Proposed Modification P240 to be 5WD after an authority decision;
- AGREE the draft legal text for Proposed Modification P240;
- AGREE the draft BSCP changes;
- AGREE that Modification Proposal P240 be submitted to the Report Phase; and
- AGREE that ELEXON should issue P240 draft Modification Report for consultation and submit results to the Panel to consider at its meeting on 10 December 2009.

## 8 Further Information

More information is available in

### Attachment A: Additional Information

This information includes:

- Background information on the new Offshore Transmission regime;
- Worked examples of:
  - The effect of the P240 issue on different types of configuration for an Offshore intermittent generator; and
  - The wider benefits from combining P240 with P237 and P238.
- A summary of the industry responses to the Group's consultation;
- Details of the Group's membership;
- A copy of the Group's Terms of Reference; and
- A timetable showing the assessment activities which the Group has undertaken.

You can download copies of the full industry consultation responses and the Transmission Company's impact assessment [here](#).

### Attachment B: Legal Text Proposed

All consultation and impact assessment responses are on the [P240 page](#) of the ELEXON website.

### Attachment C: BSCP Changes Proposed

- BSCP03 changes
- BSCP15 changes
- BSCP75 changes

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## Stage 03: Attachment A: Additional Information

# P240: Switching Plant and Apparatus between BM Units

What stage is this document in the process?

01 Initial Written Assessment

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## About this document:

This is Attachment A to the Assessment Report. This attachment provides additional background, assessment consultation responses, including the BSC Agent Impact Assessment results.

# 1 Background and Related Changes

## Definitions

The term **Power Park Module** relates to generators who use an Intermittent Power Source. The Grid Code defines an Intermittent Power Source as being 'the primary source of power for a Generating Unit that cannot be considered as controllable (e.g. wind, wave or solar)'. A wind turbine is one example of an intermittent Generating Unit.

A **BM Unit** is a collection of Plant and/or Apparatus (K3.1.1) e.g. Generating Units such as wind turbines. It is not possible for a Party to place the same Generating Plant in more than one BM Unit (K3.1.3).

**Offshore Power Park String** is a collection of Offshore Generating Units that are powered by an Intermittent Power Source, joined together by cables forming part of a User System with a single point of connection to an Offshore Transmission System. The connection to an Offshore Transmission System may include a DC Converter.

## What changes are being progressed from Issue 37?

The P237 solution developed through discussions within the [Issue 37](#) Group. Issue 37 was raised to consider whether the current requirements for BM Unit configurations and metering are suitably flexible to accommodate the changing designs for generation, in particular for new offshore generation build.

Four changes to the BSC were recommended from Issue 37. The table below summarises each issue with the corresponding Modification reference under which the proposed solution has been raised. Three of the four changes impact Offshore Transmission, and while there are benefits associated with each change, the Issue group felt the combined benefits of all three changes together would be greater than for the individual changes. Should all the changes be approved there would be efficiency benefits from implementing all the changes in parallel.

**Table 1 – Proposed changes arising from Issue 37**

Issue 37 – Proposed Changes	
Modification	Description of change
P237 - Standard BM Unit configuration for Offshore Power Park Modules	To allow Parties the option of having a single (or reduced number of BMU's), subject to Transmission Company agreement, to reduce costs and administration.
P238 - Removal of the requirement to Meter each Boundary Point for Offshore Power Park Modules	To allow Parties to treat all Exports from (or Imports to) a Balancing Mechanism Unit comprising Offshore Power Park Modules as a single Export (or Import). The Party must ensure appropriate compensation is applied to meter readings to account for losses between the location of the metering and the commercial boundary.
P240 - Switching Plant and Apparatus between BM Units	To allow Parties to switch output between BM Units (without the need to re-register the BMU) to resolve issues such as loss of connection or partial plant failure.



### Where can I find full technical definitions of these terms?

You can find the full BSC definitions of Power Park Module, Generating Unit and BM Unit in [Annex X-1](#) and [Section K3](#).

All Grid Code definitions are contained in the Grid Code [Glossary and Definitions](#).

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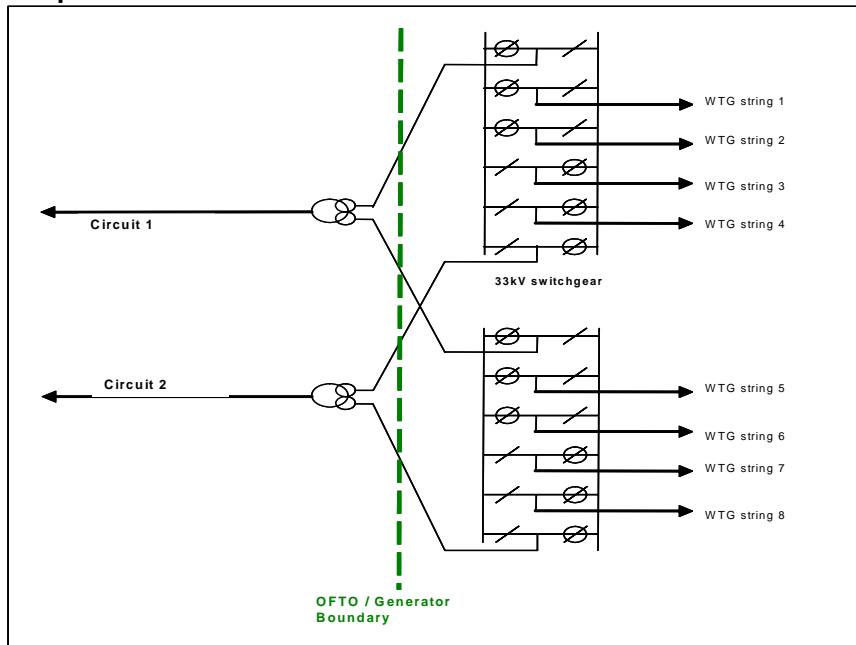
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<p>P241 - Relaxation of Requirement to Separately Meter Licensable Generating Units</p>	<p>To remove the requirement to separately Meter the flows to each Generating Unit within a Combined Cycle Gas Turbine (CCGT) Module with a single Boundary Point.</p> <p>Many sites only meter the net output at the CCGT Module's single Boundary Point, so they would be non-compliant with the BSC.</p>
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## 2 P240 Example Configuration

