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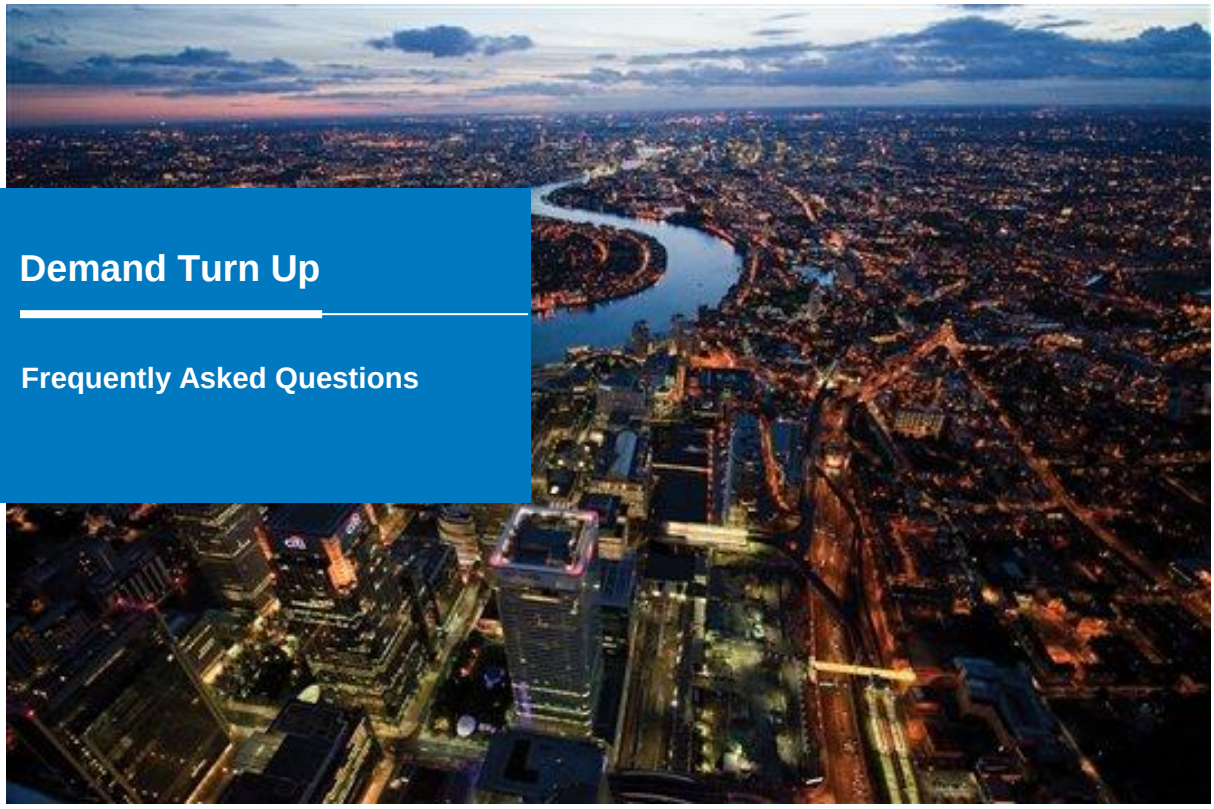

Demand Turn Up

Frequently Asked Questions

Version 3.0 – 20th January 2017

For further information, please contact the Business Development team via:

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Introduction

What is Demand Turn Up?

Demand Turn Up is a non-BM Balancing Service, introduced in 2016, to encourage large energy users and generators to either increase demand (through shifting) or reduce generation when there is excess energy on the system – typically overnight and weekend afternoons.

What is National Grid's requirement for Demand Turn Up in 2017?

Demand Turn Up is one 'footroom' service through which National Grid can manage situations of high generation and low demand. As renewable generation increases, so does our footroom requirement – in 2017, we expect this requirement to be 3-5 GW. This could be met through a number of solutions, including Demand Turn Up. The exact requirement for Demand Turn Up is difficult to define, as we will consider all options and take the most economic course of action available.

How can I register my interest in future opportunities or hear about updates?

If you aren't already on our Demand Turn Up mailing list, you can email commercial.operation@nationalgrid.com to be added and we will send you updates.

