

Workgroup Consultation Response Proforma**CMP393: Using Imports and Exports to Calculate Annual Load Factor for Electricity Storage**

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@nationalgrideso.com by **5pm** on **02 June 2023**. 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 jessica.rivalland@nationalgrideso.com or cusc.team@nationalgrideso.com

Respondent details	Please enter your details	
Respondent name:	Rein de Loor	
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Which best describes your organisation?	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input type="checkbox"/> Generator <input type="checkbox"/> Industry body	<input type="checkbox"/> Interconnector <input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input checked="" type="checkbox"/> Other

I wish my response to be:

(Please mark the relevant box)

☒ Non-Confidential☐ Confidential

Note: A confidential response will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

For reference the Applicable CUSC (charging) Objectives are:

- 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;*
- 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 C26 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;*
- 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.*

**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.

Standard Workgroup Consultation questions		
1	Do you believe that the Original Proposal facilitates the Applicable Objectives?	<p>Mark the Objectives which you believe the Original Solution facilitates:</p> <p>Original <input type="checkbox"/>A <input type="checkbox"/>B <input type="checkbox"/>C <input type="checkbox"/>D <input type="checkbox"/>E <input type="checkbox"/>F <input type="checkbox"/>G</p> <p>ESO does not believe the proposal better facilitates any of the objectives than the baseline.</p>
2	Do you support the proposed implementation approach?	<p><input type="checkbox"/>Yes <input checked="" type="checkbox"/>No</p> <p>At this stage the implementation approach isn't fully clarified by the work group. The Original Proposal requires a one-off change to how ALFs are calculated. There will need to be sufficient time for the ESO to make the required changes to the ALF calculation and charging methodology in time for the draft and final TNUoS publications. Typically, the ALF calculation will start in September so this will need to be discussed in the next work group.</p> <p>Any of the alternatives being considered by the work group will need to be assessed for the implementation requirements as these could differ from the Original.</p>
3	Do you have any other comments?	<p>No clear evidence has been provided as to why the current ALF methodology presents a defect for storage operators, nor how it results in inaccurate charges or how the proposed solution will better facilitate the CUSC Applicable Objectives.</p> <p>By looking at the net flow for storage operators, the proposed storage ALF will always be close to zero (positive or negative), because storage operation is close to symmetrical. This gives the impression in the proposed resulting ALF value that there has been no flow and the generator has not put any load on the system, but this is not the case. The small difference between net annual generation and zero is effectively a measure of the round-trip efficiency. The use of network charge (i.e. TNUoS) should not be applied to the energy losses of the storage; it should be applied to the connectee's use of the network, and their contribution to the need to invest in transmission capacity.</p> <p>Through the proposed methodology, storage operators' ALF may become a negative value to reflect that they take more demand from the NETS than they export onto</p>

		<p>the NETS. However, this net value is not reflective of the annual load they put onto the transmission system and thus their year-round charges are not calculated in accordance with their use of the system. ALF is only calculated for generators based on their exports, thus ALF being a reflection of generators' use of the network. Given the fact storage operators are considered to be generators, the effect they have on the network can not be a negative value.</p> <p>The ESO does not support introducing a different methodology for calculating ALFs for any one particular type of generator as this is discriminatory.</p> <p>Work group will also need to consider any interaction between the identified solutions in CMP316: TNUoS Arrangements for Co-location Generation Sites.</p>
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Click or tap here to enter text.

Specific Workgroup Consultation questions

5	Do these potential options better facilitate the charging objectives than the original proposal and if so, why?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No In the ESO's view, the alternatives the proposer has identified do not facilitate the Applicable Objectives better than the baseline, in a similar way to the Original Proposal as outlined above.
6	Should Storage ALF be floored at zero?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If the Proposer's solution is approved, it is the ESO's view that the ALF should never be negative to avoid potential perverse incentives. However, an ALF of 0% is not an accurate representation of how generators use the NETS either, and as such the ALF should reflect exports only.
	Would CMP393 disincentivise storage from locating in the south?	<input type="checkbox"/> Yes <input type="checkbox"/> No It is too complex to speculate what the impact of changing the way in which ALFs are calculated would be on the investment decisions storage operators (and other generators) will make with regards to where they locate. In particular, the impact of reducing ALFs or for it to

		become a negative value (as is proposed in the CMP393 Original), will alter the TNUoS charges storage operators will face, which in turn could act as either an incentive or disincentive as part of the wider charges, costs and opportunities storage operators will need to consider in their business case to locate in a particular part of GB.
8	Should storage have its own generation classification for TNUoS?	<input type="checkbox"/> Yes <input type="checkbox"/> No <p>This is not within the scope of this mod which is specifically about how the ALF of storage operators is calculated. It is neither covered by the proposed solution, nor in the Terms of Reference.</p> <p>In some of the alternatives identified by the proposer, the storage ALF will result in a de facto different TNUoS classification for storage operators by multiplying the year-round tariff elements by 0 (and thus taking them out of the calculation) or by a negative value (thereby making positive charges negative and vice versa). The ESO does not support this based on the same principles of not supporting the Original Proposal.</p> <p>Storage operators are classed as “Conventional Carbon” generators in the CUSC, as they are a dispatchable type of generator who can export onto the NETS in the same way other Conventional Carbon generators can (e.g. gas or pumped storage), and are in control of when and how quickly they dispatch. Defining the ALF for storage as demand less generation would be inconsistent with storage being classed as Conventional Carbon generation, because it would result in a net demand ALF (or negative generation ALF).</p>
9	Should CMP393 apply only to storage or to all generation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <p>The methodology to calculate ALFs should be the same for all generators. There has been no clear evidence presented by the proposer to indicate that storage operators should be treated differently to other generators, so as a result the same ALF methodology should apply to all to avoid discrimination.</p>
10	How, if at all, does the proposed methodology interact with demand TNUoS charging?	<input type="checkbox"/> Yes <input type="checkbox"/> No <p>By changing the ALF methodology, charges expected to be collected from generators will be impacted accordingly, and this may lead to a knock-on effect on revenue to be collected from demand users.</p>

		<p>There is also an argument of double counting in areas where the imports also incur demand locational tariffs. For example, in the southwestern coastal area, a battery importing during the triads will pay a TNUoS demand charge as the demand locational tariff is positive there. The generation tariff is negative under the current methodology, so when it exports it will get paid a generation TNUoS tariff. However, if the ALF is allowed to become a negative value by also taking demand into account, this could flip its generation TNUoS to become positive (or at least less negative), the root cause being double counting of the same import volume for both demand and generation tariffs.</p>
11	Does the proposed solution have any materially different impact on battery storage compared to pumped storage that should be considered (While taking into account the proxy nature of TNUoS)?	<p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>The analysis provided by the ESO (Annex 6) shows that pumped storage's ALFs would be of a greater negative value than batteries. This is due to several factors, such as efficiency of batteries compared to pumped storage, as well as the fact pumped storage can also 'charge' by collecting rain and river water.</p> <p>It should be noted from the analysis undertaken by the ESO that for pumped storage, both positive and negative ALFs are possible, whereas for batteries it is highly likely to always be a negative value.</p>