

Commercial.operation@nationalgridESO.com

ESO Balancing Services:

A guide to contracting, tendering and providing response and reserve services

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07/05/2020

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Version Control

Version	Published	Comments
1.0	December 2018	
2.0	May 2019	Up-dated sections 6, 7, 9 & 10
3.0	October 2019	2.2 – Up-dated to reduce FR threshold to 25MW and remove DTU 2.4 – Historic dates removed 2.5 – Website link added 2.7 - Forward Plan info up-dated 6.2 – FFR Testing links up-dated 6.3 – STOR despatch references up-dated to PAS Throughout – References to ARIBA removed and replaced with COUPA
4.0	November 2019	Section 2.6 up-dated to reflect latest position on stacking services
5.0	May 2020	General content refresh and up-dating of hyperlinks

Introduction

- **National Grid ESO is focused on becoming a better buyer of balancing services.**
- **This document is designed for existing and new providers** to help understand the end to end provider experience when accessing and participating in balancing markets.
- **The ESO Balancing Services Guide has been developed through external collaboration and its contents are based on your feedback.**
- This guidance document provides signposts to information on the wider electricity market in addition to guidance on each stage of the provider journey, from signing a Framework Agreement to Settlement.
- We welcome your views on this document and will be making continuous improvements based on feedback received. Contact us at commercial.operation@nationalgridESO.com, or fill out the short survey at the link below:

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8. Contract start & preparing for delivery
9. Settlement
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12. Stay updated and contact us

1. Electricity market overview

This section signposts new providers to **useful information on current topics and future developments in the GB Electricity Market** from key stakeholders, including:

- Ofgem
- ELEXON
- National Grid ESO
- Energy Networks Association
- Power Responsive

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1. Electricity Market Overview Contents

1.1. Electricity market overview

1.2. Electricity market overview FAQs

1.1. Electricity Market Overview

Follow the below links for information on current topics and future developments in the GB Electricity Market. Please contact commercial.operation@nationalgridESO.com if you would like to see additional links included on this page.

Electricity Market Regulation – Ofgem	Electricity Balancing Code - ELEXON	Electricity System Operation (ESO)	Energy Networks Association (ENA)	Power Responsive – Demand Side Flexibility (DSF)
<p><u>Market efficiency, review and reform</u></p> <p><u>Forums, seminars and working groups</u></p> <p><u>Network price controls</u></p> <p><u>European Market</u></p>	<p><u>ELEXON's role in the Electricity industry</u></p> <p><u>Training services</u></p> <p><u>Balancing & Settlement Code (BSC)</u></p> <p><u>BSC change process</u></p>	<p><u>Balancing services</u></p> <p><u>Balancing data</u></p> <p><u>Charging</u></p> <p><u>Codes</u></p> <p><u>Connections</u></p> <p><u>Online calendar</u></p>	<p><u>ENA Working Groups</u></p> <p><u>Open Networks Project</u></p> <p><u>EU Network Codes</u></p> <p><u>ENA Consultations</u></p>	<p><u>The DSF opportunity</u></p> <p><u>Case Studies</u></p> <p><u>Latest updates</u></p> <p><u>FAQs</u></p> <p><u>Sign up to the Power Responsive mailing list</u></p>

1.1. Electricity Market Overview cont.

Follow the below links for information on current topics and future developments in the GB Electricity Market. Please contact commercial.operation@nationalgridESO.com if you would like to see additional links included on this page.

Electricity Market Policy

[State of the Energy Market 2018](#)

[Cost of Energy Review 2017](#)

[Electricity Market Reform](#)

ESO Innovation Projects

[How to get involved](#)

[ESO Innovation mailing list](#)

[Innovation Strategy](#)

[Projects](#)

ESO Future of Balancing Services Roadmaps

[Frequency Response and Reserve](#)

[Reactive Power](#)

[Restoration](#)

[Wider Access to the BM](#)

[Register for updates](#)

Industry trade associations

[The Association for Decentralised Energy \(ADE\)](#)

[Energy UK](#)

[Major Energy Users' Council](#)

Regional Development Programmes (RDPs)

[UK Power Networks RDP](#)

[Western Power Distribution RDP](#)

[South West Scotland RDP](#)

1.2. Electricity Market Overview FAQs:

National Grid ESO Response:

How can my business get involved and save money / generate revenue by providing services?

Review the Power Responsive website, and download “A short guide to how your business can profit from Demand Side Response” for information and support on the process steps from understanding the opportunity to setting up systems and managing contracts. The guide includes a summary of National Grid ESO Balancing Services. Visit our website at: <https://www.nationalgrideso.com/balancing-services>

Where can I find out more information about the UK Capacity Market, and National Grid ESO’s role as the EMR Delivery Body?

The objective of the Capacity Market is to provide a regular payment to reliable forms of capacity (both demand and supply side), in return for the capacity being available when the system is tight. In our role as EMR Delivery Body, National Grid is responsible for:

- Producing annual Electricity Capacity Reports for Government to advise on capacity requirements in order to meet the published reliability standard.
 - Coordinating the implementation of the CM and FiT CfD mechanisms.
 - Administering key elements of the Capacity Market and the FiT CfD regime.
-

2. Overview of balancing services

We procure services to **balance demand and supply** and to ensure the **security of electricity supply** across Britain's transmission system.

A [list of balancing services](#) currently procured by the ESO is available on our website.



2. Overview of balancing services contents

2.1. Frequency Response services

2.2. Reserve services

2.3. Reactive power services

2.4. Restoration services

2.5. Wider access to the Balancing Mechanism

2.6. Service and revenue “stacking”

2.7. Overview of balancing services FAQs

2.1. Frequency response services

Click on each of the headings below to access the relevant service pages on our website:

Click here to watch 'The Power of Frequency Response' playlist on our YouTube channel

Firm Frequency Response (FFR)

- **Dynamic and Non-Dynamic** FFR products procured via monthly tender. Weekly auction trial starts June 2019.
- **Min. entry size is 1MW**, from a single or aggregated unit
- Able to respond to an instruction within **2-30 seconds** and sustain the response for up to **30mins**.
- More info: [FFR Interactive Guidance Document](#)

Mandatory response services

- Mandatory frequency response (MFR) is an automatic change in active power output in response to a frequency change.
- The service is mandatory for large generators and so there is no tender process.
- Some volume from the MFR market will be entered into the [FFR Auction trial](#), starting in June 2019.