The following examples are taken from a paper ([ISG99/08](#)) presented to ISG and have also been used to facilitate the P237 discussions. The diagrams illustrate the P240 issue.

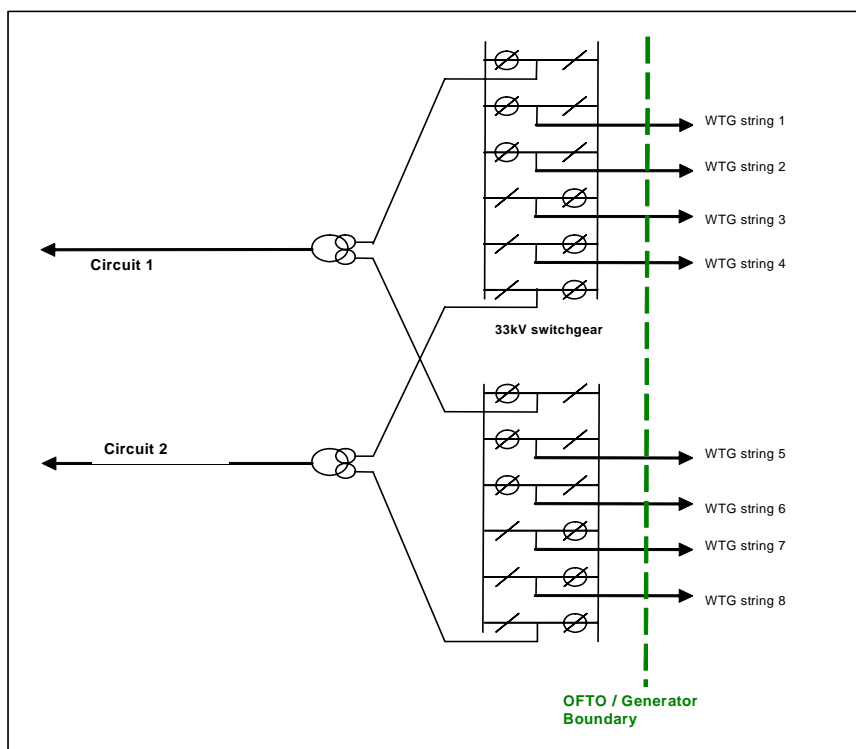
### Example 1



### Example 1

- Four BM Units, each with two WTG strings (or potentially two BM Units with four turbines each if P237 approved);
- Switchgear can change which turbine strings are in which BM Unit

### Example 2



### Example 2

- Same as example 1, but OFTO / Generator boundary is on individual strings
- Aggregation Rules would have to change when switches were changed

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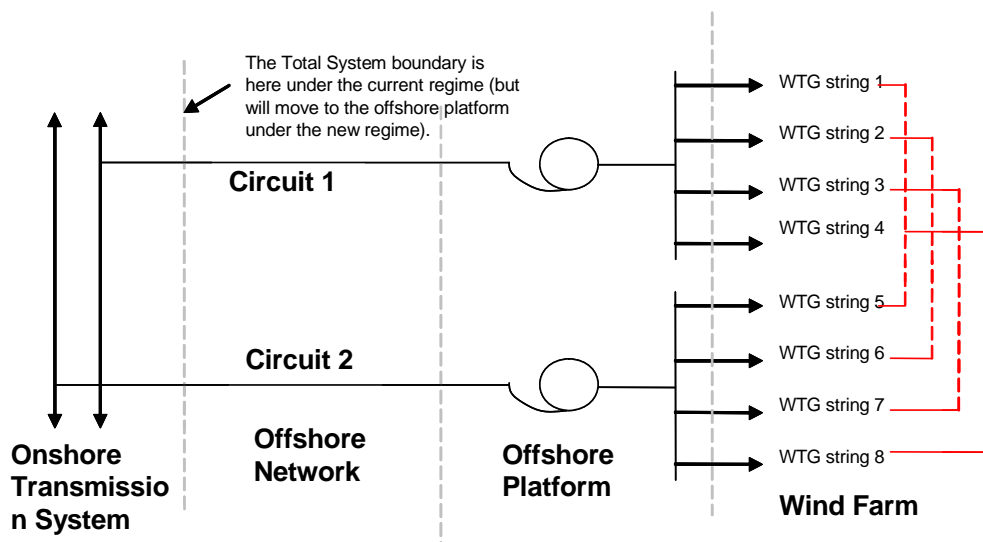
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### Example 3



### Example 3

- Connections between individual strings can be closed if there is a cable fault on one of the strings
- P240 would avoid the need to meter these transfers between strings

## Changes to Aggregation Rules

In many cases, depending on where metering is situated, the switching of Power Park Units between BM Units will not require any changes to Aggregation Rules. Example configurations 1 and 3 above provide illustrations of this.

