

Assessment Principles – Firm Frequency Response

January 2020 – Version 3

Contents

Contents.....	2
1. Introduction.....	3
2. Economic Assessment.....	3
2.1 Cost of a tender.....	3
2.2 Alternative actions.....	3
3. Nominations.....	4
4. Technical capability.....	4
5. Assessment Principles.....	4

1. Introduction

This document sets out the principles that National Grid Electricity System Operator (NGESO) will consider when assessing tenders for Firm Frequency Response.

2. Economic Assessment

NGESO's objective is to operate the system economically and consequently, the assessment reflects that view. The accepted tender will be selected such that the total costs of securing and operating the system are lower than without selecting the tender.

2.1. Cost of a tender

The cost of a tender may be made up of:

- Availability fee x hours of delivery
- Window initiation fee x forecast hours of nomination
- Nomination fee x forecast hours of nomination
- Where appropriate, response energy price x volume of response energy delivered

At present, only the availability fee is generally submitted by providers and hence the total cost of the contract is availability fee (£/h) x hours of delivery.

2.2. Alternative actions

The cost of alternative actions to accepting an FFR tender may be made up of:

- Alternative frequency response service holding fees x forecast of volume and hours of requirement
- Expected utilization price x forecast utilizations
- Forecast price and level for balancing actions in the Balancing Mechanism or elsewhere required to reload plant to optimize delivery of response
- Forecast cost of creating additional frequency reserve, part of operating reserve, where required, to allow real-time optimization to meet all frequency response requirements

Alternative frequency response services may be:

- Other accepted FFR tenders
- Optional contracts with providers
- Mandatory or commercial frequency response services

- Any equivalent service available elsewhere

The costs associated with the creation and optimization of frequency reserve may be incurred through contracts such as bids and offers, warming contracts, forward trades or other services.

3. Nominations

NGESO will publish a requirement ahead of each tender round. Accepted tenders forming contracts are then nominated on a monthly basis. This is done by forecasting the level of overall requirement for frequency response services and by considering the forecast price of alternative frequency response services and the costs associated with the creation and optimization of frequency reserve required to meet all frequency response requirements.

If the combination of nomination fee and window initiation fee is modest, a tender is more likely to be nominated more often. As generally only the availability fee is tendered currently, the expectation is that all windows will be nominated for accepted contracts.

4. Technical capability

NGESO will consider the level of response capability of the tender across the range of Frequency Deviations, -0.8Hz and +0.5Hz, as appropriate. In assessing the response capability of the FFR Tender we will consider the level of provision of the following Frequency Response sub-products:

- Static (or non-dynamic) Primary Response
- Dynamic Primary Response
- Static (or non-dynamic) Secondary Response
- Dynamic Secondary Response
- Static (or non-dynamic) High Frequency Response
- Dynamic High Frequency Response

During each day and through the year each sub-product has a varying forecast requirement and forecast alternative cost of provision. Information as to the forecast requirement and historic procurement of Frequency Response will be provided within the Monthly Market Information.

5. Assessment Principles

We will consider any relevant factors in the appraisal of FFR tenders as indicated below (order is not indicative of importance):

In addition to the relevant factors there may be some instances whereby we receive bids that have the same characteristics (same EFA block, price, volume) whereby we may need to introduce last resort rank factor. As this is last resort, we endeavor to consider any other differentiating factor prior applying the last resort rank factor. Each tender (all or nothing tenders will be classed as 1 tender) will be randomly assigned a unique number should the last resort rank factor be required. For full transparency, regardless if the rank factor was used in the assessment, the NGESO shall share with market participants how their bids were randomly ranked as part of the results publication.

- The level of all types of frequency response indicated in the FFR tender
- Any reduction in value ascribed to utilization restrictions indicated in the FFR tender
- For dynamic frequency response providers, the characteristic of response as a function of frequency deviation across the entire response matrix at the tendered part load point or within the part load point range.
- For static (or non-dynamic) frequency response providers, the tendered frequency relay pre-set level(s), namely the frequency at which static (or nondynamic) response will be delivered by frequency relay operation, and the time taken to deliver the frequency response.
- The performance and reliability of the tenderer and/or tendered unit or site(s) in delivering frequency response through firm frequency response, mandatory or commercial frequency response services or elsewhere.
- Where the tender includes a range within which the part load point will be confirmed, NGESO will assume the minimum capability of frequency response, as appropriate against requirements, within the tendered range.
- The interaction with any other balancing services provided by the tenderer to NGESO from the unit or site(s) in question.
- The speed, flexibility and reliability of interface arrangements between NGESO and the provider.
- The financial position of tenderer and its holding company (if any).
- The extent of planned outages and limitations on the transmission system or distribution system of any host public distribution system operator affecting the unit or site(s).
- Any other factors that, in NGESO's reasonable opinion, are relevant in appraising the viability of any FFR tender submitted.

