national**grid**
THE POWER OF ACTION

# Winter Outlook 2011/12

Ofgem Winter Outlook Seminar

27th September 2011

Chris Train - Network Operations Director

# Winter Outlook 2011/12 Timeline

- Winter Outlook Consultation – Published 7th July
- Consultation Responses – Received 19th August
  - 3 Consultation responses received
- Ofgem Winter Outlook Seminar – 27th September
- Winter Outlook Report – Published w/c 3rd October

nationalgrid

THE POWER OF ACTION

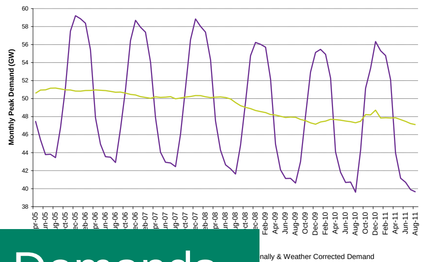
# Winter Outlook 2011/12

Prices

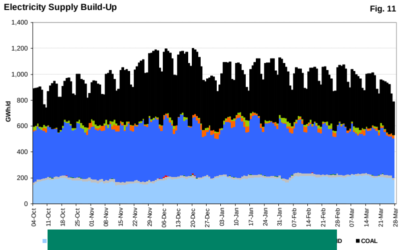
Gas

Electricity

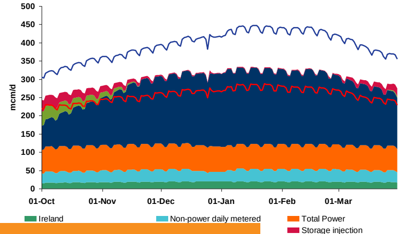
Gas vs Coal for Power




Demands

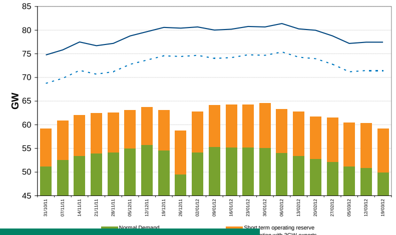



Generation




Demands

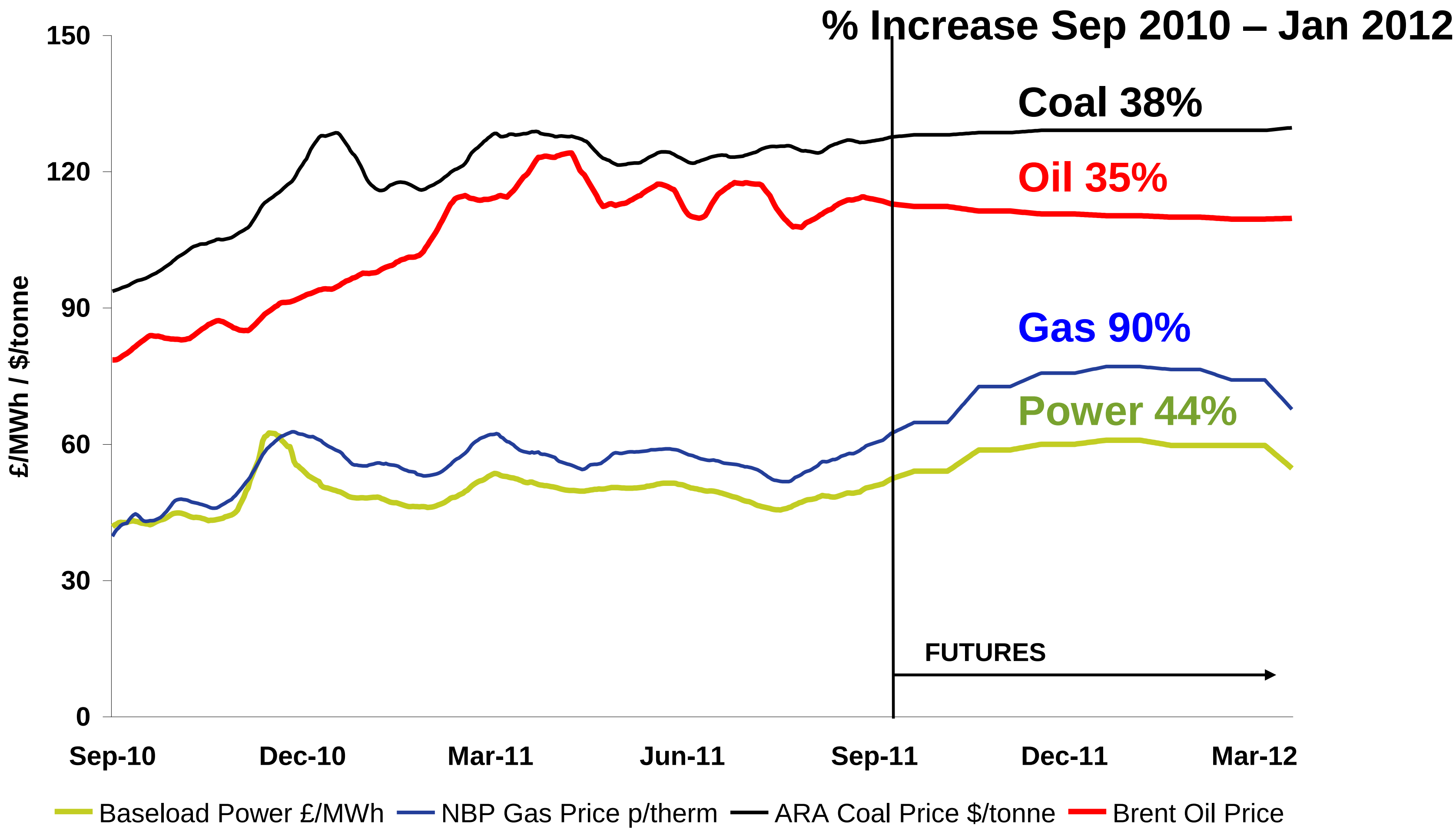
Supplies & LNG