In other cases, switching may require changes to Aggregation Rules. Example configuration 2 above would be an example of this (assuming that metering was installed at the boundary between Generator and Transmission Owner assets).

Where changes of Aggregation Rules are required, the Group agreed the insertion of Section R3.2.5A of the BSC (please refer to Attachment B draft Legal Text for more details) would clarify the new process:

- When first registering the Aggregation Rules, the Lead Party would provide more than one set of Aggregation Rules, each reflecting a different operating configuration;
- Each set of Aggregation Rules would be validated in accordance with normal procedures;
- When the operating configuration of the site changed, the Lead Party would fax/email the CDCA with details of which pre-validated configuration was to be used, and the time at which it would come into effect. The CDCA would then update central systems (prior to Interim Information Volume Allocation Run) to use the stated Aggregation Rule.

The BSC Agent impact assessment has identified a constraint in the CDCA software that prevents changes to Aggregation Rules from becoming effective at any time other than the start of a Settlement Day (i.e. midnight). Removing this constraint would require significant changes to the CDCA software, the cost of which has been assessed at £63k. The Modification Group do not believe that there is a clear case for making this investment, and the following solution is therefore proposed:

- Changes to Aggregation Rules notified to CDCA will be implemented at midnight following the time of the change;
- In the event that this system limitation has an impact on Trading Charges for the Lead Party (or a relevant Subsidiary Party), the Lead Party may request that ELEXON make an adjustment to metered data (in the period between the switching event and the start of the subsequent Settlement Day) to compensate for the incorrect Aggregation

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Rules. This might be necessary if (for example) one of the BM Units was subject to a Bid Offer Acceptance and the allocation of energy to the wrong BM Unit was exposing the Lead Party to Non-Delivery Charges; or if one of the BM Units was subject to a Metered Volume Reallocation Notification and the allocation of energy to the wrong BM Unit was therefore leading to Imbalance Charges;

- On receipt of the request, ELEXON would determine any adjustment to metered volumes required to correct the issue, and notify CDCA accordingly. Such an adjustment would not change the total amount of energy generated by the wind farm, but would potentially move energy from one BM Unit to another;
- CDCA would then implement the adjustment by manually changing the relevant meter readings;
- This new process is described in BSCP03 ('Data Estimation and Substitution for Central Volume Allocation').

The Modification Group envisages that this process will be invoked infrequently. If it turns out to be used more frequently, it may be appropriate to reconsider whether to amend the CDCA software. The Group notes that ELEXON would have the power to propose such a change (in accordance with BSCP40).

### 3 Assessment Consultation Responses

Table 2 summarises the views of the industry respondents to the Group's consultation, and of the Transmission Company (TC) in its impact assessment. You can download the full responses [here](#).

**Table 2 – P240 industry/Transmission Company responses**

	Question	Industry	TC	Conclusion:	See:
1	The Group believes P240 would better facilitate Applicable BSC Objectives (b) and (c). <i>Do you agree?</i>	5 Yes 0 No	Yes	Better facilitates	Main document: Section 6
2	The Group believe switching should be restricted to Power Park Modules only to remain consistent with the Grid Code. <i>Do you agree?</i>	5 Yes 0 No	Yes	Switching should be restricted to Power Park Modules only	Main document: Section 6
3	The Group believe P240 should only apply to BM Units of the same Lead Party. <i>Do you agree with this conclusion?</i>	5 Yes 0 No	Yes	Only apply to BM Units of the same Lead Party	Main document: Section 6
4	Do you support the implementation date to be 5 WDs after the Authority's decision?	5 Yes 0 No	Yes	Implementation Date 5WDs	Main document: Section 5
5	Are you aware of any Power Park Module configuration that would require multiple aggregation rules to be held by the CDCA?	3 Yes 1 No 1 Neutral	No	Multiple Aggregation Rules held by CDCA	Main document: Section 3
6	Do you agree that P240 provides additional benefit when combined with P237/P238?	5 Yes 0 No	Yes	Combined benefits with P237/238	Main document: Section 6
7	Are there alternative solutions that the Modification Group has not identified, that they should consider?	0 Yes 5 No	No	No alternative solutions	Main document: Section 3
8	Do you have any further comments on P240?	0 Yes 5 No	No	No further comments	n.a.

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### Summary

Modification P240 has been raised to address a number of issues which arise when Offshore Power Park Modules (Wind farms) switch configuration in response to operational events e.g. faults or planned maintenance. This Impact Assessment presents a package of 4 solutions which may be required to address the issues raised by this Modification. With the exception of the Manual element which is mandatory the other options can be ordered together or separately to meet ELEXON's requirements.

These solutions have been developed assuming a low level ( less than 10 switching events per year) of switching activity in line with guidance from ELEXON regarding the number of sites potentially able to switch in this manner, the probability of a switching event and a desire not to invest significant money in a solution which may be used infrequently (especially if related Modifications P237 and P238 are approved further reducing the likelihood of switching events impacting on the CDCA Aggregation Rules).

### BSC Services Agreement Impact Assessment

The BSC Agent has assessed P240 (in its capacities as BSC Agent and developer of the BSC Systems). These impact assessments identified two options **for supporting switching between multiple sets of Aggregation Rules**:

- Manual solution - P240 will be implemented with no system changes.
- Semi Manual solution - Introducing functionality that would make use of the existing copy function within the CDCA system to simplify the process of switching to an alternative rule as all rules would be entered into the system and only need copying forwards upon notification to use an alternative rule.

