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ESO Balancing Mechanism Access

A guide to entering the
Balancing Mechanism

Last updated:
15/02/2020



Version Control

Version	Published	Comments
0.1	06 August 2019	First Version
0.2	17 December 2019	European Balancing Guidelines (EBGL) Impacts
0.3	15 July 2020	Activity in the BM + General Updates
0.4	15 February 2021	General Updates

Feedback

Please provide feedback on this document and let us know about anything else that would be helpful.

Please [click here](#) to provide feedback.

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Introduction

National Grid Electricity System Operator (NGESO) committed to enabling Wider Access to the Balancing Mechanism (BM).

Our Wider Access to the Balancing Mechanism Roadmap set out the commitments and actions to improve existing BM entry routes and create a new route to market by December 2019.

Wider access to the BM will promote competition and provide the Electricity National Control Centre (ENCC) with greater access to flexibility. Wider Access will lower cost to consumers, improve quality of service and contribute towards zero carbon operation of Great Britain's electricity system by 2025.

We are seeking to remove barriers to BM entry in three ways:

1. Improving existing routes to market under the supplier (SVA) route.
2. Developing new routes to market through framework changes. These may be from non-traditional providers or aggregators who are not currently licensed suppliers.
3. Enhancing IT systems to improve data flows between the ESO and market participants so they are more efficient and cost-effective for new entrants.

NGESO have already enabled Accelerated Wider Access which is open to parties who are in a position to participate before December 2019.

European Balancing Guidelines (EBGL) Impacts

The European Balancing Guidelines (EBGL) requirement around prequalification goes live on 18th December 2019.

The requirements around prequalification have an impact on our current processes for Supplier registration. The Virtual Lead Party prequalification and registration processes have been designed in line with EBGL.

The main impacts are on timelines, which are set out in the System Operator Guidelines (SOG), and a few extra process steps follow. Prequalification has a maximum time of 5 months to be completed, we recognise that neither the providers nor NGESO wish for the process to take this long.

These new processes ensure that NGESO hold all the correct details for all units and that the units are fully set up to be able to be used in the Balancing Mechanism.

European Balancing Guidelines (EBGL) Impacts

Type of Change	Action	Timeline
New provider and new unit	VLP – Input data into Salesforce SVA – Submit data to Account Manager and BMU Registration Team (Offline) Traditional – Submit data through Connection Account Manager and BMU Registration Team (Offline)	<ul style="list-style-type: none"> Once unit information is submitted to NGESO, we have 8 weeks to approve. These 8 weeks include a check with the relevant Distribution Network Operator (DNO) to see if unit is within an Active Network Management (ANM) Zone plus a meter check with Elexon. Remaining 3 months is for installation of systems (e.g. EDL/EDT, operational metering) and registration with Elexon.
Already registered provider with additional new unit	VLP – Salesforce process SVA – Offline process Traditional – Offline process	<ul style="list-style-type: none"> Unit information submitted to NGESO - 8 weeks for approval including DNO check and Elexon check The 3 months are not applicable, if systems are already installed.
Changes (including capacity/adding or removing sub-sites/fuel type, ANM status) to an already prequalified unit	VLP – Salesforce process SVA – Offline process Traditional – Offline process	<ul style="list-style-type: none"> Check with DNO required plus the check with Elexon, approximately 2 weeks SVA – Aggregator Impact Matrix deadline 11:00 for changes to be effective from 05:00 for next operational day, once changes approved.

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1. Routes to BM Access

This section explains the different routes for entering the Balancing Mechanism.

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1. Routes to BM Access

1.1 Introduction to different routes

1.2 Traditional Route

1.3 Supplier Route

1.4 Virtual Lead Party Route

1.1 Introduction

There are currently 3 routes for entering the BM:

The traditional route is via NGESO's Connections team who will guide you through this process. This requires a NGESO Connection Agreement.

Accelerated Wider Access has opened the BM to parties before December 2019. This is through the Supplier route.

The final route is as a Virtual Lead Party, which came into effect from December 2019.

