

Winter Outlook 2014 / 15



Ofgem Winter Outlook Seminar
28th October 2014
Cordi O'Hara – Market Operation Director

Energy is headline news...



EDF Energy shuts three UK nuclear reactors after fault found



Ukraine crisis: Russia halts gas supplies to Kiev



Didcot B power station fire:
Half of site out of action



Fire hits Ferrybridge power station

Fifteen fire crews attend blaze at power station in West Yorkshire operated by energy giant SSE



National Grid to contract for new balancing services

Our stakeholders' views underpin the Winter Outlook Report



Enhanced and broadened stakeholder participation

Stakeholder feedback has driven the improvements in analysis and content of report

Enhanced security of supply analysis

Easier to understand with more summaries and simpler explanation

We will continue to develop the Winter Outlook Report based on stakeholder feedback...we want to hear from you!

Gas Outlook



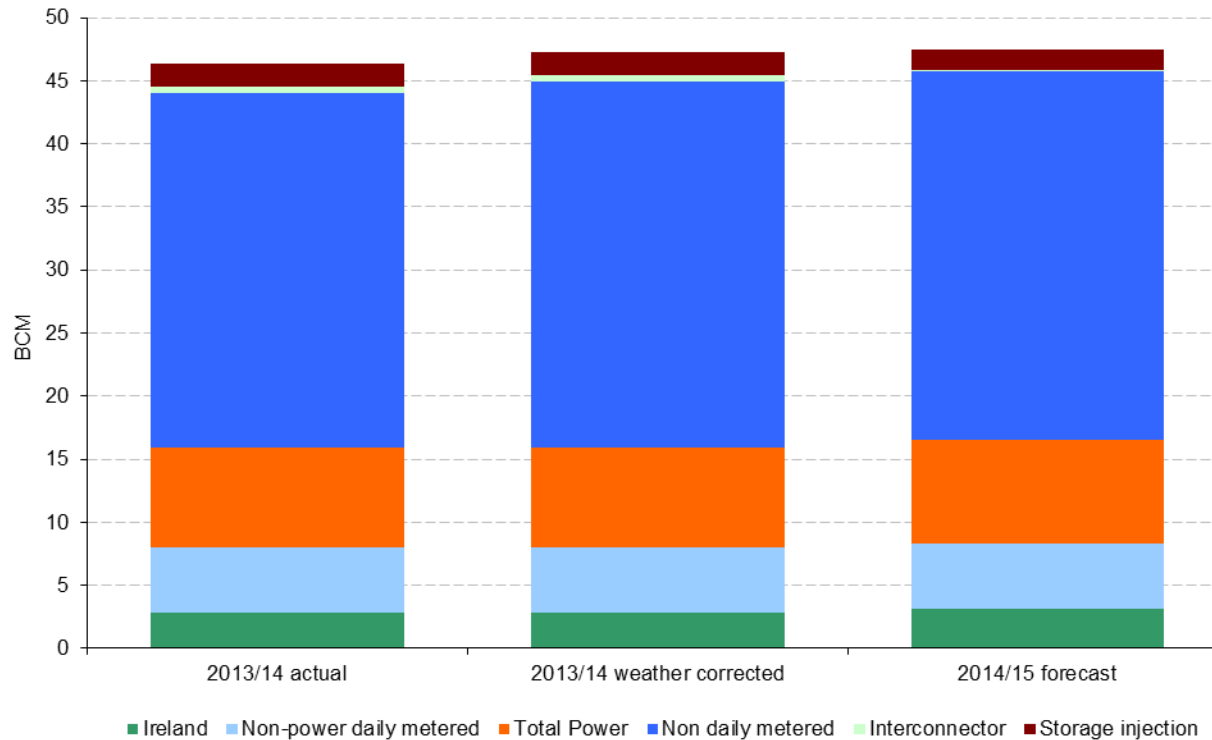
Secure gas supplies under normal conditions...

