

National Grid Electricity Transmission's IT Reopener Application - April 2021

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Key Points

NGET's Non-operational IT Capex reopener application comprises:

NG_ET_IT-RO-01_Submission_document_IEMS_TNCC_SCADA

NG_ET_IT-RO-02_Submission_document_AI

Supporting information is also included in line with the Ofgem's draft Reopener Guidance and Application Requirements Associated Document dated 26th February 2021.

1. Introduction

1.1 Background

As part of RIIO-T2 Ofgem have allowed for a Non-operational IT Capex re-opener opportunity in April 2021.

NGET are submitting a request for an adjustment to allowances of £10.9m. This request is split between two papers, one requesting £8.5m for the delivery of three Artificial Intelligence (AI) capabilities and another requesting £2.4m for life extension of the existing Integrated Energy Management System (IEMS) and delivery of a new contingency control room.

NGET are also providing information to Ofgem in preparation of a future re-opener request for allowances to deliver a new Supervisory Control and Data Acquisition (SCADA) system. This is provided for transparency and NGET are not requesting additional allowances for delivery of SCADA this time.

As part of the RIIO T2 final determinations, allowances were secured by ESO to identify and analyse the various options available to extend the life of the IEMS until 2026. Due to uncertainty around scope and cost at the time, NGET included their proposals under uncertainty mechanisms to request via re-openers within the T2 period. NGET also included their proposals for AI under uncertainty mechanisms within T2. Provision for a second control room was not included within NGET's T2 submission but is driven by the requirement to replace IEMS, which removes the capability for NGESO to provide contingency services and is consistent with decisions taken at Legal Separation.

£3.55m was allowed as baseline to fund the core SCADA project delivery team to complete the procurement stage.

Changes to the National Grid Electricity Transmission Licence were directed by Ofgem on 3 February 2021. Special Condition 3.7, Part B: When to make a reopener, includes an opportunity for NGET to submit a Non-operational IT Capex Re-opener application between 1 April 2021 and 8 April 2021.

1.2 Purpose of this document

This document together with its appendices and attached supporting information comprises NGET's submission pursuant to the National Grid Electricity Transmission Licence Special Condition 3.7, parts B and C.

NGET have sought to include a level of detail commensurate with Ofgem's draft Re-opener Guidance and Application Requirements Associated Document dated 26 February 2021. Appendix 2 to that document sets out specific Non-operational IT Capex re-opener application requirements. NGET have included the requisite details in supporting information files for the additional investment proposal (or provided an explanation as to why such information is not available).

1.3 Application criteria

This application is compliant with the licence condition 3.7 as detailed in the table below.

Licence Special Condition 3.7.6	NGET statement
An application under paragraph 3.7.4 must be made in writing to the Authority and:	
(a) give detail of the circumstances referred to in paragraph 3.7.4 that the licensee considers exist;	<ul style="list-style-type: none"> • This application requests an addition of £10.9m to NGET Baseline Allowances. • This application is being made in accordance with all sub paragraphs of 3.7.4; <ul style="list-style-type: none"> (a) the licensee identifying further evidence in support of Non-operational IT Capex projects that were included in its Business Plan, but in relation to which no allowances have been provided to date; (b) the licensee identifying activities capable of improving its Non-operational IT Capex;
(b) explain how the adjustment requested would improve its Non-Operational IT Capex;	<ul style="list-style-type: none"> • Statements around benefits of these investments are included within section 3.1 below and included within the two main submission documents.
(c) explain the basis of the calculation for the adjustment requested to allowances; and	<ul style="list-style-type: none"> • Statements are included in the table in section 3.1 below regarding the basis of calculation of allowances for the additional investment. • Further details are included in the supporting files.
(e) provide such detailed supporting evidence as is reasonable in the circumstances, which must include:	<ul style="list-style-type: none"> • We have provided two re-opener submission documents with several supporting documents to provide information required through Ofgem's guidance.
(f) delivery plans;	<ul style="list-style-type: none"> • Delivery plans are included within the main re-opener submission documents for all projects as well as supporting document for the AI submission 'NG_ET_IT-RO-10_CostandResourceestimates_AI'
(g) a prioritisation programme;	<ul style="list-style-type: none"> • Given their distinct nature and small number of projects within this re-opener submission, there is no prioritising programme for delivery of the works. Delivery plans are however included within the main submission documents.
(h) market and industry cost comparison; and	<ul style="list-style-type: none"> • The basis for the calculation of costs is outlined within section 3.1 below and within the two main submission documents.
(i) anticipated business benefits derived as a result of the proposed activities.	<ul style="list-style-type: none"> • Benefits of proposed investments are outlined within the two submission documents and within section 3.1 below.