Route	Contract	Relevant NGESO team
Traditional	Connection Agreement. Registered as a Primary Balancing Mechanism Unit (BMU).	Connections Team transmissionconnections@nationalgrideso.com
Supplier	Registered Supplier and Additional Supplier BMUs created.	Commercial Operation (Account Manager) – commercial.operation@nationalgrideso.com
Virtual Lead Party	Registered and completed through our new electronic portal. Parties sign a VLP agreement and units register as secondary BMU's.	Commercial Operation commercial.operation@nationalgrideso.com

1.2 Traditional Route to BM Access

The traditional route requires signing a NGENO Connection Agreement. These take the form of: Bilateral Embedded Generation Agreement (BEGA), Bilateral Embedded Licence Exemptible Large Power Station Agreement (BELLA), Bilateral Connection Agreement (BCA). BCAs are for new connections to the National Electricity Transmission System (NETS). Embedded generators can enter either a BEGA or a BELLA.

The Connections Team are responsible for taking parties through the connection process to go live within the BM. Please visit the Connections Team [website](#) for some more information.
transmissionconnections@nationalgrideso.com

Through this process parties will be required to accede to the Connections Use of System Code (CUSC), through NGENO and the Balancing and Settlement Code (BSC) through Elexon.

1.3 Supplier Route

The supplier route requires a party to be a registered supplier with Elexon who will issue 14 base BMU's. Parties cannot use these base BMU's to actively participate.

Parties will be required to register Additional BMUs to actively participate. Under this route aggregation is permitted but is limited to Grid Supply Point Groups (Distribution Network Owner areas). The minimum size for a unit is 1MW.

Commercial Operations/Account Managers can share the agreement required to actively participate with Additional Supplier BMU's. This includes an appendix outlining the various technical and Grid Code requirements.

Through this process parties will be required to accede to the Connections Use of System Code (CUSC), through NGESO and the Balancing and Settlement Code (BSC) through Elexon.

1.4 Virtual Lead Party (VLP)

This route was developed for TERRE (Trans-European Replacement Reserve Exchange), so is the newest and has a different registration process for participating in the BM. Please visit this [webpage](#) to understand more about TERRE. We are also using this route to deliver Wider Access.

This route requires registration as a VLP through NGESOs new registration system. Parties will register Secondary BMUs with both NGESO and Elexon. The minimum size for a Secondary BMU is 1MW.

Through this process you will be required to accede to the Connections Use of System Code (CUSC) and sign a Virtual Lead Party Agreement through the NGESO Connections Team (transmissionconnections@nationalgrideso.com), and the Balancing and Settlement Code (BSC) through Elexon.

Further Information and guidance for signing these agreements can be found [here](#)

2. Registration for the BM

This section explains what parties need to consider and steps involved with BM unit registration.

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2. BM Registration

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| 2.1 | Introduction to registration |
| 2.2 | Supplier Route NGESO Registration |
| 2.3 | VLP NGESO Registration |
| 2.4 | Elexon Registration |
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2.1 Introduction to Registration

Once parties have chosen the appropriate access route they are required to register with both NGESO and Elexon. This section outlines the steps required to register and relevant supporting information.

Parties seeking the Traditional route via a NGESO Connection Agreement will be assigned a Connections Account Manager (CAM) to take them through this process. The rest of the document is predominantly aimed towards the Supplier and VLP route.

Please be aware that under the European codes registration timelines can take up to 5 months in total for the end to end process. We advise progressing discussions as early as possible, creating and registering the BM units in our internal systems takes 2-3 months as part of this process. Our BM Registration Guidance document outlines these timelines in more detail.

2.2 Supplier Route Registration

Parties interested in the supplier route will be required to register additional supplier BMU's with NGESO and Elexon. These can run in parallel but conversations should take place with Commercial Operations/Account Manager as early as possible as NGESO will allocate the unit ID.

1. Review the [BM Registration Guidance Document](#).
2. Engage with Account Manager/Commercial Operations to review the unit details and future plans. Advice provided regarding the options around structuring BMUs.
3. Request the BMU registration form from NGESO BM Registration team. (Contact us section).
4. Engage with Account Manager and BM Registration Team to complete and submit form. NGESO provide BMU ID.
5. Register BMU with Elexon. This process can run in parallel to NGESO registration process. Section 2.4 expands on Elexon registration.

