

What stage is this document in the process?

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

Stage 03: Assessment Report

P242: Treatment of Exemptable Generation Connected to Embedded Transmission Networks

Currently, Offshore Exemptable Generators that connect onshore to a Distribution System are treated in the same way as onshore Exemptable Embedded Generators. However when the Offshore Transmission Arrangements 'Go-Live' in June 2010, Offshore Exemptable Generators will be treated in the same way as directly-connected Generators.

P242 proposes to give Offshore Exemptable Generators the option to be treated as Embedded.



Modification Group recommends Approval of P242



High Impact: Generators, Licence Exemptable Generators and the Transmission Company



Medium Impact: LDSOs

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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 P242 Modification Group.

The Panel will consider the Group's recommendations, and will agree an initial view on whether or not this change should be made. The Panel will then seek industry comments on its initial view through a further consultation.

This Assessment Report consists of 4 parts:

- 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 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 BSCP15 'BM Unit Registration', which supports the P242 legal text.

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

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Why Change?

The Secretary of State has introduced Offshore Transmission Arrangements that will Go Live in June 2010. At Go Live, any 132 Kilovolt (kV) (or above) cable that connects an Offshore Exemptable Generator to a Distribution System will become a Transmission Asset owned and operated by the Offshore Transmission Operator (OFTO). With the OFTO owning the cables, Offshore Exemptable Generators can no longer be classed as Embedded Generators in a similar manner to Onshore Exemptable Embedded Generators.

The Proposer believes this change in status, as a result of the Offshore Transmission Arrangements, give rise to undue discrimination against Offshore Exemptable Generators and future developments. After Go Live, Offshore Exemptable Generators will be classed as being Transmission Connected Generators, becoming liable for Transmission charges while still being liable for Distribution charges. This causes the undue discrimination when compared against existing Onshore Exemptable Generators, who are only liable for Distribution charges.

Solution

To enable Offshore Exemptable Generators, which after Go Live connect to Embedded Transmission, to retain the ability to be treated as Embedded Generators, P242 proposes to:

- create a **deemed Onshore Boundary Point** to enable the Offshore Generator to be:
 - treated as an **Embedded Generator**;
 - responsible for the **Metering** at the deemed Boundary Point; and
 - responsible for the **Transmission Losses** on the Embedded Transmission they use.
- allow both CMRS and SMRS Registration through the creation of a new **Embedded Transmission BM Unit** configuration; and
- limit Offshore Exemptable Embedded Generation to Generators connecting to a Distribution System via Embedded Transmission that is only used by them ('Sole Use').

Related Changes

The Proposer of P242 is also seeking to progress related changes to National Grid's Charging Methodology and may also be seeking changes to the Grid Code (GC), Connection and Use of System Code (CUSEC). These changes are being progressed to clarify issues relating to P242. However, P242 is not contingent on them and should be considered on its own merits.

Impacts & Costs

P242 will require changes to Section K to effect the solution of creating a deemed Boundary Point and a new Embedded Transmission BM Unit configuration. It will also require a new Defined Term to be added to Annex X-1. A small change is also needed to BSCP15 to include the new Embedded Transmission BM Unit configuration option in the BM Unit registration process.

As there are no system changes caused by the P242 Proposed solution the estimated ELEXON implementation cost is £1,200 which equates to 5 Man Days of ELEXON effort.

The P242 solution will have no further impact on the Transmission Company, above the activities they will be carrying out in preparation for the Offshore Transmission Arrangements going live.

Implementation

If approved, the Group recommends that P242 be implemented **5 Working Days** after the Authority's decision.

The Case for Change

The Group's majority view is that P242 will better facilitate **Applicable BSC Objective (a), (c)** and to a lesser extent **(b)**.

Views in support of P242 are that it will:

- promote efficient network design;
- minimise disruption to existing situations that following Go-Live without P242 will need to make changes to their set up;
- promote competition by removing an existing undue discrimination; and
- remove double charging of distribution and transmission charges.

Views against P242, are that:

- limited application, which may impact the Transmission Company's ability to discharge its duties efficiently;
- different treatment of Offshore Generators may make the Operation of the Offshore Transmission Arrangements more difficult;
- any disruption would be kept to a minimum by the Transmission Company;
- allowing different treatment may give rise to further discrimination between Offshore Generators.

The Transmission Company was neutral and a majority of respondents to the Group's consultation agreed with this view.

Recommendation

The Group recommends by majority that P242 should be approved.

Why has P242 been raised?

Change in Status from treatment as an Offshore Exemptable Embedded to a Transmission Connected Generator

When the new Offshore Transmission Arrangements (as introduced by the Secretary of State) 'Go Live' in June 2010, Offshore Exemptable Generators that connect directly to a Distribution System via cables rated at 132kV or above will stop being treated as an Embedded Exemptable Generators. Instead they will be considered as Transmission Connected Generators.

The reason for the change in status is that under the new arrangements the 132kV cable (and potentially part of the Offshore substation) connecting the Offshore Exemptable Generator to the Distribution System will be operated by the Offshore Transmission Operator (OFTO) and become part of the Transmission System. The change in classification of the assets will mean the Offshore Generator will be classed as being a Transmission Connected Generator. The Transmission Assets in this situation can be described as 'Embedded Transmission'.

Once the Offshore Exemptable Generator is classed as being a Transmission Connected Generator, they will become liable for transmission charges while still being liable for Distribution Use of System (DUoS) charges. This gives rise to undue discrimination as they will be liable for transmission charges and DUoS charges rather than just the DUoS charges that a comparable Onshore Embedded Generator would be liable for.

Movement of the Boundary Point Offshore

Due to the 132kV cable being part of the Transmission System the Boundary Point will move. Before Go Live the Boundary point is where the Offshore Generator's Assets (the 132kV cable) connects to the onshore Distribution System, which enables it to be treated as Embedded and to get 'Embedded Benefits'. After Go Live the Boundary point will be where the Offshore Generator connects to the Offshore Transmission Assets (i.e. the Offshore end of the 132kV cable). The movement of the Boundary Point Offshore creates a barrier to the Offshore Exemptable Generator being able to be treated as Embedded, as a Generator needs to connect to a Distribution System directly.

The Generator will be responsible for installing and registering the metering at the Offshore Boundary Point. The meter and the registration of the metering at the Offshore Transmission Connection Point will be the responsibility of National Grid.

With the shift of the Boundary Point Offshore and the change in status to a Transmission Connected Generator after Go Live, the Offshore Exemptable Generators will have to register their metering at the Boundary point via the Central Meter Registration Service (CMRS). This is in contrast to Onshore Exemptable Embedded Generators which have the option to register in either CMRS or in the Supplier Meter Registration Service (SMRS).

What does all this mean?

The change in classification of the offshore assets to Embedded Transmission and the movement of the Boundary Point Offshore means that an Offshore Exemptable Generator that, before Go Live, could be treated as an Embedded Generator can no longer do so. Furthermore the Offshore Exemptable Generator will be liable for all transmission charges, including socialised Losses to which they were not previously exposed. Additionally, before Go Live the Generator's Losses will be directly attributed to them and not socialised (ie will



What is an Exemptable Generator?

An Exemptable Generator is a licence Exempt Generator as they typically generate less than 100MW



What is Embedded Transmission?

Offshore Transmission Assets that connect Onshore to a Distribution System



What is a Boundary Point?

A Boundary Point is where a Generator connects to the Total System (which consists of the Transmission System or Distribution Systems).



What are 'Embedded Benefits'?

Embedded Benefits are savings incurred by the Exemptable Generator, as they are not liable for some of the charges that Transmission Connected Generators are. This is due to them making little or no use of the Transmission System

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effectively be a cost borne directly by the generator concerned). After Go Live these losses will form part of the socialised costs to be recovered across all participants. The change in treatment of these losses and transmission charges at Go Live gives rise to undue discrimination against the Offshore Exemptable Generator as the only difference between the Onshore and Offshore equivalents is the presence of the Embedded Transmission.

The above issues have an immediate effect on current Offshore Exemptable Generators going through transition to the new Offshore Transmission Arrangements. However they may also affect future decisions made by Parties about how new builds of Offshore Generation are connected, as the current proposed regime is likely to cause them to request a full extension of the onshore Transmission System to the shoreline, even if connection to the nearest Distribution System is the most efficient solution.

Attachment A (Section 1) provides further details on the Background of the Modification and further information on Embedded Generation.



What is an Offshore Transmission Connection Point?

Is a Systems Connection Point at which the Offshore Transmission System connects to a Distribution System.

3 Solution

How will P242 resolve the issue?

P242 seeks to allow Offshore Exemptable Generators that are connected to, or are considering connecting to, a Distribution System via Embedded Transmission to have the option of being treated as an Embedded Generator. By doing this it would remove the inconsistencies in the treatment of Onshore Exemptable Generators and Offshore Exemptable Generators that will occur at Go-Live.

To achieve this, P242 proposes that Offshore Exemptable Generators that are connected to Embedded Transmission:

- are metered at the point where the Offshore Exemptable Generator connects to the Distribution system;
- are responsible for any Losses from the Embedded Transmission, so that they are not spread across other market participants;
- qualify for Embedded Benefits;
- have a choice as to whether they register in SMRS or CMRS; and
- are the Registrant for the onshore metering as they are responsible for the Exports from the Generator.

What are the Changes that are required?

The key areas that require changes are:

- **Boundary Point** – the Boundary Point would be deemed to be onshore between the Generator and the Distribution System (this will allow an Offshore Exemptable Generator to be treated as Embedded);
- **'Sole Use'** – For an Offshore Exemptable Generator to be treated as Embedded the Embedded Transmission would have to be used by the one Generator. If another Generator wants to connect to those assets, the status of the original Generator will change and they would need to re-register as a Transmission Connected Generator;
- Allowing both **SMRS and CMRS registration** – to achieve the aims of the Modification (detailed above) and to match the pre Go Live options, the ability to register the metering in SMRS and CMRS would be included; and

- **Losses** – By having the deemed Boundary Point placed onshore the Offshore Transmission Losses would be attributed directly to the Generator, while the Generator would not be liable for socialised Onshore Losses.

For the avoidance of doubt the P242 Proposed Solution will apply to both existing transitional Offshore Exemptable Generators and future Offshore developments. Further details of the solution are provided below:

Boundary Point

For the purpose of an Offshore Exemptable Generators that wants to be treated as an Offshore Exemptable Embedded Generator, the Boundary Point between the Generator and Total System (in this case the Distribution System) will be **deemed** to be Onshore at the Offshore Transmission Connection Point between the Embedded Transmission and Distribution System.

While the Boundary Point will be deemed to be Onshore for the purposes of the BSC, the physical connection between the Generator and Transmission System remains offshore. However, by deeming the Boundary Point to be Onshore the Transmission Assets will effectively be invisible thus allowing the Exemptable Offshore Generator to be treated as being Embedded and will ensure that the Offshore Exemptable Generator is fully responsible for the losses incurred on the Offshore assets.

The metering at the deemed Boundary point will still be under the ownership of the Transmission Company, but for the purposes of Settlement the Generator (if registered in CMRS) or Supplier (if registered in SMRS) will be the registrant and will therefore be responsible for the onshore metering.

Registration

Currently Embedded Exemptable Generators can register in both CMRS and SMRS. To retain this option, changes are needed to allow meter registration in both CMRS and SMRS. The process for both types of registration are set out below:

CMRS

A new option for registering a BM Unit will be added to identify that it is using Embedded Transmission. This would involve an extra option in the existing forms (in BSCP15) to include Embedded Transmission as a BM Unit Configuration. The Generator would need to prove that it has 'Sole Use' of the Embedded Transmission to qualify for this configuration.

