Stage 01: Initial Written Assessment

What stage is this document in the process?

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

P241: Relaxation of Requirement to Separately Meter Licensable Generating Units

The Code requirement to separately meter licensable Generating Units applies to Generating Units in a Combined Cycle Gas Turbine (CCGT) Module, even though the Code considers CCGT Modules as single BM Units; existing CCGT Modules may be non compliant without additional metering.

P241 argues this has no Settlement benefit and aims to amend the Code to exclude Generating Units in CCGT Modules from the requirement to separately meter licensable Generating Units. This was recommended by the Issue 37 Group.

ELEXON recommends:
A 3 month Assessment Procedure

High Impact:
Generators, CCGT Module operators

Low Impact:
Central Data Collection Agent, Licence Exemptable Generators, ELEXON

Contents

About this document:

This document is an Initial Written Assessment (IWA), which ELEXON will present to the Panel on 13 August 2009. The Panel will consider the recommendations and agree how to progress P241.

Further information is available in the P241 Modification Proposal which is an appendix to this document.

Any questions?

Contact:
Dean Riddell

dean.riddell@elexon.co.uk

0207 380 4366

1 Why Change?

Identified Defect

Requirements in Section K of the Balancing and Settlement Code ('the Code') mean that Import and Export flows from any Generating Unit that individually constitutes or is capable of constituting a Licensable Generating Plant are considered separate to any other flows and, as a consequence, must be metered (note that such Generating Units are referred to in this document as 'licensable Generating Units'). The only Generating Units that do not need to be individually metered are those that are not licensable.

The requirement to meter licensable Generating Units currently applies equally to Generating Units that comprise a **CCGT** Module. But the Code normally deems CCGT Modules to be single BM Units (see K3.1.4), and it is normal industry practice to install Settlement Metering only at the Boundary Point with the Total System (to measure the net flow from the constituent Generating Units), and not to install separate Settlement metering at an individual Generating Unit comprising part of a CCGT Module. If no change is made to the Code, existing CCGT Modules may be non compliant with Code obligations unless additional metering is installed on their constituent Generating Units.

P241 contends that separately metering the Generating Units in CCGT Modules, even where such Generating Units are licensable, has no benefit for Settlement and therefore should not be required under the Code. **P241 therefore proposes that the Code should be amended to clearly state that licensable Generating Units in CCGT Modules are not required to be separately metered**. This solution was recommended by the Issue 37 Group following their consideration of this issue.

What is a CCGT?

Combined Cycle Gas Turbine: a group of Generating Units comprising Gas Turbine Units and Steam Units and forming a CCGT Module.

Waste heat from the Gas Turbines is used by the Steam Units, and the component Units within the CCGT Module are directly connected by steam or hot gas lines so the Units can contribute to the efficiency of the combined cycle operation.

Background and related changes

Issue 37

P241 was raised following a recommendation in the Issue 37 Report. At the Panel's request the Issue 37 Group considered three issues regarding metering and BM Unit configurations. Two of these issues were related to offshore generation, while the third concerned CCGT Modules and was the basis for P241. The Group also identified another issue relating to Offshore Transmission. The other issues tackled by Issue 37 are not directly related to P241.

The CCGT issue considered by the Issue 37 Group was identified as a result of Panel Committee discussions. The Imbalance Settlement Group (ISG) considered an application for reconfirmation of a non-standard BM Unit configuration for a Combined Heat and Power (CHP) site; as part of this consideration the ISG queried why Settlement metering was not installed on the site's CCGT generators.

Though the Code allows the separate generators in a CCGT Module to be considered as a single BM Unit, the ISG suggested that the Code required Exports and Imports from each individual licensable Generating Unit within the BM Unit to be metered separately from other Plant or Apparatus. ELEXON agreed that the existing Code drafting requires such metering.

ELEXON's interpretation of the Code confirmed that the Exports and Imports of licensable Generating Units must be metered separately. It is not possible to obtain a Metering Dispensation to avoid this requirement because Metering Dispensations may only be granted against a Metering Code of Practice, not the Code itself.