Future frequency response products

- As part of our work to improve and develop our balancing services markets as outlined in the [Product Roadmap](#), we are investigating what a new, faster-acting frequency response product may look like, and how it could form part of a new suite of frequency response products.
- More info: [Phase 2 Auction Trial](#)

Frequency data

- Second-by-second frequency data or Great Britain at a 1 second resolution
- More info: [Historic frequency data](#)

2.2. Reserve services

Click here to watch the 'Reserve products and Future Markets' playlist on our YouTube channel

Click on each of the headings below to access the relevant service pages on our website:

Short Term Operating Reserve (STOR)

- 3 tender rounds per year, for a **committed or flexible** service.
- **Min. entry size is 3MW**, from an single or aggregated unit.
- Asset(s) must be able to respond to an instruction within **20 mins** and sustain the response for **up to 4 hours**.
- More info: [STOR Interactive Guidance Document](#)

Fast Reserve (FR)

- Procured via monthly tender.
- **Min. entry size is 25MW**, from an single or aggregated unit.
- Ramp up rate is 12.5MW/min so an asset should be at an output of 25MW in 2 minutes.
- The response must be sustained for **15 mins**.

2.3. Reactive power services

Reactive power services are how we make sure voltage levels on the system remain within a given range. Voltage levels vary across the system so we instruct generators or other asset owners in the right location to either absorb or generate reactive power. We generally require absorption of reactive power to reduce high voltages on the transmission system.

- The obligatory service is delivered by most transmission connected generation.
- Enhanced services can be provided by obligated and non-obligated providers.

Reactive Power Services

- We are currently undertaking pathfinding projects looking at how we can tender for commercial solutions to future reactive power needs alongside considering traditional asset options.
- In Q3 2019/20, we published tenders for 1 year and 9 year reactive power contracts in the Mersey region, from Apr 2020 and Apr 2022 respectively. Contracts were awarded to distribution connected providers for 2020 for the first time. Contracts for Apr 2022 will be awarded in May 2020.

Mersey info

Pennines info

- We have teamed up with UK Power Networks to launch the Power Potential project, which aims to create a new reactive power market for distributed energy resources (DER) and generate additional capacity on the network. The project, which is a world first, could save energy consumers over £400m by 2050 and generate up to an additional 4 GW in the South East region of the UK.

Power potential webpage

(extra if needed)

Network Development Roadmap

Product Roadmap for Reactive Power

2.4. Restoration services

Black start is the procedure we use to restore power in the event of a total or partial shutdown of the national electricity transmission system.

- We have been developing a new market mechanism to competitively procure Black Start Ancillary Services, delivering on what we said in our Black Start Strategy and Procurement Methodology, and Restoration Roadmap.

**Black Start
Strategy**

**Procurement
Methodology**

**Restoration
Roadmap**

**Black Start
allowed revenue
report**

A note on service and revenue “stacking”

If the ESO makes an investment in assets or capability (for example, auxiliary generators), the provider will be able to offer other ancillary services using these assets subject to agreement from ESO. The expectation is that the provider will agree a reduction to the Black Start service fee. This is to avoid the end consumer ‘paying twice’, and to avoid market distortion of other services. The provision of other balancing services must not interfere with the ability to provide Black Start.

2.5. Wider access to the Balancing Mechanism (BM)

Facilitating participation in the Balancing Mechanism will significantly help the ESO manage operability challenges, enabling smaller Providers to participate in all markets..

- Increasing participation in the Balancing Mechanism will lead to more cost effective balancing actions. We are seeking to remove barriers to Balancing Mechanism entry for small and aggregated units in three ways:
 1. Improving existing routes to market to ensure their suitability for the participation of supplier aggregators in the BM.
 2. Developing new routes to market through framework changes to create a new way of entering the BM for parties wishing to provide near real-time flexibility. 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 smaller and aggregated units.

**BM Contract
Interaction**

**BM Wider
Access Website**

2.6. Service and revenue “stacking”

The high level principles of service and revenue stacking are:

Security of supply is maintained: An exclusivity clause in balancing services contracts ensures the availability of resources to meet our requirements and secure the system. This exclusivity is reflected in our assessment of the price we are willing to pay for these products.

Providers can offer multiple services to multiple entities: Providers should be able to participate in multiple markets to diversify revenue streams.

Assets can be contracted under two services in the same time period if the requirements of each service are not conflicting. An example would be where an asset or portfolio of assets provides active power services and reactive power services over the same time window to the ESO or the DNO.

Stacking is compatible with the Capacity Market (CM) Rules: The CM Rules state that Providers can participate in “Relevant Balancing Services” at the same time as receiving CM revenues.

DNO Services: A developing area, and at present are particularly focused on local constraint management. Work is ongoing around stacking arrangements for DNO and ESO services and markets with all DNOs through the [Open Networks programme](#).

2.6. Service and revenue “stacking”

The below matrix sets out which ESO services can be stacked **across** Availability Windows using a traffic light system.

Response products						
Reserve products						
Reactive power						
Restoration – Black Start	See Section 2.4	See Section 2.4	See Section 2.4	N/A		
Balancing Mechanism	BM contract interaction note			N/A		
Capacity Market			Service not listed as a Relevant Balancing Service under the CM Rules.	Service not listed as a Relevant Balancing Service under the CM Rules.	N/A	
	Response products	Reserve products	Reactive power	Restoration – Black Start	Balancing Mechanism	Capacity Market

Providers can offer single or multiple services to single or multiple buyers. The onus is on the Provider to ensure that asset(s) are available to perform under each contract they are party to. Providers can offer active and reactive services to the ESO and / or DNO across Availability Windows.

2.6. Service and revenue “stacking”

The below matrix sets out which ESO services can be stacked **within a single** Availability Window using a traffic light system.

Response products	EFA windows must align	See next slide for detail				
Reserve products	Services not compatible	N/A				
Reactive power		N/A				
Restoration – Black Start	See Section 2.4	See Section 2.4	See Section 2.4	N/A		
Balancing Mechanism				N/A		
Capacity Market			Service not listed as a Relevant Balancing Service under the CM Rules.	Service not listed as a Relevant Balancing Service under the CM Rules.	N/A	
	Response products	Reserve products	Reactive power	Restoration – Black Start	Balancing Mechanism	Capacity Market

2.6. Service and revenue “stacking”

For a single asset or portfolio of assets operating within an Availability Window:

- **Multiple services can be provided to multiple buyers over an Availability Window if the requirements of the services are compatible and the provision of one service does not impede performance under an existing contract.** An example would be where an asset or portfolio of assets provides active power services to the ESO and reactive power services to the DNO over the same time window.
- **A single active or reactive power service cannot be provided to multiple buyers over an Availability Window, as this would result in the potential for double counting of MW or Mvars.** Also, once instructed by one Operator, the provider may become unavailable for the other. This would add uncertainty and require over-procurement to compensate. This adds cost at the national scale and may make some local schemes with limited volume unworkable.
- **Multiple services can be provided to a single buyer over an Availability Window, if the requirements of the services are compatible and if the provision of one service does not impede the ability to perform against an existing contract.** An example would be where an asset or portfolio of assets provides active power services and reactive power services over the same time window to the ESO or the DNO.

2.7. Overview of balancing services FAQs

National Grid ESO Response:

How can I participate if my asset(s) are <1 MW?

