

Constraint Management review

David Smith

nationalgrid

The power of action.™

Agenda

- ◆ Ofgem letter
- ◆ Background on constraint costs
- ◆ The options we propose to take forward
- ◆ Summary

Ofgem letter

Requests National Grid to conduct an urgent review to consider whether changes are required to existing commercial and charging arrangements for access to the GB transmission system

Ofgem letter

◆ Review should seek to address:

- Options for reducing the level of constraint costs; and
- Whether the current use of system charging mechanisms are equitable and appropriate

Ofgem letter

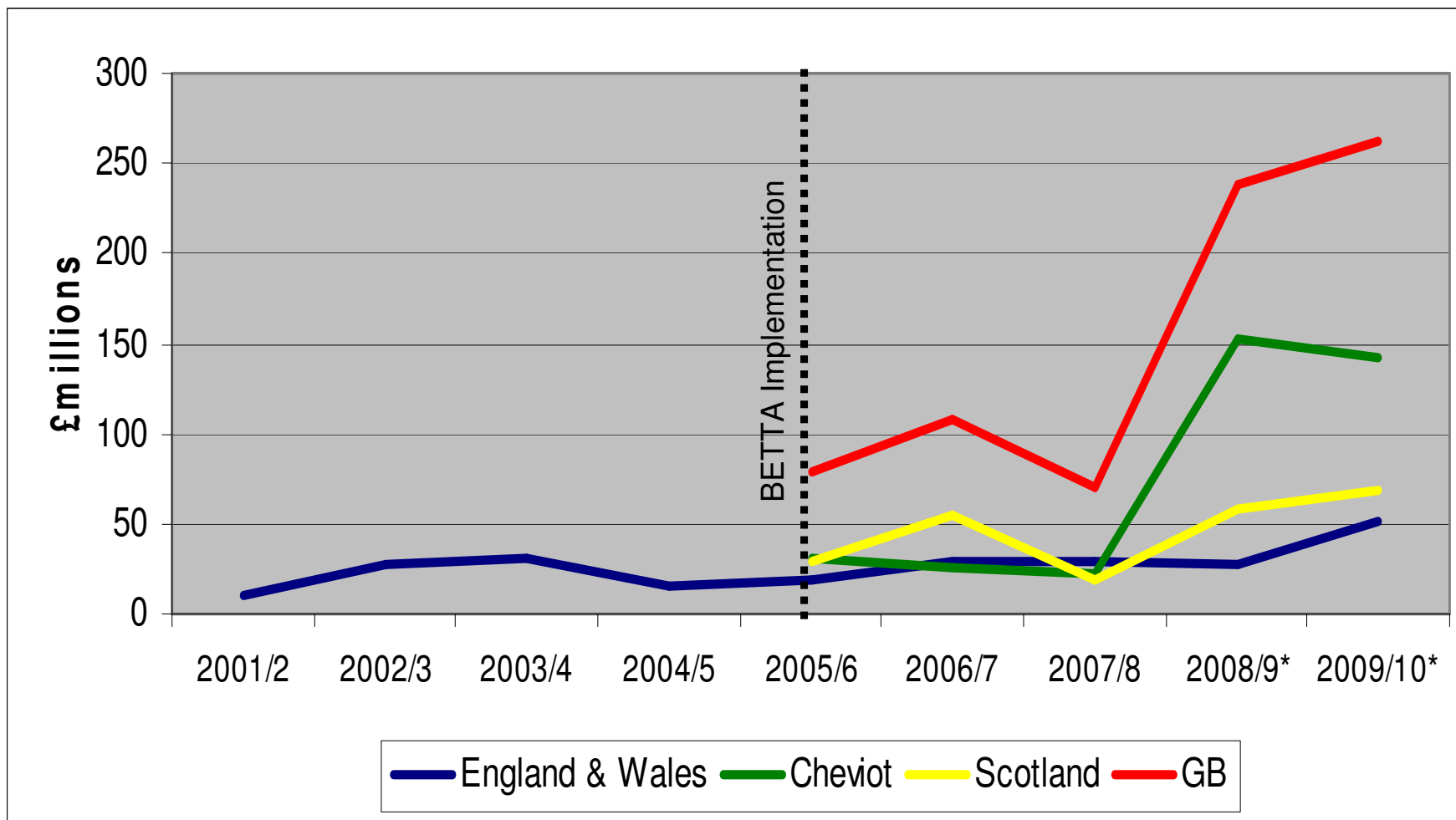
◆ Timelines for the review

- Raise any proposals by the end of February 2009; or
- Publish a report explaining why we consider the current arrangements and forecast level of constraints costs are consistent with all of our relevant statutory and licence obligations