2.3 Virtual Lead Party NGESO Registration

Parties will be required to acceded to the CUSC and the BSC.

The website contains details on the VLP work underway and the pre-qualification process with NGESO. This will need to be completed before units can access the BM. NGESO are on track to deliver Wider Access in December 2019.

Parties will need to create an account in NGESO's new Electronic Portal: Salesforce (please click here to create an account). Applications are submitted through the following link. VLP parties will be required to sign a VLPA (Virtual Lead Party Agreement) as part of this process.

The NGESO cost of becoming a VLP is £5000 plus VAT. Please visit the Connections website for more guidance.

2.4 Elexon Registration

During the NGENSO registration process parties will also be required to complete the necessary registration steps with Elexon. These processes can run in parallel.

The forms required are outlined in the [BM Registration Guidance Document](#).

For more information regarding the Elexon registration steps, costs and timescales please visit the Elexon [website](#).

Additional information regarding BMUs can also be found [here](#).

Please follow this [link](#) to learn specifically about VLP registration with Elexon.

3. BM System Requirements

This section outlines system requirements to be active in the BM.

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3. BM Systems Requirements

3.1 Introduction to system requirements

3.2 Control room communications

3.3 Operational Metering

3.4 Industry Reporting

3.1 Introduction to systems

There are a number of systems required before a unit can become active in the BM to ensure they have the ability to communicate with the Electricity National Control Centre (ENCC). These systems are described in the following slides.

Electronic Dispatch Logging(EDL)

Electronic Data Transfer(EDT) and Control/System Telephony.

Operational Metering data submission.

In addition to communication systems and operational metering, providers also need to submit certain data sets for reporting purposes. These are flagged in the end of this section under Reporting 3.4.

3.2 Control Communications

Electronic Data Transfer (EDT) and Electronic Dispatch Logging (EDL) are 2 systems which are used for control communications. EDT allows the BMU to submit technical and commercial parameters about the unit and EDL allows the ENCC to send instructions to the BMU.

To ensure the appropriate communications systems are in place parties can:

- Utilise an existing connection that your business already has.
- Utilise another company's connection with their agreement.
- Engage with NGESO IS team regarding the new API system.

3.3 Operational Metering

Active BMU's are required to supply operational metering data on the volumes they deliver, with variations depending on the type of generating technology.

NGESO have developed a new cloud-based operational metering solution capable of providing a low-cost, high-volume, future-proof product which meets the needs of NGESO and new participants. This system went live on 10th October 2019.

Parties can access a high level document of the new Operational Metering Submission API on the [Wider Access webpage](#). Following this, parties will be granted access to a secure platform for further technical details as they are ready to develop a solution and progress to testing.

Once you have started your registration, you need to contact box.SmallBMUOpsMeter-ESO@nationalgrid.com as soon as possible to start the process of integrating into the operational metering system as this will take some time.

3.4 Reporting

National Grid operates the MODIS system to report market data for compliance with the European Transparency (ETR) and REMIT regulations. This includes unavailability data for generating and consumption units from Market Participants relating to Articles 7 and 15 of the ETR regulation.

This information is forwarded to ELEXON who publish BM Reports and share with ENTSO-e for publication on the European Transparency Platform.

Before submitting this data, participants need to request EIC (Energy Identification) Codes through our Local Issuing Office (LIO) – details here:

<https://www.nationalgrideso.com/balancing-services/ljo-eic-codes>

Once codes have been allocated, participants can contact our MODIS team at: Box.MODIS.Business@nationalgrideso.com to arrange the setup of new units for new ETR and REMIT data submission.

4. Being Active in the Balancing Mechanism

This section explains what you need to consider and what processes to follow when you have successfully entered the BM and are being active.



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4.1 Introduction to activity in the BM

Once you are considered live in the BM, there are certain processes that you need to follow. You always need to submit Dynamic data through EDL and Commercial data through EDT for the ENCC to have the possibility of sending you instructions. You will receive instructions from the ENCC based upon this dynamic data, these are called BOAs (Bid/Offer/Acceptances). These will instruct you whether to stay on, come off, or increase/decrease from PN plus other instructions.