Gas market is well supplied and able to cover any cold spells.

Gas supplies, storage and network capacity well in excess of maximum expected demand.

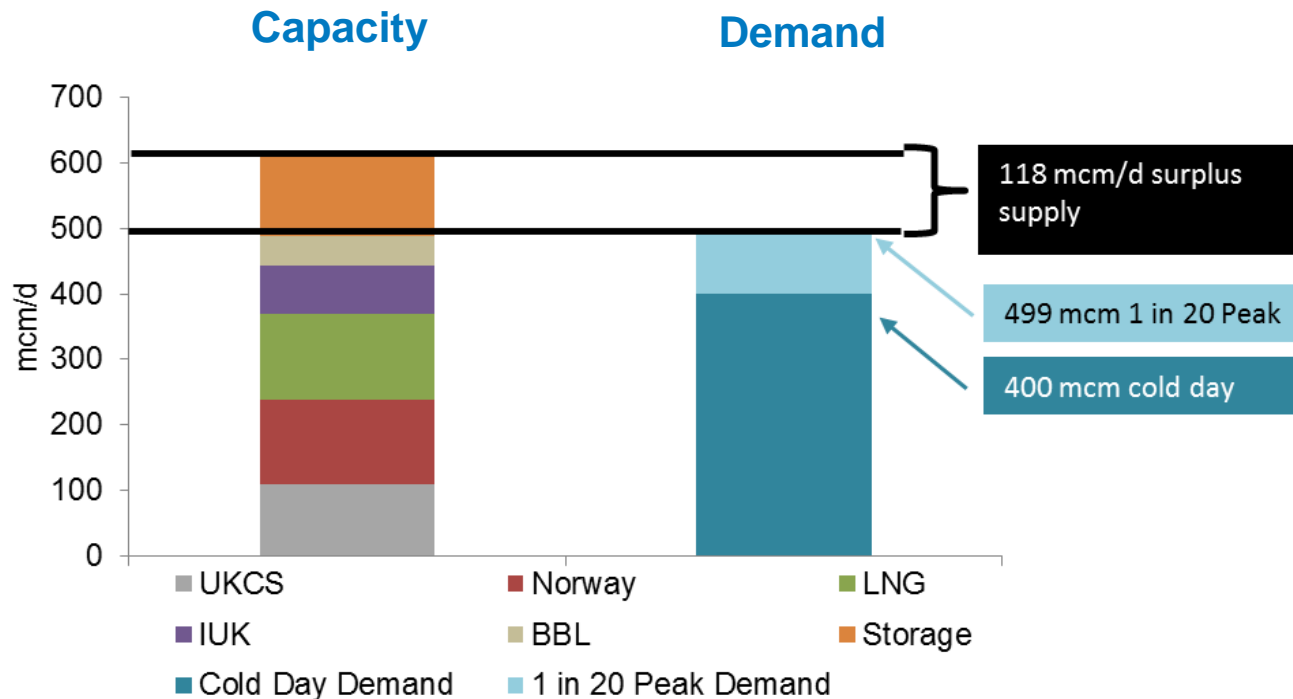
Supply interruptions from Russia pose a low risk to UK energy security.

