

▷ Distribution**System**Operator

Distribution Flexibility Services Procurement Statement

April 2024

DSO | nationalgrid
electricity distribution

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Executive summary

In our fourth Distribution Flexibility Services Procurement Statement we set out how we will be procuring flexibility services in the 2024/25 regulatory year.

Last year we implemented a number of changes, including moving to an overarching contract, implementing trades, procuring over longer time horizons and delivering the first phases of the Market Gateway. This has enabled significant growth in access to our flexibility markets as we now have over 30 organisations with contracts signed and over 70,000 assets registered through the Market Gateway.

The focus over the next year is to build on these foundations and continue to grow access. We will continue to digitise our processes and deliver all the standardisation work coming out of the Open Networks project. With adjustments to the pre-qualification process, the standard agreement, flexibility products and settlement, we hope to make the process as easy and accessible as possible. Ultimately, we want to see liquid competitive markets for flexibility that help us manage the network as efficiently as possible.

In this document we lay out why and how we procure flexibility services, as well as how we engage with the market to make sure this remains effective. We intend it to provide a good overview of our processes, whilst signposting to further information for those who need it.

If you have any questions or would like information on how to get involved, please do get in contact with NGED.flexiblepower@nationalgrid.co.uk. We want to know how we can support you on your journey to providing flexibility services, and how we can continue to improve our processes, and lead the way in this space.



1. Introduction

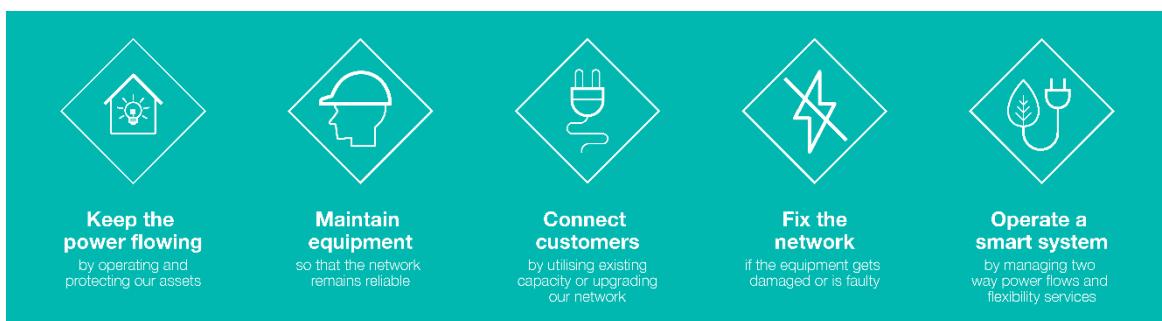
National Grid Electricity Distribution is a Distribution Network Operator (DNO) and a Distribution System Operator (DSO), responsible for distributing electricity to 8 million customers. We look after a network of wires, poles, pylons, cables and substations; distributing electricity to homes and businesses across the West Midlands, East Midlands, the South West and South Wales as shown in Figure 1.

The distribution network sits between the transmission network and our customers. The drive towards a low carbon economy has led to increasing levels of generation directly connected to our distribution network along with new forms of electricity demand such as electric vehicles, heat pumps and battery storage.



Figure 1: Licence Areas

The energy system is undergoing a huge transition because of the changes to electricity generation and use, including the growth of distributed generation and the increasing popularity of electric vehicles and heat pumps. These changes and the associated increases in demand have required us to develop new processes and systems, such as adopting flexible solutions to manage different power flows on the network. To continue to operate a smarter, more efficient energy system, we are carrying out the functions of a Distribution System Operator. Our [DSO Charter](#) outlines our vision and strategic commitments.



As these functions develop, we are committed to providing clear information about what Flexibility Services we need and how we procure them.

This document, our fourth Distribution Flexibility Services Procurement Statement, is one element of that commitment and draws together information to provide an overview of how we intend to procure services for the next regulatory year (April 2024 to March 2025). It will sit alongside the Distribution Flexibility Services Procurement Report which will detail what services we have procured over the same period, to be published by the end of April. We see these documents, required as part of our Distribution Licence, as base requirements for market information and transparency, which are supported by a host of publicly available information and data to provide more details where necessary. These are referenced throughout the document, and are collated in section 7.

All relevant information, including previous documents are available on our website: [National Grid - Distribution Flexibility Services Reporting.](#)

Within this document we cover a number of key topics such as:

- Why we procure services.
- How we procure these services.
- The process for identifying and publishing the needs.
- Our tendering processes.
- How we engage with stakeholders.
- The future services we are developing.
- What data is available and where.

2. Flexibility Service Requirements

2.1 Why we procure Flexibility Services

Traditional network design was based on passive networks designed to deliver peak demand with minimal intervention with a specified level of redundancy. To enable a greater volume of demand, generation and storage to be connected, our networks are becoming smarter and more active. Creating a more efficient and flexible system will benefit all customers and empower them to be at the centre of the energy revolution. The core driver for our procurement of flexibility is the deferral of network reinforcement. By managing temporal peaks on the network, we can avoid overloading assets and hence push back the need to invest in more assets.

As detailed in section 5.1, we have developed robust processes to help us understand where the deployment of flexibility services is the most cost-effective solution.

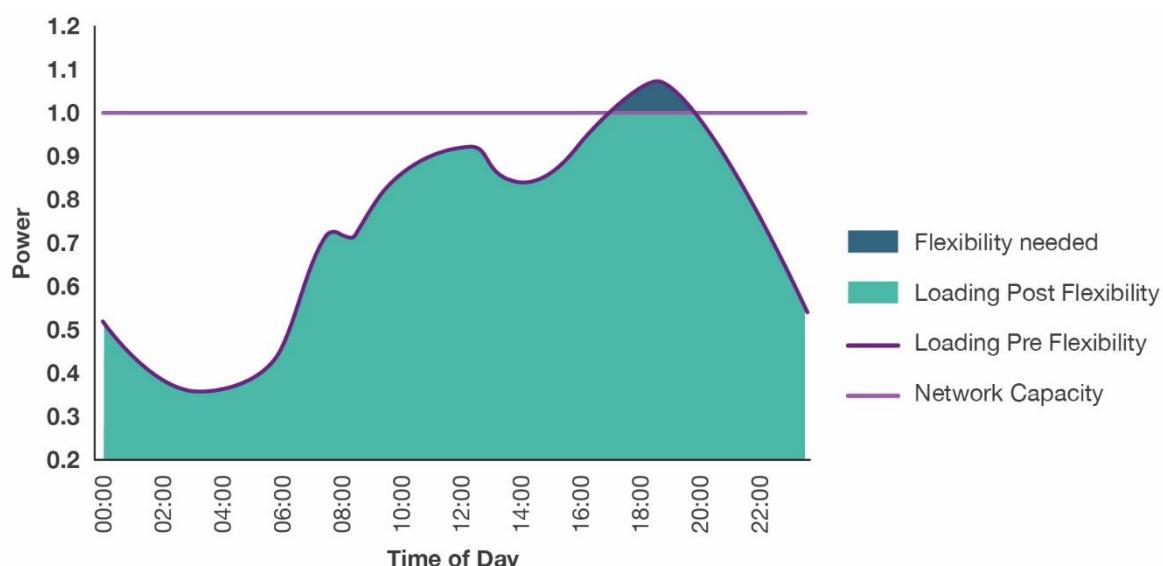


Figure 2: The need for Flexibility

Flexibility can provide more granular increases in network capacity, better reflecting the in-year requirements of network users. Flexibility can also help to manage capacity shortfalls economically and responsively until the need for conventional reinforcement is established. In some circumstances, a longer period of flexibility may allow for more appropriate, long term investment plans to be implemented. Flexibility can also be used to connect new customers to heavily loaded parts of the network without the need for reinforcement. Our 'Flexibility First' approach can soften the criticality of timing for the intervention, if sufficient flexibility is available and economic, by managing peak demand leading up to and beyond the capacity limit of the network. The extent to which flexibility is used will be determined by an industry standard cost benefit analysis via the Common Evaluation Methodology.

While we will be making greater use of flexibility, there will still be situations where it is necessary to carry out conventional network reinforcement, for instance, where there is insufficient flexibility provision to tackle the level of network constraint. The following diagram illustrates the different approaches that may arise.

Network Loading	100%		
Conventional Reinforcement	Accept addition connection until network reaches capacity	Reinforce conventionally	
Flexibility First	Accept addition connection until network nearing capacity	Use flexibility to manage network up to the capacity and beyond where available	Reinforce conventionally where economic

Figure 3: Options for constraint resolution

Flexibility Services are one of many new active solutions being used by DSOs to help manage networks effectively including the use of smart grid technologies such as enhanced voltage optimisation or automated load transfers.

2.2 How we procure Flexibility Services

When we created our initial flexibility service offerings, we established the Flexible Power brand. This aimed to create clear distinction between more traditional DNO roles of offering connections, and the new requirements around the procurement of flexibility services.



While the Flexible Power brand remains at the centre of our operation of services, in 2023 we launched our [Market Gateway](#) platform to facilitate digitalisation and scale up of registration, qualification and bidding into our flexibility Markets. We are continuing to develop the Market Gateway; a key focus has been establishing its role as a standardised data entry point which can then be linked to wider market platforms. To this end, we recently announced partnerships with two market platforms, Piclo Flex and Electron.

More details can be found on the Flexible Power website: www.flexiblepower.co.uk.

2.2.1 Services

To date we have procured four Active Power services: Sustain, Secure, Dynamic and Restore. These align with the Open Networks [Common Services definitions](#) which were set out by Product 3 of WS1a in 2020.

These services are summarised in the figure below.