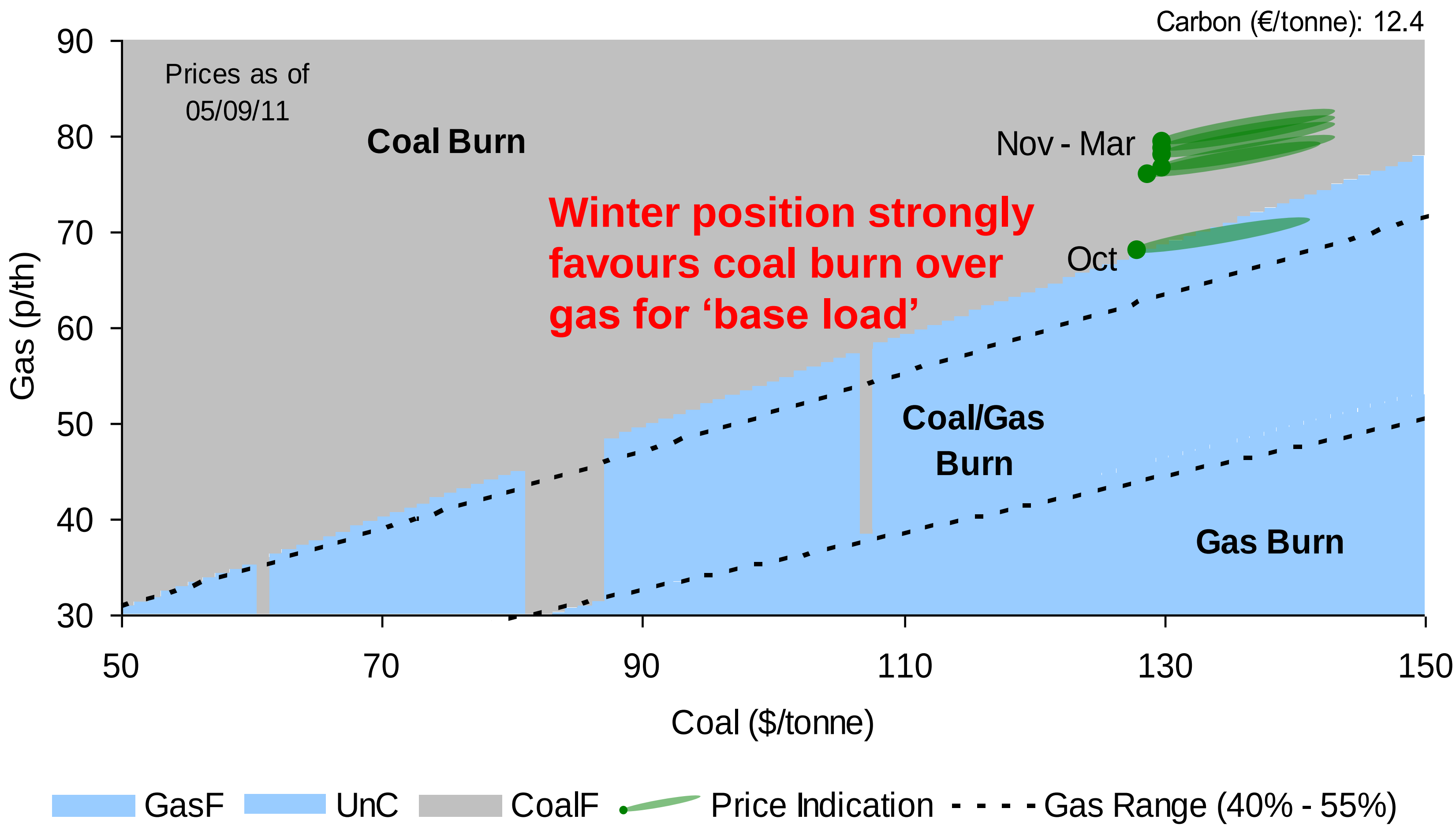

Surpluses

Europe

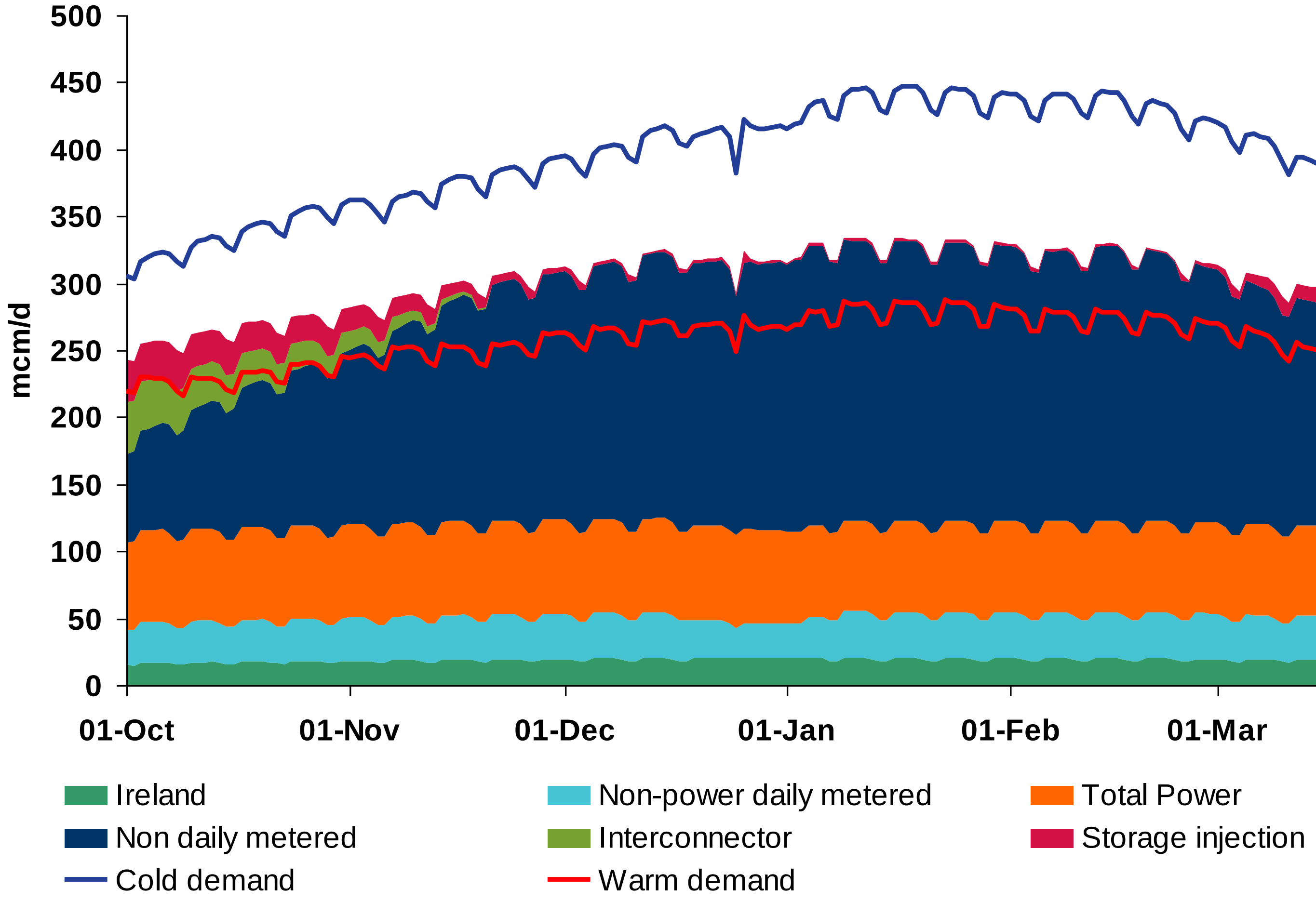
# Gas - Fuel Prices



# Gas – Relative Power Economics



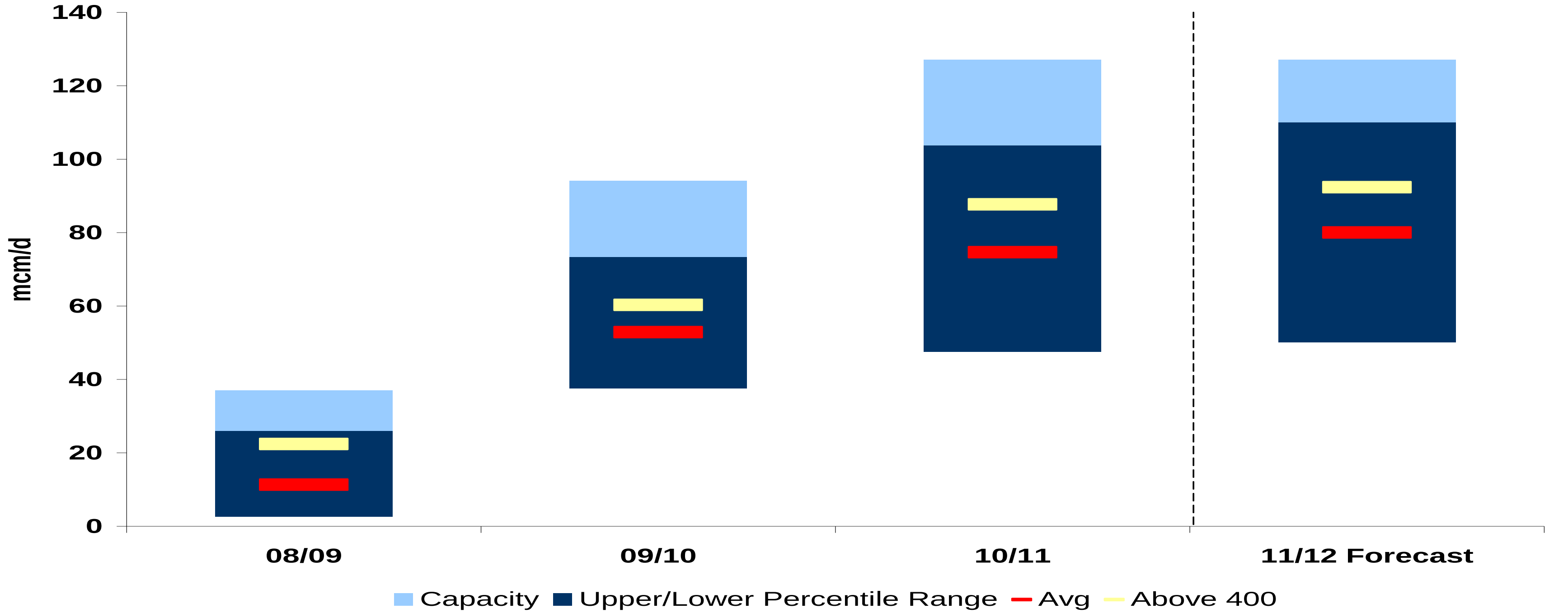
# Gas - 2011/12 Demand



# Gas - 2011/12 Supplies

| (mcm/d) | 2010/11 Range | 2010/11 Base Case | 2011/12 Range | 2011/12 Dec – Feb | 2011/12 400+ |
|---|---|---|---|---|---|
| UKCS | 154 | 154 | 106 – 132 | 119 | 125 |
| Norway | 86 – 116 | 101 | 70 – 118 | 96 | 105 |
| BBL | 30 | 30 | 24 – 36 | 30 | 32 |
| IUK | 30 – 0 | 20 | 0 – 30 | 8 | 20 |
| LNG Imports | 30 – 100 | 77 | 50 – 110 | 80 | 92 |
| Total | 342 – 412 | 382 | 250 – 426 | 333 | 374 |
| Storage | 108 | 108 | 2 – 74 | 36 | 65 |
| **Total inc. Storage** | 450 - 520 | **490** | **252 - 500** | **369** | **439** |