The impact assessments also identified a constraint in the current system that requires Aggregation Rule changes to come into effect at midnight. Two options for addressing this were identified:

- System Change solution - Introducing Period boundary for Aggregation Rules processing into the CDCA System.
- Manual solution - Using meter reading estimation to correctly allocate energy between BM Units for Settlement Periods where the "incorrect" rule was present in the system. This would only be done where the incorrect allocation of energy resulted in a material impact on any BSC Party, and the process for doing so would be described in BSCP03 ('Data Estimation and Substitution for Central Volume Allocation')

These impact assessment responses are detailed below:

#### Option 1 - Manual Solution for Switching of Aggregation Rules

Logica propose the following process for applying the revised Aggregation Rule when a Participant makes a switch of plant from one BM Unit to another under the P240 rules;

- Participants will send pre-approved Aggregation Rules to Logica who will store the information on a network file share. Participants will be limited to a maximum of 9 Aggregation Rules per BM Unit which must be clearly labelled with appropriate configuration references.



- After a switch has occurred, an authorised signatory of the registrant BSC Party for the BM Unit will contact the CDCA, informing of the switch and specifying which Aggregation Rule to apply and the Settlement Date from which this should apply. Notification should be given to Logica of a switching event within two working days of the switch taking place and within working hours. This ensures that the CDCA Interim Initial aggregation run operates using the correct rule and avoids changing the aggregation rules for historic dates which involves more effort.
- Logica will apply the requested Aggregation Rule and send a confirmation note back to the Participant.

## Option 2 - Semi Manual Solution

As part of the AMD solution Logica also investigated a method of entering the pre validated aggregation rules into the core CDCA system for past effective dates and then using the existing "Copy" functionality for aggregation rules to bring each rule into effect as required. The benefit of this scenario was to reduce the time taken to input and implement the Aggregation Rule and reduce the possibility of any typing errors.

The issue encountered with this solution was that the existing Copy function on the Aggregation Screen only works for the highest effective from date (i.e. evergreen rules). Therefore in order to allow Logica to store multiple rules on the CDCA system a code change on the Maintain Aggregation Rule Form would be required. Due to the expense of making this code change when weighed against the small advantage (especially compared to the improved manual solution) it offered, Logica decided not to price this solution for AMD or the Operate and Host.

## Option 3 – System Changes for Switching Within Day

A switching event under modification P240 is unlikely to occur at exactly midnight local time (i.e. at the start of Settlement Period 1) unless this is prescribed by the changes to the BSC. In practise the switch is likely to take place at the most operationally convenient time for the BSC Party concerned. The current software baseline, however, only allows CDCA Aggregation Rules to change on Settlement Day boundary so there will be a period of the switching day during which the "incorrect" aggregation rule is applied by CDCA.

In many cases (all BM Units within the Wind farm owned by the same participant, no Bid Offer Acceptances issued to either BM Unit on the switching day) this will have no material impact on the BSC Party registering the BM Units or any other Party and no further action will be required. However, in some cases there may be a material impact of the CDCA applying the aggregation rule to the incorrect configuration (following the switching) for part of the day.

Logica have assessed the impact of amending CDCA to allow Aggregation Rules to change within a Settlement Day. This would require the following changes to the CDCA system:

- The Aggregation Rule table would be amended to include the effective from and to Settlement Period values.
- Amendments to the Maintain Aggregation Rule form
- Amendments to the Valid Aggregation Rule Report (used by CDCA to validate Aggregation Rules)
- Amendments to the Aggregation process itself

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#### Option 4 - Manual Solution for Switching Within Day

If option 3 is not approved for implementation then there is the potential for participants to be materially affected by the CDCA system restriction.

In this eventuality it is assumed that a materially-affected Party would request manual correction of the issue through a new BSCP03 process. ELEXON would investigate (on accordance with the BSCP03 process) and ensure that all necessary validation is performed outside of CDCA systems and the final binding meter readings are presented to CDCA. CDCA would then estimate the meter readings for all channels in the affected BM Unit's aggregation rule to zero except for one channel which would be estimated to the final metered volume required for this BM Unit. In this way the aggregated metered volume supplied by the CDCA Aggregation Run for each BM Unit can be controlled as necessary.

The P240 Modification Group consists of members of the Settlement Standing Modification Group (SSMG), supplemented with:

- Members of the Issue 37 Group; and
- The Transmission Company's expertise on the Grid Code requirements for intermittent generators.

Section 4 contains full details of the Group's membership.

Table 2 shows the areas which the Group has considered in accordance with its Terms of Reference, and where you can find its discussions of each area.

**Table 3 – P240 Assessment Procedure Terms of Reference**

P240 Terms of Reference	
The P240 Modification Group is formed from the same Group who are considering P237/P238. The Group will consider the following items:	
Ref	
01	How much notification (if any) is required by BSC when switching occurs?
02	How does P240 affect the offshore wind farm configuration?
03	What is the best way to amend the BSC?
04	Does P240 impact the BM Unit registration process?
05	Should Aggregation Rules change?
06	Does P240 impact ELEXON and Party Agent?
07	What are benefits/disadvantages for P240 both: <ul style="list-style-type: none"> <li>- As a stand alone; and</li> <li>- In conjunction with P237/P238.</li> </ul>
08	Are there any alternative solutions?
09	Are the alternatives better than the proposed solution?

