

## System Operator Access to Wind

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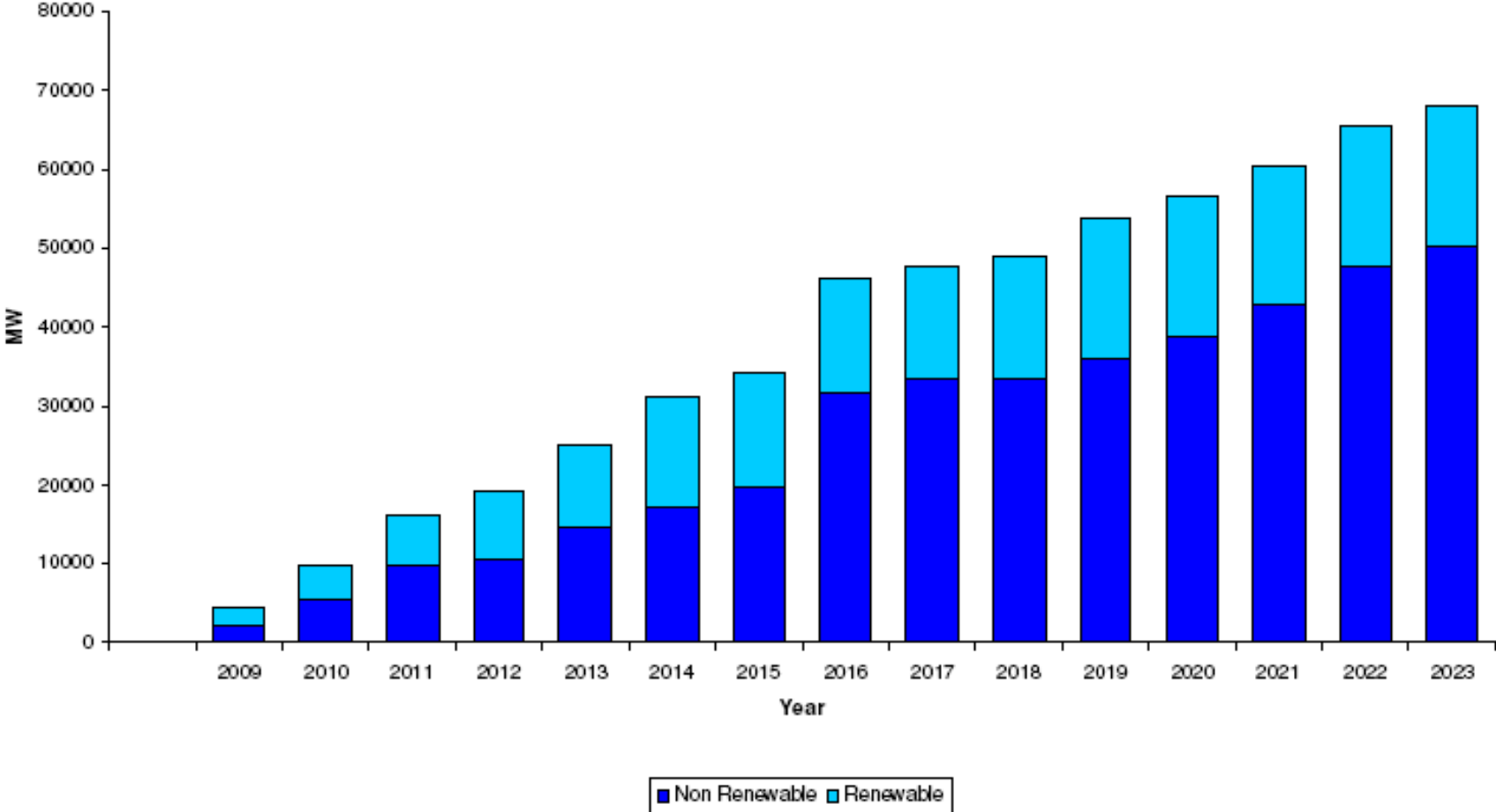
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# Overview

- ◆ Some Context
- ◆ Key Issues
- ◆ Immediate Challenges
- ◆ Overview of Short Term Approach
- ◆ Summary

