

Conclusions to ECM17 – Uniform Charging

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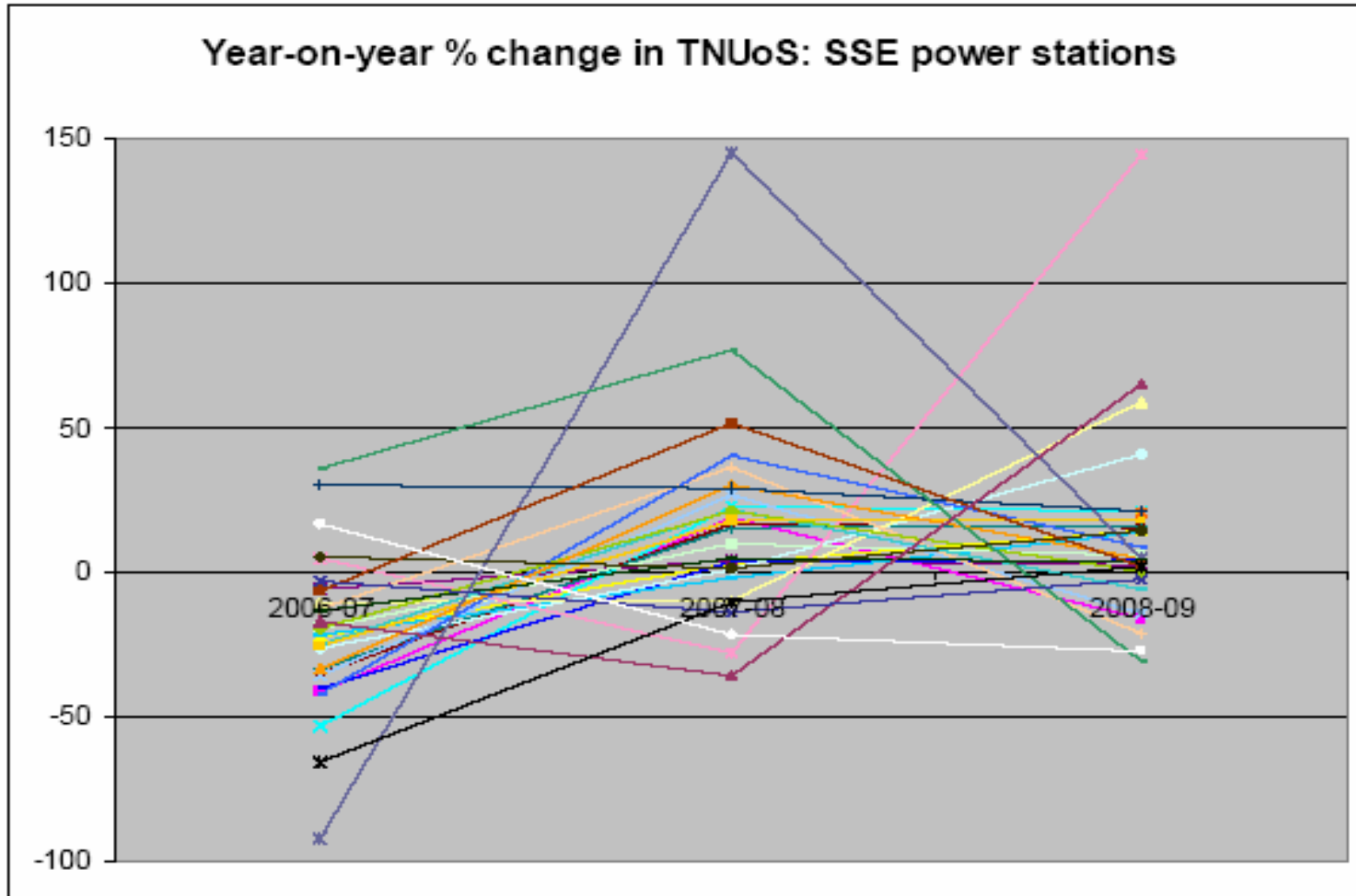
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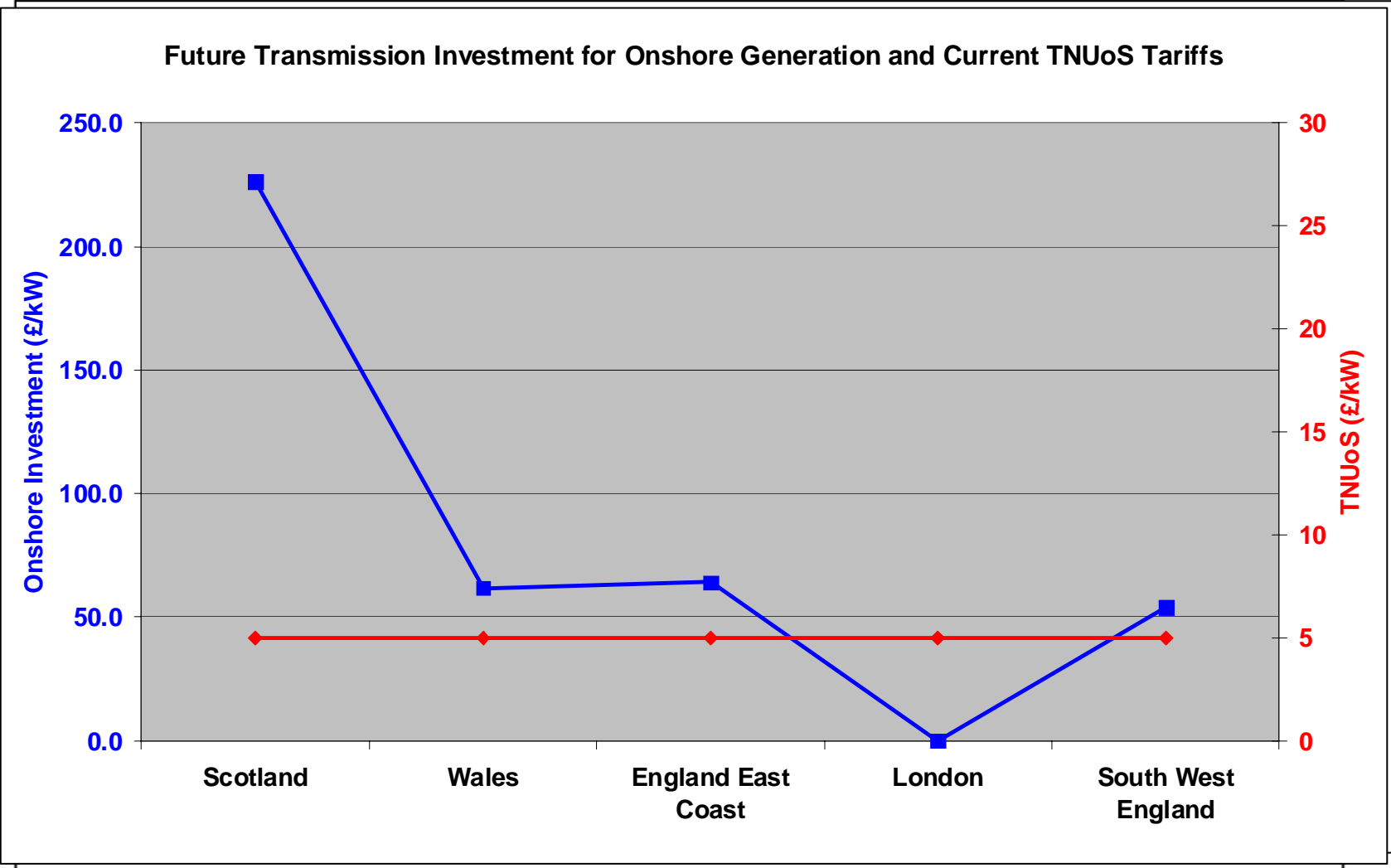
Background to GB ECM-17

