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2012 FES – Gas Strategy

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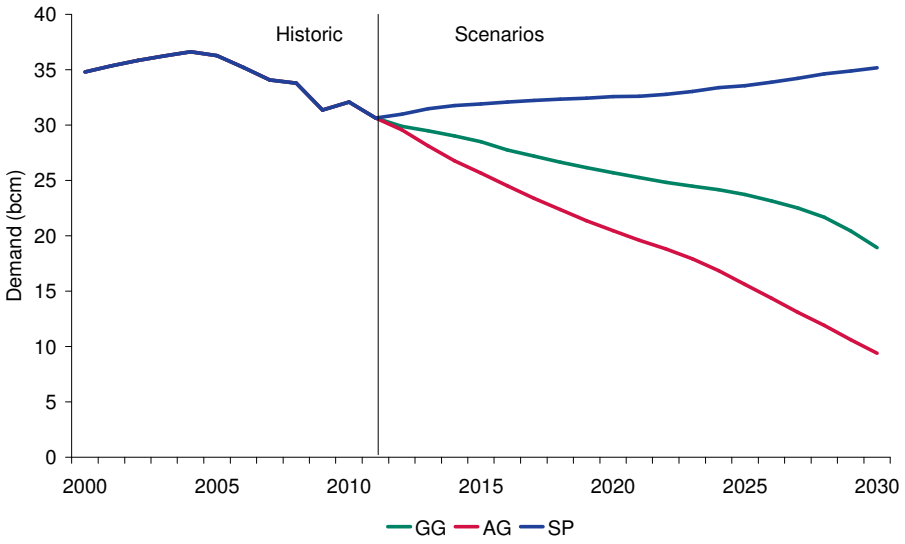
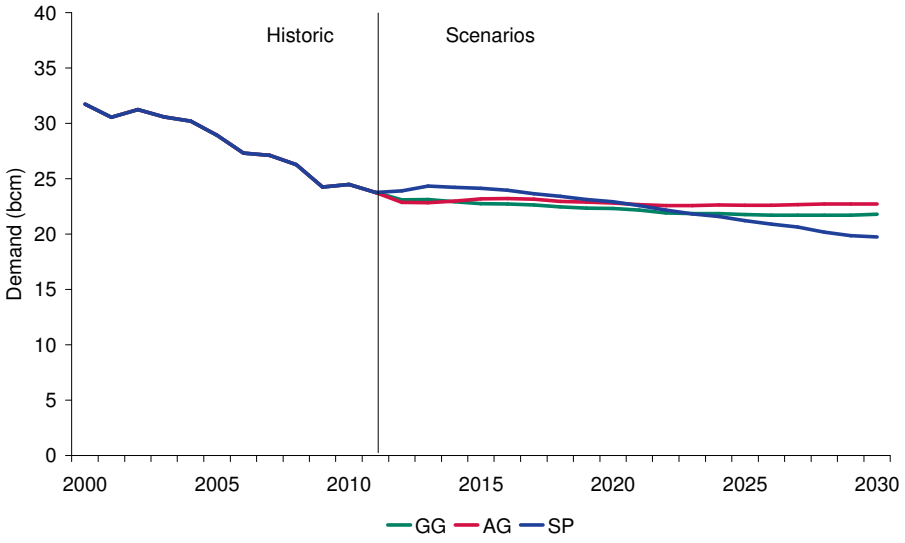
2012 Scenarios & Axioms