Once the Generator is registered in CMRS as an Exempt Export BM Unit (Section K 3.2) it would then automatically join the Base Trading Unit as set out in Section K 4.7 and be classed as Embedded.

SMRS

To register in SMRS, the Offshore Exemptable Generator would agree a connection with the Distribution System through the Transmission Company and set up their metering in SMRS as set out in Section K 2.4.

The Supplier would be required to register an Additional Supplier BM Unit via BSCP15/4.1. This would provide the necessary indicators that the BM Unit is using Embedded Transmission, in the similar manner to CMRS registration.

The SMRS-registered Offshore Exemptable Generator would then be able to belong to the Base Trading Unit as set out in Section K 4.7 and be classed as Embedded.



What does the group mean by 'sole use'?

In the context of the P242 and the code, it will mean one Generator/BM Unit connecting to and using one (Embedded Transmission) cable to the Onshore Distribution System

'sole use' or Increase in generation capacity

For an Offshore Exemptable Generator to be treated as Embedded, the Embedded Transmission connecting the Generator onshore would have to be used only by the one Generator (sole use). This is because of the requirement to separately meter different Party's outputs to maintain the integrity of Settlement.

The situations where an Offshore Exemptable Generator, that elected to be treated as Embedded, can no longer be considered as Embedded are:

- where the Embedded Transmission that the Offshore Exemptable Generator uses to connect to the Distribution System stops being used solely by that Generator (i.e. another generator connects to the Embedded Transmission); or
- the Generator increases its generating capacity above the Exemptable limit (i.e. 100MW+) In these situations the Offshore Exemptable Generator is no longer Exemptable and would need to re-register as a Transmission Connected Generator via CMRS.

These scenarios would result in the Transmission Company becoming the registrant of the Onshore metering at the Offshore Transmission Connection Point, with the Generator being the registrant of the metering at the Boundary Point Offshore between the Generator and Embedded Transmission.

Losses

The Offshore Exemptable Generator will be automatically responsible for the losses along the Embedded Transmission. This is due to the Offshore Exemptable Generator being metered at the deemed Boundary Point Onshore where the Transmission Assets connects to the Distribution System.

Step by Step details on how CMRS and SMRS registration would work in relation to the P242 proposed solution can be found in Attachment A, Section 3.

Has the Group identified any Alternative Solutions?

No alternative Modifications have been developed as part of the P242 Assessment. The Group did discuss a potential alternative (prior to the Assessment Consultation) that the Group did not develop further.

Details and the Group's discussions on why the alternative was not developed can be found in Attachment A, Section 3.

One Assessment Consultation respondent suggested an alternative solution. The Group discussed this alternative but did not develop it further. **Details of this Assessment Consultation alternative, the Group's discussion and rationale for not developing it, is provided in Attachment A, Section 7.**

4 Impacts & Costs

Costs

ELEXON Cost		ELEXON Service Provider cost	Total Cost
Man day	Cost		
5.0	£1,200	£0	£1,200

Indicative industry costs

There are no costs to Industry or the Transmission Company to implement P242 as the changes are only administrative in nature.

Impacts

Impact on BSC Parties and Party Agents

Minimal as the changes are administrative in nature. However the existing generators affected by P242 will be affected: if a decision to approve is made after Go-Live, they would need to do a significant amount of changes in registration. In contrast, a decision before Go-Live will create little impact as the current pre Go-Live set up will remain.

Impact on Transmission Company

The Transmission Company indicated no impacts in relation to implementing P242 in addition to the activities they are already carrying in preparation of Go Live.

Impact on Code

Code section	Potential impact
Section K1	<ul style="list-style-type: none"> Allow a deemed Onshore Boundary Point for an 'Embedded Transmission BM Unit'. Exclude Offshore Transmission Connection Point associated with Embedded Transmission BM Unit which shall operate as Boundary Points as a result of the new provisions concerning the deemed Boundary Point.
Section K2	<ul style="list-style-type: none"> To remove any ambiguity around what will not apply to Metering Systems for a CMRS register Embedded Transmission BM Unit. Create a provision that allows the optional registration of Metering Equipment in CMRS where the Metering Equipment measures quantities of Exports, or Exports and Imports from an Embedded Exemptable Generating Plant.
Section K3	<ul style="list-style-type: none"> Create a new BM Unit configuration 'Embedded Transmission BM Unit' as a

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	<p>category of BM Unit.</p> <ul style="list-style-type: none"> • Allow the Generator to register metering in CMRS or SMRS (with a provision that if registered in SMRS the Supplier must register an Additional BM Unit).. • Make a provision that the Generator (CMRS) Supplier (SMRS) to be responsible for the metering at the deemed Boundary Point.
Annex X-1	Include a new definition of 'Embedded Transmission BM Unit'

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP15	Small impact to amend form BSCP15/4.1 to include 'ET - Embedded Transmission' under BM Unit configuration footnote.

Group's discussion on the P242 Legal Text

Meaning of 'sole use' in the P242 Proposed Redlined Text

During the Group's discussion of the draft P242 legal text, the Group considered what 'sole use' means in relation to the P242 solution. The Group concluded that in the context of the P242 and the Code it will take the meaning of only one Generator/BM Unit connecting to and using Embedded Transmission to shore.

Only if a Generator meets the requirements of 'sole use' in relation to the other requirements can they be in a position to access any 'Embedded Benefits'. If they do not meet all the requirements including 'sole use' they cannot be treated as Embedded and instead will be treated and need to register as Transmission Connected.

The Group believed that Embedded status should be limited to 'sole use' situations to minimise any incentives for larger Parties to split an Offshore sites up into smaller Exemptable Sites to be treated as Embedded, and gain access to Embedded Benefits.

Details of the Groups discussion about 'sole use' can be found in Section 3, and discussions around incentives for larger sites to split up to be treated as Embedded can be found in Attachment A, Section 4.

Costs

The costs of implementing P242 are minimal, and involve 5.0 man days (£1,200¹) of ELEXON effort to implement the BSC/BSCP15 changes and update Local Working Instructions (LWIs).

The Transmission Company indicated no impacts in relation to implementing P242 in addition to the activities they are already carrying in preparation of the Offshore Transmission Arrangements Go Live date.

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¹ The average ELEXON day rate is £240 per Man Day, and is based on average implementation efforts from past BSC System Releases.

Wider Impacts

As set out in the Modification Group's Terms of Reference the P242 Modification Group had to consider the wider impacts of the Modification on other Codes and other industry work that is underway or will or commence in the future.

The Group concluded that while there is other work occurring in relation to P242, the solution developed and the ability for the Authority to reach a decision on P242 is not contingent on the outcome of the other industry work. Therefore P242 should be considered on its own merits.

Details of the Group's discussion around the impacts on other Codes and Industry Work can be found in Attachment A, Section 4.

5 Implementation

When will P242 be implemented?

Changes to the BSC

The Group believes that there is nothing preventing a prompt implementation following an Authority decision on P242. The Group requests that a prompt decision is reached suitably **in advance** of the Offshore Transmission Arrangements going live in June 2010. This period of time in advance would be needed to allow any Parties affected by P242 to make any necessary changes to their Transition Plans for the Offshore Transmission Arrangements.

The Group therefore recommends that, if the Authority approves P242, the changes to the BSC are implemented 5 Working Days after the Authority's decision. This will enable the changes to take affect promptly while providing Parties with suitable notice to change any Transition Plans they are carrying out.

Changes to BSCP15

The changes to BSCP15 are minor and include adding the new Embedded Transmission BM Unit configuration option to the BM Unit registration form used by Parties. The Group considers that it is beneficial to deliver these changes in parallel with those to the BSC,.

The Transmission Company and a majority of respondents to the Group's consultation support this approach and the Group's proposed Implementation Date.

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

ELEXON will consult on both the legal text and redlined BSCP changes during the Report Phase for P242.

Cost Benefit Analysis

During the Assessment of P242 the Group carried out a Cost Analysis of the affect on Exemptable Generators Post Go-Live, showing the costs they would be liable for with or without P242.

The table below show a comparison of the total costs that the existing three Pre Go Live Onshore Exemptable Embedded Generators, as described in the P242 proposal; Barrow, Robin Rigg East and Robin Rigg West would be liable for after Go Live, compared to what they would be liable for if P242 was approved.

	Costs post Go Live (£)	
Generator Costs	Baseline	P242
BSUoS	959,037	0
RCRC	-87,215	0
Onshore Distribution Losses	0	-1,297,099.55
Onshore Transmission Losses	379,772	
Offshore Losses	1,539.90	1,337,216
Total	1,253,134	40,116
Supplier Costs	Baseline	P242
BSUoS	959,037	0
RCRC	-87,215	0
Onshore Transmission Losses	473,269	0
Offshore Losses	1,539.90	0
Total	1,346,631	0
Grand Total	Baseline	P242
	2,599,765	40,116
Average saving²		853,216

If P242 was approved and implemented, a Generator that chose the Offshore Embedded route could save approximately **£853,216 per year**. They would only be paying the directly attributed Offshore Losses, and would get a credit for the Onshore Distribution losses. Without P242 they would be liable for the whole range of costs, in the form of BSUoS, RCRC, Onshore Transmission Losses and Offshore Transmission Losses.

Full details of the costs benefit analysis along with a detailed commentary on how the costs were calculated are provided in Attachment A Section 6.

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² This figure is the average saving based on the total example saving, for Barrow, Robin Rigg East and Robin Rigg West, of £2,599,765 minus the costs incurred under P242 divided by 3.

Why will P242 be better than the existing BSC Requirements?

The Group's majority view is that P242 will better facilitate the achievements of **Applicable BSC Objective (a), (c)** and to a lesser extent **(b)**.

The table below sets out the final views raised by the Modification Group members, for and against each Applicable BSC Objective following the Assessment Consultation.

Applicable BSC Objective	Benefit(s)	Drawback(s)
Objective (a)	<ul style="list-style-type: none"> Promotes efficient network design solutions. The current Baseline provides a disincentive for Offshore Generators to connect via Embedded Transmission even when this would be the most efficient solution. 	<ul style="list-style-type: none"> The Offshore Exemptable Generators will only be able to meter onshore in limited situations. Having different treatment may impact the Transmission Company's ability to discharge its duties efficiently. The Transmission Company will not take into account 'Embedded Benefits' when deciding on the best place for a Generator to connect. The Generator may apply pressure to get the connection they want in order to be treated as Embedded.
Objective (b)	<ul style="list-style-type: none"> Ensures that there is no unnecessary economic impact on the Transmission System from the cost of retrofitting Offshore Metering. This impact would be, in part, from the required network outages to fit this metering. Promotes Offshore renewable Generation by introducing an extra option for small generation, when new offshore sites are being developed. It would prevent marginalising some offshore projects, as the DNO connection will be chosen if most efficient. 	<ul style="list-style-type: none"> Treating Offshore Generators differently may make the Operation of the Offshore Transmission system more difficult. The retrofitting of any metering would be managed by the Transmission Company to minimise the impact.
Objective (c)	<ul style="list-style-type: none"> Promote competition in generation by removing any undue discrimination between the onshore and offshore situation. Ensures that the correct costs associated with the Embedded Transmission are targeted at the Offshore Exemptable 	<ul style="list-style-type: none"> Allowing different treatment of Transmission Connected generation may create further discrimination between Generators. Licensable generators have to install and meter offshore at the Boundary Point, involving higher costs over metering onshore.