Winter gas demand expected to be similar to last year



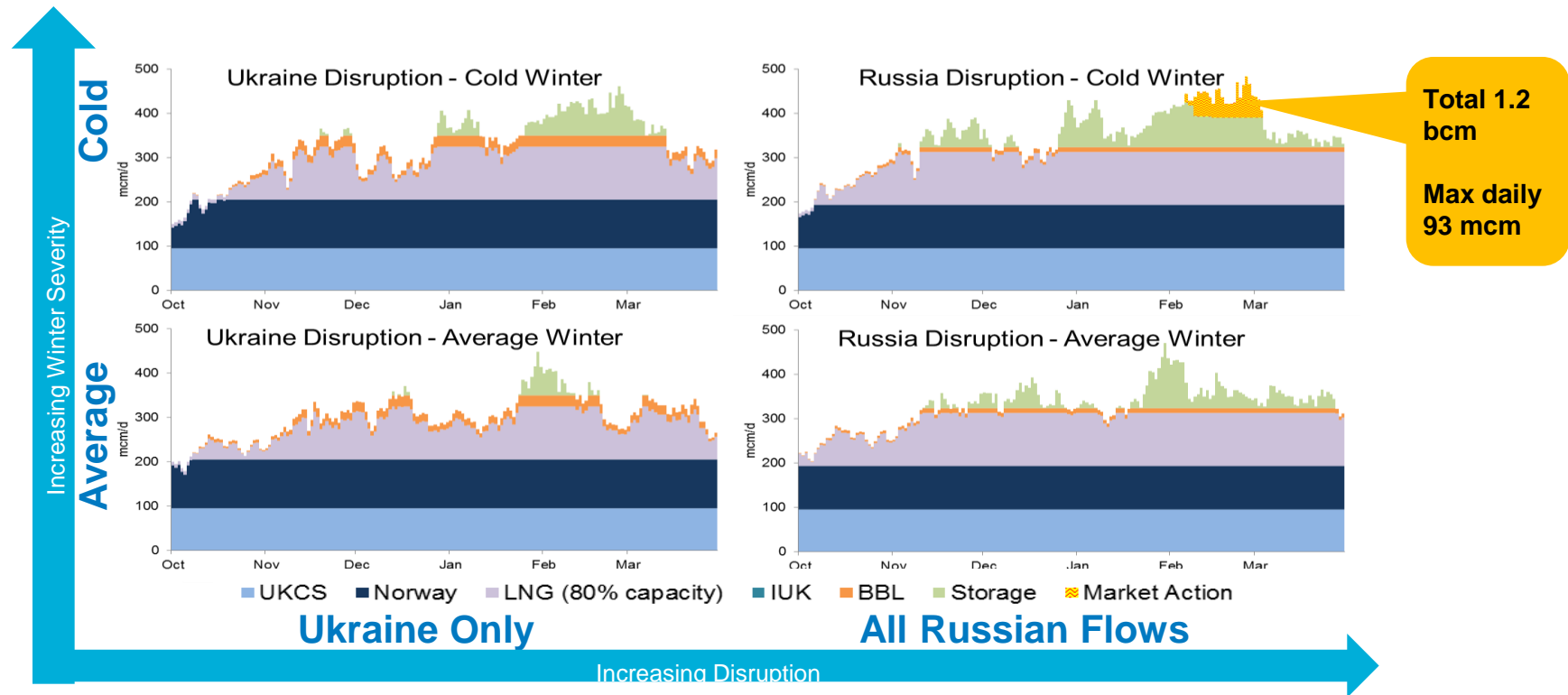
- Non Daily Metered (NDM), Daily Metered (DM) and Industrial to remain flat.
- Small increase due to expected rise in demand from power generation.

There is sufficient capacity and diversity of supply to meet 1 in 20 peak conditions



- Highest potential demand is 499 mcm/d at 1 in 20 conditions.
- Potential supply, including storage, of 617 mcm/d.
- This allows significant flexibility for gas to come from either the continent or LNG.

Russia/Ukraine tensions pose a low risk to UK gas supply



- Stress tests show that most scenarios can be accommodated as business as usual
- Only cold winter and full Russian supply disruption would require further market actions

Gas Summary

2014/15 demand slightly up on 2013/14

Diverse range of supply capacity, in excess of peak demand, subject to market forces.

Risk posed by any curtailment of Russian gas understood, the capacity is in place to receive alternative gas flows and the market is prepared.

