

Firm Frequency Response Review

Outline Change Proposals
Document (OCP – 18)



14 June 2018

This Outline Change Proposals Document (OCP-18) will review the Firm Frequency Response (FFR) service and its associated documentation to enable additional flexibility and improve the service more generally.

Where applicable it is envisaged that any resulting amendments to the service will be implemented no earlier than 1st August 2018.

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Executive Summary

This OCP has been created to ensure that the FFR service continues to attract new entrants and facilitate competition. In doing so National Grid has taken on board observations from the current FFR tender process and comments received through the Flexibility workstream from both current and prospective service providers. The following items are being proposed:

- A limitation on the number of tenders received per unit per tender round.
- Reducing the time within which a tender can be withdrawn from the tender process.
- Pre-qualification – Asset to have passed testing one month prior to delivery of service.
- Change to the definition of a Service Day to align with EFA blocks.
- Clarity on termination provisions in the Mandatory Works clause.
- Monitoring and testing - updating performance factors.
- Introduction of mechanism to enable aggregated BM units or aggregation of individual BM units to participate in the FFR tender market.
- Housekeeping – Simplification of the FFR SCTs as per Product Roadmap.

In the course of reviewing frequency response, National Grid is revising the volumes, methods, and methodologies for the procurement of frequency response. It is envisaged that over the coming months, the industry will see increased transparency in these aspects.

Views are invited from the industry on each of the areas highlighted in this document, in addition to any other issues that industry members consider worthy of raising with a view to improving the FFR service.

Responses to this consultation should be sent to commercial.operation@nationalgrid.com

by 5pm on Thursday 12th July 2018

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INTRODUCTION

National Grid has a licence obligation to control frequency within the limits specified in the Electricity Supply Regulations, i.e. +/- 1% of nominal system frequency, 50.00Hz. National Grid must, therefore, ensure that sufficient generation and / or demand is held in automatic readiness to manage all credible circumstances that might result in frequency variations.

National Grid forecasts ahead of time and refines throughout the interim to real time, the response requirement to be held, based primarily on the largest loss of generation and demand on the system; weather conditions; transmission conditions; etc.

The response to meet low frequency events, caused by circumstances where demand is greater than generation, is currently met in two timescales:

Primary response: an increase in active power from a response provider within 10 seconds which must be maintained for a further 20 seconds;

Secondary response: an increase in active power from a response provider within 30 seconds which must be maintained for a further 30 minutes.

By contrast, high system frequency incidents are situations where generation is greater than demand and consequently system frequency rises. The response required from the high frequency response service provider is a reduction in active power, within 10 seconds to be maintained thereafter.

A LIMITATION ON THE NUMBER OF TENDERS RECEIVED PER UNIT PER TENDER ROUND

Currently a provider can submit as many tenders for a unit as they wish. As competition in the FFR market has grown so the number of tenders being submitted has vastly increased and the administration associated with this is becoming increasingly unmanageable.

As a result of this, the proposal is to change clause 2.3.3 to a capped number of tenders that a provider can offer per unit, per tender round to no more than two and that submitted bids must be structured so that it would be possible accept all submitted tenders if successful in the tender round (i.e., tenders for the same unit cannot overlap with each other)

Question 1. Do you agree with the proposal of capping the number of tenders that can be submitted?

Question 2. The current proposal is to cap the numbers of tenders per unit to two per tender, if you disagree with this what number would you suggest?

REDUCING THE TIME A TENDER CAN BE WITHDRAWN FROM THE TENDER PROCESS

Currently service providers can withdraw tenders up to 11:00am on D12 (tender results day). The withdrawal of tenders so close to results being published has an impact on the tender assessment process, especially if that tender that was due to be accepted.

National Grid is proposing that a tender can be withdrawn from the tender process by 11:00 on Business Day 4, with Business Day 1 being the date Market Day (Close of FFR tender event). This change will still afford providers the opportunity to withdraw their tender after submission, while also allowing sufficient time for the assessment and governance processes to be rerun to reflect any change that a tender withdrawal may create. Additionally, with the ability to reassess the tenders, this will allow providers that may have been rejected, to have their tenders reconsidered.

Question 3. Do you agree with the new proposal of changing the time that tenders can be withdrawn, to eight days before results day (i.e. 11:00 on D4)?

Question 4. If you do not agree, what timescales would you suggest as the latest that a tender can be withdrawn from the FFR tender process?

