Making a positive difference
for energy consumers

Penny Garner, Acting Independent Panel Chair
c/o National Energy System Operator
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Gallows Hill
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Dear Penny,

Authority decision to 'send back' Connection and Use of System Code (CUSC) Modification Proposal CMP441: Reducing the credit risk of supplying non-embedded hydrogen electrolysers

On 23 December 2024, the Final Modification Report (FMR)[1] for CUSC Modification Proposal CMP441 ('the Proposal') was submitted to the Authority[2] for decision. It is our decision that we are unable to properly form an opinion on CMP441 based on the FMR as submitted to us. We are therefore sending the proposal back to the CUSC Panel for further consideration.

Background

A Non-Embedded Customer[3] may "host" other customers (who are referred to as Downstream Parties[4]) on-site through its own private network. These downstream users will generally have bilateral arrangements in place to pay the Non-Embedded Customer directly for their electricity and do not have a direct relationship with a Supplier. In cases where a Supplier for such an arrangement seeks de-energisation of the customer, the CUSC describes a process of engagement that must be followed.

[1] CMP441 Reducing the credit risk of supplying non-embedded hydrogen electrolysers: https://www.neso.energy/document/350441/download
[2] References to the "Authority", "Ofgem", "we", and "our" are used interchangeable in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas Electricity Markets (Ofgem) supports GEMA in its day-to-day work. This decision is made by or on behalf of GEMA
[3] Defined in the CUSC as "a Customer except for a Public Distribution System Operator receiving electricity directly from the National Electricity Transmission System irrespective of from whom it is supplied."
[4] Defined in the CUSC as "a third party connected to a Non-Embedded Customer's System".

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On 11 March 2016, we approved CUSC modification CMP254 'Addressing discrepancies in disconnection/de-energisation remedies', Workgroup Alternative CUSC Modification (WACM) 3.[5] This modification introduced provisions to the CUSC that allow a Supplier to instruct the National Energy System Operator (NESO, who in turn instructs the relevant Transmission Owner) to de-energise a Non-Embedded Customer, thereby allowing the Supplier to exercise its statutory right under the Electricity Act 1989 to de-energise customers in cases of non-payment of electricity charges.[6] Where a Downstream Party would be affected by the de-energisation of its host, CMP254 WACM3 introduced a process of information-sharing and discussion between NESO, the Supplier, the Non-Embedded Customer, and the Downstream Party/Parties. This process is set out in detail, and takes place over the course of at least 5 days (120 hours) between the point at which the Supplier is entitled to disconnect the premises under the Act and the point at which the Supplier is able to instruct NESO to begin carrying out the de-energisation.

Firstly, the Supplier must confirm with the affected Non-Embedded Customer that the contact details of any Downstream Parties are correct; the Non-Embedded Customer has 48 hours to do so. However, this requirement is unnecessary if the contact details had been confirmed in the previous 10 days. Secondly, the Supplier must arrange a meeting between the Non-Embedded Customer and any Downstream Parties in order to discuss whether an arrangement to avoid de-energisation can be reached; invitations to this meeting must be issued with at least 48 hours' notice. Thirdly, the Supplier may only issue its instruction to NESO to deenergise the site at least 72 hours after the aforementioned meeting has begun.

The consultatory process introduced under CMP254 does not have a direct parallel to the de-energisation process described in Section 2A of the Distribution Connection and Use of System Agreement (DCUSA). Similarly, downstream customers are not identified separately to the directly-connected customer with regards to the de-energisation process.

[5] Authority decision to approve CMP254 WACM 3: https://www.ofgem.gov.uk/decision/connection-and-use-system-code-cusc-cmp254-addressing-discrepancies-disconnectionde-energisation-remedies
[6] Schedule 6 Paragraph 2 (1) of the Electricity Act 1989 as amended.

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Hydrogen electrolysis is an emergent form of demand that uses electricity in the production of fuel for low carbon dispatchable power. NESO's Clean Power 2030 advisory document assumes 3.7GW of electrolyser capacity to be installed, creating an electricity demand of 11TWh in 2030. The large power requirements of such sites mean that they are likely to connect to the electricity system at higher voltage levels, using either the distribution or transmission network.

The Modification Proposal

On 14 October 2024, Statkraft (the 'Proposer') raised CMP441 seeking to amend Section 3.6.9 of the CUSC to remove some requirements on newly-connecting Non-Embedded Customers and on their Suppliers which relate to information-sharing and the process of de-energisation. This intended to reduce the length of time between when a Supplier may disconnect the premises of a customer under the terms of the Electricity Act, and when a Supplier may subsequently request NESO action the de-energisation on behalf of the Supplier. In order to reduce this length of time, the proposal seeks to disapply the information-sharing process introduced under CMP254, in turn reducing Supplier exposure to non-payment credit risk for supplying transmission connections. The proposal seeks to bring the terms of de-energisation under the Transmission network into closer alignment with those under the Distribution network.

The removal of this process would only apply to newly-connecting Non-Embedded Customers with Downstream Parties, and would have no effect on existing Non-Embedded Customers or their respective Downstream Parties. Despite the title of the modification, the proposal would affect all newly-connecting Non-Embedded Customers with Downstream Parties, and is not limited to sites with the purpose of hydrogen electrolysis.

In the Final Modification Report, the Proposer considered that CMP441 would better facilitate Applicable Objectives (b)[7] and (d)[8]. With regard to Applicable Objective (b), the Proposer considered that CMP441 would provide consistency with the DCUSA for newly-connected

[7] CUSC Non-Charging Objective (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.
[8] CUSC Non-Charging Objective (d): promoting efficiency in the implementation and administration of the CUSC arrangements.