Electricity outlook



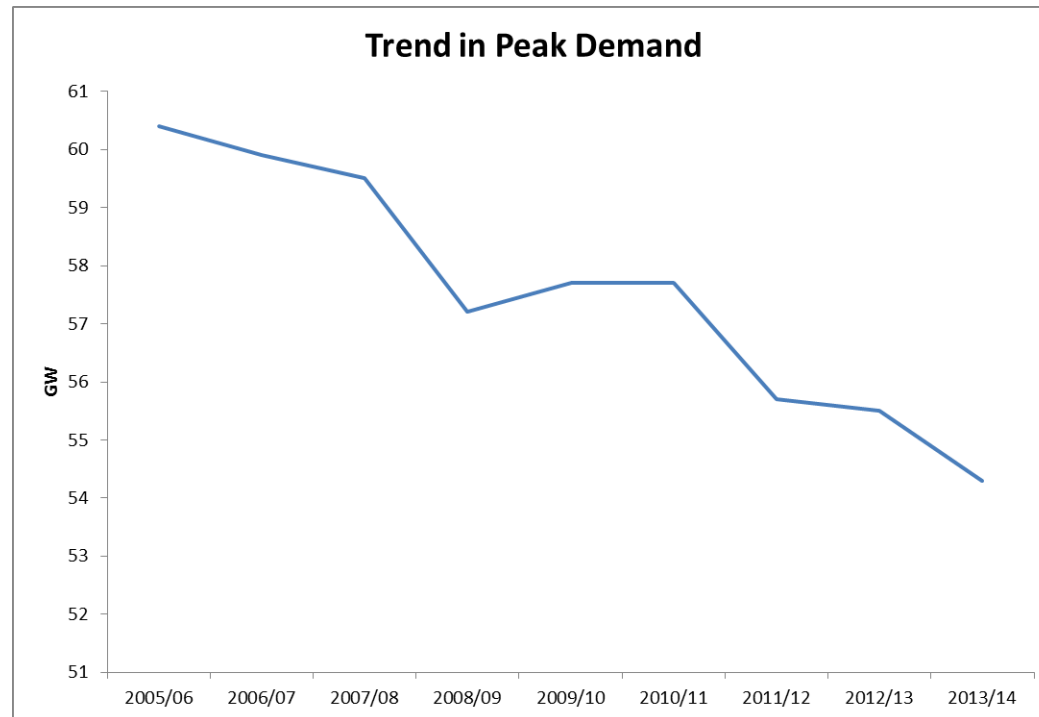
Electricity margins are expected to be tighter than last year, but we have the tools and services in place to balance the system

Recent generator capacity reductions make this year more challenging than last.

New balancing services will enable National Grid to manage tighter margins.

There is no room for complacency, but we have the right tools in place.

General trend in peak demand is downwards



| Demand Forecast (GW) | 2013/14 | 2014/15 |
|---------------------------------------|---------|---------|
| Average Cold Spell (ACS - Restricted) | 56.3 | 55.0 |