You can also email us at the address above with general questions or call +44 (0)1926 654611.

Requirements on providers

Which technologies can participate in Demand Turn Up?

Demand Turn Up is open to any technology, not participating in the Balancing Mechanism (BM), that has the flexibility to increase demand (through shifting, not wasting unnecessarily) or reduce generation during times of high renewable output and low demand. These periods are typically overnight and weekend/bank holiday afternoons, although the requirement is not limited to these periods.

The service is open to true demand reduction, CHP and any other type of generation, energy storage (such as batteries) and other technologies, providing they can offer the flexibility required. National Grid does not differentiate between technology types for the purposes of assessing tenders. Each technology type will have different capabilities – for example, some may be able to delivery indefinitely, whilst others will not. When declaring availability, it's important to consider any factors that may impact the volume of Demand Turn Up available.

Does size of units matter?

To be able to participate, the entry threshold is 1 MW, which can be aggregated from sites 0.1 MW and larger. Fractions of megawatts are fine e.g. 4.2 MW, providing they meet the entry threshold.

What equipment needs to be installed?

Providing you have minute by minute or half hourly metering on your site(s), a mobile phone/landline and the ability to access email, there is no additional equipment that needs to be installed.

Procurement

How is Demand Turn Up procured?

There will be two routes to market for Demand Turn Up providers in 2017: Fixed and Flexible.

1) Fixed Demand Turn Up

This will be procured through a tender in February 2017. As part of the tender, interested parties will submit their availability and utilisation prices to National Grid. If successful, these prices will be fixed for the duration of the British Summer Time (BST), although utilisation prices can be lowered below the tendered price if desired, in order to be cost competitive with other solutions. The advantage of this service is guaranteed availability payments during the windows that providers declare themselves available (not including 'optional windows' – see explanation on page 5).

2) Flexible Demand Turn Up

This route will be open for the duration of BST. Parties that were unsuccessful during the Fixed tender or were not able to meet the February tender deadline, or parties that want the flexibility to change availability and utilisation prices frequently may choose this route. Assessments will be made by National Grid on Fridays and Tuesdays to determine which providers are required for coming Friday-Monday and Tuesday-Thursday, respectively. Availability payments will only be made to providers who are successful at this assessment stage, however unsuccessful parties will have the option to make themselves available for the service with a utilisation payment only. By choosing this option, it will have no impact on the outcome of the assessment but offers a possible route to market for providers who have the ability to provide the service for a utilisation payment only. The advantage of the Flexible route is that it offers the flexibility to change availability and utilisation payments frequently to reflect weather and market conditions.

The table below summarises the key points from the two routes:

	Fixed DTU	**Flexible DTU**
Tender/ assessment	Tender deadline – 17th February 2017 Assessment by National Grid – 20th-24th February 2017 Results of tender assessment – 24th February 2017	Ongoing - Framework Agreements can be signed and parties can join the service throughout BST. Submissions of prices and MW availability will be assessed on Fridays and Tuesdays and providers will be notified whether they are required. Friday assessments will cover a requirement Friday-Monday, and Tuesday assessments will cover a requirement Tuesday-Thursday.
Availability payment	Submitted during February tender and fixed for duration of BST. Not available for 'optional windows'.	Submitted with availability declarations (see final row in table). Only guaranteed if accepted during Friday or Tuesday assessment. If unsuccessful at Friday or Tuesday assessment, can forego availability payment and be available for utilisation payment only. Not available for 'optional windows'.
Utilisation payment	Submitted during February tender and capped for duration of BST (providers can reduce below tendered price when declaring availability if desired). Paid for megawatts delivered.	Submitted with availability declarations (see final row in table). Paid for megawatts delivered.

Declaring availability	Declares the megawatts available for DTU. Submitted for the coming week or, if know what availability will be for a prolonged period, it can be between a range of dates or 'until further notice'

If I want to participate in the service, what do I need to do?

If you wish to enter into the Fixed Demand Turn Up tender in February 2017, you'll need to submit your tender bid by 17:00 hours on 17th February, via the **Fixed DTU tender submission Excel template** available on the Demand Turn Up webpage. The results of the tender will be shared on 24th February.