1.4 NGET approach to reopener event

Within this re-opener application, NGET are only requesting allowances where scope and costs have a high certainty. For some investments this means they are only requesting partial funding for a project for a specific phase. NGET will use future re-opener opportunities to request the additional allowances to cover the remainder of the project cost when scope and costs are clear.

NGET has been engaging with Ofgem leading up to this submission and have already discussed this approach. Giving the timing of the projects included within this re-opener submission, NGET have also agreed with Ofgem the need for an authority triggered re-opener, likely to be required in early 2022. Further detail has been provided within the main submission document for IEMS, TNCC and SCADA on when it would be appropriate to trigger this re-opener.

2 Assurance and Publication Requirements

2.1 Assurance

NGET's designated point of contact for this reopener application is Jade Ison, RIIO-2 Regulatory Submission Manager, UK Regulation, email jade.ison@nationalgrid.com, telephone 07977 021952.

In accordance with section 2.2 of Ofgem's guidance, this application is accompanied by an assurance statement (supporting file NG_ET_IT-RO-03-Assurance_Statement) to discharge Ofgem's requirement for written confirmation from a suitable senior person within the company that the re-opener application has been appropriately assured.

2.2 Publication

In accordance with section 2.5 and 2.6 of Ofgem's guidance, within 5 working days of submitting the re-opener application to Ofgem, a version of the re-opener submission will be published on the NGET website with redactions made where only necessary to protect confidentiality, commercial sensitivity and security.

3 Proposed additional baseline allowances and Price Control Deliverables

3.1 Project overviews

Project name	Artificial Intelligence						
Supporting Information	NG_ET_IT-RO-02_Submission_document_AI NG_ET_IT-RO-10_CostandResourceestimates_AI						
Project Description	Three capabilities to evolve electricity system planning processes through new and enhanced solutions to plan outages, work and resource.						
PCD Output	<p>PCDs to deliver three capabilities;</p> <p>1. Outage sequencing – Deliver a full digital product that allows us to automatically generates the national year ahead outage plan whilst considering both system and resource constraints simultaneously.</p> <p>2. Outage cost forecasting – Deliver a bespoke Constraint Analysis Tool (CAT) that enables us to complete multiple outage case studies to be run per day.</p> <p>3. Scenario Modelling – Deliver a product that ingests data relating to all work, drivers, delivery decisions and historic outcomes and model deliverability confidence and suggest alternate work or sequencing.</p>						
Anticipated business benefits	These PCDs will allow NGET to deliver more optimised and efficient plans, increasing agility. There will be better commercial management from project initiation through ET's Business Investment Process for Capital projects.						
Allowance	£m	2021/22	2022/23	2023/24	2024/25	2025/26	Total
	Total	██████	██████	██████	██████	██████	£8.47m
Basis of calculation	<p>The selected options have been costed using a combination of data sources, with the % (rounded to nearest whole) of total capital investment shown in brackets:</p> <ul style="list-style-type: none"> - Externally sourced costs from market tenders or request for prices from suppliers ██████ (EXTERNAL) - Benchmarked costs from comparable historic projects previously undertaken; ██████ (PARTNER – offshore, PARTNER – UK, NATIONAL GRID) - Subject matter expert opinion based on scope identified ██████ (Assumed product refinements) 						

Project name	IEMS Extension
Supporting Information	NG_ET_IT-RO-01_Submission_document_IEMS_TNCC_SCADA NG_ET_IT-RO-06-CBA_IEMS
Project Description	This is an NGESO led programme to maintain the asset health of the existing Integrated Energy Management System (IEMS). This work will maintain the resilience of the CNI IEMS through until its replacement in 2026. NGET are requesting their contribution of the shared NGET and NGESO costs for this project as per the GSA established at Legal Separation.
PCD Output	n/a – NGET are currently only requesting allowances for a proportion of the investment where scope and costs are clear.