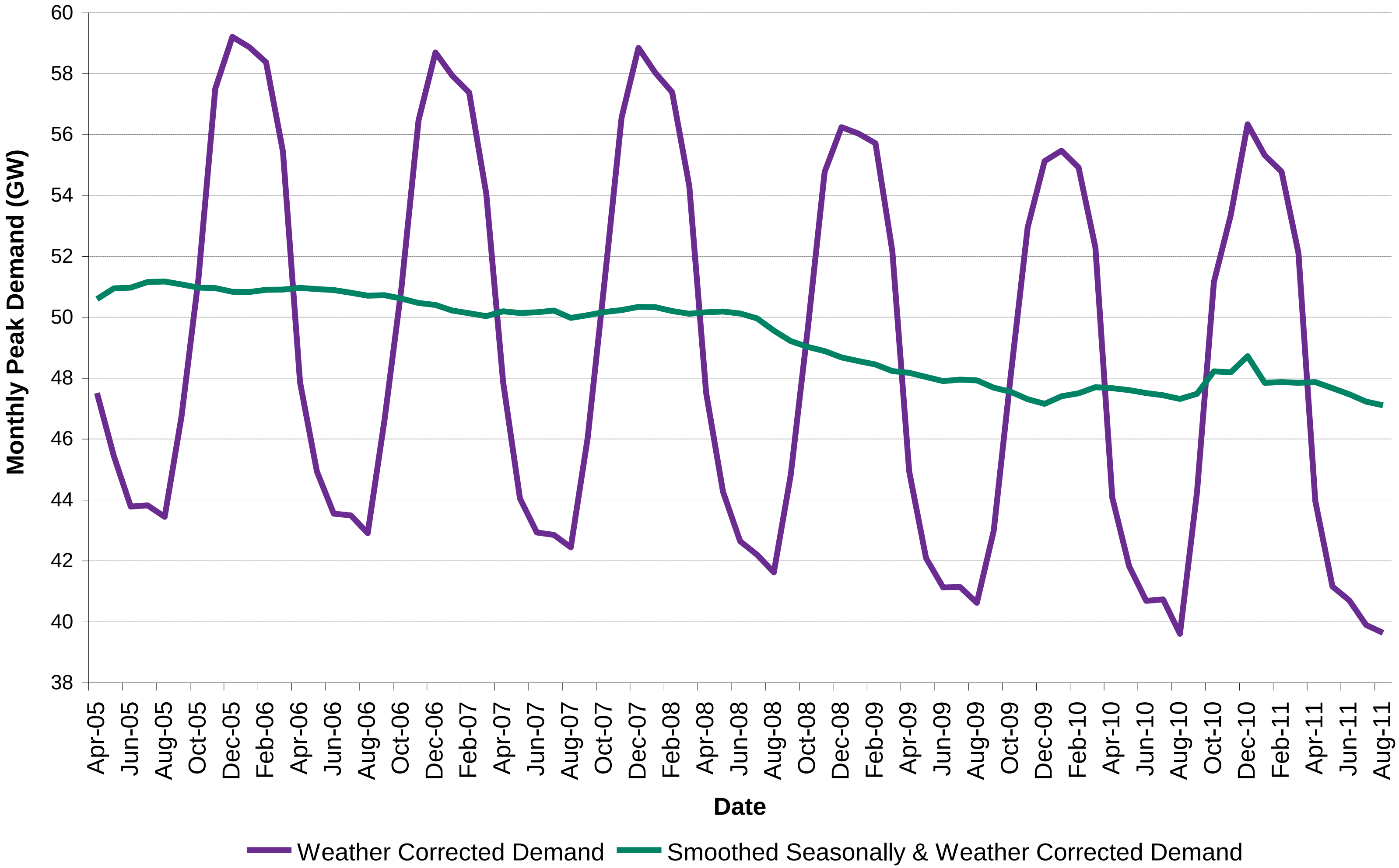
# 2011/12 LNG Forecast




| Higher Imports | Lower Imports |
|---|---|
| Increased global LNG production | Higher global LNG demand |
| Lower LNG demand in Spain | Increased LNG demand in Japan |
| UK gas prices higher than US | UK gas prices lower than Far East |
| Increased gas supply to Germany (Nord Stream) | Increased gas demand in Germany (Nuclear ) |
| | Commencement of Gate LNG |