If your asset(s) size is less than the required threshold, you can provide Balancing Services via an aggregator. See the list of aggregators on the DSR quick links box on the [DSR page](#) of our website for contact details.

Where can I find the latest tender round results for each service?

On our website, each service page has a Market Information tab. Click on these links for Market Information Reports and tender results files:

- [FFR Market Information](#)
- [STOR Market Information](#)
- [FR Market Information](#)

How can domestic response assets participate?

Please contact us at commercial.operation@nationalgridESO.com to discuss your domestic response portfolio. Domestic response portfolios can enter balancing services markets providing that all service requirements can be met, including testing.

Can wind / solar assets participate in balancing markets?

Wind and solar assets do not currently participate in balancing services, but one objective of [the FFR Auction Trial](#) is to test whether closer to real time procurement removes barriers to entry for these technologies.

2.7. Overview of balancing services FAQs

National Grid ESO Response:

Do National Grid ESO pay for any technical upgrades required to provide services?

National Grid ESO will not pay for upgrades at providers sites under standard contract terms.

This page will be updated in response to requests for information – contact us at commercial.operation@nationalgridESO.com

3. Getting started - initial research

Before contacting us, **potential providers should research the Balancing Services** which National Grid procures.

The following slides provide a **check list and high level summary of next steps** to support new providers initial research into providing balancing services.



3. Getting started – initial research contents

3.1. Getting started: new provider check list

3.2. Getting started: navigating the NG ESO website

3.3. Getting started FAQs

3.1. Getting started: New provider check list

✓	Understand the opportunity by exploring the information contained in the links provided in this document.
✓	Develop the business case for your organisation , to get key internal stakeholders buy in.
✓	Browse the balancing services pages of the <u>National Grid ESO website</u> .
✓	Decide whether to contract via an aggregator or direct with National Grid ESO – see our list of <u>Aggregator contact details</u> .
✓	Contact <u>commercial.operation@nationalgridESO.com</u> with any specific questions. We can also be reached on the phone, from 08:30 – 16:30 weekdays: 01926 654 611.
✓	Complete Pre-Qualification for assets . Either through Testing for Frequency Response Services or setting up PAS (Platform for Ancillary Services) for Reserve Services.
✓	Put Framework Agreement in place or Form A, B, C Process for Auction Trial . See <u>Section 5</u> for more information.
✓	Tender in to provide services or participate in Auction Trial .
✓	Provide company and bank account details to Settlements team.
✓	Comply with any performance monitoring requests following contract go-live.

3.2. Getting started: navigating the NG ESO website

For each service, the NG ESO website contains information under the following headings:

Overview	Technical Requirements	How to Participate	Assessment Process	Getting Paid	Market Information
<ul style="list-style-type: none">■ A brief overview of the service■ Key service information■ Service parameters■ Important updates and information, such as change proposals	<p>For example:</p> <ul style="list-style-type: none">■ Minimum response energy■ Suitable metering & data transfer capabilities	<ul style="list-style-type: none">■ Details on how to tender for the service■ Outline of prerequisites before tendering■ Standard contracts and other related documents	<ul style="list-style-type: none">■ Details on how tenders will be assessed■ Slides from tender results webinars and Q&A■ Information on how to join the results webinars	<ul style="list-style-type: none">■ Information on the various types of payment structure for the service	<ul style="list-style-type: none">■ Market Information Reports and data tables■ Service review documents■ Historic tender round results

3.3. Getting started FAQs:

National Grid ESO Response:

Why can't you tell me more about the revenues I can expect to earn from each market?

We do not forecast prices in our balancing services markets, but all information, including prices and volumes, from previously submitted tenders are available in the Market Information tab on each service page on our website.

Can you recommend an aggregator for me to work with?

See the list of aggregators on the DSR quick links box on the [DSR page](#) of our website for contact details.

Where can I find additional information to support the preparation of my tender?

See the Market Information Report for each service. Click on the links below to access these reports:

- [FFR Market Information](#)
 - [STOR Market Information](#)
 - [FR Market Information](#)
-

4. Account Management support

Your Account Manager is your **main point of contact with National Grid ESO**, and will guide you through from initial contact to preparing for Balancing Services delivery.

This section **sets out the key Provider and Account Manager responsibilities.**

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4. Account Management support contents

4.1. Account Management support: Account Manager commitments and responsibilities

4.2. Account Management support: Provider commitments and responsibilities

4.1. Account Management support: Account Manager commitments and responsibilities

Account Manager Commitments and Responsibilities

- Account Managers will support potential and existing providers by:
 - Raising awareness of the opportunities to provide services to National Grid ESO.
 - Supporting new providers through the research phase, by clarifying the available information relating to balancing service provision.
 - Managing the administrative processes involved with signing Framework Agreements
 - Receiving testing data, reviewing and validating it, where pre-delivery tests are required
 - Supporting the preparations ahead of service delivery, including ensuring that systems and processes are in place and units have been registered with the control room.
 - Supporting the resolution of queries relating to dispatch, payments and performance monitoring.
- The role of Account Managers is not to:
 - Advise providers on tender strategy or provide estimates of expected revenues from service participation
 - Provide a detailed summary of tender results (the post tender webinars provide this information)

4.2. Account Management support: Provider commitments and responsibilities

Provider Commitments and Responsibilities

- Organise assets and systems suitably to provide services within the necessary parameters set by National Grid.
- Read relevant Market Information Reports and take requirements set by National Grid into account when tendering for services.
- Maintain a clear record of Framework Agreements and contract information.
- Comply with all testing and performance monitoring requirements.
- Copy Account Manager into all relevant communications to National Grid ESO and contact Account Manager in the first instance in relation to all issues and queries.
- Follow the escalation route outlined below and ensure that Account Manager is aware of the escalation prior to escalation being made:
 - Account Manager
 - Contracts Manager / Business Development Manager
 - Contracts and Settlements Manager
 - Head of Commercial Operations
- Balancing services providers should not:
 - Ask Account Managers for bilateral agreements or bespoke service terms
 - Expect responses via email or phone outside of working hours
 - Escalate without prior warning to Account Manager

5. Contractual Process

For Tendered Services a Framework Agreement **must be entered into before tendering** to provide services.

It **confirms the provider understands and agrees to the Standard Contract Terms** for the service they wish to tender in for.