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

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Applicable BSC Objective	Benefit(s)	Drawback(s)
	<p>Generator.</p> <ul style="list-style-type: none"> Removes the double charging of transmission and distribution charging, by making the Offshore Exemptable Generator only liable for the Distribution charging and the costs of the offshore assets. No reason for differential treatment between Onshore and Offshore post Go-Live when the Generator Set-Up is still essentially the same. It will resolve regulatory uncertainty over the treatment of such situations 	<p>Have different treatment could have a negative impact on competition.</p>
Objective (d)	<ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Slight amount of added complexity to ELEXON processes.

The Analysis completed by the Transmission Company was neutral around the Applicable Objectives as the benefits the Group identified were limited in their application.

A majority of Assessment Consultation respondents supported the initial views of Modification Group that P242 does better facilitate the applicable objectives, particularly in relation to the issue of undue discrimination.

Further details on the Assessment Consultation responses and the Group's discussions are provided in Attachment A, Section 7.

Discrimination

One of the Modification Group's Terms of Reference was to consider whether there was undue discrimination arising from the Offshore Transmission Arrangements. The Group considered this discrimination issue in relation to the arguments for and against what P242 is trying to achieve.

The Group's provided arguments in relation to discrimination and whether this can be considered due discrimination with regard to:

- Offshore Embedded Transmission Exemptable Generators and Onshore Exemptable Embedded Generators;
- Offshore Embedded Transmission Exemptable Generators and Offshore Exemptable Transmission Connected Generators in Scotland (with 132kV connections); and
- Offshore Licensable Generators having to meter Offshore and Exemptable Generators and being able to meter Onshore under P242.

Full details of the views for and against P242 in relation to the question of discrimination and how each relates to the Applicable BSC Objectives is provided in Attachment A, Section 5

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Incentives/Disincentives to become Offshore Exemptable Embedded as a result of P242



During the Group's discussions of what P242 was trying to achieve, the Group discussed and considered whether P242 (if approved) would act as an inappropriate incentive for large Offshore Generators to try to be treated as Offshore Exemptable Embedded Generators.

Following the provision of some background information provided by the Proposer on where Offshore developments currently stand, the Group concluded that the likelihood of large Offshore Generators splitting their sites up and connecting them separately to Distribution Systems would be negligible. While a small incentive would exist for an Offshore Generator to develop their site in such a way as to meet the requirements established by P242, the practicalities and inconvenience of doing so significantly outweigh this incentive.

Full details of the Group's discussion on this subject is provided in Attachment A Section 4.

Recommendation

The Group by majority recommends that P242 should be approved.

7 Group's Recommendations

The P242 Modification Group invites the Panel to:

- AGREE an initial recommendation that Proposed Modification P242 should be made;
- AGREE an initial Implementation Date for P242 of 5 Working Days after an Authority decision is received (such that both the BSC legal text and the changes to BSCP15 will become effective on this date);
- AGREE the draft legal text and redlined changes to BSCP15;
- AGREE that Modification Proposal P242 shall be submitted to the Report Phase; and
- AGREE that ELEXON should issue a P242 draft Modification Report for consultation (including the draft legal text and BSCP changes), 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: Detailed Assessment

This information includes:

- Background on the Offshore Transmission Arrangements and P242;;
- The Modification Group's Terms of Reference and how each has been completed;
- Modification Group discussions on the Proposed Solution, the suggested Alternative and Wider Impacts;
- Benefits and Drawbacks of the Proposal;
- Cost Analysis of Exemptable generation with and without P242 Post Go Live;
- A summary of the industry responses to the Group's consultation;
- Process followed for P242; and
- Modification Group membership

Attachment B: Draft BSC Legal Text

Attachment C: Draft BSCP15 changes

All consultation and impact assessment responses are on the [P242](#) page of the ELEXON website.

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Stage 03: Attachment A: Detailed Assessment for P242

P242: Treatment of Exemptable Generation Connected to Embedded Offshore Transmission Networks

What stage is this document in the process?

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

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About this document:

This is Attachment A to the Assessment Report. This attachment provides additional information on P242, including details of the Modification Group's discussions.



Any questions?

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What are TNUoS charges?

The Transmission Network Use of System charge published for the relevant year as set out in the statement provided for in Standard Licence Condition C4 of the Transmission Licence held by National Grid



What are RCRC charges?

Is a charge or credit to a Party covering an over or under payments in relation to Balancing the system at the end of each settlement period

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What is the Offshore Transmission Regime?

The Government and Ofgem have introduced competitive Offshore Transmission Arrangements, which will Go Live in the summer of 2010. In preparation for Go Live, the Secretary of State directed changes to the industry codes, including the BSC, on 24 June 2009 (Go Active).

One of the effects of the regime is that all Offshore Transmission through 132 kilovolt (kV) cables and above will be treated as being part of the Offshore Transmission System.

What is Embedded Generation?

Embedded Generation is where a Generator is located within a Distribution System and deemed not to make use of the Transmission System. Generators that typically generate less than 100MW are Licence Exemptable and have the option to be treated as Embedded by connecting directly to a Distribution System. By connecting directly to a Distribution System and not making use of the Transmission System they are not liable for the following transmission related charges:

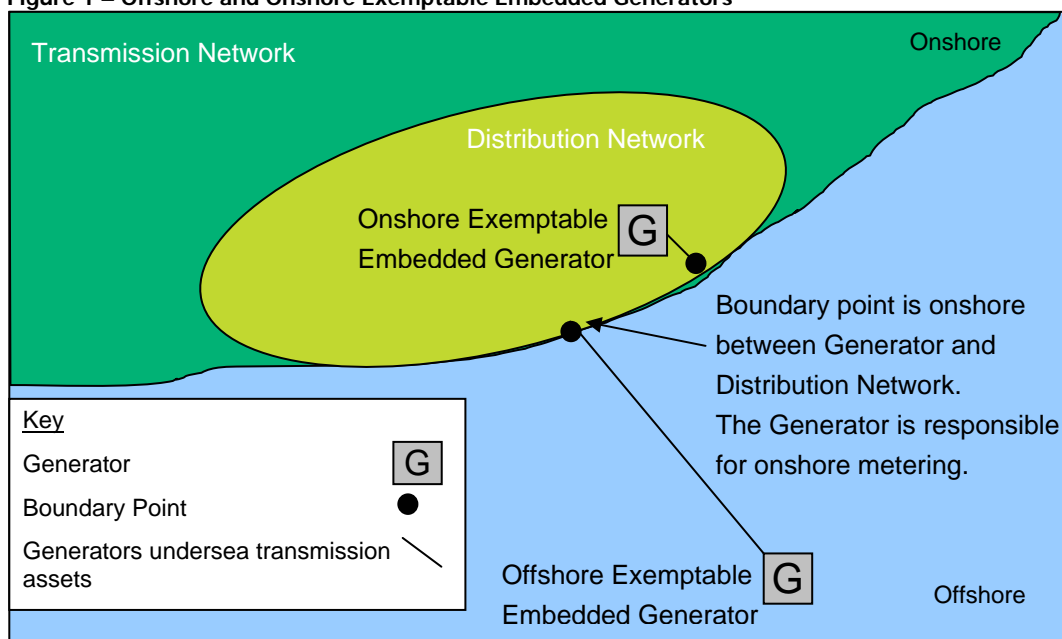
- Transmission Network Use of System (TNUoS)
- Balancing System Use of System (BSUoS)
- Residual Cashflow Reallocation Cashflow (RCRC)
- Socialised Transmission Losses

The avoidance of the above charges are known as 'Embedded Benefits'. While the Exemptable Embedded Generator receives Embedded Benefits, they are however liable for Distribution Charges.

Onshore and Offshore Exemptable Embedded Generators

Before the Offshore Transmission Arrangements Go Live in June 2010, Exemptable Onshore and Offshore Generators can elect to connect directly to a Distribution System and not make use of the Transmission System. Figure 1 shows the difference between the Offshore and Onshore Exemptable Generators.

Figure 1 – Offshore and Onshore Exemptable Embedded Generators



Before Go Live, both Onshore and Offshore Exemptable Generators would have a Boundary Point between them and the Distribution System. The only difference between Onshore and Offshore Exemptable Embedded Generators is that the Offshore Generator owns Assets (i.e. a Transformer and a 132kV cable) connecting it to the Distribution System. As such the Offshore Exemptable Generator is responsible for its own Transmission Losses and maintenance of the assets. Table 1 provides a comparison of the two.

Table 1 – Comparison of Offshore and Onshore Embedded Generators and the charges they are liable for Pre Go Live

	Onshore Embedded Generator	Offshore Embedded Generator
DUoS	Liable	Liable
Wider TNUoS	Not Liable	Not Liable
BSUoS/RCRC	Not Liable	Not Liable
Registers Meter in	SMRS or CMRS	SMRS or CMRS
Onshore Transmission Losses	Not Liable	Not Liable
Offshore Transmission Losses	Not applicable	Directly attributed to the Generator (as metering is onshore)
Offshore Transmission Asset Costs	Not applicable	Liable (own assets)



What are DUoS charges?

Charges associated with using a Distribution Network



What are BSUoS charges?

The charges associated with balancing the inputs and outputs of the Transmission System.



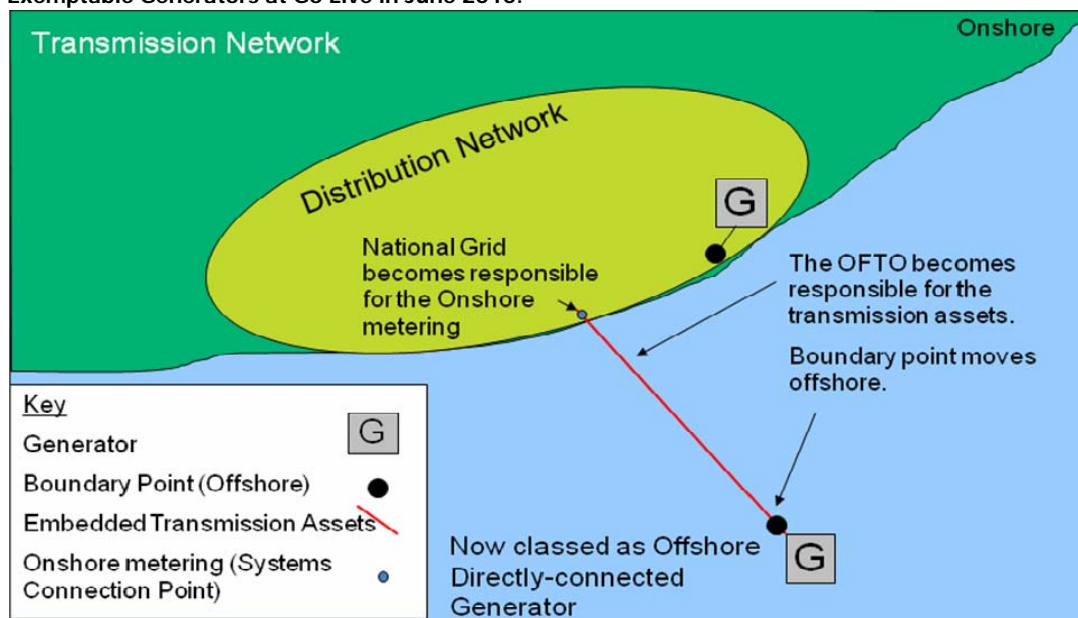
What is Embedded Transmission?

