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* PwC refers to PricewaterhouseCoopers LLP, a limited liability partnership incorporated in England (number OC303525), whose registered office is at 1 Embankment Place, London WC2N 6RH

Balancing Mechanism Report

May 2023



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Introduction

Section Q of the Balancing and Settlement Code ('BSC'): Balancing Mechanism Activities, to which National Grid Company plc ('National Grid') is signatory, requires National Grid in its role as National Electricity Transmission System Operator ("NETSO") to submit certain data to the Balancing Mechanism Reporting Agent ('BMRA') and Settlement Administration Agent ('SAA').

A link to Section Q of the BSC as published on Elexon's website is provided below. Section Q of the BSC is updated periodically and as such, depending on the date of clicking on the below link, the version of Section Q may differ to one of the versions relevant to the audit period 1 April 2022 to 31 March 2023. Should you wish to access any of the versions of section Q of the BSC relevant to this audit period, please contact Elexon.

<https://www.elexon.co.uk/the-bsc/bsc-section-q-balancing-services-activities/>

Section H para 5.1.6 of the BSC requires the NETSO to appoint a Balancing Mechanism Auditor ('BM Auditor') to review the compilation and submission of Balancing Mechanism data. The objective of the Balancing Mechanism Audit ('BM Audit') is to establish whether, in all material respects, the NETSO is compliant with the requirements of Section Q of the BSC in the areas defined as in-scope.

For the year-ended 31 March 2023, National Grid Electricity System Operator (NGESO) in its role as NETSO has appointed PricewaterhouseCoopers LLP ('PwC') as the BM Auditor.

Scope of the Audit

The overall scope of the BM Audit is defined in Section H 5.1.6 of the BSC. This states:

"The following matters shall be audited by an independent auditor of internationally recognised standing appointed by the NETSO (the 'BM Auditor'):

- a) *The compiling and submission of Final Physical Notification ('FPN') data by the NETSO pursuant to and in accordance with Section Q*
- b) *The compiling and submission of Bid-Offer data by the NETSO pursuant to and in accordance with Section Q*
- c) *The compiling and submission of Acceptance data by the NETSO pursuant to and in accordance with Section Q*
- d) *The submission of other data by the NETSO pursuant to and in accordance with Section Q6"*

For the purposes of this report, and the BM Audit, those aspects of Section Q of the BSC covering the compilation and submission of Balancing Mechanism data and relevant to the activities stated in a) to d) (from here on referred to as the 'specified processes') above, form the reporting criteria. The data included within these submissions are collectively referred to as the 'Balancing Mechanism data'.

The scope of the BM Audit does not include the calculation of the submitted Balancing Mechanism data by NGESO. Specifically, it does not include the calculation of Balancing Settlement Adjustment data and Applicable Balancing Services Volumes, which are required in the calculation of the System Sell Price and System Buy Price. Furthermore, the scope of the BM Audit does not require the BM Auditor to assess the validity of the Balancing Mechanism data submitted on behalf of BM Units to NGESO but is restricted to the BM Auditor reviewing the onward submission of this data to the BMRA or the SAA, as required.

Additionally, those aspects of the specified processes that involve engineering decisions that NGESO makes are expressly excluded from the scope of the BM Audit. It is also not the responsibility of the BM Auditor to:

- confirm that system security has always been maintained; and/or
- review the accuracy of forecast demand as prepared by NGESO compared to actual demand.

Directors' Statement

The Directors of NGESO are and shall be responsible for producing the Balancing Mechanism Report ("BM Report") and complying with the rules as set out in Section Q of the BSC (the reporting criteria) in respect of the compilation and submission of Balancing Mechanism data during the year ended 31 March 2023 to the Balancing Mechanism Reporting Agent ("BMRA") and the Settlement Administration Agent ("SAA"). Our responsibilities include designing, implementing and maintaining systems, processes and internal controls over information relevant to the evaluation or measurement of the application of the specified processes, which is free from material misstatement, whether due to fraud or error, against the reporting criteria.

We are also responsible for ensuring that those criteria are relevant and appropriate to NGESO and the intended users and the BM Report provides complete, accurate, balanced reflection of NGESO's performance in this area and discloses, with supporting rationale, matters relevant to the intended users.