For the **Auction Trial, the Form A, B, C Process needs to be completed.**



5. Signing a Framework Agreement contents

5.1. Signing a Framework Agreement: key principles

5.2. Signing a Framework Agreement: process steps

5.3. Signing a Framework Agreement: in counterpart

5.4. Signing a Framework Agreement: duplicate

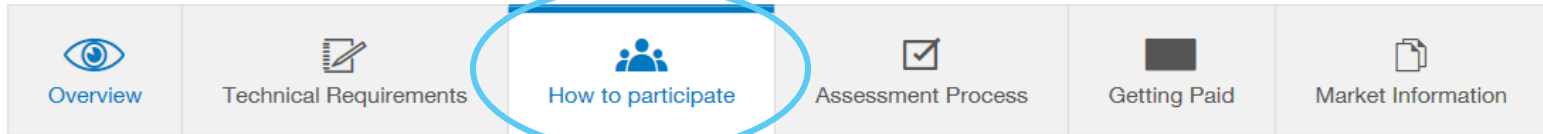
5.5. Signing a Framework Agreement: FAQs

5.6. Form A, B, C Process for Auction Trial (Contracting)

5.1. Signing a Framework Agreement: key principles

The Framework Agreement

- Gives contractual effect to the relevant provisions of the Standard Contract Terms (SCTs) between National Grid and the Provider.
- Contains service data specific to the providers Unit(s) which the provider wishes to submit a tender(s) for.
- Must be signed by the Provider and National Grid before tenders can be made.
- There is a standard Framework Agreement template for each services. There are also different Framework Agreements within for different types of service procured, such as Static or Dynamic Frequency Response.
- Standard templates are available under the 'How to Participate' section for each Service on the website. No “special amendments” to standard templates will be accepted. All providers participate in competitive tenders under the same contract terms.

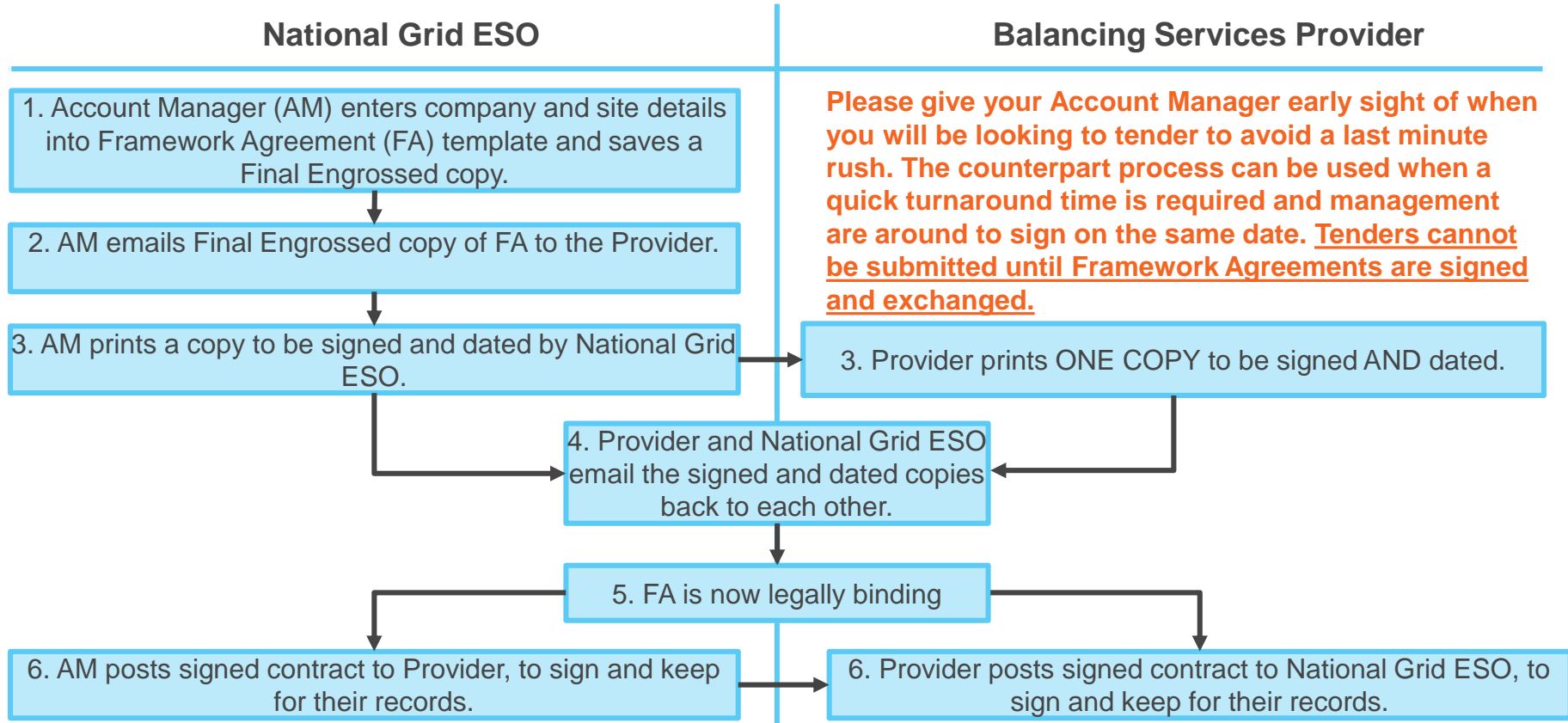


5.2. Signing a Framework Agreement: process steps

Please allow 3-4 weeks for this process and give your Account Manager early sight of when you will be looking to tender. Tenders cannot be submitted until Framework Agreements are signed and exchanged.

- 1 Contact your Account Manager, or commercial.operation@nationalgridESO.com to request the relevant Balancing Mechanism (BM) or Non-BM Framework Agreement template. Review the Framework Agreement alongside the relevant service SCTs.
- 2 Provide Account Manager with the company and unit details as required for the Framework Agreement, including company name / number / address / operational contacts. Your Account Manager will enter the company and unit details onto the Framework Agreement and send back to you for checking. They will then generate a contract log number for the Framework Agreement. If the Framework Agreement is for an aggregated unit, you can provide sub-site information at a later date, but these must be provided before testing (if required) and delivery.
- 3 Account Manager will start the contract approval process, which may take up to two weeks. The two methods for contract signature are counterpart, where the signatures are exchanged via email on the same day, or duplicate, where the contracts are exchanged via post. Duplicate is used as standard, unless the Provider is working under very tight deadlines and can arrange for same-day signature. See the following slides for more information on these processes.
- 4 Account Manager will register the BM or Non-BM Unit with the control room.
- 5 Account Manager will arrange for you to receive access to the online tender platform. You should receive log on details.
- 6 You should complete the [Ancillary Services - New Service Provider Bank Account Form](#) and return to Settlements.

5.3. Signing a Framework Agreement: in counterpart



5.4. Signing a Framework Agreement: duplicate

National Grid ESO

1. Account Manager (AM) enters company and site details into Framework Agreement (FA) template and saves a Final Engrossed copy.

2. AM emails Final Engrossed copy of FA to the Provider.

5. National Grid ESO sign and date two copies of the FA. FA is now legally binding.

6. AM posts one copy of signed contract to Provider.

Balancing Services Provider

Please allow 3-4 weeks for this process and give your Account Manager early sight of when you will be looking to tender. Tenders cannot be submitted until Framework Agreements are signed and exchanged.