PRE-QUALIFICATION – ASSET TO HAVE PASSED TESTING ONE MONTH PRIOR TO DELIVERY OF SERVICE

Currently service providers can deliver the contracted FFR service as long as the unit passes testing prior to the start date of the contract. When a unit that is due to deliver a contracted service fails to pass the testing with less than a month's notice, this leaves National Grid no option other than to procure this capacity through the within day mandatory market, which may not be as economic as the originally contracted tender. The unavailability of this capability also creates a lost opportunity for other providers who could have been able to provide the service. In order to avoid this scenario National Grid is proposing that all units that are awarded a contract must have passed testing 1 month prior to commencement of service delivery. This proposal will allow National Grid to procure any shortfall through the FFR tendered market. As National Grid are removing the maximum limit of six month forward tendering, it is believed that this development will allow service providers to plan their delivery of services including sufficient time to allow for testing.

Question 5 - What are your thoughts on contracted units having to have passed testing 1 month prior to delivery?

CHANGE DEFINITION OF A SERVICE DAY

As part of the product simplification roll out the FFR tendered service will be moving to EFA blocks, the current definition of a service day needs to be amended to reflect this change. The current definition of a service day is *"a period commencing at 00.00 hours on a calendar day and ending at 00.00 hours on the next following calendar day"*.

To line up with EFA blocks National Grid propose that service day definition changes to 23:00 – 23:00, for example service day starts at 23:00 Monday and finishes at 23:00 Tuesday, starts at 23:00 Friday finishes 23:00 Saturday. This proposed change is currently how tenders that have start and finish times in different days are assessed.

Question 6. Are there any implications that you are aware of that changing the hours defined as a service day would create?

TERMINATION PROVISION TO MANDATORY WORKS

Currently service providers submit a mandatory works provision as part of their FFR Framework agreement for units that are in the process of development or construction. When these works are delayed for any reason, providers provide a revised plan of the timescales using the cure plan provision in the Framework agreement. National Grid has seen a rise in the use of cure plans resulting in delays to the provision of contracted FFR services on the expected start date, this has led to increased costs to replace the delayed capability by procuring in alternative markets. After listening to feedback from service providers, the decision has been taken to remove the six month cap for forward tendering allowing service providers to develop their own delivery programme to ensure that units are available at the start of their contract. In allowing providers to have this control over their development periods. National Grid expects that there will no longer be a reason to use cure plans (except for contractually defined Relief Events or Force Majeure events) and therefore we will look to terminate contracts for units that are not able to deliver on their contracted start date.

Question 7. What would you like to see as a defined Relief Event to activate a cure plan?

MONITORING AND TESTING – UPDATING PERFORMANCE FACTORS AND FORMULA

Currently monitoring and testing only looks at performance factors for under-delivery against contracted volumes. As part of the development of the baseline trial and through the output from data modelling it has been identified that performance factors should also be included in the event of over-delivery against contracted levels. The reason behind this is that a significant level of unexpected over-delivery can result in system stability issues and, in extreme cases, subsequent frequency excursions in the opposite direction. At present the tolerance around under-delivery is 5%, and we are proposing to mirror this tolerance for over-delivery.

The ongoing baselining trail has highlighted that the formula currently used for monitoring and testing $PPM = A/B * 100$ (dynamic) need to be updated to improve greater accuracy. National Grid propose using the formula below.

$$Performance \% = \frac{PPM_1 + PPM_2 + \dots + PPM_{1800}}{1800}$$

$$where x_1 = \frac{\text{metered response at 1 second}}{\text{contracted response at 1 second}} \quad \& \quad PPM_1 = (2 - x_1) * 100 \text{ if } x_1 > 1, \quad PPM_1 = (x_1) * 100 \text{ if } x_1 < 1,$$

Question 8. Do you agree with the approach to performance factor tolerances for over delivery of FFR service?

Question 9. If you disagree with the proposed 5% tolerance for over delivery, please suggest what you believe it should be set at and provide any justification for this figure

Question 10. Please state any concerns that you have regarding the proposed change to the formula used for monitoring and testing

INTRODUCTION OF MECHANISM TO ENABLE AGGREGATED BM UNITS OR AGGREGATION OF INDIVIDUAL BM UNITS TO PARTICIPATE IN FFR

National Grid are aiming to increase access to the Balancing Mechanism under Principle 3 in the Electricity System Operator Forward Plan, through facilitating aggregated BMUs created by Supplier and Virtual Lead Parties (through code modifications GC0097 and P344 - implementation of Project TERRE and wider access).