Dynamic Data:

- MEL/SEL/MIL/SIL – BM Unit's operating limits –
 - MEL must be equal to or higher than SEL
 - MIL must be equal to or less than SIL
- MNZT – Minimum non-zero time
- MZT – Minimum zero time
- NDZ – Notice to deviate from zero
- TS – Time to synchronise (applicable if NDZ<89mins)

Commercial Data

- Physical Notifications (PNs) of what you intend to generate
- Bid and Offer price pairs for your unit (usually done in MW blocks)

4.2 General Information

Here are some general top tips for operating in the BM:

- It is really important to ensure that all of your dynamic data submissions are correct. All instructions are based upon the data in the BM systems.
- If you are participating in Triad avoidance, you will need to ensure that all commercial and dynamic data is reflective of this.
- The ENCC are able to emergency instruct, if necessary, at any time even if the unit is participating in non-BMU markets (normal BM rules apply even when participating in non-BMU markets).
- Ensure phone calls to the ENCC are real-time issues only, anything outside of this needs to go through your account manager.
- If the ENCC need to unwind a BOA there is a benefit if these costs are neutral.

4.2 Participating in Balancing Services

If you participate in Firm Frequency Response, please note the following information:

- If you are an energy storage unit, you must submit PNs to manage State of Energy
- All fax declarations (unavailability/availability) need to be sent with a minimum of 15 minutes notice.

4.3 Aggregated Assets

If you are an aggregated unit that contains multiple sub-assets, please follow the below guidance:

- Please ensure your Aggregator Impact Matrices (AIMs) are filled in and up to date. It is a Grid Code (GC97) requirement that these are sent 11:00 day prior to effective date for any changes.
- Instructions (BOAs) will be sent against your Minimum Zero Time (MZT) & Minimum Non-Zero Time (MNZT).
- It is suggested that your MZT & MNZT will need to be the longest of your aggregated assets.
- You have the option, if you have multiple assets with different prices, to set price bands between assets. This can allow the ENCC to instruct against price bands and dispatch whole assets within the aggregated unit.

4.2 Energy Storage assets (including aggregated)

If you are either a single energy storage unit or aggregated energy storage units, please follow the below information:

- We have an interim workaround for managing State of Energy, parties are advised to submit PNs based on a 15 minute delivery period.
- We are in the process of updating our systems to manage State of Energy as a dynamic parameter.
- The ENCC will instruct a maximum of 15 minutes per BOA.
- Dynamic data will need to be updated following receipt of a BOA. Recommended to re-submit open-ended MEL to show capability for the next 15 minutes after period of current delivery.

5. Checklist

This section contains a checklist to support parties seeking to enter the BM.



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5.1 Checklist (*Supplier & VLP*)

✓	Review the following documentation: BM Wider Access Guidance Document. BMU Registration Guide. Elexon support material.
✓	Contact the relevant team. This will either be the Connections Team or Commercial Operations via your Account Manager (please see the Contact Us section) to discuss project specifics.
✓	Sign the relevant agreements. Either through your Account Manager or the VLP NGESO platform.
✓	Register the BM Unit with both NGESO and Elexon.
✓	Install Control Communications/Operational Metering. This can be in parallel to BM Registration. Testing required.
✓	Register for the correct industry reporting system.
✓	Receive planned go-live date from Account Manager (SVA route).
✓	Go-Live in the Balancing Mechanism.

6. Frequently Asked Questions

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6.1 FAQs

Following the release of this document we will keep track of any questions we receive and create a Question & Answer document so parties can view regular queries we receive.

**Please send any questions to either your Account Manager or
Commercial.Operation@nationalgrideso.com**

7. Contact us

This section explains how to contact us to find out more information.

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7.1 How to contact us

Please contact us through either our email address or give us a call:
commercial.operation@nationalgrideso.com

01926 654611

If you already have an Account Manager, they are your main contact with NGESO.

BMU Registration team (note all queries should feed through your account manager): **bmu.registration@nationalgrideso.com**

All information is on our website, please click **here**.

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