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Workgroup Consultation Response Proforma

CMP432: Improve "Locational Onshore Security Factor" for TNUoS Wider Tariffs

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses to cusc.team@nationalenergyso.com by **5pm** on 07 March 2025. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration.

If you have any queries on the content of this consultation, please contact: cusc.team@nationalenergyso.com

Respondent details	Please enter your details	
Respondent name:	Tom Steward	
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Which best describes your organisation?	☐Consumer body ☐Demand ☐Distribution Network Operator ☒Generator ☐Industry body ☐Interconnector	☐Storage ☐Supplier ☐System Operator ☐Transmission Owner ☐Virtual Lead Party ☐Other

I wish my response to be:

(Please mark the relevant box)

☒ **Non-Confidential** *(this will be shared with industry and the Panel for further consideration)*

☐ **Confidential** (this *will be disclosed to the Authority in full but, unless specified, will not be shared with the Workgroup, Panel or the industry for further consideration)*

For reference the Applicable CUSC (charging) Objectives are:

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;*

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 accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard licence condition C11 requirements of a connect and manage connection);*

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 and the ISOP business*;*

d) *Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency **; and*

e) *Promoting efficiency in the implementation and administration of the system charging methodology.*

** See Electricity System Operator Licence*

***The Electricity Regulation referred to in objective (d) 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.*

Please express your views in the right-hand side of the table below, including your rationale.

<table>
<tr><th colspan="3">Standard Workgroup Consultation questions</th></tr>
<tr><td rowspan="3">1</td><td rowspan="3">Do you believe that the Original Proposal and better facilitates the Applicable Objectives?</td><td>Mark the Objectives which you believe the Original solution better facilitates:</td></tr>
<tr><td>Original ☐A ☐B ☐C ☐D ☐E</td></tr>
<tr><td>The Original is negative or neutral for all objectives compared with the baseline.
Cost reflectivity
The proposal to set the security factor to 1 would imply that no generator should contribute to the cost of security. This is in spite of the fact that when there is an outage, their ability to continue to generate is entirely contingent upon that security. This is therefore a clear move away from cost reflectivity. As noted below – generators that choose single local</td></tr>
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		circuit connections do not benefit from security, and therefore face a different level of charges to reflect that. The fact that, even before the application of the €2.50/MWh cap, generators pay only a fraction of the cost of the network, implies that there is a significant amount of network that they rely upon but are not charged for. In the 2025/26 charging year, the total cost of the onshore TO costs is £4.1bn, but generators only contribute ~£600m. This is inclusive of the 1.76 security factor. Reducing the security factor to 1 would make the charges faced bey generators even less cost reflective. This response sets out a number of examples for investigation that could imply the need to increase the security factor, which implies that a reduction to 1 would be a significant move away from cost-reflectivity.
2	Do you support the proposed implementation approach?	☐Yes ☒No
		Assessment alongside CMP444 is appropriate, however not in isolation from other critical interrelated mods such as CMP315/375 (which OFGEM has been considering for over 12 months). Furthermore, to properly assess the role of the SCULF model and ensure it is fit for purpose, an urgent code modification is not appropriate. There are a number of improvements that have been recommended by the TNUoS Taskforce and raised in other modifications that would increase TNUoS tariffs, so to reduce unpredictability, this suite of modifications should be considered together, rather than developing one modification for approval by itself.
3	Do you have any other comments?	**Local Circuits** Generators linked to the MITS via a local asset can choose to have a single line (attracting a security factor of 1) or a double circuit – attracting a security factor of 1.76. To move the entire MITS to a security factor of 1 would imply either that those generators with a single line should attract a reduced security

		factor compared to the MITS. Logically this would be 0.88 (half of the current 1.76). This is obviously inconsistent with reality – it is not possible for a generator with a firm connection contract to have 88% security. Alternatively, the move to the MITS having a security factor of 1 implies that all generators with single links should be entitled to free instant network upgrades – this too is obviously impractical. The same is true for consumers on islands with a single link to the MITs who similarly have a lower-than-MITS level of security. We believe this modification cannot progress until the consistent treatment of local circuits is resolved.
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	☐Yes (the request form can be found in the Workgroup Consultation Section) ☒No
		It is not clear what the appropriate level of the security factor truly is. We believe there are arguments for increasing above 1.76, however these imply a significant amount of work beyond that which may be achieved with an urgent code modification.
5	Do you agree with the Workgroup's assessment that the modification does not impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Code?	