Offshore Transmission Assets that connect Onshore to a Distribution System.

How will the Offshore Transmission Regime affect Offshore Exemptable Embedded Generators?

When the Offshore Transmission Arrangements Go Live in June 2010, Offshore Transmission Owners (OFTOs) will take over the responsibility of all Offshore networks operating cables at 132kV and above. These assets will be re-categorised as Transmission Networks. This means that Offshore Exemptable Generators connected by such assets to an Onshore Distribution System, will at Go Live cease to be considered as Embedded, and will instead be treated as Transmission Connected. Figure 2 shows the changes that will take affect at Go Live.

Figure 2 – How the Offshore Transmission Arrangements will change the treatment of Offshore Exemptable Generators at Go Live in June 2010.



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Since the change in status means that the Offshore Exemptable Generator is now treated as Transmission Connected, they will lose the Embedded Benefits, and will become liable for the Transmission Charges and socialised Transmission Losses. In addition as the Transmission Assets connect Onshore to the Distribution System they will still be liable for the DUoS charges as well. The shift of the Boundary Point from a location onshore to between the Generator and Transmission System, will mean existing Generators will incur a cost of installing the metering offshore. Table 2 provides a comparison of how Offshore Exemptable Generators that before Go-Live could be treated as Embedded will be treated following Go Live, compared with Offshore Licensed Generators.

Table 2 – Comparison of Offshore Exemptable Generators before and after Go Live compared to Offshore Licence Generators

	Offshore Exemptable Generator before Go-Live	Offshore Exemptable Generator at Go Live	Offshore Licensed Generator at Go Live
Option to be Embedded	Yes	No (as they are Transmission Connected)	No (as they are Transmission Connected)
DUoS	Liable	Liable (Embedded Transmission)	Not Liable (not Embedded Transmission)
Wider TNUoS	Not Liable	Liable	Liable
BSUoS/RCRC	Not Liable	Liable	Liable
Registers Meter in	SMRS or CMRS	CMRS only (as they are Transmission Connected)	CMRS only (as they are Transmission Connected)
Location of Generator Metering	At Onshore Boundary Point between Generator and Distribution System	At Offshore Boundary Point between Generator and Transmission System	At Offshore Boundary Point between Generator and Transmission System
Onshore Transmission Losses	Not Liable	Liable	Liable
Offshore Transmission Losses	Directly attributed to the Generator (as metering is onshore)	Socialised	Socialised
Offshore Transmission Asset Costs	Liable (own assets)	Liable (paid to OFTO)	Liable (paid to OFTO)

What is the Proposal trying to achieve?

E.ON/Centrica raised P242 to propose changes to the BSC so that Offshore Exemptable Generators connecting to 'Embedded Transmission' after Go Live will have the option to be treated as Embedded. These Offshore Exemptable Embedded Generators would then be able to gain access to Embedded Benefits, while picking up the relevant offshore costs that an Offshore Exemptable Embedded Generator should be liable for. Table 3 shows a

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comparison of how Offshore Exemptable Generators will be treated after Go Live compared with how they would be treated under the model proposed by P242, if the Generator has the option to be treated as Embedded.

Table 3 – Comparison of Offshore Exemptable Generators before and after Go Live

	Offshore Exemptable Generator at Go Live	P242 proposal - Offshore Exemptable Embedded Generator
Option to be Embedded	No (as they are Transmission Connected)	Yes
DUoS	Liable	Liable
Wider TNUoS	Liable	Not Liable
BSUoS/RCRC	Liable	Not Liable
Registers Meter in	CMRS only (as they are Transmission connected)	CMRS and SMRS (retain both options, that are available before Go-Live)
Location of Generators Metering	At Offshore Boundary Point between Generator and Transmission System	At deemed Onshore Boundary Point between Generator and Distribution System
Onshore Transmission Losses	Liable	Not Liable
Offshore Transmission Losses	Socialised	Directly attributed to the Generator (as metering is onshore)
Offshore Transmission Network cost	Liable (paid to OFTO)	Liable (paid to OFTO)

The Proposer's rationale behind P242 is that the change in status as a result of the Offshore Transmission Arrangements gives rise to undue discrimination against the Offshore Exemptable Generator. The discrimination is undue as the only difference between Offshore Exemptable Generators and Onshore Exemptable Generators is that before Go Live the Offshore Generator is liable for its own Offshore Asset costs and losses along the 132kV cable to shore. This means the Offshore situation is very similar to that Onshore. After Go Live the Offshore Exemptable Generator will be considered as Transmission Connected but is not directly connected to the wider onshore Transmission System. The Offshore Generator's set up will still be more similar to the Onshore Exemptable Embedded situation, with the only difference being the presence of the Embedded Transmission between the Generator and the Onshore Distribution System. That is, the discrete offshore assets which were previously considered part of the power station's assets connecting it to the distribution system will be regarded as a discrete and isolated part of the Transmission System.

History of Issue

The issue that the P242 is proposing to address was first raised by the Proposer in correspondence with Ofgem in October 2007, at various workshops and seminars through the Ofgem and the Department of Environment and Climate Change (DECC) Offshore Transmission project and consultation process. The issue was not considered formally until later in 2008.

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In July 2008 Ofgem and DECC stated that they would be reviewing the treatment of these Offshore Generators and this was subsequently undertaken within the project. In the [November 2008 Regulatory Update document](#), Ofgem/DECC concluded that they were not convinced that different treatment for these generators was justified.

Meanwhile, the TNUoS charging principles behind the model were consulted on formally in National Grid's consultation on Offshore Transmission which took place in November 2008. The Proposer continued to advocate the alternative model in its response to the Regulatory Update document and included suggested BSC drafting changes to assist its further consideration. However the [final consultation document issued in March 2009](#) maintained the view that different treatment was not appropriate.

The Proposer believed that the challenging programme of work required for introducing the Offshore Transmission regime may have meant that it was not possible for the implications of such a new concept as 'Embedded Transmission' to be fully understood. The Proposer considers that a defect in the arrangement exists, and should be addressed before Go-Live.

Amending Statutory changes

When the details of Initial Written Assessment of P242 were presented at the Panel meeting on 13 August 2009 ([158/08](#)) concerns were raised as to whether it was a Modification that was undoing parts of the Offshore Transmission Arrangements that had been put in place by the Secretary of State.

At the Panel meeting Ofgem were asked about providing a provisional view on the prospects of such a Modification. Ofgem referred back to the November 2008 and March 2009 Offshore consultation documents which indicated that Ofgem would *'consider any specific issues that relate to the transition of existing 132kV connected licence exempt offshore generators to the new transmission arrangements on a case by case basis'*.

It was agreed that this Modification should go through a thorough and complete process so that it could be judged on its own merits following a full industry consultation and assessment.

Any Authority decision will be based on:

- the content of the Modification Report;
- industry consultation responses;
- whether the proposal improves the current BSC baseline; and
- whether it better facilitates the applicable BSC Objectives.

2 Terms of Reference

The P242 Modification Group consists of members of the Settlement Standing Modification Group (SSMG), supplemented with members of the Issue 37 Group.

Table 4 lists the Terms of Reference considered by the P242 Modification Group, a summary of the Group's conclusions against each and where in this document the full details of the Group's discussion and conclusions are set out.

Table 4 - P242 Assessment Procedure Terms of Reference

Area of Terms of Reference	Group's conclusions:	See:
Is there a reason why Offshore Exemptable Generators that are connected directly to a Distribution System should not be treated similarly to onshore Embedded Exemptable generators?	The Group discussed the arguments for and against P242, and concluded that there was no reason why they shouldn't be treated the same.	Main Document Section 6 Further Information in Attachment A, Section 5
Where should the Boundary Point lie?	To enable an Offshore Exemptable Generator to be treated as Embedded you will need a deemed Onshore Boundary Point at the Offshore Transmission Connection Point.	Main Document Section 3
What BSC definition changes are needed? Are there wider implications of changing BSC definitions on other industry codes?	Changes to Annex X-1 may be needed to add new definitions. No existing BSC Definition changes are required, as the provisions in Section K can be amended to accommodate the proposed solution. Other industry changes are required in relation to the Charging Methodology. P242 is not contingent on it.	Main Document Section 4 Attachment A, Section 4
What are the wider impacts of P242 outside of the BSC?	The Group discussed the wider impacts and concluded that there are no wider impacts on other industry work.	Main Document, Sections 4 Attachment A, Section 4
Are there any issues caused by the Party responsible for the Exports from the relevant generator also being the Registrant of the onshore metering?	No, the Group agree that in order for the Generator to be treated as Embedded and be responsible for their own losses, the Generator would be the registrant of the offshore metering in CMRS and the Supplier in SMRS.	Main Document Section 3
How will the Offshore Losses be directly attributed to the Offshore Exemptable Generator?	The Group concluded that having the Generator (CMRS) and Supplier (SMRS)	Main Document Section 3

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Area of Terms of Reference	Group's conclusions:	See:
	responsible for the onshore metering would mean that the Offshore Losses would be automatically the responsibility of the Offshore Generator.	
<p>What are the benefits and drawbacks of P242? Including:</p> <ul style="list-style-type: none"> Costs/benefits to all Parties and the Transmission Company 		<p>Main Document Section 6 Further details in Attachment A; Section 5 and 6</p>
<p>How does current treatment of Offshore Exemptable Generation result in discrimination, and how will the P242 solution resolve this?</p>	<p>The Group discussed at some length the discrimination issues and the views for and against. The Groups majority view is there is undue discrimination between Onshore and Offshore Exemptable Generators.</p>	<p>Main Document Section 6 Further details in Attachment A; Section 5</p>
<p>Is an Alternative Modification required?</p>	<p>The Group discussed a potential Alternative solution, with the majority of the Group agreeing it should not be taken forward as it doesn't deliver the full requirements set out in the P242 Proposal.</p>	<p>Main document Section 3 Further details in Attachment A; Section 3</p>
<p>How does the P242 solution better meet the Applicable BSC Objectives?</p>	<p>The Group's final views are that P242 will better facilitate objective (a) and (c) and in a limited circumstance objective (b)</p>	<p>Main Document Section 6 Further Details in Attachment A; Section 5</p>

3 Details of Proposed Solution

The Main P242 document explains the P242 solution (see Section 3). To provide additional clarity on how the registration process would work, the following tables provide a high level overview of the steps that the Generator would need to follow in order to register as an Embedded Transmission BM Unit in CMRS and SMRS.

A third table shows what would need to occur if the Embedded Transmission was no longer 'Sole Use' or the Offshore Generators, Generating Capacity increases above 100MW.

