

# Meeting 2020 targets – Grid Infrastructure

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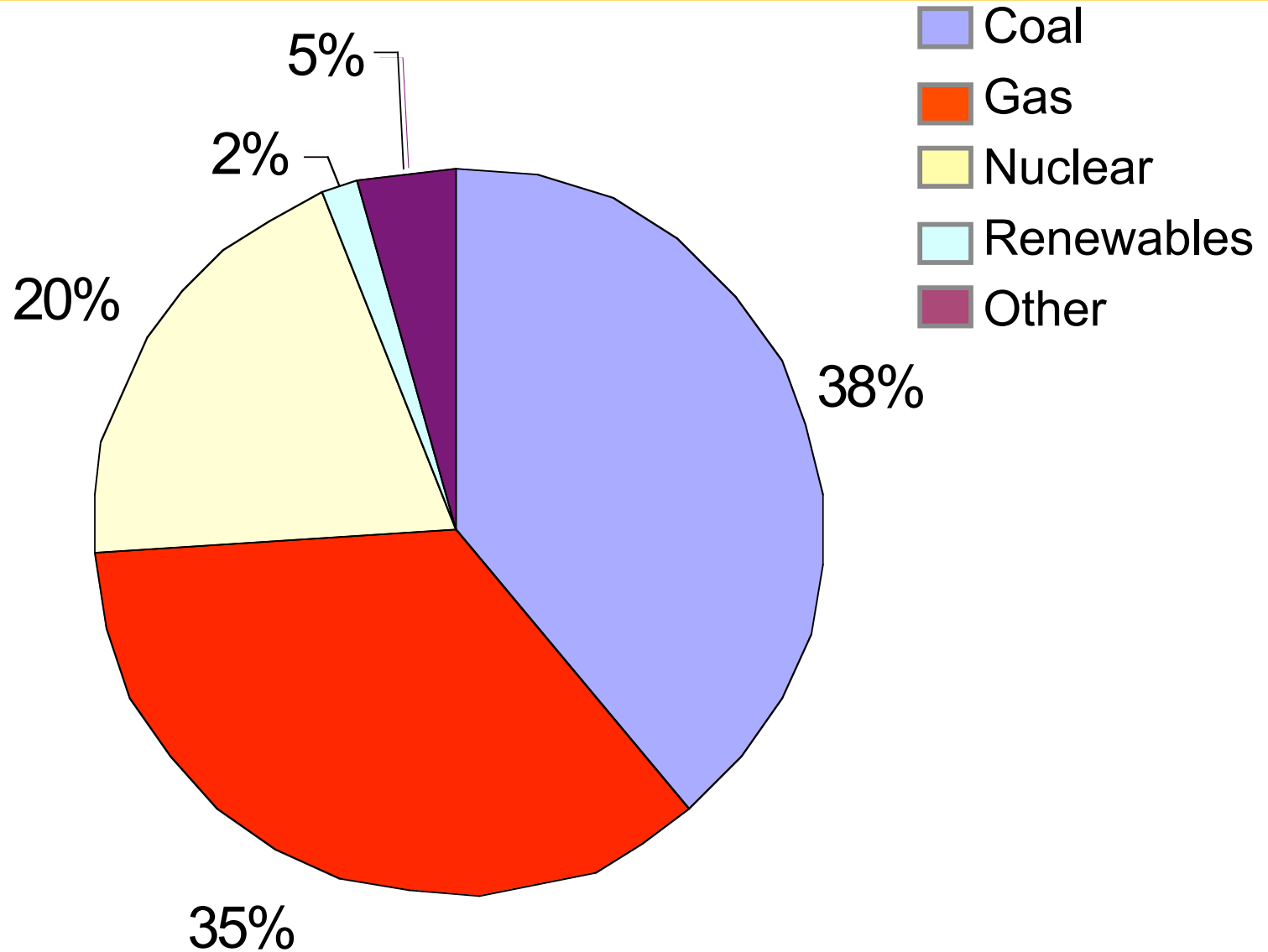
**nationalgrid**