## 6 Timetable and Responsibilities

**Table 3 – P240 timetable and related changes**

Date	Assessment activity
28/04/09	ISG discusses issues with Offshore metering and BM Units
14/05/09	Panel raises Issue 37
03/06/09	Issue 37 Group holds its first meeting
23/06/09	Issue 37 Group holds its second and final meeting
09/07/09	ELEXON presents the Issue 37 report to the Panel
21/07/09	Npower raised P240
13/08/09	ELEXON presents the P240 IWAs to the Panel / Panel submits P240 to the Assessment Procedure
21/08/09	Modification Group holds its first meeting for P240
14/09/09	Modification Group holds its second meeting for P240
28/09/09	ELEXON issues the P240 Assessment Consultation Documents for industry consultation, and for impact assessment by BSC Agents and the Transmission Company
12/10/09	Participants return Assessment Consultation responses / BSC Agents and the Transmission Company return impact assessments
19/10/09	Modification Group holds its third meeting for P240
12/11/09	ELEXON submits the Group's P240 Assessment Reports to the Panel

**Table 4 – Estimated P240 progression costs up to an Authority decision**

Meeting cost	External legal/ expert cost	BSC Agent impact assessment cost	ELEXON resource
£750 <sup>1</sup>	£0	£3,000	72 man days, equating to £14.5k

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<sup>1</sup> 3 meetings, shared with P241

**Table 5 – P240 Modification Group attendance**

Member	Organisation	21/08/09	14/09/09	19/10/09
David Jones	ELEXON (Chair)	Y	Y	Y
Bu-Ke Qian	ELEXON (Lead Analyst)	Y	Y	Y
Ed Marr	RWE Npower (Proposer)	Y	Y	Y
Ian Pashley	National Grid	Y	Y	Tel.
Gary Henderson	SAIC	Y	Y	Y
Esther Sutton	E.ON UK	Y	Y	Tel.
Andy Colley	SSE	Y	Y	Tel.
Fiona Irwin	Great Gabbard Offshore Winds Limited	Y	Y	Y
Chris Stewart	Centrica	Y	Y	Tel.
Attendee	Organisation	17/07/09	14/09/09	14/10/09
John Lucas	ELEXON (Technical Support)	Y	Y	Y
Diane Mailer	ELEXON (Lawyer)	Y	Y	Y
Yvonne Naughton	Ofgem	Tel.	N	Tel.
Adam Richardson	ELEXON	N	N	Y

## P240 – PROPOSED DRAFT LEGAL TEXT

### SECTION K: CLASSIFICATION AND REGISTRATION OF METERING SYSTEMS AND BM UNITS (Version 29)

*Amend paragraph 3.1.3 to read as follows:*

- 3.1.3 Subject to paragraphs 3.1.4B and 3.1.4C, the same Plant and Apparatus may be comprised in more than one BM Unit only to the extent that different persons are responsible for the Exports from and the Imports to such Plant and Apparatus.

*Insert new paragraph 3.1.4A to read as follows:*

- 3.1.4A A combination of Power Park Modules (including any Power Park Module(s) comprised in a BM Unit located Offshore), with the same Lead Party, may be identified as a "Switching Group" in accordance with this paragraph 3, in which case each such BM Unit shall be described as "belonging" to that Switching Group.

*Insert new paragraph 3.1.4B to read as follows:*

- 3.1.4B Power Park Modules may belong to a Switching Group on the basis that Plant and Apparatus can be selected to run in any of the BM Units belonging to that Switching Group.

*Insert new paragraph 3.1.4C to read as follows:*

- 3.1.4C Subject to Section R3, Plant and Apparatus comprised in Power Park Modules belonging to a Switching Group shall be deemed to be comprised in the BM Unit in which the Plant and Apparatus is selected to run at any given time.

*Insert new paragraph 3.1.4D to read as follows:*

- 3.1.4D A Power Park Module may not belong to more than one Switching Group at any given time.

*Amend paragraph 3.2.3 to read as follows:*

- 3.2.3 A Party may apply to register a BM Unit by submitting a registration application to the CRA specifying:
- (a) the identity of the applicant Party;
  - (b) the date from which the applicant wishes the registration to be effective;
  - (c) the estimated amounts referred to in paragraph 3.4.1 (for the purposes of establishing the Generation Capacity and the Demand Capacity) for the proposed BM Unit;
  - (d) the CVA Metering Systems associated with the proposed BM Unit; and
  - (e) the Switching Group to which the BM Unit belongs (if any).

## SECTION R: COLLECTION AND AGGREGATION OF METER DATA FROM CVA METERING SYSTEMS (Version 9)

*Insert new paragraph 3.2.5A to read as follows:*

### 3.2.5A In the case of a Power Park Module which belongs to a Switching Group:

- (a) the Lead Party may, subject to and in accordance with BSCP75, and consistent with the information for the time being submitted to the Transmission Company under the Grid Code:
  - (i) prepare and submit more than one set of Aggregation Rules (each of which shall comply with the requirements of paragraph 3.3), reflecting different operating configurations of the Plant and Apparatus comprised in the Switching Group; and
  - (ii) elect and from time to time change its election (by notice to the CDCA in accordance with BSCP75) as to which of the sets of Aggregation Rules for the time being so submitted (provided the same is valid in accordance with paragraph 3.4.2) is to be used by the CDCA in determining the BM Unit Metered Volume; and
- (b) the CDCA shall, as soon as practicable, use the set of Aggregation Rules for the time being so elected by the Lead Party for the purposes of paragraph 5.4; and
- (c) where the CDCA (due to technical constraints in the CDCA system) is unable to make the change in Aggregation Rules so elected effective until 00:00 following the time of the change, the Lead Party may request that any resulting error in the BM Unit Metered Volumes is corrected subject to and in accordance with BSCP03.