Successful participants will need to sign the Fixed Demand Turn Up agreement prior to the service start date of 27th March.

Information on how tenders are assessed and the contractual requirements, please see the **Fixed DTU Tender Rules** on the Demand Turn Up webpage. In line with our aspiration to increase the transparency of information published, it is our intention to share the results of the tender of this website.

Practicalities of service provision

Availability

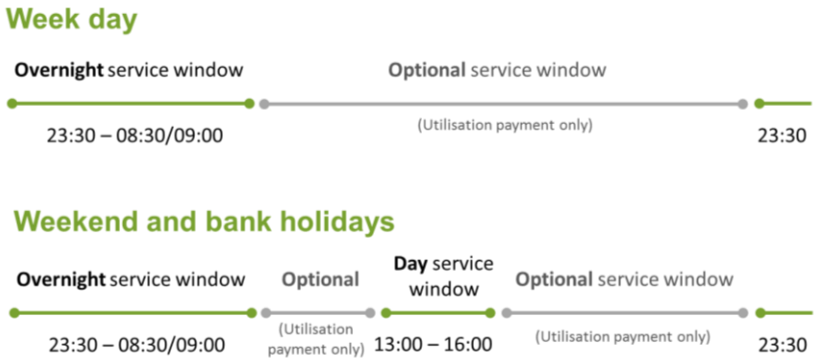
When does National Grid need Demand Turn Up? What are the availability windows?

Demand Turn Up will be extended for 2017 to cover British Summer Time (BST). The service will run from 27th March to 28th October 2017. The availability window, unchanged from the 2016 service, are:

	Daily	Weekends and English bank holidays
March, April, May, September, October (base months)	23:30 – 08:30	13:00 – 16:00
June, July, August (peaks months)	23:30 – 09:00	13:00 – 16:00

What are optional windows?

The periods in between availability windows are classed as 'optional windows' (see illustration below), during which there is likely to be less requirement for Demand Turn Up. Providers can declare themselves available during the optional windows, and receive a utilisation payment only.



How does National Grid know we're available to provide Demand Turn Up?

Providers submit availability reports to declare the megawatts they have available for Demand Turn Up. This can be done on a weekly basis or, if you know what your availability will be for a prolonged period, it can be between a range of dates or 'until further notice'. Once you have declared yourself available, you'll need to be prepared to deliver Demand Turn Up if instructed. Failure to do so will be treated as non-delivery.

Do I have to be available 24/7?

No, there is no commitment to be available 24/7.

Is it possible to be available for parts of an availability window, rather than the whole window?

It is possible to declare two different availabilities during availability windows, in line with Settlement Periods (i.e. on the hour and half past). For example, it is possible to declare the following availability: 5MW available 13:00-14:30 and 3MW 14:30-16:00, or 5MW 23:30-06:00 and 0MW 06:00-08:30.

For optional windows, one MW volume must be submitted for the whole period.

Can I substitute or replace a unit if one is unavailable?

Sites that are not able to offer the service should declare a zero megawatt availability. New sites can come into the service throughout the summer. NB there is no requirement for a site to be unavailable to sign up a new site.

Can I participate in other Balancing Services at the same time as DTU?

It is not possible for a provider to declare availability for Demand Turn Up at the same time as declaring availability for another Balancing Service. For example, to participate in Short Term Operating Reserve (STOR), it would be necessary for a provider to declare 0MW availability for DTU during the periods they wished to be available for STOR. In this instance, it is important to remember that it is possible to declare two different availabilities during DTU availability windows (as explained above) – for the avoidance of doubt, 0MW constitutes one availability value.

Demand Turn Up is not a Relevant Balancing Service for the Capacity Market.

Instruction

How will I be instructed?

Instructions will be issued via email, with a supporting SMS sent to the provider. As in 2016, in 2017 we will send an email containing the details of the megawatt response required and the timeframes during which it is required. Providers will need to confirm receipt of an email instruction within 30 minutes of it being issued.The aspiration is to automate the dispatch process in future and this will be once the new control room system has been rolled out.

If National Grid issues a Demand Turn Up instruction, how long will I be required to provide for? What's the maximum delivery time?