# Agenda

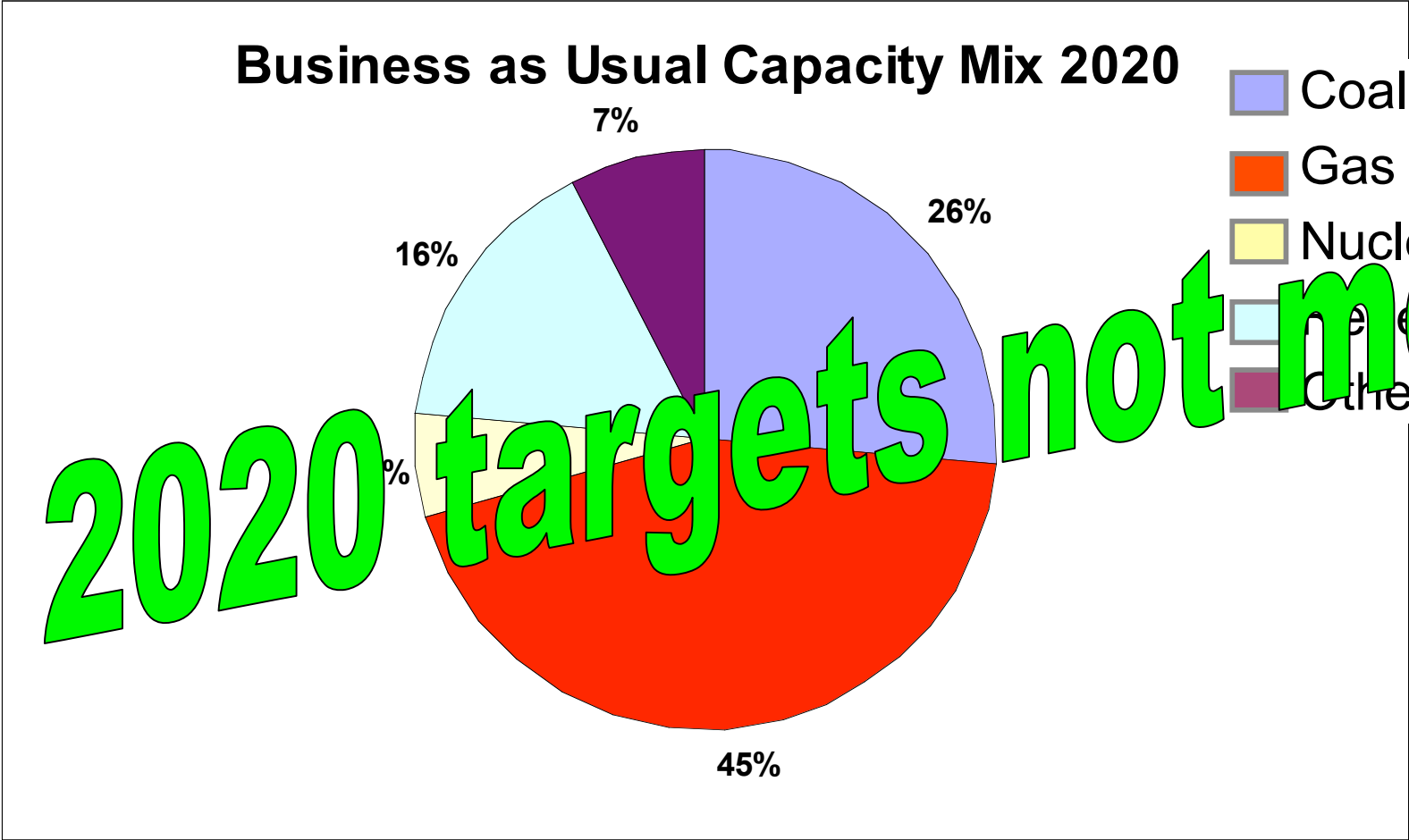
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- ◆ Meeting targets – capacity mix
- ◆ What factors influence grid development
- ◆ Issues to resolve
- ◆ Summary