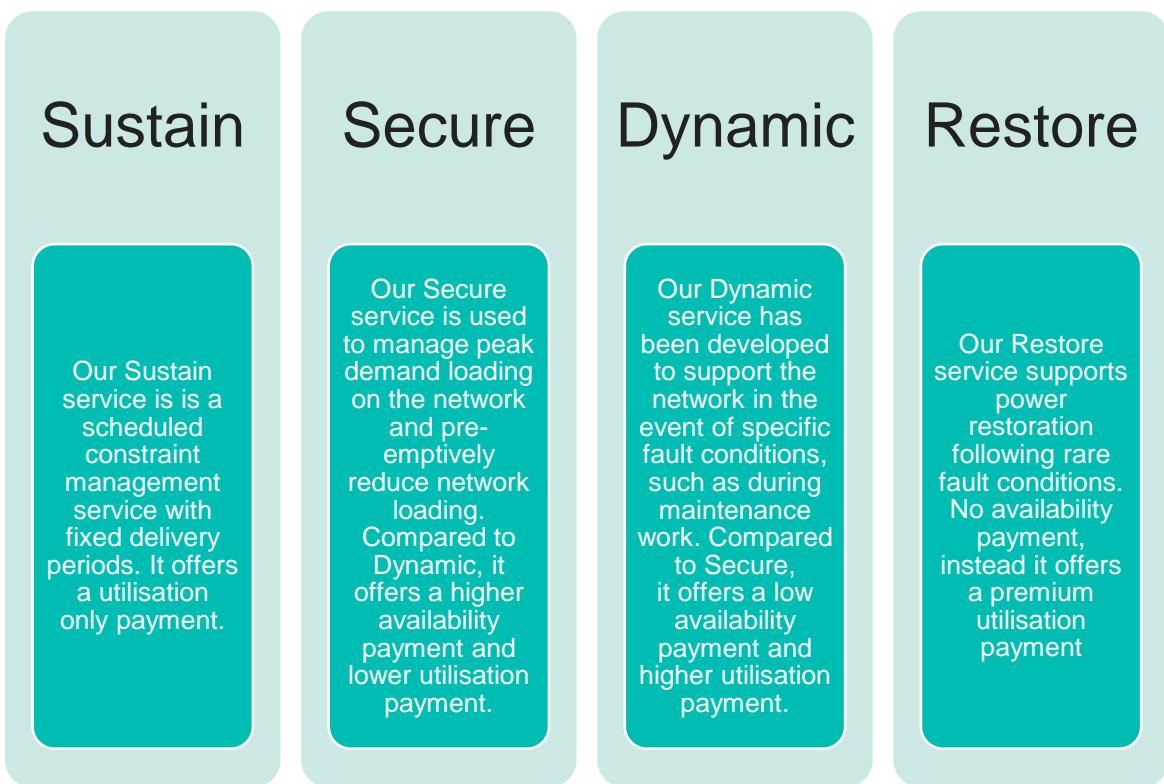


Figure 4: Overview of our Flexibility Services

By summer 2024, we will transition to the new standardised products developed under the [Open Networks](#) project. These products are shown in Figure 5.

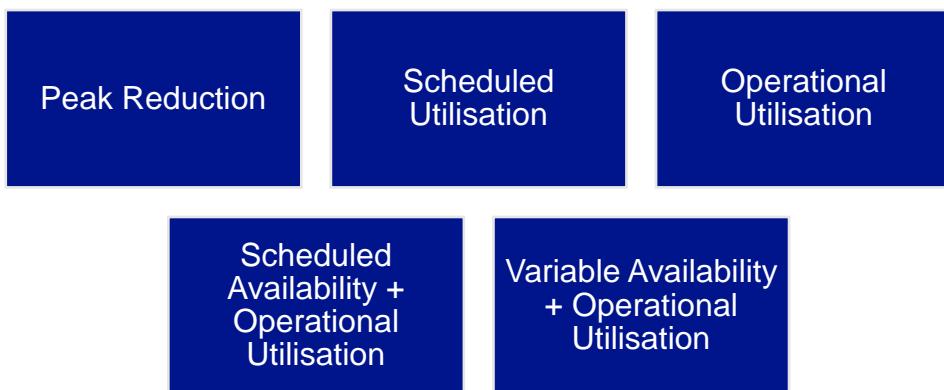


Figure 5: Overview of New Products

The products and variants we will use are shown in Figure 6. These are a subset of the full set of new products. Full details of each variant are detailed in Appendix A.

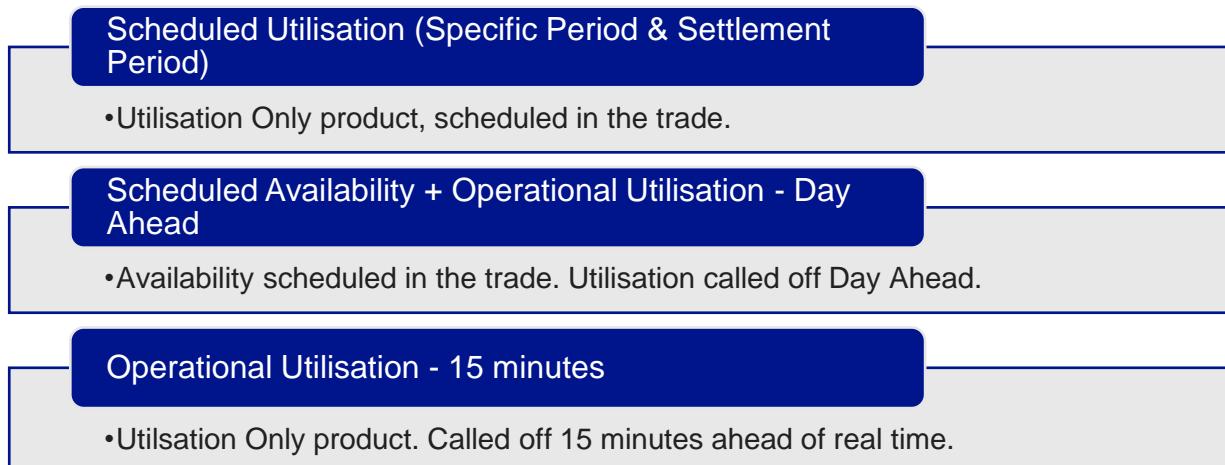


Figure 6: Products being implemented

Our current Sustain, Secure, Dynamic and Restore services will transition as detailed in Figure 7 below. We do not currently procure any Reactive Power services.

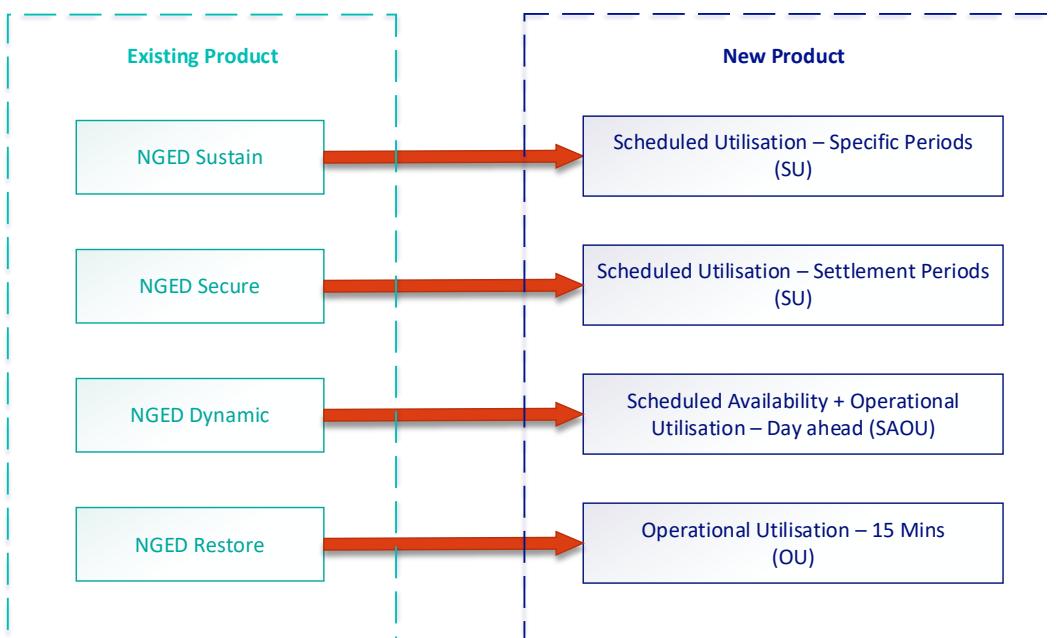


Figure 7: Flexibility Product and variant transition

While the new products share many similarities, this is not a straight, like for like swap. Key changes include:

- Our Secure product transitions to Scheduled Utilisation – Settlement Periods. In the process the arming fee will be dropped to make a Utilisation Only product.
- Our Dynamic product transitions to Scheduled Availability + Operational Utilisation – Day Ahead. Here the previous 15 minute ahead notification provided for the dynamic product will move to day ahead. Bringing the dispatch instruction ahead of gate closure in the Balancing Mechanism should improve revenue stacking opportunities.

Procurement of existing services will continue until the transition has completed.

For the rest of the document, we have used existing product names alongside their corresponding new product acronyms for a clear pre- and post-transition view.

There are many similarities between our Secure and Sustain services. This is borne out of them being variants of the same product going forwards (*Scheduled Utilisation – Specific Periods & Settlement period*). The key difference between the services is the level of targeting seen in the utilisation windows. For Sustain will have common delivery windows that are common across all zones. For Secure, these will be zone specific windows. We generally use the Sustain service for LV zones and Secure for our higher voltage zones.

Settlement of delivered services is calculated using our established payment mechanics. These are designed to encourage full delivery, whilst balancing the level of penalties to ensure the services remain attractive. The mechanics are detailed in our [Guidance Document](#) and are based on a clawback of value for under delivery. For Secure, Sustain and Dynamic (SU & SAOU), below our 5% grace factor, for every 1% of under delivery, we reduce the payment by 3%. This is measured on a minute-by-minute basis. There is also an overall performance percentage applied to availability payments.

The services are also currently subject to our baselining methodology as outlined in our [Guidance Document](#). Our Baselines have been updated to reflect a reduced focus on historic baselines and a move toward technology specific static baselines. This has allowed us to provide more transparency around baselines at the point of bidding, greater optionality for FSPs managing varying asset portfolios and improved revenue stacking.

We seek flexibility from a wide range of providers and have not set a contractual minimum capacity limit for participation to make participation possible for a larger range of FSPs, including those connected at lower voltages.

To date most procurements have focussed on demand turn down or generation turn up. As detailed in section 5, we have a robust process for identifying where we procure services. As the impacts of the Access Significant Code Review are better understood, we anticipate the number of Demand Turn Up zones to increase. We are currently aiming to launch Demand Turn Up/Generation Turn Down services in this regulatory year.

