

Company Secretary
National Grid Electricity
Transmission plc
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Direct Dial: 0141 354 5416
Email: Steven.McMahon@ofgem.gov.uk

Date: 11 January 2019

Dear Company Secretary,

Project Direction ref: NGET / Black Start from Distributed Energy Resources / 11 January 2019

National Grid Electricity Transmission plc (NGET) submitted the project Black Start from Distributed Energy Resources (the Project) in August 2018 to be considered for funding through the Electricity Network Innovation Competition (NIC). In this year's decision¹, we selected the Project² for funding.

This Project Direction contains the terms that must be complied with by NGET as a condition of the Project receiving funding through the Electricity NIC. These terms can be found in the Schedule to this Project Direction.

Project direction

Chapter 5 of the Electricity NIC Governance Document³ states that a Project Direction will:

- set out the Project-specific conditions that the Network Licensee (which for this project is NGET) is committing to in accepting funding;
- require the Network Licensee to undertake the Project in accordance with the commitments it has made in the Full Submission.⁴

¹ <https://www.ofgem.gov.uk/publications-and-updates/network-innovation-competition-2018-funding-decisions>

² Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the Electricity NIC Governance Document.

³ <https://www.ofgem.gov.uk/publications-and-updates/version-30-network-innovation-competition-governance-documents>

⁴ Where appropriate, the Project Direction may therefore include extracts from the Full Submission or refer to specific sections of the Full Submission.

- set out the Approved Amount for the Project, that will form part of the calculation contained in the Funding Direction issued by the Authority under Chapter 7 of the Governance Document;
- set out the Project budget that the Network Licensee must report against and how variances against the Project budget will be reported and approved; and
- set out the mechanism for the Network Licensee receiving the Approved Amount as set out in section 4 of the Funding Direction.

These requirements are described for the Project in the Schedule to this Project Direction.

Decision

Provided NGET complies with the Electricity NIC Governance Document and with the Schedule to this Project Direction, the Project is deemed to be an Eligible NIC Project.⁵

This Project Direction constitutes notice pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.

Yours faithfully,



Steven McMahon
Deputy Director, Electricity Distribution and Cross Sector Policy
For and on behalf of the Authority

⁵ Eligible NIC Project has the meaning given in definitions of the Electricity Distribution licence.

Schedule to Project Direction

1. TITLE

Project Direction ref: NGET / Black Start from Distributed Energy Resources / 20December 2018

2. PREAMBLE

This Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to National Grid Electricity Transmission (the "Funding Licensee") pursuant to the Electricity NIC Governance Document issued pursuant to Part E of Special Condition 3I (The Network Innovation Competition) of the Electricity Transmission Licence (the "Licence"). It sets out the terms to be complied with in relation to Black Start from Distributed Energy Resources (the "Project") as a condition of it being funded under the NIC and the Funding Return Mechanisms.⁶

Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the Electricity NIC Governance Document.

References to specific sections of the Funding Licensee's Full Submission in this Project Direction are, for ease of reference, made by referring to the section number in the Funding Licensee's Full Submission pro-forma.

3. CONDITION PRECEDENT

The Funding Licensee will not access any funds from the Project Bank Account until it has signed contracts with the Project Partners named in Table 1.

Table 1. Project Partners

SP Transmission, SP Distribution and SP Manweb TNEI Services Limited

4. COMPLIANCE

The Funding Licensee must comply with Part E of Special Condition 3I of the Licence and with the Electricity NIC Governance Document (as may be modified from time to time in accordance with Part E of Special Condition 3I) and with this Project Direction.

Any part of the Approved Amounts that the Authority determines not to have been spent in accordance with this Project Direction (or in accordance with the Electricity NIC Governance Document) is deemed to be Disallowed Expenditure.

Pursuant to Special Condition 3I , Disallowed Expenditure is revenue received (whether by the Funding Licensee or by another Licensee) under the NIC and Funding Return Mechanisms that the Authority determines not to have been spent in accordance with the provisions of the Electricity NIC Governance Document or with those of the relevant Project Direction.

Pursuant to Chapter 8 of the Electricity NIC Governance Document, Disallowed Expenditure includes any funds that must be returned if the Project is halted without Ofgem's permission, any funds that have not been spent in accordance with the

⁶ The Funding Return Mechanism is defined in part C of Special Condition 3I .

approved Project Budget contained within the Project Direction, and any unspent funds on the completion of the Project.