3. Provider prints TWO COPIES of the FA and signs BUT DO NOT DATE.

4. Provider posts both copies back to National Grid ESO

7. Provider receives one signed copy of FA to keep for their records.

5.5. Signing a Framework Agreement: FAQs

National Grid ESO Response:

What is the difference between a Framework Agreement and a contract to provide services?

A signed Framework Agreement allows the provider to tender in to provide services. It confirms that both NG ESO and the provider agree to be bound by the Service Terms if a tender is accepted. A contract for delivery is awarded following a successful outcome in a tender round. A tender acceptance letter will confirm that a tender has been accepted and will refer to the signed Framework Agreement.

We will not be signing any new Framework Agreements with bespoke terms. A contract for delivery does guarantee service revenues, under the service terms which are the same for all providers. We recommend that project sanction is not influenced by whether a Framework Agreement with NGENSO is in place because a signed Framework Agreement does not guarantee tender acceptance, and therefore revenue.

How do I add a new site / asset / customer to an aggregated portfolio?

Please see section 10.1 of this document and read the specific service terms and Framework Agreement template. This process is managed via the relevant Appendix to the Framework Agreement.

5.5. Signing a Framework Agreement: FAQs

National Grid ESO Response:

How long is a Framework Agreement in force for?

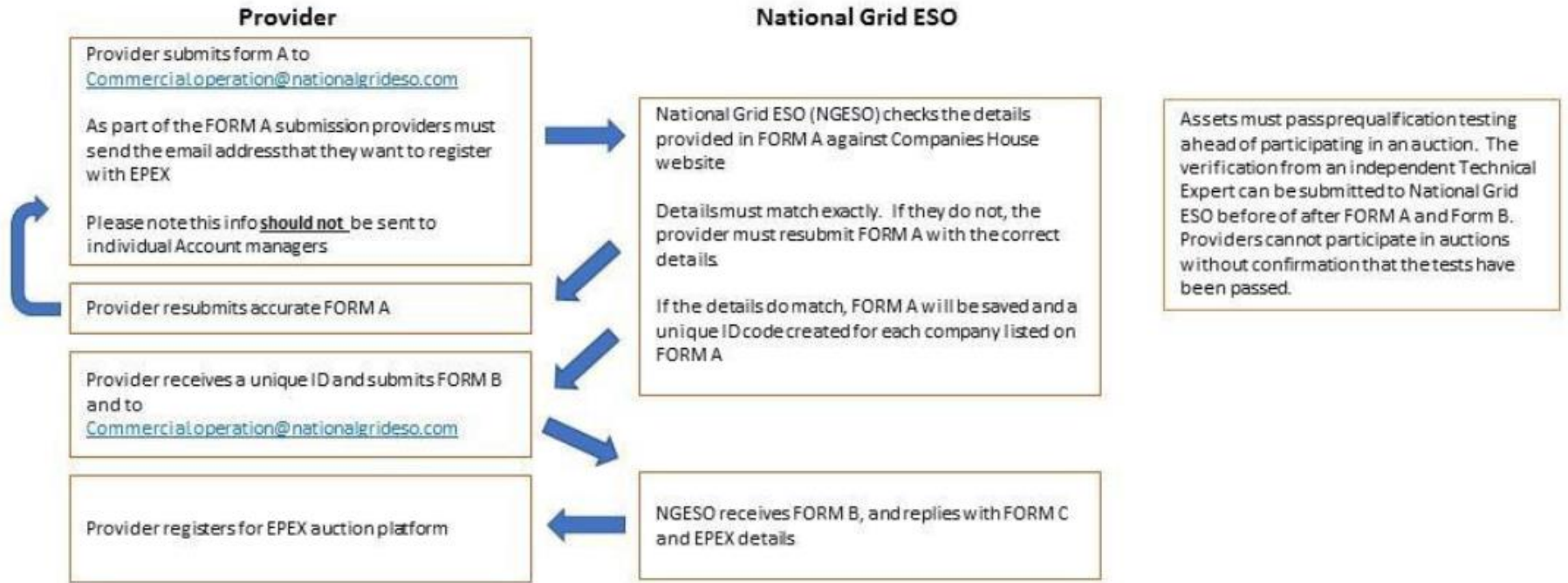
A Framework Agreement is valid from the effective date until it is terminated by either party.

How and when can changes be enacted to a Framework Agreement?

Standard terms cannot be amended, but site details can be amended via the Appendix process, using the Appendices to the Framework Agreement. Section 10 outlines the steps involved in adding / re-allocating and amending site details.

We will novate Framework Agreements where company details need to be updated.

5.6. Form A, B, C Process for Auction Trial (Contracting)



6. Tendering Process

Feedback



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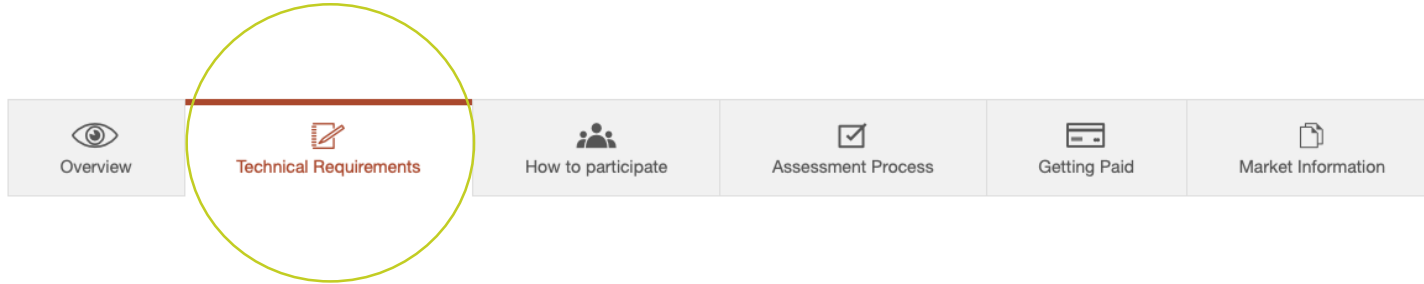
6. Tendering Process contents

6.1. Fast Reserve (FR)

6.2. Firm Frequency Response (FFR)

6.3. Short Term Operating Reserve (STOR)

6.1. Fast Reserve (FR)



The FR service is open to both balancing mechanism (BM) and non-BM providers who can meet our **technical requirements**.

Prospective suppliers must complete a **prequalification questionnaire** before they sign a Framework Agreement.