	Slow Progression	Gone Green	Accelerated Growth
Targets	Pressure for EU targets to be abandoned, 2020 missed	EU targets hit by 2020, on target for 2050 carbon targets	EU targets met pre-2020
Economy / Prices	Continued low growth, increased focus on affordability. Fossil fuel prices gradually fall from current high levels	Central GDP assumptions ~2%pa Current trend in fossil fuel prices continue	Sustained high economic growth Fossil fuel prices rise faster than current trends
Power Generation	Slower deployment of offshore wind, new nuclear delayed to mid-2020s, CCS pilot in 2030 deployed in gas	Offshore wind grow to meet 2020 targets, new nuclear from 2020s, CCS pilot from 2025 deployed for both coal and gas	Costs of offshore wind falls, rapid build up of offshore wind, increased levels of tidal generation. CCS gas/coal post 2020
Consumers / Heating	Resistant to cost of targets, minimal electrification of heating (mostly off-grid)	Acceptance of targets, internal temperatures continue to fall, incentives drive electrification of domestic heating	Enthusiasm for meeting targets, significant growth in electrification of heating

2012 Domestic and I&C demand





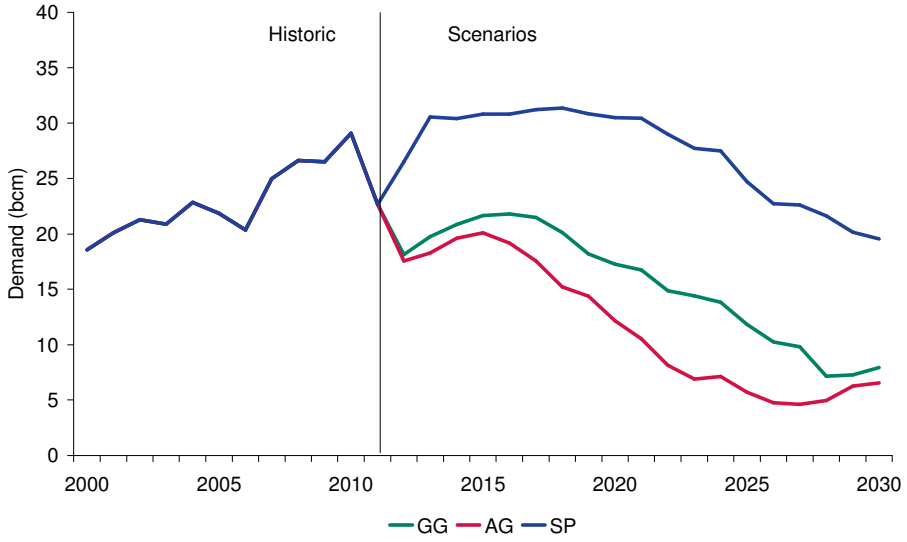
Domestic

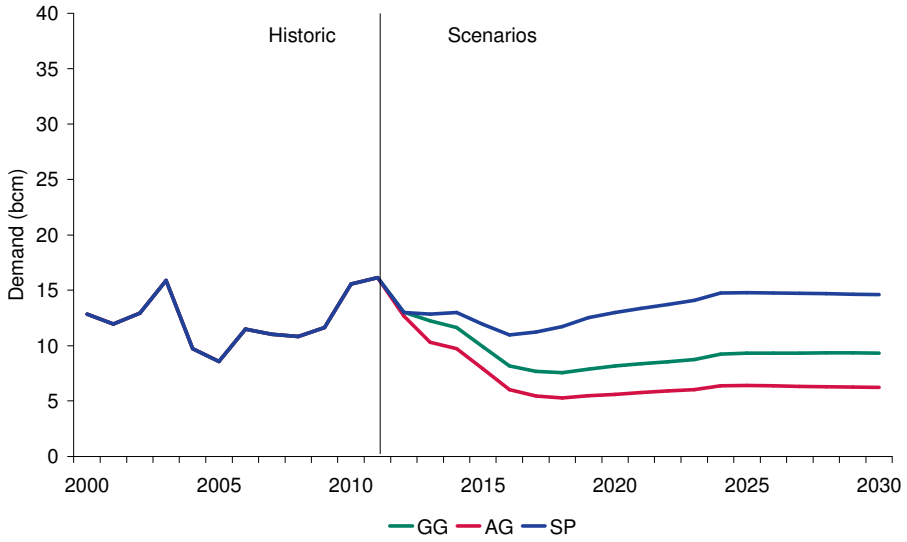
- Behavioural change
- Energy efficiency
- New house build
- Change of heating fuel

