Modification proposal:	**Connection and Use of System Code (CUSC) CMP320: Island MITS Radial Link Security Factor (CMP320)**		
Decision:	The Authority[1] directs that the Original Proposal of this modification be made[2]		
Target audience:	National Grid Electricity System Operator (NGESO), Parties to the CUSC, the CUSC Panel and other interested parties		
Date of publication:	09 July 2020	Implementation date:	01 April 2021

Background

Generators and demand users pay for the ongoing costs of the transmission network via Transmission Network Use of System (TNUoS) charges. TNUoS charges take account of costs for different types of circuits. These include onshore circuits, offshore circuits, alternating current (AC) subsea and high-voltage direct current (HVDC) circuits.

TNUoS charges for generators are made up of "local" and "wider" locational elements. Wider charges apply to those parts of the network that are part of the Main Integrated Transmission System (MITS).[3] In calculating generator charges, a Security Factor is multiplied by the zonal locational tariff to reflect redundancy in the transmission system.

For circuits classed as "wider", a Security Factor of 1.8 is applied, irrespective of redundancy on those circuits. For "local" circuits without redundancy, the Security Factor is 1.0. Many islands are – or could be – connected by a single radial circuit to the mainland, so there is effectively no redundancy in the transmission circuit. [4]

On 18 July 2019, SSE Generation Ltd (the 'Proposer') raised Connection and Use of System Code (CUSC) Modification Proposal CMP320: *Island MITS Radial Link Security Factor*. This proposal seeks to ensure that the Security Factor applied to a single radial circuit connected to an island remains at 1.0 if that circuit is classified as part of the MITS, which could otherwise then be considered a "wider" circuit by virtue of the MITS node.

Following the CUSC Modifications Panel's (the 'Panel') decision that CMP320 should proceed to a workgroup, on 5 August, the Proposer resubmitted CMP320 as an Urgent CUSC Modification Proposal. On 23 August 2019, the Panel wrote to inform us of its majority view that CMP320 should be treated as urgent.

---

[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.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] A MITS node is one with either (i) more than four Transmission Circuits; or (ii) two or more Transmission Circuits and a Grid Supply Point.
[4] Radial circuits are single 'spurs' that link generation and/or demand in one location to the wider interconnected transmission network.

On 30 August 2019, we issued our decision that the proposals should not be progressed on an urgent basis as we considered it did not meet our urgency criteria.[5]

The modification proposal

The Proposer considers that the definition of MITS means that it is possible, in certain circumstances beyond the control of the user, that a MITS node may be created on an island that is served by a single radial circuit to the mainland. This would reclassify the island connection from a local circuit with a Security Factor of 1.0, to a wider circuit, with a Security Factor of 1.8, despite the redundancy on the circuit not changing. The Proposer considers that the potential increased Security Factor and associated increase in TNUoS charges would not be cost reflective for the generators on the island.

The Proposer's solution is to amend Section 14 of the CUSC to apply a Security Factor of 1.0 (rather than 1.8) where a MITS node is located on an island which, in turn, is connected to the mainland on a single radial subsea circuit.

The Proposer considers that the proposed modification would improve cost reflectivity of TNUoS charges, which should also enhance competition. It also noted that it would recognise the evolving nature of the transmission system with the potential introduction of single radial circuits and MITS nodes to islands. Therefore, it considered CMP320 would better meet CUSC charging objectives (a), (b) and (c) in comparison with the current baseline.[6]

In addition to the Original Proposal, the workgroup developed two Workgroup Alternative CUSC Modifications ("WACMs"):

- WACM1 would redefine what a MITS node is in terms of remote islands connected by a single circuit, and to reclassify nodes on remote islands as local circuits, which would remove the need to amend the Security Factor within the wider TNUoS charging methodology; and
- WACM2 would not limit the solution to remote island generation but extend it to cover all connections with the same characteristics, ie mainland MITS nodes connected with a single radial circuit.

CUSC Panel[7] recommendation

At the CUSC Panel meeting on 31 January, the CUSC Panel unanimously considered that the CMP320 Original Proposal would better facilitate the CUSC charging objectives than the baseline. The Panel voted by majority that WACM1 and WACM2 would better facilitate the CUSC charging objectives than the baseline. Of the nine votes, five considered

[5] https://www.ofgem.gov.uk/publications-and-updates/cmp320-island-mits-radial-link-security-factor-decision-urgency
[6] As set out in Standard Condition C5(5) of the Electricity Transmission Licence, see: https://epr.ofgem.gov.uk//Content/Documents/Electricity%20transmission%20full%20set%20of%20consolidated%20standard%20licence%20conditions%20-%20Current%20Version.pdf
[7] The CUSC Panel is established and constituted from time to time pursuant to and in accordance with the section 8 of the CUSC.

