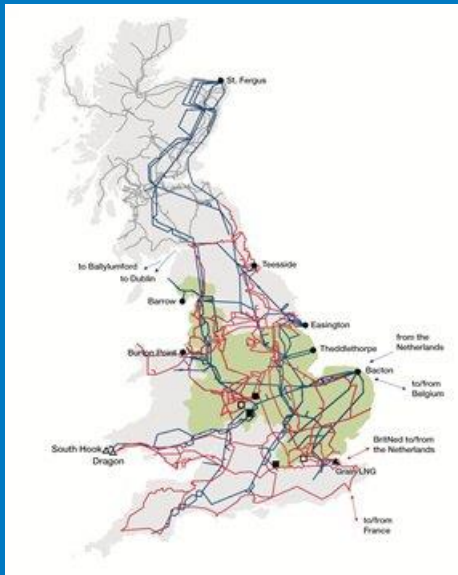


# GSR016: Small and Medium Embedded Generation Assumptions



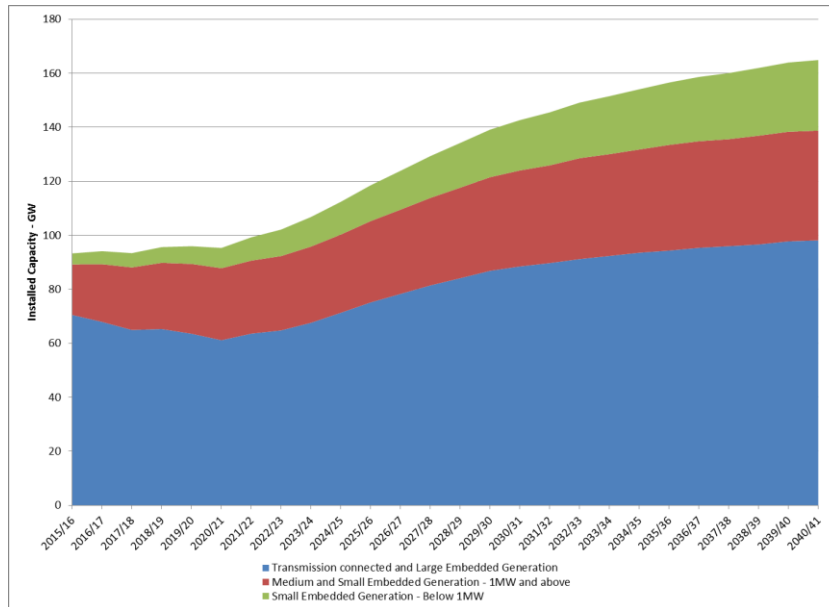
Bieshoy Awad

# Contents

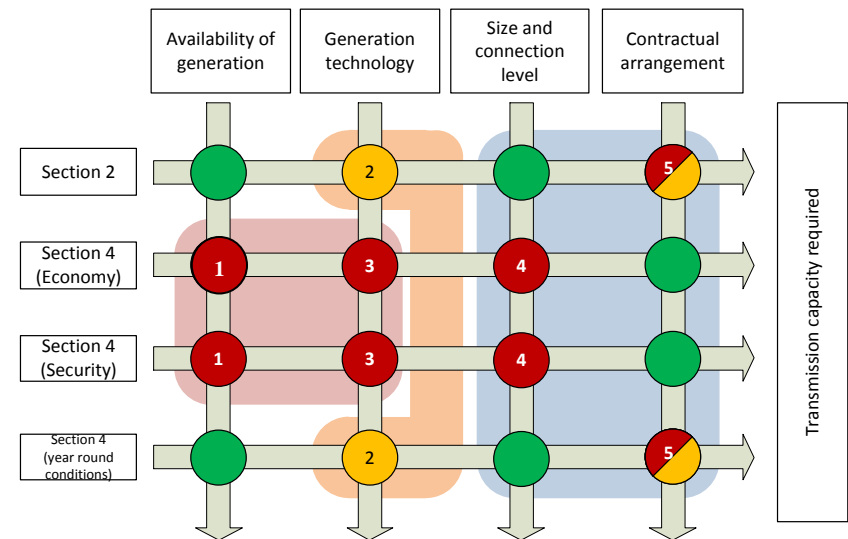
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1. Background
2. Examples
3. Recommendations
4. Additional Data Requirements
5. Discussion