We confirm to the best of our knowledge that we have:

- established and carried out the specified processes in accordance with the requirements of aspects of Section Q of the BSC covering the compilation and submission of Balancing Mechanism data and relevant to the specified processes;
- designed, implemented and maintained internal controls and processes over information relevant to the specified processes;
- presented information, including the reporting criteria, in a manner that provides relevant, reliable, comparable and understandable information; and
- measured and reported on the specified processes and Balancing Mechanism data based on the reporting criteria.

We confirm our compliance for the year ended 31 March 2023 with the rules as set out in the following versions of Section Q of the BSC:

- Version 41.0, dated 18 March 2022, for the period 1 April 2022 to 29 June 2022;
- Version 42.0, dated 30 June 2022, for the period 30 June 2022 to 6 December 2022;
- Version 43.0, dated 7 December 2022, for the period 7 December 2022 to 22 February 2023; and
- Version 44.0, dated 23 February 2023, for the period 23 February 2023 to 31 March 2023.



Fintan Slye

For and on behalf of the Board of Directors of National Grid Electricity System Operator Limited
19 May 2023



Independent Assurance Report

Balancing Mechanism auditor's independent assurance report to the Directors of National Grid Electricity System Operator Limited for the year ended 31 March 2023

We have performed an independent reasonable assurance engagement in our role as the Balancing Mechanism Auditor ("BM Auditor"), over specific aspects of the responsibilities placed on National Grid Electricity System Operator Limited ("ESO") in its role as the National Electricity Transmission System Operator ("NETSO") within the Balancing and Settlement Code ("BSC") for the year ended 31 March 2023.

Our independent assurance report is produced in accordance with the Framework Services Agreement dated 1 December 2017 and Call-Off Contract Number: ESO-20-07-01 dated 1 October 2020, agreed between ourselves and ESO, as amended by Change Request ESO-22-03-23, dated 17 March 2022.

Section H Paragraph 5.1.6 of the BSC requires that the activities set out below should be subject to audit by the BM Auditor and accordingly they form the subject matter information of the engagement. For the purposes of our assurance engagement, the reporting criteria are those aspects of Section Q of the BSC covering the compilation and submission of Balancing Mechanism data and relevant to the processes set out below (the "specified processes"):

- compiling and submission of Final Physical Notification data by the NETSO pursuant to and in accordance with Section Q;
- compiling and submission of Bid-Offer data by the NETSO pursuant to and in accordance with Section Q;
- compiling and submission of Acceptance data by the NETSO pursuant to and in accordance with Section Q; and
- submission of other data by the NETSO pursuant to and in accordance with Section Q6.

The data included within these submissions are collectively referred to as the 'Balancing Mechanism data' for the purpose of our opinion. All other rules, principles, criteria, processes, and controls described in or required by the BSC are excluded from the scope of our independent assurance report.

In addition, for the purposes of our assurance engagement we have considered the following versions of the BSC, Section Q:

- Version 41.0, dated 18 March 2022, for the period 1 April 2022 to 29 June 2022;
- Version 42.0, dated 30 June 2022, for the period 30 June 2022 to 6 December 2022;
- Version 43.0, dated 7 December 2022, for the period 7 December 2022 to 22 February 2023; and
- Version 44.0, dated 23 February 2023, for the period 23 February 2023 to 31 March 2023.

Unless the context otherwise specifically stated, words and expressions defined in the BSC, Section Q versions 41.0, 42.0, 43.0 and 44.0, to which ESO is a signatory, have the same meaning in this independent assurance report.

Inherent limitations

Because of their nature, ESO carrying out the specified processes may not prevent or detect and correct all errors or omissions in the compilation and submission of Balancing Mechanism data. Furthermore, our opinion is based on historical information and the projection to future periods of any evaluation or conclusions about ESO's application of the specified processes in respect of its compilation and submission of Balancing Mechanism data would be inappropriate.