The Issue 37 Group considered that the requirement for Generating Units that compose a CCGT Module to be separately metered, if licensable, was an unintended side-effect of the drafting of the Code provisions. The Group concluded that Section K of the Code should be amended to exclude Generating Units in CCGT Modules from the requirement to separately meter each licensable Generating Unit. The Group agreed this would potentially better facilitate Applicable BSC Objectives (c) and (d).

The Issue 37 Group's discussions identified paragraph K1.1.4(e) as the relevant Code provision which should be amended to resolve the issue. Paragraph K1.1.4(e) was introduced into the Code in its present form by Modification P162 (see below). In forming its interpretation of the relevant Code provisions ELEXON referred to the P162 Assessment Report to clarify the intent of the provisions introduced by P162. ELEXON also took account of the accepted interpretation and conventional operations of the industry when clarifying the existing obligations around the metering of licensable Generating Units.

Approved Modification Proposal P162

Modification Proposal P162 'Changes to the definition of Imports and Exports' was approved and implemented in October 2004. The aim of P162 was to clarify the definition of Imports and Exports in Section K of the Code to ensure consistency with the intent of the original BSC drafting and to ensure Section K was consistent with current operational practice and the Metering Codes of Practice.

Section K sets out Parties' responsibility for Imports and Exports. Parties must install metering to measure Import and Export flows for which they are responsible. Other Code obligations in Section K cover the configuration of BM Units.

P162 suggested that Section K was too ambiguous. If the ambiguity was not removed participants could be subject to metering obligations more onerous than customarily required for Settlement purposes.

The P162 Group believed the intent of the Code with regard to the underlying principles relating to Imports and Exports was to require separate metering for Import and Export at a **Boundary Point**, and for each flow to be attributable to a Party. The P162 Group did not believe that Imports or Exports should be determined for all Generating Units whatever their size, as Section K implied at that time. The P162 Group agreed that flows from Exemptable Generating Plant Generating Units do not need to be individually metered but flows from large Generating Units (i.e. Licensable Generating Plants) do need to be measured separately; this was reflected in the approved P162 legal text (i.e. the current drafting of K1.1.4).

What is a Boundary Point?

A point at which any Plant or Apparatus (e.g. a generator) is connected to the Total System.

The Total System is the Transmission System and each Distribution System.

P162 amended Section K to reflect the P162 Group's interpretation of the intent of the Code in relation to Imports and Exports. The implications of the agreed requirements for the metering of an example site are shown in Figure 1. The key features of the P162 Group's interpretation of the intent of Section K are:

- It permits netting of all flows attributable to a single Party below the Boundary Point with the Total System;
- K1.1.4 concerns establishment of Imports and Exports at the Boundary Point and should not require demand satisfied by Exemptable Generating Plant below the Boundary Point to be separately identified/metered;
- The interpretation reflects conventional metering practices and is compliant with the CoPs;

- Netting of Boundary Point flows is prohibited (though netting flows below the Boundary Point that are attributable to the same Party and do not relate to a licensable Generating Unit is permitted); and
- The flow associated with a Generating Unit that individually constitutes, or is capable of constituting, a Licensable Generating Plant must be separately identified (including flows of certain associated apparatus).