More detail on each service can be found in the overview on the Flexible Power website:
www.flexiblepower.co.uk/about-flexibility-services

2.2.2 Volumes and requirements

As highlighted in sections 3 & 5, we have a robust process for the identification of system needs, and the assessment of flexibility options through our [Distribution Network Options Assessment](#) (DNOA) process. This sets out in detail its specific requirements including the locations and volumes needed and feeds into the subsequent trading activity. The figure below highlights how our key processes interact.

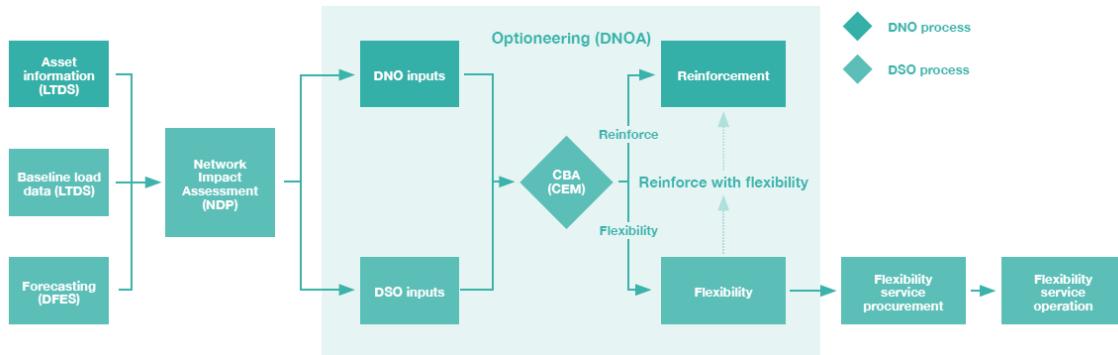


Figure 8: Determining Flexibility Requirements

For our higher voltage zones our [Long Term Development Statement](#) (LTDS) highlights the assets that make up our network. Feeding in the forecasting of load growth from our [Distribution Future Energy Scenarios](#) (DFES) allow us to understand how the loadings on the network will change. We set this out, including the key areas for future enhancement in our [Network Development Plan](#) (NDP). As detailed later in section 5, the DNOA process then compares the options for managing any potential constraint. Built around the ENA's Common Evaluation Methodology, this assesses the most effective routes forwards. The DNOA then feeds into our Procurement of Flexibility Services.

Each Constraint Management Zone is focussed on the mitigation of a specific network constraint. As such the times, volumes and prices needed are highly diverse. Across the portfolio of zones, we have requirements in every month in the year, every day of the week and all half hours for some days. We acknowledge the requirement for comprehensive market information on our detailed procurement needs for each zone and therefore have created a suite of information to the market to communicate our latest needs. These include:

Network Flexibility Map (<https://www.nationalgrid.co.uk/network-flexibility-map-application>): We publish comprehensive data on signposting and forecasting of our Higher Voltage zones through our Network Flexibility Map. This includes the overall availability windows and expected market volumes required for all our Distribution Future Energy Scenarios (DFES) for a five-year period under the Signposting process. Visualisations of the data are available online through the mapping tool and datasets are downloadable without registration. The Network Flexibility Map also presents our firm flexibility requirements which feed into our procurement process. This shorter-term view, gives clarity on our needs and is refreshed annually in line with our procurement timeline. We are reviewing the best approach to viewing data for LV zones.

Flexible Power Map (<https://www.flexiblepower.co.uk/locations/national-grid-electricity-distribution/map-application-ngd>). The Flexible Power Map replicates much of the functionality of the Network Flexibility Map but focusses on the requirements against which we will procure. It highlights the required volumes and forecast availability windows. This map is held on the Flexible Power website and hosts data from the other DNOs who are also involved in the Flexible Power Collaboration.

Distribution Networks Options Assessment (DNOA) (<https://www.nationalgrid.co.uk/dso/distribution-future-energy-scenarios/distribution-network-options-assessment>): Our DNOA process provides a systematic methodology to recommend a single investment option for potential constraints. (See section 5.1). As part of the DNOA process we publish why we have gone out to procure for each zone.

The Market Gateway (<https://marketgateway.nationalgrid.co.uk>): As well as facilitating market qualification, our Market Gateway will host all our Trade opportunities. These are each of the requirements for which we

are seeking a response. It is also the platform that will host all the responses from FSPs and our final Trade Awards. This will be the key point of commercial interaction for FSPs.

Raw data on the Connected Data Portal ([Flexibility - Groups - National Grid's Connected Data Portal](#)): We host raw data on our Connected Data Portal. This is a platform for the hosting of datasets across the business. It allows data to be accessed via API, allowing easy processing at scale. We have committed to publishing the data behind the above publications on the portal. This includes, the detailed requirements in each zone as well as the associated geographic polygons. It also hosts the core data for the LV zones as well as the splits in requirements between the different products available in a single zone (as Trade Opportunities) and the final Trade Awards.

These publications link together as shown in the figure below.

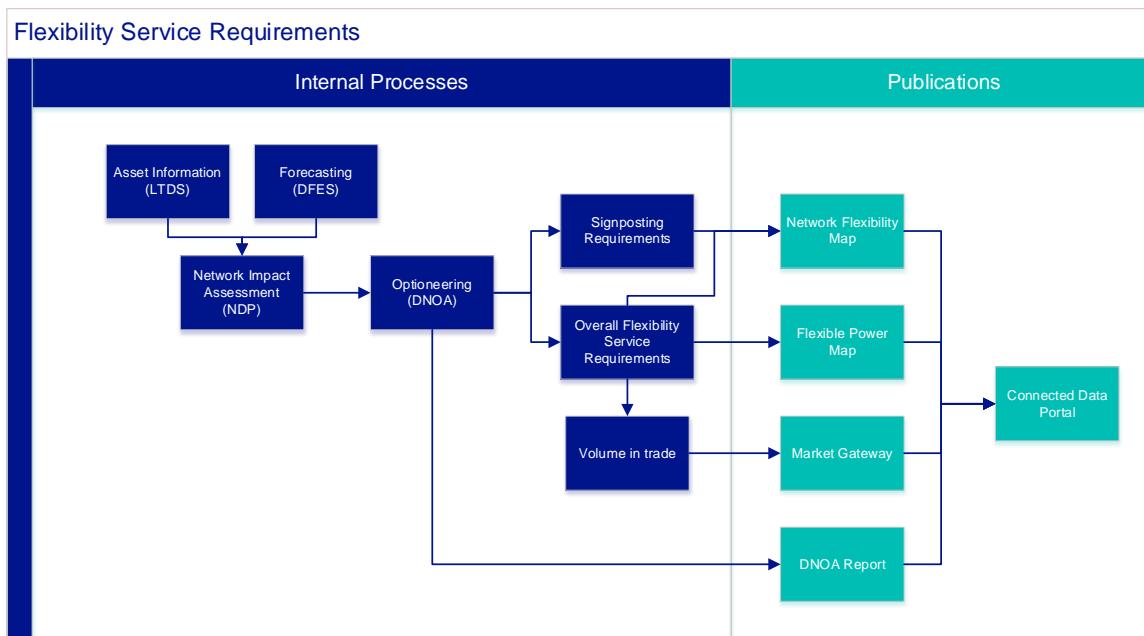


Figure 9: Network Requirement publication and signposting

We also provide a number of additional tools to aid FSPs in understanding our requirements such as a [Post Code Checker](#) and a [Service Value Calculator](#). All our documentation is summarised in our [Document and Data Catalogue](#).

Due to the timing of the above processes, we cannot provide a definitive view of all the services we will be procuring the coming year. Our DNOA processes refreshes on a yearly basis and will be updated following the latest Network Development plan.

However, we recognise the value in providing indications of the potential volumes of flexibility services needed, to help build understanding on the order of magnitude of the market. To foster transparency and give insight, we have provided the following summaries of our anticipated flexibility service needs for 2024/25. These are based on our last procurement round (concluded in March 2024) and include volume procured for operation in 2024/25 as well as volume beyond this regulatory year for some of our higher voltage zones that do not have need this year. As we procure in single year increments, the volume covers the first year of need, and is not cumulative.

The following tables highlight these flexibility service needs.

Table 1: Higher Voltage zonal requirements

ZONE NAME	MAXIMUM VOLTAGE LEVEL AT WHICH SERVICE WILL BE PROCURED (KV)	PRIMARY PRODUCT	RESPONSE TYPE	SEASONAL REQUIREMENT	PEAK CAPACITY (MW) 2024/25	FORECAST UTILISATION (MWh) 2024/25	PEAK CAPACITY (MW) 2025-29	FORECAST UTILISATION (MWh) 2025-29
Exeter City	33	Secure (SU)	DTD/GTU	Winter	1.96	1.87		
Hayle - Camborne	132	Dynamic (SAOU)	DTD/GTU	Winter/Summer			14.70	123.82
Grassmoor	11	Secure (SU)	DTD/GTU	Winter/Summer			0.77	0.33
Woodbeck	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer	1.05	4.59		
Llandrindod - Rhayader	66	Dynamic (SAOU)	DTD/GTU	Winter/Summer	1.65	20.09		
Moretonham pstead	11	Dynamic (SAOU)	DTD/GTU	Winter			0.05	1.10
Tiverton	33	Dynamic (SAOU)	DTD/GTU	Winter	8.58	77.14		
Weston Super Mare	33	Dynamic (SAOU)	DTD/GTU	Winter/Summer	6.27	37.57		
Hereford - Ledbury Ring	66	Secure (SU)	DTD/GTU	Winter/Summer	2.05	15.01		
Loughboroug h	132	Dynamic (SAOU)	DTD/GTU	Winter/Summer	9.64	4.90		
Ilkeston	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer			3.44	4.74
Aberaeron	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer			0.10	0.40
East Yelland	33	Dynamic (SAOU)	DTD/GTU	Winter/Summer	1.64	0.90		
Hemyock	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer	0.73	3.98		
Mullion	11	Secure (SU)	DTD/GTU	Winter/Summer	0.67	2.59		
Plympton BSP	33	Secure (SU)	DTD/GTU	Winter/Summer			4.91	36.53
Stowfield - St Weonards	11	Secure (SU)	DTD/GTU	Winter/Summer	0.40	1.49		
Sharnbrook	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer			1.72	1.04
Gunnislake	11	Secure (SU)	DTD/GTU	Winter/Summer	0.96	4.27		
Morwenstow	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer	3.41	18.04		
Toton	11	Secure (SU)	DTD/GTU	Winter/Summer	2.69	0.35		

