

# Short-term Operating Reserve (STOR) - Requirements for compliance with aspects of the Clean Energy Package

ESO Initial Proposals for Industry Engagement

11 September 2020





## Executive Summary

As outlined in the [System Needs and Product Strategy](#) (SNaPS) (2017) and in the [Response and Reserve Roadmap](#) (2019), our ambition is to move the procurement of all balancing services closer to real-time. The requirements of CEP Article 6(9) place obligations on us to procure the STOR product at day-ahead.

This document sets out the ESO proposed strategy and requirements necessary to ensure that procurement of the firm STOR product is fully compliant with the requirements of Article 6(9) of Regulation (EU) 2019/943 (Clean Energy Package). Article 6(9) of the CEP obligates TSOs to procure Balancing Capacity products at day-ahead and that the contracting period shall be no longer than one day. Further details of the CEP and relevant obligations on NGESO relating to the STOR service were covered in our recent [industry webinar](#) and subsequent [frequently asked questions](#).

The existing procurement of firm STOR contracts was suspended in December 2019, as a consequence of the CEP Article 6(9), and with the exception of a small volume of longer-term contracts, all remaining firm contracts end on 31 March 2021. In order to comply with Article 6(9), we believe the procurement strategy and minimum requirements set out in this document are necessary to ensure the least risk transition to day-ahead procurement from 1 April 2021. At this stage, we have tried to avoid wholesale changes to the existing product, but instead defer these to be picked up through our reserve reform programme. We believe this is necessary to avoid any delays that could jeopardise our ability to deliver on our timeline for 1 April 2021. Therefore, aside from the minimum requirements identified, no other potential changes to the existing service have been proposed at this time, unless they can be introduced without risk to our delivery timeline. Unless otherwise stated within this document, we intend the STOR product to remain as specified in the current Standard Contract Terms (#12).

## Industry engagement

We would welcome feedback from STOR providers on these proposals in order to ensure we have an agreed solution for both the service and its procurement in time to meet the 1 April 2021 timeline.

We will be arranging an industry webinar for 29 September 2020 to walk through these proposals in more detail and to take feedback from industry. Engagement and input from providers is critical to being ready for April 2021 and we are keen to involve providers with the development of the final requirements, which we plan to share in October.

If you do have any initial feedback, suggestions or questions, then please direct them to [commercial.operation@nationalgrideso.com](mailto:commercial.operation@nationalgrideso.com) in the first instance.

## 1. Procurement Strategy

Following a detailed impact assessment of the existing and potential future STOR market and our operational requirements against the requirement of the CEP;

- We are committed to 100% procurement of the firm STOR product at day-ahead from 1 April 2021.
- Our initial expectation is that our total daily requirement for STOR will be ~1700MW but we intend to finalise this and inform the market over the coming months.
- We will continue to seek a derogation (aligned to the regulation for a minimum of 30% day ahead and 70% at month ahead) to allow us some flexibility with procurement as we transition to day-ahead.
- As we transition to day-ahead we will look to use the Optional STOR service and the Balancing Mechanism to meet any shortfall in the event of insufficient volume being available in the day ahead auction.
- Further development of new reserve products, aligned to our ambitions for simple and transparent products procured closer to real-time, will be captured through our reserve reform programme.

NGESO requires reserve to provide contingency for plant losses, market imbalance and demand forecast errors. Currently STOR meets a large part of this requirement. In the next few years this will change as new reserve products are developed to meet changing operating conditions. The requirement for reserve to maintain the balance between supply and demand of electricity will continue.

Traditionally we held three STOR tender rounds per year, to procure sufficient product to meet our operational requirement. It has been our stated ambition to move procurement closer to real time and, as a consequence of the CEP Article 6(9), this approach was suspended in December 2019. We are now required to procure balancing capacity products at day-ahead and that the contracting period shall be no longer than one calendar day.