# Current Generation Mix

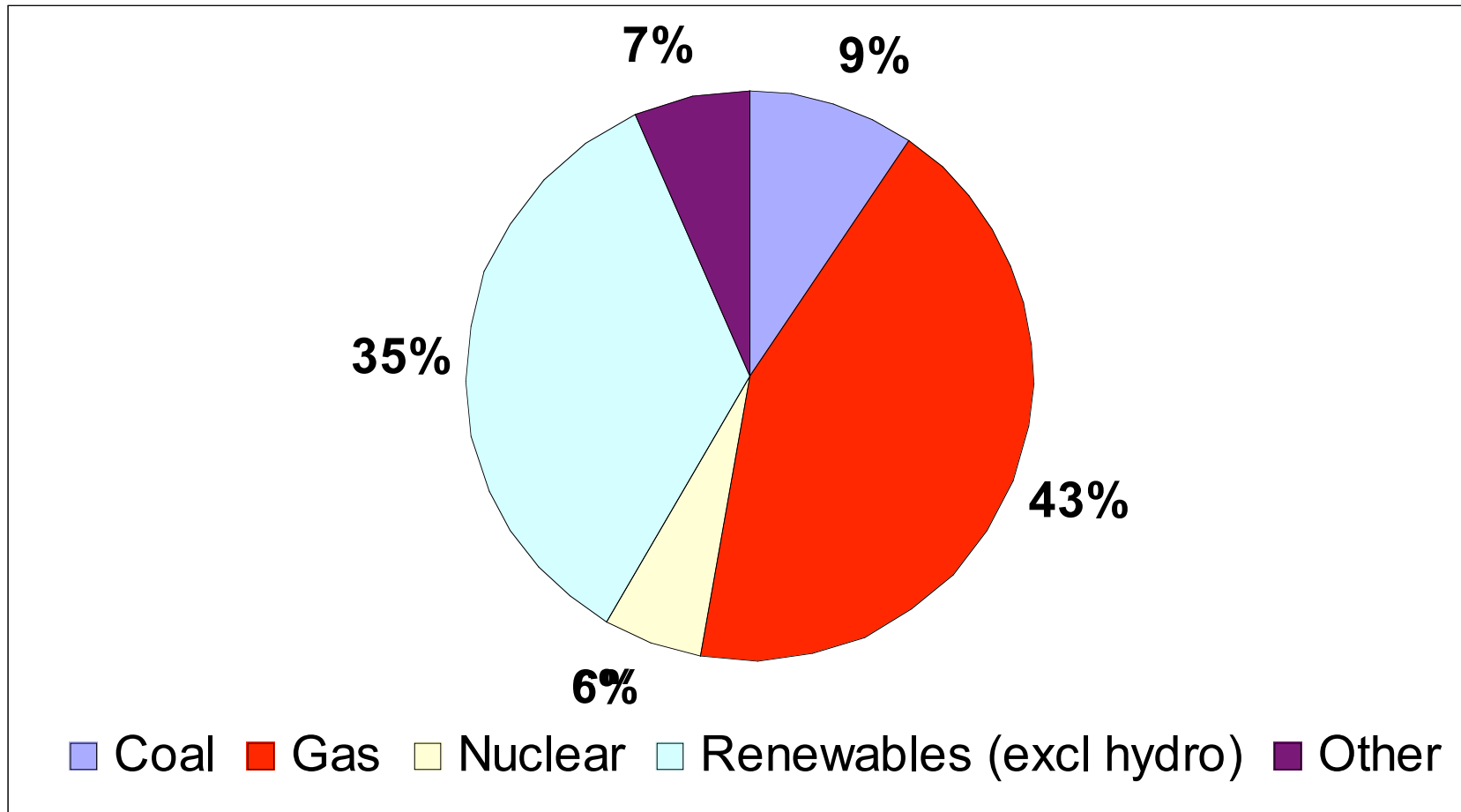


# 2020 Targets - 'business as usual'



# What mix can meet the 2020 targets?

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# How can 2020 targets be met?

