

DATED

202[]

NATIONAL GRID ELECTRICITY SYSTEM OPERATOR LIMITED

and

[PROVIDER name]

**COMMERCIAL SERVICE AGREEMENT
FOR THE PROVISION
OF A PRIMARY ELECTRICITY SYSTEM RESTORATION
(BLACK START) SERVICE**

at

[Site name]

Contract Log No: [National Grid to provide]

Subject to Contract

Draft v.1.0

CONTRACT FORM

Parties:

The “ Company ”:	NATIONAL GRID ELECTRICITY SYSTEM OPERATOR LIMITED , a company registered in England with number 11014226 whose registered office is at 1-3 Strand, London, WC2N 5EH;
The “ Provider ”:	[], a company registered in [] with number [<i>Company number</i>] whose registered office is at [<i>registered office</i>].

Background:

The Company issued an Invitation to Tender (“**ITT**”) for the provision of Electricity System Restoration Services [in the South East region] on [].

The Provider is the owner of the Black Start Plant and has been awarded a contract to provide a Primary ESR Service in accordance with the ITT.

This form (“**Contract Form**”) together with the document titled the Primary Electricity System Restoration Service General Terms (“**Service Terms & Conditions**”) attached (including the annexes and schedules thereto) shall form the entire agreement between the Company and the Provider regarding the provision of a Primary ESR Service.

Words and expressions used in this Contract Form and not defined herein shall have the meanings ascribed to them in the Service Terms and Conditions.

Part 1 – Conditions Precedent

The Provider shall use its reasonable endeavours to ensure that each of the following conditions precedent are satisfied by not later than [] (the “**Final Consent Date**”):

A. [The Provider obtaining all necessary Consents for commencing the Works].
B. [The Provider executing the variation to the Bilateral Agreement for the Black Start Plant].
C. [The Provider entering into a construction agreement for the Works with its contractor].
D. [The variation of the Balancing and Ancillary Services Agreement]
E. [The Provider has entered into an agreement for the supply of electricity required for the purposes of the ESR Service]
F. [Delivery by the Provider to the Company of evidence to the Company’s satisfaction of its ability to deliver Acceptable Security for an amount equal to the Security Amount ¹].

¹ If required by the tender rules.

Part 2 - Works

- A) Scope of Works: [] [No works other than a Commissioning Test required]
B) Target Commencement Date: []
C) Indicative Milestone Schedule: as set out in Part 5 of this Contract Form

Part 3 - Works Contribution Payment

A) External Costs

	<u>Party/Contractor</u>	<u>Description of Cost</u>	<u>Maximum Amount</u>
1.			
2.			
3.			

B) External Costs Cap

The maximum amount reimbursable in respect of **External Costs** is £[].

C) Internal Costs

	<u>Party/Contractor</u>	<u>Description of Cost</u>	<u>Maximum Amount</u>
1.			
2.			

D) Internal Costs Cap

The maximum amount reimbursable in respect of **Internal Costs** is £[].

E) **Works Contribution Period:** [] months

Part 4 – Security

Clause 4.6.4.8 applies and the Guarantor Minimum Credit Rating is []/Clause 4.6.4.9 applies and the Guarantor's Minimum NAV is []²

² Applicable where a PCG is the selected form of security. Delete the option that does not apply

Part 5 – Indicative Milestone Schedule

MILESTONE ACTIVITY	LATEST TARGET
Complete preliminary functional specifications	
Environmental Statement completed	
Submit IPC Application	
Submit Section 36 Application	
Expected to receive Section 36 Consents	
Expected to receive IPC Consents	
Site access (enabling works)	
Site access (main civil)	
Civil construction completion	
Start of delivery of power converter system	
Complete pipe-work installation	
Complete electrical control & instrumentation installation	
Mechanical completion (i.e. the completion of the supply and installation of the power converter system and process Plant and equipment provided under contract to the BS Service Provider with the exception of minor defects and omissions).	
Installation and commissioning of all communications links to enable the BS Service Provider to receive Black Start Instructions)	
Cold commissioning complete	
Start hot commissioning	
Completion of hot commissioning	
Black Start Capability testing	
Target Commencement Date	

Part 6 – Black Start Service Technical Parameters

BS Auxiliary Unit(s)	Technology Type(s)	Reference(s) / Id(s)	Description
	[]	[]	Example: 7 Gas Reciprocating Engines, XXMW p/Unit