Under Article 6(9) of CEP, Balancing Capacity contracts must be procured at no more than one day ahead and that the contracting period shall be no longer than one day. There is the ability to derogate this requirement to procure up to 70% of the volume at up to month ahead timescales, with the remaining 30% being procured at day ahead. It is our intention to procure 100% at day ahead, however, we do appreciate that this is a large step change for the ESO and the market. Therefore, as a precaution we will be seeking a derogation to ensure that, if in the unlikely event that 100% cannot be procured at day ahead in the initial few months, we are covered from a regulatory perspective.

### Day-ahead

STOR is a mature product (procured since 2007) with a liquid and competitive market. Historically our requirement for STOR has been for 2300MW each day made up of 1800MW for Short term operating reserve and 500MW to offset regulating reserve. When procurement of STOR was suspended in December 2019, we had existing firm STOR contracts, which provided ~1800 MW, that ran until 31 March 2021 and a small volume of longer-term contracts that run until 2025. Following the recent survey that was issued with our June 2020 update [letter](#), a number of market providers indicated they were keen to move to near real-time procurement and could do so within 6 to 9 months. In moving closer to real-time we believe operators of wind and solar farms, which previously have struggled to participate in longer-term procurement timescales (due to the variability of these energy sources), will now be able to enter the STOR market.

## 2. STOR service requirements

We have set out below the minimum requirements to transition the existing STOR service to day-ahead procurement. This is based on the existing firm STOR service/product, as specified in the current (#12) of the Standard Contract Terms. At this stage, we don't believe any significant changes are necessary, however the following are the minimum requirements and changes needed;

1. There will be no change to the existing minimum service requirements for;
  - minimum of 3 MW of generation or steady demand reduction (including aggregated)
  - 20 minute response time.
  - Response sustained for a minimum of two hours.
2. We do not intend to change the existing service annual seasons and daily availability windows, but the current window times may change. We will continue to define and publish future year requirement in advance to the market as we have historically done within the Tender Round Calendar. This will predefine the STOR day availability windows applicable for each day-ahead tender. These availability windows set out the periods within each STOR day that the firm STOR service is required. These periods are broken down into individual daily hours (typically two periods in each day) and split by Working and Non-Working Days and into 6 seasons through the year (April to March).
3. Each day-ahead tender will apply to the following STOR day, which runs from 05:00 – 05:00 (GMT), and all availability windows within the STOR day must form part of a single tender. This is unchanged from the existing STOR tender procedure. The start, end and publication of results for each tender has yet to be finalised but will need to allow sufficient time for all other ENCC processes and actions following completion of each tender.
4. As with the existing service, STOR providers will only be able to submit a day-ahead tender if they are party to the Framework Agreement and their unit is pre-qualified in accordance with the STOR registration procedure. We are considering a move away from the Framework Agreement and SCT structure, and instead follow the simplified structure adopted for the response auction trial, ODFM (Optional Downward Flexibility Management), but until this is confirmed we will continue with the existing Framework Agreement approach. For the avoidance of doubt, all Non-BM providers must have capability to be dispatched via our Platform for Ancillary Services (PAS) system.
5. Individual units existing parameters (e.g response time, ramp rates, recovery period, minimum run time and maximum run time) will not be required for each day-ahead tender. These parameters will be set as those provided at the point of pre-qualification and detailed within the Framework Agreement. This is a change to the existing tender process and will allow for a more automated and simplified tender and assessment process. We will ensure we have a fast track facility in place to allow any changes to parameters to be updated through the Framework Agreement.
6. For individual STOR units a unique contract number will be allocated for each daily tender contract award, an approach similar to that current used for Optional STOR, and the same unique number will be used for each daily tender contract awarded – where any unit technical parameters change via an update to the Framework Agreement, then a new unique contract number will be allocated.
7. The tender submission itself will only include the availability price £/MW/h and the MW (up to the pre-qualified MW). There will be no requirement for any other technical parameters. Tender submissions will cover all availability windows for the following STOR day with a single availability price £/MW/h covering all windows.
8. Contract transfers, as required by EBGL Article 34 will remain allowing STOR contracts to be transferred between STOR providers.
9. The requirement for weekly availability declarations will be removed.
10. Service delivery penalties and Event of Default (EOD) will need to be reviewed and simplified for single STOR day contracts. Rather than a range of penalties covering individual call off periods and overall performance over longer period, we may look to simplify to a single measure of availability and service deliver during each window. This needs more consideration and joint discussion with STOR providers. See links for detail of the existing [BM](#) and [NBM](#) performance penalties.