# Background



Estimates based on FES 2016 Gone Green



Issues could be addressed by GSR022 Workgroup

Issues could be addressed by GSR016 Workgroup

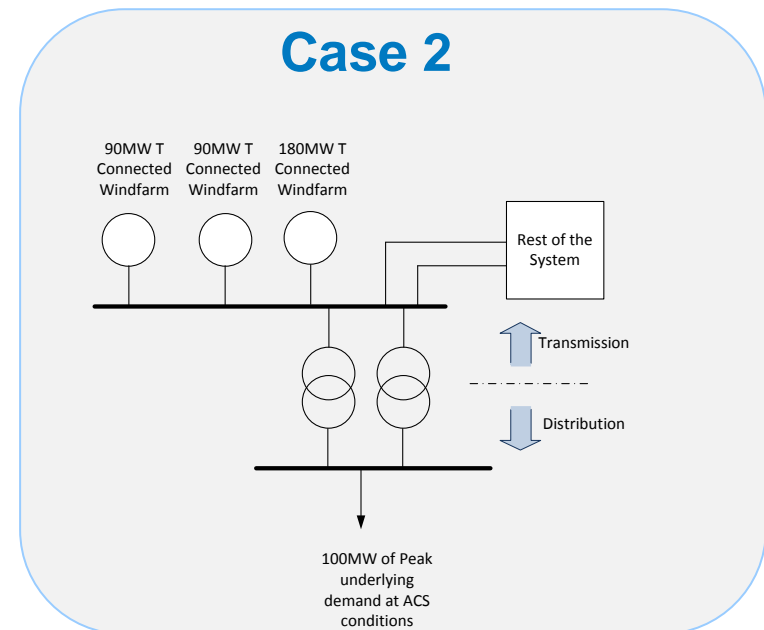
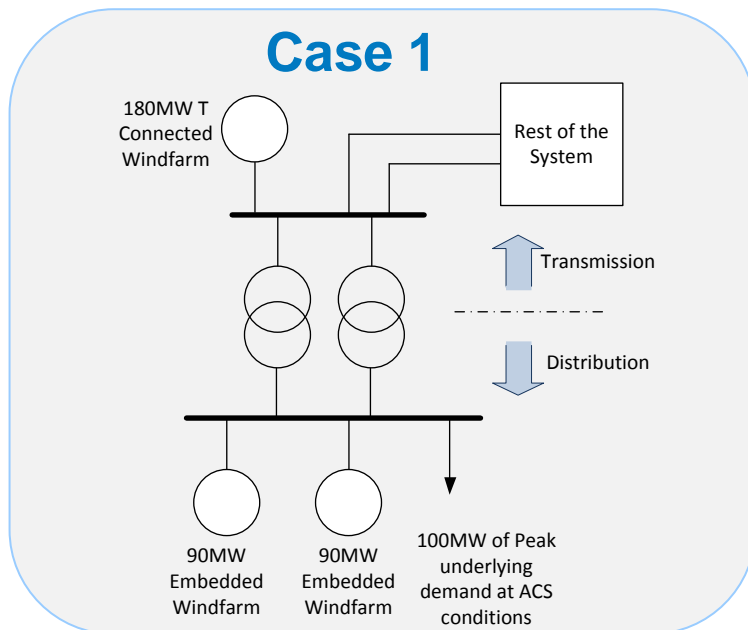
Issues could be addressed by a **policy** that is:  
1) informed by the work done by the GSR022 Workgroup; and  
2) agreed with the TOs via the JPC

