

# Design Variation Charging Arrangements Update

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TCMF

21<sup>st</sup> June

Tom Ireland

# Next steps...

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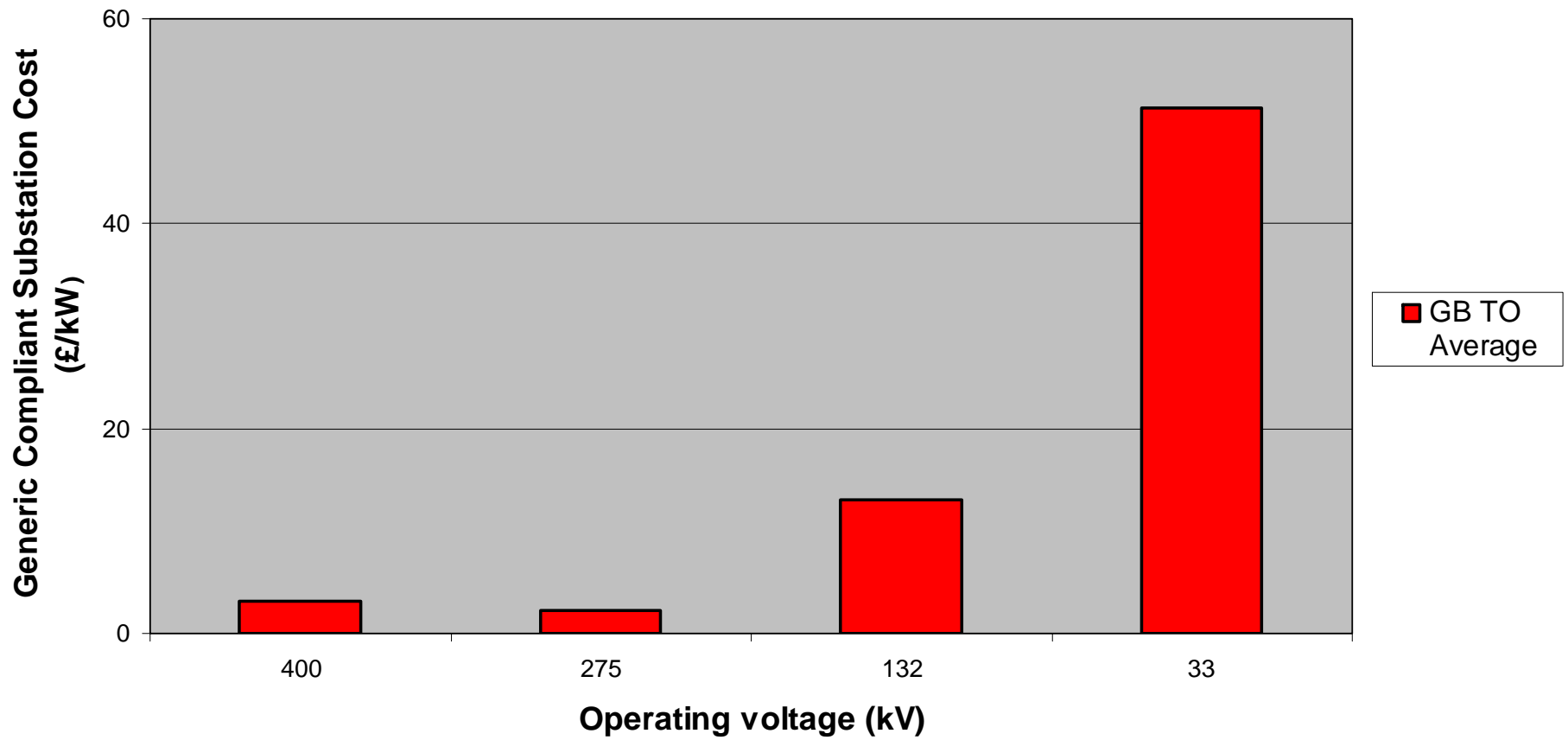
- ◆ Agreement of principles
- ◆ Further analysis with more comprehensive data set
- ◆ Standard formal charging consultation process to follow

# Principles

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- ◆ TNUoS discount must be consistent with Charging Methodology
  - ◆ Avoids inappropriate incentives
- ◆ Why the initial Design Variation Discount proposals did not reflect the true costs, in some instances
  - ◆ Sub transmission substation assets are a magnitude more expensive (£/MW terms) – flat residual approach does not work
  - ◆ 132kV EF include consideration of future uprating
  - ◆ 132kV Expansion Factors are an average of a broad range of OHLs
  - ◆ TNUoS paid on capacity requested (rather than installed)
- ◆ What can we do about these?

# Substation costs I



# Substation costs II

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- ◆ Substation asset cost recovered from residual tariff (£/kW)
- ◆ Significant cost differences for sub transmission substation assets (per kW)
- ◆ Option
  - ◆ Changing connection charging boundary so sub transmission assets are charged as connection assets
- ◆ Issues
  - ◆ Treatment of shared assets
    - ◆ Share based on MW of CEC?

# OHL costs I

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- ◆ Existing 132kV Expansion Factors are derived using a weighted average of the incremental cost of upgrading the circuit to 275/400kV (1.0) and the true cost of 132kV (2.87)
- ◆ This amendment would identify which circuits are likely to be upgraded and apply a lower expansion factor. The true unadjusted expansion factor would be applied to the remainder
- ◆ Updated for data received from TOs with 132kV circuits
  - ◆ 27 circuits (969km) identified across both TOs

# Multiple expansion factors

- ◆ Updated for real data from all TOs with 132kV circuits
- ◆ No changes to zonal boundaries required with existing Expansion Factors
- ◆ Design variation discount increased by 25%

Zone No.	Zone Name	Zonal Tariff (£/kW)
1	North Scotland	-0.40
2	Peterhead	-0.12
3	Western Highland & Skye	-1.05
4	Central Highlands	0.07
5	Argyll	0.00
6	Stirlingshire	0.03
7 - 20	<i>All other zones</i>	0.01

# OHL Cost II

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- ◆ Calculation of Expansion Factors based upon weighted average of line types
- ◆ Broad range of £/kWkm for 132kV
- ◆ Cost based upon an average will not be cost reflective in all instances
- ◆ Work ongoing with TOs to investigate a more specific approach
  - ◆ E.g. generating more 132kV expansion factors