Specific Workgroup Consultation questions		
6	Do you think there are any other approaches to reflecting the cost of security or is there a	**The appropriate value of security** Without significant additional work, it is difficult to confirm that 1.76 is the correct value. However, it is clear that 1 is

	value other than 1 or 1.76 that is more appropriate. If you have any supporting evidence, please provide this?	not appropriate (or if it is, it is by unprecedented coincidence, and is unlikely to remain as 1 in the medium-longer term as the network is developed). 1. The proposer set out that the significant upgrades currently happening in Scotland to accommodate new generators indicate a security factor above 1. He asserted that these reinforcements are "one off", and that the capacity of links in future will never again increase. This implies an implausible level of certainty over future network development. 2. Annex 1 to this response sets out the significant scope for a number of other such examples where new network reinforcements are necessary to maintain security standards in line with the SQSS. 3. The current Security Factor approach is derived from the Year Round background and we understand it to be reflective of the actual network available including redundancy. Given that NESO is behind on network build, and the cost of constraints has become suboptimal compared with network build, we infer that the current Security Factor may already be lower than is optimal and this must be investigated. 4. No evidence was provided by the proposer that all the examples discussed in the workgroup are not already reflected in the 1.76 value. To offer some individual examples demonstrating that every reinforcement does not imply a security factor of 1.76 fails to appreciate the role of averaging in the calculation. **Other things that should be included in valuation of security** 1. **Other facets of security** - The current approach is extremely limited in that it only considers the role of thermal constraints in security. In reality, security is significantly more complex than this – encapsulating frequency, voltage stability, and the need to be able to deliver system restoration. A more

		sophisticated evaluation of system security and approach to charging is necessary to achieve greater certainty on the appropriate security factor, but failing to include important facets of security implies that 1.76 may indeed be an under-estimate of the current security factor. 2. **Reflecting the nature of links -** The current security factor approach also fails to consider the nature of the links that a generator relies upon. With the proliferation of sub-sea HVDC cables as providing boundary capacity, it is not clear that an N-1 criterion continues to be appropriate. With more and more high capacity sub-sea links, the odds of more than one of these failing simultaneously (and the consequential significant loss of boundary capacity) increases significantly. This is in particular owed to the temporal impact of subsea cable repairs (in contrast to onshore cables) - subsea cables are notoriously difficult to repair - as evidenced by cable failures to radially-connected offshore windfarms where cable outages can take months to repair. The increased risk of second (or third) outages while the first outage is ongoing is significantly increased during the lengthy repair period for a cable. Furthermore, during periods of geo-political instability, the risk of intentional damage to sub-sea cables cannot be discounted. It would therefore be appropriate to reflect the higher security impact of making use of sub-sea HVDC cables in the security factor.
7	Do you believe price signals should reflect average existing cost, incremental cost, a combination of the 2, or something else?	It would maintain consistency with the rest of the charging framework for the security factor to continue to reflect a combination between incremental cost and average cost. To redefine the TNUoS charging model as an “incremental only” approach would necessitate other code changes to ensure consistency is maintained. For example, the average effect of the expansion constant would no longer be appropriate, and so where generators necessitate the greater deployment of network infrastructure (such as in the “beyond 2030” report – with many links specifically being proposed to service forthcoming offshore generators in Scotland), those