In 2016, the average length of delivery was 4 hours 20 minutes. However, each instruction depends on a number of factors, including the weather conditions and the provider's capabilities. We will ask you how long you are capable of providing Demand Turn Up for in a single instruction and we won't exceed this when we issue instructions.

What is the speed in which I need to respond?

As with duration of delivery, the speed in which a provider needs to respond is linked to individual providers' capabilities. The average notice period for an instruction (i.e. the time between a provider receiving an instruction and starting to deliver the service) was 7 hours 20 minutes in 2016. This may differ in 2017, depending on how far in advance we can identify our requirement, but we will only issue instructions that providers have told us they have the capability to meet.

How many calls can we expect per year?

There were 323 instructions issued in total between 1st May and 30th September 2016. The number of instructions per provider is dependent on a number of factors, including the weather conditions (wind speed and solar radiation), the price submitted in your tender and the price of other options – more economically efficient units will be utilised ahead of more costly options.

Payment

What payments will National Grid make to us for providing Demand Turn Up?

There are two forms of payment that National Grid will make as part of the Demand Turn Up service:

Availability payment – for being available to provide the service

Utilisation payment – for delivering the service when instructed

Unlike 2016, providers will have the flexibility to submit their own prices for the service – these prices will inform the economic assessment to determine which parties are accepted. The detail of how these payments work across the Fixed and Flexible services is explained in the 'Procurement' section of this document.

How will National Grid determine whether the service has been delivered?

There are two settlement options available to providers. It is the provider's decision as to which of the settlement options is most appropriate. The chosen settlement option will apply for the duration of the contract term.

As with the 2016 DTU service, a forecast method is available. For this option, providers will need to submit their forecast data (either their forecast demand or generation) on a half hourly basis to National Grid by no later than 10:00, one day ahead of real time. If no forecast data is received, it will be assumed that the provider is unavailable. To assess delivery of the service, the forecast data will be compared to the actual data submitted by the provider post-event, and the different between the two values should be equal to the utilisation instruction issued by National Grid.

Based on feedback from providers partipating in the 2016 service, we have also developed a baseline methodology approach. The baseline will be calculated using the average demand from the previous four entries for that day and time. For example, if you were instructed for Demand Turn Up on a Wednesday afternoon, the baseline would be calculated using the demand on the previous four Wednesday afternoons. If a Demand Turn Up instruction had also been issued on one of the four baseline Wednesdays, that day would be disregarded and the calculation would go back a week further.

Collaboration with Western Power Distribution (WPD)

What are the objectives and what does the trial involve?

National Grid and WPD trialled the sharing of Demand Turn Up for the first time in 2016. We're continuing the trial into 2017, to build on previous learning points, for example, around conflicts, information and monetary flows, and contractual arrangements between both parties.

The aim is to enhance our understanding of how we can share distributed energy resources to meet both transmission and distribution requirements, in a way that maximises value to participants (by offering different revenue streams) and also value to end consumers (by avoiding the need to duplicate processes).

National Grid will procure Demand Turn Up and share information with WPD on which providers are available within their network. WPD will them communicate which provider(s) they wish to use, and National Grid will issue instructions to Demand Turn Up providers on behalf of both parties.

The learnings from this year's trial and the plans for 2017 will be communicated through a joint report, which is due to be published mid-December 2016.

Why is this important?

As more generation connects to the distribution network, Distribution Network Owner (DNOs) are becoming more active and innovative in managing their networks, for example, exploring demand side response as an alternative to building assets. With this in mind, greater collaboration between National Grid and DNOs is required to understand how we can work effectively together and minimise conflicts.

In addition, distributed energy resources, often new technologies, are looking to diversify their revenue streams, by providing services to multiple parties, in order to realise their business cases.

Sharing Demand Turn Up between National Grid and WPD has been and will be an important step in understanding how parties can work together effectively to meet transmission and distribution requirements from sharing a single service.

How will this impact Demand Turn Up providers?

National Grid will remain the single point of contact for Demand Turn Up providers, so there won't be any additional work required as a result of the sharing trial. If you are within WPD's area, you may be utilised for the benefit of National Grid or WPD. If you have any comments or feedback on the trial, we'd welcome your thoughts – email commercial.operational@nationalgrid.com