CMRS Registration

Table 5 – CMRS registration steps

Step	Activity	Timetable ref.
1	Offshore Embedded generator registers as a BM Unit with an Embedded Transmission BM Unit configuration. The indication that the BM Unit configuration uses Embedded Transmission would warrant necessary checks to show the assets are 'Sole Use'.	BSCP15 3.1
2	During the registration as an Embedded Transmission BM Unit, the Offshore Generator will need to prove its Exemptable status	BSCP15 3.10
3	The registration of an Embedded Transmission BM Unit will provide the necessary indication to National Grid that the Generator will be taking the responsibility of the settlement metering at the deemed Boundary Point	-
4	Once the BM Unit's exemptable status has been confirmed it would be treated as an Exempt Export BM Unit, which will mean it will join the Base Trading Unit	-

SMRS Registration

Table 6 – SMRS registration steps

Step	Activity	Timetable ref.
1	Offshore Exemptable Generator agrees connection with the Distribution System via the System Operator.	-
2	The relevant Supplier will then register the metering system in SMRS. In doing this the Offshore Exemptable Generator joins the Supplier BM Unit, and automatically joins the Base Trading Unit for the relevant GSP Group.	-
3	At the same time as 2 the Supplier must register an Additional BM Unit via BSCP15 4.1, which will indicate that it is an Embedded Transmission BM Unit configuration and that the Generator has 'Sole Use' of the Transmission System. During the registration of the Additional BM Unit, proof will be needed of the Generator's Exemptable Status (BSCP15 3.10).	BSCP15 3.4

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No longer 'Sole Use' or increase in generating capacity above 100MW

Table 7 explains the steps that an Offshore Generator would need to go through if the Embedded Transmission Assets stopped being 'Sole Use' or the generation capacity of the Generator increased to 100MW or above. These changes in status would stop the Offshore Exemptable Generator from being able to be treated as Embedded (and Exemptable for the Generation capacity change) and would need to re-register.

Table 7 – No longer 'Sole Use' or increase in Generation Capacity above 100MW

Step	Activity	Timetable ref.
1	<p>If the Transmission Assets stop being 'Sole Use' or the generation capacity of the Offshore Exemptable Generator changes, the Generator or Supplier will need to de-register the Embedded Transmission BM Unit in CMRS or SMRS.</p> <p><i>(National Grid will have early site of a new Generator considering connection to an existing 'Sole use' Asset or re-enforcement of a Generating Plant to cope with increase capacity, so will know if a Offshore Exemptable Generator will need to de-register as an Embedded Transmission BM Unit and instead register as a Transmission Connected BM Unit.)</i></p>	BSCP15 3.11
2	<p>The Offshore Exemptable Generator will then need to register as a Transmission Connected Generator in CMRS</p> <p><i>(If the Generation capacity is still below 100MW they may need to re-confirm the Exemptable status following the process in BSCP15 3.10)</i></p> <p>By Registering as a Transmission Connected BM Unit the generator will need to have the metering installed at the Boundary Point where it connects to the Transmission Assets.</p>	BSCP15 3.1 BSCP15 3.10

Alternative Solution

Following the completion of discussions over the P242 Proposed Solution, the Group considered one potential Alternative Solution.

How did the alternative solution differ?

The key differences were that:

- there would be no deemed Onshore Boundary Point.
- metering Onshore would be achieved through a metering dispensation; and
- the meter registration would remain in CMRS only, in line with other Transmission connected Generation

Location of the Boundary Point and Use of Metering Dispensation

Under the suggested alternative Modification the location of the Boundary Point would remain unchanged. It would be located Offshore between the Offshore Exemptable Generator and the Offshore Transmission network. To avoid the need for metering to be installed offshore, a Party would seek a Metering Dispensation against the relevant Code of Practice (CoP) so that the Generator could meter onshore at the Offshore Transmission Connection Point.

Registration

CMRS

The meter would be registered in CMRS. It would be used to determine flows for the Offshore Transmission Connection Point. Readings from the same meter would be used in the aggregation rules for the Offshore generator, possibly with a scaling factor for losses on the line (part of the dispensation application referred to above). This may need a bilateral agreement between the generator and National Grid in relation to the generator's BSC obligation to ensure metering at the Boundary Point.

At least one BM Unit would be registered with the Boundary Point flow(s) allocated to it, as for all other Transmission Connected Generators. Registration of a BM Unit maintains visibility and the potential for balancing actions and ancillary services associated with the Transmission Connected Generator. This would be consistent with the existing BSC and all other Transmission Connected Generators.

The 'Embedded Benefits' obtainable by being in a BSC Trading Unit would be achieved by a simple change to BSC Section K4, to allow a BM Unit using a Dedicated Transmission System to be deemed to be in the GSP Group and would automatically join the Base Trading Unit.

SMRS

There would be no SVA registration, so as to be consistent with all other Transmission Connected connections.

Views and Conclusion of the Group on the suggested Alternative

The Modification Group member who suggested the potential Alternative believed it would have been better than the proposal, as the discrimination with other Transmission Connected assets (not just generators) in terms of meter registration, BM Unit registration, Transmission Losses and visibility would have been reduced. It would have maintained a vestige of the Offshore Transmission being treated as Transmission rather than as a collection of private assets.

The Group discussed the Alternative and reached a majority conclusion that the suggested Alternative solution was not suitable as:

- it did not meet all the requirements set out in the P242 Proposal Form, and highlighted in Section 3 of the main P242 document), in so far that:
 - it only allowed for CMRS registration, whereas the P242 Proposal form explicitly stated that both CMRS and SMRS registration options should be available;
 - The Offshore Transmission losses would not necessarily be directly attributed to the Generator, and would remain socialised;
- it introduced a degree of uncertainty as there would be no guarantee that the necessary metering dispensation would be approved, to allow the Generator to meter onshore at the Offshore Transmission Connection Point; and
- the option to submit a metering dispensation to allow the Generator to continue to Meter onshore is already available, and would not need to form part of a Modification to occur.

The details of another alternative solution proposed by an Assessment Consultation respondent, along with the Group's discussions and conclusions are provided in Section 7.

Wider Impacts

Other Industry Code impacts

The Group discussed whether there would be other code impacts, with there being some discussion around impacts on National Grid's Grid Code (GC) and Connection and Use of System Code (CUSC). The Proposer indicated at the Modification Group meetings that there may be related changes being taken forward to the GC and CUSC, but these changes are not contingent on P242.

Impacts on other Industry Work

Charging Methodologies

A charging methodology change is being progressed to clarify that the Offshore Exemptable Generator will only pick up the Local Offshore charges (use of the Transmission Assets connecting the Generator to the Distribution System) only, when the Generator is treated as Embedded. See Section 6, for further details of the charging methodologies change.

As with the NGC and CUSC changes, the change to the charging methodologies would support the changes that would be introduced by P242, but are not contingent on each other.

Transmission Access

The Group discussed and concluded that there would be no changes to Transmission Access in relation to the P242.

National Grid Review of Small Generation

The Group discussed that the review may have an impact on the BSC in the future, with the effect at this time unknown. P242 is looking at the current live baseline and if the Modification is approved, any change in the future as a result of the National Grid review will be against the Baseline of the BSC at the time the review is completed.

Incentives/Disincentives to become Embedded Generation

The Group considered whether the P242 Solution could provide an inappropriate incentive for developers of large scale generation to design new sites in a manner that will enable them to take advantage of 'Embedded Benefits'.

The Proposer took an action to provide information on the current situation with Offshore developments and whether there would be an incentive.

What would the generator need to do to meet the requirements of the P242 solution?

The circumstances under which developers could avail themselves of the benefits of P242 are:

- The Generator would have to be able to convince National Grid and the Secretary of State that the generation (most likely a wind farm) was a number of separate Generators located next to each other to obtain the Licence Exemptions.
- The design of the Offshore network would have to be such that discrete cables (or groups of cables) would transmit the output of each individual Exemptable Generator

alone and that the output of each station could not be exported along the cables of any other station.

- Each cable or group of cables would have to connect to the Distribution System onshore with its own individual metering at each connection point.

Can future developments take advantage of P242?

Current Developments

There is presently very limited scope for existing wind projects (known as Round 1 and 2) to redesign and acquire licence exemptions from the Secretary of State as most of them are either constructed, under construction, have planning permission or are in the planning process.

Future Developments

Future projects (known as Round 3) are all of a large size ranging from 500MW to 1500MW. Due to their size, providing the proof (to get a Licence Exemption) that these wind farms are in fact separate Generators is likely to be very difficult.

Additionally, these sites are often grouped into larger zones. The largest of these zones for example is Dogger Bank with an estimated capacity of around 10GW. There are also two zones with an estimated 5GW each and one of 3GW. These zones are generally further from shore than the earlier rounds.

Both the size of the zones and their distance from shore make it less likely that individual stations will be connected to the mainland with their own point to point cables. In December 2008, National Grid and Senergy Econnect, published a study¹ for Crown Estate on possible connection options for Round 3 projects. The designs contained in that document generally entailed a number of projects being aggregated Offshore before being transmitted together to the mainland.

The situation of the Round 3 projects compared with the Round 1 and 2 projects is summarised very well in the report²:

"Projects arising out of the Round 1 and Round 2 offshore leasing process were predominantly small in size and close to the shoreline (almost exclusively within the 12 nautical mile limit of territorial waters) relative to the proposed Round 3 areas. For the majority of these Round 1 and Round 2 projects, cost benefit analysis clearly demonstrated that individual, AC, radial connections to the electricity system onshore were the most economic. In contrast, offshore areas earmarked for Round 3, such as the Dogger Bank, could be developed to levels of up to tens of gigawatts and are located more than 100km from the onshore system leaving greater scope for consolidation and optimisation in taking the energy to shore."

Therefore, it is going to be very difficult to justify individual radial connections for each "Exemptable" power station as would be necessary to exploit P242 in this manner.

Security issues with Larger Sites

There is also a general security of connection issue for the wind farms. A 500MW site could typically require 4 cables to connect it to shore. This would provide very limited redundancy compared with the maximum capacity of the station. That is, if one of these cables failed it is unlikely that the maximum capacity of the station could be transmitted down the remaining cables. However, wind stations do not operate at full capacity all of

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¹ http://www.thecrownestate.co.uk/round3_connection_study.pdf

² See page 12 of the report.

the time. Therefore, ordinarily if such a large wind farm lost a quarter of its transmission capacity you would not expect it to lose a quarter of its output.

At times when the generator was generating at three quarters of its total capacity or less, the whole station's output could still be transferred down the remaining transmission capacity. By contrast, if the generator split into 4 individual power stations, each with one cable, if one cable failed then the entire output of the individual station would be curtailed. In other words a quarter loss of transmission capacity would equate to a quarter loss in output.

Loss of Offshore transmission capacity is a significant risk to a project, particularly Offshore as the lack of suitable vessels and the requirement for a window of good weather means that repairs cannot be effected as easily or as quickly as onshore. Should a failure occur at the beginning of winter, it could be many months until the asset is returned to operation.

As well as the risk associated with loss of cables it should be borne in mind that in the above example each cable would be carrying around 125MW each, well above the licence exemption threshold. To bring a project of 500MW below the threshold it would have to be split into at least 5 projects, if not 6. Therefore, the cost implications in terms of additional cables would act as an additional disincentive.

Finally, even if the above hurdles were cleared, the generators would have to connect to the local distribution system onshore. Apart from the costs of transmitting 500MW of power at 132kV in terms of losses and infrastructure reinforcement, the generator would not have the same level of financial firmness as would be provided by an onshore transmission connection.

Conclusion

In conclusion there are a number of factors which would stop sites choosing to fragment to make use of the P242 solution, making it unlikely in reality. This is based on experience in respect of the larger projects, such as London Array, which are choosing to connect onshore to the Transmission System.

