



Transmission Boundary Costs proposal

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What is the issue?

- DNOs aren't explicitly funded for all connections led transmission reinforcement – it has always been assumed that some of this would be fully funded by customer contributions
- Strategic or general reinforcement triggered by the DNO is recovered by ESO/NGET by increasing GSP annual exit charges
- Large generation and demand connections which are identified as triggering transmission reinforcement therefore must fully fund all reinforcement works. It is unattractive due to:
 - The first mover carries all the risk. No element of socialisation by the DNO means the costs are jointly and severally apportioned to all applicable connections
 - With the likely queue attrition – it potentially leaves the first mover potentially left standing picking up all the costs
 - It is compounded by all the customer contributions being needed to be provided upfront, rather than recovered through annual exit charges

We have a number of specific examples where this is blocking connection of low carbon technologies

Size and Scale

- Roughly 60% of our GSPs are connection assets, whereby all asset costs are funded by distribution customers
- The cost treatment of those assets has been purposefully overlooked by Transmission Charging Review (TCR) and Significant Code Review (SCR)
- We are funded to develop/maintain these assets through New Transmission Capacity Charges (NTCC) totex allowance and Transmission Connection Point Charges (TCPC) pass through, which can be funded through existing LRE allowances or an existing Uncertainty Mechanism
- As at June 2024, we have ~ £440m of NTCC CAPEX which we have agreed to progress with the ESO, which we have passed through to customers

Solution strategy (proposed for trial)

- Current treatment doesn't explicitly agree socialisation of these costs for generation, so any generation connection triggering these works could be potentially liable for all costs. This is a massive barrier to decarbonisation.
- NGED recommends levelisation of the charging boundary, capacity based charging and implementation of DSO flexibility markets; to do this, it requires the DNO to be allowed to socialise unapportioned costs (via exit charges over 40+ years) – albeit with the expectation we will aim to fully recover all costs. As more customers accept contracts for apportioned capacity, Transmission construction agreements will be revised with NESO to remove any residual unapportioned costs.
- We should not agree to strategic investment in all GSPs, but trigger them based on criteria – i.e. where we can credibly demonstrate the need from demand will follow soon as evidenced from our DFES and stakeholder engagement processes

Actions required for delivery

- 1 • The currently agreed CCCM table excludes transmission assets and needs to be rewritten
 - NGED proposes the additional red rows (added below) and seeks a letter of comfort from Ofgem to progress as a trial
 - Ultimately all DNOs need to agree to change the CCCM
 - We would need Ofgem to agree with the changes and approve this document:

Voltage of Scheme Assets	Voltage at the POC			132kV
	LV (below 1000V)	HV (above 1kV but less than 22kV)	EHV (above 22kV but less than 72kV)	
Transmission	We fund	Apportioned (>1MW)	Apportioned	Apportioned
Transmission/132kV Substation	We fund	Apportioned (>1MW)	Apportioned	Apportioned
132kV Network	We fund	We fund ¹	Apportioned	Apportioned
132kV/ EHV Substation	We fund	EHV circuit breakers only Apportioned	Apportioned	Not applicable
EHV Network	We fund	Apportioned	Apportioned	Not applicable
132kV/ HV Substation	HV circuit breakers only Apportioned	Apportioned	Not applicable	Not applicable
EHV/HV Substation	HV circuit breakers only Apportioned	Apportioned	Not applicable	Not applicable
HV Network	Apportioned	Apportioned	Not applicable	Not applicable
HV/ LV Substation	Apportioned	Not applicable	Not applicable	Not applicable
LV Network	Apportioned	Not applicable	Not applicable	Not applicable

- 2 To enable the trial to proceed, NGED requests a letter of comfort from Ofgem declaring:
 - It is in line with the SCR decision that transmission reinforcement for demand and generation should be socialised using the same voltage rules identified in the SCR
 - NTCC can be used to fund the socialised elements of transmission reinforcement for generation. LRE mechanisms are available if this is outside DNO allowances.
 - DSOs would be expected to conduct CBAs for non-wires alternatives ahead of sanctioning reinforcement and may lead to NTCC-funded flexibility markets.
- 3 NGED will work with the ESO/NGET to provide capacity released figures alongside each construction agreement.

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Comparison of a level playing field

	Infrastructure Site	Connection Site
Wider Transmission Strategy and Costs	ESO	ESO
Local Transmission Reinforcement Strategy	ESO	DSO
Local Transmission Reinforcement Costs	ESO/TNUoS	DSO/DUoS
Transmission cost apportionment	Socialised	Recouped from individual projects
Transmission Second Comer rules	N/A	None
Distribution Reinforcement Costs	DSO/DUoS	DSO/DUoS
Distribution cost apportionment	As per CCCM	As per CCCM
Distribution Second Comer rules	As per ECCR	As per ECCR

We want this to be more like distribution reinforcement charges, which are recouped from individual projects where material, but socialised otherwise.

What are other DNOs doing?

There is a difference of approach across DNOs, some of which is due to the regional variation of DER uptake and others due to transmission voltage levels in Scotland.

NGED has the highest volume of DER seeking connection across all DNOs and double the amount of connection asset GSPs than any other DNO, so we are seeing the biggest impact.

Table 1: DNO Methodology Summary

DNO	Current Methodology	Methodology Detail
ENW	Hybrid socialisation of costs through DUoS but passing through ESO Securities.	Hybrid approach: recent situations have been socialised through DUoS but with ESO securities passed through to connecting customers. But would most likely charge upfront if there was only one customer triggering the work
NGED	Charged upfront to connection customers, including pass through of securities and liabilities from ESO	Where the BCA outlines work and securities/liabilities these are passed through directly to identified customers through SoW process. Apportionment occurs based on capacity across all users identified against the works and is revisited based on amendments to the BCA.
NPG	Charged upfront to the connecting customers	Costs are apportioned between customers based upon required capacity
SSEN	Socialisation of costs through DUoS , but passing through ESO Securities	Socialisation of costs through DUoS
SPEN	Charged upfront to connecting customers (including pass through of securities from ESO)	Costs apportioned between customers based upon required capacity .
UKPN	Charged upfront, following cost profile, to the connecting customers (as well as securitisation profile covering wider works liability)	Costs are apportioned between customers above 5MVA / 1MW only, based upon required capacity against transmission constraint, i.e. if demand transmission constraint, connecting customers with requested demand > 5MVA would share the cost of the T-work. Smaller generation not subject to Appendix G and demand <5MVA viewed as background load-growth