Connection and Use of System Code (CUSC) CMP450: Introducing the definition of Dynamic Reactive Compensation Equipment (DRCE) in the CUSC (CMP450)

Decision:	The Authority[1] has decided to reject[2] this modification
Target audience:	National Energy System Operator (NESO), Parties to the CUSC, the CUSC Panel and other interested parties
Date of publication:	04 August 2025

Background

Transmission connected generators connecting to the National Electricity Transmission System (NETS), are required by the Grid Code (GC)[3] and as a condition of connection, to meet certain obligations to provide reactive power support to help manage voltage on the transmission system. To ensure compliance and to manage their reactive power effectively, many generators install Dynamic Reactive Compensation Equipment (DRCE)[4].

For offshore wind farm generation projects, the current 'generator build' model requires the generator to design, fund, and install both the offshore transmission assets linking the generator to the onshore network, as well the offshore generation assets. As part of the project build DRCE is also often installed. Following a competitive tender process under the Offshore Transmission Owner (OFTO) regime, the offshore generators then transfer the transmission assets to the OFTO and receive a Final Transfer Value (FTV), whereby the offshore generator is reimbursed for its capital expenditure (CAPEX) incurred for developing

[1] References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] The Gride Code (GC) sets out the technical rules for users connecting to the NETS. Section CC.6.3.2 sets out the minimum reactive power capability that both onshore and offshore generators must meet, including specified power factor ranges under steady state conditions.
[4] DRCE typically includes equipment such as Static Synchronous Compensators (STATCOMs), Static Var Compensators (SVCs), capacitors, or reactors, all of which are used to control reactive power output.

The Office of Gas and Electricity Markets
10 South Colonnade, Canary Wharf, London, E14 4PZ **Tel** 020 7901 7000
www.ofgem.gov.uk

and constructing the Transmission Assets, including the costs of any DRCE. The OFTO is then responsible for operating (including provision of reactive power support) and maintaining these assets for a specified licence period and recovers its costs via a Tender Revenue Stream (TRS). The TRS is funded largely by the offshore generator via its Transmission Network Use of System (TNUoS) offshore local circuit tariff for its continued use of these assets (including DRCE to maintain compliance with its reactive power obligations).

In contrast, for onshore projects, onshore generators are responsible for building their generation assets (which include DRCE) and retain ownership of these. As the DRCE help manage system voltage, the onshore generator (as asset owner and operator of the DRCE), may recover some costs associated with this support through Obligatory Reactive Power Service (ORPS)[5] payments.

On 02 August 2023 CUSC Modification Proposal CMP418: Refine the allocation of Dynamic Reactive Compensation Equipment (DRCE) costs at OFTO transfer was raised[6]. CMP418 seeks to modify the charging methodology in Section 14 of the CUSC by changing how costs associated with DRCE are recovered from offshore generators following the transfer of these assets to the OFTO. We have also published our decision on CMP418 today.

The modification proposal

Ocean Winds (the 'Proposer') raised CUSC Modification Proposal CMP450 (the 'Proposal') on 13 February 2025. CMP450 seeks to introduce a definition of 'Dynamic Reactive Compensation Equipment' into Section 11 (Interpretation and Definitions) of the CUSC. The intent of this change is to ensure alignment between the CUSC and the Grid Code, where the term DRCE is already defined. However, this alignment is only necessitated in the event that CMP418 is approved, as without that change, the defined term DRCE would not be used within the CUSC and therefore would not be necessary.

[5] ORPS is the provision of varying reactive power output. This refers to the requirement for certain generators to vary their reactive power output to support voltage control near their connection point. Under the Grid Code, all relevant generators must have the capability to both absorb and produce reactive power as needed by the system operator. While ORPS is not procured through a commercial tender process, payments are made to generators via the Default Payment Mechanism to reimburse the operational and maintenance costs of delivering this service.
[6] CMP418 Proposal Form: https://www.neso.energy/document/294296/download

The Office of Gas and Electricity Markets
10 South Colonnade, Canary Wharf, London, E14 4PZ **Tel** 020 7901 7000
www.ofgem.gov.uk

The Proposal was developed explicitly as a consequential modification to CMP418, which would, if approved, include specific references to DRCE. CMP450 was therefore raised in parallel to provide the necessary definitional support to CMP418. The Proposer considers that if CMP418 were implemented, CMP450 would be required to ensure consistency within the CUSC by defining the new term introduced.