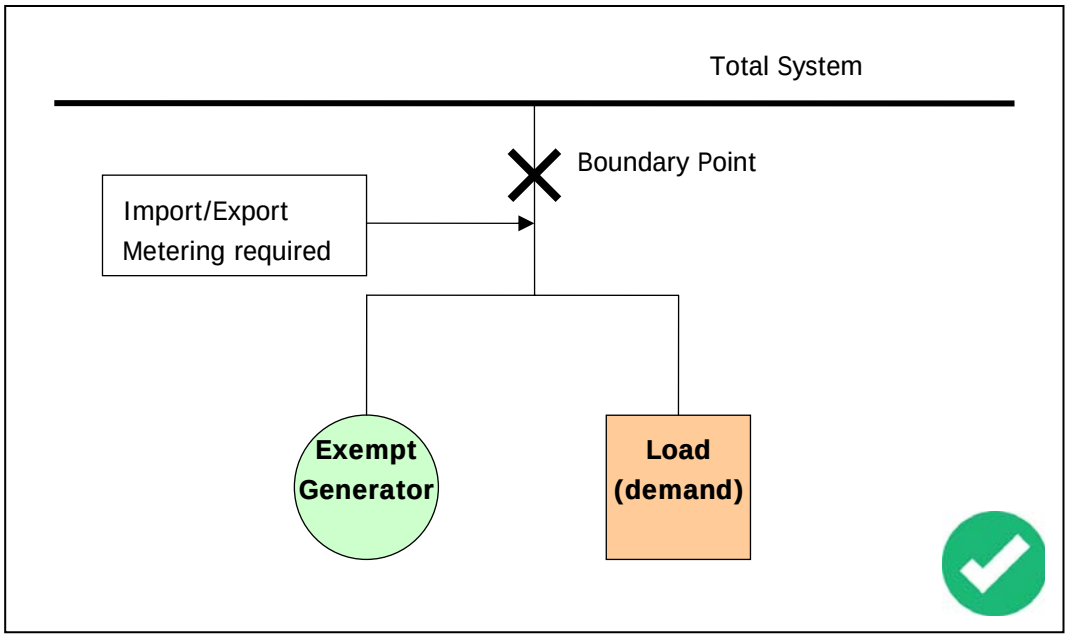


Figure 1. Interpretation of Section K confirmed and clarified by P162

The P162 Group rejected an interpretation that prohibited Parties netting below the Boundary Point any flows attributed to them, i.e. under the rejected interpretation the Import and Export flows at the Boundary Point are defined as those that would have occurred if there were no opposing flows. In practical terms this would require separate measurement of each Generation Unit and load below the Boundary Point.

For example, the site in Figure 2 would require two sets of metering, measuring both the Generator's Import and Export and the load's Import and Export (in comparison with one set of metering to measure the overall net Import and Export at the Boundary Point, as under the agreed interpretation and shown in Figure 1). The rejected interpretation would not be consistent with the metering CoPs or industry practices, and would have material commercial implications for Parties by requiring additional Metering and, potentially, the installation of Current and Voltage Transformers (CT/VTs) at significant cost.