		generators should face the full incremental cost of the sub-sea HVDC links, as the marginal reinforcements and not benefit from existing network which is deemed to be of lower replacement cost. It could be argued that the expansion constant should be derived from the most expensive project of each reinforcement type, rather than the average as the current arrangements and CMP315/375 proposes. The security factor represents an **average** of the security requirements of the network. There are instances where new generation necessitates new lines that increase the implied security factor (such as all those being installed in Scotland at present), and indeed there may be some examples which reduce the implied security factor. This is the nature of averages. No evidence has been presented to the workgroup that the current 1.76 does not reflect the average of all of these changes to the network. An alternative to this averaging approach would be to make use of regional security factors, which could risk significant tariff volatility as charges would shift with every reinforcement. What is clear is that a security factor of 1 would not represent an accurate reflection of the impact of a generator on security reinforcement requirements.
8	Do you have a view on whether the SECULF model is appropriate? Is enough information available to market participants?	More information, materials, and training are necessary to fully assess the appropriateness of the SECULF model. However, the fact that it does not reflect a number of aspects of security, or the nature of the links being relied upon, implies that additional work is necessary to ensure it is fit for purpose. A significantly larger piece of work than can be achieved under an urgent code modification is necessary to incorporate these other aspects of security.

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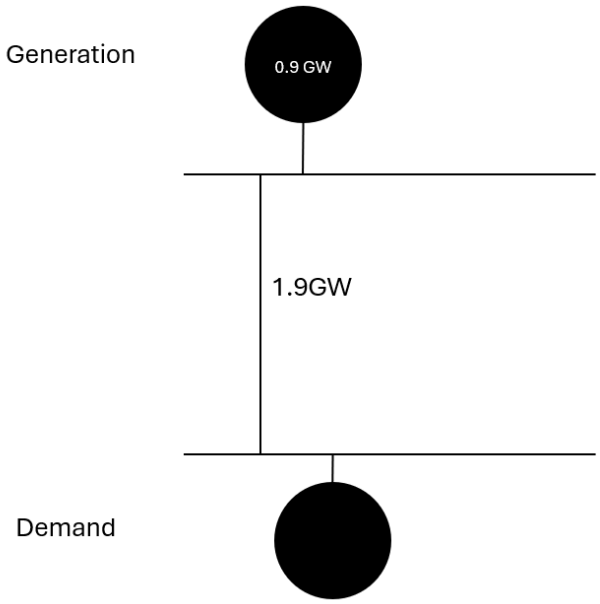
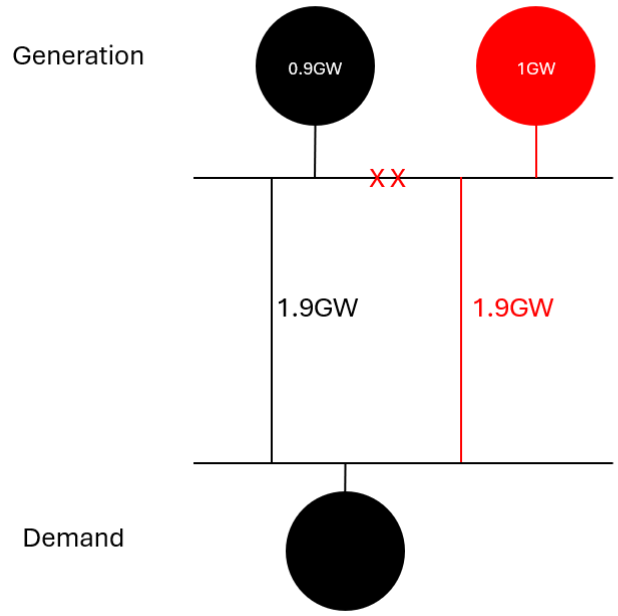
Appendix 1



Network is secure under the SQSS as this specifies the normal infeed loss must not exceed 1.32GW.



New 1GW generator connects, pushing the single point of normal infeed loss above 1.32GW, and therefore SQSS necessitates a new link to be added. The same principle applies for infrequent infeed loss with limit of 1800MW.

Circuit-brakers also necessary to avoid risk of losing entire bus-bar as a single outage.

This demonstrates an example of a secure network necessitating network expansion, liable to be repeated at various points across the network.