5. APPROVED AMOUNT FOR THE PROJECT

The Approved Amount is **£10,271.61k**

6. PROJECT BUDGET

The Project Budget is set out in Annex 1 of this Project Direction.

The Funding Licensee will report on expenditure against each line under the category total in the Project Budget, and explain any projected variance against each line total in excess of 5% as part of its detailed report which will be provided, in accordance with Chapter 8 of the Electricity NIC Governance Document. Ofgem will use the reported expenditure and the explanation to assess whether the funding has been spent in accordance with the Electricity NIC Governance Document and with this Project Direction.

7. PROJECT IMPLEMENTATION

The Funding Licensee must undertake the Project in accordance with the commitments it has made in the Full Submission approved by the Authority pursuant to the Electricity NIC Governance Document and with the terms of this Project Direction. These include (but are not limited to) the following:

- (i) undertake the Project in accordance with the description set out in Section 2 (Project Description) of the Full Submission;
- (ii) provide a Network Licensee Compulsory Contribution of £1,169.09k (£879.58k from National Grid Electricity Transmission; and £289.51k in total from SP Transmission, SP Distribution and SP Manweb);
- (iii) complete the Project on or before the Project completion date of 1 April 2022; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

8. REPORTING

Ofgem may issue guidance (and amend it from time to time) about the structure and content of the Project Progress Report required by Chapter 8 of the Electricity NIC Governance Document. The Funding Licensee must follow this guidance in preparing the reports.

As required by Chapter 8 of the Electricity NIC Governance Document, the Funding Licensee must inform the Authority promptly in writing of any material event or circumstance likely to affect its ability to deliver the Project as set out in its Full Submission.

9. INTELLECTUAL PROPERTY RIGHTS ("IPR")

In Section 5 of its Full Submission (Knowledge Dissemination) the Funding Licensee has stated that the Project conforms to the default IPR arrangements set out in Chapter 9 of the Electricity NIC Governance Document. The Funding Licensee must therefore undertake the Project in accordance with the default IPR arrangements.

10. Project Deliverables

At the end of a Project, the Funding Licensee must commission a report from an independent third party that verifies whether the Project Deliverables set out in Table 2 below (which comply with Chapter 5 of the Electricity NIC Governance Document) have been achieved.

After it has received the report, the Funding Licensee must send it to the Authority. Where a Project Deliverable has not been achieved we will consider whether funding should be returned to customers using the Funding Return Mechanism. If the Network Licensee is deemed by Ofgem to be at fault for the non-delivery of the Project Deliverable, it is the proportion of funding assigned to it within Table 2 below, which may be returned to customers.