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supply, in doing so allowing for a more level playing field between supplying Transmission and Distribution customers. They also considered that it would improve the viability of small industrial & commercial suppliers in the provision of electricity to Non-Embedded Customers, improving competition. With regard to Applicable Objective (d), the Proposer considered that CMP441 would only require a limited process of implementation.

The Proposer considers that the disapplication of the engagement process for newly-connected customers would reduce the cost of providing electricity for these customers, as the ability to de-energise a customer sooner would reduce the credit risk associated with delivered unpaid supply which is held by the Supplier. The Proposer asserts that due to the considerable potential value of this non-payment credit risk for large customers, the engagement process acts as a barrier to market participation for smaller, less-capitalised suppliers.

By reducing the cost to supply Non-Embedded Customers and improving competition between Suppliers, the Proposer asserts that CMP441 would better enable large demand associated with hydrogen electrolysis to connect to the Transmission system and therefore contribute to the production of a low-carbon fuel, providing energy security under a clean power system.

Reasons for Our Decision

We have identified the following deficiencies in the FMR which prevent us from being able to come to a decision:

- Lack of clarity of potential benefits, in particular as to reduced supplier non-payment credit risk premia.
- Lack of clarity of potential risks, in particular as to:
    - Differential treatment between existing and newly-connecting customers;
    - Availability of relevant information for potentially affected customers;
    - Implementation challenges as a result of time-based distinction;
    - FMR cohesiveness and rationale.

<u>Lack of clarity on potential benefits</u>

The FMR suggests that the modification would improve Supplier non-payment credit risk premia, reducing the cost to serve Non-Embedded Customers relative to Embedded Customers and facilitating competition in the supply of electricity. While we agree in principle that

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improved competition can bring improved outcomes, there is insufficient evidence of the scale and likelihood of cost saving benefits to suppliers and the relevant customers that this modification would facilitate.

Lack of clarity on potential risks

Differential treatment between existing and newly-connecting customers

Our understanding is that CMP441 would result in differential treatment between existing and newly-connecting customers. Because the application of the engagement process would be dependent on the connection date of the relevant site, this would be an enduring distinction. We have not seen sufficient evidence to establish whether this distinction would be in the consumer interest, other than when understood in the context of increased competition in supply and potentially lower non-payment risk premia faced by consumers.

The different terms of de-energisation may have distortive effects on the siting decisions of downstream customers, who may experience lower costs for their energy when siting under post-CMP441 sites than under existing sites. In these conditions, downstream customers located at post-CMP441 sites may have a cost advantage compared to those located in existing sites. Similarly, demand for siting with new developments may be increased, distorting the market between Non-Embedded Customers as site operators. This distinction may introduce distortions to competition in other industries, a particularly relevant consideration for Industrial and Commercial Non-Embedded Customers that the FMR has not identified or assessed.

Availability of information for Downstream Customers

In our decision to approve CMP254, we considered that the process of engagement allowed for a reasonable and appropriate balance between the availability of relevant information regarding potentially affected customers, which may inform how the Supplier responsibly safeguards the interests of any impacted downstream users, and the resultant non-payment credit risk held by the Supplier above what arises from the terms of de-energisation described in the Electricity Act. We noted that the Supplier must bear an element of responsibility in

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protecting Downstream Parties, as the Supplier is the party issuing the instruction to de-energise.

The FMR does not consider possible detrimental effects of the disapplication of the engagement process on Downstream Parties, nor does it give consideration to whether Suppliers and customers may be able to mitigate against the risk of a harmful information asymmetry in the event of de-energisation. We believe that the expectations of shared responsibility to protect the interests of Downstream Parties remain relevant despite the size or nature of the user.

Implementation challenges as a result of time-based distinction

We recognise that Suppliers will need to develop a suitable process for identifying whether a Customer Site connected before or after CMP441's implementation, as this would be relevant information in cases where a Non-Embedded Customer transfers between Suppliers. This process would need to be nuanced to situations where Downstream Parties may connect to or disconnect from existing and future Non-Embedded Customers. The received FMR presents no consideration of this practicality, and should consider whether the holding and sharing of this information presents any difficulties in implementation, and whether doing so efficiently would require further industry code changes to be raised.

FMR cohesiveness and rationale

The title and preamble of the FMR heavily suggest that the proposal is relevant only to hydrogen electrolysers, whereas the legal text and consequences of the proposal are relevant to all Non-Embedded Customers with Downstream Parties. While we understand that revisions have been taken to change the scope of the change proposal after engagement with CUSC Panel, the FMR's title and justification obfuscate the actual purpose and intent of the change proposal. This may dissuade appropriate engagement with the code modification process and cause undue confusion. We believe that the FMR would benefit from a revised title and justification that more closely reflect the intended outcomes.

Direction

We therefore direct that further steps and consideration are given to the issues highlighted above by the CUSC Panel/workgroup in order to address these deficiencies. A revised FMR

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should include a greater range of informed perspectives of present and potential future Non-Embedded Customers, their respective Downstream Customers, and the suppliers of these customers. We would further expect a robust consideration of the risks identified and inclusion of mitigations that may be appropriate.

After addressing the issues discussed above, and revising the FMR accordingly, the CUSC Panel should re-submit it to us for decision as soon as reasonably practicable.

Yours sincerely,

Andrew Malley

Head of Electricity Network Charging

Signed on behalf of the Authority and authorised for that purpose

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