Responsibilities of the Directors

As explained in the Directors' Statement on page 2 of the Report, the Directors of ESO are responsible for:

- the compilation and submission of Balancing Mechanism data to the Balancing Mechanism Reporting Agent ("BMRA") and the Settlement Administration Agent ("SAA") as set out in Section Q of the BSC;
- complying with Section Q of the BSC in respect of the compilation and submission of Balancing Mechanism data. This includes designing, implementing and maintaining systems, processes and internal controls over the evaluation or measurement of the application of the specified processes, that is free from material misstatement, whether due to fraud or error;
- ensuring that those criteria are relevant and appropriate to ESO and the intended users of the Balancing Mechanism Report ("BM Report");
- appointing an independent auditor to establish whether, in all material respects, the NETSO is compliant with the requirements of Section Q of the BSC in the areas defined as in-scope, as set out in Section H of the BSC of the BSC, paragraph 5.1.6; and
- producing the BM Report, other than the independent assurance report and Appendix A – Assurance Approach sections of the document, including underlying data and a statement of Directors' responsibility, which provides a balanced reflection of ESO's performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the BM Report.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain reasonable assurance as to whether ESO, has, in respect of its compilation and submission of Balancing Mechanism data, in all material respects, carried out the specified processes set forth in Section Q of the BSC for the year ended 31 March 2023 whether due to fraud or error;
- forming an independent opinion, based on the evidence we have obtained; and
- reporting our opinion to the Directors of ESO.

Professional standards applied

We have performed our reasonable assurance engagement in line with the requirements of the International Standard on Assurance Engagement 3000 (Revised), 'Assurance engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board.

Our independence and quality control

We have complied with the Institute of Chartered Accountants in England and Wales Code of Ethics, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, that are at least as demanding as the applicable provisions of the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants.

We apply International Standard on Quality Control (UK) 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of our work performed

We have planned and performed our work in accordance with our Assurance Approach which is included as Appendix A of the 'BM Report, May 2023'. Our work included an examination, on a test basis, of the specified processes carried out by ESO, in respect of its compilation and submission of Balancing Mechanism data as set forth in Section Q of the BSC.



We performed a reasonable assurance engagement. A reasonable assurance engagement involves performing procedures to obtain evidence about the subject matter information. The nature, timing and extent of procedures selected depend on professional judgement, including the assessment of risks of material misstatement, whether due to fraud or error, in the subject matter information. In making those risk assessments, we considered internal control relevant to the subject matter information.

In reaching our opinion, we assessed the risk of a material breach in respect of the compilation and submission of Balancing Mechanism data in relation to the specified processes, whether caused by fraud or error.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

The scope of the BM Audit does not include the calculation of the submitted Balancing Mechanism data by ESO. Specifically, it does not include the calculation of Balancing Settlement Adjustment data and Applicable Balancing Services Volumes, which are required in the calculation of the System Sell Price and System Buy Price. Furthermore, the scope of the BM Audit does not require the BM Auditor to assess the validity of the Balancing Mechanism data submitted on behalf of BM Units to ESO but is restricted to the BM Auditor reviewing the onward submission of this data to the BMRA or the SAA, as required. Additionally, those aspects of the specified processes that involved engineering decisions that ESO made are excluded from the scope of our BM Audit. It is also not the responsibility of the BM Auditor to:

- confirm that system security has always been maintained; nor
- review the accuracy of forecast demand as prepared by ESO compared to actual demand.

Materiality

The assessment of what is material and therefore what issues, if any, warrant inclusion in the independent assurance report, is a matter of professional judgement. The BSC Auditor has communicated that its materiality as part of the BSC audit is 1.2TWh for the year ended 31 March 2023, which we have taken into account where any issues have been identified for which a clear numerical impact in terms of TWh can be considered. In applying our judgement, we also considered the following factors:

- a. the number of persons and entities affected by the specified processes;
- b. the effect of an adjustment which affects (in a past or the current audit period) whether ESO has carried out the specified processes, or is likely to affect the future;
- c. whether a misstatement is the result of an intentional or unintentional act or omission;
- d. the extent to which the actual outcome would have been different had the specified processes in respect of the compilation and submission of Balancing Mechanism data as set forth in Section Q of the BSC been carried out; and
- e. the aggregate impact of any failure to comply with Section Q of the BSC.

Basis for our opinion

Based on the procedures performed and evidence obtained, in our opinion, in all material respects, ESO has carried out the specified processes as set forth in Section Q of the BSC in respect of its compilation and submission of Balancing Mechanism data for the year ended 31 March 2023.

Other information

The information included in the 'Introduction' section is presented by ESO to provide additional information and is not part of the description of specified processes subject to the scope of our assurance engagement.

Such information has not been subjected to any assurance procedures performed in the examination of the ESO's application of the specified processes in respect of its compilation and submission of Balancing Mechanism data. Accordingly, we express no opinion on it.



