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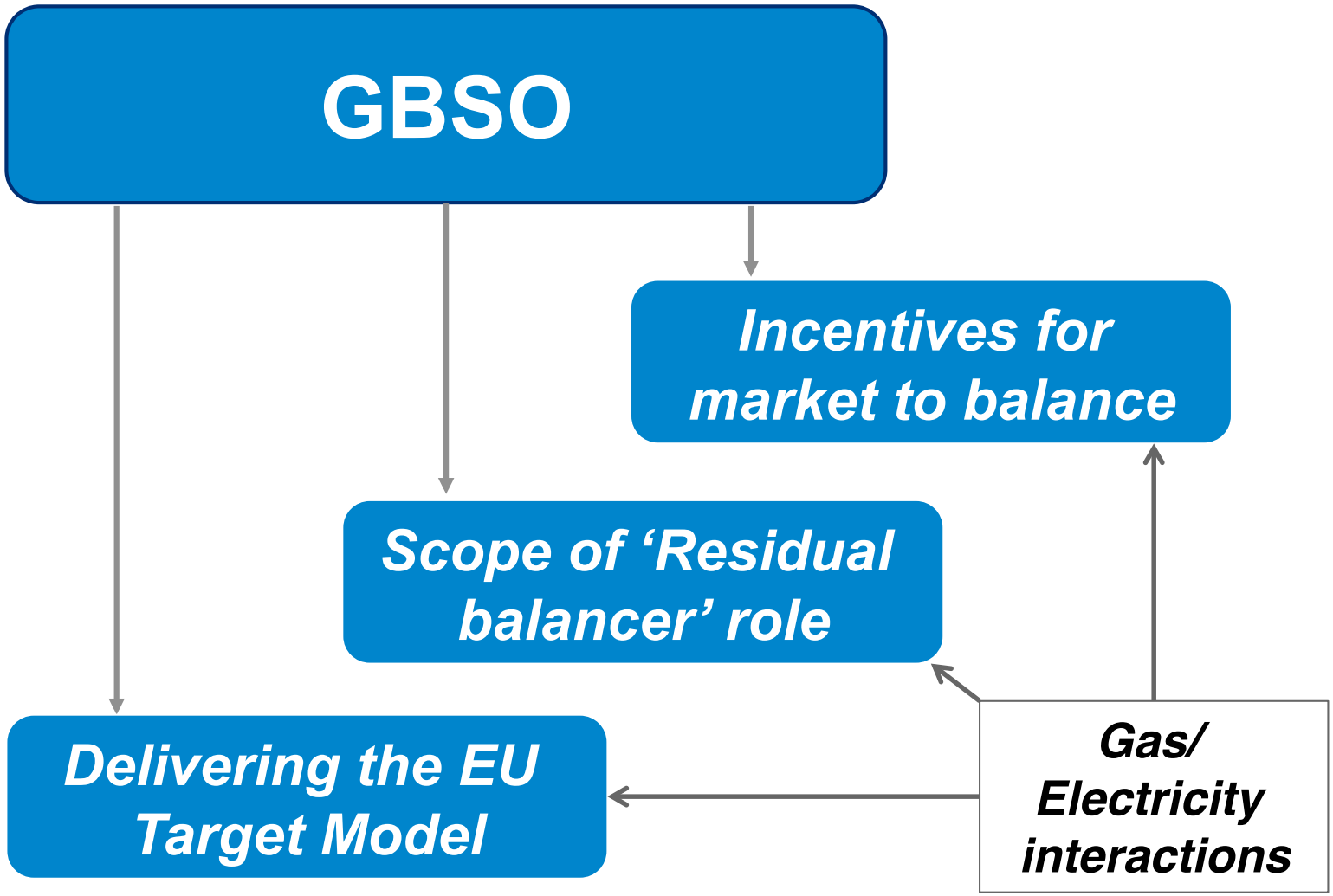
Future Trading Arrangements Design

An NGET Perspective

Areas of focus…



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Incentives for Market to balance

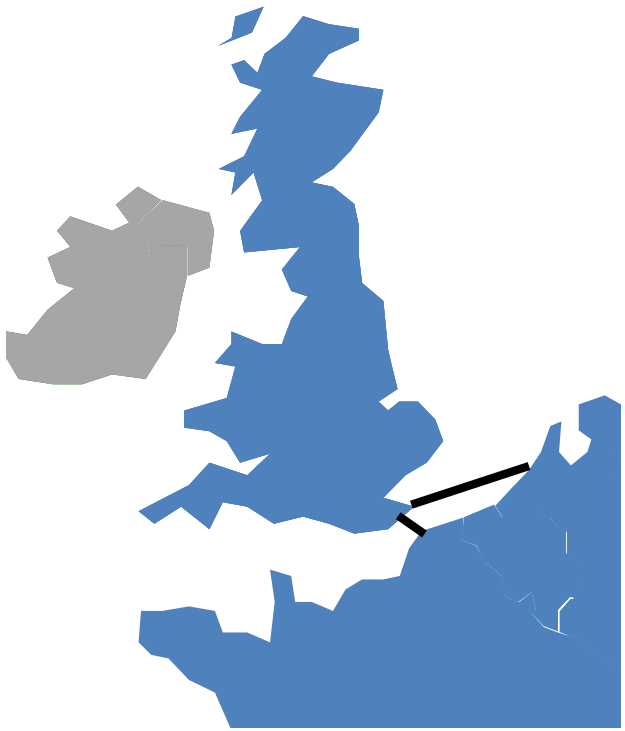
- Trading arrangements need to deliver efficient outcomes for consumers
  - *Parties need right incentives to balance*
  - *Risks need to be borne by those best able to manage them*
- The ‘renewables’ challenge:
  - *Magnitude of renewables integration not envisaged at NETA*
  - *Integration preferable to separate treatment to enable efficient balancing decisions*
- Improved forecasting of renewable output is key – both for market participants and SO
- Access to balancing services across interconnectors will remain and become even more important