Agenda

- ◆ Ofgem letter
- ◆ Background on constraint costs
- ◆ The options we propose to take forward
- ◆ Summary

Trend in constraint costs



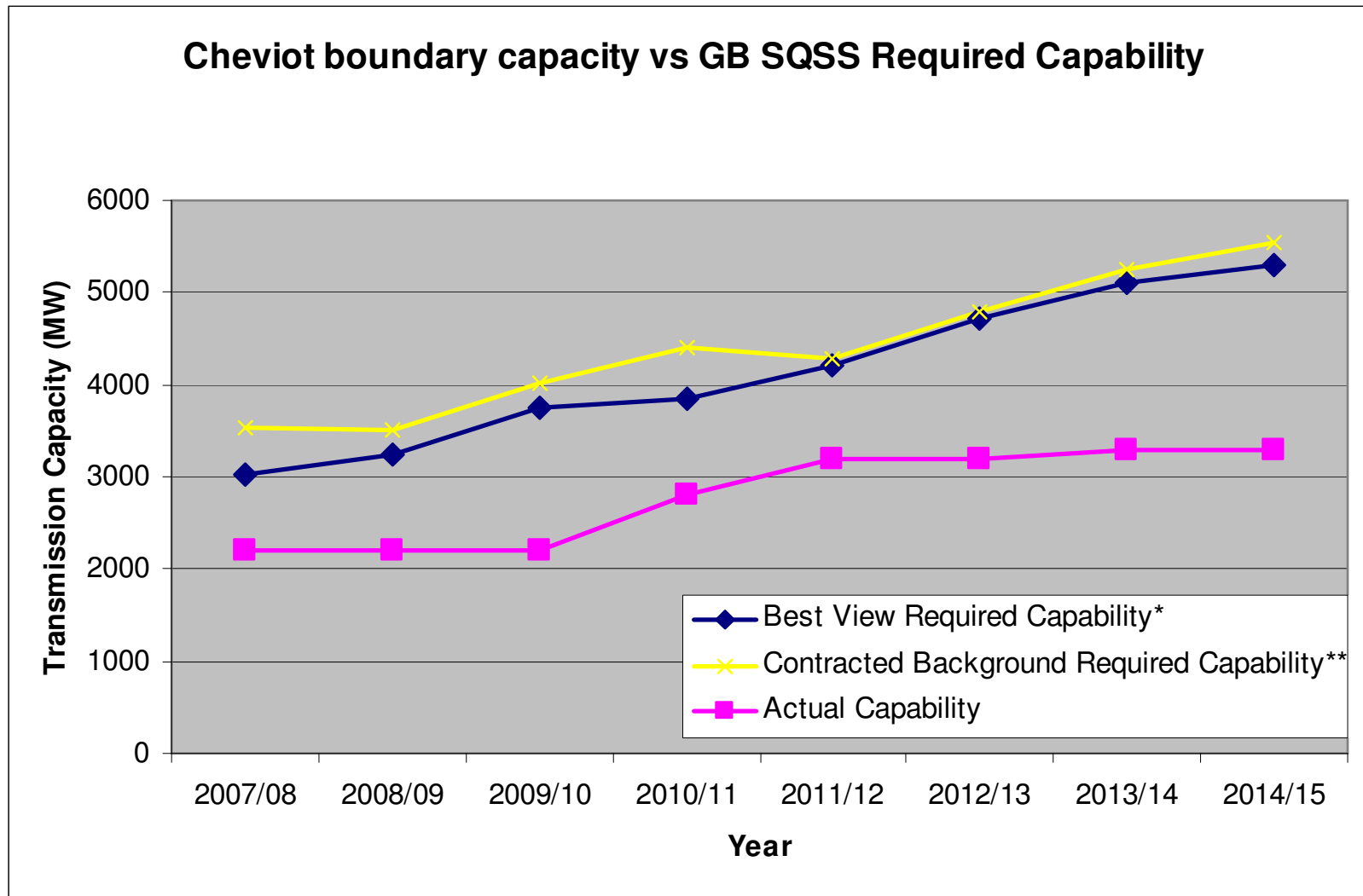
* Forecast information

Historical trend in constraint costs

◆ What is driving the recent increase?

- Outages associated with new investment/connections
- Outages associated with asset replacement
- Derogation of B6 or 'Cheviot' boundary for requirement to comply with Security and Quality of Supply Standards (SQSS)

Forecast of capacity shortfall



Derogated boundaries

- ◆ Why is non-compliance with SQSS a specific issue?