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- ◆ Contribution from heat and transport sectors – but how much by 2020?
- ◆ Energy efficiency has role to play
- ◆ Renewable electricity is key for 2020
  - ◆ Massive increase in volume required
  - ◆ Volume of offshore wind will be key element in whether targets are met or not
  - ◆ Investment required in grid infrastructure
  - ◆ Regulatory and commercial framework changes will be required
  - ◆ Huge challenge ahead

# What factors will influence the development of the grid?

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- ◆ Security Standards
  - ◆ How much transmission do you build?
- ◆ Investment
  - ◆ Where/when do you build it?
  - ◆ What commercial/regulatory framework underpins investment?
  - ◆ Risk/reward profiles
- ◆ Access
  - ◆ How do you allocate capacity?
- ◆ Highly interactive issues

# What are the immediate issues to be resolved?

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- ◆ Offshore transmission regime
  - ◆ Addressing the 'GB Queue'
  - ◆ Transmission access
  - ◆ Developing the security standards
  - ◆ Strategic investment options
  - ◆ Required investments
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- ◆ Immediate issues relate to onshore currently
  - ◆ Resolution will impact on offshore regime

# Offshore transmission regime

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- ◆ Contributing to Ofgem/BERR project to deliver regulatory and commercial regime
  - ◆ Policy decisions made – implementation phase
  - ◆ Introduction of competitive process for appointment of offshore transmission owners
- ◆ National Grid is acting as GBSO designate for the regime and is responsible for
  - ◆ Development of codes and contractual arrangements
  - ◆ Charging arrangements
  - ◆ Operational requirements
- ◆ Ofgem/BERR consultation shortly containing further information

# GB Queue – transmission access

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- ◆ What's the issue?
  - ◆ Large number of projects waiting to connect in Scotland
  - ◆ Due to delays on planning consent (Beauly – Denny)
  - ◆ How can plant that is ready get on?
- ◆ What's happening?
  - ◆ Various options being considered
    - ◆ Continue as now – may lead to holding projects off until investment delivered
    - ◆ Let plant on – manage the consequences
    - ◆ Share access