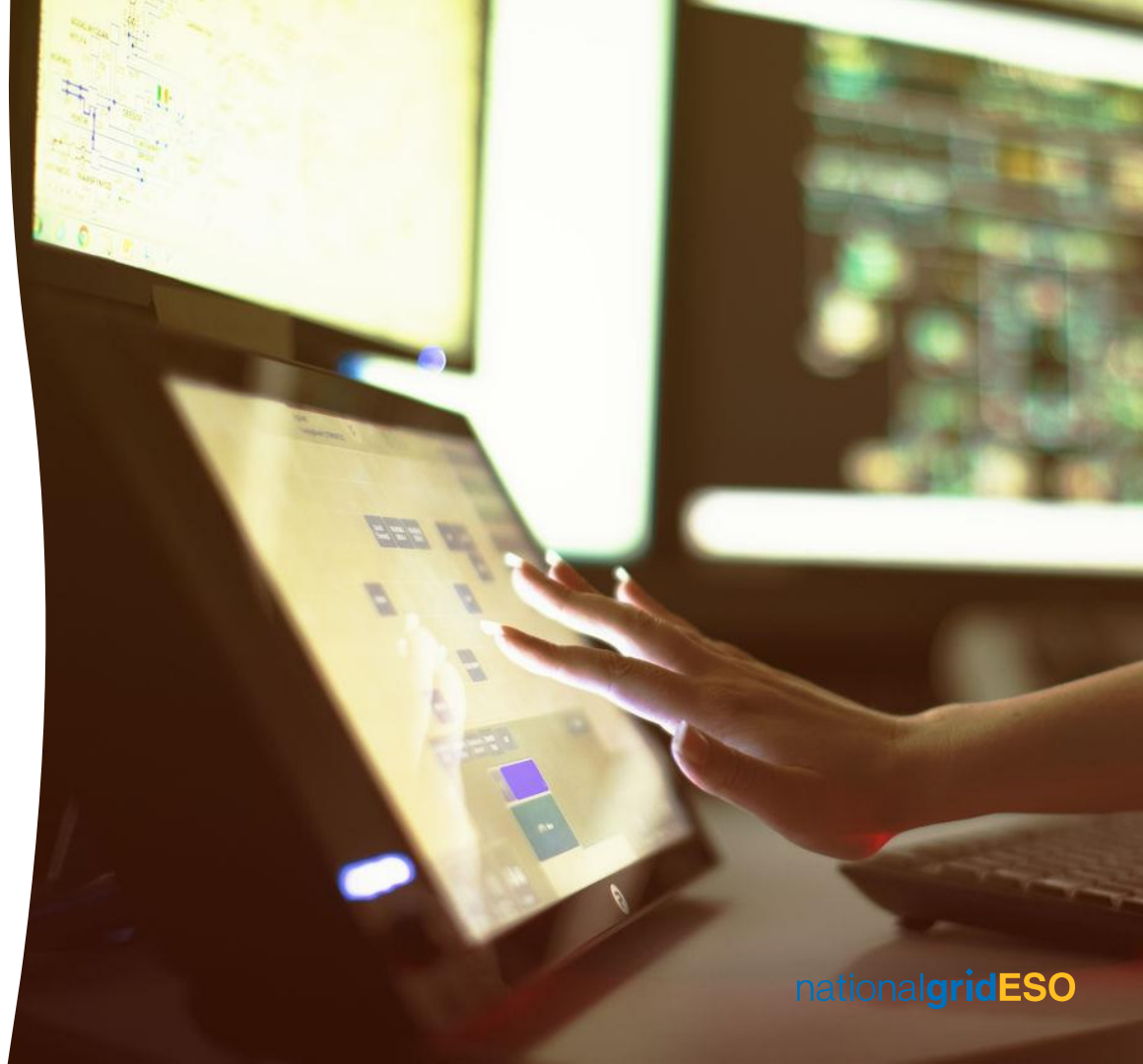
If the submission is approved, the supplier can move on to **sign the Framework Agreement** and will be given log-in details for our electronic tender platform COUPA.

Our **requirements are published on the 22nd business day of every month** in the **Market Information** section on our website. The tender window closes on the first business day of the following month.

The **tender results** are published under the Fast Reserve **Market information** tab on the **18th business day of the month.**

When a provider doesn't have an FR tender accepted, they can provide optional FR at the request of NG ESO whether or not they have submitted a tender, as long as they have signed a Framework Agreement & have PAS in place.

Providers must have passed PAS testing before tendering.



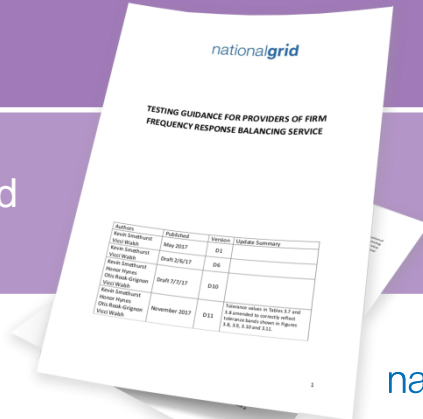
6.2. Firm Frequency Response (FFR)

The FFR service is open to both BM and non-BM providers who can meet our **technical requirements**. Providers can also offer other balancing services outside of their tendered FFR windows.

To enter the tender process a provider must first have signed a Framework Agreement. Providers who meet our requirements will be given a secure log-in to our electronic tender platform COUPA.

Providers can tender for a month-ahead requirement.

Tenders for a month-ahead only requirement must have had their assets **tested** and signed off as successfully validated by your Account Manager.



How to tender

Read this [guidance document](#) to understand the requirements for providing an FFR service. Understand whether [dynamic or non-dynamic](#) response best suit your asset(s).

Contact commercial.operation@nationalgridESO.com with your initial enquiry. You will be assigned an account manager.

FFR requirements are published in the [Market Information reports](#) on the balancing services website no later than the 18th business day of the month.

Tenders must be submitted in COUPA no later than the first business day of the following month.

6.3. Short Term Operating Reserve (STOR)

[How to participate](#)

STOR is **open to both BM and non-BM participants**, but it is not possible to provide other services at the same time as providing for STOR-contracted availability windows. There are usually three tender rounds a year. These dates can be found on the right hand side of the **[STOR overview page](#)**.

There are two possible ways to supply STOR:

Currently suspended (not procuring). Committed service – provider must be available to deliver STOR during all contracted availability windows.

Flexible service – only open to non-BM reserve providers who must commit to delivering STOR at the week-ahead stage.

To tender for the service, a provider must first **sign a STOR Framework Agreement**. This will give effect to the Standard Contract Terms in force at the time.

A formal acceptance letter emailed to the service provider creates the contract (STOR Contract). All STOR providers will be given a password for our COUPA tender platform.

Providers are able to **submit tenders for one or more season, up to a maximum of two complete financial years**.

BM participation is via the balancing mechanism. For non-BM service providers, a despatch and monitoring system is in place - Platform for Ancillary Services – PAS. Further information can be found under PAS documents in the **[Technical Requirements](#)** tab.