 - Significant action required during intact network conditions
 - Removes flexibility to schedule outages during generator outages
 - Use of intertrips is a necessity rather than an occasional tool to maximise flows across the boundary

Derogated boundaries

- ◆ Focus of our review so far has been on derogated boundaries
 - More difficult to manage constraints
 - High costs

Is 1st April important for implementation?

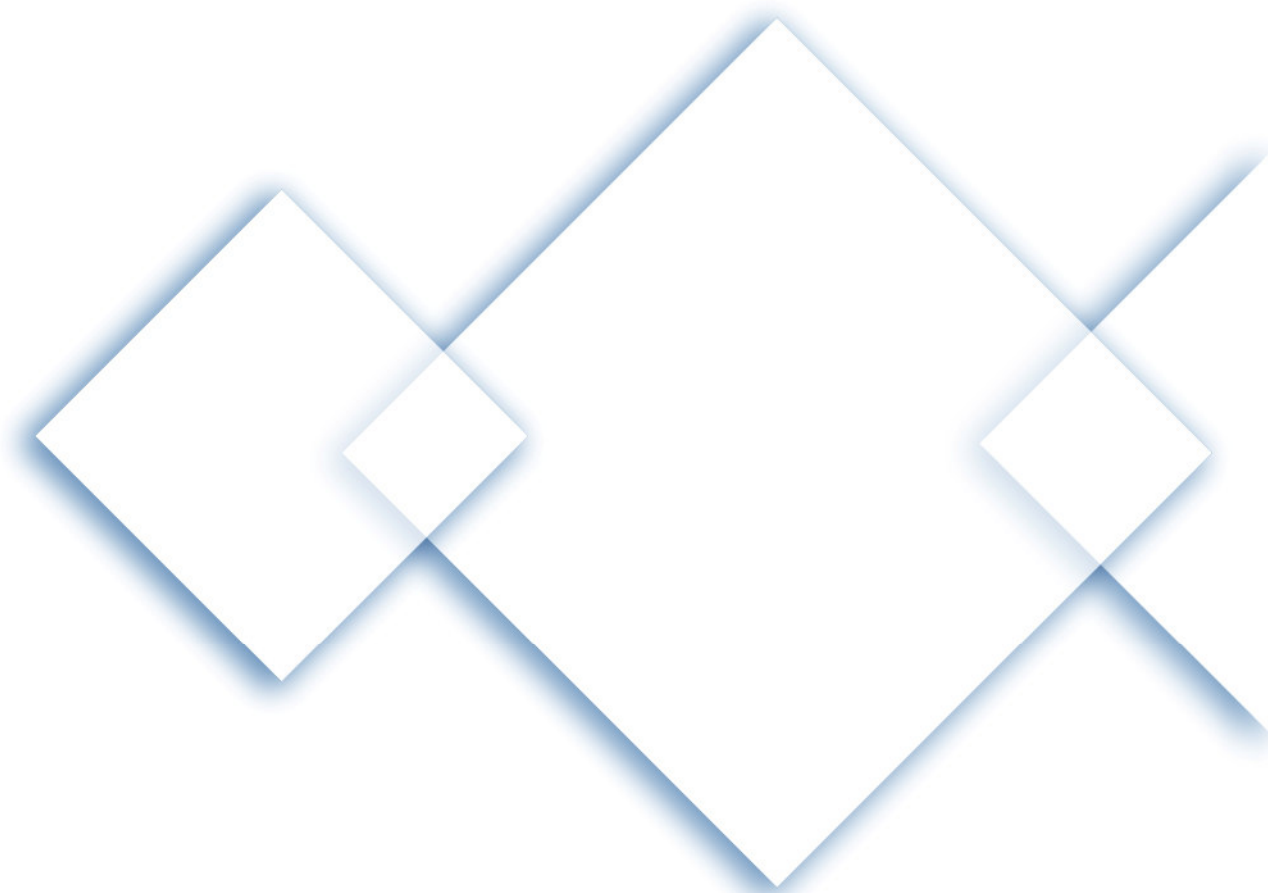
- ◆ Constraint costs now
- ◆ Will increase over summer period
 - Generation proportionally higher than demand
 - Outages

