CMP315 - TNUoS: Review of the expansion constant and the elements of the transmission system charged for

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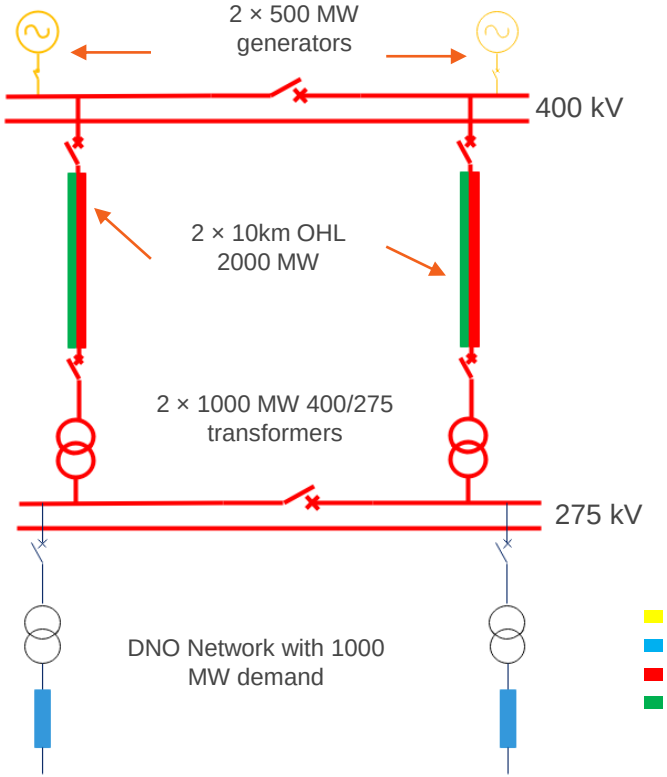
Description of Defect: Missing elements and insufficient cost recovery of allowed revenue

- TNUoS charges for 2020/21 are forecast to recover £246m from locational tariffs and £2,329m (79% of allowed revenue) from the residual tariff.
- The current model only charges for overhead lines and underground cables, effectively placing zero cost on all other parts of the transmission system.
- Where assets are chargeable, the current model does not recover their full cost.
- This proposed modification targets both defects.
- Initial independent work by LCP supports this position.

Current asset charging allocation



Gen owned
DN connection
Residual
Forward Looking

Simplified network connecting 1000 MW of generation and demand. Generator bays are owned by the generator(s) (yellow). DNO connection assets are charged separately (blue).

DC Load Flow (DCLF) model results in 500 MW flow on each circuit. This is scaled up to 900 MW for security (1.8×).

Of the 2000 MW circuit capacity, 900 MW allocated to the locational charge (green stripe) and 1100 MW is allocated to the residual charge (red stripe).

Other assets (switchgear, transformers) are fully allocated to residual (shown in red).

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Proposed solution

The charging model converts the load flow into locational charges using:

i. The expansion constant (the annualised cost of 1 km of 400kV of overhead line).

ii. Expansion factors (the relative cost of other transmission assets). An asset with an expansion factor of 2 is twice as expensive as a 400kV overhead line. Many assets (like transformers) have zero expansion factors.

The proposed solution would be to:

i. Review the expansion constant and confirm it best reflects the full cost of 1 km of 400 kV overhead line.

ii. Review (and potentially introduce) expansion factors for other assets used on the transmission system.

Impacts

- The structure of the TNUoS charge would remain the same meaning no impact on users' systems.

- The change would result in stronger locational signals leading to more efficient investment decisions and therefore lower customer cost.

Governance and Next Steps

Our view is that the proposal is outside of the scope of Ofgem's SCR. The SCR deals with how residual charges are allocated. This proposal deals with the level locational charge which will impact the amount to be recovered by the residual charge but it does not deal with its allocation.

Normal Governance is proposed (this proposal is outside the scope of self governance).

Recommended next step is for an industry workgroup to develop the proposal, consult industry and make a recommendation to the Panel.

Governance – Panel decisions

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Timeline and governance route agreed with CUSC Panel

Decision

The Panel determined that this modification will have a material impact and the modification will therefore be submitted to the Authority for a decision. A Workgroup Consultation will also be administered.

Panel timeline:

To be confirmed following the first Workgroup meeting.

Terms of Reference agreed with the CUSC Modifications Panel

- Review of the principles of the current methodology
- Consider the effect on both TNUoS demand charges and generation charges
- Consider any interaction with demand TNUoS tariffs if floored at zero
- Consider that if individual party TNUoS charges are based on specific assets, how might each TNUoS payer be notified (and regularly updated) of the detail of those assets they are being charged for in case, if later, those assets are used by other parties.
- Consider in terms of aligning with Recital 63 of EU Renewable Energy Directive (2009/28/EC)
- Consider the distribution effect on Consumer impacts
- Implementation timeframes to be considered ahead of the TO RIIO price controls in 2021
- Consider interactions with the Transmission license and any cross code impacts especially STC
- Be mindful of, and consider, the SCR
- Clarify need, as soon as possible, for any external analysis

Questions

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