7. Asset testing and performance monitoring

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7. Asset testing and performance monitoring contents

7.1. Firm Frequency Response (FFR)

7.2. Short Term Operating Reserve (STOR)

7.3. Fast Reserve (FR)

7.1. Firm Frequency Response (FFR)

Asset testing is a set of tests suppliers have to complete and pass as part of the tender process, depending on the service they are going to deliver. Assets have to be tested prior to submitting a tender for the service.

FFR performance is monitored as per the **standard contract terms** and measured against how suppliers predict they can perform.

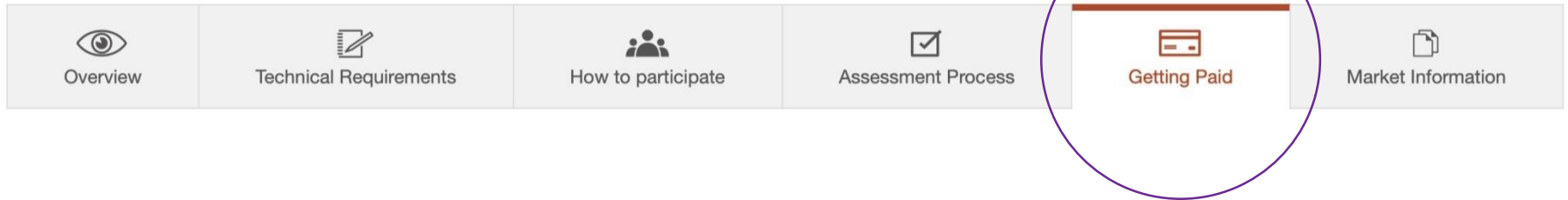
Non Dynamic FFR supply is performance monitored after a frequency event to make sure the supplier has delivered what they needed to be available for. NG ESO will request the data from the supplier for the time and dates any event took place.

Dynamic FFR is monitored during a pre-planned, 30-minute window once a month but NG ESO can request the frequency data for all or part of the month either side.

The supplier will be given a performance monitoring score which will be reflected in their payments.

7.2. STOR

- In order to confirm that NG ESO is paying for the service as agreed, we **monitor availability and delivery**.
- Where a service provider fails to deliver under the service terms, then the associated consequence is set out in the SCTs.
- A full list of the events of default and consequences can be found in the relevant document at the bottom of the **Getting Paid** tab.



7.3. Fast Reserve

NG ESO monitors availability and pays for the service as agreed.

Where a service provider fails under the service terms, then the associated consequence is set out in the SCTs.



8. Contract start and preparing for delivery

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8. Contract start and preparing for delivery contents

8.1. Ensure Settlements have set your Company up as a New Vendor

8.2. Ensure PAS is working correctly in accordance with our guidance documentation for:
Fast Reserve
STOR

8.3. Are you aware of Performance Reporting for our services? See Section 7 for the detail

8.4. Do you understand our Settlement payments process? More info in Section 9 and also on our website

Do you know how to raise a Query? See Section 11 for more detail

8.5.

Contracts Queries:

01926 654 611

commercial.operation@nationalgridESO.com

Settlements Queries:

01926 654 613

settlement.queries@nationalgridESO.com

9. Settlement

This section provides you with the information and forms you will need regarding payments for service provision.

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9. Settlement contents

9.1. Submitting your details

9.2. Preliminary statement

9.3. Final statement

9.4. Submitting data

9.5. Information security

9.6. Ancillary services report hierarchy appendix

9.1. Submitting your details

- Our **Settlements** team is responsible for calculating and making payments to balancing services providers. Payments are made in line with a **payment calendar**.
- Providers need to actively **submit bank and contact details** using the forms on the Settlements section of our website as soon as they win a tender, or earlier.

Service Provided	Invoiced	Prelim (D+8)	Final (D+18)	Payment Date (3 days after final statement)
01 May 2019	Jun-19	12/06/2019	26/06/2019	01/07/2019
01 June 2019	Jul-19	10/07/2019	24/07/2019	29/07/2019
01 July 2019	Aug-19	12/08/2019	27/08/2019	30/08/2019
01 August 2019	Sep-19	11/09/2019	25/09/2019	30/09/2019
01 September 2019	Oct-19	10/10/2019	24/10/2019	29/10/2019
01 October 2019	Nov-19	12/11/2019	26/11/2019	29/11/2019
01 November 2019	Dec-19	11/12/2019	27/12/2019	02/01/2020
01 December 2019	Jan-20	13/01/2020	27/01/2020	30/01/2020
01 January 2020	Feb-20	12/02/2020	26/02/2020	02/03/2020
01 February 2020	Mar-20	11/03/2020	25/03/2020	30/03/2020
01 March 2020	Apr-20	14/04/2020	28/04/2020	01/05/2020
01 April 2020	May-20	13/05/2020	28/05/2020	02/06/2020
01 May 2020	Jun-20	10/06/2020	24/06/2020	29/06/2020

9.2. Preliminary statement

We calculate how much energy you have supplied each month and send you a preliminary statement outlining what you are entitled to be paid for that month, usually on the eighth working day.



- The statement shows costs grouped by service type, as well as a breakdown by unit name.
- Further backing data reports show the breakdown of each service so you can validate the proposed payment.
- These are secured using an agreed password.

9.3. Final statement

We will send your final statement on the 18th working day of the same month along with supporting documents.

The payment will arrive three working days after the final statement.

9.4. Submitting data

If your service requires you to submit data (e.g. FFR bridging, EFR) and you want it to appear in your preliminary statement, please make sure it is sent to us by the fifth working day of the payment month.

If you wish it to be included in your final statement and paid that month, please provide it by the 15th working day of the payment month.

9.5. Information security

- We will agree with you a list of contacts authorised to receive commercially sensitive data and issue you with a secure password.
- Please complete the new **company set-up form** so we can set you up on our systems.
- Please make sure you keep your bank details and list of authorised contacts up to date with us.
- We need any changes in bank details by the 10th working day at the latest for payments in that month.
- You can find forms for both **here**.
- We'll need these details for the monthly statement runs, as well as for queries and dispute resolution.

9.6. Ancillary services report hierarchy appendix

PDF	Open with Adobe Acrobat
CSV	Open with Excel
DAT	Open in WordPad and unwrap text

Report Category	Report Code	Description	Type
Statement	SBI	Self-Billing Invoice summarising payments due by Service Type (e.g. Reactive).	PDF
Statement	BUS	By unit summary providing costs by unit and service	PDF
Statement	SUM	Daily Cost report by Service Type	PDF
Statement	REA	Daily Reactive Costs	PDF
Statement	OPR	Daily Operating Margin costs for Response, and Reserve services (exc. STOR)	PDF

Continued...