# Electricity - Demand Forecast Uncertainty has Increased

nationalgrid
THE POWER OF ACTION



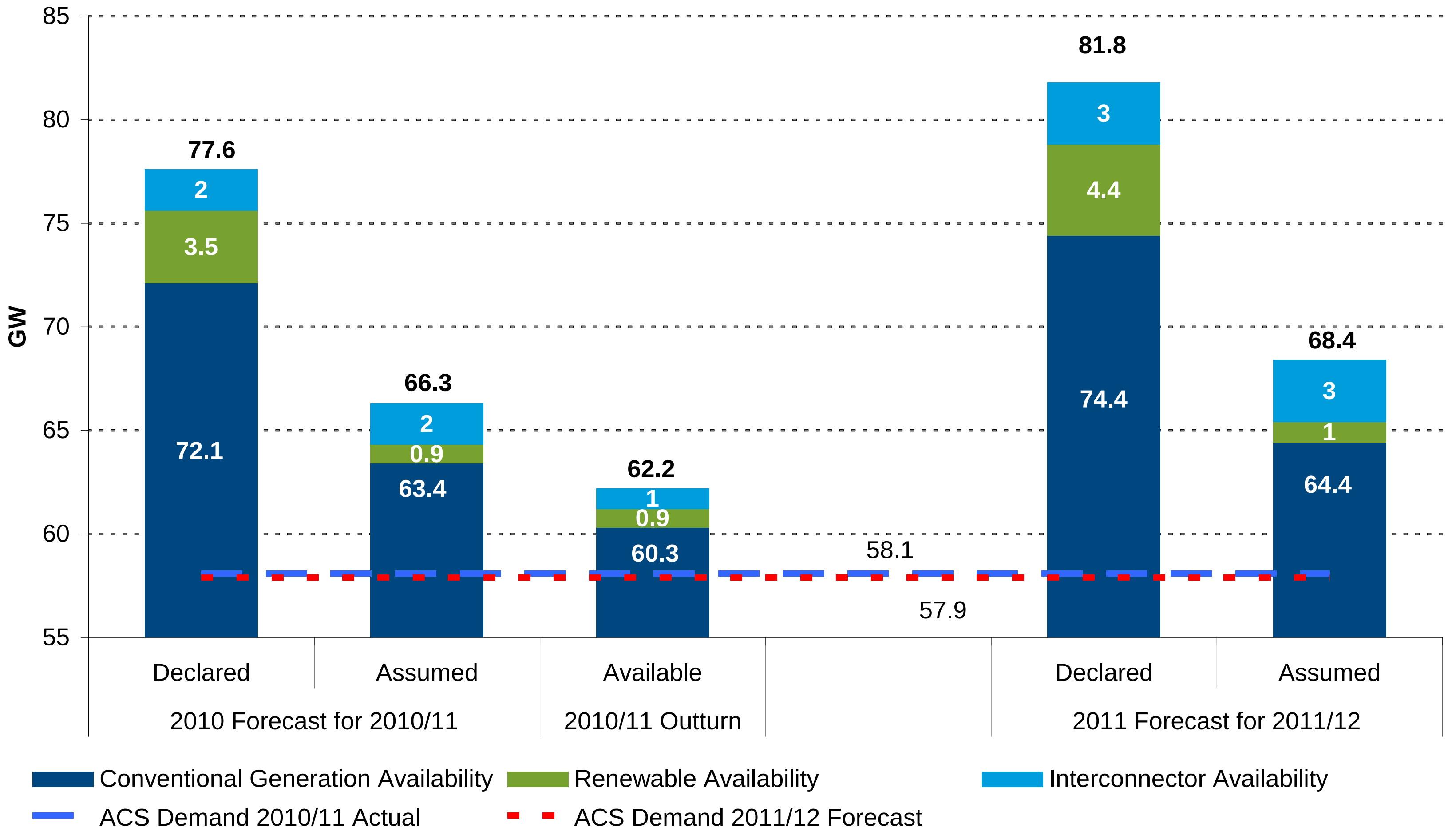
nationalgrid

THE POWER OF ACTION

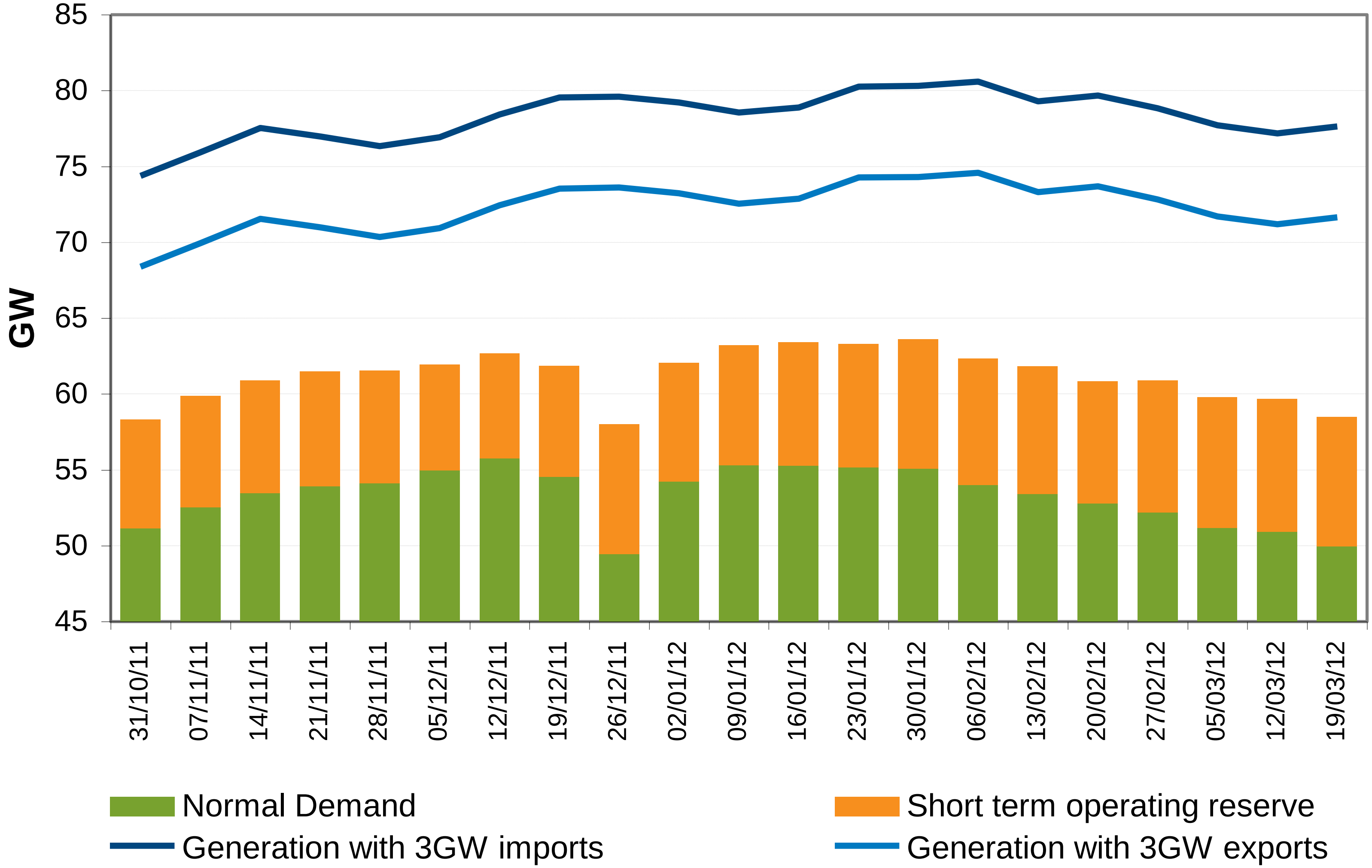
# Electricity - Assumed Availability

| Power Station Type | Full Metered Capacity (GW) | | Assumed Availability | | Assumed Availability (GW) | |
|---|---|---|---|---|---|---|
| Nuclear | 9.8 | ↓ | 83% | ↑ | 8.1 | ↑ |
| Interconnectors | 3.0 | ↑ | 100% | — | 3.0 | ↑ |
| Hydro generation | 1.0 | — | 70% | ↑ | 0.7 | ↑ |
| Wind generation | 3.4 | ↑ | 8% | ↓ | 0.3 | — |
| Coal | 28.0 | ↓ | 86% | ↓ | 24.1 | ↓ |
| Oil | 3.4 | ↑ | 70% | ↓ | 2.4 | ↑ |
| Pumped storage | 2.7 | — | 96% | — | 2.7 | — |
| OCGT | 1.2 | — | 90% | ↑ | 1.1 | ↑ |
| CCGT | 29.3 | ↑ | 89% | — | 26 | ↑ |
| **Total** | **81.7** | ↑ | | | **68** | ↑ |
| **Overall availability** | | | **84%** | ↓ | | |

