

CUSC Alternative Form – Non Charging

CMP456 Alternative Request 1: Cost recovery for legacy plant in relation to GC0168

Overview: The alternative proposal expands the conditions under which costs may be recovered by the User for developing EMT models for legacy plant, aligning these provisions with the requirements proposed under modification GC0168.

Proposer: Dr. Isaac Gutierrez, ScottishPower Renewables.

☒ I/We confirm that this Alternative Request proposes to modify the non -
charging section of the CUSC only



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What is the proposed alternative solution?

The alternative solution proposes more detail on conditions where costs must be recovered in developing Electro-Magnetic Transient (EMT) models for legacy plant.

Costs to be recovered

It is proposed that recoverable costs include but are not limited to:

1. EMT model production:
 - a. Procurement of a suitable contractor
 - b. Physical interrogation of existing control system
 - c. Loss of revenue due to stopping Generators to obtain control system data or inverter/converter data.
 - d. in case of Inverter Base Resources (IBR) Generators, any converter/inverter firmware update required to build a model, if allowed by NESO, and it is not considered a substantial modification. This includes but it is not limited to Energy storage systems (ESS), Static Synchronous Compensators (STATCOMs), Static Var Compensations (SVCs), Hybrid STATCOMs, Wind Turbine Generators (WTGs) used in offshore and onshore windfarms.
 - e. For offshore wind Generators, if interrogation of control system or WTG converter settings parameters is not possible to do it remotely, reimbursement of any cost associated with hiring vessels and manpower required to reach WTGs offshore and retrieve data required for developing EMT models
 - f. Production of detailed or equivalent model in the specified software and version as referred to via PC.A.9.9.1. of the Grid Code
 - g. Model validation as per PCA.9 requirements: including but not limited to validation of EMT models where no Factory Acceptance Tests (FAT), Real Time Data simulator (RTDS) or Hardware in the Loop (HiL) data is available for the existing site. (No physical test run) under agreement between the User and NESO

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- h. Model User Manual and report creation
- i. Model maintenance fees. Due to some legacy plant being obsolete this cost can be significant.
- j. Liaison with NESO for verification

What is the difference between this and the Original Proposal?

In the original Proposal reimbursement scenarios were limited. Essentially, only certain cases justified financial compensation for the effort of developing EMT models.

The alternative proposal expands the scope of reimbursement. Based on practical experience, the alternative argues that developing EMT models for legacy plants including inverter/converter-based Generators, is complex, resource-intensive, and often requires significant engineering effort. Therefore, more scenarios should qualify for reimbursement.

What is the impact of this change?

The only impact anticipated between the original and the alternative proposals will be on the cost recovery in relation to EMT model development.

Proposer's assessment against CUSC Non-Charging Objectives	
Relevant Objective	Identified impact
(i) The efficient discharge by the Licensee of the obligations imposed on it by the Act and by this licence*;	<p>Positive</p> <p>will help NESO to operate a reliable and stable transmission system.</p> <p>Provides assurance that the licensee's obligations are satisfied and</p>

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	discharged ensuring all Generators, regardless of age or technology, are treated consistently, in a harmonised and efficient way
(ii) Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity;	Positive Will enable new plant to connect faster if EMT models are available for legacy plant ahead. Will allow fair competition between Generators as cost for EMT models in legacy plant were never envisaged in the project's financial models, unlike new connections where these costs are added in the Capital Expenditure (CAPEX) and Operational Expenditure (OPEX) enabling a more level field for Generators.
(iii) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency **; and	Neutral
(iv) Promoting efficiency in the implementation and administration of the CUSC arrangements.	Positive By establishing a simple, transparent and efficient procedure for the recovery of any bona

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	<p>vide costs, the proposal will promote efficiency in the administration of the CUSC arrangements. A streamlined reimbursement process reduces unnecessary administrative burden, minimises disputes, and ensures that all parties understand the steps, evidence requirements and timelines involved.</p>
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** See Electricity System Operator Licence*

***The Electricity Regulation referred to in objective (iii) is Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) as it has effect immediately before IP completion day as read with the modifications set out in the SI 2020/1006.*

When will this change take place?

Implementation date:

The alternative proposal retains the original proposal's implementation date, which falls on the first day of the Charging Year

Implementation approach:

The alternative proposal does not introduce any changes to the implementation approach relative to the original proposal.

Acronyms, key terms and reference material

Acronym / key term	Meaning

WTG	Wind Turbine Generators
IBR	Inverter Based Resources
STATCOM	Static Synchronous Compensator
SVC	Static Var Compensation
HVAC	High Voltage Alternate Current
FAT	Factory Acceptance Tests
RTDS	Real Time Digital Simulation
HiL	Hardware in the Loop
ESS	Energy storage systems
CAPEX	Capital Expenditure
OPEX	Operational Expenditure

Reference material:

1. THE GRID CODE, **ISSUE 6, REVISION 36, 12 December 2025**
2. GC0168: Submission of Electro Magnetic Transient (EMT) Models