WACM2 would the best option, three considered the Original Proposal would be the best option and one considered WACM1 would be the best option.

Our decision

We have considered the issues raised by the modification proposal, the WACMs and the Final Modification Report (FMR) dated 12 February 2020. We have considered and taken into account the responses to the industry consultations on the modification proposal which are attached to the FMR.[8] We have concluded that:

1. implementation of the Original Modification Proposal will better facilitate the achievement of the relevant charging objectives of the CUSC; and
2. directing that the Original modification be made is consistent with our principal objective and statutory duties.[9]

Reasons for our decision

We consider the Original modification proposal will better facilitate CUSC objectives (b) and (c) and has a neutral impact on the other applicable objectives.

We consider that WACM1 and WACM2 go beyond the scope of the original defect, which was tightly defined to cover the Security Factor that should apply if a single radial link connects to a MITS node on an island. In our assessment, we have focused on the Security Factor that should be applied in these circumstances. We have not assessed the appropriateness of wider or local circuit charges being applied to remote islands, or the impact on generation zones should such an island MITS node be formed.

WACM1 seeks to reclassify the definition of a MITS node in certain circumstances, while WACM2 seeks to extend the solution to cover other MITS radial circuits. Neither of these proposals are limited to the defect identified in the Original Proposal. As such, we are concerned that the process to date may have excluded parties with an interest in these wider issues, not identified in the original defect. We are also concerned that any potential unintended consequences of the two alternatives have not been fully-explored by the workgroup or industry more widely. One Panel member abstained from voting on these WACMs, considering the inclusion of WACM1 and WACM2 to be procedurally incorrect. That Panel member considered that the two WACMs address a different defect to the one originally identified.

We do not think that industry has been given sufficient time to explore the issues raised by WACM1 and WACM2 so we are unable to fully assess these proposals for the purpose of this decision. Therefore, based on the evidence available, we consider that WACM1 and WACM2 are neutral against all of the objectives.

[8] 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
[9] 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.

We have summarised the Panel views and our preliminary views of WACM1 and WACM2 based on the evidence available. We will be able to more fully assess any such proposals should they be raised in a subsequent modification where they address the defect identified by that modification.

(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;

Original Proposal

Members of the CUSC Panel unanimously agreed that the Original Proposal would better facilitate objective (a), as did the majority of respondents to the consultations. One workgroup member considered that the Original Proposal would not better facilitate this objective.

Panel members highlighted that, by introducing more cost reflective charges for affected generators, the proposal would promote competition in generation. One workgroup member considered that the Original Proposal would impede objective (a) by not applying to the comparable situation for mainland onshore MITS nodes at the end of a single radial link.

Our position

We agree with the Panel that the proposal has the potential to make affected island generators more competitive with other generators. This is because their charges would no longer be subject to a Security Factor that is disproportionate to the security of their circuit connection.

We also acknowledge that CMP320 has the potential to introduce some differential treatment between generators with similar levels of connection, but with different geographical locations: island or mainland.

We also note HVDC circuits and AC subsea cables are already subject to differential treatment from mainland onshore circuits. In the CUSC, for HVDC circuits and AC subsea cables (connecting islands), expansion factors are determined on a case-by-case basis in contrast to the standard expansion factors applied to mainland onshore circuits.[10]

On balance, weighing up the benefits for island generators, and the potential for introducing (further) differential treatment between generators in similar network positions, we consider CMP320 to be neutral against objective (a).

[10] NGESO models circuits to set the locational TNUoS tariffs. Starting from a standard circuit tariff, the 'expansion factor' is used to calculate tariffs for different types and costs of circuits.

WACM1 and WACM2

A majority of the CUSC Panel considered that both WACM1 and WACM2 would better facilitate objective (a). Two Panel members considered that WACM1 would not better facilitate this objective.

For both WACMs, Panel members highlighted potential benefits to competition from increased cost reflectivity of charges. For WACM2, Panel members considered the lack of geographical discrimination as positive for competition.

For WACM1, as with the Original Proposal, some Panel members were concerned that the reduced Security Factor would only apply to island circuits and not mainland circuits in an equivalent position. In addition, Panel members were concerned that the proposed solution did not taken into account the network configuration on the island, but simply applied a Security Factor of 1.0 to an island regardless of levels of redundancy.

For WACM2, two Panel members expressed concerns that applying the proposed solution could have unintended consequences. They noted that the proposed approach does not take into account whether or not the affected mainland generators also have a financially firm connection, such that they are already financially compensated for any reduction in security from being connected to a single radial circuit.