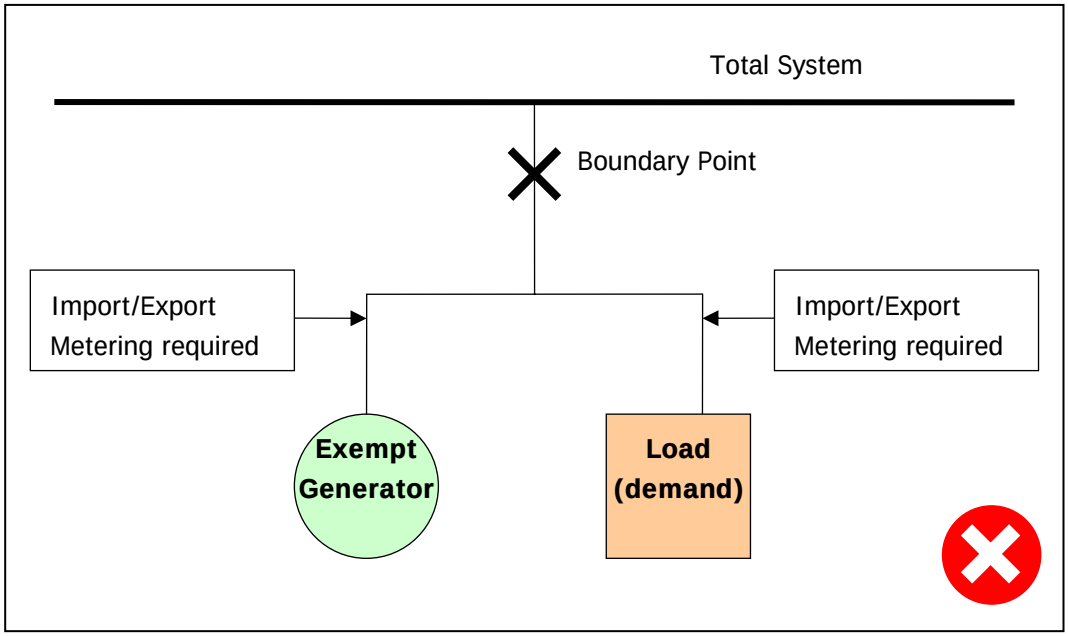


Figure 2. Interpretation of Section K rejected by P162

The P162 Group agreed to amend K1.1.4 to clarify that separate flows below the Boundary Point that relate to the Customer premises or Exemptable Generating Plant of a single Party need not be separately measured. However, the flows from each Generating Unit of any Licensable Generating Plant must be identified.

The Section K drafting introduced by P162 does not mention Generating Units within CCGT Modules. As part of P162 Assessment the P162 Group's interpretation and solution was 'logically tested' using a number of worked examples. One of these examples contains the only reference to CCGTs in the P162 Assessment Report (P162 Assessment Report Annex 8 'Worked Examples', example 'd'). However, this example concerns the treatment of a single licensable Generating Unit attributable to single Party (with or without a Unit Transformer); this means it is not applicable to the issue raised by P241, i.e. the treatment of multiple licensable Generating Units within a CCGT Module that constitutes a single BM Unit.

Example 'e' in the P162 Assessment Report covers the treatment of multiple licensable Generating Units attributable to single Party, and appears to best represent the situation of multiple licensable Generating Units within a CCGT Module constituting a single BM Unit. The P162 Group did not identify any examples of this situation and agreed that this arrangement was not prohibited by the Code, but would require the individual flows to be separately identified. The P162 Group agreed the Code should require that multiple licensable Generating Units attributable to a single Party at a Boundary Point should be seen as a single Export per Generating Unit, and that the P162 legal text gave effect to this requirement.

2 Solution

Addressing the identified defect

P241 would sanction the composition of existing CCGT installations by excluding Generating BM Units that comprise CCGT Modules from the Section K obligation to separately meter licensable Generating Units. This would mean existing CCGT installations would become compliant with the Code without needing to make any metering changes.

If the existing licensable Generating Unit metering obligation was stringently enforced with regard to CCGT Modules, additional metering would need to be installed at significant expense and for no Settlement benefit.

Such exclusion would appear to align the licensable Generating Unit metering requirements with the treatment of CCGT Modules being deemed to be a single BM Unit by paragraph K3.1.4(a) of the Code, without regard to the status of the Generating Unit(s) which comprise them.

Clarifying potential ambiguities

There is some ambiguity around the relevant provisions in Section K. It is in question whether the Code technically and unambiguously requires the metering of licensable Generating Units (i.e. further to denoting their Import/Export flows as separate to any other plant or apparatus).

The implications of this are that it could be argued that if there is not technically a Code requirement to meter all licensable generators it would not be necessary to exclude CCGT Module licensable Generating Units from K1.1.4(e).

Another approach that would address the identified defect and remove ambiguity would be to introduce a clear Code requirement to meter licensable Generating Units (i.e. align the Code drafting with the longstanding interpretation that licensable Generating Units must be metered) and then exclude licensable Generating Units in CCGT Modules from this requirement.

Treatment of other types of licensable Generating Unit

P241 suggests excluding Generating Units in CCGT Modules from the requirement to separately meter licensable Generating Units.