Agenda

- ◆ Ofgem letter
- ◆ Background on constraint costs
- ◆ The options we propose to take forward
- ◆ Summary

The options we propose are taken forward

- ◆ SO-TO aligned incentives
- ◆ On derogated boundaries
 - Locational BSUoS
 - Administered prices for intertrips
- ◆ For further consideration
 - Administered Balancing Mechanism prices during constraints



Locational BSUoS

nationalgrid

The power of action.™

Two potential methodologies

- ◆ Option 1 - Ex-ante
- ◆ Option 2 - Ex-post

Ex-ante Methodology (Option 1)

Ex-ante methodology has three component parts

1. TEC capacity based locational BSUoS charge
 - Include year end reconciliation?
2. Option to relinquish TEC for a non enduring period (1 year)
3. Short term access product

Ex-post methodology (Option 2)

- ◆ Costs allocated on a MWh metered output (adjusted) basis
- ◆ MWh (adjusted) reflects balancing services taken by SO to alleviate constraints
- ◆ Costs will be allocated in settlement periods when constraint costs are incurred
- ◆ TEC holders require signal to make economically informed decisions (generate or trade out position)

Ex-ante & ex-post - summary

	<i>Option 1 Ex-Ante Capacity Based Charge</i>	<i>Option 2 Metered Adjusted</i>
<i>Optional Non Enduring TEC Reduction</i>	✓	✓ (if desired)
<i>Short Term Access Product</i>	✓	✓ (if desired)
<i>Costs Targeted at Generation Only</i>	✓	✓
<i>Costs & Benefits Targeted at Generation & Supply</i>	✗	✓ (could be)

Ex-ante & ex-post - summary

	<i>Option 1 Ex-Ante Capacity Based Charge</i>	<i>Option 2 Metered Adjusted</i>
<i>Optional Non Enduring TEC Reduction</i>	✓	✓ (if desired)
<i>Short Term Access Product</i>	✓	✓ (if desired)
<i>Costs Targeted at Generation Only</i>	✓	✓
<i>Costs & Benefits Targeted at Generation & Supply</i>	✗	✓ (could be)

