Modification proposal:	**Connection and Use of System Code (CUSC) CMP411: Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies (CMP411)**		
Decision:	The Authority[1] directs that this modification be made[2]		
Target audience:	National Grid Electricity System Owner (NGESO), Parties to the CUSC, the CUSC Panel and other interested parties		
Date of publication:	28 March 2024	Implementation date:	1 April 2025

Background

The Offshore Transmission Network Review (OTNR) was launched by government in July 2020 with the objective of ensuring that transmission connections for future offshore wind generation were delivered in an optimal way, considering the United Kingdom's ambitions for offshore wind energy in achieving net zero. The government's Ten Point Plan for a Green Industrial Revolution in November 2020[3] set an ambitious offshore wind target of 40GW by 2030. In April 2022, the government announced a new British Energy Security Strategy (BESS)[4] which built on previous offshore wind targets to set an ambition of 50GW of offshore wind by 2030.

Under the current regulatory framework, offshore windfarms are connected to the onshore network via radial (point-to-point) connections, meaning in effect that each offshore generator has its own connection to the onshore transmission system, which it is responsible for constructing. Once built, these offshore transmission assets are tendered via a competitive tender process and ownership of the assets is transferred to the successful bidder, who becomes then Offshore Transmission Owner (OFTO). Generators

[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 Ten Point Plan for a Green Industrial Revolution - GOV.UK (www.gov.uk)
[4] British Energy Security Strategy - GOV.UK (www.gov.uk)

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pay charges to the OFTO in respect of the offshore transmission assets. Radial connections are not appropriate for the scale of ambition and may present a barrier to the further scaling up of the offshore wind sector. Additionally, they impose more of an impact upon the seabed and local communities that host the connections, as radial connections only serve one generator. Therefore, increased coordination in the offshore network will mean that generators are more likely to share assets leading to more efficient deployment of assets and mitigating potential disruption to the seabed and local communities. The OTNR aims to ensure that future connections for offshore wind are delivered with increased coordination whilst ensuring an appropriate balance between environmental, social and economic costs.

Anticipatory Investment (AI) policy

AI refers to the investment in offshore transmission infrastructure made by an initial user to support the later connection of specific offshore development(s). Although the current framework for offshore wind development has successfully driven cost reductions and timely delivery of projects, due to the competitive nature of this framework, developers have not been incentivised to undertake AI on behalf of future projects. Under our existing cost assessment process, where AI is undertaken by a developer to support the later connection of specific offshore wind project(s), the AI risk is allocated to the developer. This has disincentivised offshore wind developers from undertaking additional development risks as developers do not wish to be at a competitive disadvantage.

For clarity, in this decision letter we refer to the developer(s) making the investment in the shared asset as the initial user, and the developer(s) that will use the shared asset in future as the later user(s).

As part of our OTNR decision[5], we concluded that the management of AI risk was likely the biggest barrier to greater coordination of offshore projects, and intended to address this barrier by enabling developers to undertake AI to deliver beneficial coordination whilst managing and mitigating the allocation of AI risk to consumers. We concluded that the investment made by the initial user in the shared infrastructure comprises of an AI and non-AI element, which would be determined by the Authority on a case-by-case basis based on the proportional usage of the shared infrastructure through the Early-

[5] Consultation on changes intended to bring about greater coordination in the development of offshore energy networks (ofgem.gov.uk)

Stage Assessment (ESA) process.[6] The ESA process was established as part of the development of our AI policy, with the aim of providing developers with confidence that AI spent on coordinated infrastructure will be treated as an allowable cost in any future cost assessment process.