Table 2. Project Deliverables

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
1	Organisational, Systems and Telecommunications viability assessment of the capability to deliver the high level concept	8/11/2019	Report documenting the outcomes of analysis for: <ul style="list-style-type: none"> Resilience assessment of telecommunications; Resilience and capability assessment of systems relevant to Black Start from DER; and Capability assessment of Organisational structures and skills. <p>The conclusions of the report will highlight the main areas of challenge that will be the focus of the Design and later stages to address.</p>	8%
2	Design of process, roles and requirements, and systems and telecommunication requirements to control and coordinate a Power Island created from Black Start from DERs.	2/10/2020	Proposal of how Black Start from DER will operate as a process, including: <ul style="list-style-type: none"> A process map with task allocations; Organisational structures including roles and responsibilities; Requirements for systems or tools with initial outline design concepts; and Telecommunications functional requirements 	12%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
3	Refine the Organisational, Systems and Telecommunications requirements by testing key areas and capturing the learning	30/9/2021	<p>Undertake a desktop exercise to test the organisational capability for the process, including systems and telecommunications where appropriate.</p> <p>Capture learnings from the exercise within an update to the Key Deliverables 2 report. Work with manufacturers to complete designs of systems and telecommunications to enable the timely delivery of the Power System Trials.</p> <p>Where appropriate, undertake offline tests to prove capability of systems via hardware in the loop testing.</p>	10%
4	Assessment of Black Start from DER viability in GB and proposed functional requirements	31/7/2019	<p>Report presenting the outcomes from the Options stage of the Power Engineering and Trials (PET) work stream including;</p> <ul style="list-style-type: none"> • The choice of case studies and the potential options for network re-energisation in each case; • Initial proposals for the functional and testing requirements to apply for Black Start from DER; and • The potential for roll-out of the method across GB; and • Industry consultation to test whether the report is clear, comprehensive and justifies further work. 	5%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
5	Technical and financial proposals for demonstration	31/7/2020	<p>Report presenting the conclusions from detailed assessment of the Power Engineering aspects of Black Start from DER, using the case studies as examples, and make firm proposals for live trials.</p> <p>The report will be supported by the results of power system studies, shared subject to confidentiality restrictions relevant to each DER.</p> <p>The report will be assessed in terms of completeness and clarity and whether it allows decisions to be made on live trials by the Steering Group and DER participants.</p>	10%
6	Demonstration of Black Start from DER	20/12/2021	<p>This deliverable will mark the completion of the Power Engineering live trials (as approved by the Steering Group). A report will be produced detailing outcomes and learning from the trials.</p> <p>This will be assessed against the testing objectives specified for the trials.</p>	30%
7	Functional requirements for procurement and regulation	8/11/2019	<p>Report on procurement options and the criteria for determining the preferred option.</p> <p>Report on commercial design of the service (e.g. term, obligations delivery and payment etc.) with consideration of the learnings from the organisational and technical work streams.</p> <p>Report on gaps and blockers in relevant codes and license conditions that will need to be addressed to enable proposed new Black Start services.</p>	5%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
8	High-level outline of contract terms and regulatory arrangements.	2/10/2020	<p>Report on detailed design of the procurement process and contractual arrangements based on technical, procurement and regulatory options.</p> <p>Report on potential regulatory and funding arrangements, and consequential changes to relevant codes and Licence requirements.</p>	5%
9	Final version of procurement generic standard terms.	20/12/2021	<p>Generic standard terms of contract by which a service for Black Start could be procured reflecting industry engagement.</p> <p>These will include the contracted obligations on each party required in the delivery of the service and the necessary commercial arrangements.</p>	5%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
10	Final proposals for functional and testing requirements for Black Start from DER.	End of Project	<p>Report on learning and proposed approaches from project activities, across all work streams and external engagement. This will form the basis for transition to business as usual.</p> <p>If the concept is successful this will include:</p> <ul style="list-style-type: none"> • finalised process design with consulted organisational structures, roles and responsibilities; • finalised functional specifications for telecommunications and systems; • finalised technical generic DER / Network / concept requirements; • finalised Generic contractual terms for procurement. <p>If the concept cannot be successfully proven, the above will be prepared documenting the gaps.</p>	10%
Common Project Deliverable				
N/A	Comply with knowledge transfer requirements of the Governance Document.	End of Project	<p>Annual Project Progress Reports which comply with the requirements of the Governance Document.</p> <p>Completed Close Down Report which complies with the requirements of the Governance Document.</p> <p>Evidence of attendance and participation in the Annual Conference as described in the Governance Document.</p>	N/A

12. USE OF LOGO

The Funding Licensee and the Project Partners, External Funders and Project Supporters⁷ may use the NIC logo for purposes associated with the Project but not use the Ofgem logo in any circumstances.

13. AMENDMENT OR REVOCATION

As set out in Chapter 8 of the Electricity NIC Governance Document and this Project Direction, this Project Direction may be amended or revoked under the following circumstances:

- (i) if the Funding Licensee considers that there has been a material change in circumstance that requires a change to the Project Direction, and the Authority agrees; or
- (ii) to reflect amendments made to the Licence.

14. HALTING OF PROJECTS

This Project Direction is subject to the provisions contained in paragraphs Chapter 8 of the Electricity NIC Governance Document relating to the halting of projects. By extension, this Project Direction is subject to any decision by the Authority to halt the Project to which this Project Direction relates and to any subsequent relevant Funding Direction issued by the Authority pursuant to Part E of Charge Restriction Condition 5A.

In the event of the Authority deciding to halt the Project to which this Project Direction relates, the Authority may issue a statement to the Funding Licensee clarifying the effect of that halting decision as regards the status and legal force of the conditions contained in this Project Direction.

NOW THEREFORE:

In accordance with the powers contained in the Electricity NIC Governance Document issued pursuant to Part E of Charge Restriction Condition 5A of the Licence the Authority hereby issues this Project Direction to the Funding Licensee in relation to the Project.

This constitutes notice of reasons for the Authority's decision pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.

⁷ As listed in Box 1.6 in Section 1 of the Full Submission pro-forma.

ANNEX 1: PROJECT BUDGET

Cost Category	Cost (£k)
Labour	
	5,094.20
Equipment	
	-
Contractors	
	2,175.30
IT	
	-
IPR Costs	
Travel & Expenses	
	352.70
Payments to users	
	-
Contingency	
	578.42
Decommissioning	
Other	
	3,367.86
Total	11,568.48