Filton Airport and Cribbs Causeway Ring	33	Secure (SU)	DTD/GTU	Winter/Summer	4.66	318.26		
Staythorpe GSP	132	Secure (SU)	DTD/GTU	Winter/Summer			26.97	392.13
Atherstone	11	Secure (SU)	DTD/GTU	Winter/Summer	0.95	2.40		
Ashgrove	11	Secure (SU)	DTD/GTU	Winter/Summer	5.58	8912.74		
Ravenhill	11	Secure (SU)	DTD/GTU	Winter/Summer			0.19	0.25
Milford Haven BSP	33	Dynamic (SAOU)	DTD/GTU	Winter/Summer	19.95	72.56		
Newton Abbot to Newton Abbot Main Circuits	33	Secure (SU)	DTD/GTU	Winter/Summer	2.54	1.84		
Camborne Treswithian	11	Secure (SU)	DTD/GTU	Winter/Summer			0.37	0.37
Epwell	11	Secure (SU)	DTD/GTU	Winter/Summer			0.36	0.73
Knighton	11	Secure (SU)	DTD/GTU	Winter/Summer	0.64	5.52		
Feeder Road BSP	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer			4.05	27.80
Shrewsbury GSP	132	Dynamic (SAOU)	DTD/GTU	Winter/Summer	3.31	22.62		
Harbury to Banbury 132kV	132	Dynamic (SAOU)	DTD/GTU	Winter/Summer	12.00	57.22		
Wise Street	11	Secure (SU)	DTD/GTU	Winter/Summer			0.77	1.97
Holme Carr	11	Secure (SU)	DTD/GTU	Winter/Summer			1.81	4.49
Alfreton-Wessington	33	Secure (SU)	DTD/GTU	Winter/Summer	9.85	1637.03		
Bretby	11	Secure (SU)	DTD/GTU	Winter/Summer	0.32	2.55		
Ellesmere Avenue	11	Secure (SU)	DTD/GTU	Winter/Summer			1.95	1.96
Shepshed	11	Secure (SU)	DTD/GTU	Winter/Summer	6.15	1031.33		
Hallcroft Road	11	Secure (SU)	DTD/GTU	Winter/Summer	3.07	74.40		
Stamford	11	Secure (SU)	DTD/GTU	Winter/Summer	3.57	173.54		
St Davids Primary	11	Secure (SU)	DTD/GTU	Winter/Summer	0.79	77.06		
Llandrindod Wells Primary	11	Secure (SU)	DTD/GTU	Winter/Summer			2.01	51.31

Swansea North/ Upper Boat	132	Dynamic (SAOU)	DTD/GTU	Winter/Summer	11.76	111.84		
Nantwen Primary	11	Secure (SU)	DTD/GTU	Winter/Summer			0.30	0.15
Exminster Primary	11	Secure (SU)	DTD/GTU	Winter/Summer			0.66	9.84
Keynsham East Primary	11	Secure (SU)	DTD/GTU	Winter/Summer			2.52	129.90
Brockworth Primary	33	Secure (SU)	DTD/GTU	Winter/Summer			0.18	3.42
Alderton Primary	11	Secure (SU)	DTD/GTU	Winter/Summer	3.09	190.28		
Street BSP	33	Secure (SU)	DTD/GTU	Winter/Summer	3.07	268.19		
Edgarley Primary	11	Secure (SU)	DTD/GTU	Winter			0.09	0.59
Shapwick Primary	11	Secure (SU)	DTD/GTU	Winter	0.09	0.16		
Tiverton to Bridge Mills and Cullompton circuits	33	Secure (SU)	DTD/GTU	Winter			0.28	0.49
Feeder Road to Bedminster and Bower Ashton circuit	33	Dynamic (SAOU)	DTD/GTU	Winter/Summer	6.07	96.83		
Feeder Road A Primary	11	Dynamic (SAOU)	DTD/GTU	Winter/Summer	5.44	6.71		

Our lower voltage zones are summarised below. These cover only the 2024/25 regulatory year.

Table 2: Lower voltage zone summary (in 2024/25 regulatory year)

LICENCE AREA	MAXIMUM VOLTAGE LEVEL AT WHICH SERVICE WILL BE PROCURED (kV)	PRIMARY PRODUCT	RESPONSE TYPE	PEAK CAPACITY (MW)	FULL DELIVERY WINDOW UTILISATION (MWh)	SEASONAL REQUIREMENT	NUMBER OF CMZs
East Midlands	0.4	Sustain (SU)	DTD/GTU	70.73	24,049.05	Winter	740
South Wales	0.4	Sustain (SU)	DTD/GTU	4.41	1,500.42	Winter	101
South West	0.4	Sustain (SU)	DTD/GTU	6.28	2,134.86	Winter	297
West Midlands	0.4	Sustain (SU)	DTD/GTU	10.89	3,703.62	Winter	288

The following table summarises the network needs the higher voltage services are being used to mitigate.

Table 3: Summary of volumes by network requirement type

CONSTRAINT	REGULATORY YEAR	PRE-FAULT		POST-FAULT		PRE-FAULT LOW VOLTAGE SUSTAIN	
		Peak Capacity (MW)	Forecast Utilisation (MWh)	Peak Capacity (MW)	Forecast Utilisation (MWh)	Peak Capacity (MW)	Full Delivery Window Utilisation (MWh)
Thermal	2024/25	65.73	12,811.74	68.16	372.68	92.32	31,387.95
	2025-29	61.24	752.10	4.05	27.80	N/A	N/A
Voltage	2024/25	3.70	35.10	0	0	0	0
	2025-29	0.28	0.49	0	0	N/A	N/A
Security Of Supply	2024/25	7.00	36.37	0	0	0	0
	2025-29	2.60	12.97	0	0	N/A	N/A
Network Stability	2024-29	0	0	0	0	0	0
Other	2024-29	0	0	0	0	0	0

Table 4: Summary of the volumes per product

PRIMARY PRODUCT		PEAK CAPACITY (MW)	FORECAST UTILISATION (MWH)	NUMBER OF ZONES	PEAK CAPACITY (MW)	FORECAST UTILISATION (MWH)	NUMBER OF ZONES
		2024/25	2024/25	2024/25	2025-29	2025-29	2025-29
Sustain (SU)		92.32	31,387.95	1,426	N/A	N/A	N/A
Secure (SU)	Long Term*	6.80	up to 6360.45	20	2.54	up to 317.24	15
	Total	53.10	12,720.89	20	44.12	634.47	16
Dynamic (SAOU)	Long Term*	35.25	up to 267.5	14	14.41	up to 79.45	6
	Total	91.48	535.00	14	24.05	158.90	6
Restore (OU)		144.58	N/A	34	68.17	N/A	22
Others		0	0	0	0	0	0

*Long Term highlights the volumes taken forwards into the longer-term markets. We have not explicitly included the volumes in the shorter-term markets as it will procure the volume required to cover the total requirement minus what is successfully procured in the Long-Term markets.

2.2.3 Operational Processes and Dispatch Principles

The services we procure are detailed in section 2.2.1. Once services have been procured (see section 3) we have clear and transparent processes for operating our services.

Our Shorter-Term products operate within a week-ahead timescales. FSPs offer availability, capacity and availability/utilisation prices to us. These are matched against requirements and are manually cleared according to our dispatch principles set out above. The timings are highlighted in the figure below.

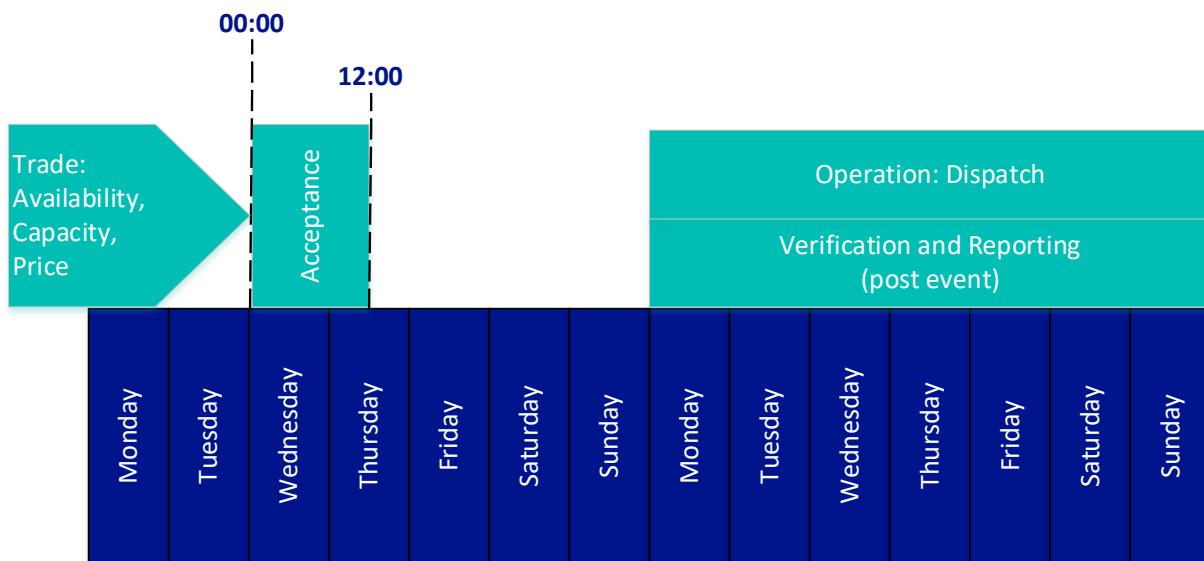


Figure 10: Weekly Operational process

Availability Declarations: By 00:00 on Wednesday, FSPs provide us with their trade responses for the following operational week (Monday to Sunday). This includes providing details such as the available capacity they can provide, the price and key operational parameters such as maximum and minimum run times.