Anticipatory Investment (AI) charging principles set out in Revised Minded to Decision

In our December 2022 publication[7], we outlined several scenarios and charging issues we expected NGESO and industry to explore to give effect to our AI policy. We considered a number of proposals, mainly how the costs of the shared infrastructure will be apportioned between the initial and later user. We set out that, in principle, we consider there is merit in a charging framework that splits the costs of shared assets between specific users based on the capacity of their plant. However, we recognised that during the period of time after the transfer of the assets to the OFTO but before the later user connecting, charges would only be payable by the initial user by reference to the capacity of their plant meaning that the OFTO would not receive its full revenue entitlement. We considered it appropriate that these charges should be funded through the Transmission Demand Residual (TDR) during this period and then, critically, repaid by the later user once connected and deducted from the TDR in the subsequent years. We refer to this sum as the AI Cost Gap.

We also set out in the charging principles that, in the case of a later user connecting which is not a generator, for instance a Transmission Owner (TO) (ie the additional capacity confers a wider network benefit and is not attributable to a specific group of users), we consider that the costs of AI would also be collected through the TDR. We would expect this process to follow the current CUSC arrangements set out in Section 14.15.137 of the Connection and Use of System Code (CUSC), which ensures adequate recovery of the total TO revenue. In this instance, the TDR would not be refunded, as we consider the additional capacity to confer a wider network benefit and therefore consider it appropriate that the costs are paid by demand users.

Currently when two or more offshore generators are connected to the onshore transmission system at the same time and share the same offshore transmission assets, Section 14 of the CUSC methodology sets out how local charges (both offshore local circuit and offshore local substation) are apportioned between the two Offshore Generators. The current charging methodology is primarily designed on the basis that

[6] Decision on the Early-Stage Assessment for Anticipatory Investment (ofgem.gov.uk)
[7] Revised Minded-to Decision and further consultation on PT2030 (ofgem.gov.uk)

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offshore generators will connect radially, and whilst it takes account of a scenario where two offshore generators connect at the same time using the same assets, it does not specify how charges associated with offshore assets related to AI should be recovered. Therefore, a change to Section 14 of the charging methodologies is required.

The modification proposal

CMP411 ('the Proposal') was raised by National Grid Electricity System Operator (NGESO) ('the Proposer') on 9 February 2023. The purpose of the Proposal is to determine how costs related to AI will be apportioned through network charges between different users, and introduce the concept of AI and AI Cost Gap to the charging methodology. For clarity, the aim of the Proposal is not to calculate the AI value (this will be determined by the Authority through the ESA process), but to determine how the AI value and the AI Cost Gap is recovered, including the appropriate tariff, the length of time for recovery and the appropriate inflation indexation to be used.

CMP411 Solution

CMP411 proposes that any generator connected to the offshore transmission system at point of asset transfer to the OFTO will become liable for charges in respect of the non-AI value portion of the OFTO revenue, and any subsequent generator(s) will become liable for charges in respect of the AI value portion of the OFTO revenue at the point of connection to the transmission system. Both generators' charges (Offshore Local Charges) will be calculated as per the current arrangements set out in CUSC Section 14 (14.15.121 and 14.14.129-14.15.134) but will be based on the proportion of their costs of the total OFTO revenue (ie the non-AI value for the initial user and AI value for later user(s)).

As noted above, there will be a period of time between the shared offshore assets being transferred to the OFTO and the later user connecting, during which time the AI Cost Gap will be payable by demand users.

The Proposal introduces a mechanism following the principles we set out that AI Cost Gap will be recovered from demand customers via the TDR until such time as the later user(s) connects, and that any later user that connects after the asset transfer to the OFTO will be subject to costs associated with the AI Cost Gap once they connect. The AI Cost Gap will be repaid to demand customers by the later user through the generator paying the

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proposed AI Cost Gap tariff or via one payment in the charging year in which they connect, depending on the preference of the later user.