11. We intend to remove the Flexible STOR service. We no longer see this route to market is necessary as procurement will be at day-ahead and via the Optional STOR service rather than providers having to commit their volume for whole seasons at a time and potentially years in advance.

### 3. Availability payments to be settled as ‘Pay as Cleared’

All availability payments for firm STOR procured at day-ahead will be settled using a pay-as-clear mechanism.

Availability payments are classed as balancing capacity and not within scope of Article 6(4). However, we believe this change from pay-as-bid will be well received by existing and new STOR providers as a simple and easy mechanism that better facilitates a fair and transparent participation and also provides an easier market entry for new participants. Overall, this will help increase competition in the STOR market and deliver better outcomes for the end consumer.

The decision to move availability payments to pay-as-clear supports our ambition to take the learning from the response auction trials as set in the Response and Reserve Roadmap. We believe that moving to pay-as-clear will lead to lower prices than in a pay as bid mechanism if there is sufficient information and sufficient competition. The STOR market has in the past been liquid, and the expectation is that this will be a liquid market again when day-ahead procurement commences. Moving the availability price to pay-as-clear incentivises STOR providers to submit their marginal price and is believed will have a downward pressure on overall balancing costs.

Article 6(4) of the CEP requires the settlement of balancing energy using a pay-as-clear mechanism. The STOR service utilisation payment is classed as balancing energy and we have submitted a derogation against this requirement in order to remain pay-as-bid for 2 years from its approval. The utilisation of STOR in real time is dependent on both economic and technical parameters, and therefore remaining with the pay-as-bid mechanism is more appropriate. The change to the settlement method for availability should not impact the derogation for utilisation to remain pay-as-bid.

### 4. Tender assessment principles

We have set out below the high-level principles that NGENSO will consider in assessing bids for STOR. Work is ongoing to develop the more detailed assessment principles and methodology and once complete a separate assessments principles document will be published.

Only tenders submitted by STOR providers with a Framework Agreement and their unit is pre-qualified in accordance with the STOR registration procedure will be assessed. For the avoidance of doubt, all Non-BM providers must have capability to be dispatched via our Platform for Ancillary Services (PAS) system.

NGESO’s objective is to operate the system economically and efficiently, which is reflected in how we assess STOR tender submissions. All units tendered will be selected on the basis that the total costs of securing and operating the system are lower with than without that unit.

### High level assessment methodology

All compliant bids will be assessed in the same way using the following criteria.

- Providers will submit an availability price (£/MW/hr) and megawatt (MW) capacity.
- Bids are sorted from lowest to highest availability price.
- Determine if the marginal bid can be accepted based on the buy curve
  - If it can then accept marginal unit
  - If not, then reject the marginal and repeat until the marginal unit is found
- The marginal unit's price sets the clearing price and all parties receive the same price for their volume

## 5. Systems and IT impacts

We intend to develop a solution using the Salesforce system where many providers already have access for Prequalification, Transfers and P354 processes. Providers will be able to:

- Receive notifications and view upcoming Tenders
- Submit Tenders for a single unit via a GUI
  - The ESO will validate submissions upfront, so providers will know immediately if the bid is valid or needs to be resubmitted
- Bulk Upload Tenders for multiple units via a GUI
- Withdraw Tender
- Receive notification and view Tender Results

