

Stability Pathfinder Phase One Assessment principles

Introduction

The purpose of this document is to set out the rules that we will apply to assess the tenders made by providers to provide the stability pathfinder phase one service to the ESO.

Governance

We have produced these in accordance with license condition C16 of the NGENSO transmission license. It will be made available online, on our websites, for as long as we intend to apply it for the procurement of the stability service. We will update this document as the need arises. Any updates will be made available online.

Version control

Version	Date	Status	Notes
1	21/10/2019	Final	First release
2	05/11/2019	Final	Availability payment changed to £/SP from £/y Regulated network solutions added to list of alternative costs Re-word contract length section to refer to end date instead of duration Reactive range described in injection/absorption instead of lead/lag Effectiveness section included Volume limit included Other minor changes

Prequalification criteria

Any provider who meets the technical requirements will be assessed using the principles set out in this document.

Assessment principles

Our objective is to maintain the balance of the electricity system in an efficient, economic and coordinated manner. So, to assess the tenders we calculate a forecast cost for each tender and assess all tenders against the alternative cost of maintaining the stability of the system. We will only accept those where the forecast tendered costs are lower than the forecast alternative cost.

Contract length

Participants can submit tenders delivery ending on 31 March 2023 or 21 March 2026. We will assess all tenders ending in 2023 together as one, and separately, all tenders ending in 2026 together as another assessment. We will then decide between the two tender sets on the basis of the best overall value delivered. This will be done to ensure that we get the most economic solution. We will not mix tenders ending in 2023 with those in 2026-.

Forecast costs

The forecast cost is made up of the:

- Availability payment = £/settlement period
- Active energy payment = £/MWh

To assess the tenders, we will scale the tender availability price by the how much inertia it provides, what the reactive range is, where providers are located, the stability support provided and how much power is consumed.

Inertia contribution

The amount of inertia a unit provides will determine how useful it is in providing stability to the system. We will scale the price received by the inertia contribution.

Tenders that have a higher inertia will be valued higher than tenders with lower inertia.

Reactive range

The quantity of MVar injection or absorption determines how useful it is in managing voltage in a region.

Providers that can provide larger injection and absorption capability will be valued higher than those providing a smaller capability.

Stability Support – National

The voltage level that providers are connected to will impact the effectiveness in providing stability to the wider power system. For phase 1 all substations will have a connection effectiveness assumed, based on the connection voltage.

Providers connected at 400kV are more effective for assisting with the national stability requirement so will be valued higher than those connected at lower voltages (i.e. 275kV or 132kV).

Stability Support – Local

The location of the provider in GB will affect the ability to provide stability support to the local power system. We will assign a benefit to each zone. The mapping of the substations to the zones will be provided in the invitation to tender pack. We will provide a view of the zones where the benefit is higher.

Providers connected at substations where zonal benefit is higher will be valued more highly than those where the zonal benefit is low.

Regional Voltage

The location in GB of the provider will affect the ability to provide reactive support to the system. We will map the substations to the voltage regions which will be shared in the invitation to tender pack. We will also provide a view of the regions where the reactive weighting is higher.

Providers connected at substations where the reactive weighting factor is higher will be valued more highly than those where the reactive weighting factor is low.

Power consumption

The quantity of power (demand) used to provide the service. We will pay the active energy payment for the quantity of power taken from the system up to the capped value submitted in the tender.

Providers that have a smaller demand for power for their inertia contribution will be valued higher than those with a larger demand for power for their inertia contribution.

Effectiveness

In rare circumstances, there may be a reason to consider the effectiveness of a particular connection, in addition to the ratings assigned generally by location and voltage level (i.e. those for stability support – national, stability support – regional and regional voltage, as described above). If we assess that a proposed connection would limit the benefits to

the operation of the network from being delivered, we will consider this as part of the assessment. It is not possible to assess all potential connection locations in advance, so this will happen after tenders have been submitted.

Providers with a strong connection to the transmission network will be valued higher than those with a very weak connection.

Comparison with Transmission Owner Assets

This assessment methodology is provider agnostic. If a solution is submitted by an existing Transmission Owner via the regulated route, the assessment will assume that the total costs of the assets will be recovered over the contract length when determining a £/settlement period rate.

Transmission owner assets and other commercial providers will be assessed on parity using a cost per settlement period basis.

Alternative costs

The alternative costs for stability will be made up of one or more of the following:

- Footroom and headroom creation to allow units to be synchronised
- Synchronising additional synchronous machines to provide inertia
- Frequency response costs
- Curtailing the largest losses
- Voltage costs
- Additional bids and offers to maintain generation and demand balance
- Regulated network solutions

Volume limits

We will procure up to 25GVA.s through this process with a cap of ~33% of the market which equates to 8GVA.s from any company¹.

Market information

To give transparency of this service we will publish market information via the NGENSO website.

After the assessment, we will publish the number of providers, tender parameters including prices and whether they were accepted or rejected.

¹ Company is defined as the highest level definition of group structure, including (non-exhaustive) all subsidiaries, affiliates, special purpose vehicles or majority shareholding interests