National Grid foresee a number of challenges in allowing units to be active in the BM and deliver FFR services under Non-BM framework agreements. To align the market with the future wider access goals, National Grid propose to review and amend the SCT's to facilitate interaction between BM access and the tendered FFR market for aggregated BMUs (restricted to GSP group).

National Grid are mindful that an issue with aggregation is the concerns over the ability to fund projects. National Grid are also proposing to review how the SCTs and framework agreements could be structured to facilitate the introduction of aggregated BM units. National Grid welcome providers' input onto how this can be enabled.

Question 11. Do you agree with the proposal of reviewing the SCT's to introduce a mechanism to support aggregated BMUs to access the tendered FFR market?

Question 12. Please state any concerns that you have regarding the proposed changes.

Question 13. We welcome views regarding how you might see enabling Aggregated BM units or aggregation of individual BM units to participating in the FFR tendered market?

HOUSEKEEPING

As identified in the Product Roadmap for Frequency Response and Reserve in December 2017, we have worked to simplify the existing FFR SCTs. The aim of this work has been to increase clarity over the requirements in the contract without materially changing their provisions. The following points are considered to be housekeeping changes to the SCTs i.e. non-material changes.

1. Simplification of SCTs as set out in the product roadmap for frequency response and reserve; combining Sections 3, 3A, 4 and 4A into a single service description section
2. Defining Acceptance/ Rejection of FFR tender
3. Removal of requirement to publish data columns in tender proforma and the post tender report that are no longer used such as; Response Energy Fee, Window Initiation Fee, Nomination Fee, Rapid response and Additional TEC/STTEC requirements.
4. Performance monitoring to reflect any changes from base lining trial
5. Remove indexation provision from SCT clause 1.3.6
6. Various incorrect references, cross-references and numbering in the FFR SCTs will be updated and corrected
7. Changing the definition of Multiple Month Tender to increase the maximum number of months from 24 to 30.
8. Amend wording relating to sites and units to be consistent with other services

Below is the OCP simplification summary of amends for SCT issue 9

No.	Issue/Section	Existing Clause Ref	Explanation of changes/Comment
1	OVERALL STRUCTURE		
1.1	Introductory Section	-	Service description will be removed Contract framework structure will be clarified Additional explanation of concepts of "FFR Unit" and "Contracted FFR Unit"
1.2	Applicability of Sections and FFR Agreements explanation	1	Introduction will be deleted as replicated contents page Change provisions will be moved to Boilerplate Description of FFR Agreements will be moved to Section 1 and simplified
1.3	Tender Rules	2	Minor structuring to improve clarity

No.	Issue/Section	Existing Clause Ref	Explanation of changes/Comment
1.4	Repetition of text	3, 3A, 4 and 4A	All service contract terms (static and dynamic, BM and non-BM) will be consolidated into a single Section
1.5	Events of Default and Consequences	Annexure to each Section	Will be moved into service contract terms
1.6	Service contract terms	-	To aid clarity, will be restructured around Service Availability, Service Instruction and Service Delivery
1.6	Capability Data Tables – interpretation rules	3.6 and 4A.6	Will be moved to Definitions and Interpretation Section
1.7	Assessments and Testing	7	Will be moved to Section 4
2	PERFORMANCE MONITORING		
2.1	Percentage Performance Measure (dynamic)	3.14.2 and 4A.14.2	Proposed change to formula shown above
2.2	Percentage Performance Measure (static)	4.14.2 and 3A.14.2	For simplification, two alternative assessment methodologies to be replaced by single methodology
2.3	NG right to declare non-capability and require Repeating Test (dynamic only)	3.14.4, 3A.14.6, 4.14.6, 4A.14.4	For simplification and to align with static provisions, removal of provider counter-notice provision (3.13.9 and 4A.14.6), and reasonable grounds criteria (3.13.10 and 4A.14.7) in dynamic provisions
2.4	Obligation to retain records (dynamic only)	3.13.11 and 4A.14.8	Will be extended to static
3	SERVICE ELEMENTS		
3.1	Rapid Response and Rapid High Frequency Response		Will be removed, as no longer any requirement
4	TENDER PROCESS AND SERVICE PARAMETERS		
4.1	FFR Prequalification Assessment	-	Any FFR Unit included in an FFR Agreement must have passed an FFR Prequalification Assessment before being tendered in for service