Use and distribution of this report

Our report is intended solely for the benefit of the Directors of ESO in connection with ESO's reporting obligations under Section H paragraph 5.1.6 of the BSC and in accordance with the terms agreed between us.

Our report must not be made available to any other party save as set out in the agreement. To the fullest extent permitted by law we do not accept or assume any liability or responsibility for any other purpose or to any other party for our assurance work or our report save where terms are expressly agreed in writing.

Where the 'BM Report, May 2023' (including our independent assurance report) is published on a website by ESO, it shall be subject to the conditions of access specified in the agreement between us and ESO. The maintenance and integrity of that website is the responsibility of ESO; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the 'BM Report, May 2023' or our independent assurance report when presented on that website.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Chartered Accountants
Watford
19 May 2023

Appendix A - Assurance Approach

We designed our audit approach and testing to provide reasonable assurance that the specified processes had been carried out as set forth in Section Q of the BSC respect of NGESO's compilation and submission of Balancing Mechanism data for the year ended 31 March 2023. This consisted of the following activities

- a) obtained an understanding of the computer systems and/or internal operating procedures that NGESO has established;
- b) tested on a sample basis, to the extent we considered necessary, the ongoing operation of the IT systems and/or internal operating procedures relevant to the specified processes for the period 1 April 2022 to 31 March 2023; and
- c) tested on a sample basis, to the extent that we considered necessary, the data processed by the relevant IT systems and/or internal operating procedures for the period 1 April 2022 to 31 March 2023.

In performing our assurance engagement, we assessed the risk of a material non-compliance with the specified processes, as set forth in Section Q of the BSC. In areas within the specified processes where we identified specific risks, or where weaknesses were identified in the operation of certain internal processes or controls, these compliance tests were supplemented by substantive tests of detail of the relevant underlying data.

We selected several half-hour periods within Settlement Days for testing across the reporting period. The selection of the Settlement Days (and subsequently half-hour periods within) reviewed was based solely on our assessment of risk and application of our sampling methodology. Our samples included a mixture of "normal" days and "other" days (e.g. a day where an outage has occurred), in order to ensure that we were able to test all relevant in-scope areas of section Q which we are required to assure.

Where it was more efficient for us to do so, we used technology enabled audit tools and ran tests for the entire selected sample day. These methods involved the use of data interrogation tools to perform automated tasks such as matching two or more types of records, identifying patterns and looking for anomalies.

Where we did not find sufficient samples of events/activities on the selected sample days we selected data from additional days to ensure that the sample sizes selected continued in line with our sampling methodology.

Throughout the period of execution of our work we monitored developments that had a potential impact on the compilation and submission of Balancing Mechanism data, and where we identified a potential risk within the scope of our assurance engagement, we assessed the risk and determined an appropriate response.

The work that we carried out can be summarised as follows:

1) The receipt and compilation of Final Physical Notification, Bid-Offer and Acceptance Data

- Compared the Settlement Data (Final Physical Notification, Bid-Offer and Acceptance data and Bid-Offer Acceptance Data) sent by the BMUs against the information processed by the NGESO systems, and notified to the Balancing Mechanism Reporting Agent (BMRA);
- Confirm the relevant application of default data where required, through sample testing; and
- Reviewed incidents where the electronic transfer had been interrupted and confirmed that appropriate actions were taken to ensure no data files have been lost/duplicated.

2) The submission of Final Physical Notification Bid-Offer, Acceptance Data and other required data

- Compared the Settlement Data (Final Physical Notification, Bid-Offer and Acceptance data and Bid-Offer Acceptance Data) in the NGESO systems with the information notified to the BMRA;
- Confirmed the appropriate submission of Final Physical Notification, Bid-Offer and Acceptance Data and other required data within the required timescales, through sample testing; and
- Reviewed incidents where electronic transfer had been interrupted and actions taken to ensure no data files have been lost/ duplicated.

3) General IT Controls Testing

Most transactions involving the input and output of data are sent and processed electronically. The integrity of these transactions may therefore be impacted by the robustness of the IT control environment. Consequently, we obtained an understanding of the IT general controls through testing which covered the following domains and a number of applications (SPICE, SORT, MODIS, IP, ASB, Salesforce, OGDS and Oracle MFT):

- Program development;
- Program changes;
- Computer Operations; and
- Access to programs and data.

This testing was not designed to provide us with sufficient appropriate evidence on which to form an assurance conclusion over the design and operation of controls and accordingly we do not express such a conclusion.