Requirement	Contracted Value	Description
BS Auxiliary Unit(s)	[] MW	Contracted Auxiliary Generation. Examples: Diesel Gen, small OCGT, Gas Reciprocating Engine(s).
Number of contracted main units	[] Unit(s) & Id(s)	Unit or units contracted for the provision of Anchor Plant Capability.
Contracted Power	[] MW	Contracted power for the service and information on how that can be delivered (Example: if two units are needed that will mean that if only one is available at a given point in time the service will be unavailable or depleted).
Time to Connect	[] hours	Time taken to start-up the Contracted Anchor Plant from shutdown without the use of external power supplies, and to energise part of the network, within two hours of receiving an instruction.
Service Availability	[]%	The ability to deliver Anchor Plant Capability over 80% of a year. Note: It is the responsibility of the AR Contractor to demonstrate its service availability. By submitting a tender, the AR Contractor commits to ensuring availability at least 80% in each year of the service.
Voltage Regulation	Un+10% - Un-10% [] kV – [] kV	Ability to create a voltage source and remain connected within acceptable limits during energisation/block loading ($\pm 10\%$).
Frequency Regulation	Existent 47.5-52Hz	Ability to manage frequency level when block loading (47.5Hz – 52Hz).
Resilience of Supply, Restoration Service	[] hours	When instructed, the minimum time the Contracted Anchor Plant will deliver the contracted service.
Resilience of Supply, Restoration Auxiliary Unit(s)	[] hours	Run continuously at the output required to support / deliver the contracted restoration Service

Requirement	Contracted Value	Description
Reactive Capability	[] MVar	Ability to energise part of the network, managing Voltage with Leading or lagging capability whilst active power is zero.
Sequential Restoration attempts	[] start-ups	Ability to perform at least three sequential start-ups.
Short-circuit level (SCL) (Following the start of a system disturbance)	$t \leq 80\text{ms}, [] \text{ kA}$ $t > 80\text{ms}, [] \text{ kA}$	For $t \leq 80\text{ms}$: $I \geq 240 [\text{MVA}] \sqrt{3} \cdot U [\text{kA}]$ For $t > 80\text{ms}$: $I \geq 100 [\text{MVA}] \sqrt{3} \cdot U [\text{kA}]$ $U \equiv$ connection voltage [kV]
Inertia Value	[] MVA.s	Stored energy available in the Contracted Anchor Plant for immediate release in response to changes in power levels and thereby helping to maintain frequency and voltage on the power island within acceptable bounds. (This can be real, physical inertia as in a rotating machine, or virtual inertia as in converter-connected resources with suitable control).
Minimum Stable Operating Level	[] MW	The minimum load the Contracted Anchor Plant will have to go up to as quickly as possible to enable a stable operation.
Block Loading Size	[] MW	Ability to accept instantaneous loading of demand blocks.
Initial Block Load	[] MW	To reflect any specific requirements the Contracted Anchor Plant might have around sizes of load blocks.
Maximum Block Load	[] MW	Normally aligned with the (contracted) block loading size but the Contracted Anchor Plant might be able to accommodate larger blocks.
Hold Points	(variable)	If applicable, any necessary hold points when progressing with the start-up of the Unit/Service (Example: remain 15 minutes at 150MW to allow the Steam Turbine to join the power island created by the Gas Turbine).
Time Between Blocks	[] min	Time needed between blocks of load.
Interim power output levels (MW):	[] MW within ½ hour of Connection Event [] MW within 1 hour of Connection Event [] MW within 1½ of Connection Event	

Part 7 – Black Start Availability Price

£[]/Settlement Period

Part 8 – Target Availability

<u>Availability Assessment Period:</u>	<u>Target Availability for Availability Assessment Period y (A_y):</u>	<u>Scheduled maintenance days in Availability Assessment Period y:</u>

Part 9 – Notices

A) The Company's address for service of Notices:

National Grid Electricity System Operator Limited

Faraday House

Warwick Technology Park

Gallows Hill

Warwick CV34 6DA

Email:

[]

For the attention of:

[]

Commercial contact

[]

B) The Provider's address for service of Notices:

[Company name]

[Company Address]

Email: []

For the attention of: []

Operational telephone contact number []

Operational contact []

Part 10 - Special Conditions

The following provisions shall supplement and, where inconsistent with the GTCs and/or the Service Terms, apply in place of the relevant provision of the GTCs and/or the Service Terms.

Signed for and on behalf of NATIONAL GRID ELECTRICITY SYSTEM OPERATOR LIMITED by: []	
Dated:	
Signed for and on behalf of [PROVIDER] by []:	
Dated:	