Industrial & Commercial

- Economy
- Energy efficiency

2012 Power generation and exports





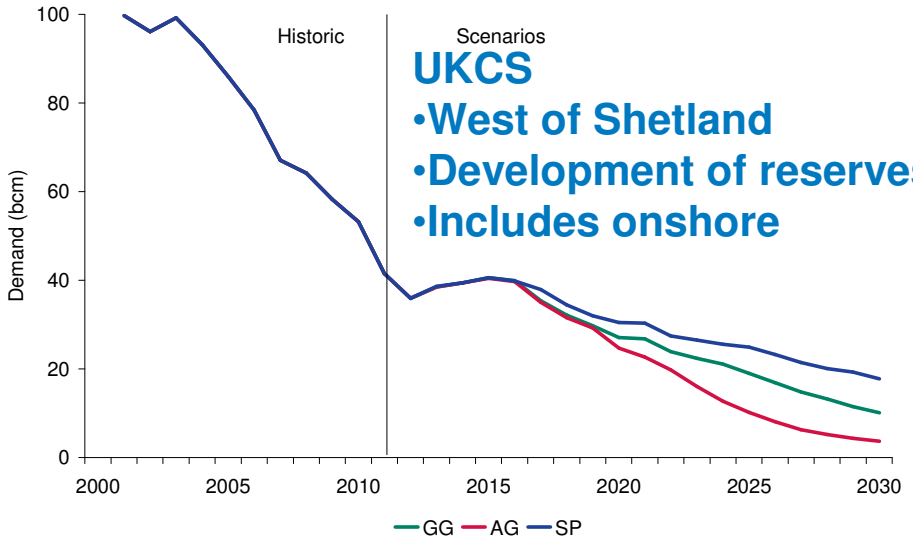
Power generation

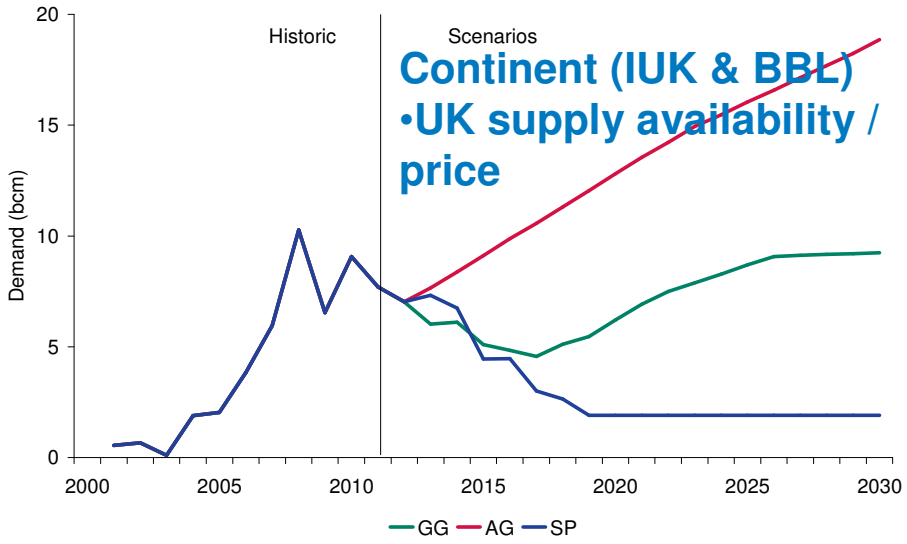
- Coal / gas price
- Changes to generating mix
  - CCGT build
  - Wind development
  - New nuclear
  - CCS