- ◆ Alternative approach raised by Scottish Government
- ◆ Based on two propositions, namely that existing tariffs:
 - ◆ Create an uncertain environment for investment, and
 - ◆ Discriminate against renewable generation
- ◆ Proposal was to move to a uniform tariff, i.e. commodity rather than capacity charging
- ◆ Two rounds of industry consultation held

Volatility Analysis



Cost Reflectivity Analysis



National Grid's Conclusions

- ◆ Good engagement with industry; detailed and useful analysis of issues provided in responses
- ◆ Analysis provided did not demonstrate the proposal better facilitated relevant objectives, therefore National Grid's licence precludes progressing the proposal further
- ◆ However, proponents identified important areas for improvement in existing methodology that National Grid can take forward:
 - ◆ Tariff Volatility caused by Re-Zoning
 - ◆ Appropriate Charging for Wind Generation

Effect of Re-Zoning on Tariffs

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Tariff Volatility Caused by Re-Zoning

- ◆ Zones stabilise generation tariffs through averaging nodal prices
- ◆ Zones reviewed as part of PCR, i.e. every 5 years
- ◆ Changes to zones can cause step-change in tariffs
- ◆ No way for generators to mitigate this risk at present

Tariff Volatility Caused by Re-Zoning

- ◆ Options for consideration
 - ◆ Fixed zonal tariffs for >1 year
 - ◆ Increased number of zones / nodal tariffs
 - ◆ “Soft-landing” for stations that change zone
 - ◆ Others?
- ◆ Consultation to start in October, parties are welcome to make suggestions prior to this: adam.sims@uk.ngrid.com