Assessment of P241 should clarify what other types of licensable Generating Unit are required to install Settlement metering solely due to K.1.1.4(e) (i.e. that are not already required to be metered due to the general requirement for Boundary Point metering). This should be considered in terms of theoretical application of K1.1.4(e) to Generating Unit types and the practical implications in terms of actual metering requirements for existing sites.

Depending on the outcome of these considerations there could be two different possible impacts on the P241 solution:

a) If there are no other types of Generating Unit that are required to install metering solely due to K1.1.4(e) then consider removal of K1.1.4(e) altogether; or
b) If other Generating Unit types are required to install metering only because of K1.1.4(e) the P241 Group should consider whether it remains appropriate for such Generating Units to remain subject to K1.1.4(e) or whether they should be excluded in the same way as P241 suggests for CCGT Module Generating Units.

Proposer's view of P241 benefits

The Proposer believes it is inefficient for Generators to be required by the Code to install and maintain meters not required for Settlement purposes and for Generators and the Central Data Collection Agent (CDCA) to be required to read metering not required for Settlement purposes.

The Proposer believes P241 would remove this inefficiency and thereby better facilitate Applicable BSC Objectives (c) and (d)[1]. Further details are given in the table below.

Proposer's view of benefits of P241 against the Applicable BSC Objectives	
Description of Objective[2]	Identified benefit
a) Efficient discharge of the obligations of the Transmission Licence.	None identified.
b) Efficient, economic and co-ordinated operation of the GB transmission system.	None identified.
c) Promoting effective competition in the generation and supply of electricity and in the sale and purchase of electricity.	Removing the requirement to meter licensable Generating Units where the metering is not needed for Settlement would remove an obstacle to market participation.
d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.	Increased efficiency due to: • Generators not being required to install and maintain meters; and • Generators/CDCA not being required to read metering for non-Settlement purposes.

[1] The P241 Modification Proposal form stated justification against Objectives (b) and (c), but discussion with the Proposer has confirmed that this was a mistake and that the Proposer's view is that the benefits of P241 are against Objectives (c) and (d), in line with the conclusions of the Issue 37 Report and the P162 Report.

[2] The Applicable BSC Objectives in full are:

a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence];

b) The efficient, economic and co-ordinated operation of the GB 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 and administration of the balancing and settlement arrangements.

3 Proposed Progression

Terms of Reference

ELEXON recommends that the P241 Modification Group should consider, and include in the Assessment Report as appropriate, the areas set out in the table below.

Recommended areas for inclusion in P241 Terms of Reference		
No.	Area	Reason
1	The relevant obligations of Section K of the Code, the underlying principles of the Code metering requirements and any relevant interactions between Section K and the Metering CoPs.	To clarify the underlying principles of the Code metering requirements and confirm the existing intent, interpretation, implications and practical application of the existing baseline. Also to understand the drivers behind P241 and the practical implications of the Code obligations for the industry e.g. by considering relevant ISG discussions[3].
2	The impact of the identified defect and the impact of not addressing this defect (e.g. cost of metering).	To identify the benefits of the P241 solution.
3	The intent of the original Code drafting and the drafting introduced by P162 in relation to the treatment of CCGT Module Generating Units.	To ensure the Group's considerations take into account the intent of the Code and other considerations in the same area.
4	Any ambiguity in the Code requirement to meter licensable Generating Units.	To identify any implications for the P241 solution.
5	What other types of Generating Unit the licensable Generating Unit metering obligations apply to.	To identify any implications for the P241 solution, e.g. should other Generating Units be excluded, or should the Code requirement to meter licensable Generating Units be otherwise amended (or removed altogether).
6	The impact of the P241 solution on Settlement.	To confirm the P241 solution would not negatively impact Settlement, e.g. confirm it is not necessary to meter CCGT Module licensable Generating Units (and why) whereas metering Licensable Generating Units in other BM Unit types is necessary for Settlement.
7	The impact on the System Operator.	To confirm any exclusions from the licensable Generating Unit metering requirement would not adversely impact the System Operator.
8	Testing the P241 solution.	To validate the P241 solution, e.g. by testing it against relevant example plant configurations.