Acceptance: By Thursday morning, before 12:00, we assess the available volume declared and accept availability to meet the volumes required for us to manage the relevant constraint.

As Restore (OU) has no availability payment, all availability declarations are accepted automatically.

After 12:00 this is communicated to FSPs via the Market Gateway.

Long Term products will trade in much the same way, however they will happen over a longer timeframe. The timings are highlighted in the figure below.

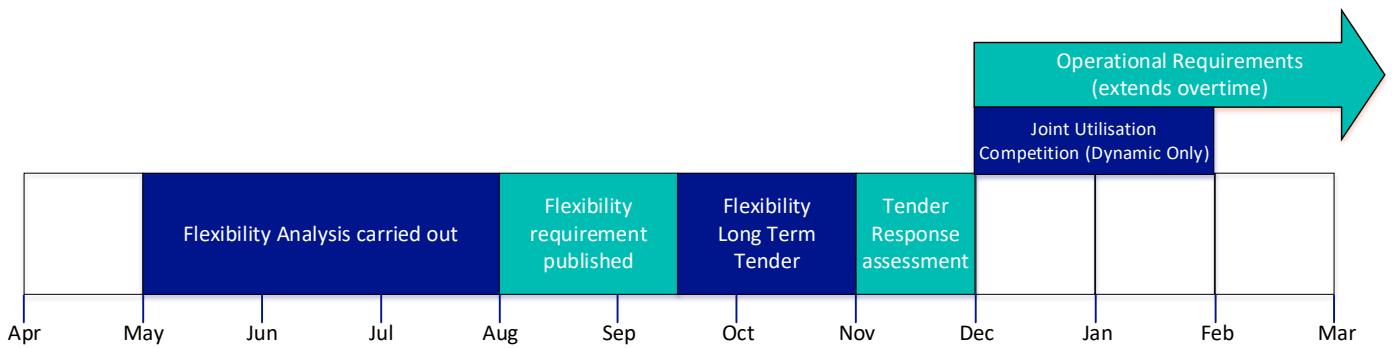


Figure 11: Long Term Operational process

Availability Declarations: Following publishing results in August, FSPs will be able to submit their availability declarations in September/November. This includes providing details such as the available capacity they can provide, the price and key operational parameters such as maximum and minimum run times.

Acceptance: We will accept or reject trades by the end of December.

Once trades have been cleared, our dispatch processes then focusses around the Flexible Power Portal (<https://flexiblepowerportal.co.uk>) and its associated API. This is a simple API used to send start/stop messages and receive metering data (see our [Guidance document](#) for more details).

Operation

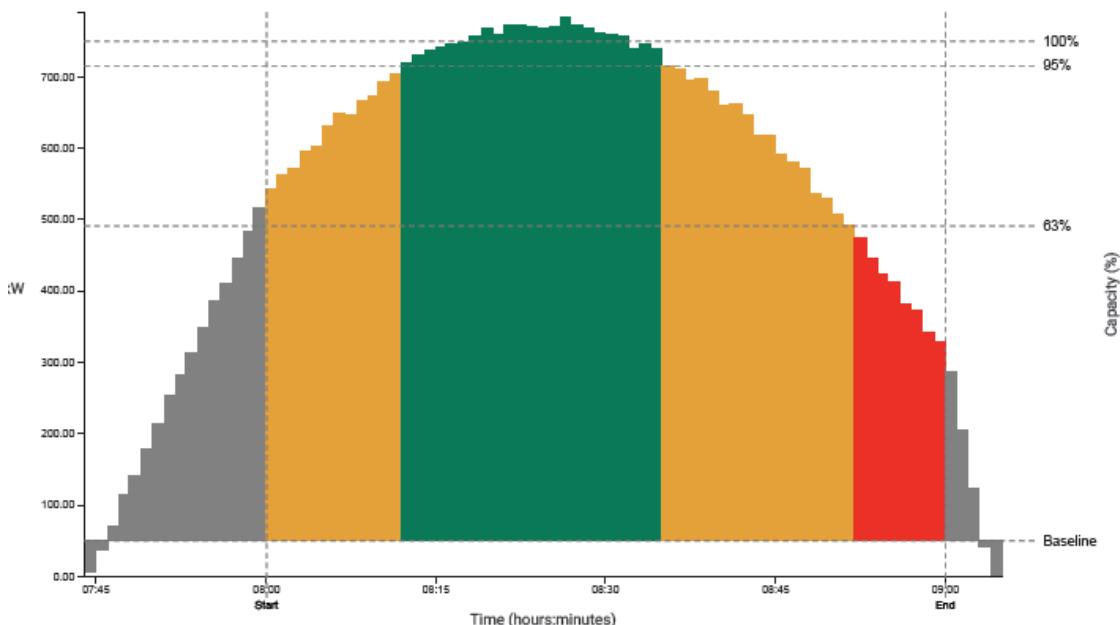
When we instruct FSPs to deliver flexibility depends on the service being used. These will always be within periods of accepted availability.

- For Secure, the default is that once accepted, the service will be utilised. FSPs can opt to schedule their asset operations and a utilisation instruction is sent via the API 15 minutes ahead of the requirement. As we transition to the SU product, this will become a utilisation only service.
- For Dynamic, utilisation is triggered by network conditions, after the acceptance of availability. A utilisation instruction is sent via the API 15 minutes ahead of the requirement (day ahead when SAOU is implemented).
- For Restore (OU), utilisation is triggered in response to network conditions. FSPs are expected to provide response as soon as possible following receipt of the utilisation instruction sent via the API.
- Our dispatch principles align with our wider service selection principles laid out in section 5.2.
- As our operational experience increases, we will use this information to provide feedback to FSPs in areas and support them to maximise their value to the system.

Reporting & Settlement

Event [performance](#) and [earnings reports](#) are automatically generated shortly after the close of each instruction. These allow FSPs to easily assess their performance. Examples are available on the [Flexible Power Website](#). A sample performance report is shown below.

Event Overview

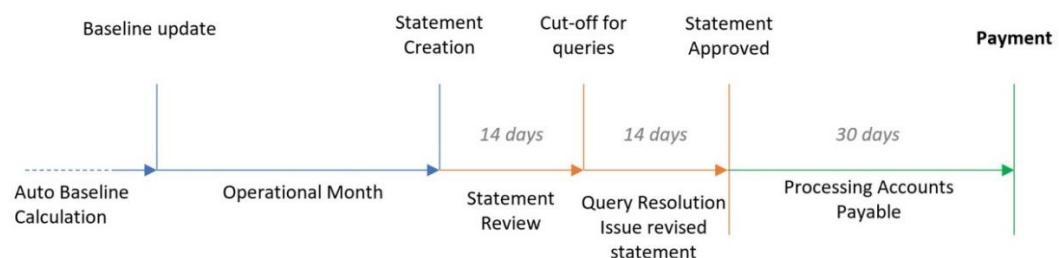


Performance Highlights

Expected Total Volume	700.00 kWh
Actual Total Volume	592.92 kWh
Baseline	50.00 kW

Figure 12: Example Performance Report

Self-billing invoices are then created on a monthly basis aggregating all the monthly events and follow the process highlighted below. This gives time for the review of the invoice, as well as any follow up queries ahead of payment.



More details about our settlement process can be found in our [Guidance Document](#).

These processes will be updated as the outcomes of the Open Networks Settlement technical working group are finalised and implemented.

3. Tendering Process

3.1 Process

We have developed our tendering processes to be objective, transparent and market based. They are designed to be as simple as possible whilst maintaining compliance with the Utilities Contract Regulations. These regulations impose strict requirements on how utilities procure services. Since 2019 we have used a Dynamic Purchasing System (DPS) to manage pre-qualified parties enabling their eligibility to tender into all our published procurement cycles. Our experience of using the DPS has fed into the procurement processes developed within the Open Networks project.

In April 2023 we evolved our tendering processes to align with the framework contract approach taken by the ESO, and as such have implemented a process where market participants are pre-qualified and awarded an overarching contract ahead of being able to bid for trade opportunities. This has allowed us to accommodate the procurement of services at both long- and short-term timescales and in the future will allow us to facilitate even closer to real time procurement.

This process, still uses a DPS, and is split into an initial qualification, where the formal procurement is carried out to award an overarching contract. Following this, ongoing technical qualification and trading can happen at any time. This process is administered on our online [Market Gateway](#), which we launched in April 2023 to digitalise our end-to-end procurement process and accelerate platform and marketplace interactions.



Figure 13: Overview of our qualification and trading processes

We understand the need to further improve the standardisation of processes across the industry and have:

- Aligned with the ESO's method of framework procurement through the early adoption of the Service Terms structure for the Standard Flexibility Agreement. This allowed our implementation of Short-Term Trades. Other DNOs will align with this structure when version 3 of the Standard Flexibility Agreement is finalised and implemented later this year.
- Aligned with the standardised procurement timelines for our long-term products.

We will continue to implement the outcomes of the Open Networks project, and we have already begun work on developing our systems to allow us to quickly adopt the changes to products, pre-qualification criteria and settlement in summer this year.

3.1.1 Qualification

The qualification process is designed to prepare the FSP and assets for participation in a trade and service delivery. It has 3 distinct phases. More information can be found in our [Guidance Document](#)

Commercial Qualification

Commercial qualification involves the submission of some basic information to gain access to the DPS. The PIN response is effectively an expression of interest to join, based on basic company information (Name, address, company type and number etc.).

This is followed by the PQQ, this requires confirmation that the FSP meets the minimum requirements for participation in flexibility services. These are:

- Commitment to build the Flexible Power API for services that are utilised close to real-time.
- Ability to provide relevant metering data over the API or via upload.
- Asset ability to respond to utilisation instruction and provide a response for minimum of 30mins.

There are also a number of mandatory questions specified in the Utilities Contract Regulations that cover mandatory ineligibility, discretionary grounds for rejection, and confidentiality requirements. The FSP must confirm their acceptance and adherence to these.

Once complete, the FSP is added to the DPS and invited to the overarching tender. Commercial qualification is always open.

Overarching Tender

The tender for an overarching contract is then available immediately after commercial qualification and only includes the Terms and Conditions and associated Service Terms of the Standard Flexibility Agreement. Acceptance of the Standard Flexibility Agreement is the only criteria for pass/fail. Pricing, capacity and asset qualification are not be considered at this stage. Once accepted, an overarching contract is awarded. This is enduring with re-acceptance only needed for significant updates to the terms and conditions.