‘Residual Balancer’ role

- Primary SO role
  - *Balance the system efficiently; ‘Sole counter-party’ to give clear balancing responsibility*
  - *Efficient actions: in real-time, a single action can resolve multiple issues (inertia, voltage, constraint, energy) simultaneously*
- Considerations
  - *Build upon BETTA principles*
  - *Enhance access to cross-border balancing tools (risk that tools will be limited to post-Gate Closure, which will impact available volumes)*
  - *Use of DSR – responsibility; certainty*
  - *EMR interactions*

EU Target Model: Market Coupling

- Combining national day-ahead energy auction markets with available I/C capacity in a single matching algorithm, to allow most efficient trades to match across the coupled region.
  - North-West Europe pilot due to be implemented Nov 2013
  - Encourages growth of liquid, robust spot markets
- Also required to extend market coupling to intra-day
  - Focus on continuous matching, but with potential for national auctions
  - How to price interconnection capacity?
  - May limit pre-GC balancing action on interconnectors



EU Developments: Potential for market splitting

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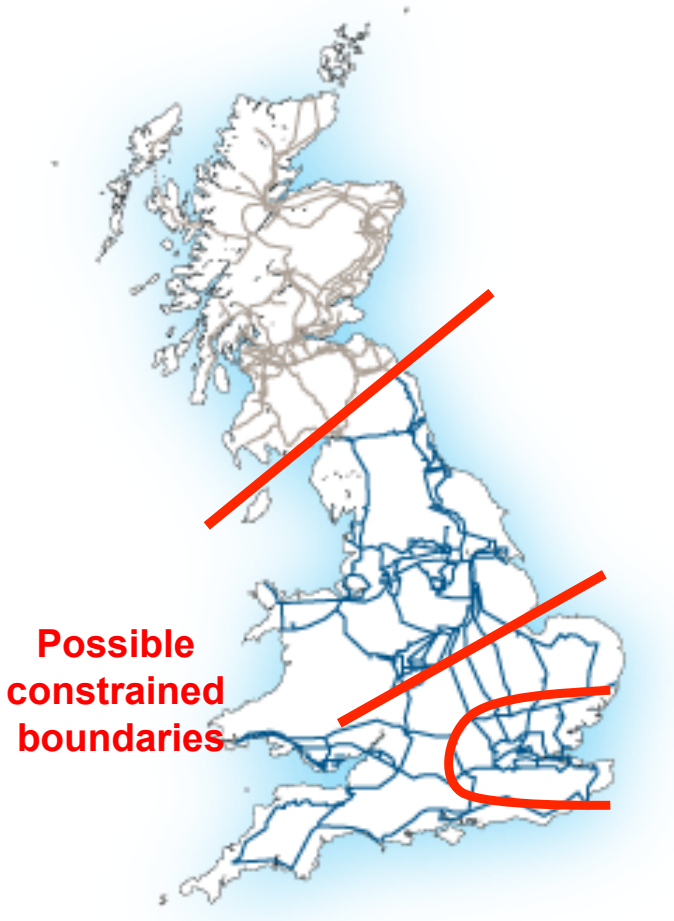
- Persistent structural congestion could potentially lead to the establishment of multiple bidding zones under CACM Network Code
- Where generation exceeds demand behind a constrained boundary, price will reduce
- In the absence of a suitable cross-zonal product, physical parties would:
  - *have access to their local zone only;*
  - *be exposed to cross-zonal differences in the spot wholesale electricity price (and potentially risk being out of balance in both zones)*
- Considerable knock on impacts:
  - TNUoS charging
  - EMR – e.g. Capacity Mechanism; FiT CfD Strike Price changes



GB Electricity Transmission System

Other considerations: Balancing Code Key Areas

- **Procurement and balancing products**
  - Reserves and procurement harmonisation
  - Procurement of balancing services
  - Procurement of balancing energy
- **Capacity Reservation on Interconnectors**
  - Reservation for operating reserves
  - Principle of co-optimisation
  - Reserve sharing
- **Imbalance Settlement**
  - Imbalance Settlement Pricing
  - Settlement Period Duration
  - Imbalance Calculation