CUSC Modification required

Agenda

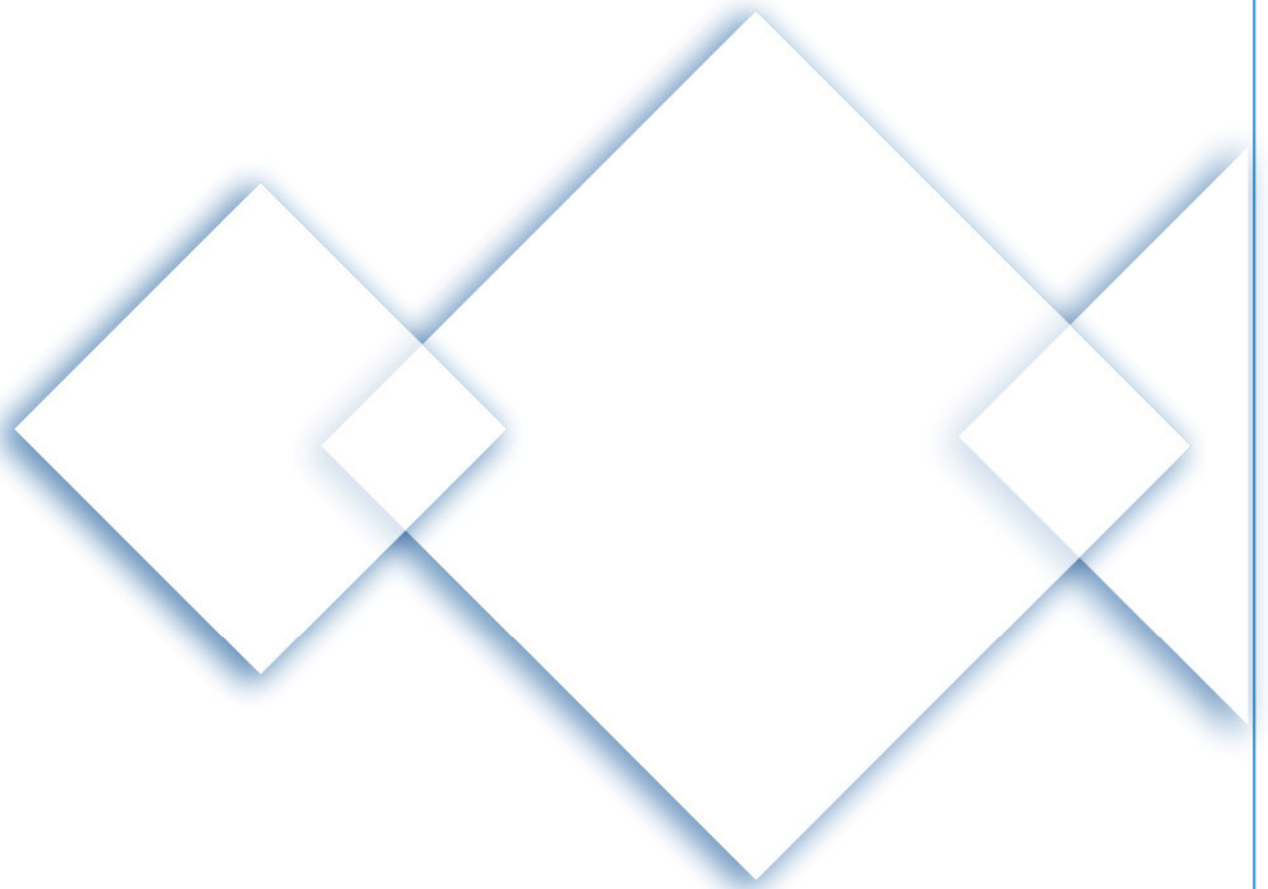
- ◆ Ofgem letter
- ◆ Background on constraint costs
- ◆ The options we propose to take forward
- ◆ Summary

Next steps

- ◆ **Locational BSUoS**
 - Intend to consult on pricing methodology for ex-ante and ex-post
 - CUSC modification will also be required for TEC reduction and short term access
- ◆ **SO-TO aligned incentives**
 - Will continue to work with TOs
 - Share work with Ofgem
- ◆ **Administered prices for intertrips**
 - CUSC modification raised
- ◆ **Administered Balancing Mechanism prices during constraints**
 - Will consider this further over next few weeks