This approach replicates that seen in the ESO framework approach and also retains the requirement for UK DNOs to comply with the Utility Contract Regulations (UCR), however, unlike a framework, it doesn't have a time limit on when parties can join.

Once an overarching tender is awarded an FSP is commercially eligible to participate in trades, however in order to be fully eligible to enter into trades the technical qualification requirements must then be completed.

Technical Qualification

Technical qualification focusses on ensuring FSPs are ready to conduct trades. It includes the registration and validation of assets, the creation of logical grouping of these assets (Meterable Units), and testing through our operational portal so utilisation instruction can be received and metering data can be shared for verification and settlement purposes.

Typical details include:

- The location of the asset.
- The energisation status of the asset.
- The technology type.
- The installed capacity (in kW).
- The metering location.

Assets can be added, updated and deleted at any time by the contracted FSP, as can the logical grouping. Only assets that are registered and have been verified by National Grid can be selected for participation in a trade.

3.1.2 Trading

Trades are the vehicle for the award of service windows. They form the detailed requirements for availability (and for some products utilisation). Once awarded, as well as service windows, a trade will specify the parameters for delivery; the expected volume of response, the assets being utilised and the associated price.

Details of the data covered in a trade can be found in our [Guidance Document](#). Trades do not form part of the formal overarching tender process and will only be awarded through a subsequent trade award following a successful trade response.

Our trades currently operate across two timeframes, short term (weekly) and long term (annually). A trade is used to lock in key requirements from FSPs and the DSO and clearly set out delivery expectations.

As such once a trade opportunity closes, the trade responses are locked and assessed. The trade award is used to confirm the availability acceptance windows, the meterable units (the asset or asset group) covered and the technical parameters (as specified in the trade response). These cannot be edited post trade. In due course we will develop processes to facilitate secondary trading.

It should however be noted that whilst the meterable units tied to a trade are fixed, the assets linked to those units can still be changed subject to the operational period.

This will allow FSPs to manage which assets are being used. The same response, with the same availability window is expected, but the baseline values will alter to align with the latest assets. For example, an energy retailer may want to remove assets that are no longer their customers, and add others in their place.

3.2 Pricing Strategy

A ceiling price for each zone is calculated as part of our DNOA process using the CEM tool. All ceiling prices will be communicated in the trade opportunity. We are currently fixing the ratio between availability and utilisation prices, but will be looking to remove this restriction in due course.

We then use a Pay as Clear (PaC) mechanic where we are using competitive pricing. This means that all providers are paid at the rate of the marginal accepted bid, rather than the price they bid. This is designed to encourage bids at the marginal cost of operation, rather than the expected clearing price of the zone. This mechanic is being used in most new Flexibility Services across Europe.

The decision between PaC and fixed pricing will be determined in the trade. Our default parameters are:

PRODUCT	PRICING MECHANIC
Sustain (SU)	Pay As Clear
Secure (SU)	Pay As Clear
Dynamic (SAOU)	Pay As Clear
Restore (OU)	Fixed Price

Our initial implementation of PaC is built on manual processes looking to best align with our service selection principles. The clearing price will be set by the most expensive provider selected.

Restore services are used in response to rare, high impact, network events. The nature of these events often restricts the Flexibility Services that could be used due to locational requirements. In order to ensure timely usage of these services they will remain fixed price.

These prices feed into the performance related payment mechanics. More details can be found in our [Guidance Document](#).

3.2.1 Joint Utilisation Competition

We aim to operate a Joint Utilisation Competition in due course.

When utilisation decisions are made, all availability of flexibility services will be considered consistently based on our Service Selection Principles regardless of the timeframe the offer of availability was made in.

Where longer terms products are trading months ahead, we will look to acquire a specified volume (potential defined as a range) as defined in the trade. As per our clearing process, availability prices will be set and utilisation pricing will be capped. At this stage the availability payments are committed.

This utilisation, associated with this availability will then be entered into a competition with the shorter-term product. This competition will be for the total required volume. As such the shorter-term participants will be competing for:

- the short-term market requirements,
- any unfulfilled volume in the long-term allocation, and
- any instances where their combined availability and utilisation is more economically effective than the utilisation of longer-term participants.

Long term participants will automatically be entered into the competition at their capped rate, but have the option to update their pricing.

Market conditions may have changed since the point that an FSP has made a declaration of availability for a long-term service such that the originally bid utilisation price is no longer competitive. This JUC allows the FSP to submit a reduced utilisation price such that utilisation of their assets can remain competitive.

The decision to resubmit a reduced utilisation price is at the discretion of the FSP and there is no obligation to submit an updated price. Where an FSP chooses to submit a reduced utilisation price for an already accepted availability period, the availability price will not be amended and will remain at the originally cleared price.

3.3 Timelines

As detailed in section 3.1, our new commercial and technical qualification processes are open all year round.

We will update our flexibility requirements every six months, and open longer-term trades annually. The windows for shorter term trades will then be opened weekly. Please note that some dates may be subject to change depending on our procurement need. The timeline provided below shows our best view at this stage.

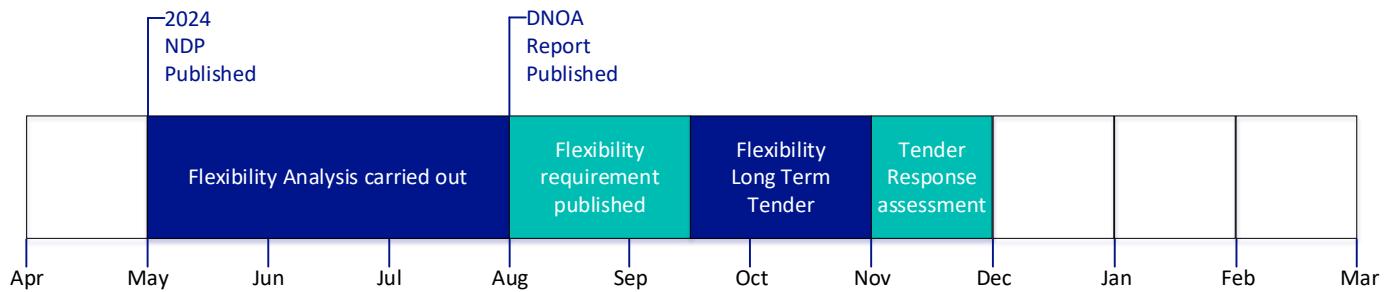


Figure 14: 2024 Procurement Timeline

As highlighted in section 2.2. The requirements are published across a number of publications. On publication of needs we also remind our registered stakeholders through an update service, with the links required to the requirements, links to DPS registration and any further information (such as webinars).

3.4 Contract Award Process

FSPs respond to the qualification tender by accepting the latest Flexibility Service Agreement, a self-billing agreement and providing billing details. No asset details are collected at this stage. These are collected later at the technical qualification stage.

Following the qualification tender, a contract is awarded to the FSP.

We have worked collaboratively with industry through the ENA's Open Networks project to develop a common set of terms and conditions and were the first DNO to adopt these as an Overarching Contract. We will continue to ensure our terms and conditions provide low barriers of entry, maximise participation and reduce complexity. They include:

- Mutual and capped liabilities.
- Performance based payment mechanisms to incentivise participation.
- No penalties for non-delivery, only loss of potential revenue.
- No exclusivity clauses.
- No obligation to trade.

Our contracts do not have any exclusivity, maximising the ability for a flexibility provider to increase revenue opportunities by providing services to other parties.

Our implementation of the Flexibility Service Agreement is available here (<https://www.flexiblepower.co.uk/downloads/1119>). The terms must be accepted as part of the qualification tender. As it is a standard, cross party contract, it is non-negotiable, however feedback will be collated and fed back into future reviews, both within National Grid and with the wider ENA standard terms. We expect to implement the latest ENA standard terms by summer 2024.

4. Stakeholder Engagement

4.1 Engagement around Flexibility requirements

We have a dedicated flexibility Commercial team that are focused on the engagement and support of existing and potential flexibility providers from registration through to delivery and settlement. The team uses a wide range of methods to engage with stakeholders and encourage participation in our flexibility market. These include:

- On Track to Trade Webinars, hosted four times a year to provide useful and up to date information on the route to become a flexibility provider. Flexibility Surgery appointments are always available to speak directly with the team.
- We actively encourage stakeholders to join our update service using our contact form: [Contact NGED \(flexiblepower.co.uk\)](#).
- A dedicated support page on [Flexible Power Website](#) with the latest guidance, support and contact information.
- We can also be contacted directly at NGED.FlexiblePower@nationalgrid.co.uk.

As detailed in Section 3.3 we operate one long term trading cycle a year and weekly short-term trades, focussed on our summer and winter requirements. The timings are set in our [Procurement and Engagement Timetable](#). These are surrounded by a mix of promotional activities to maximise participation, as well as feedback processes to allow us to continually improve our processes. Information on our pre-qualification requirements as well as all other relevant information are available on the [Flexible Power Website](#). We have summarised the full list of relevant documents in our [Document and Data Catalogue](#).

4.2 Engagement about products and process

In addition to what we procure, we also seek stakeholder feedback on how we procure services. We aim to target key stakeholders including those who have been involved in various elements of the process as well as wider industry stakeholders, including the ESO and other DNOs. As well as ad hoc feedback we see a number of key processes;

- This year we are taking a collaborative approach to our Evolution of Flexibility service engagement by working with UK Power Networks to identify areas of alignment. We intend to jointly consult on our proposals for further standardisation in summer 2024. Leveraging our combined experience as leading DSOs in flexibility, we hope this collaborative approach will streamline stakeholder engagement, fostering alignment not only between our organizations but potentially across other DSOs as well.
- As part of our work in the Open Networks project (see section 4.3) we collaborate with the other DNOs to deliver more standardised processes for procurement and operation of Flexibility Services. This includes engagement with the Challenge group, focus groups and the Insights forum. We use this feedback to inform ON work as well as our internal process.

