

## Stage 03: Assessment Consultation

# P237: Standard BM Unit configuration for Offshore Power Park Modules

What stage is this document in the process?

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

The BSC requires each Power Park Module to be registered as a separate Balancing Mechanism (BM) Unit. This creates inefficiencies for some Offshore intermittent (i.e. renewable) generators. The extent of these inefficiencies will depend on the type of operational configuration used by the generator.

P237 will resolve these inefficiencies by allowing 2 or more Offshore Power Park Modules to form a single BM Unit (where the Lead Party requests this aggregation and the Transmission Company agrees).

P237 progresses one of the recommendations of the Issue 37 Group.



Modification Group initially recommends:  
**Approval of P237**



High Impact:  
Offshore intermittent generators



Medium Impact:  
ELEXON and the Transmission Company



Low Impact:  
Possible impact on the Central Registration Agent and Central Data Collection Agent (to be confirmed)

## Contents

1	Summary	3
2	Why Change?	5
3	Solution	7
4	Impacts, Costs & Implementation Approach	9
5	The Case for Change	11
6	Further Information	13

Attachment **A**: Detailed Assessment

Attachment **B**: Consultation Questions

## About This Document:

The purpose of this Assessment Consultation is to obtain views or further evidence from BSC Parties and other interested parties on the merits of the change discussed in this document.

**The Modification Group particularly seeks the views of both Onshore and Offshore intermittent generators on the merits of P237.**

There are 3 documents for this Assessment Consultation:

- This is the **main document**. It outlines the solution, impacts, costs, benefits and implementation approach for the change. It includes the Group's initial view 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.
- **Attachment B** is the form for submitting a response to this consultation. The Group invites your views on the specific questions contained in this form.

This main document and Attachment A will also be used by the Transmission Company, the Central Registration Agent, the Central Data Collection Agent and ELEXON to establish the extent of any impacts from P237 on their organisations. The Group is undertaking these impact assessments in parallel with this industry consultation.

The Group will consider the consultation and impact assessment responses at its meeting on 14 August 2009, when it will make its final recommendation as to whether the change should be made. The Panel will consider this recommendation and the Group's full Assessment Report at its meeting on 10 September 2009. The Panel will then consult on its own recommendation to the Authority.



Any questions?

Contact:

Kathryn Coffin



kathryn.coffin@elexon.co.uk



020 7380 4030



## Why change?

The Balancing and Settlement Code (BSC) currently requires a generator to register each of its **Power Park Modules** as a separate Balancing Mechanism (BM) Unit<sup>1</sup>, unless the generator applies for and is granted a non-standard BM Unit configuration.

The interaction between this requirement and the new Grid Code provisions for Offshore intermittent generators may require some Offshore generators to register more BM Units than are actually necessary.

The inefficiencies and operational difficulties which this creates are a potential barrier to the development of existing and future Offshore projects. It also causes inefficiencies for the Transmission Company, ELEXON and BSC Agents.

## Solution

P237 will remove these inefficiencies by allowing an Offshore intermittent generator to register 2 or more of its Power Park Modules as a single BM Unit (where the generator requests this and the Transmission Company agrees).

This will be a new standard BM Unit configuration under the BSC. P237 will therefore avoid the need for the generator to go through the non-standard application process.

## Related changes

P237 progresses one of the recommendations of the **Issue 37**<sup>2</sup> Group. This Group considered 4 issues with the BSC's metering and BM Unit requirements, 3 of which relate to Offshore generation.

**Modification Proposal P238**<sup>3</sup> addresses another of these separate (but related) issues. The Group is consulting on P237 and P238 in parallel. You can download the P238 consultation documents [here](#).

**Modification Proposals P240**<sup>4</sup> and **P241**<sup>5</sup> have also been raised to address the remaining 2 issues. ELEXON will present Initial Written Assessments for these proposals to the Panel at its meeting on 13 August 2009, when the Panel will decide how to progress them. You will therefore have the opportunity to comment on P240 and P241 at a future point.

## Impacts & costs

P237 will require changes to the standard BM Unit configurations and registration process, which are set out in Section K3 of the BSC and in BSC Procedure (BSCP) 15. It will also require new Defined Terms to be added to Annex X-1 of the BSC.

The Group is undertaking an impact assessment in parallel with this consultation, to establish the extent of any impact on the Transmission Company, ELEXON and BSC Agents. It does not expect that any associated costs will be significant.