The Proposer states that CMP450 would be positive in regard to Applicable CUSC Objective (ACO) (iv) by promoting efficiency in the implementation and administration of the CUSC arrangements. The Proposer did not consider the Proposal to have any material impact against the remaining ACOs.

CUSC Panel[7] recommendation

At the CUSC Panel meeting on 2 May 2025, the Panel unanimously agreed that the Proposal would better facilitate the ACOs than the existing provisions in the CUSC (the 'Baseline') and therefore recommended its approval. All Panel members considered that ACO (iv) would be better facilitated, while one Panel member also stated that CMP450 would be positive for ACO (i). The Panel therefore recommended unanimously that CMP450 should be approved, under the general understanding that it would be required only as a supporting change dependent on the approval of CMP418.

Our Decision

We have considered the issues raised by the Proposal and the Final Modification Report (FMR)[8] dated 14 May 2025. We have also considered and taken into account the votes of the CUSC Panel which are attached to the FMRs as well as the decision to reject CMP418. We have concluded that:

[7] The CUSC Panel is established and constituted from time to time pursuant to and in accordance with section 8 of the CUSC.
[8] Final Modification Report 450: https://www.neso.energy/document/360551/download

The Office of Gas and Electricity Markets
10 South Colonnade, Canary Wharf, London, E14 4PZ **Tel** 020 7901 7000
www.ofgem.gov.uk

- Implementation of the Proposal would not better facilitate the achievement of the ACOs[9].

Reasons for our decision

We consider that the Proposal would not better facilitate ACO (iv) and would have a neutral impact on the other ACOs. We have decided to reject CMP450 for the reasons set out below.

Our assessment against the ACOs:

(iv) Promoting efficiency in the implementation and administration of the CUSC arrangements.

The Proposer considers that CMP450 would better facilitate ACO (iv) by promoting efficiency in the implementation and administration of the CUSC arrangements. Specifically, they assert that should CMP418 be approved, the Proposal would promote efficiency in the implementation and administration of the CUSC arrangements.

All Panel members considered that CMP450 would better facilitate ACO (iv), primarily on the basis that introducing the DRCE definition would promote efficient implementation and administration of the CUSC. Some members noted that it would help ensure consistency with the Grid Code, and others emphasised the simplicity and clarity of the proposed change. These views were expressed on the basis that the Proposal was a necessary change to ensure that the intent of CMP418 could be implemented if it were to be approved.

Our view

[9] As set out in Standard Condition E2 of the Electricity System Operator Licence. Please see: https://www.ofgem.gov.uk/sites/default/files/2024-09/Complete_ESO_Licensing_Direction_and_Licence_Terms_and_Conditions_decision_e-signed_and_dated_FINAL.pdf

The Office of Gas and Electricity Markets
10 South Colonnade, Canary Wharf, London, E14 4PZ **Tel** 020 7901 7000
www.ofgem.gov.uk

CMP450 was proposed solely to support the implementation of CMP418, in the event it was approved, by introducing a definition for DRCE within the CUSC. Since CMP418 has been rejected, we consider that the introduction of the DRCE definition would serve no operative purpose in the CUSC. Furthermore, we consider that introducing a standalone, unused definition would be administratively burdensome and provides no further clarity in the methodology. Therefore, we conclude that CMP450 would result in a negative outcome for ACO (iv).

Decision notice

In accordance with Standard Condition E2 of the Electricity System Operator Licence, the Authority has decided that modification proposal CUSC Modification Proposal 450: *Introducing the definition of Dynamic Reactive Compensation Equipment (DRCE)* in the CUSC should not be made.

James Stone
Head of Electricity Network Charging – Energy Systems Management & Security
Signed on behalf of the Authority and authorised for that purpose

The Office of Gas and Electricity Markets
10 South Colonnade, Canary Wharf, London, E14 4PZ **Tel** 020 7901 7000
www.ofgem.gov.uk