# Some Context

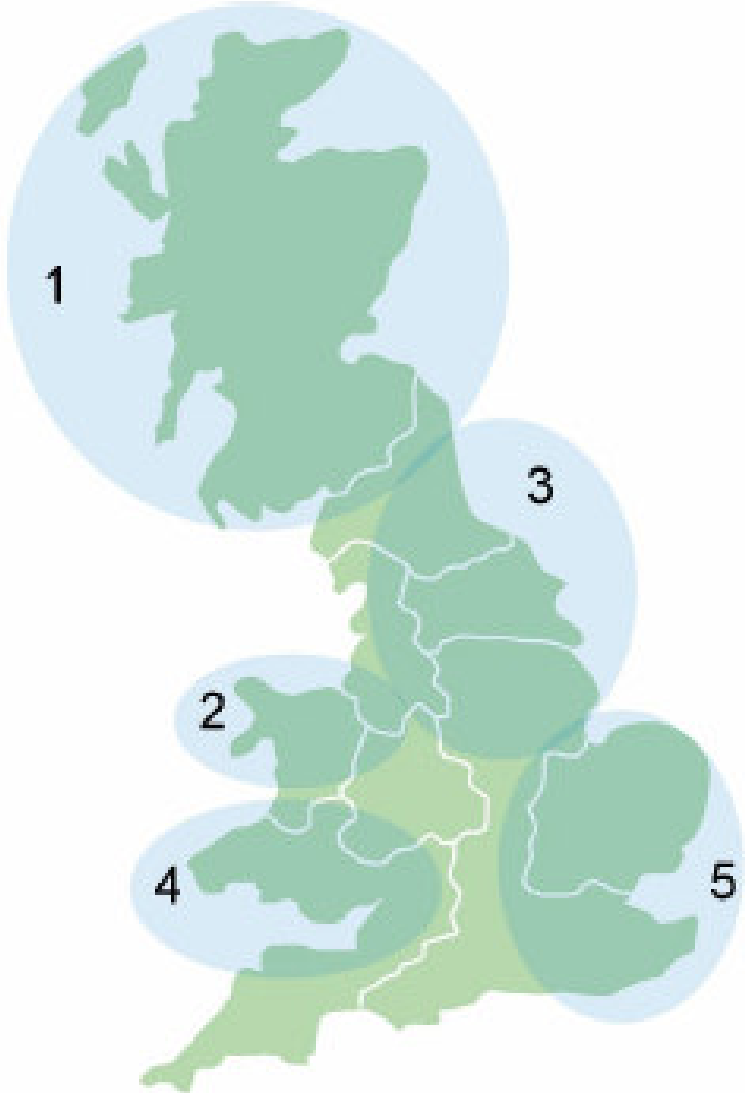
Total MW Contracted



# Key Issues

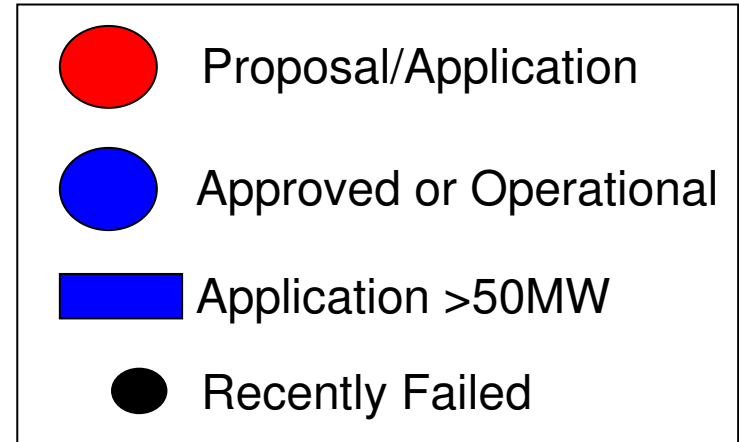
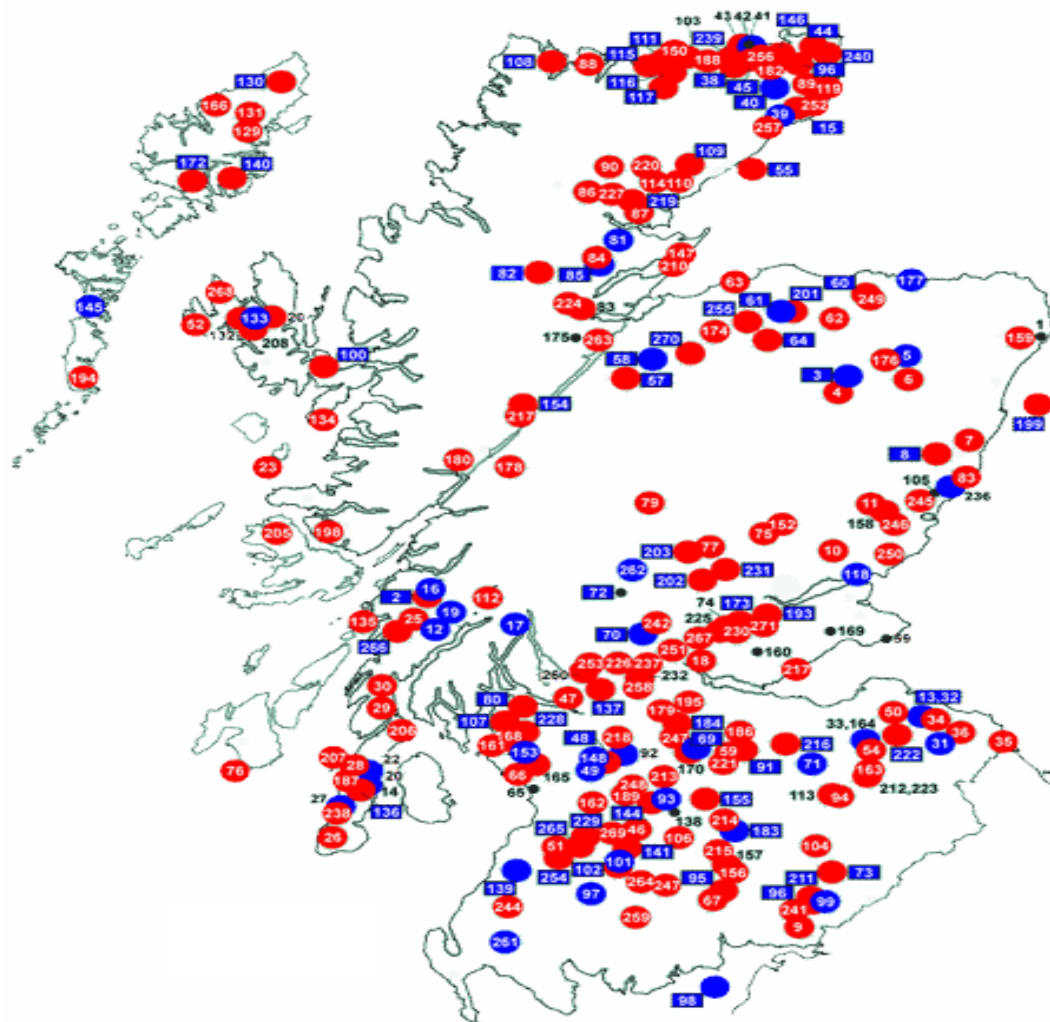
- ◆ Balance between flexible and inflexible generation in UK is changing
- ◆ Footroom is an increasing requirement over low demand periods
  - Overnights
  - Bank Holidays

# High Onshore Activity Areas



Area	No. of Contracts	MW
Area 1	102	9055
Area 2	18	8887
Area 3	18	7864
Area 4	12	8529
Area 5	27	18629
Other	15	14972
<b>Totals</b>	<b>192</b>	<b>67936</b>

# Immediate Challenges



- Network Reinforcement v Renewable Growth.
- Large number of embedded inflexible sites.

# Immediate Challenges

- ◆ During periods of high wind and low demand (especially within Scotland) there is currently a localised requirement to create footroom.
- ◆ This requirement is further exacerbated by –
  - Constraints
  - Limited options in the Balancing Mechanism
  - Limited access to Embedded generation

# Our Approach

## Short term strategy (< 6 months)

- ◆ Raising industry awareness of Grid Code obligations and processes
- ◆ Develop systems and processes to facilitate data submission and BM Participation
- ◆ Launch interim solution for submission for site specific forecast output
- ◆ Encourage a review of Balancing Mechanism parameters where applicable.
- ◆ Short term commercial contracts to curtail embedded sites.
  - Generation Curtailment Service (Heads of Terms)

# Should Footroom Conditions persist

Inadequate footroom available to System Operator as all commercial options utilised then;

## Stage 1

- ◆ Negative Reserve Active Power Margin (NRAPM) Assessment and Warning with fax to affected sites and/or published on BMRA.

## Stage 2

- ◆ Emergency Instruction
  - Directly to site
  - Via DNO

# Summary

- ◆ Access to footroom is a growing issue and we are looking at our requirements both nationally and locally.
- ◆ We need flexibility to manage all generation
- ◆ We are exploring commercial opportunities outside the Balancing Mechanism
- ◆ Should we exhaust the commercial options available then we may move to Emergency instructions.

Any questions?

Contact – Your account manager or [Sam.Wither@uk.ngrid.com](mailto:Sam.Wither@uk.ngrid.com)