### What is a Power Park Module?

This is the Grid Code term for a collection of Generating Units which are powered by an intermittent power source (e.g. by wind, wave or solar power).

Section 1 of Attachment A provides more detail.

<sup>1</sup> BM Units are the 'units of trade' in the Balancing Mechanism. Each BM Unit is a collection of Plant and/or Apparatus (e.g. Generating Units such as wind turbines). You can download an [information sheet](#) from ELEXON's website which explains BM Units in more detail.

<sup>2</sup> 'Boundary Point Metering and BM Unit Issues in Section K'.

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

<sup>4</sup> 'Switching Plant and Apparatus between BM Units'.

<sup>5</sup> 'Relaxation of Requirement to Separately Meter Licensable Generating Units'.

## Implementation

If the Authority approves P237, the Group recommends that the changes to the BSC and BSCP15 are implemented 5 Working Days after the Authority's decision.

## The case for change

The Group believes that P237 will ensure that the BSC's BM Unit requirements are not an unnecessary barrier to Offshore renewable generation.

**Its initial view is that P237 should therefore be approved.**

The Group invites you to comment on this view as part of the consultation.



## Why has P237 been raised?

The new Offshore Transmission Regime came into effect in June 2009, and is scheduled to 'go live' in June 2010. This has introduced a new Grid Code definition of Offshore Power Park Module, which is different to (and more complex than) the corresponding definition for Onshore intermittent generators. Section 1 of Attachment A explains the new Grid Code definitions in more detail.

The new Grid Code definition of an Offshore Power Park Module interacts with the BSC's provisions for BM Units in a way which was not envisaged when the concept of a Power Park Module was introduced in the BSC.

**Because of the difference in what the Grid Code now counts as a Power Park Module for an Offshore generator compared to Onshore, the existing BSC provisions may require Offshore generators to register more BM Units than are actually needed by the Transmission Company to operate the Transmission System.<sup>6</sup>**

This creates inefficiencies for:

- **Offshore generators** (who will have to submit Physical Notifications of their expected output for each individual BM Unit);
- The **Transmission Company** (who will have to process these Physical Notifications and issue individual Bid Offer Acceptances for each BM Unit in order to utilise this output); and
- **ELEXON** and **BSC Agents**, who will have to register each individual BM Unit in the central BSC Systems.

The extent of the inefficiencies will vary depending on the Offshore generator's particular configuration of Plant/Apparatus. Some Offshore generators may not be impacted at all. For others, the BSC provisions may also require them to:

- Re-register their BM Units to reflect short-term operational reconfigurations of Plant and/or Apparatus from one Offshore Power Park Module to another (e.g. in response to a fault);<sup>7</sup>
- Install extra metering in order to derive separate Metered Volumes for each BM Unit (for use in Settlement); and/or
- Make frequent changes to Aggregation Rules<sup>8</sup> under the BSC.

**Attachment A (Section 3 and Appendix 1) provides worked examples of the scope of the issue for different Offshore generator configurations.**

**When was the term Power Park Module added to the BSC?**

Modification Proposal [P191](#) introduced this term to the BSC in 2005, following its inclusion in the Grid Code and to support intermittent generation.

<sup>6</sup> References to the 'Transmission Company' in this document use the BSC meaning of 'GB System Operator', and should not be confused with the Offshore Transmission Owners (OFTOs) which are being procured as part of the new Offshore regime. References to the 'Transmission System' are to the National Electricity Transmission System, which includes Offshore waters.

<sup>7</sup> The BSC's BM Unit re-registration process takes at least 30 days, and is therefore not a practical way to manage this kind of short-notice operational reconfiguration. The BSC only currently allows Plant/Apparatus to be contained in one BM Unit at a time. P240 has been raised to allow Plant/Apparatus to 'switch' between BM Units.

<sup>8</sup> The rules under which Metering System data is aggregated to determine BM Unit Metered Volumes for Settlement.

The Proposer considers that it was not the intention of the new definition of Offshore Power Park Module to place an excessive administrative burden on Offshore generators. The Proposer believes that the BSC provisions should be changed to remove this potential barrier to Offshore development.

The Group believes that the specific issue which P237 identifies is limited to Offshore intermittent generators, because it arises specifically from the new definition of Offshore Power Park Module. You can find the Group's reasons for this view in Sections 1 and 3 of Attachment A.