Our position

We share the concerns raised by Panel members regarding the potential unintended consequences of WACM1 and WACM2. In both cases, the proposed solution could be applied in circumstances where the generator either: benefits from some network redundancy (WACM1) or is already compensated for lack of network redundancy (WACM2). Based on the evidence available, we consider that WACM1 and WACM2 are neutral against objective (a).

(b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);

Original Proposal

A majority of the members of the CUSC Panel agreed that the Original Proposal would better facilitate objective (b). One Panel member considered it to be neutral against this objective.

Those Panel members that considered the Original Proposal would better facilitate this objective stated that the modification would ensure that the revised Security Factor would result in charges that better reflect the redundancy on the network. That is, generators wouldn't be charged for redundancy that doesn't exist for these circuits.

Our position

We consider CMP320 better facilitates objective (b). We agree with the majority of the Panel that it is more cost reflective if TNUoS charges are based on the redundancy associated with single radial circuits, rather than applying the default of Security Factor of 1.8 where no such redundancy exists.

WACM1 and WACM2

A majority of the CUSC Panel considered that both WACM1 and WACM2 would better facilitate objective (b). Two Panel members considered that WACM1 would not better facilitate this objective.

For both WACMs, as with the Original Proposal, some Panel members stated that the modification would ensure that the revised Security Factor would result in charges that better reflect the redundancy on the network.

As for objective (a) Panel members expressed the same concerns with the extent to which cost reflectively would be achieved could be undermined by the potential unintended consequences of each WACM.

Our position

We share the concerns raised by Panel members regarding the potential unintended consequences of WACM1 and WACM2. In both cases, the proposed solution could be applied in circumstances where the generator either: benefits from some network redundancy (WACM1) or is already compensated for lack of network redundancy (WACM2).

For WACM1, we do note that applying a local circuit charge to island links would ensure that generator charges related to those links are targeted on island generators, rather than shared more widely by other generators in that generation zone.

Based on the evidence available, we consider that WACM1 and WACM2 are neutral against objective (b).

(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;

Original Proposal

Members of the CUSC Panel unanimously agreed that the Original Proposal would better facilitate objective (c). They highlighted the proposed transmission links to remote Scottish islands that could result in a MITS nodes being established on those islands, despite being served by a single radial link.

Our position

We agree with the Panel that the Original Proposal is timely in light of the proposed transmission links to some remote Scottish islands. The proposal would help ensure charging arrangements take into account parties affected by these developments. We therefore consider that CMP320 better facilitates objective (c).

WACM1 and WACM2

A majority of the CUSC Panel considered that both WACM1 and WACM2 would better facilitate objective (c). One Panel member considered that WACM1 would not better facilitate this objective.

The Panel members that supported these WACMs did so for the same reasons given for the Original Proposal. One Panel member considered that WACM1 would result in the incorrect approach to the development of transmission island links, by precluding the creation of island nodes that are part of the MITS.

Our position

The potential unintended consequences of WACM1 and WACM2, highlighted above, could undermine the extent to which those proposals 'properly take account' of the potential development of transmission island links. Based on the evidence available, we consider that WACM1 and WACM2 are neutral against objective (c).

Legal text

The proposed legal text introduces a term 'Identified Onshore Circuit' to Section 14 of the CUSC, which is defined in the following paragraph of the proposed legal text, but is not separately defined in Section 11 (Definitions) of the CUSC. In the interests of best practice, we consider that the new term and definition should appear in Section 11 (Definitions) of the CUSC. We encourage NGESO to raise a housekeeping modification to that end ahead of the implementation date.

Other issues

As noted above, in our assessment, we have focused on the Security Factor that should apply if a single radial link connects to a MITS node on an island. WACM1 has raised an important issue concerning the cost reflectivity of charging for remote islands connected by transmission links, specifically whether or not a wider circuit designation is appropriate for these cases.

We also note that, as part of their assessment, existing CUSC proposed modifications concerning generation rezoning (CMPs 324 and 325) are considering the impact on

generation zones should an island MITS be formed.[11] The FMR for these proposals is due to reach us in August and will inform our next steps in this area. For the avoidance of doubt, nothing in this letter in any way fetters our discretion with respect to CMPs 324 and 325.

Decision notice

In accordance with Standard Condition C10 of the Transmission Licence, the Authority, hereby directs that the Original Modification Proposal CMP320: *Island MITS Radial Link Security Factor* be made.

Andrew Self
Deputy Director, Electricity Access and Charging – Energy Systems Transition
Signed on behalf of the Authority and authorised for that purpose

[11] CMPs 324 and 325: *Generation Zones – changes for RIIO-T2* and *Rezoning – CMP324 expansion* are being progressed together, see: https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp324-cmp325