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CUSC Modification Proposal Form

CMP441:

Reducing the credit risk of supplying non-embedded hydrogen electrolysers

Overview: This modification seeks to address a discrepancy in the timing in de-energising a non-embedded site verses an embedded site.

Modification process & timetable

1. **Proposal Form**
   14 October 2024
2. **Code Administrator Consultation**
   31 October 2024 – 21 November 2024
3. **Draft Final Modification Report**
   05 December 2024
4. **Final Modification Report**
   23 December 2024
5. **Implementation**
   10 business days after Ofgem decision

Status summary: The Proposer has raised a modification and is seeking a decision from the Panel on the governance route to be taken.

This modification is expected to have a: Low impact

On Customers, Suppliers and Transmission System Operators

Proposer's recommendation of governance route	Standard Governance modification with assessment by a Workgroup	
Who can I talk to about the change?	**Proposer:** Dan Brimelow dan.brimelow@statkraft.com 0207 549 1000	**Code Administrator Contact:** cusc.team@nationalenergyso.com

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What is the issue?

To achieve clean power by 2030, Government has pledged to double the target on green hydrogen, with 10GW of production for use particularly in flexible power generation, storage, and industry like green steel.

Hydrogen Allocation Rounds (HAR) are currently the Government's main tool to kick start this emerging industry. Agreements for the first of these rounds are due to be issued imminently with around 2.5GW due to be awarded within the next three years.

Industry codes, designed around traditional supply use cases, need changing to accommodate this new evolution to the energy system.

Hydrogen electricity supply is very different to traditional electricity supply since almost 100% of the variable input cost of the electrolyser is electricity.

Hydrogen electrolyser projects present a significantly higher credit risk to suppliers than a traditional very large I&C supply customer due to the embryonic state of the hydrogen industry, projects tending to be thinly capitalised SPVs, technology risk, size of the supply, dependency on the anchor hydrogen offtaker, limited diversification, grant funding arrangements, load concentration, term, and size of delivered unpaid.

There is a discrepancy between the DCUSA and CUSC as to the time it takes to deenergise a customer, in the special case of where a directly connected customer governed under the CUSC, has embedded clients on its private site – referred to in the relevant CUSC text (introduced as CMP254, prior to which non-supplier-paying directly-connected customers could never be disconnected, contrary to the Electricity Act's provisions), as "downstream customers"

In the case of non-payment, to the Supplier, if the primary customer is embedded on a DNO network, disconnection by the DNO at the Supplier's request can be relatively prompt, even within 24 hours. Likewise for a simple directly-connected site with no downstream customers, disconnection by the TO at the Suppliers request can, again, be relatively prompt. However in the case where the directly-connected site does have "downstream customers" (embedded clients on its own private network), potentially unbeknown to the Supplier, CMP254/CUSC text requires various processes of further dialogue; disconnection of the site (of the primary directly-connected site) will be slower in these cases were it hosts downstream customers, so that disconnection of the primary site could take at least an additional seven days.

Since the credit risk for electricity supplied to hydrogen electrolysers may be very considerable versus a large I&C site, this discrepancy between the DCUSA and the CUSC for such sites acts as a barrier in delivering hydrogen electrolyser projects which are transmission connected versus those that are distribution connected.

Why change?

The change will allow a level playing field between the transmission and distribution connected hydrogen electrolysers and will reduce some of the credit risk associated with delivered unpaid supply.

What is the proposer's solution?

The solution has been resubmitted following feedback from the CUSC Panel Meeting on 27 September 2024.

The amended solution would be to disapply paragraphs 3.6.9.7 and 3.6.9.8 of the CUSC for Non-Embedded Customers with Connection Sites connected after [1st January 2025 or such other date determined by the Authority], so that the extra process for "downstream customers" embedded as a separate entity on that site, does not apply for all newly connected sites going forwards irrespective of whether the site is a transmission connected hydrogen electrolyser.

The text in red shows the proposed additional text to be added to the code and can be found in annex 1.