The Group invites interested parties (and especially Onshore intermittent generators) to comment on this view.

**Consultation Question: Scope of issue**

The Group considers that the specific issue which P237 identifies is limited to Offshore generator configurations.

It therefore believes that P237 creates no disadvantage for Onshore intermittent generators.

Do you agree?

The Group invites you to give your views using the response form in Attachment B.



### How will P237 resolve the issue?

**P237 will allow 2 or more Offshore Power Park Modules to form a single BM Unit, where the Lead Party<sup>9</sup> requests this aggregation and providing that the Transmission Company agrees.**

This will enable the Lead Party to register all of the Plant/Apparatus contained in these Offshore Power Park Modules within a single BM Unit (note that P237 does not alter the actual Grid Code definition of what constitutes an Offshore Power Park Module). This aggregation will be formalised as a **new standard BM Unit configuration** in Section K of the BSC, in line with the Issue 37 Group's recommended solution.

This will deliver administrative efficiencies to Offshore intermittent generators, the Transmission Company, ELEXON and BSC Agents by:

- Removing the need to register unnecessary BM Units;
- Removing the need to submit and process Physical Notifications for these BM Units; and
- Removing the need to submit and process Bid-Offer Acceptances for these BM Units.

Depending on an individual Offshore generator's specific configuration, P237 may also:

- Facilitate short-notice operational reconfigurations of Plant/Apparatus;
- Remove the need to make Aggregation Rule changes to support these operational reconfigurations; and/or
- Reduce the amount of metering which the generator is required to install.

**Attachment A (Section 3 and Appendix 1) provides worked examples of these benefits for different types of Offshore configuration.**

The Group invites you to provide details of the specific benefits of P237 to your organisation, if applicable. To support its arguments against the Applicable BSC Objectives (see Section 5), the Group welcomes details of any cost-savings which you might achieve from P237.

#### Consultation Question: Specific benefits to your organisation

Would P237 deliver efficiency/administrative benefits for your organisation?

The Group invites you to give your views using the response form in Attachment B.

#### Has the Group developed the solution from the original Modification Proposal?

No, the Group's solution is identical to that proposed by the Issue 37 Group and by the Proposer in the original Modification Proposal.

<sup>9</sup> The Party to whom the BM Unit will be registered.

## Will there be any further BSC criteria for the new configuration?

No, the Group believes that the BSC should give the Transmission Company full discretion in deciding whether to allow an aggregation of Offshore Power Park Modules.

The Group considers that this will give maximum flexibility to both the Transmission Company and Offshore generators in agreeing specific configurations, and will avoid the risk that the BSC rules present an unintended barrier to any future Offshore developments.<sup>10</sup>

## Will aggregation be mandatory?

No, an Offshore intermittent generator will still be able to register its Offshore Power Park Modules as separate BM Units if it believes that this is more appropriate for its particular operational configuration.<sup>11</sup>

## What happens if the Transmission Company does not agree?

If the Transmission Company does not agree to the Lead Party's request to register an aggregation of Offshore Power Park Modules as a single BM Unit, the Lead Party will effectively be able to appeal this decision to the Panel.

It can do this by applying to have its preferred configuration of Plant/Apparatus registered as a non-standard BM Unit configuration. This is an existing ability for all BM Units under Section K3.1 of the BSC, and is therefore not part of the P237 solution.<sup>12</sup>

## Has the Group identified any other solutions?

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

The Issue 37 Group noted that the BSC already permits a Lead Party to apply for a 'non-standard' BM Unit configuration if it believes that several Power Park Modules should be aggregated to form a single BM Unit. However, both the Issue Group and the Modification Group have concluded that this does not provide developers with certainty about permitted configurations, as a Party cannot be sure that its configuration request will be granted. It may also result in large volumes of applications for 'non-standard' configurations, with the risk that this process becomes unfit for purpose.

The Group therefore believes that a new standard configuration is required.

### Consultation Question: Solution

Do you believe that there any alternative solutions to the issue which the Modification Group has not identified, and which it should consider?

[The Group invites you to give your views using the response form in Attachment B.](#)

<sup>10</sup> The Group notes that the BSC requires each BM Unit to have only one Lead Party. A consequence of this is that 2 separate Offshore generators who are physically proximate (e.g. who share the same platform) will not be able to combine their Power Park Modules in a single BM Unit under P237, unless one of the generators is Exemptable and therefore able to nominate the other as its Lead Party under Section K of the BSC. The Group considers that this is appropriate in order to avoid difficulties for the Transmission Company in issuing instructions to the generators.