## ANNEX X-1: GENERAL GLOSSARY (version 41)

*Insert the new definition of “Switching Group” in alphabetical order into Annex X-1 as follows:*

<u><b>"Switching Group":</b></u>	<u>means a Switching Group as described in Section K3.1.4A;</u>
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## **P240 – Proposed redlined changes to BSCP03 ‘Data Estimation & Substitution for Central Volume Allocation’ v11.0**

### **Section 1.1 Purpose and Scope of the Procedure**

This procedure describes the process for agreeing the appropriate metered data values associated with Active Energy meters to be used for CVA when there is a problem with the values obtained via the normal metered data collection process.

This procedure also describes in section 3.3 the process for the Lead Party of BM Units in a Switching Group to request the correction of errors in the BM Unit Metered Volumes arising from technical constraints in the CDCA System.

#### **This procedure covers the following situations:**

- (a) Notification to the Registrant and Meter Operator Agent that the metered data is missing or suspect.
- (b) Provision of a metering status report and fault report to both the Registrant and MOA of the Metering System.
- (c) Determination of the data estimation process to be utilised and derivation of the substitute values.
- (d) Agreement and confirmation between the CDCA and the Registrant of the estimated/substituted data values to be used in CVA.

#### **This procedure excludes the following processes:**

- (a) The collection of meter readings for the purpose of MAR as covered by BSCP05 - Meter Advance Reconciliation for CVA.
- (b) In the event that the CDCA and the Registrant fail to agree the substitute values this would be the basis of a dispute and this process is covered by BSCP11. Until the disputes procedure has been successfully resolved, the CDCA is obliged to use the original estimated data.
- (c) The detailed fault rectification procedures for equipment failures which may have caused this procedure to be invoked. This would be covered by BSCP06.
- (d) Those relating to metering data from Metering Systems registered in SMRS.
- (e) Metering data associated with the BM Units of Interconnector Users, as covered by BSCP04.
- (f) Data Estimations for Reactive Meters and Check Channels.

### **Section 1.2 – 3.2 no changes**



### Section 3.3 Data Correction for BM Unit in a Switching Group

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>3.3.1</u>	<u>Within 20 WD following the day on which the operational switching was carried out</u>	<u>If a Party believes an error has occurred in Trading Charges as a result of the CDCA not applying the Aggregation Rules for a Switching Group until midnight following the time of the change, the Lead Party may request that the error is corrected.</u>	<u>Lead Party</u>	<u>BSCCo</u>	<u>- Copy of aggregation rule change request; - Reason why trading volumes are incorrect; and - Proposed correct trading volumes</u>	<u>Fax / Email.</u>

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>3.3.2</u>	<u>Following 3.3.1</u>	<u>ELEXON confirms the validity of the correction request by assessing the following criteria:</u> <u>- there is an impact on Trading Charges for the Lead Party and/or a Subsidiary Party for the affected Settlement Periods; and</u> <u>- the request was made for a valid registered set of Aggregation Rules.</u>	<u>BSCCo</u>	<u>Relevant Party</u>		<u>Fax / Email.</u>
<u>3.3.3</u>	<u>Following confirmation that the data correction request is invalid<sup>1</sup></u>	<u>Notify Party of decision.</u>	<u>BSCCo</u>	<u>Relevant Party</u>	<u>Reason for judgement that the application is invalid</u>	<u>Fax / Email.</u>
<u>3.3.4</u>	<u>Following 3.3.2 and no later than 2 WD after the validation</u>	<u>Where the data correction request has been confirmed to be valid, authorise CDCA to correct data.</u>	<u>BSCCo</u>	<u>CDCA</u>		<u>Fax / Email.</u>
<u>3.3.5</u>	<u>Within 2WD of 3.3.4</u>	<u>Notify Party of whether criteria are met.</u>	<u>CDCA</u>	<u>BSCCo</u>		<u>Fax / Email.</u>
<u>3.3.6</u>	<u>At the same time as 3.3.5</u>	<u>Notify relevant Party of data correction outcome.</u>	<u>CDCA/BSCCo</u>	<u>Relevant Party</u>		<u>Fax / Email.</u>

Section 4 – no changes

<sup>1</sup> Party can raise a Trading Dispute if they are unsatisfied with the outcome.

## P240 – Proposed redlined changes to BSCP15 ‘BM Unit Registration’ v16.0

P240 requires changes to BSCP15 Sections 1.1 and to Form BSCP15/4.1 in Appendix 4.

### Section 1.1 Purpose and Scope of the Procedure

This BSCP defines the key interfaces, interdependencies and timetable for the registration and de-registration of BM Units by the Party, which, for the avoidance of doubt, includes:

- New registration;
- De-registration;
- Where the FPN flag status changes;
- Registration of Seasonal Estimates of the Maximum Positive Magnitude and Maximum Negative Magnitude Unit Metered Volume;
- Registration / de-registration of Exempt Export Status;
- Election of Production / Consumption flag for an Exempt Export BM Unit;
- Mid-Season Changes of the Maximum Positive Magnitude and Maximum Negative Magnitude BM Unit Metered Volume;
- Change of CVA BM Unit Lead Party; ~~and~~
- Transfer of Supplier ID; ~~and~~
- Notification of Switching Group<sup>1</sup>.