Appropriate Charging for Wind Generation

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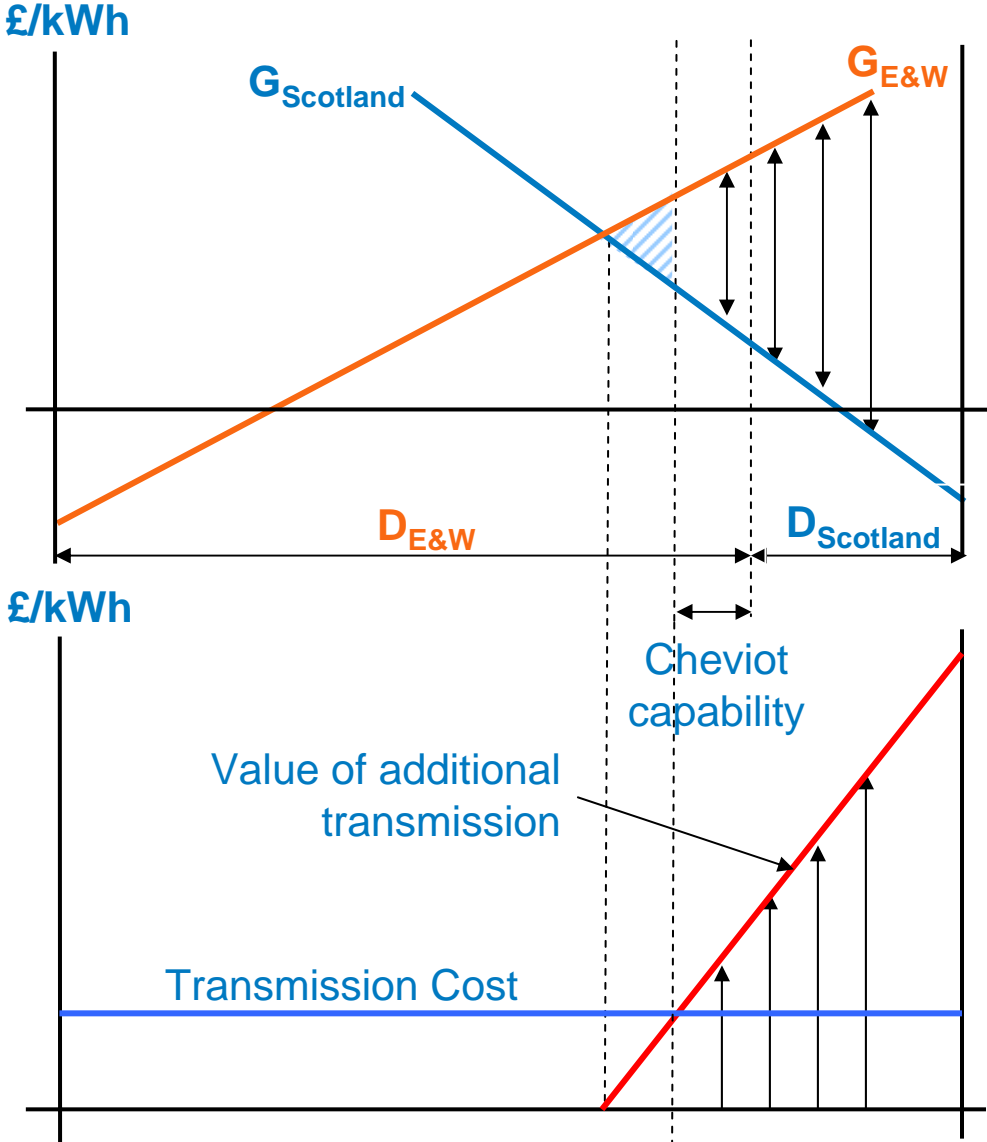
Introduction

- ◆ Historically, transmission investment for large thermal plant driven by deterministic rules in security standards
 - ◆ Ensure transmission does not unreasonably inhibit ability to meet winter peak demand
- ◆ Operating characteristics of wind mean contribution to winter peak demand is much less certain
 - ◆ Dominant driver of transmission investment is economic rather than deterministic
- ◆ Alternative approach to charging developed as part of CAP171 (capacity pricing mechanism) linked to provision of information and user commitment
 - ◆ CAP171 rejected by CUSC Panel prior to development or assessment

Further analysis

- ◆ Approach developed to support CAP171 may be more appropriate
- ◆ Separation of short-term and long-term costs
 - ◆ Locational BSUoS proposal deals with short-term signals
 - ◆ Long-term prices can be based on efficient level of transmission
 - ◆ Transmission supply function based on current TNUoS expansion factor, etc.
- ◆ Single boundary example completed....

Single boundary example – Cheviot 1



Single boundary example – Cheviot 2

| | Wind | BaseGas | BaseCoal | Marginal Gas | Marginal Coal | Nuclear |
|-----------------|------|---------|----------|--------------|---------------|---------|
| Marginal (£/kW) | 2.82 | 5.22 | 6.07 | 4.57 | 3.22 | 5.66 |
| LF (%) | 35 | 88 | 81 | 73 | 15 | 76 |

Compare with TNUoS differential of £6/kW

Conclusions

- ◆ Results suggest that, for example, long-term charge for wind should be 50% of current TNUoS value
- ◆ But, this would require....
 - ◆ Revised definition of access right
 - ◆ National Grid need to make assumptions about / obtain data on generation:
 - ◆ Background (openings and closures)
 - ◆ Merit order (particularly marginal units)
 - ◆ Bids and offers
 - ◆ Availability
 - ◆ Efficient transmission investment
 - ◆ May be difficult without user commitment
- ◆ Optional arrangements to provide information and user commitment in exchange for charge certainty would appear to provide this