# Security standards

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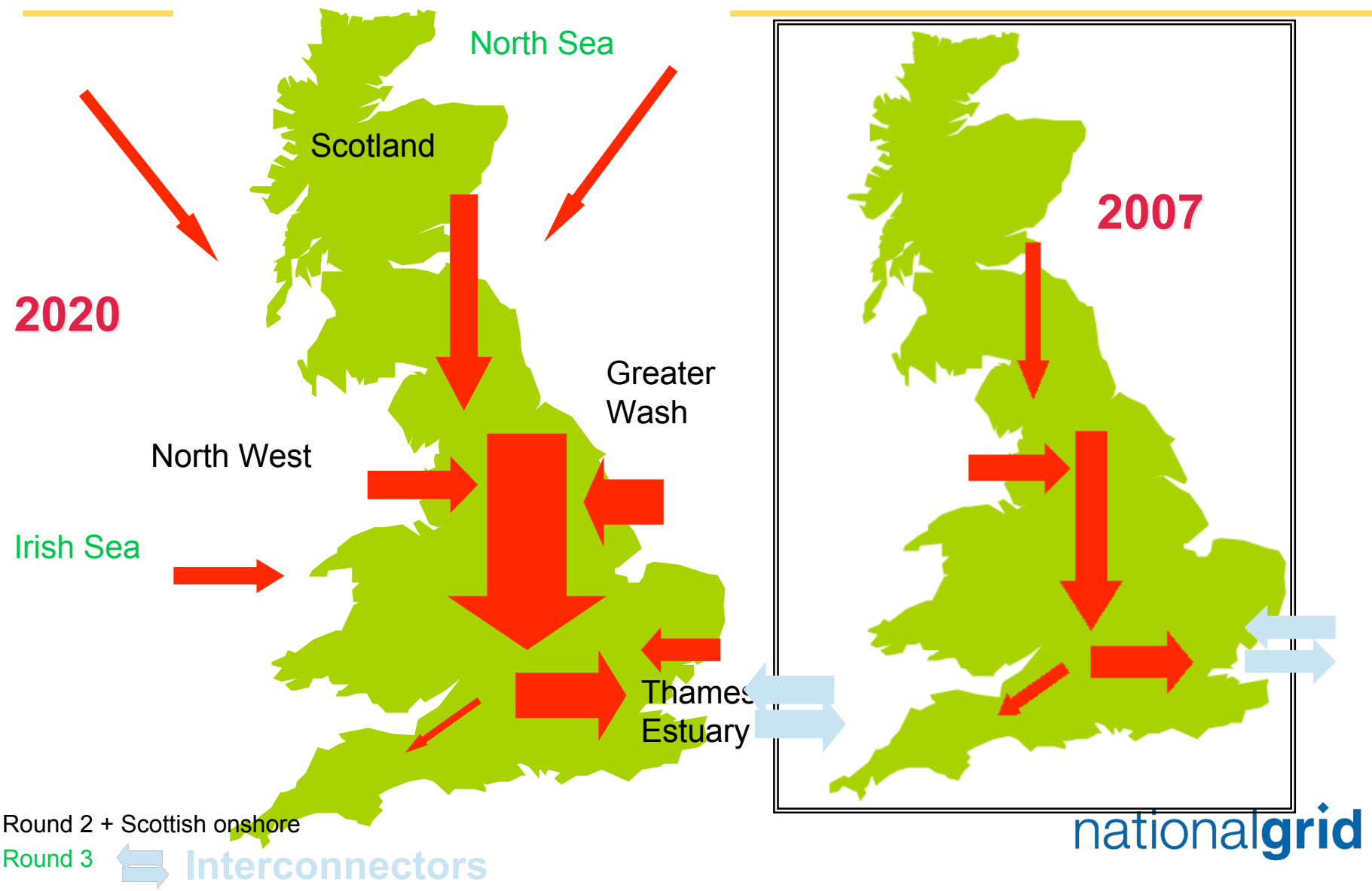
- ◆ What's the issue?
  - ◆ Is the current security standard appropriate?
  - ◆ How should wind's contribution be accounted for?
  - ◆ Who decides how much investment – TO or user?
  - ◆ Largest loss issue
- ◆ What's happening?
  - ◆ Undertake fundamental review of SQSS
  - ◆ Inclusive process – timescales currently being finalised
  - ◆ Interaction with TAR

# Strategic investment options

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- ◆ What's the issue?
  - ◆ Current regulatory regime based on investment process starting only when clear (committed) signal is present
  - ◆ Can result in grid investment delaying generation projects (GB queue)
- ◆ What's happening?
  - ◆ Revised arrangements required to ease entry of new entrants
    - ◆ Align grid works and generator works
    - ◆ No financial commitment required before transmission works commence
    - ◆ Facilitate earlier release of capacity
  - ◆ Provide appropriate risk/reward profile for transmission companies
  - ◆ Regulatory model being worked up

# 2007 power flows compared with 2020 Energy Policy Goals



# Scenario and investment options

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- ◆ What's the issue?
  - ◆ Assuming that the appropriate framework is developed
  - ◆ What are the no-regrets investments that should be progressed now to deliver the a 2020 grid infrastructure to allow targets to be met?
- ◆ What's happening?
  - ◆ Determine the strategic investment options required
  - ◆ Study with Scottish TOs
  - ◆ Requirement to align offshore developments with onshore
  - ◆ Output to be made available end 2008

# Summary

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- ◆ Grid infrastructure needs to change to deliver 2020 targets
- ◆ Changes required to today's regulatory/commercial frameworks
- ◆ Highly interactive issues to consider
- ◆ Work is ongoing now which will deliver real progress on the key issues