

ISG209/05 – NON-STANDARD BM UNIT APPLICATION FOR THE CHESHIRE POWER STATION

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Owner/author	Katie Wilkinson
Purpose of paper	Decision
Classification	Public
Summary	RWE Generation UK plc has applied for two non-standard BM Units for its assets associated with its Cheshire Power Station. We invite the ISG to approve the application.

1. Background

- 1.1 Cheshire Power Station is located on North Road, Ellesmere Port and consists of:
 - one 44MW Open Cycle Gas Turbine (OCGT) Generating Unit (GU) (known as Cheshire OCGT);
 - a bank of six 1.1MW reciprocation gas engine GUs (known as Cheshire East); and
 - a bank of twelve 1.1MW reciprocation gas engine GUs (known as Cheshire West).
- 1.2 All generators are natural gas-fuelled. Each GU is capable of being controlled individually, but in practice run as three distinct units, Cheshire OCGT 44MW, Cheshire East 6.6MW and Cheshire West 13.2MW.
- 1.3 RWE Generation UK plc (RWE) has applied for two non-standard BM Units, one for its Cheshire East GUs and one for the Cheshire West GUs.
- 1.4 The Cheshire OCGT is a single GU, and will be classed as a standard BM Unit as it will be operated and controlled as an individual generator. The electrical single line diagram (Attachment B) shows that it is connected to a single 11 kV switchboard (103) and then connects to the "Green" section of a 33kV switchboard (labelled "33kV Switchboard Green") via a single 11/33kV transformer (102TX).
- 1.5 The electrical single line diagram (Attachment B) shows that Cheshire East's six GUs are connected to a single 11 kV switchboard (105) which then connects to the "Red" section of the 33kV switchboard (labelled "33kV Switchboard Red") via a single 11/33kV transformer (104TX). The six GUs are identical units and are dispatched as a collective unit.
- 1.6 Cheshire West's 12 GUs are connected to a single 11/33kV transformer (TX6). This transformer in turn is connected to the "Red" section of the 33kV switchboard (labelled "33kV Switchboard Red"). The 12 GUs are identical units and are dispatched as a collective unit.
- 1.7 The 33kV switchboard sections (Green and Red) are connected to the local Licensed Distribution System Operator's (LDSO) Distribution System (Scottish Power Energy Networks - Manweb) at 33kV via two cables.
- 1.8 The Settlement SVA Metering Equipment is currently located at the point of connection between the Power Station and the LDSO's Distribution System which is at the Defined Metering Point (DMP). With the proposed BM configurations, new Metering Equipment for all three BM Units will require to be installed below the 33kV

ISG209/05 – NON-STANDARD BM UNIT APPLICATION FOR THE CHESHIRE POWER STATION

switchboard (as marked in the Attachment B) prior to formal registration in CVA¹. A Metering Dispensation will be required for the CVA Metering Equipment which is due to be submitted to ELEXON in September 2018. RWE plans for the Metering Dispensation application to be presented to the ISG for approval in October 2018.

2. Non-standard BM Unit application

- 2.1 In accordance with Section K3.1.5 and 3.1.6, RWE is seeking the ISG's approval to register two non-standard BM Units, one for its Cheshire East GUs and one for the Cheshire West GUs.
- 2.2 In accordance with the conditions of BSC Section K3.1.2 and the standard configurations described in K3.1.4, the standard BM Unit configuration for this site would be to register each GU as a separate BM Unit.
- 2.3 Where the configuration of Plant and Apparatus does not fall into a category of standard BM Unit configuration set out in BSC Section K3.1.4 (and summarised in Appendix 1 – BM Unit Configurations) or where the responsible Party considers a different configuration would satisfy the requirements of paragraph K3.1.2, the ISG, under authority delegated from the BSC Panel, must determine the outcome for an application for a non-standard BM Unit configuration (in accordance with Section K3.1.6).
- 2.4 RWE wants to register all six GUs and the associated plant auxiliary supplies for Cheshire East within a single BM Unit, and all 12 GUs and the associated plant auxiliary supplies for Cheshire West within another single BM Unit. As this would not satisfy the requirements for a standard BM Unit, RWE is seeking approval for two non-standard BM Units in accordance with Section K3.1.6.
- 2.5 RWE believes that, should a BM Unit be required for each GU, this will be troublesome for the Transmission Company (TC), reduce system efficiency, cause unreasonable and unnecessary costs to RWE, and be an administrative burden for all parties involved. Two single BM Units would be a more useful service to the TC when being used in the Balancing Mechanism (who would otherwise have to issue instructions to 18 different BM Units).
- 2.6 RWE has stated that there are recurring costs associated with maintaining CVA BM Units and the associated CVA Metering Systems; these would be much higher than otherwise necessary, if each GU was registered individually, with no identifiable benefit. In line with Section D Annex-3 3.1 (b) and (c), assuming 18 BM Units (and two MSIDs²) were required, RWE would be incurring an annual charge of £24,000³ as opposed to £4,800, if only two BM Units (and two MSIDs) were registered.
- 2.7 If 18 BM Units were required, there would need to be 18 separate Metering Systems, located on each GU circuit, to measure the individual BM Unit flows. It would be extremely costly to install Metering Equipment and the associated metering class CTs and VTs for separate Metering Systems for each individual GU (estimate is ~£285,000).
- 2.8 Under Section K, paragraph 3.1.2(a), responsibility must lie with one Party. RWE has confirmed that it will be the Lead Party of these BM Units.
- 2.9 Under Section K, paragraph 3.1.2(b), a BM Unit must be controlled independently of any other. RWE has confirmed that the each of the BM Units will be controlled independently of any other.