The Secretary of State has set a new Reliability Standard and method

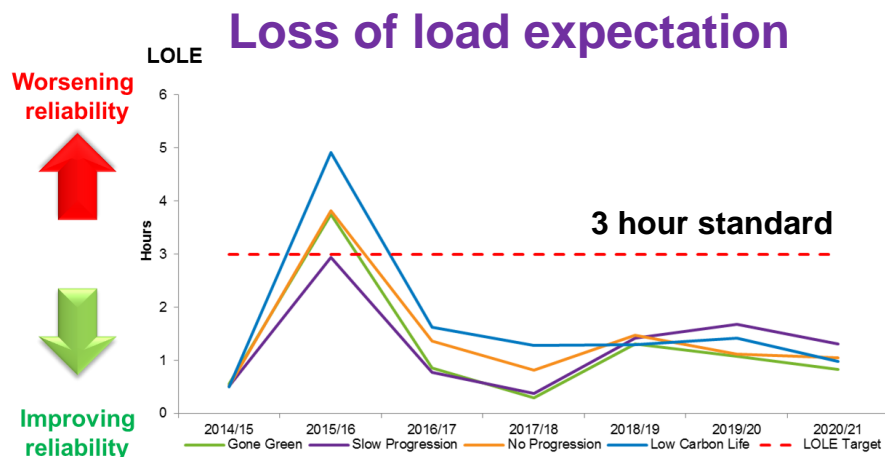
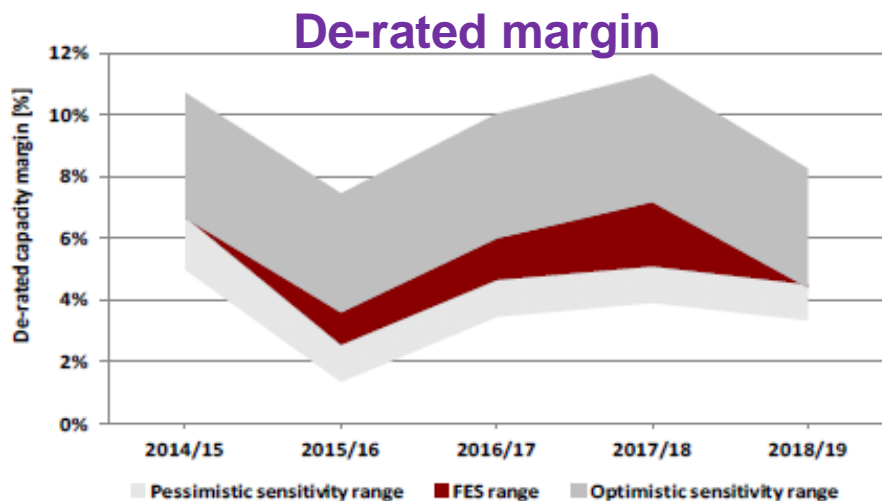
Loss of Load Expectation (LOLE)

- **Stochastic model for whole winter view, and multi year view.**
- **3 Hour Reliability Standard set by Secretary of State.**
- **It means on average how often we would have to use our reserves.**
- **Informs Capacity Assessment, EMR Capacity Mechanism and New Balancing Services.**

De-rated Margins (%)