<sup>11</sup> As with any renewable generation project, the Group notes that each Offshore intermittent generator will need to take into account the interaction between the rules for Renewables Obligation Certificates and its chosen configuration of Plant/Apparatus. However, the Group does not believe that this presents any specific issues for P237.

<sup>12</sup> In practice, the Panel delegates these appeals to the Imbalance Settlement Group (ISG).





### What are the likely impacts and costs of P237?

At this stage of its assessment, the Group believes that P237 will or may impact:

- **Section K3** of the BSC, which contains the standard BM Unit configurations and the requirements for registering BM Units;
- **Annex X-1** of the BSC, which will need to include a new reference to the Grid Code's definition of an Offshore Power Park Module and will also potentially need to define the new standard BM Unit configuration for an aggregation of Offshore Power Park Modules;
- **BSCP15**, which contains the detailed process for registering and re-registering BM Units, including the actual registration form;
- **Offshore intermittent generators**, who will be able to request aggregation of their Offshore Park Modules in a single BM Unit;
- The **Transmission Company**, who will need to:
  - Assess each application from a Lead Party to aggregate its Offshore Power Park Modules in a single BM Unit; and
  - Decide whether to agree to the requested configuration;
- The **Central Registration Agent** and **Central Data Collection Agent**, who will need to register and validate each application respectively; and
- **ELEXON**, who supports the BM Unit registration and validation processes (including supporting the **ISG** in processing any appeals).

The Group is currently undertaking an impact assessment in parallel with this consultation, in order to establish the exact impact and any associated costs. The Group does not expect that these costs will be significant.

The Group does not anticipate that any changes will be required to the Grid Code, as the definition of an Offshore Power Park Module will remain unchanged.

### When will P237 be implemented?

#### Changes to the BSC and BSCP15

The Group believes that the current BSC requirements for BM Units are presenting an unnecessary barrier to the development of Offshore renewable generation. The Group notes that this may affect Offshore projects which are already in development, as well as those which are initiated after the new Offshore Transmission arrangements 'go live' in June 2010.

**The Group therefore recommends that, if the Authority approves P237, the changes to the BSC and BSCP15 are implemented 5 Working Days after the Authority's decision. This will resolve the issue as soon as possible.**

The changes to BSCP15 are minor and include adding the new standard BM Unit configuration to the BM Unit registration form used by Parties. The Group considers that it will be beneficial to deliver these changes in parallel with those to the BSC itself, so that they can be used straight away. It therefore agrees that ELEXON should draft and consult on the BSCP15 changes before, rather than after, the Authority's decision.

### When will I know the exact impacts and costs of P237?

The Group will include its recommended redlined changes to the BSC (the 'legal text') and to BSCP15 in its Assessment Report to the Panel. This report will also detail the full impacts and costs, as well as the Group's final recommended Implementation Date.

The Panel will then issue all of this information and its own recommendation for a further consultation, giving you another opportunity to comment on P237.

ELEXON is drafting the changes to the BSC and BSCP15 in parallel with this consultation. You will have an opportunity to comment on the draft redlined changes at a future point, before P237 is sent to the Authority.

*Please note that the feasibility of a 5 Working Day implementation lead time is dependent on there being no material BSC System changes required to support P237. The Group will take a final view on this at its meeting on 14 August 2009, when it will consider the impact assessment responses.*

### **Changes to BSCP75**

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. P237 therefore has no direct impact on this BSCP. 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 P238 and/or P240 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, it 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.

#### **Consultation Question: Implementation approach**

The Group believes that the P237 changes to the BSC and BSCP15 should be implemented **5 Working Days** after an Authority decision.

It believes that ELEXON should raise a separate Change Proposal to introduce examples of Offshore Aggregation Rules to BSCP75, once the Authority has made its decisions on all of the current Modification Proposals which relate to Offshore requirements.

Do you agree?

[The Group invites you to give your views using the response form in Attachment B.](#)

## Why will P237 be better than the existing BSC requirements?

The Group believes that P237 will better facilitate the achievement of **Applicable BSC Objectives (b), (c) and (d)**.