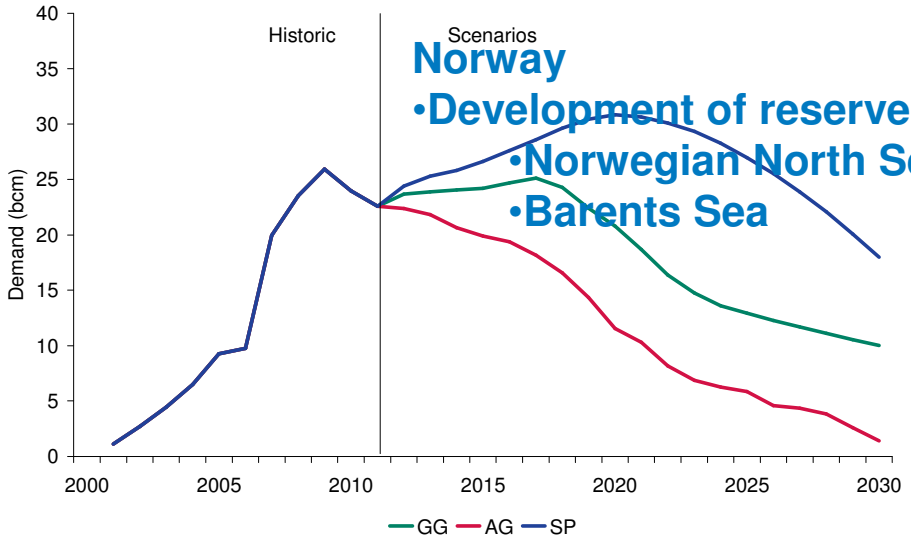
Exports

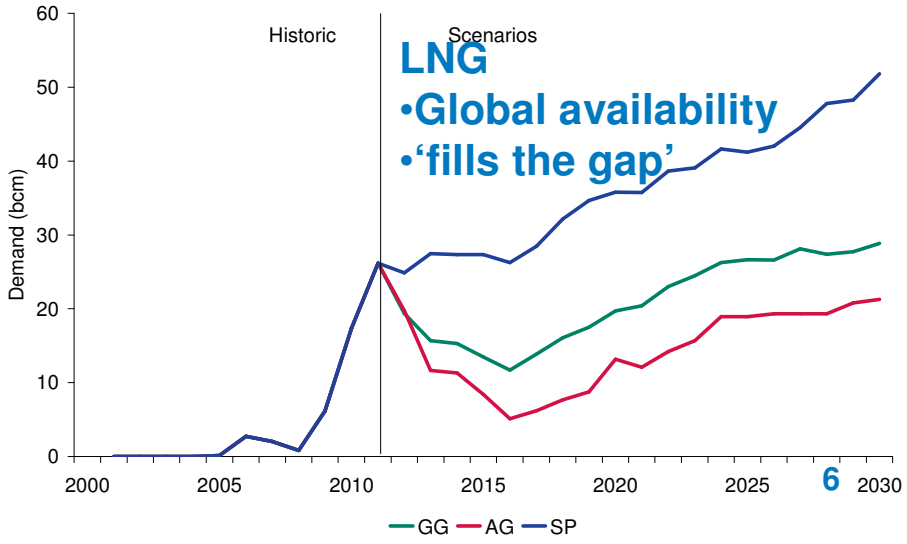
- Ireland – as SP, GG & AG
- IUK -

2012 Supplies









