EIP 157: Dynamic System Rating – DLR Beyond OHL

ENA Basecamp 2026

4th February 2026

Scottish & Southern Electricity Networks

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The Challenge

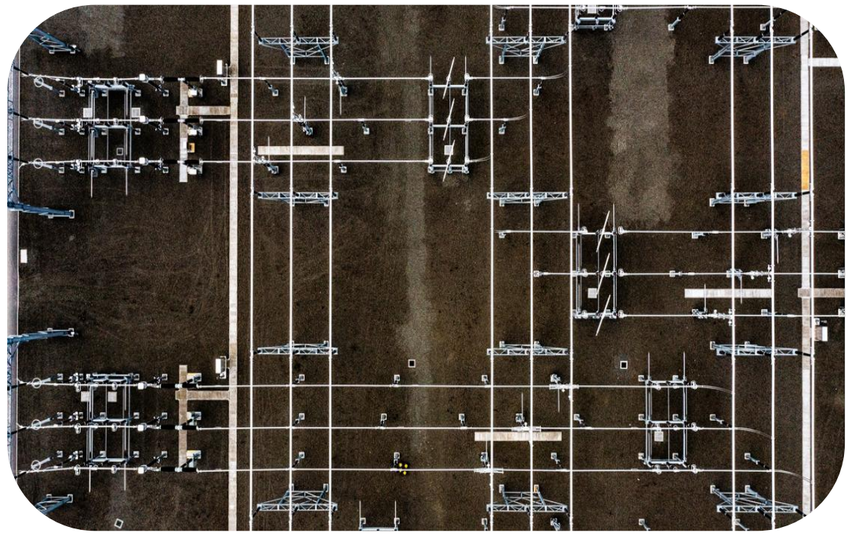
Dynamic Line Rating (DLR) is now an OHL design option for GB TO networks

DLR helps maximise utilisation of the network and minimise system constraints

TO networks include other asset types that can be the limiting factor constraining power flow

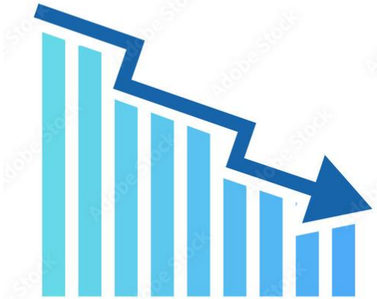
A 'system' approach can allow the integration of these assets into a 'dynamic system rating’

Existing ratings management systems are not designed to handle multiple dynamic, intra-day ratings



The Impacts -

Increase Network Capacity:
Increase the usable capacity on the Transmission network



Reduce Network Constraints:
Reduce the operating cost of the energy system by reducing

Reduce Upgrade costs :
Potentially reduce scale of network upgrades by higher asset utilisation

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What are we looking for

- **How to Dynamically Rate plant other than OHL**
  - Transformers
  - Current Transformers
  - Busbars
  - Cables
- **Not just 'continuous' rating – but how to provide meaningful short term ratings as well**
  - **Short term rating timescales** (1min, 3min, 5min, 10min, 20min, 1hr, 6Hr+)
- **Can this be achieved with existing asset data and real time SCADA data**

Single or Double circuit? (Cable only)	N/A	Winter (OHL) / Normal Cold (Cable)		Spring / Autumn (OHL Only)		Summer (OHL) / Normal Hot (Cable)	
		Amps	MVA	Amps	MVA	Amps	MVA
Pre-fault Continuous Rating (See note 1)		1680	805	1560	740	1340	640
Post-fault Continuous Rating (OHL only - see note 2)		2010	955	1850	885	1600	760
Pre-fault Flow (See note 3)	84%	1688	802	1554	743	1344	638
	75%	1508	716	1388	664	1200	570
	60%	1206	573	1110	531	960	456
	30%	603	287	555	266	480	228
	Short Term Overload Ratings						
	Overload Duration	Winter (OHL) / Normal Cold (Cable)		Spring / Autumn (OHL Only)		Summer (OHL) / Normal Hot (Cable)	
		Amps	MVA	Amps	MVA	Amps	MVA
Up to 84%	24H (Cables only)	-	-	-	-	-	-
	6H (Cables only)	-	-	-	-	-	-
	20 Min	2130	1010	1960	935	1670	795
	10 Min	2350	1120	2160	1030	1830	875
	5 Min	2760	1310	2530	1200	2140	1020

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