We also collect ad-hoc feedback, on specific topics which is then fed into relevant processes. An example of this is our [Stackability Feedback Report](#), which provides a high-level overview of the feedback received on our Revenue Stacking for Flexibility [report](#) and its accompanying summary [infographic](#). This report will be shared with the Open Networks project to inform their approach and help them deliver concrete benefits.

Stakeholder engagement is also a key part of any new service development work (see section 6).

4.3 Engagement with ESO and DNOs

We recognise that National Grid is one actor amongst many in an ever more complex energy market place. As such, in addition to our wider engagement, we endeavour to engage heavily with the other network licensees.

A key part of this is through our active involvement at the Energy Network Association, especially the Open Networks project, where we work with the other licensees to develop and adopt common approaches across a range of DSO related activities. The Market Development and Network Operations work streams are focussed on the development of Flexibility Services. The key objectives include:

- Bringing more transparency in how DNOs facilitate local markets for flexibility and make decisions to provide more confidence in independent decision making.
- Simplifying participation in local flexibility markets through standardisation of approaches across DNOs and between DNOs and the ESO.
- Addressing barriers to participation in flexibility markets and facilitate stacking of revenues across multiple markets.

As highlighted in section 4.2, the Open Networks project build stakeholder engagement into processes. This covers regular engagement via the Challenge Group, Focus Groups and the Insights forum.

In addition, we engage actively with other licensees directly when needed. Examples of this include:

- Our collaboration with the ESO and other relevant DNOs on the Regional Development Programmes (RDPs). The RDPs look across the whole-system landscape to identify key areas of development to unlock additional network capacity, reduce constraints and open up new revenue streams for market FSPs. Through this work we have developed the MW Dispatch service with the ESO.
- By opening up our Flexible Power brand and processes to other DNOs we have looked to increase alignment and collaboration within the industry. The collaboration will help streamline the process for flexibility providers and make interfacing with DNOs simpler and easier by avoiding the complexities and resource intensity associated with liaising with numerous network operators. We intend to work in partnership to further develop the Flexible Power brand and develop the portal functionality to enable interface capability with other flexibility platforms so wider market participation options can increasingly be made available to providers.

5. Detailed Quantitative Assessment

5.1 Flexibility Service Requirements

Our [Long Term Development Statement](#) (LTDS) highlights the assets that make up our network. As highlighted in section 2.2.2, our [Distribution Future Energy Scenarios \(DFES\)](#) provides data on the predicted growth in generation and demand across the 4 licence areas on a yearly basis. This scenario growth data allows areas on the network expected to be constrained to be identified.

Forecasts carried out using this data feed into the [Network Development Plan](#) (NDP) and are used to plan conventional network build solutions and/or flexibility procurement based on system needs.

The decision-making process for determining the optimal solution for each constraint is called the [Distribution Network Options Assessment](#) (DNOA). This is carried out in an annual process, and informs our rounds of Flexibility Service Procurement. The DNOA process is used to both look forward and identify which services should have services procured to help mitigate them, as well as looking backwards to ensure they continue to provide value.

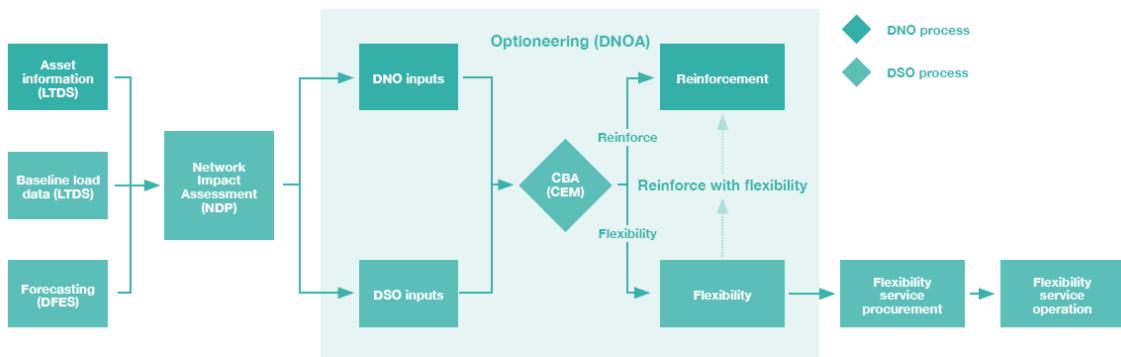


Figure 15: Determining Flexibility Requirements

The DNOA outlines the decisions made to meet the future needs of the distribution network. A smarter network needs smarter decisions: the DNOA outlines the options considered to provide the best consumer value in investments made on the distribution network and how cost-benefit analysis is employed to determine the optimal investment path. The decisions show in a transparent manner how we are optimising our investment to deliver secure, sustainable and affordable electricity to meet the changing needs of the areas we serve.

To improve transparency in how DNOs reach decisions for the flexibility procurement and the potential to delay conventional reinforcement, a [Common Evaluation Methodology](#) (CEM) Cost-Benefit Analysis (CBA) tool has been created by Baringa Partners as part of the Open Networks project. This tool is used in the DNOA process to assess the net benefit of flexibility against a baseline of conventional reinforcement for scenarios over a number of years. The economic analysis is based on the Time Value of Money wherein delaying reinforcement costs creates a significant economic benefit. If this benefit is greater than the cost of flexibility required during the deferral period, then flexibility procurement is deemed the optimal solution and could create savings that can be passed on to customers and stakeholders. A good practice guide for its use can be found [here](#).

The decision tree below demonstrates the different choices our analysis can lead to. Firstly, the schemes that do not require any intervention are removed from future DNOAs. Among the schemes which do require

intervention, if the constraint cannot be managed using flexibility, then reinforcement is pursued. The schemes which require flexibility services are put through cost-benefit analysis to determine if flexibility can be used to defer reinforcement. This is further detailed in the latest DNOA document ([National Grid - Distribution Network Options Assessment](#))

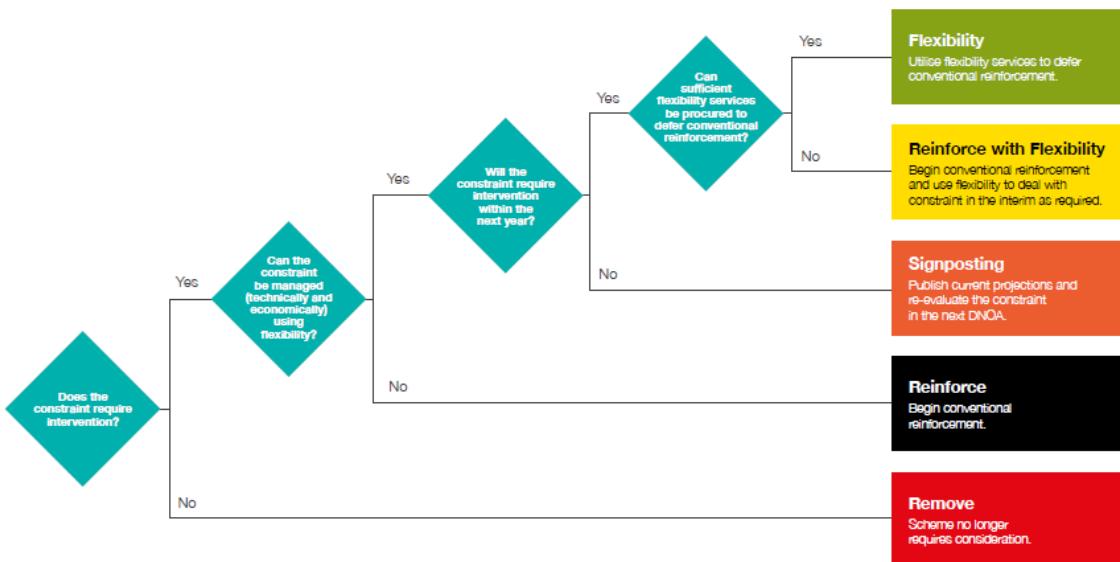


Figure 16: DNOA decision tree

5.2 Flexibility Service Selection

As detailed in section 3, we have a detailed process for the procurement of Flexibility Services, including a clear methodology for how we select which services to procure and then instruct.

As we implement the new structure of trades, we are reviewing how we select services. We need to balance the needs for transparency, efficiency and deliverability. These are interlinked with our dispatch principles, set out in section 2.2.3

We will engage on a road map for operational decision making in Summer 24. This will help steer processes and systems needed.

Our selection is currently built on manual processes, aiming to provide the lowest total cost to the DNO and function on a Pay as Clear basis. As we progress, we will look to develop robust service selection systems.

5.2.1 Service Selection Principles

In March 2020 the ENA Open Networks Project published a set of [dispatch decision criteria](#) guiding principles, which guide how DSOs decide which services to dispatch.

PRINCIPLE	DESCRIPTION	NATIONAL GRID ELECTRICITY DISTRIBUTION IMPLEMENTATION
Security	The needs of the system will be met using flexibility in such a way that security of supply is maintained.	This principle can be subdivided into two key criteria that need to be met, Technical Integrity and Customer Security.

		<ul style="list-style-type: none"> Technical Integrity considers Network Integrity, the ability of a network to operate within technical limits and System Frequency Integrity, the ability of the System to operate within acceptable frequency limits¹. Customer Security is the ability of a network to meet customer demand and generation. There are minimum standards for these National Grid Electricity Distribution must meet but opportunities to go beyond these standards are also considered where these are economic.
Cost	Flexibility will be operated to meet system need at the minimum level of cost.	The use of Flexibility Services should be cost effective and expenditure proportional to the benefits it brings to the network.
Operability	DSOs will seek to dispatch services that offer compatible levels of operability.	Operability is a measure of how well an offer of a Flexibility Service meets actual or potential System needs. National Grid Electricity Distribution will seek to develop an objective and transparent method for assessing the operability of offers of Flexibility Services.
Competition	DSOs will provide transparency of their dispatch decisions and activities.	Flexibility should be procured using simple, fair and transparent rules and processes. Services should be developed such that service providers can participate easily in different markets.
Fairness	DSOs will operate a fair dispatch methodology and provide equal opportunities to participate.	Flexibility Services shall be assessed and selected impartially purely on their technical and commercial merits. Where multiple technically sufficient Flexibility Services are available at a comparable cost, we will share the dispatch of services across these providers.