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<sup>1</sup> Per section K3.1.4B, Power Park Modules may belong to a Switching Group on the basis that Plant and Apparatus can be selected to run in any of the BM Units belonging to that Switching Group. A ‘Switching Group’ is described in Section K3.1.4A of BSC.

## Section 4.1 BSCP15/4.1 Registration of BM Unit for a CVA Metering System <sup>2</sup>

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<b>To: CRA</b>	<b>Date Sent:</b> _____
<b>From: Participant Details</b>	
Party ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
<b>Name of Authorised Signatory:</b> _____	
Authorised Signature: _____	Password: _____

### Is this BM Unit registration:

- ☐ **a New BM Unit Registration**
- ☐ a Change of registration data associated with a Change of BM Unit Lead Party
- ☐ subject to a Registration Transfer in accordance with BSCP68
- ☐ a change in status of a BM Unit's FPN Flag
- ☒ a change in the Switching Group to which the BM Unit belongs

(Tick as appropriate)

Note that if you wish to register a BM Unit as Exempt Export, you must enter "Yes" in the appropriate box in the form on Page 2 and follow the process in Section 3.10 of this BSCP.<sup>3</sup>

<sup>2</sup> Lead Parties of BM Units with associated CVA Metering Systems, Additional BM Units, Base BM Units and Interconnector BM Units should complete this form BSCP15/4.1 in accordance with Section 3.1.5 of this document. In the case of Base BM Units this form should be used to complete the Base BM Registrations by providing, for example, the initial GC/DC vales and if appropriate the FPN Flag.

<sup>3</sup> Lead Parties of BM Units with associated SVA Metering Systems which wish to be classified as Exempt Export should complete the declaration form BSCP15/4.9 – (Part A).

## BSCP15/4.1 Registration of BM Unit (cont)

BM Unit Registration Details													
BM Unit Id	BM Unit Name(Max 30 Characters)	NG BM Unit ID <sup>4</sup>	BM Unit Type <sup>5</sup>	BM Unit Configuration <sup>6</sup>	GSP Group Id <sup>7</sup>	LDSO Party Id	GC (MW)	DC (MW)	P/ C Flag <sup>8</sup>	FPN Flag (Y / N)	Exempt Export (optional) <sup>9</sup>	Inter-connector Id <sup>10</sup>	EFD

<sup>4</sup> The NG BM Unit ID must be provided for all BM Units with the FPN Flag set to 'Y'.

<sup>5</sup> E – Embedded, I – Interconnector, G – Base Supplier S – Additional Supplier, T – Directly Connected

<sup>6</sup> CCGT – CCGT registered in CMRS, PPM – Power Park Module registered in CMRS, GU – Generating Unit registered in CMRS, DC – Directly Connected Circuit at Customer (Supplied by BSC Party) Premises, IC – Interconnector Unit, BB – Base BM Unit, AB – Additional BM Unit, NS – Non-standard.

<sup>7</sup> If unit type E or S

<sup>8</sup> Only applicable for Exempt Export BM Units or Interconnector BM Units

<sup>9</sup> To register a BM Unit as Exempt Export, enter “Yes” and follow the process in Section 3.9 of this BSCP

<sup>10</sup> If BM Unit Type is I

## BSCP15/4.1 Registration of BM Unit (cont)

1.1.1.1 MPAN Mapping Details <sup>11</sup>		
MPAN	Effective From Date	Effective To Date

BM Unit Group Details		
Teleswitch Group ID	Effective From Date	Effective To Date

BM Unit and Associated CVA Metering Systems	
BM Unit	Associated CVA Metering Systems

Switching Groups ( list BM Unit Ids for each Switching Group below)
(Example: Switching Group 1 – T_ABMU-1 and T_BBMU-1)

<sup>11</sup> Only applicable to Embedded Sites

## **P240 – Proposed redlined changes to BSCP75 ‘Registration of Meter Aggregation Rules for Volume Allocation Units’ v9.1**

### **Section 1.1 Purpose and Scope of the Procedure**

This BSCP defines the process for submission of Aggregation Rules by Parties to the Central Data Collection Agent (CDCA) for Volume Allocation Units as defined in Section R of the Code. This BSCP describes the key interfaces and timetable responsibilities for interested parties.

This procedure also defines the process for the Lead Party of BM Units in a Switching Group to instruct CDCA to use a different set of Aggregation Rules (chosen from a number of pre-registered sets) to reflect the switching of Plant and Apparatus between BM Units.

This procedure does not include the registration of Aggregation Rules for Supplier BM Units.

### **Section 1.2 Main Users of the Procedure and their Responsibilities**

This BSCP should be used by the following:

- (a) Party for the submission of Aggregation Rules
- (b) CDCA for validating and registering the Aggregation Rules

Throughout this procedure, timetables reflect the number of Working Days (WD) following defined events by which an activity should be completed.

### **Section 1.3 Key Milestones**

Timescales for the registration of Aggregation Rules can be reduced upon agreement between all relevant parties. Other key milestones in this procedure are:

- 20 WD notice for submission of Aggregation Rules
- Selection of Aggregation Rules for Range CCGT Modules with the same timescales as defined in the Grid Code
- Selection of Aggregation Rules for BM Units in Switching Groups within 2 WD of operational switching

Sections 1.4 - 3.1 – no changes.