ELEXON recommends that the P241 Modification Group is formed from members of the Settlement Standing Modification Group (in practice primarily the same Modification Group that is progressing P237 and P238).

[3] The CCGT issue was identified due to discussion of ISG92/01.

Timetable and costs

ELEXON recommends that P241 is submitted to a 3 month Assessment Procedure, such that the P241 Assessment Report is considered by the Panel at its meeting on 12 November 2009. This will allow P241 to be coordinated with Modification P240, which will be considered by a Modification Group composed largely or wholly of the same members.

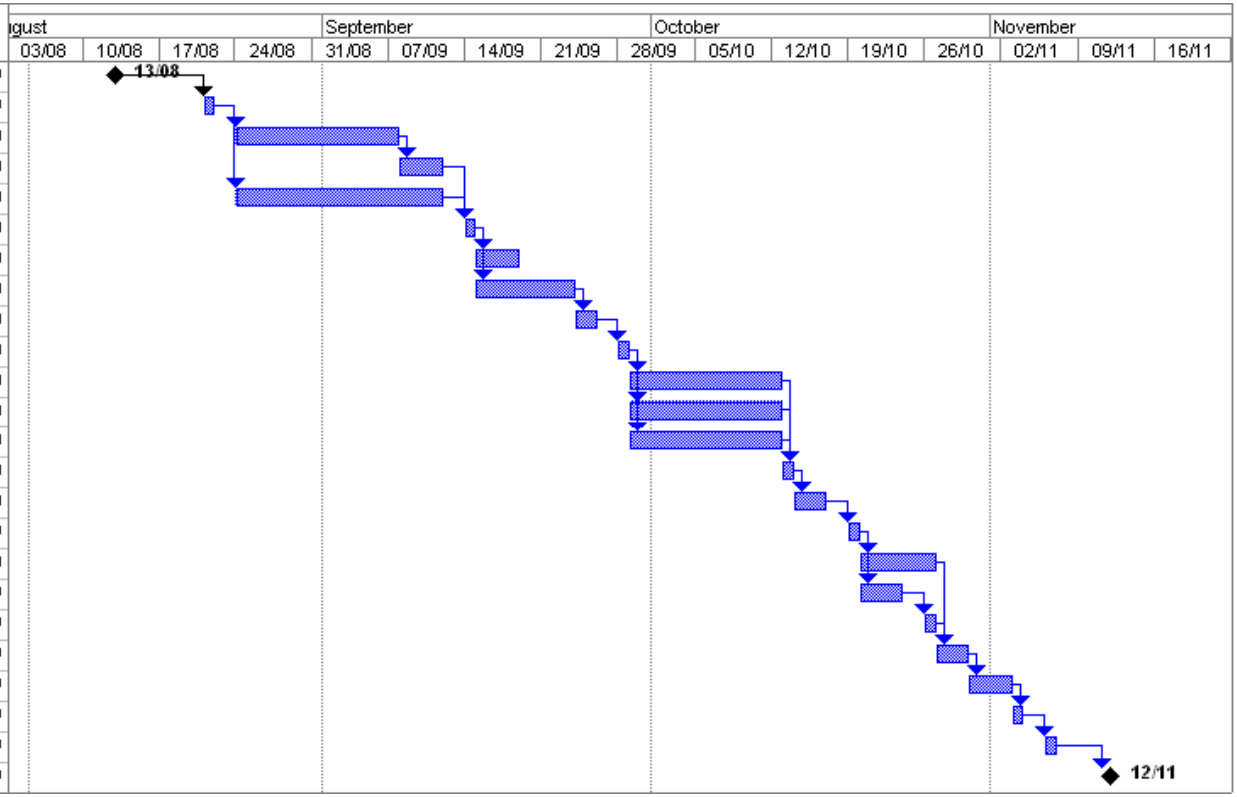
The recommended timetable of activities for P241 includes:

a) 3 Modification Group meetings;
b) 1 industry consultation (2 weeks);
c) 1 BSC Agent impact assessment (in parallel with consultation); and
d) 1 Transmission Company impact assessment.