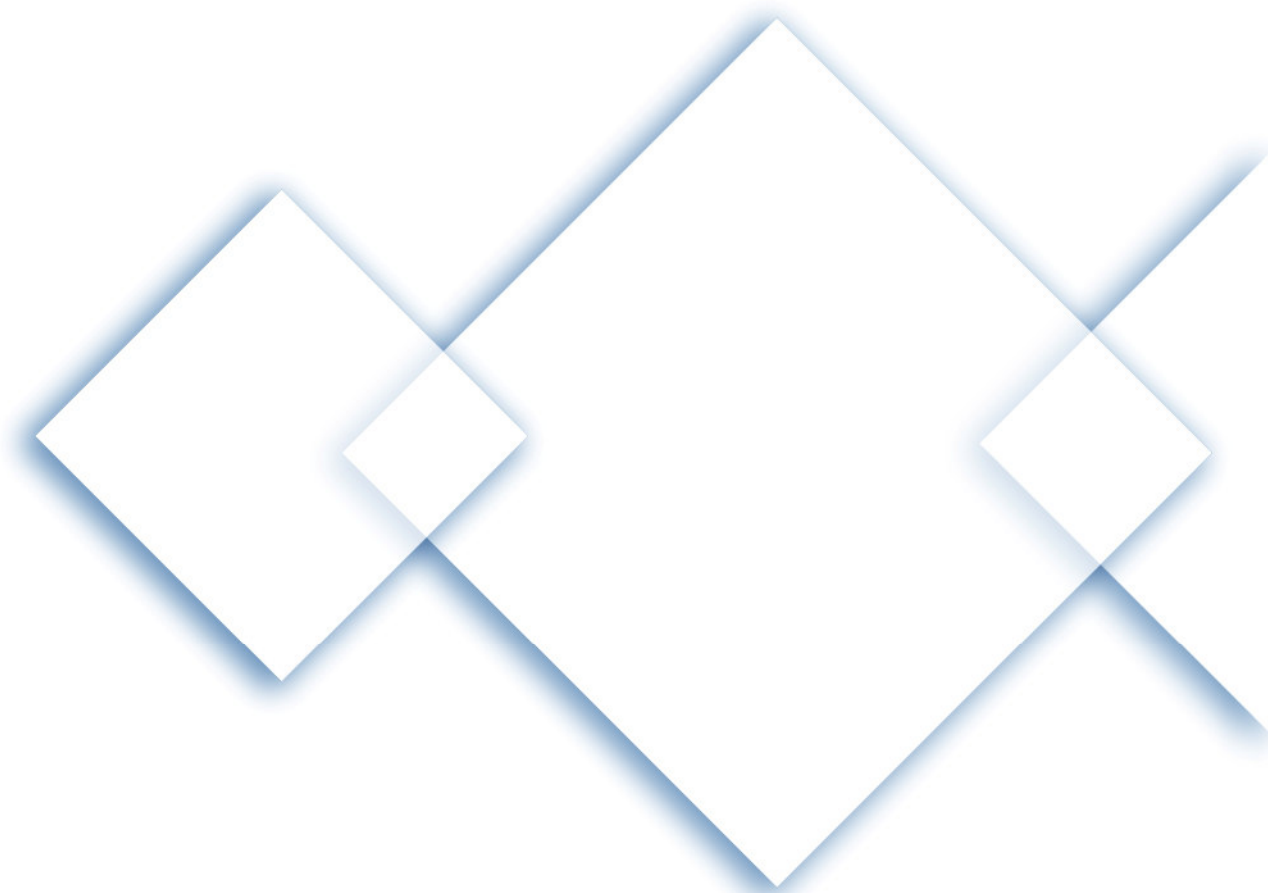
Timelines

- ◆ **Locational BSUoS**
 - 28 day consultation out in next week
 - CUSC modification raised in parallel
- ◆ **SO-TO aligned incentives**
 - Expect to complete work over next few weeks
- ◆ **Administered prices for intertrips**
 - Discussed later
- ◆ **Administered Balancing Mechanism prices during constraints**
 - Will consider this further over next few weeks



nationalgrid

The power of action.™



SO-TO aligned incentives

nationalgrid

The power of action.™

SO-TO aligned incentives

Should allow sharpened focus to

- ◆ Encourage efficient and timely investment
- ◆ Innovation in the way the TOs plan outages to reduce overall cost in their medium term plans

SO-TO aligned incentives

Proposals

- ◆ In active discussions with three TOs
- ◆ A number of options, presently favour a medium term capacity measure on key boundaries
- ◆ Sharing work with Ofgem as discussions continue