We are working to develop standard rules and procedures to assess the operability of offered Flexibility and match this against our system requirements. The first stage of this process is to set out our underlying service selection principles, these will guide both our current service selection process and the more detailed service selection rules we will develop. These principles incorporate the Open Networks principles and provide further information about how these are implemented in practice. These are common across our selection of services to make available, as well as utilise.

To ensure security of supply is delivered for the most cost-effective outcome, we will consider these items in the following order:

PRIORITY	NAME	MEANING	IMPLEMENTED OPEN NETWORKS PRINCIPLE
1	Technical Integrity	The National Grid Electricity Distribution requirements of Network Integrity, System Frequency Integrity (SD2/TP1B) shall be met. Where these are dependent on Flexibly Services, these services must meet these requirements.	Security

¹ Although System Frequency is not managed by National Grid Electricity Distribution, it can be affected by the operation of National Grid Electricity Distribution's network and customers.

2	Customer Security	National Grid Electricity Distribution requirements for demand and generator security (SD2) shall be met. Where these are dependent on Flexibility Services, these services must meet these requirements. Opportunities for enhancements to demand and generator security may be used where economic.	Security
3	Value	Flexibility should be procured and operated to carry out the roles of a DSO, in a cost-effective manner.	Operability & Cost
4	Market Resilience	Where multiple technically sufficient Flexibility Services are available at a comparable cost, we will share the dispatch of services across these providers.	Competition & Fairness

As our operational experience in dispatching flexibility increases, we are seeing how these principles apply in practice, and what further rules we must implement to ensure these are applied consistently and that we have effective and transparent decision making. These will be regularly communicated with FSPs to ensure they can maximise their value to the system.

6. Services in Development

Since developing our initial processes and procedures through innovation trials, our processes for procuring flexibility have been evolving and maturing. As we build learning and scale, we expect to continue developing and improving our processes. Alongside the existing products mentioned in the sections above, we have a number of other services in development. These range from innovation trials to BaU development work.

Depending on the learning generated as part of their development they may, or may not be implemented in the next reporting year.

Demand Turn Up Services

Over the next year we will look to develop and roll out Demand Turn Up/Generation Turn Down services. We expect these to use similar products and processes to our existing services.

Flexibility from low carbon heating

Our EQUINOX project which develops three novel commercial methods, designed to maximise participation in domestic DNO flexibility services, will directly inform BaU procurement strategies. These methods explore various risk-reward models between DNOs, suppliers, and customers, demonstrating their impact on flexibility volume, cost, and reliability across different customer segments, including the fuel poor and vulnerable.

Closer to real time Procurement

As part of our IntraFlex NIA project we trialled the use of the NODES market platform to procure services closer to real time via a continuously clearing market. Following the positive learning from the trial, we are now looking to deploy closer to real time markets. However, given the complexity of these services, we are targeting deployment in 2025.

Energy Efficiency

Our work on the Sustain product has delivered learning on the structuring of drop-to services. The wider Future Flex project also highlighted further challenges associated with such products. We remain committed to the development of an offering for energy efficiency in ED2.

Secondary Trading

As primary markets for flexibility services mature, we will look to develop processes for secondary trading. This involves shifting an obligation for delivery from one FSP to another. In our processes this would mean changing the organisation and the assets associated with a trade. We will build the capability later in ED2. A key part of secondary trading is matching suitable FSPs and Assets that could trade. We see this as a clear opportunity for a third-party market, with the responsibility of the DSO being to validate a process for the trade once agreed, rather than being the primary facilitator.

7. Data and Publications

We acknowledge there is a significant amount of data and information involved in the procurement of our services, as well as wider DSO processes.

As such we have summarised the key references in this section.

To provide a live view of please refer to our [Document and Data Catalogue](#).

7.1 Distribution Flexibility Services Regulatory Reporting

Publication	Description	Location
Distribution Flexibility Services Procurement Statement	A forward-looking report on how we will procure services in the coming regulatory year.	National Grid Website & Flexible Power Website
Distribution Flexibility Services Procurement Report	A report, and supporting data table, detailing how and where we have procured flexibility services in the past regulatory year.	National Grid Website
Ongoing Reporting	We publish the outcomes of our Flexibility Service procurement. This is covered by our Procurement Results document.	Flexible Power Website
Evolution of Distribution Flexibility Service Procurement Document and Webinar	Our initial, informal engagement on the changes we would like to make to how we procure flexibility services.	National Grid Website
Distribution Flexibility Services Procurement Consultation Document, Webinar and Outcomes	Our formal consultation on changes we have proposed on how we procure flexibility services.	National Grid Website
Ofgem Guidance	The Ofgem guidance determining what should be covered in the regulatory reporting.	Ofgem Website

7.2 DSO process (and inputs)

Publication	Description	Location
Long Term Development Statement (LTDS)	The Long Term Development Statement provides an overview of the design and operation of the distribution network, together with data on the 132kV, 66kV and 33kV systems and the transformation levels down to 11kV. This is produced by DNO rather than DSO functions.	National Grid Website (registration needed)
Distribution Future Energy Scenarios (DFES)	The Distribution Future Energy Scenarios outline the range of credible futures for the growth of the distribution network out to 2050.	National Grid Website & Connected Data Portal
Network Development Plan (NDP)	The Network Development Plan provide stakeholders with transparency on network constraints and needs for flexibility. The NDP has been created to present the 'best view' of planned asset based and flexible network developments over the five to ten-year period	National Grid Website
Distribution Network Options Assessment (DNOA)	The Distribution Network Options Assessment (DNOA) is a publication which outlines reasons behind investment decisions made in order to deal with constraints on our network.	National Grid Website & Connected Data Portal

7.3 Flexibility Requirements

Publication	Description	Location
Network Flexibility Map	The Network Flexibility Map includes the availability windows and expected market volumes required for all our DFES scenarios for a five-year period under the Signposting process. Visualisations of the data are available online through the mapping tool and datasets are downloadable. The Network Flexibility Map also presents our firm flexibility requirements which feed into our procurement process. This shorter-term view, gives clarity on our needs and is refreshed every six months in line with our procurement timeline.	National Grid Website & Connected Data Portal
Flexible Power Map	The Flexible Power Map replicates much of the functionality of the Network Flexibility Map but focusses on the requirements against which we will procure. It highlights the required volumes and forecast availability windows. This map is held on the Flexible Power website and hosts data from the other DNOs who are also involved in the Flexible Power Collaboration.	Flexible Power Website & Connected Data Portal
Market Gateway	Our portal for all commercial interactions.	Market Gateway
Procurement results	The results documents provide detailed information on the volumes procured through each cycle.	Flexible Power Website & Connected Data Portal
Post Code Checker	A simple look up tool to assess the allocation of postcodes to CMZs. The background data is available as an excel sheet and on the connected data portal.	Flexible Power Website & Connected Data Portal
Service Value Calculator	A tool to provide a view on the maximum potential revenue available to a provider.	Flexible Power Website
Flexibility Zone Activity Timetable	A spreadsheet detailing which months of the year each zone has a requirement for provider availability	Flexible Power Website

7.4 Flexibility Process

Publication	Description	Location
Procurement & Engagement Timetable	This document provides the proposed procurement window dates and the surrounding market engagement	Flexible Power Website
National Grid Guidance for Electricity Distribution Service Providers	Our Consolidated guidance on how we procure flexibility services	Flexible Power Website
NGED_ENA Standard Flexibility Services Agreement	The latest version of the T&Cs applicable to our Procurement of Flexibility Services	Flexible Power Website
On Track to Trade - Webinar	Slides and Recording on our Webinars on how to participate in our services.	Flexible Power Website
Flexible Power Payment Mechanics	An overview of the Flexible Power Payment Mechanics	Flexible Power Website
Flexible Power Example Event Performance Report	An example of the performance report created post a response event.	Flexible Power Website
Flexible Power Example Monthly Invoice	An example of the monthly invoice created at the end of each month.	Flexible Power Website

Flexible Power Example Event Earnings Report	An example of the payment breakdown of utilisation earnings created post a response event.	Flexible Power Website
Flexible Power Nominated Baseline values	The values used for our nominated baselines	Flexible Power Website

7.5 Flexibility Updates

Publication	Description	Location
Flexibility Update Service	A mailing list to receive Updates on our Flexibility Services	Email Sign up at: Contact NGED (flexiblepower.co.uk)

7.6 Other relevant information

Topic	Description	Location
Open Networks	An overview of the Open Networks Project and all the relevant documentation.	ENA Website
RDPs	Overviews of the Regional Development Programmes	National Grid ESO website & National Grid website
Innovation	An overview of the National Grid Electricity Distribution innovation portfolio	National Grid Website

Appendix A: NGED implementation of common products

Name	Common Product Parameter	Scheduled Utilisation - Settlement Periods	Scheduled Utilisation - Specific Periods	Scheduled Availability + Operational Utilisation - Day ahead response	Operational Utilisation - 15 min response time
Structure	Payment Structure	Utilisation Only	Utilisation Only	Availability and Utilisation	Utilisation Only
	When prices are set (procurement timescales)	At trade	At trade	At trade	At trade
Availability	Availability Request Mechanism	N/A	N/A	Request initiated by DNO	N/A
	Availability Acceptance timing			At trade	
	Availability Refinement timing			Not allowed	
	Availability Changes Allowed?			No	
	Minimum Aggregate Unit Size			N/A	
	Partial Availability Acceptance Possible?			No	
	Time Variable Availability Volumes Allowed			No	
	Availability Payment Unit			£/MW/H	
	Availability Period			Settlement Periods	
Utilisation	Utilisation Payment Unit	£/MWh	£/MWh	£/MWh	£/MWh
	Utilisation Period	Settlement Periods	Blocks	Minutes	Minutes
	Delivery Expectation	Continuous	Continuous	Continuous	Continuous
	Maximum Response Time	N/A	N/A	N/A	15 mins
	Payments during response time?	No	No	No	No
	Minimum Utilisation Time	30 mins	30 mins	30 mins	30 mins
	Minimum Utilisation Volume	N/A	N/A	N/A	N/A
	Utilisation Instruction Timings	At trade	At trade	Operational - Day Ahead	Real Time
	Partial Utilisation Instruction possible	No	No	No	No
	Time Variable Utilisation Volumes Allowed	No	No	No	No

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