

**Code Administrator 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](mailto:cusc.team@nationalgrideso.com) by **5pm on 01 May 2024**. 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 Teri Puddefoot [terri.puddefoot@nationalgrideso.com](mailto:terri.puddefoot@nationalgrideso.com) or [cusc.team@nationalgrideso.com](mailto:cusc.team@nationalgrideso.com)

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<b>Which best describes your organisation?</b>	<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 checked="" type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input type="checkbox"/> 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 Panel or the industry for further consideration)

**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 Code Administrator Consultation questions		
1	Please provide your assessment for the proposed solution against the Applicable Objectives?	Mark the Objectives which you believe the proposed solution better facilitates:
		Original <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E
		<p>We find that the proposed modification will improve on the baseline and make the charging methodology better fit for purpose in the context of the increased need for and deployment of electricity storage on the system.</p> <p>It will support ACO (a) by ensuring that the charging methodology better reflects how storage assets interact with the transmission system. This will remove a barrier to entry, better incentivising storage operators to compete to connect and provide system services. This will facilitate competition in the generation of electricity.</p> <p>It will support ACO (b) by ensuring that the transmission charging methodology reflects how battery storage and pumped storage assets import power from the transmission system, as well as exporting it. As a result, charges will better reflect the impacts of electricity storage on the transmission system. The methodology was last substantially updated in 2014, and was not designed with battery storage specifically in mind. Since 2014, the amount of electricity storage, and in particular battery storage, connecting to the system has increased substantially. As a result of this, the charging methodology does not fully reflect the way electricity storage now interacts with the system. The modification will help to rectify this and improve cost reflectivity.</p>

		<p>It will support ACO (c) by ensuring that the transmission charging methodology responds to the accelerating deployment of storage in the NETS. The methodology was last substantially updated in 2014, and was not designed with battery storage specifically in mind. Since 2014, the amount of electricity storage, and in particular battery storage, connecting to the system has increased substantially. This is an important development in transmission licensee business, and the modification will help to ensure that energy storage is better represented in the transmission charging methodology. This is consistent with the representation of storage in wider areas of transmission regulation, such as in the Connection Planning Assumptions, which take both storage imports and storage exports into account.</p>
2	Do you have a preferred proposed solution?	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Baseline <input type="checkbox"/> No preference
3	Do you support the proposed implementation approach?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Click or tap here to enter text.
4	Do you have any other comments?	<p>There is inevitably a lag between physical changes to the energy system and their representation in the codes, but an update for storage is long overdue. The last substantial update to CUSC happened in 2014. At this time, there were no batteries connected to the transmission network, and the update did not consider the future impact of storage. Since then, over 1GW of batteries have connected at transmission level, with another 2GW on the distribution network.</p> <p>While CUSC has not adapted to the expansion of energy storage, other important areas of electricity system governance have. National Grid ESO updated their connection planning assumptions (CPAs) to reflect the growth in storage deployment and operation. The CPAs, which forecast transmission network upgrades required by new energy projects, consider storage imports as well as exports.</p> <p>Our proposed change would also be consistent with modelling by LCP on how storage operates during</p>

	<p>constraints. When Ofgem updated transmission charging in 2014, they decided that charges should reflect how transmission investment planners consider the impact of generation on constraint costs. To do this, they adjusted part of the transmission charging tariff by annual load. This provided a 'proxy of the impact an individual generator has on the system when investment is planned to manage constraint costs'.<sup>1</sup></p> <p>LCP's analysis shows that pumped and battery storage both import and export during constraints, with a tendency towards importing. But current annual load factors include only the load these technologies place onto the system, and not the load they absorb from it. LCP's findings further justify our proposal to use both imports and exports to calculate storage annual load factor.</p>
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<sup>1</sup> 'Project TransmiT: Decision on proposals to change the electricity transmission charging methodology', Ofgem, 2014, [https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/project\\_transmit\\_decision\\_on\\_proposals\\_to\\_change\\_the\\_electricity\\_transmission\\_charging\\_methodology.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/project_transmit_decision_on_proposals_to_change_the_electricity_transmission_charging_methodology.pdf).