¹ The SVA Metering Equipment will be deregistered and the new CVA Metering Equipment registered via the BSCP68 'Transfer of registration of Metering Systems between CMRS and SMRS' process.

² Where different Line Loss Factors are required for the Import and Export Metering System by the LDSO, limitations in the Central Data Collection Agent's (CDCA) system mean two Metering System Identifiers are required.

³ (18 BMUs x 12 months x £100 (£21600) + 2 MSIDs x 12 months x £50 (£2400))

ISG209/05 – NON-STANDARD BM UNIT APPLICATION FOR THE CHESHIRE POWER STATION

- 2.10 Under Section K, paragraph 3.1.2(c), a BM Unit must have Metering Equipment which is installed pursuant to Section L and conforming to the appropriate Code of Practice (CoP). RWE has confirmed that CoP2 Metering Equipment will be installed for the Cheshire OCGT GU, CoP2 Metering Equipment for the Cheshire East GUs, and CoP1 Metering Equipment for the Cheshire West GUs, but a Metering Dispensation will be required for the Actual Metering Points not being at the Defined Metering Points (points of connection to the LDSO's Distribution System).
- 2.11 Under Section K, paragraph 3.1.2(d) the BM Unit shall not comprise Plant and Apparatus whose Imports and Exports are measured by both CVA Metering System(s) and SVA Metering System(s). RWE has confirmed that each BM Unit will only be measured by CVA Metering System(s).
- 2.12 Under Section K, paragraph 3.1.2(e) a BM Unit must be the smallest aggregation of Plant and/or Apparatus that satisfies paragraphs K3.1.2 (a), (b) and (c). Although in theory each GU can be individually controlled and therefore would be the smallest aggregation of Plant and Apparatus to satisfy paragraph K3.1.2 (a), (b) and (c), in practise there is only one control system for each of the Cheshire East and Cheshire West BM Units.

3. Transmission Company and ELEXON comments

- 3.1 The Transmission Company has reviewed the non-standard BM Unit application and has no issues with, or objections to, it.
- 3.2 ELEXON recommends that the ISG agree this application on the basis that:
- the responsibility for the flows of electricity associated with each BM Unit lie with one Party (Section K 3.1.2 (a));
 - even though the GUs within the BM Unit are capable of being independently controlled, RWE has confirmed that they will operate the Cheshire East GUs and Cheshire West GUs each as single units and each set of GUs will work as one, and that the Plant and Apparatus associated with each Power Station is capable of independent control from any other Plant and Apparatus (Section K3.1.2(b));
 - all volumes flowing from and to the BM Units will be captured by Metering Equipment to the relevant Code of Practice and these volumes will be determined separately from volumes to and from other BM Units (Section K 3.1.2 (c));
 - the BM Unit does not comprise Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) Metering Systems that measure the same Imports or Exports (Section K 3.1.2 (d)); and
 - Although the BM Unit would not be the smallest aggregation of Plant and Apparatus that satisfies K3.1.2 (a)-(c) it would be inefficient and unnecessary to register 18 BM Units for the 18 GUs (Section K3.1.2(e)).

4. Recommendations

- 4.1 We invite you to:
- a) **APPROVE** the two non-standard BM Units for the Cheshire East and Cheshire West Generating Units.

Appendices

Appendix 1 – BM Unit Configurations

ISG209/05 – NON-STANDARD BM UNIT APPLICATION FOR THE CHESHIRE POWER STATION

Attachments

Attachment A – Cheshire PS Non Standard BM Unit Application form BSCP15/4.13

Attachment B (CONFIDENTIAL) – Cheshire PS LV Single Line Diagram

For more information, please contact:

Katie Wilkinson,

Settlement Analyst

Katie.wilkinson@elexon.co.uk

020 7380 4276

ISG209/05 – NON-STANDARD BM UNIT APPLICATION FOR THE CHESHIRE POWER STATION

APPENDIX 1 - BM UNIT CONFIGURATIONS

The BSC states that a BM Unit shall comprise Plant and/or Apparatus for who's Exports and / or Imports a Party is responsible (Section K3.1.1).

A BM Unit must satisfy the following conditions (K3.1.2):

- responsibility for the BM Unit would lie with one Party;
- it would be capable of independent control;
- it would be visible to the Settlement Administration Agent (SAA) as a metered quantity separately from anything that is not included in the BM Unit;
- the BM Unit does not comprise of CVA and SVA Metering Systems that measure the same Imports or Exports
- it would be the smallest aggregation of Plant and Apparatus that satisfies the first three bullet points above.

The BSC also sets out a number of standard configurations of BM Units (Section K3.1.4), including:

- a single Generating Unit (GU), Combined Cycle Gas Turbine (CCGT) or Power Park Module (PPM),
- a Combined BM Unit,
- the Imports through the station transformers of a Generating Plant or premises, which are directly connected to the Transmission System, at a single Boundary Point.
- directly connected premises which are connected at one boundary point only

The BSC states that a Registrant and/or Central Data Collection Agent (CDCA) / Central Registration Agent (CRA) can apply to the Panel for a non-standard BM Unit configuration in the following circumstances (K3.1.5):

- the Plant / Apparatus does not fall into a category listed in section K3.1.4 or the CDCA / CRA considers that there is reasonable doubt that this is the case;
- the Plant / Apparatus does fall into a category listed in K3.1.4 but the responsible Party considers that a different configuration would satisfy the requirements set out in K3.1.2; or
- there is more than one set of Exports / Imports at a CVA boundary Point and more than one Party is responsible for these.