The Proposer considers the solution to better facilitate Applicable Charging Objectives (ACOs)[8] a), c) and e). With respect to ACO a) the Proposer believes that the Proposal will reduce the risk for the initial user who is constructing the shared assets, as it would prevent the current arrangements where they could be liable for higher TNUoS than they otherwise would have been had they not made AI. They also consider that this objective will be better facilitated as the Proposal will encourage developers to coordinate, and therefore, result in improved competition. For ACO c), the Proposer considers that the Proposal reflects Ofgem's decisions on AI implementation and under ACO e), they believe that the proposed mechanism will provide clarity in the CUSC regarding the treatment of AI and the basis of its cost recovery. The Proposer considers the Proposal to be neutral against the remaining objectives.

CUSC Panel[9] recommendation

At the CUSC Panel meeting on 15 December 2023, the CUSC Panel unanimously considered that the Proposal would better facilitate the ACOs and the Panel therefore recommended its approval.

Our decision

We have considered the issues raised by the Proposal and the Final Modification Report (FMR) dated 5 January 2024. We have considered and taken into account the responses to the industry consultation(s) on the Proposal which are attached to the FMR[10]. We have concluded that:

- implementation of the Proposal will better facilitate the achievement of the ACOs;[11] and

[8] The objectives vary depending upon whether the modification is to a Charging Methodology i.e. Use of System Charging Methodology or Connection Charging Methodology. Applicable Charging Objectives are defined in paragraph 5 of SLC C5 of NGESO's Transmission Licence.
[9] The CUSC Panel is established and constituted from time to time pursuant to and in accordance with section 8 of the CUSC.
[10] CUSC modification proposals, modification reports and representations can be viewed on NGESO's website at: https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc/modifications
[11] As set out in Standard Condition C5(5) of NGESO's Transmission Licence, see: Licences and licence conditions | Ofgem

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- directing that the modification be made is consistent with our principal objective and statutory duties.[12]

Reasons for our decision

We consider the Proposal will better facilitate CUSC objectives a), c) and e) and has a neutral impact on the other applicable objectives.

(a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution, and purchase of electricity;

The Panel members unanimously agreed that the Proposal better facilitates this objective. They considered the Proposal to benefit competition by reducing additional risk and uncertainty for the initial user by providing a mechanism for the costs of non-AI and AI to be collected from the relevant users. One Panel member also highlighted that the Proposal ensures generators face Offshore Local Circuit Charges only for the proportion of the assets which they utilise, therefore, removing a barrier for generators to coordinate.

The majority of the Code Administrator Consultation responses supported the Proposal, noting similar reasons to those outlined by the Panel members.

Our views

We agree with Panel members and the Code Administrator Consultation responses that the Proposal better facilitates competition in the generation of electricity. Under the status quo, an initial generator that is constructing shared assets for its own use as well as for use by a later user may be liable for TNUoS charges associated with both the AI element and the non-AI element of assets prior to the later user connecting.

We consider the Proposal to be positive against this objective as it ensures that generators who participate in AI arrangements are not disadvantaged as compared to those generators who do not partake in AI (ie generators who choose to connect radially). By implementing the proposed changes to the charging methodology, the Proposal ensures a level playing field insofar as charging in respect of AI.

(c) that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses;

The Panel members unanimously agreed that the Proposal better facilitates this objective. They considered that the Proposal aligns with Ofgem's policy on AI and addresses the current barrier to entry for offshore generators to coordinate. One Panel member noted that the Proposal better facilitates this objective by taking account of the

[12] The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

growth in offshore generation and with least possible disruption by reducing the number of radial connections.

The responses to Code Administrator Consultation noted similar themes to the Panel members, noting that the Proposal better enables project coordination and addresses the current disincentive for generators to coordinate.

Our view

We consider the Proposal to have a positive impact on this objective and agree with the Panel and Code Administrator Consultation views. Although we did not issue a direction to NGESO to propose this modification, we believe the Proposal will implement the charging principles we set out previously in relation to the recovery of AI costs, and therefore, gives effect to our Anticipatory Investment policy decision. Furthermore, we consider the mechanism introduced by the Proposal will incentivise generators to coordinate in order to accelerate progress towards the proposed Government targets for offshore wind. Overall, therefore, we consider the Proposal will lead to the charging methodology properly taking account of developments in the transmission licensees' transmission businesses, namely the co-ordinated expansion of the offshore network.