Group's discussion of the information provided

The Group discussed the information that the Proposer provided and concluded that:

- while unlikely, due to the size of the developments, a generator could consider the Embedded option as a means of avoiding some of the transmission costs, through obtaining Embedded Benefits;
- the developer would weigh up the costs of developing the site as a transmission connected compare to an Embedded development, and if the cost to develop the Embedded site was too costly or the savings incurred did not cover the cost of development they were more likely to develop a larger transmission connected site;
- the development of larger Offshore sites are more efficient and provide better security as they will connect to a larger Offshore Transmission system across groups of cables, so if one cable fails there are others to cope with the transmission, whereas Embedded Transmission involves a single cable, and if it fails the energy cannot be transmitted; and
- a Distribution System would be limited on the number of Offshore connections at 132kV and above, before the System needed re-enforcing.

Arguments for and against the Applicable BSC Objectives

Section 6 of the main document provides a summary of the Benefits and Drawbacks of P242. Most of the arguments arose during discussions, prior to the Assessment Consultation, around whether there was undue discrimination against Offshore Exemptable Generators not being able to be treated as Embedded after the Offshore Transmission Arrangements Go Live in June 2010 next year. The Group considered other areas of discrimination providing arguments for and against each.

Table 8 provides the arguments for and against the Modification in relation to this discrimination issue and how they in turn related to the Applicable BSC Objectives as summarised in section 7 of the main document.

Table 8 – Views for and against the Discrimination Issue

Discrimination	Views For P242	Views against P242
Discrimination between Offshore Embedded Transmission Exemptable Generators and Onshore Exemptable Embedded Generators	<p>The Offshore Embedded Transmission connected Exemptable Generator more closely resembles the situation of an Onshore Exemptable Embedded Generator than it does a Transmission connected Generator, as:</p> <ul style="list-style-type: none"> • These generators are not connected to the wider, integrated GB Transmission Network, and so treating them as if they are is unjustified – indeed in National Grid’s Transmission Charging methodology the Offshore Transmission assets are regarded as local works and not part of the Main Integrated Transmission System; • Their only difference to an Onshore Embedded Generator is the presence of the 132kV cabling to shore. <p>P242 ensures the Offshore Generator is exposed to charges similar to that of an Onshore Exemptable Embedded Generator; by doing so it provides equitable treatment and so better facilitates competition under BSC Objective (c).</p>	<p>After Go Live, the assets (the 132kV cable) will be the responsibility of the OFTO and so the Offshore Generator must be considered as transmission connected. After this point there is a suitable difference between the Offshore and Onshore Exemptable Generators to warrant the difference in treatment.</p> <p>Allowing differences in the treatment of transmission-connected generation (whether Licensable or Exemptable) would create further discrimination and would have a negative impact on Applicable BSC Objective (c).</p>
Discrimination between Offshore	The Offshore Embedded Transmission Exemptable Generator does not resemble the situation of Onshore	As above, notwithstanding the fact that the detailed connection configurations differ, both cases are

Discrimination	Views For P242	Views against P242
<p>Embedded Transmission Exemptable Generators and Onshore Exemptable Transmission Connected Generators in Scotland (with 132kV connections)</p>	<p>Exemptable Transmission Connected Generators in Scotland, as:</p> <ul style="list-style-type: none"> The 132kV network in Scotland is part of the wider integrated GB Transmission Network and is not a discrete standalone network. Embedded Transmission connected Generation meets demand in the same manner as an Embedded Generator situated Onshore does. It cannot be claimed that it connects to the Onshore Transmission System in the same manner as a 132kV Transmission connected Generator in Scotland. The access to the market that an Exemptable Embedded Transmission connected Generator has is different from the equivalent Transmission connected Generator in Scotland. If there is a failure of the Distribution System that means that an Embedded Transmission Generator has to reduce output, this will not be accommodated through a Bid being accepted in the Balancing Mechanism. Instead the Generator has to reduce output at its own cost and potentially incur imbalance charges. This is the same position as is faced by someone responsible for the output of an Embedded Exemptable Generator. Conversely, if a failure on a Distribution System caused circumstances which required a 132kV connected Generator on the Scottish Onshore Transmission System to reduce power, a bid would be accepted by the System Operator in the Balancing Mechanism. <p>As the physical and commercial positions of the two classes of Generators are significantly different, it is not unduly discriminatory to treat</p>	<p>considered to be transmission-connected and so warrant being treated in the same way.</p> <p>To do otherwise risks making the maintenance and operation of the Offshore Transmission System (whether discrete or contiguous with the rest of the GB network) more difficult, impacting Applicable BSC Objective (b), or creating unfair discrimination between generators, impacting Applicable BSC Objective (c).</p>

Discrimination	Views For P242	Views against P242
	<p>them differently under P242; indeed to treat them the same would be unduly discriminatory. Therefore, P242 would better facilitate competition in generation and so better facilitate Applicable BSC Objective (c).</p>	
<p>Discrimination between Offshore Licensable Generators having to meter Offshore and Exemptable Generators and being able to meter Onshore under P242</p>	<p>The scope of P242 is focused on addressing discrimination in respect of Exemptable Generation. The same discrimination issue does not exist in Licensed Generation, where all generators are treated equitably.</p> <p>Under P242 the treatment of Licensable Generation would remain unchanged. If the Embedded Transmission Licensable Generators are to be exposed to the costs of the wider Transmission System including Onshore Transmission losses, it is only equitable that the losses of the Offshore Transmission Network should be socialised across other parties in a similar manner. This creates the requirement for Offshore metering so that the output of the relevant Generator is measured gross of the relevant Offshore losses.</p> <p>Conversely, under P242 the Embedded Transmission Exemptable Generator is totally responsible for its Offshore losses. This drives the requirement for these Generators to be metered Onshore.</p> <p>The result is that the generator incurs charges that are fair and reasonable and so do not adversely impact competition and therefore Applicable BSC Objective (c).</p>	<p>Under the Offshore Transmission arrangements, the Licensable Generators have to install and meter Offshore at the Boundary Point, which involves a much higher cost over metering Onshore. This difference in requirements could have a negative impact on competition and therefore Applicable BSC Objective (c).</p> <p>The Exemptable Generators will only be able to meter onshore at the deemed Boundary Point in limited situations, i.e. in cases of Sole Use, and where connecting to Distribution System. Maintaining different treatment for particular Offshore generators could impact the Transmission Company's ability to discharge its duties efficiently, resulting in a negative impact on Applicable BSC Objective (a).</p>

Cost Analysis

Offshore Exemptable Generator Baseline (Post Go Live) costs compared to P242 Proposed Solution costs.

During its discussions the P242 Modification Group agreed that a comparison of the costs that Offshore Exemptable Generators would be liable for after Go-Live (the current Baseline) compared to the costs the Offshore Exemptable Generator would be liable for under the P242 Proposed Solution if it elected to be Embedded would be useful.

The following table shows a generalised comparison, along with supporting commentary on how the costs were calculated.

Source Data			Costs post Go Live (£)		
Generation Capacity	270		Generator Costs	Baseline	P242
Load Factor	35%		BSUoS	959,037	0
Output MWh	827,820		RCRC	-87,215	0
BSUoS £/MWh	1.16		Onshore Distribution Losses	0	-1,297,099.55
RCRC £/MWh	-0.11		Onshore Transmission Losses	379,772	
Market Price	53.84		Offshore Losses	1,539.90	1,337,216
Total TGSD (TWh)	359		Total	1,253,134	40,116
Onshore Losses	TLM	Percentage	Supplier Costs	Baseline	P242
Offtaking	1.011	1.1%	BSUoS	959,037	0
Delivering	0.991	0.9%	RCRC	-87,215	0
Distribution Line Loss		-3%	Onshore Transmission Losses	473,269	0
Offshore Losses	3.0%		Offshore Losses	1,539.90	0
			Total	1,346,631	0
			Grand Total	Baseline	P242
				2,599,765	40,116

All source data covers periods from 1 Aug 2008 to 31 July 2009

Commentary

The source data for this table comes from information available from the ELEXON and National Grid websites, with the values covering the period between 1 August 2008 and 31 July 2009. The generation capacity quoted is the sum of the individual capacities of three current Offshore Exemptable Embedded Generation plants: Barrow, Robin Rigg East and Robin Rigg West. For the purpose of the exercise, Offshore Losses and Onshore Distribution Losses are assumed to be 3%.

1. Generator Costs

i) BSUoS Costs

Baseline – the generator will pay BSUoS on metered generation at the Offshore platform (i.e. gross of Offshore Transmission Losses).

P242 – the generator would not be liable for BSUoS as it would be considered as Embedded.

ii) RCRC

Baseline – the generator will be exposed to RCRC on its metered generation at the Offshore platform (i.e. gross of Offshore Transmission Losses).

P242 – the generator would not be exposed to RCRC.

iii) Onshore Distribution Losses

Baseline – The generator will not be exposed to Onshore Distribution Losses.

P242 – The generator would be credited with losses at the relevant Distribution Line Loss Factor. That is, the generator is scaled up for losses that have been deemed to have been saved by the generator reducing the demand of the GSP Group. Line losses are generally set specifically for each generator, however an average benefit of 3% has been assumed. The value has been applied to the output of the generator net of Offshore Transmission Losses as this would be the figure used for settlement. The benefit of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

iv) Onshore Transmission Losses

Baseline – The generator will be exposed to Onshore Transmission Losses on its metered output Offshore (gross of Offshore Transmission Losses). The loss factor to be used is that for Delivering BM Units. The cost of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

P242 – the generator would not pay any Onshore Transmission Losses

v) Offshore Losses

Baseline – The Losses associated with the generator's Offshore Transmission Network will be smeared across all other market participants. These will be split roughly 50:50 between generation and demand. The generator will be exposed to its share of the losses allocated to generators in proportion to its market share. The cost of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

P242 – The generator would be exposed to the total Losses associated with its Offshore Transmission Network. These are generator specific but for this analysis are assumed to be 3%. This is applied to metered output Offshore. The cost of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

2. Supplier Costs

As well as avoiding costs itself, an Embedded generator is deemed to reduce demand in the GSP Group equivalent to its generation. This means that a supplier benefits from reduced charges on this output too. These principles would also

apply for suppliers associated with generators affected by P242 were it to be implemented.

i) **BSUoS Costs**

Baseline – The supplier will pay BSUoS on its metered demand. This analysis shows the additional amount that the relevant suppliers would have to pay under the present baseline arrangements when the Offshore Arrangements Go Live, as a result of the loss of Embedded Benefits from the P242 affected generators.

P242 – The supplier would not be liable for BSUoS on the amount of demand offset by the P242 generator.

ii) **RCRC**

Baseline – The supplier will be exposed to RCRC on its metered demand. This analysis shows the additional amount that the relevant suppliers would be exposed to under the present baseline arrangements when the Offshore Arrangements Go Live, as a result of the loss of Embedded Benefits from the P242 affected generators.

P242 – The supplier would not be exposed to RCRC on the amount of demand offset by the P242 generator.

iii) **Onshore Distribution Losses**

The supplier's Distribution Losses would be unaffected by P242; they would be liable for the same amount under both the Baseline and the proposed P242 arrangements.

iv) **Onshore Transmission Losses**

Baseline – The supplier will be exposed to Offshore Transmission Losses on its metered demand. This analysis shows the additional amount that the relevant suppliers would be exposed to under the present baseline arrangements when the Offshore Arrangements Go Live, as a result of the loss of Embedded Benefits from the P242 affected generators. The loss factor to be used is that for Offtaking BM Units. The cost of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

P242 – The supplier would not be exposed to Onshore Transmission Losses on the amount of demand offset by the P242 generator.

v) **Offshore Transmission Losses**

Baseline – The Losses associated with the generator's Offshore Transmission Network would be smeared across all other market participants. These will be split roughly 50:50 between generation and demand. The supplier will be exposed to its share of the losses allocated to demand in proportion to its market share. This analysis shows the additional amount that the relevant suppliers would be exposed to under the present baseline arrangements when the Offshore Arrangements Go Live, as a result of the loss of Embedded Benefits from the P242 affected generators. The cost of these losses has been priced at Market Index Price for this analysis as a proxy for the energy price.