Below are examples of what a Service Provider GUI's could look like:

### View upcoming Tender

Service Name	Tender ID	Tender Period From	Tender Period To	Tender Open Date	Tender Close Date	Status	Tender Information
Committed STOR	TR2672AUG	06/08/2020 05:00	07/08/2021 05:00	02/08/2020 00:01	05/08/2020 00:01	Open	
Committed STOR	TR1233AUG	07/08/2020 05:00	08/08/2021 05:00	03/08/2020 00:01	06/08/2020 00:01	Open	
Committed STOR	TR1453AUG	09/08/2020 05:00	10/08/2021 05:00	05/08/2020 00:01	08/08/2020 00:01	Upcoming	
Committed STOR	TR3893AUG	10/08/2020 05:00	11/08/2021 05:00	06/08/2020 00:01	09/08/2020 00:01	Upcoming	
Committed STOR	TR1232JUL	24/07/2020 05:00	25/07/2020 05:00	20/07/2020 00:01	23/07/2020 00:01	Closed	
Committed STOR	TR1231JUL	25/07/2020 05:00	26/07/2020 05:00	21/07/2020 00:01	24/07/2020 00:01	Closed	

### Submit Tender

#### Tender Submission

**Tender Summary**

Tender ID: TR1234JUL

Service Name: Committed STOR

Tender Period From: 29/07/2020 05:00

Tender Period To: 30/07/2020 05:00

**Tender Data (single unit)**

Unit ID: Unit ID 1

MW: Provide MW input

Availability Price: Provide Availability Price (£/MW/hr)

Submit

**Tender Data (multiple units)**

To input tender data for multiple units in a single tender submission please fill in the details in the spreadsheet below and upload to the portal

Tender data Spreadsheet

Download
Upload

## View Tender Results

Search Tender Results									
Service Name	Tender ID	Tender Sub ID	Tender Period From	Tender Period To	Unit ID	Contract Num	MW	Availability Price	Tender Results
Committed STOR	TR2672AUG	SBAUG01	06/08/2020 05:00	07/08/2020 05:00	Unit ID 1	32.24	40	15.00	Accepted
Committed STOR	TR2672AUG	SBAUG02	06/08/2020 05:00	07/08/2020 05:00	Unit ID 2	32.25	35	10.00	Accepted
Committed STOR	TR2672AUG	SBAUG03	06/08/2020 05:00	07/08/2020 05:00	Unit ID 3	32.26	50	18.00	Rejected
Committed STOR	TR1233AUG	MSBAUG99	07/08/2020 05:00	08/08/2020 05:00	Unit ID A	45.10	12	11.00	Accepted
Committed STOR	TR1233AUG	MSBAUG99	07/08/2020 05:00	08/08/2020 05:00	Unit ID B	45.11	18	16.00	Rejected
Committed STOR	TR1233AUG	MSBAUG99	07/08/2020 05:00	08/08/2020 05:00	Unit ID C	45.12	20	20.00	Rejected
Committed STOR	TR1233AUG	MSBAUG99	07/08/2020 05:00	08/08/2020 05:00	Unit ID D	45.13	10	10.00	Accepted

## API Integration:

The ESO is exploring API integration allowing 'Tender Submission' and 'Receive Results' to be done without manual intervention. Although this is not expected to be live in the first release, we would like feedback if this capability would be welcomed by industry so it can be prioritised accordingly.

## Next Steps

29 September 2020 - Industry webinar for questions and feedback on proposals.

October 2020 - Further engagement and input from providers to help shape final requirements.

Late October – More detailed final requirements, followed by ongoing engagement and involvement with providers as we progress towards 2021.

If you do have any initial feedback, suggestions or questions, then please direct them to [commercial.operation@nationalgrideso.com](mailto:commercial.operation@nationalgrideso.com) in the first instance.