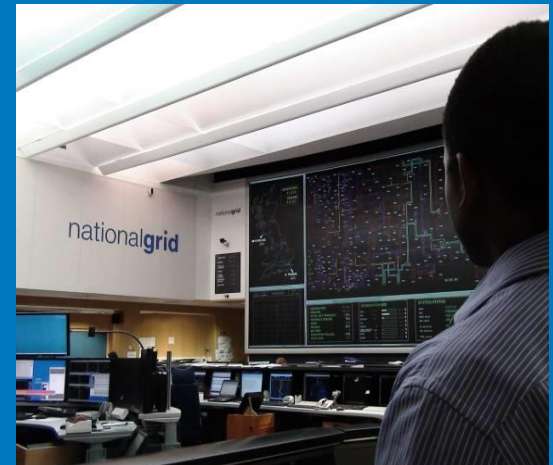


# SO System Monitoring Requirements



Dr Phil Ashton – Future Control Strategy

Fiona Williams – Technical Policy

Wednesday 13 December 2017

# Summary

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- Changing Energy Landscape
  - Growing motivation / requirements for system monitoring
- Current policy not fit for purpose
- Actual and Future Requirements
  - Post-Event
  - Real-Time
- Requirement for a workgroup
- Sort out detail to mutual benefit

# Changing Energy Landscape

Power Station  
Closures  
 $\approx 25\%$

of total capacity by 2020  
vs 2010 levels



Decarbonise  
Electricity  
 $80\%$

CO<sub>2</sub> reduction by 2050



Energy from  
Renewables  
 $\approx 15\%$

of total supplies by 2020



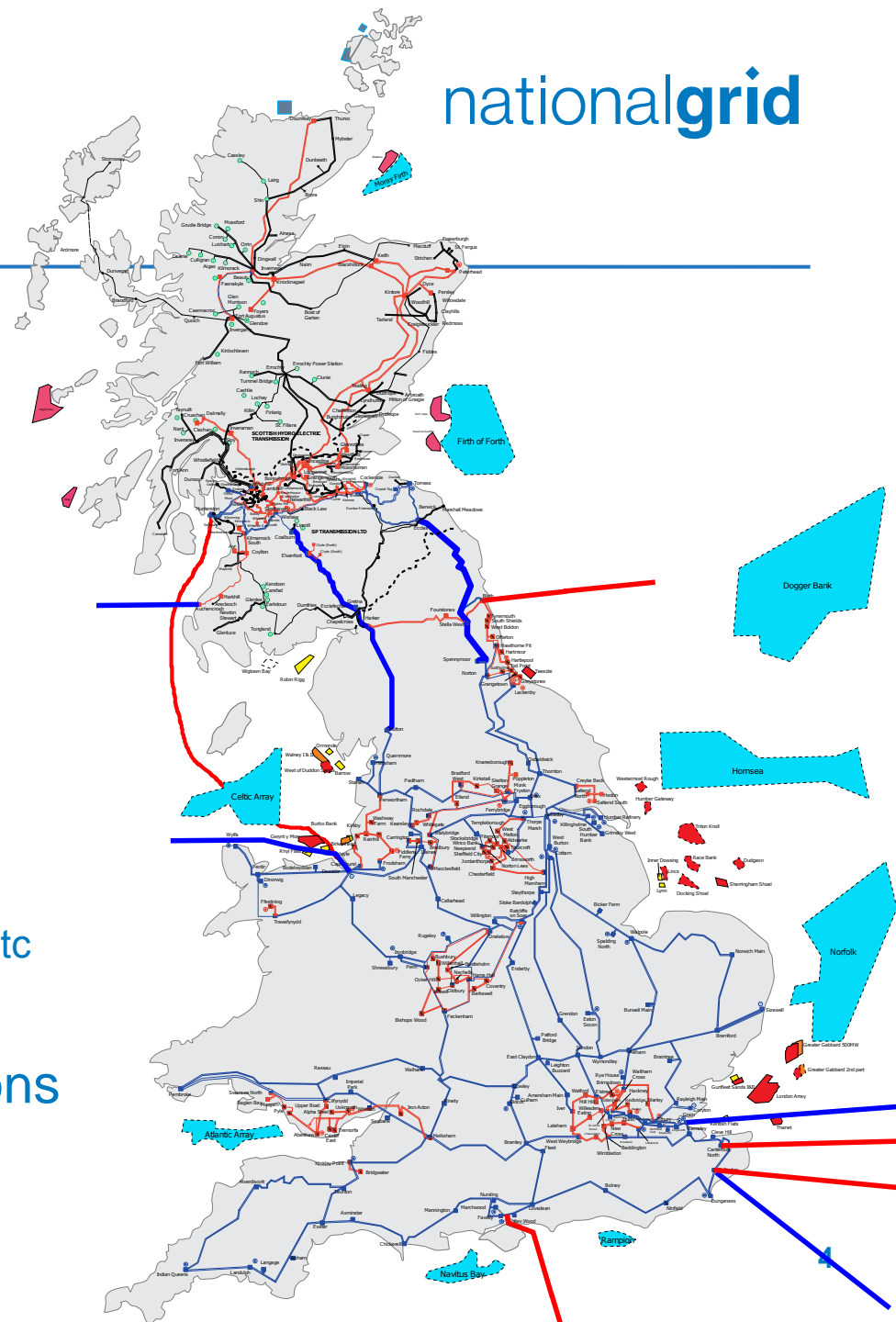
Energy needs  
based on  
Stakeholders views  
of the future energy  
landscape



Challenges and  
Opportunities.  
Developing  
measures to  
ensure the  
operability of  
future networks

# Network Challenges

- Increased Interconnection
  - ELEC Link 1000MW
  - NEMO 1000MW
  - IFA2 1000MW
  - NSN 1400MW
- Series Compensation
  - TCSC and FSC
- Intra-Network HVDC
  - Western Link
- FACTS & Power Electronics
  - Statcoms, QB's, SVC's, Wind, PV etc
- Multiple Models
- Increased Dynamic Interactions
- SSO
- System Stability Issues?



## Summary of Existing Systems

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- Insufficient visibility and understanding of the systems performance
- Enhanced monitoring, improved modelling and a continued approach to validation and base lining is now required
- Mutual Benefit of enhanced monitoring - preventative action possible, maximising asset utilisation