P242 – The supplier would not be exposed to the losses associated with the Offshore Transmission Network as the Offshore Generator would be fully exposed to these.

Is TNUoS charging affected by P242?

During discussions of costs the Group considered whether TNUoS charges were affected in any way by P242.

The Proposer looked at whether P242 would change the allocation of TNUoS charges in any way, rather than requiring a related but not contingent change to the Transmission Charging Methodology. On looking at the TNUoS Charging Methodology the Group concluded a change would be required in respect of Generation TNUoS charges and Demand TNUoS Charges.

Generation TNUoS

Under the Offshore Transmission Arrangements, the Embedded Transmission connected Generator would sign a Bilateral Connection Agreement (BCA) with National Grid. Generators with a BCA are required to pay TNUoS charges in accordance with 5.1ii) of the Charging Methodology³. Therefore a change would be required to the methodology to change this requirement for Exemptable Generation Connected to Embedded Transmission.

Demand TNUoS

In terms of demand TNUoS embedded benefit, the situation is different depending on whether the generator is CMRS or SMRS registered.

CMRS Registered

At present CMRS registered generators with Bilateral Embedded Generation Agreements and who do not have to pay Generation Charges can receive a credit for demand TNUoS, as set out in paragraph 4.11 of the Charging Methodology:

"4.11 For Supplier BMUs and BM Units associated with Exemptible Generation and Derogated Distribution Interconnectors with a Bilateral Embedded Generation Agreement, if the average half-hourly metered volume over the Triad results in an import, the BMU will be charged the amount of the relevant kW tariff multiplied by the average import. If the average half-hourly metered volume over the Triad results in an export, the BMU will be paid the amount of the relevant kW tariff multiplied by the average export. For the avoidance of doubt, parties with Bilateral Embedded Generation Agreements that are liable for Generation charges will not be eligible for a negative demand credit."

The Generator receives negative demand TNUoS on its average output over the Triad. Note that 4.11 also applies to supplier BMUs (i.e. SMRS registered BMUs) that export during the Triad.

The relevant part of the Transmission Use of System Methodology covering SMRS Exemptible Generators is paragraph 4.12 which says:

"4.12 The output of generators and Distribution Interconnectors registered as part of a Supplier BM Unit will have already been accounted for in the Supplier BM Unit demand figures upon which National Grid Transmission Network Use of System Demand charges are based"

Therefore, P242 would have a direct effect on this as it would allow the generator to be registered in SMRS and therefore be part of a supplier BM Unit and net off with demand, or receive a negative TNUoS credit if it was exporting.

³ [The Statement of the Use of System Charging Methodology](#)

As indicated in Section 3, the related changes to P242, including the necessary changes to the Charging Methodologies to provide the required clarity are being progressed in parallel to P242. These related changes are not contingent on P242, which means they can be progressed and considered separately on their own merits.

Cost of Moving Metering Offshore

During discussions the costs to the Offshore Exemptable Generators of having to install Offshore Metering at the Boundary Point between the Generator and Transmission System was questioned.

The movement of existing metering to the Offshore Boundary Point would require outages on the Offshore Transmission and potentially Generator assets. This would mean the Generator would be unable to export power during this time, and could require more expensive generation to be run in its place.

The costs of moving the metering offshore will vary depending on the location and size of the Generator and the type of meters used, however the movement of the metering could be avoided if a metering dispensation was approved to allow the metering to remain on shore.



Where are consultation respondents' views?

A majority of respondents support P242 and the Group's conclusions.

Summary of Assessment Consultation Responses

The table below 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 10 – P242 Industry/Transmission Company responses

Question	Industry	TC	Conclusion:	See:
1 Would the Proposed Modification P242 help to achieve the Applicable BSC Objectives?	4 Yes 1 No	No	Majority support for the proposed solution. One respondent undecided. Belief that some of the identified benefits in relation to the applicable objectives were marginal.	Main document section 6 and below for details of discussion
2 Do you believe that there are any alternative solutions which the Modification Group has not identified, and which it should consider?	1 Yes 4 No	No	One potential alternative suggested, following discussion the Group concluded it was out of scope.	Main doc Section 3 and below for details of discussion.
3 The Group believes that the P242 changes to the BSC and BSCP15 should be implemented 5 Working Days after an Authority decision. Do you agree?	5 Yes 0 No	Yes	A majority of respondents support a 5 day implementation, one did not respond to the question.	Main document section 5 and below for details of discussion
4 The Group initial views are that it believes that P242 will better facilitate the achievement of Applicable BSC Objectives (a), (b) and (c) when compared with the existing BSC requirements. Do you agree?	4 Yes 1 No	No	A majority supported views of the Group. Further views for and against P242 have been captured in the case for change	Main document, Section 6
5 Do you agree there is Undue Discrimination between the treatment of Onshore Exemptable Embedded Generators and the Offshore Equivalent?	5 Yes 1 No	No	Majority of respondents believed there was undue discrimination. One believed it was due, to have consistency with the treatment of Licence Generators offshore	See Section 5 above

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Details of the Group's discussion on the consultation and Transmission company Analysis responses are provided below:

The Proposed Modification meeting the applicable objectives

The Group discussed views expressed by one respondent that there is no link between Embedded Benefits and the Applicable BSC Objectives.

The Group discussed that some of the, Embedded Benefits arise as a result of the interaction between the Charging Methodology that exist outside of the BSC and the BSC itself. P242 and the solution developed is about allowing the existing Offshore Embedded sites, as well as future Offshore sites to continue to have access to those Embedded Benefits after Go Live. The rationale for this is that there is no change to the physical setup of the Generators identified under P242, but instead results from a difference in categorisation of the Offshore assets due to the Offshore Transmission legislation .

The Group moved on to discuss that from a BSC point of view the P242 solution will involve the losses being attributed to the generator, as they currently are pre Go-Live. There are some efficiency benefits to existing situations as they will not need to go through lengthy set-up changes if P242 is approved, and instead they will be able to continue to act in the manner that they currently do. Also the P242 solution helps partly resolve the issue of the double charging of transmission and distribution charges.

Alternative suggested by the respondent

As part of the Assessment Phase consultation, one respondent suggested an alternative solution. The suggested solution was to remove the 'sole use' element of the P242 Proposed solution and allow *shared use* of the Embedded Transmission asset.

The Group's reason for including a 'sole use' provision was to prevent Parties from being given an incentive to split up sites to be treated as Embedded.

Background and details of the alternative

The respondent proposed their alternative due to the existence of Gunfleet Sands. Gunfleet Sands is made up of 2 Exemptable Generators (Gunfleet Sands Ltd and Gunfleet Sands II Ltd) sharing an Offshore Licence Exempt Distribution System (Gunfleet Grid Company Ltd).

Currently both Generators at Gunfleet Sands are treated as Embedded. However, since the Generators share the cable they cannot be considered to have 'sole use' and cannot be treated as Embedded under the P242 Proposed solution.

The two Generators, Gunfleet Sands and Gunfleet Sands II, are also different to the other existing Offshore Embedded sites as they both meter Offshore at a Boundary Point between the two Generators and the Offshore Licence Exempt Distribution Network. This contrasts with Robin Rigg East, Robin Rigg West and Barrow which currently meter (pre Go Live) Onshore.

As a result of the shared use of the Offshore Distribution network the losses are attributed via a Line Loss Factor (LLF), in order to attribute the losses accordingly to each Generator.

The similarities and differences between Gunfleet Sands compared to Robin Rigg East and West and Barrow are summarised in the table below:

Table 11 – Gunfleet Sands compared to sites described in P242 (Robin Rigg East, Robin Rigg West and Barrow)

Sites	Gunfleet Sands (comprising Gun Fleet Sands Ltd, Gunfleet Sands II Ltd and Gunfleet Grid Company Ltd)	Robin Rigg East, Robin Rigg West and Barrow
Differences		
Use of 132kV Cable to Shore pre Go Live	Shared by the two Offshore Exemptable Generators, managed by Offshore Licence Exempt Distribution System	Sole use, owned and operated by each Generator.
Location of Metering Pre Go Live	Offshore (at Boundary point between Generator and Offshore Distribution System)	Onshore between Generator and Onshore Distribution System
How are Transmission Losses attributed	Losses are shared by the two Generators via a Distribution Network Operator (DNO) Line Loss Factor (LLF)	Losses attributed directly to the Generator as the metering is onshore.
Similarities		
How are they treated after Go Live?	Embedded Transmission	Embedded Transmission
Cable to shore	132kV	132kV

The key differences are:

- Gunfleet Sands meter offshore and connect to an Offshore Distribution System (Gunfleet Sands Grid Company Ltd), whereas the P242 scenario has the offshore Exemptable generators metering onshore;
- the 132kV cable to shore in the Gunfleet sands scenario is owned and operated by the Offshore Licence Exempt Distribution System, whereas in the P242 proposal the 132kV cable to shore is owned and operated by the individual Generator; and
- the Offshore Licence Exemptable Distribution Network (the 132kV cable) is shared by two generators at Gunfleet, while the P242 proposal has each Generator using the cable to shore by itself.

Group's discussion

The P242 proposed solution with the 'sole use' requirement, was developed to set out strict requirements that Offshore Exemptable Generators would have to meet in order to be treated as Embedded, should they choose to seek Embedded status.

The Group raised concerns that developing an alternative solution to allow 'shared use' of the Embedded Transmission could give rise to inappropriate incentives, explored in Section 4, for developers to split up their new or existing sites in order to gain access to Embedded Benefits.

Group discussions at previous meetings had focused on the Modification's aim of retaining the same treatment for Exemptable Embedded sites pre and post Go Live. However, the Group noted that the proposed solution is about allowing the Offshore sites with a specific

configuration model to have the option to be treated as Embedded post Go Live. Gunfleet Sands does not fit into this model due to the differences highlighted in the table above.

Due to the differences between Gunfleet Sands and the P242 model developing a solution that incorporates both setups, and avoids providing inappropriate incentives for future developments, (i.e. splitting large generators into Embedded sites) creates a significant challenge and is highly complex. However the Group attempted to create an Alternative solution that would do this.

Gunfleet Sands out of scope

After lengthy discussion on the differences between Gunfleet and the P242 scenario situations, the Group reached a view that the Gunfleet Sands situation was out of scope of the scenario described in the P242 proposal form.

The rationale for this is that the scenario set out in the P242 proposal form concerns Offshore Exemptable Generators connected to an Onshore Distribution network via a 'discrete' 132kV cable. The 132kV asset is currently (pre Go Live) under the ownership of the Offshore Exemptable Generator and is part of the power station itself; at Go Live the ownership and responsibility of the cable will shift to the OFTO.

In contrast, the Gunfleet Sands setup involves shared use of a 132kV cable that is under the ownership of the Offshore Licence Exempt Distribution System. This means the cable to shore is not under the ownership of either Generator nor forms part of the power station.

It is this difference that prevents it from being included as part of P242. However the Group did comment that there is no reason that would prevent another Modification proposal being raised and developed if needed.