Estimated progression costs based on proposed timetable	
Meeting costs (including Modification Group member expenses)	£750
Non-ELEXON legal and expert costs	Nil
Service Provider impact assessment costs	£3,000
ELEXON resource	57 man days, equating to around £10,700

Timetable and Costs

ID	Task Name	Duration	Start	Finish
1	IWA presented to Panel	0 days	Thu 13/08/09	Thu 13/08/09
2	Mod Group Meeting 1	1 day	Fri 21/08/09	Fri 21/08/09
3	Draft the solution and legal text	11 days	Mon 24/08/09	Mon 07/09/09
4	Group reviews draft solution	4 days	Tue 08/09/09	Fri 11/09/09
5	Draft consultation document	15 days	Mon 24/08/09	Fri 11/09/09
6	Mod Group Meeting 2	1 day	Mon 14/09/09	Mon 14/09/09
7	Update solution and legal text	4 days	Tue 15/09/09	Fri 18/09/09
8	Complete consultation document	7 days	Tue 15/09/09	Wed 23/09/09
9	Group reviews consultation document by email	2 days	Thu 24/09/09	Fri 25/09/09
10	Update consultation document	1 day	Mon 28/09/09	Mon 28/09/09
11	Industry consultation	10 days	Tue 29/09/09	Mon 12/10/09
12	Transmission Company impact assessment	10 days	Tue 29/09/09	Mon 12/10/09
13	BSC Agent impact assessment	10 days	Tue 29/09/09	Mon 12/10/09
14	Collate responses and issue to Group	1 day	Tue 13/10/09	Tue 13/10/09
15	Group review responses	3 days	Wed 14/10/09	Fri 16/10/09
16	Mod Group Meeting 3	1 day	Mon 19/10/09	Mon 19/10/09
17	Draft the Assessment Report	5 days	Tue 20/10/09	Mon 26/10/09
18	Update draft legal text	4 days	Tue 20/10/09	Fri 23/10/09
19	Internal ELEXON legal text walkthrough	1 day	Mon 26/10/09	Mon 26/10/09
20	Group reviews Report/legal text by email	3 days	Tue 27/10/09	Thu 29/10/09
21	Finalise Assessment Report/legal text	2 days	Fri 30/10/09	Mon 02/11/09
22	Internal paper day	1 day	Tue 03/11/09	Tue 03/11/09
23	External paper day	1 day	Fri 06/11/09	Fri 06/11/09
24	Assessment Report presented to Panel	0 days	Thu 12/11/09	Thu 12/11/09



4 Likely Impacts

At this stage, ELEXON believes that P241 will or may impact:

- **Section K** of the Code, which contains the requirements relating to separately metering licensable Generating Units;
- **Generators** i.e. those that operate CCGT Modules and possibly non-standard configurations of other licensable Generating Units;
- The **Central Data Collection Agent** which collects metering data;
- **ELEXON**, who supports the BM Unit registration processes and supports **ISG** consideration of applications for non-standard BM Unit configurations;
- Possible impacts on the **Metering Codes of Practice** and **Balancing and Settlement Code Procedure 75** which covers aggregation rules, including those for CCGTs; and
- Possible impact on the **Transmission Company**, but only if there is an impact on their operational data.

5 Recommendations

On the basis of the initial written assessment, ELEXON invites the Panel to:

- DETERMINE that Modification Proposal P241 progresses to the Assessment Procedure;
- AGREE the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel at its meeting on 12 November 2009;
- DETERMINE that the P241 Modification Group should be formed from members of the Settlement Standing Modification Group (and in practice should be primarily the same Modification Group that is progressing P237 and P238); and
- AGREE the Modification Group's Terms of Reference.

6 Further Information

You can find more information in:

Attachment A: P241 Modification Proposal form