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Anticipated business benefits	Maintains the current operating arrangements until a time when IEMS is replaced with a solution better suited to NGET.						
Allowance	£m	2021/22	2022/23	2023/24	2024/25	2025/26	Total
	Total	████	████	████	████	████	████
Basis of calculation	The internal National Grid (NG) resources, contract resources and resources costs are sourced from our four ADAM partners or utilise standard internal staff benchmark costs. Hardware and software costs are based on previous project experience.						

Project name	TNCC2											
Supporting Information	NG_ET_IT-RO-01_Submission_document_IEMS_TNCC_SCADA NG_ET_IT-RO-07_TNCC_CBA NG_ET_IT-RO-08_TNCC_Outline_Costing NG_ET_IT-RO-09_TNCC_RAID_Log											
Project Description	NGET are required to have a contingency control room for an emergency situation. Following legal separation of NGESO it is no longer possible to use the Electricity National Control Centre (ENCC). This request is to fund Phase 2 of delivery of a new Control Centre for NGET, specifically detailed site specific optioneering, outlining design and costing.											
PCD Output	n/a – NGET are currently only requesting allowances for Phase 2 of the Contingency Control programme which includes conducting site specific optioneering, outlining design and costing for the remainder of the project.											
Anticipated business benefits	The second control room will deliver; Compliance: with STCP 06-4 Contingency Arrangements and meet BEIS requirements. Safe & Reliable Network: Enables NGET to continue to deliver the safe, secure, reliable and efficient operation of the HV Transmission system for the benefit of consumers. Resilience: Provides for loss of the TNCC and gives flexibility to manage segregation of shift teams in the event of pandemic. Customer Service: improve customer service by effectively managing network risk.											
Allowance	£m	2021/22						2022/23	2023/24	2024/25	2025/26	Total
	Total	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>					
Basis of calculation	<div><div>-</div>Resource cost estimates are based upon staff costs from 18/19 Transmission Investment Handbook</div> <div><div>-</div>Cost estimates are based on previous preliminary works including NGET Innovation Centre, NGET refurb centre, <div></div></div>											

4 Proposed Amendments to PCD Table

4.1 Proposed AI Price Control Deliverables

Please refer to supporting file NG_ET_IT-RO-02_Submission_document_AI where we have set out in full our proposed amendments

Project area	Output	Delivery date	21/22	22/23	23/24	24/25	25/26
AI	Outage Sequencing	End T2					
AI	Outage Cost Forecasting	End T2					
AI	Scenario Modelling	End T2					

18/19 prices in £m's

Appendix 1 – List of Supporting Documents

Re-opener Proposal	File Name
IEMS/TNCC/SCADA submission	NG_ET_IT-RO-01_Submission_document_IEMS_TNCC_SCADA
AI Submission	NG_ET_IT-RO-02_Submission_document_AI
IT Assurance Statement	NG_ET_IT-RO-03_Assurance_Statement
Irregular Submission Assurance report	NG_ET_IT-RO-04_Irregular Submission Assurance Report
Irregular Submission Risk Assessment	NG_ET_IT-RO-05_Irregular Submission Risk Assessment
IEMS Cost Benefit Analysis	NG_ET_IT-RO-06_CBA_IEMS
TNCC Cost Benefit Analysis	NG_ET_IT-RO-07_TNCC_CBA
TNCC Costing outline	NG_ET_IT-RO-08_TNCC_Outline_Costing
TNCC RAID log	NG_ET_IT-RO-09_TNCC_RAID_Log
AI Cost and Resource estimates	NG_ET_IT-RO-10_CostandResourceestimates_AI
AI Cost Base for 18/19 prices	NG_ET_IT-RO-11_AI_Price_Base
Fraser Nash Quote for AI	NG_ET_IT-RO-12_Fraser_Nash_Quote