

Stage 2 Feasibility Report

Provider Name	[Complete]
Site/Asset/Project Name	[Complete]
Submission Date	[Complete]

Introduction

Purpose of the F2 Report

The objectives of **F2** are to:

1. Confirm technical capability, and detail how will the BS Service be delivered.
2. Provide an Implementation Strategy.
3. Develop network modelling to ensure the BS Service will not cause any impact or damage to third party plant or equipment, where the service is provided in an alternative operating mode.
4. Provide a commercial offer for the BS Service.

Instructions

There is no report template for the F2, but you should use the structure provided for F2 in '**TD2 – Feasibility Assessment Process**', and must attach to your report '**F2 Appendix 1**' and '**F2 Appendix 2**' which are included within this document.

Commercial Submission

The F2 Report shall include a full and detailed breakdown of all costs included in the commercial offer for the provision of the BS Service. NGESO reserves the right to employ consultants to evaluate the designs and cost structures as part of the tender, and may provide pricing schedule templates later in the process (but before commencement of F2 studies).

F2 Appendix 1 - List of Appendices / Attachments

Please list document titles of any associated attachments.

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F2 Appendix 2 – Technical Bid

Technical Requirements

Ref	Requirement	Minimum	Unit	Provider Capability	Reference to F2 section evidencing the requirement
1.01	Time to Connect	≤ 2	hours		
1.02	Service Availability	≥ 90	%		
1.03a	Voltage Control (Leading)	+10	% of nominal Volts		
1.03b	Voltage Control (Lagging)	-10	% of nominal Volts		
1.04a	Frequency Control (Lower)	≥ 47.5	Hz		
1.04b	Frequency Control (Upper)	≤ 52.0	Hz		
1.05	Resilience of supply, Black Start Service	≥ 10	hours		
1.06	Resilience of Supply, BS Auxiliary Unit(s)	≥ 72	hours		
1.07	Block loading size	≥ 20	MW		

1.08	Reactive Capability	≥ 100	MVAr Leading		
1.09	Sequential Black Starts	≥ 3	starts		
1.10	Short-circuit level (following the start of a system disturbance)	For $t \leq 80\text{ms}$: $I \geq \frac{240 [\text{MVA}]}{\sqrt{3} \cdot U} [\text{kA}]$ $U \equiv$ connection voltage [kV]	For $t \leq 80\text{ms}$, please state value of I, in kA		
		For $t > 80\text{ms}$: $I \geq \frac{100 [\text{MVA}]}{\sqrt{3} \cdot U} [\text{kA}]$ $U \equiv$ connection voltage [kV]	For $t > 80\text{ms}$, please state value of I, in kA		
1.11	Inertia Value	≥ 800	MVA.s		

Ref	Requirement	Unit	Provider Capability	F2 Reference
3.1	Connection to Network			
3.1a	Transmission / Distribution Connected	Enter a T or D as appropriate		
3.1b	Multiple / single connections to the Network	Enter a number to represent the number of routes on to a network owned busbar.		
3.1c	Different Technology with a Black Start Zone	Enter the fuel or technology type of the equipment providing the service.		
3.2	Power Output			
3.2a	Reactive Capability at 0MW	Mvar		
3.2b	Active Capability	MW		
3.3	Resilience of Supply			
3.3a	BS service at contracted Power Output	hours		
3.3b	BS Auxiliary Units	hours		
3.4	Contribution to System Stability			
3.4.1a	Short circuit Level	kA		
3.4.1b	Short circuit Level	kA		
3.4.2	Contribution to Inertia	MVA.s		
3.5	Contribution to Restoration Time			
3.5.1	Contribution to Restoration Time	hours	Note: NG ESO to assess	

Assessment Criteria