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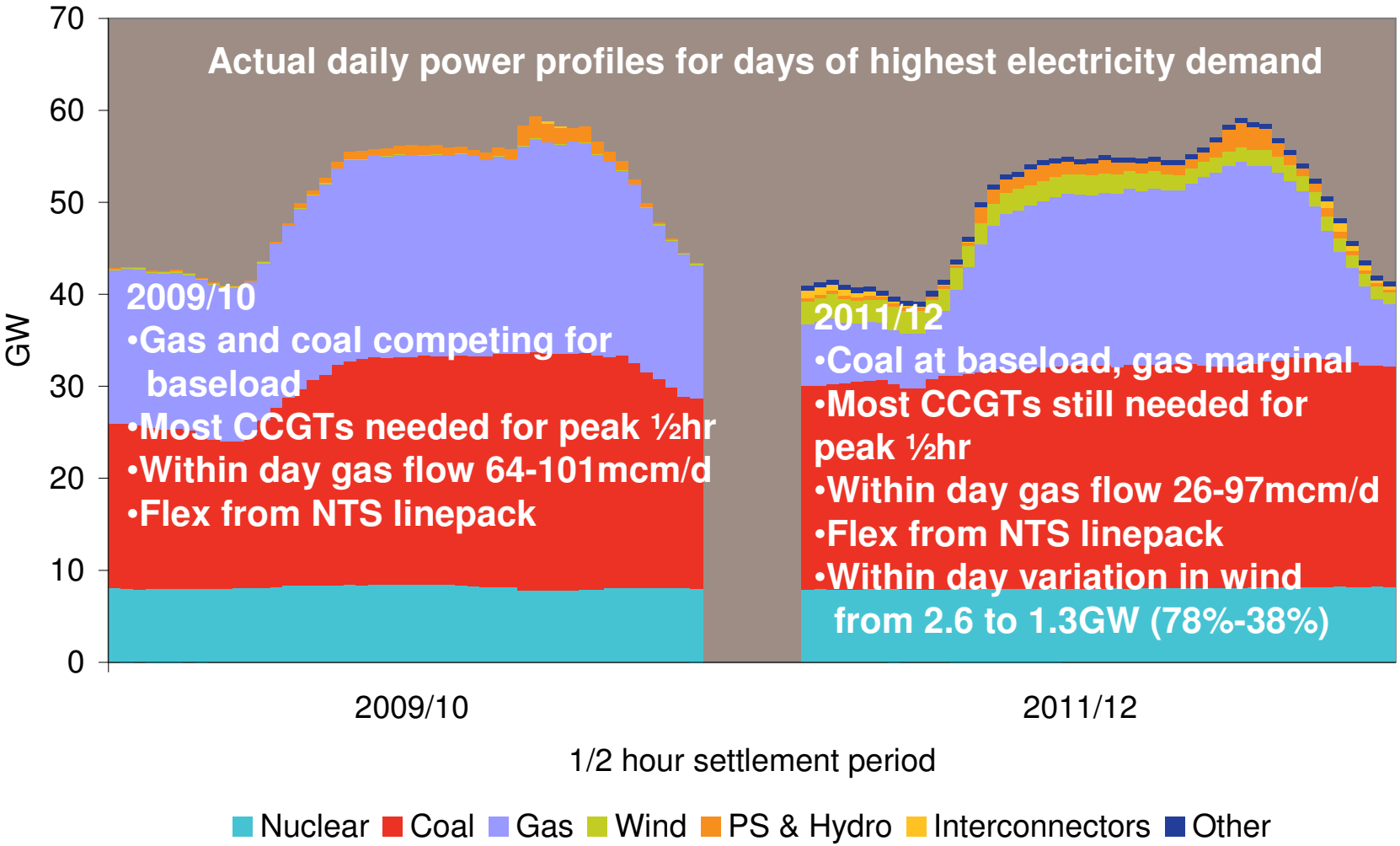
Gas / electricity interaction (current)