The table below sets out the Group's views against each Applicable BSC Objective. The Group invites you to comment on these views as part of the consultation.

Applicable BSC Objective	Benefit(s)
Objective (a)	None identified.
Objective (b)	<p>Ensures that Offshore BM Units are not required to a level in excess of that needed by the Transmission Company to operate the Transmission System efficiently and economically.</p> <p>Technically and practically, the ability to control a single BM Unit is a simpler process than multiple ones, especially if the single BM Unit is representative of the single Export circuit.</p> <p>Allowing aggregation of Offshore Power Park Modules also makes it easier for the Transmission Company to issue instructions to the generator.</p> <p>P237 therefore facilitates Offshore renewable generation. While it deals with administrative issues (and has no direct impact on carbon emissions), it does deliver indirect environmental benefits.</p>
Objective (c)	<p>Ensures that Offshore generators do not face excessive BM Unit requirements compared with other generator classes.</p> <p>This is particularly the case for Offshore generators in the transitional regime that have either planned, built, or are in the process of constructing to designs that did not require or envisage the need for extra BM Units.</p> <p>It is also easier on a technical and practical level for an Offshore generator to control a single BM Unit, rather than multiple ones.</p>
Objective (d)	Ensures that BSC Agents will not have to accommodate excessive numbers of BM Units in the BSC Systems (which would have associated costs).

### Consultation Question: Merits of P237

The Group believes that P237 will better facilitate the achievement of **Applicable BSC Objectives (b), (c) and (d)** when compared with the existing BSC requirements.

Do you agree?

The Group invites you to give your views using the response form in Attachment B.



### What is the Group's view?

The Group believes that P237 will facilitate the current and future development of Offshore generation projects, by removing an unnecessary barrier caused by the BSC's existing BM Unit requirements.



### What are the Applicable BSC Objectives?

- (a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence
- (b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System
- (c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity
- (d) Promoting efficiency in the implementation of the balancing and settlement arrangements

## Are there additional benefits if P237 is combined with P238 and P240?

Yes, the Group has identified wider benefits from P237 if it is delivered in combination with these other Issue 37 changes.

The Group believes that all 3 Modification Proposals address separate (although related) issues, and are not dependant on each other. Each therefore delivers potential benefits in isolation of the others, and benefits from a separate assessment against the current BSC rules.

However, the Group notes that each of the changes supports the others as part of a package of measures to remove barriers to Offshore generation. In combination, the benefits of these changes will be greater than at the individual proposal level. The Group believes that it is helpful to highlight these wider benefits, so that the Authority can take them into account when making its decisions.

For each worked example which the Group has considered, it has therefore identified:

- The benefits of P237 on its own; and
- Where applicable, the benefits of P237 when combined with P238 and P240.

You can find further information on these benefits in Attachment A (in Section 3 and Appendix 1).

### Consultation Question: Combined benefits of Issue 37 changes

The Group believes that the combined benefits of P237 and P238 will be greater than those which arise individually from each proposal.

Although P240 is yet to receive further assessment, the Group believes it is likely that this will also have additional benefits in combination with P237/P238.

Do you agree?

The Group invites you to give your views using the response form in Attachment B.



You can find more information in:

### Attachment **A**: Detailed Assessment

See this attachment for further supporting details of the Group's discussions.

These include:

- An explanation of the relevant Grid Code definitions;
- Background information on the new Offshore Transmission regime;
- Detailed worked examples of:
  - The effect of the issue on different types of configuration for an Offshore intermittent generator;
  - The resulting benefits of P237 for each of these configuration types; and
  - The wider benefits from combining P237 with P238 and P240;
- The reasons why the Group believes that the issue is limited to Offshore intermittent generation;
- Details of the Group's membership;
- A copy of the Group's Terms of Reference; and
- A timetable showing the Group's assessment so far, as well as planned dates for its remaining activities.

### Attachment **B**: Consultation Questions

Please use this form to submit your consultation response. The Group invites you to give your views on each of the questions in this form.

#### Where can I find more information on the Issue 37 Group's discussions?

Section 1 in Attachment A gives an explanation of the other 3 changes recommended by the Issue Group, and how these may interact with P237.

These 3 changes have now been raised as P238, P240 and P241.

You can also find further information on the [Issue 37](#) page of ELEXON's website, in ISG paper [99/08](#), and on the [P238](#), [P240](#) and [P241](#) web pages.