Statement	OTH	Daily Cost for Black Start, Constraints and STOR	PDF
Reactive	RPC	Daily Leading and Lagging Reactive costs by unit	CSV
Reactive	RPV	Daily Leading and Lagging Reactive MVARH by unit	CSV
Firm Fast Reserve	FSB	Cost per Contract and calendar day for Availability and Nomination for a BM unit	CSV
Firm Fast Reserve	FSE	FFR Events of Default	CSV
Firm Fast Reserve	FSN	Cost per Contract and calendar day for Availability and Nomination for a NBM unit	CSV
FFR	FFB	Cost per Contract and calendar day for Availability and Nomination for a BM unit	CSV
FFR	FFE	FFR Events of Default	CSV
FFR	FFN	Cost per Contract and calendar day for Availability and Nomination for a NBM unit	CSV
Fast Start	FSA	Fast Start Availability Cost per unit per day	CSV

Continued...

Fast Start	FSU	Fast Start Utilisation Cost per unit per day	CSV
BM Start Up	BSU	Warming and Hot Standby Costs per instruction	CSV
Hydro Services	HOS	Spin Gen (with and without LF), Spin Pump, Pump Deload costs per unit and Instruction segment	CSV
Hydro Services	HRA	Response Holding costs per unit and Instruction segment (Hydro only)	CSV
Hydro Services	HRC	Response Commercial Imbalance Costs per unit and Instruction segment (Hydro Only)	CSV
Hydro Services	HRE	Response Energy Costs per unit and Instruction segment (Hydro Only)	CSV
BM Response*	MFH	Holding Cost and MWh Held are provided by unit and instruction segment for primary, Secondary and HF response	CSV
BM Response*	MFE	Response Energy Cost and volumes are provided by unit and instruction segment.	CSV
Black Start	BST	Settlement Periods of Availability and Unavailability and the resulting payments supplied per station	CSV

Continued...

Black Start	BSD	Black Start Declarations issued in the month detailed	CSV
Intertrip Capability	ICP	Intertrip Capability cost per day/ unit	CSV
STOR	SBV	BM Availability Cost per unit and window (part window) along with a “STATUS” that documents why a payment is due or not.	DAT
STOR	SBT	BM Utilisation performance assessment by unit and call-off	DAT
STOR	SED	Event of Default report	DAT
STOR	SNV	NBM Availability Cost per unit and window (part window) along with a “STATUS” that documents why a payment is due or not.	DAT
STOR	SNT	BM Utilisation performance assessment by unit and call-off and the resulting cost.	DAT
STOR	SBA	BM Availability cost per unit and settlement period	CSV

Continued...

STOR	SBU	BM Utilisation volumes by unit per settlement period	CSV
STOR	SNU	NBM Utilisation Cost and volumes by unit and settlement Period	CSV
BM Start UP, BM Response and Fast Start	ASI	Ancillary Services Instructions to BM service providers	CSV
Hydro Services	PSI	Ancillary Services Instructions to BM service providers who provide Hydro Services (e.g. Spin Pump. Spin Gen and Pump Deload)	CSV
STOR	NSD	STOR NBM week ahead availability declarations, and availability declarations as they stand at 17:00 day ahead	CSV
STOR	NSR	STOR NBM re-declarations of availability post 17:00 day ahead	CSV
STOR	NSI	STOR NBM service call-offs	CSV

10. Change management

This section focuses on how existing providers can manage their balancing services agreements with a particular focus on aggregated units.

The following slides show the processes involved in adding / re-allocating and removing sub-sites.

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10. Change management contents

10.1. Existing Providers – how to add new sub-site

10.2. Existing Providers – how to re-allocate sub-sites

10.3. Existing Providers – remove sub-sites

10.4. Change management FAQs

10.1. Existing Providers – add new sub-site

National Grid ESO

2. NGENSO will verify the request made by the Aggregator by phoning up the site owner/operator and confirming:

- they have a contractual relationship with the Aggregator
- delivery method and site capacity

NGESO will also check that the new sub-site is not already contracted with another provider.

3. Following the checks, NGENSO will approve, sign and date the Appendix, scan it and e-mail it back to the Provider.

Balancing Services Provider

1. Complete relevant Appendix (check your Framework Agreement) and send Appendix to commercial.operation@nationalgrideso.com

Please allow up to 2 weeks for this process and give your Account Manager early sight of when you will be looking to tender.

Sub-site details do not need to be provided when the aggregated Framework Agreement is first signed, but sub-sites must be added to the Framework Agreement and allocated to a portfolio via the relevant Appendix before test data can be submitted. The Framework Agreement must be updated via the Appendix process before service delivery.

10.2. Existing Providers – re-allocate sub-sites

National Grid ESO

2. NGENSO will verify the request made by the Aggregator by checking that the aggregated capacity of the sub-sites is equal to the contracted MW of the aggregated unit. If the aggregate capacity of the sub-sites is less than the contracted MW of the aggregated unit, the Appendix 9 request should be rejected.

3. Following the checks, NGENSO will approve, sign and date the Appendix, scan it and e-mail it back to the Provider.

Balancing Services Provider

1. Complete relevant Appendix (check your Framework Agreement) and send Appendix to commercial.operation@nationalgrideso.com

Please allow up to 2 weeks for this process and give your Account Manager early sight of when you will be looking to tender.

Sub-site details do not need to be provided when the aggregated Framework Agreement is first signed, but sub-sites must be added to the Framework Agreement and allocated to a portfolio via the relevant Appendix before test data can be submitted. The Framework Agreement must be updated via the Appendix process before service delivery.

10.3. Existing Providers – remove sub-sites

National Grid ESO

2. NGESO will approve, sign and date the Appendix, scan and e-mail it back to the Provider.

Balancing Services Provider

1. Complete relevant Appendix and send Appendix to commercial.operation@nationalgrideso.com

10.4. Change management - FAQs

National Grid ESO Response:

11. Query Management

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11. Query management

If you disagree with our preliminary statement, you can raise a dispute with us using our **dispute submission template**. We will aim to correct any errors quickly so you get the correct income.

You can raise settlement disputes by emailing or telephoning the relevant department and we will aim to provide you with a query reference number within eight working hours.

Contracts Queries:

01926 654 611

commercial.operation@nationalgridESO.com

Settlements Queries:

01926 654 613

settlement.queries@nationalgridESO.com

Information we need

When emailing your dispute please include as much information as possible so we can reach a swift resolution:

- which ancillary service you provide and the terms of your contract
- names/BMU_IDs of units involved
- specific dates of dispute
- the settlement figure you believe is correct
- evidence to back up dispute – for example a breakdown of your settlement figures so we can identify where the discrepancy has arisen
- which specific company, including the AS company code, if you manage several companies
- if you provide multiple services and wish to dispute multiple problems, please keep each dispute to a separate email (so each receives a separate reference number) so we can correctly allocate and track your issues.

12. Stay updated and contact us

commercial.operation@nationalgridESO.com

futureofbalancingservices@nationalgridESO.com

Team phone: 01926 654611

[Sign up for updates on the future of balancing services](#)

[Feedback on Balancing Services Product Roadmaps - Reactive Power and Restoration](#)

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Feedback



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