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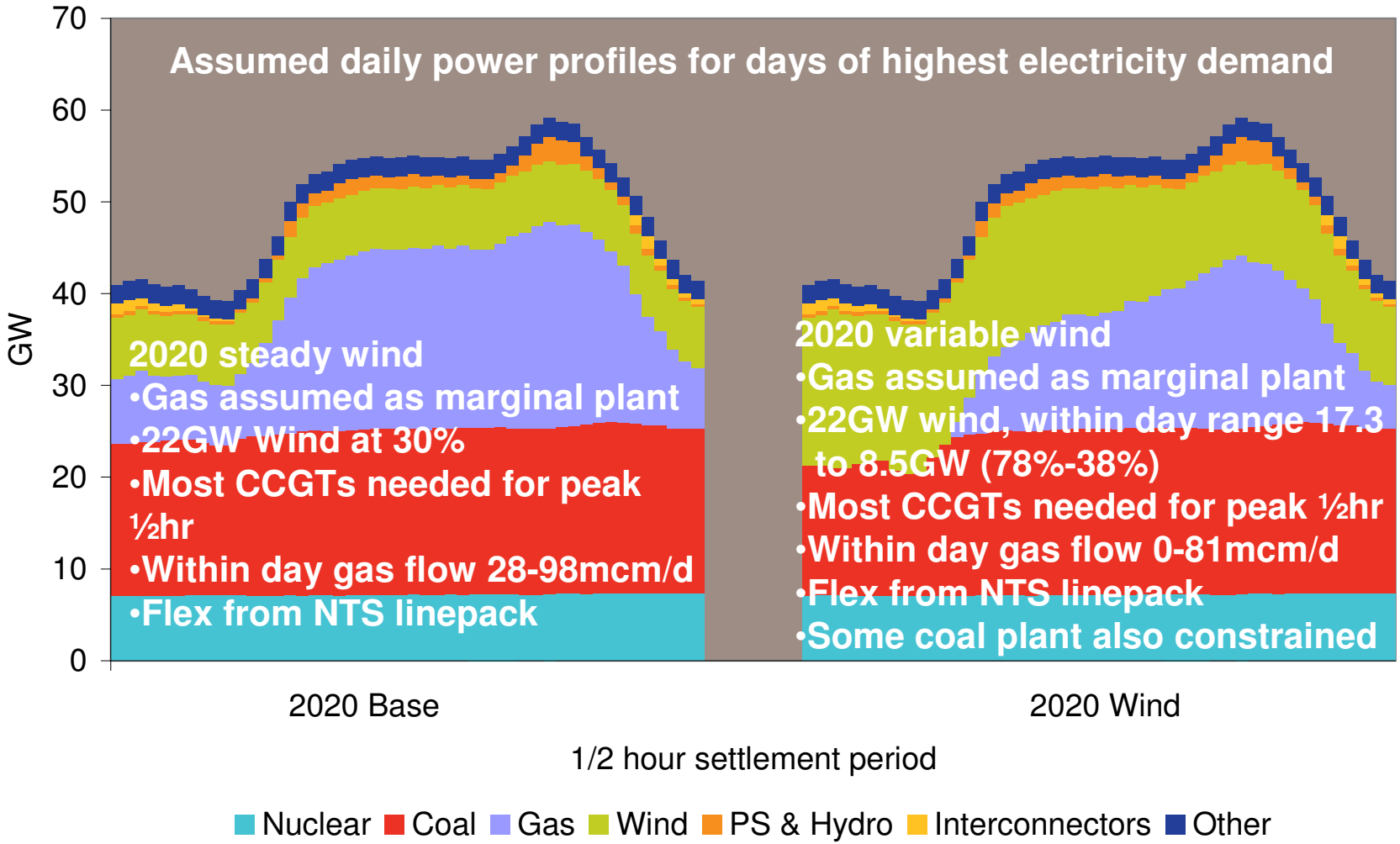
Gas / electricity interaction (2020)



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Other Network Issues

- Factors intensify network operations and dynamics
  - Historic north to south flows replaced with variable supply patterns
  - Changeable exit profiles – power stations, LDZ offtakes & storage injection
  - Changeable entry profiles – flexible supplies – LNG, IUK, Norway & storage
  - Increased supply concentration hence increased impact of supply losses
- Future considerations
  - Impact of variable wind
  - Increased reliance on imports – supply variations & concentration
  - Increased electricity interconnection – gas plant provides flexibility
  - New connections – imports (Interconnectors & LNG), storage, power stations

Conclusions

- **There is an enduring role for gas**
- **Network challenges continue to increase**