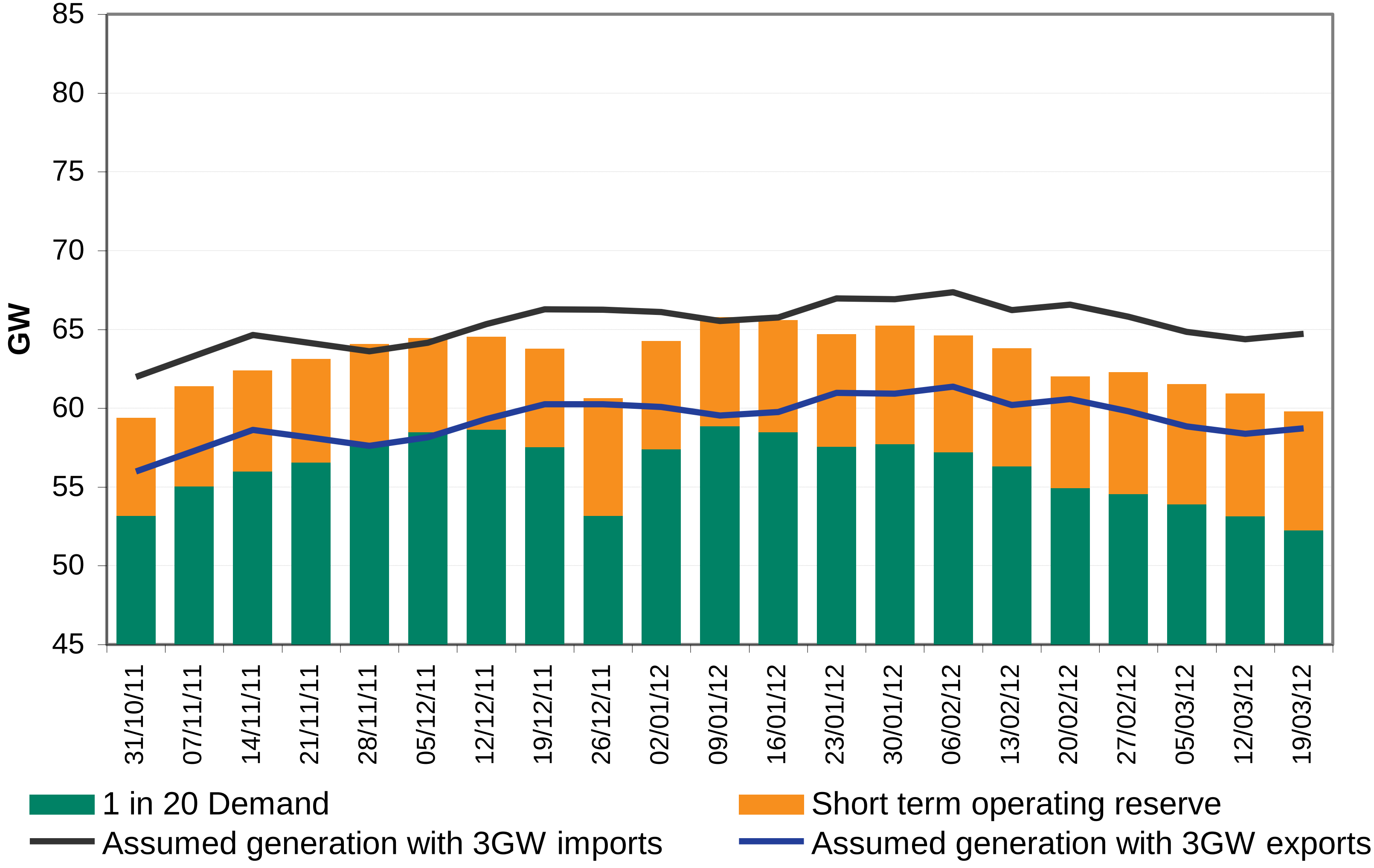
# Electricity – Generation and Demand Forecasts and Outturns



# Electricity - Normal Demand and Notified Generation Availability



# Electricity - 1 in 20 Demand and Assumed Generation Availability



# Winter Outlook 2011/12 - Summary

- **Gas**
  - Forward winter fuel prices strongly favour coal to be base load generation. This provides a potential upside to gas demand
  - Weather corrected gas demand forecast to be similar to last winter, though peak demand forecast is lower due to power generation assumptions
  - Forecast non storage supplies are similar to last winter with lower UKCS being offset by more LNG, albeit LNG supplies are subject to some reservations
  - Storage levels similar to last winter, but should increase within winter when new facilities are commissioned
- **Electricity**
  - Average Cold Spell Demand forecast is very close to last year
  - Notified and Assumed Generation availability is close to last years figures
  - High likelihood of 3 GW of exports to the continent could lead to low margins during a 1 in 20 demand period