No.	Issue/Section	Existing Clause Ref	Explanation of changes/Comment
			provision in the following calendar month. However, for tenders where the contract start date is more than a month away, then the assessment may be deferred until closer to the tendered contract start date and tender acceptance BUT the FFR Contract will be subject to termination by NG if the assessment is not passed sooner than 1 month prior to the contract start date.
4.2	Multiple tenders with overlapping service terms	2.3.3(a)	Will be limited to no more than 2 tenders
4.3	Multiple Month Tenders	6	Maximum length will be extended from 24 to 30 months
4.4	Service Windows	6	Will be defined by EFA Blocks
4.5	Indexation	1.3.6 and 2.2.1	Will be removed – all prices to be fixed throughout tendered service term
4.6	Tender withdrawal	2.3.5	Withdrawal deadline to be 11:00 8 Business Days prior to results day, to allow re-assessment and to accommodate removal of withdrawn tender results from market communications
4.7	Tender acceptance	2.5.1	Clarification as to method of communication of acceptances and rejection
5	SERVICE DELIVERY		
5.1	Tendered Contracted Frames will be automatically accepted by NG	3.2, 3A.2, 4.2, 4A.2 3.3, 3A.3, 4.3, 4A.3	Concept of Nomination and Nominated Windows (including Automatic Nomination Facility and Window Revision Facility) no longer needed, and instead Service Window will be used throughout
5.2	MEL and SEL to be maintained within tendered max SEL/min MEL	3.4.2(b)	New facility for deviations to be agreed in advance with NG (to accommodate unforeseen temperature variations)

No.	Issue/Section	Existing Clause Ref	Explanation of changes/Comment
5.3	Nomination Fee and Window Initiation Fee	3.5.1(b) and (c), 3A.5.1(b) and (c), 4.5.1(b) and (c), 4A.5.1(b) and (c)	Will be deleted – all payments will be made via availability payments and response energy payments
6	INDEMNITY CLAUSES		
6.1	Third Party Claims	3.11, 3A.11, 4.11, 4A.11	<p>Will be clarified/simplified</p> <p>Will be extended to DC not just embedded</p> <p>Will be extended to site exports arrangements and not just site supplies arrangements, as well as related services</p> <p>Will give provider conduct of claims</p>
6.2	Service Impairment	3.12, 3A.12, 4.12, 4A.12	<p>Indemnity will be replaced with a narrower obligation to reimburse additional costs of service replacement</p> <p>Additional remedy for NG of contract termination</p> <p>Concession where competing service is a balancing service procured by NG</p>
6.3	Tender Collusion etc	2.3.4	Indemnity narrowed to collusion only [(a) deleted, and (c) moved to separate clause with remedy for NG of contract termination]
7	HOUSEKEEPING/OTHER		
7.1	Termination of FFR Contracts	3.15, 3A.15, 4.15, 4A.15	<i>Detail of proposed change above in the termination provision to mandatory works section above</i>
7.1	“Operational Day”	6	Delete – not used
7.2	“Service Day”	6	Will be replaced by EFA Day

As stated in the product roadmap for simplification of frequency services we are looking to simplify the Standard Contract Terms so that all service contract terms (static and dynamic, BM and non-BM) will be consolidated into a single Section. A draft version of the agreement showing how this will look has been attached to allow provider to familiarise themselves with the new format. In addition to this any of the proposed changes that are taken forward will also be added into the final version

We would welcome any comments you may have on the simplified Standard Contract Terms



FFR SCTs -
Simplifcation Versio

RESPONSES

National Grid welcomes responses from the industry on any of the topics raised in this Outline Change Proposals Document. In addition, if you would like to raise any other topics for improvement to the FFR service, please include this in your response.

Any questions regarding the content of this Outline Change Proposals Document should be directed to Andrew Rice (andrew.rice@nationalgrid.com).

All responses to this document should be emailed to commercial.operation@nationalgrid.com by no later than 5pm on **Thursday 12th July 2018**. Please note that unless marked as 'Confidential', all responses will be published on the National Grid Website.

Any resulting amendments to the FFR service will be implemented no earlier than 01 August 2018.