The Group did comment that it was hard to determine how the Gunfleet Sands situation had been set up in order to obtain the Embedded Benefits. They noted that the full details of the Gunfleet Sands Generators and Offshore Licence Exemptable Distribution System set up was provided as a confidential attachment to the respondent's consultation response. This information will be provided to the Authority when the final Modification Report is sent for decision.

Group's conclusions on the suggested alternative

The Group does consider the Gunfleet Sands situation to be a **cause for concern**. The Group has fully considered the suggested alternative and concluded that while the scenario described is a related issue, it needs to be taken forward via a separate Standing Issue or Modification. The Group therefore decided that the alternative suggested should not be developed further.

Implementation

The Group noted the majority support for the 5 Working Day implementation approach. They reiterated that there would be a benefit to efficiency if the Authority reached a decision as soon as possible prior to Go-Live, following the submission of the Modification report for decision.


Where can I find other P242 documents?

 Visit the P242 page of ELEXON's website [here](#)
Table 12 – P242 Timetable

Date	Assessment Activity
24/07/2009	E.ON UK plc raises P242
13/08/2009	ELEXON presents the P242 IWA to the Panel/Panel submits P242 to the Assessment Procedure
24/08/2009	Modification Group holds its First meeting for P242
15/09/2009	Modification Group holds its second meeting for P242
22/09/2009	Modification Group holds its Third meeting for P242
02/10/2009	ELEXON issues the P242 Assessment Consultation documents for industry consultation, and for impact assessment by BSC Agents and the Transmission Company
16/10/2009	Participants return Assessment Consultation responses/BSC Agents and the Transmission Company return impacts assessments
21/10/2009	Modification Group holds its fourth meeting for P242
06/11/2009	ELEXON submits the Group's P242 Assessment Report to the Panel
12/11/2009	ELEXON presents the Group's P242 Assessment Reports to the Panel

Table 13 – Estimated P242 progression costs up to an Authority decision

Meeting cost	External legal/ expert cost	BSC Agent impact assessment cost	ELEXON resource
£1,750 ⁴	£0	£0	75 man days, equating to c. £16,590

Table 14 – P242 Modification Group attendance

Member	Organisation	24/08/2009	15/09/2009	22/09/2009	21/10/2009
Adam Lattimore	ELEXON (Chairman)	Y	N	N	Y
David Jones	ELEXON (Chairman)	N	Y	N	N
Chris Rowell	ELEXON (Chairman)	N	N	Y	N
David Barber	ELEXON (Lead Analyst)	Y	Y	Y	Y
Paul Jones	E.ON (Proposer)	Y	Y	Y	Y
Ian Pashley	National Grid	Y	Y	N	Y
Chris Stewart	Centrica	N	Y	Y	N
Gary Henderson	SAIC	Y	Y	Y	Y
Martin Mate	EDF	Y	Y	Y	Y
Andy Colley	Scottish and Southern Energy	Y	N	Y	Y

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⁴ This has increase from the £1,500 estimate in the IWA, as an additional half day meeting was needed prior to consultation.

Member	Organisation	24/08/2009	15/09/2009	22/09/2009	21/10/2009
Bill Reed	RWE npower	Y	Y	Y	Y
Matthew Hays Stimson	EDF Energy Networks	N	N	Y	N
Attendee	Organisation	24/08/2009	15/09/2009	22/09/2009	21/10/2009
Diane Mailer	ELEXON (Lawyer)	N	Y	Y	Y
Natalie Pike	ELEXON (Lawyer)	Y	Y	Y	N
Abi Akala	ELEXON (Service Delivery)	Y	Y	Y	Y
Steve Francis	ELEXON (Design Authority)	Y	Y	Y	Y
Yvonne Naughton	Ofgem	Y	N	N	Y
Bridget Morgan	Ofgem	N	Y	Y	N

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P242 – PROPOSED DRAFT LEGAL TEXT

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

1.1.4 For the purposes of the Code:

- (a) in relation to the terms Export and Import, references to the Plant or Apparatus of a Party shall be treated as including:
 - (i) the premises of a Customer supplied by that Party;
 - (ii) Plant and Apparatus of a Third Party Generator for whose Exports that Party has elected to be responsible in accordance with paragraph 1.2.2(a)(ii)(2);
 - (iii) Plant or Apparatus (whether or not owned or operated by that Party), not forming part of the Total System, by which electricity is transported from the Total System to premises supplied by the Total System or (as the case may be) to the Total System from Generating Plant providing electricity to the Total System;
 - (iv) an Interconnector in relation to which that Party is an Interconnector User.

(b) subject to paragraphs (c) (d) and (e), unless otherwise provided:

- (i) "**Export**" means, in relation to a Party, a flow of electricity at any instant in time from any Plant or Apparatus (not comprising part of the Total System) of that Party to the Plant or Apparatus (comprising part of the Total System) of a Party;
- (ii) "**Import**" means, in relation to a Party, a flow of electricity at any instant in time to any Plant or Apparatus (not comprising part of the Total System) of that Party from the Plant or Apparatus (comprising part of the Total System) of a Party;

and Export and Import, as verbs, shall be construed accordingly;

- (c) any Export or Import is to be determined at a single Boundary Point;
- (d) for the purposes of paragraph (c), in relation to a Party any flow (under paragraph b(i) and (ii) respectively) which occurs at a Boundary Point:
 - (i) to or from Plant or Apparatus of that Party shall be considered to be a single Export or Import of that Party;
 - (ii) to or from the Plant or Apparatus of that Party shall be considered to be a separate Export or Import from any Export or Import of any other Party.
- (e) notwithstanding paragraphs (c) and (d):

- (i) the flow to or from each Generating Unit (where such Generating Unit individually constitutes or is capable of constituting a Licensable Generating Plant) and to or from the associated unit transformer of that Generating Unit (if any) shall be combined. Such combined flow shall be considered to be a single Export or Import and separate from any Export or Import of any other Plant or Apparatus; and
- (ii) the flow to or from a station transformer associated with a Licensable Generating Plant shall be considered to be a single Export or Import, and separate from any Export or Import of any other Plant or Apparatus.

Insert new paragraph 1.1.5 (note this will be 1.1.7 if P238 is approved) to read as follows:

1.1.5 Notwithstanding any other provision in the Code, the Boundary Point for determining any Export or Import from an Embedded Transmission BM Unit shall be the Offshore Transmission Connection Point and an Embedded Transmission BM Unit shall be deemed to connect directly to the Distribution System at the Boundary Point. This shall be the only Boundary Point at which Metering Equipment relating to the Exports and Imports of an Embedded Transmission BM Unit is required to be installed.

Insert new paragraph 1.1.6 (note this will be 1.1.8 if P238 is approved and the reference in the text shall be a reference to paragraph 1.1.7) to read as follows:

1.1.6 For the avoidance of doubt, the provisions in the Code that would otherwise apply to a Systems Connection Point shall not apply to an Offshore Transmission Connection Point that is a Boundary Point pursuant to paragraph 1.1.5.

Amend paragraph 2.1.1 as follows:

- 2.1.1 A Boundary Point Metering System shall be registered in CMRS where:
- (a) the Metering Equipment measures quantities of Imports to or Exports from Plant or Apparatus which is directly connected to the Transmission System, other than in the case of an Embedded Transmission BM Unit; or
 - (b) the Metering Equipment measures quantities of Imports to or Exports from a Licensable Generating Plant; or
 - (c) the Metering Equipment measures quantities of Imports to or Exports from an Interconnector; or
 - (d) the Panel has determined, upon the application of any Party, that there are special circumstances by reason of which such Metering System should be registered in CMRS.

Amend paragraph 2.1.2 as follows:

- 2.1.2 Without prejudice to paragraph 2.1.1, a Boundary Point Metering System may be registered in CMRS where the Metering Equipment measures quantities of Exports, or Exports and Imports:

(a) ~~_____~~ at the Site of an ~~Exemptable~~ Exemptable Generating Plant; or

(b) from an Embedded Transmission BM Unit.

Insert new sub-paragraph 3.1.4(g) (note this will be new sub-paragraph 3.1.4(h) if Modification P237 is approved) as follows:

3.1.4 Subject to paragraph 3.1.6 each of the following shall be a single BM Unit, and (except where paragraph 3.1.5 applies) shall be deemed to satisfy the requirements in paragraph 3.1.2:

(a) any Generating Unit, CCGT Module or Power Park ~~Model~~ Module for whose Exports the Metering System(s) is or are registered in CMRS;

(b) the Plant and Apparatus which comprises part of, and which Imports electricity through the station transformer(s) of, a Generating Plant, where the Metering System(s) for such Imports is or are registered in CMRS;

(c) premises (of a Customer supplied by a Party) which are directly connected to the Transmission System, provided that such premises are so connected at one Boundary Point only;

(d) an Interconnector BM Unit, in accordance with paragraph 5;

(e) a Base BM Unit or an Additional BM Unit (other than an Embedded Transmission BM Unit that is an Additional BM Unit), in accordance with paragraph 3.3; ~~and~~

(f) any configuration of Plant and Apparatus set out in Table A in Annex I-2; and

(g) any Exemptable BM Unit that is the only BM Unit connected to a part of the Offshore Transmission System that connects to a Distribution System via an Offshore Transmission Connection Point and for whose Exports the Metering System(s) is or are registered in SMRS (where the BM Unit is registered as an Additional BM Unit) or in CMRS (an "Embedded Transmission BM Unit").

Amend paragraph 3.2.3 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; and

(d) the CVA Metering Systems associated with the proposed BM Unit.

Insert new paragraph 3.3.2A to read as follows:

3.3.2A Notwithstanding paragraph 3.3.1, an Embedded Transmission BM Unit shall be registered pursuant to paragraph 3.3.2 as an Additional BM Unit and shall not be the Base BM Unit registered for a Supplier pursuant to paragraph 3.3.1.

ANNEX X-1: GENERAL GLOSSARY (Version 41)

Insert the following new definition into the General Glossary in Annex X-1 in alphabetical order:

"Embedded Transmission BM Unit": has the meaning given to that term in Section K3.1.4;



P242 – Proposed redlined changes to BSCP15 ‘BM Unit Registration’ v16.0

P242 requires changes to BSCP15 Form BSCP15/4.1 in Appendix 4.

4. Appendices

4.1 BSCP15/4.1 Registration of BM Unit for a CVA Metering System¹

Page 1 of 3

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

(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.²

¹ 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.

² 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 ³	BM Unit Type ⁴	BM Unit Configuration ⁵	GSP Group Id ⁶	LDSO Party Id	GC (MW)	DC (MW)	P/C Flag ⁷	FPN Flag (Y / N)	Exempt Export (optional) ⁸	Inter-connector Id ⁹	EFD

³ The NG BM Unit ID must be provided for all BM Units with the FPN Flag set to 'Y'.

⁴ E – Embedded, I – Interconnector, G – Base Supplier S – Additional Supplier, T – Directly Connected

⁵ CCGT – CCGT registered in CMRS, PPM – Power Park Module registered in CMRS, GU – Generating Unit registered in CMRS, ET – Embedded Transmission, 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.

⁶ If unit type E or S

⁷ Only applicable for Exempt Export BM Units or Interconnector BM Units

⁸ To register a BM Unit as Exempt Export, enter “Yes” and follow the process in Section 3.9 of this BSCP

⁹ If BM Unit Type is I

BSCP15/4.1 Registration of BM Unit (cont)

<i>MPAN Mapping Details¹⁰</i>		
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

¹⁰ Only applicable to Embedded Sites