Draft legal text

3.6.9.7 Save for Non-Embedded Customers with Connection Sites connected after [1st January 2025 or such other date determined by the Authority], a **Non-Embedded Customer** shall provide its **Supplier** on request and as soon as is reasonably practicable with the details of any **Downstream Parties** including (but not limited to) contact names, addresses, email addresses, and telephone numbers.

3.6.9.8 Save for Non-Embedded Customers with Connection Sites connected after [1st January 2025 or such other date determined by the Authority], prior to a **Supplier** instructing **The Company** to **Deenergise** the Non-Embedded Customer's Connection Site(s) under Paragraph 3.6.9.1:

(a) the **Supplier** shall request the **Non-Embedded Customer** to confirm within 48 hours of such request that the details supplied under Paragraph 3.6.9.7,

remain correct and/or provide updated details for any **Downstream Parties**, and where such details had been supplied by the **Non-Embedded Customer** to the **Supplier** within the preceding **10 Business Days**, the **Supplier** may, whilst making this request, in parallel and without delay give notice to arrange the meeting described in (b), below;

(b) where there are **Downstream Parties** (other than **Downstream Parties** that are **Affiliates** of the **Non-Embedded Customer**), the **Supplier** shall, giving not less than 48 hours' notice, arrange a meeting between the **Supplier**, the **Non-Embedded Customer**, those **Downstream Parties** and **The Company** to discuss the impact of the **Deenergisation** and whether an agreement to avoid the **Deenergisation** and resulting impact on those **Downstream Parties** can be reached to the reasonable satisfaction of the **Supplier** (acting reasonably); and

(c) the **Supplier** shall not issue its **Deenergisation** instruction to **The Company** within 72 hours (or such longer period, determined by the **Supplier** from time to time, at their sole discretion, and notified to the attendees of any meeting held under (b)) from the commencement of any meeting held under (b).

What is the impact of this change?

Proposer's assessment against CUSC Non-Charging Objectives	
Relevant Objective	**Identified impact**
(a) The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;	**Neutral** No impact
(b) 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** Provides consistency with the DCUSA for newly connected supply. Provides a level playing field for supplying

	transmission connected hydrogen electrolysers. If not addressed, Suppliers, particularly smaller I&C suppliers, may be unable to participate in the market.
(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	**Neutral** No impact
(d) Promoting efficiency in the implementation and administration of the CUSC arrangements.	**Positive** Very limited implementation required
*The Electricity Regulation referred to in objective (c) 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.	

Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories	
Stakeholder / consumer benefit categories	**Identified impact**
Improved safety and reliability of the system	**Positive** The change will positively encourage the deployment of transmission connected hydrogen electrolysers which will in turn add demand to the energy system particularly when the system has an excess of renewable electricity verses demand and will provide the ESO with additional levers to more efficiently manage constraints. Positively supports decarbonisation and improves security of supply by reducing the UK's dependency on natural gas imports.

Lower bills than would otherwise be the case	**Positive** The modification reduces the credit requirement of suppliers which would typically come at a cost to hydrogen electrolyser projects.
Benefits for society as a whole	**Positive** Supports the emergence of a new energy industry targeting decarbonisation.
Reduced environmental damage	**Positive** The modification removes a barrier to the deployment of large transmission connected electrolyser projects. This in turn positively supports decarbonisation by displacing natural gas with green hydrogen.
Improved quality of service	**Neutral**

When will this change take place?

Implementation date

As soon as possible

Date decision required by

As soon as possible

Implementation approach

There are no systems or processes that would be impacted by this change. Implementation is therefore very minimal.

Proposer's justification for governance route

Governance route: Standard Governance modification to proceed to Code Administrator Consultation

The modification requires a fully developed solution.

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Interactions

☐Grid Code	☐BSC	☐STC	☐SQSS
☐European Network Codes	☐ EBR Article 18 T&Cs[1]	☐Other modifications	☐Other

Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CUSC	Connection and Use of System Code
DCUSA	Distribution Connection and Use of System Agreement
EBR	Electricity Balancing Regulation
HAR	Hydrogen Allocation Rounds
SPV	Special Purpose Vehicle