

Charging for HVDC “Bootstraps”

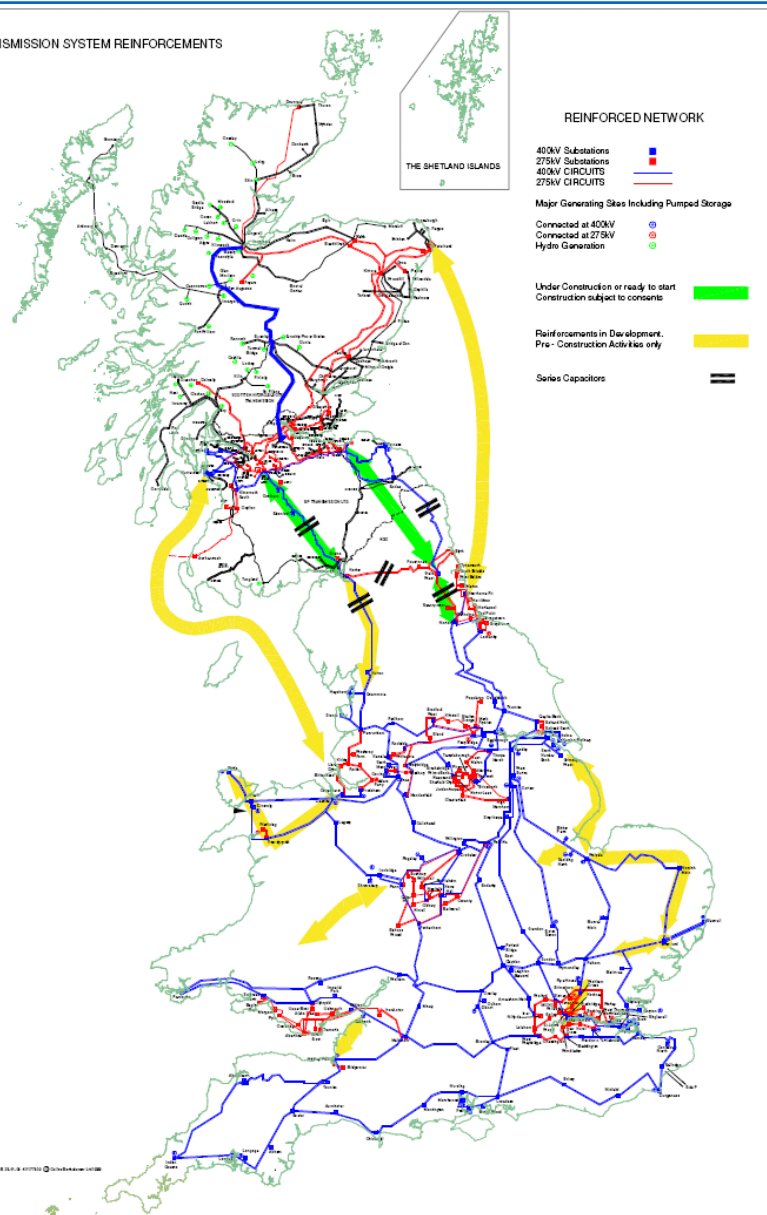
Sarah Hall, CISG 6th January 2010



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HVDC “Bootstraps”



- ◆ Electricity Networks Strategy Group have initiated investigation into Strategic Reinforcements required by 2020
- ◆ Substantial growth in generation in Scotland towards 2020 and beyond
- ◆ Boundary between Scotland and England requires significant reinforcement
- ◆ Two HVDC “bootstraps” have been proposed
 - ◆ Western Link – Hunterston to Deeside
 - ◆ Eastern Link – Peterhead to Hawthorne Pit

Modelling HVDC Links

- ◆ Should the links be included in the transport model?
- ◆ If not included in the model how would we signal the cost?
- ◆ If included, a methodology for the treatment of HVDC links needs to be developed
- ◆ Two key factors are:
 - ◆ Calculation of expansion factor (using the ENSG cost of £700million initial calculations suggests an expansion factor of around 8-9)
 - ◆ Impedance (the flow on HVDC Links can be controlled so is not based on impedance unlike conductors in the current model)

Tariffs in a System with HVDC Links