# Investment Example

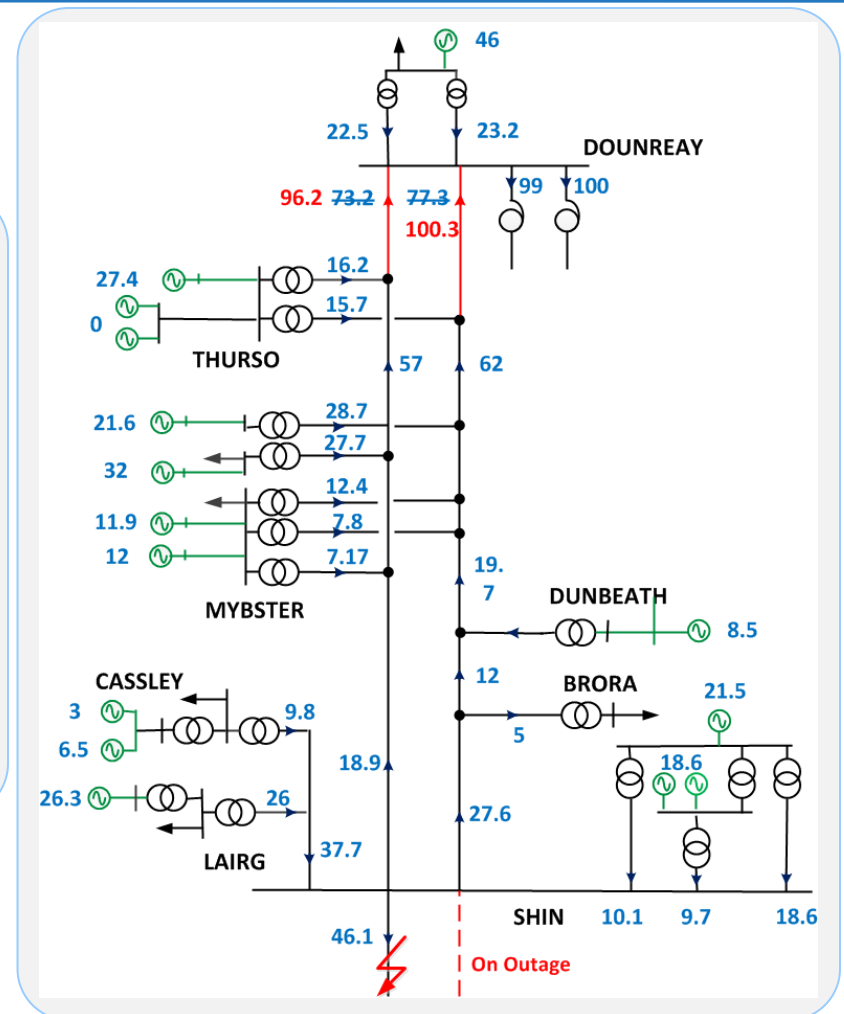
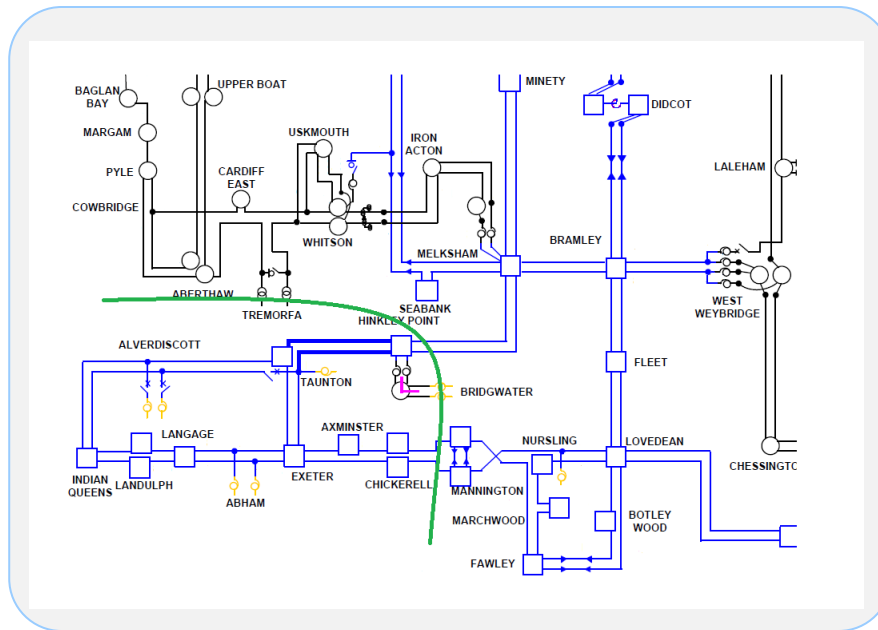
		90MW	90MW	180MW	Total flow
Case 1	Security	15MW*	15MW*	0MW**	-70MW
	Economy	15MW*	15MW*	126MW**	56MW
Case 2	Security	0**	0**	0**	-100MW
	Economy	63MW**	63MW**	126MW**	152MW

\* Arbitrary  
Value could vary from  
one DNO to another

\*\* As per the SQSS



# Operability Examples



# Recommendations

## Recommendations

- All types of generation should be treated consistently in NETS SQSS Section 4 studies – Security and Economy Backgrounds – irrespective of its size (Small, Medium, or Large) and connection level (Transmission or Embedded)
- There is sufficient criteria in the NETS SQSS to ensure that the transmission system remains operable under all conditions.
- Transmission Licensees need to ensure these criteria are met either via operational measures or via additional reinforcements. No generic solution proposed as the options may vary from one area to another.

## Changes to the NETS SQSS

- Change of the of the NETS SQSS ACS Peak Demand definition
- Removal of all exclusions of Small and Medium Embedded Power Stations

# Additional Data Requirements

## **Standard Planning Data**

Grid Code PC.A.2, PC.A.3, PC.A.4, and DRC Schedule 12

- Forecast transmission system demand at the time of the peak transmission system demand, minimum transmission system demand, maintenance period demand, and peak Grid Supply Point demand;
- Forecast contribution of embedded Small and Medium Power Stations considered when calculating the forecast demand; and
- Forecast connection dates and capacity of embedded Small and Medium Power Stations connecting at the Grid Supply Point.

## **Potential Additional Data**

- Forecast transmission system demand at the time of the peak total system gross demand, minimum total system gross demand, and peak Grid Supply Point gross demand;
- Forecast contribution of embedded Small and Medium Power Stations considered when calculating the forecast demand; and
- Aggregated capacity of Embedded Small Power Stations with capacity below 1MW, categorised in accordance with generation technologies.
- Data that allows forecasting the times of the peak national gross demand and the minimum national gross demand.

## Next Steps

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- Assess what data is required to allows forecasting the times of the peak national gross demand and the minimum national gross demand.
- Work with DNOs to assess what additional embedded generation data could be submitted.
- Submit a proposal to modify the Grid Code.



## GSR016 – Discussion

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Any questions?