### Section 3.2 Notification of Operational Switching<sup>1</sup>

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>3.2.1</u>	<u>Within 2 WD of switching of Plant and Apparatus between BM Units in a GSP Group (if that switching requires different Aggregation Rules)</u>	<u>Submit form<sup>2</sup> electing which of the pre-registered sets of Aggregation Rules is now applicable.</u>	<u>Party</u>	<u>CDCA</u>	<u>Form BSCP75/4.4 Election of Pre-Registered Aggregation Rule for Switching Group</u>	<u>Fax / Letter/ Email</u>
<u>3.2.2</u>	<u>Within 1 WD of receipt of 3.2.1</u>	<u>The CDCA shall validate that set of Aggregation Rules identified on the BSCP75/4.4 form has previously been registered in accordance with 3.1.</u>	<u>CDCA</u>			<u>Internal</u>
<u>3.2.3</u>	<u>Within 1 WD of receipt of 3.2.1 and if form fails validation</u>	<u>Inform Party that the required configuration has not been pre-registered</u>	<u>CDCA</u>	<u>Party</u>		<u>Fax / Letter/ Email</u>
<u>3.2.4</u>	<u>Within 5 WD of receipt of 3.2.1 and if form passes validation</u>	<u>Configure CDCA system to use selected Aggregation Rules effective from midnight following the time of switching specified on the BSCP75/4.4 form</u>	<u>CDCA</u>			<u>Internal</u>

<sup>1</sup> This process is applicable to Power Park Module BM Units that are capable of operational switching.

<sup>2</sup> Where multiple sets of Aggregation Rules are being registered, also send BSCP75/4.4 to indicate which set is the initial operation set.



<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>3.2.5</u>	<u>Within 1 WD of 3.2.4.</u>	<u>Produce confirmation report of aggregation rule data entered into system and provide to Party to confirm.</u>	<u>CDCA</u>	<u>Party</u>	<u>Aggregation rule report confirmation of data entered into systems.</u> <u>CDCA-I048 Report of Aggregation Rules</u>	<u>Fax / Letter/ Email</u>

Section 4.1 – no changes

#### Section 4.2 BSCP75/4.2 Registration of Meter Aggregation Rules For Volume Allocation Units

PAGE 1 OF 3

<b>To: CDCA</b>	<b>Date Sent:</b> _____
<b>From: Participant Details</b>	
Party ID: _____	Name of Sender: _____
Participation Capacity: _____	Contact email address: _____
Our Ref: _____	Contact Tel. No. _____
<b>Name of Authorised Signatory:</b> _____	
Authorised Signature: _____	Password: _____

☐ Tick box if this is a Registration Transfer in accordance with BSCP68.

#### Section 1

##### Please Tick Aggregation Unit Type

BM Unit (B)		External Interconnector (I)		Internal Interconnector (D)		Grid Supply Point (P)		Grid Supply Point Group Take (G)	
----------------	--	-----------------------------------	--	-----------------------------------	--	--------------------------	--	--	--

Aggregation Unit ID	
Aggregation Unit Name (optional)	
Effective From Date	
Effective To Date (optional)	
Aggregation Unit ID	
Aggregation Unit Name (optional)	
Effective From Date	
Effective To Date (optional)	

☐ Tick box if submitting multiple sets of Aggregation Rules (each reflecting a different operational configuration) for a BM Unit in a Switching Group.  
If you have ticked this box, each set of Aggregation Rules should be submitted on a separate copy of Section 2, each one identified by an appropriate description of the operational configuration (e.g. 'Normal Running', 'Circuit 2 Outage').

## Section 2

<u>Operational Configuration:</u>	<u>(Applies only to BM Units in a Switching Group that require different Aggregation Rules depending on the operational configuration.)</u>				
Expression Reference (ER)	MSQ, ER, BMU, GSP, DSCP, LLF or CST	Reference	+, -, /, x	MSQ, ER BMU, GSP, DSCP, LLF or CST	Reference
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

**Section 3**

From CDCA to Registrant

I hereby confirm that the Meter Aggregation Rules associated with the above Reference No. have been received.

Input by:      Signed:.....      Name:.....      Date:.....

Checked by:      Signed:.....      Name:.....      Date:.....

(For CDCA)

Section 4.3 – no changes

**Section 4.4 BSCP75/4.4 Election of Pre-Registered Aggregation Rule for Switching Group**

**PAGE 1 OF 1**

<b><u>To: CDCA</u></b>	<b><u>Date Sent:</u></b> _____
<b><u>From: Participant Details</u></b>	
Party ID: _____	Name of Sender: _____
Participation Capacity: _____	Contact email address: _____
Our Ref: _____	Contact Tel. No. _____
<b><u>Name of Authorised Signatory:</u></b> _____	
Authorised Signature: _____	Password: _____

<input type="checkbox"/>	<b><u>I hereby elect that the initial Aggregation Rules for the BM Unit shall be:</u></b>
<input type="checkbox"/>	<b><u>I hereby elect to switch Aggregation Rules for the following BM Units (in order to reflect a change in operational configuration):</u></b>

<u>BM Unit ID(s)</u>	
<u>New Operational Configuration</u> <u>(as specified on pre-registered Aggregation Rules)</u>	
<u>Date and time<sup>3</sup> that configuration was switched:</u>	

<sup>3</sup> Date and time are not required for the initial election, as date comes from the form submission.