(e) promoting efficiency in the implementation and administration of the use of system charging methodology.

The majority of Panel members considered the Proposal to better facilitate this objective, with one member considering the Proposal to have a negative impact and remaining members considering it to have a neutral impact. Those who considered the Proposal to be positive against this objective noted that the solution codifies the AI principles within the CUSC, which provides clarity and mitigates any risk of confusion regarding treatment of AI cost recovery. It also provides transparency and predictability as to how these costs will be administered.

One of the Panel members who considered the Proposal to be negative against this objective outlined concerns regarding the solution introducing additional complexity into the methodology by refunding the AI Cost Gap through the TDR in later years and considered the requirement of Ofgem's role in calculating the AI and non-AI value through the ESA process to add inefficiency into the administration of the system charging methodology. They also considered that the ESO should consider a future modification to create an agreed methodology of calculating the share of AI and non-AI for a given project.

The majority of the Code Administrator Consultation responses considered the Proposal to better facilitate this objective, noting similar themes to the Panel regarding improved clarity in the charging methodology in relation to AI costs.

Our view

We agree with the views that the Proposal better facilitates efficiency in the implementation and administration of the CUSC charging methodology. We consider the Proposal provides clarity in the methodology for how the costs of AI will be recovered. We therefore consider the Proposal to mitigate against the risk of confusion and improves the efficiency of the charging methodology.

We disagree with the view that Ofgem's role in calculating the AI and non-AI costs through the ESA process will have a negative impact on the charging methodologies. The ESA process has not been proposed by this Proposal and was developed as part of the

OTNR decisions. Therefore, we do not consider it in scope of this Proposal to argue whether this process impacts the efficiency of the charging methodology, considering it will not be included in the CUSC. Therefore, we disagree with the view that the ESA process causes a negative impact with respect to this objective.

We understand the views regarding the additional step of refunding the money via TDR could create complexity, but we consider this is outweighed by the benefits introduced by the Proposal, mainly the increased transparency on how AI costs will be recovered.

Assessment against the Authority's principal objectives and statutory duties[13]

In making a decision on the Proposal, we have considered whether our decision is consistent with our principal objective to protect the interests of consumers, and our other statutory duties.

We consider that the Proposal encourages the more coordinated expansion of the offshore network, which is key to the governments net zero targets, while ensuring that costs are apportioned in a fair manner. Furthermore, we consider that by incentivising developers to coordinate and share infrastructure, consumers will benefit from the reduced number of subsea cables required, and therefore minimise disruption to local communities. While we recognise arguments made that consumers would bear the risk in the event of the later user failing to connect, we consider that the relatively low risk of consumers having to bear the cost of stranded assets is likely to be mitigated by appropriate User Commitments[14] given by the connecting generator (which at least partially offset the cost), and in any event, offset by the wider benefit conferred by the Proposal. Overall, therefore, we consider approving the Proposal protects the interests of consumers and in particular, their interest in compliance with Net Zero targets.

Decision notice

In accordance with Standard Condition C10 of the Transmission Licence, the Authority, hereby directs that modification proposal CMP411: *Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies* be made.

Harriet Harmon

Head of Electricity Transmission Charging

Signed on behalf of the Authority and authorised for that purpose

[13] The Authority's statutory duties in this context are detailed mainly in the Electricity Act 1989 (in particular, but not limited to section 3A) as amended.

[14] This regime is also under review in the context of AI, under CMP402: "Introduction of Anticipatory Investment (AI) principles within the User Commitment Arrangements". CMP402: Introduction of Anticipatory Investment (AI) principles within the User Commitment Arrangements | ESO (nationalgrideso.com)