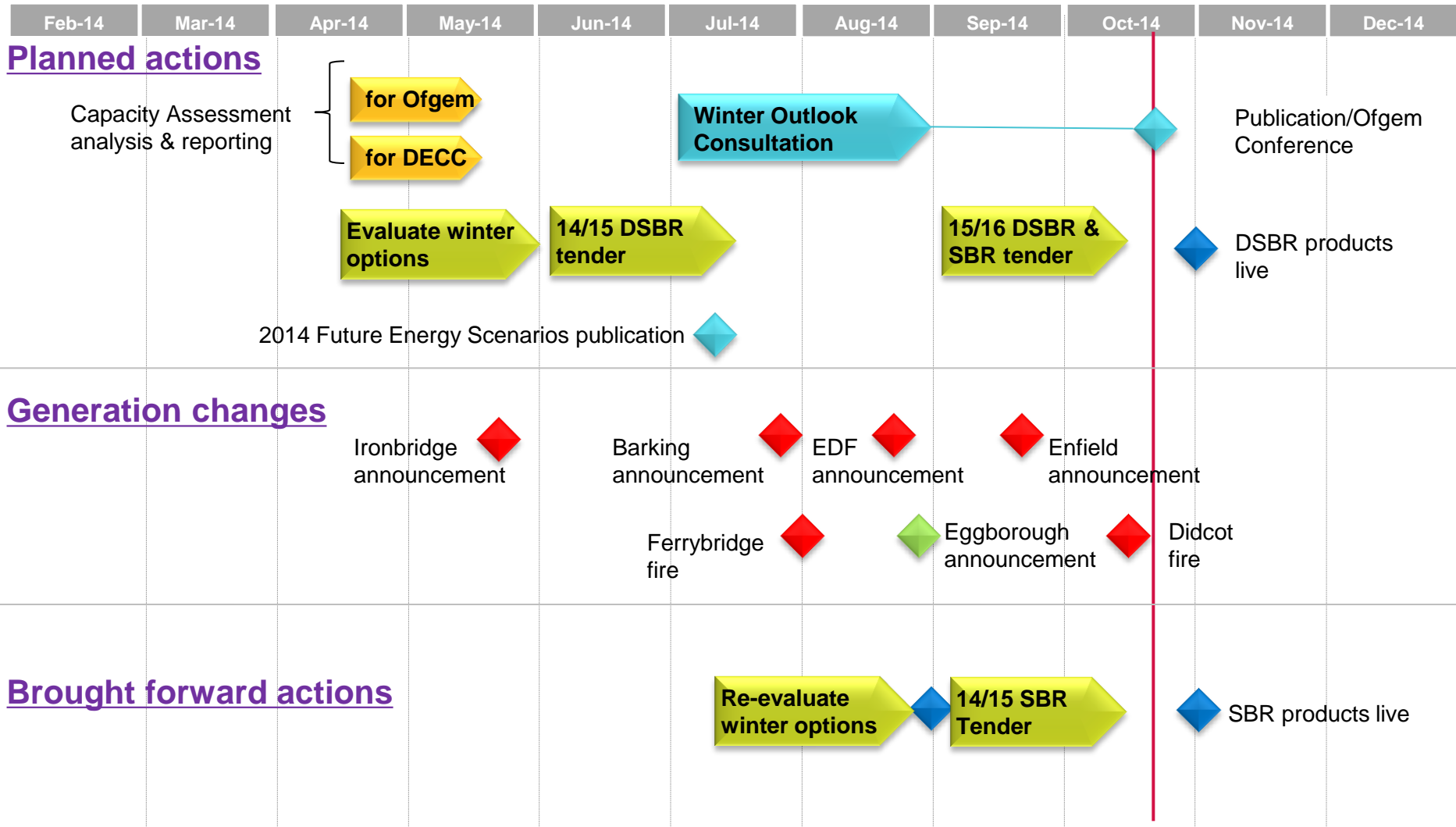
- **Operational measure for weekly assessment used within winter.**
- **More granular, near time.**
- **De-rates generation capacity to take into account breakdowns.**
- **Outages considered separately, based on supplied data.**

The June Electricity Capacity Assessment Report **nationalgrid** showed a range of potential margins, and loss of load within standard for this winter...



| Ofgem Scenario | 2014/15 De-Rated Margin (%) |
|----------------|-----------------------------|
| Optimistic | 8 - 11 |
| FES Range | 6.5 - 6.7 |
| Pessimistic | 4.2 - 5.4 |
| LOLE | 0.5 hours |

Since then the generation picture has evolved and we have responded by accelerating the deployment of Supplemental Balancing Reserve



New balancing services are now in place...

Demand-Side Balancing Reserve

- Tender in July
- 431 sites participating

Supplemental Balancing Reserve

- Tender in Sept
- 3 power stations offered contracts

1100MW of additional reserve capacity will be available as a last resort to meet tough winter peak conditions

De-rated margin for the whole winter...

| | |
|---|---------|
| Total Generator Capacity | 71.1 GW |
| De-Rated Generator Availability | 58.2 GW |
| ACS Demand + reserve | 55.9 GW |
| De-Rated Winter Margin | 2.3 GW |
| De-Rated Winter Margin % | 4.1% |
| Loss of Load Expectation | 1.6hrs |
| Post DSBR/SBR De- Rated Winter Margin % | 6.1% |
| Post DSBR/SBR Loss of Load Expectation | 0.6hrs |

In addition to the new products, we have a range of operational tools to manage the system

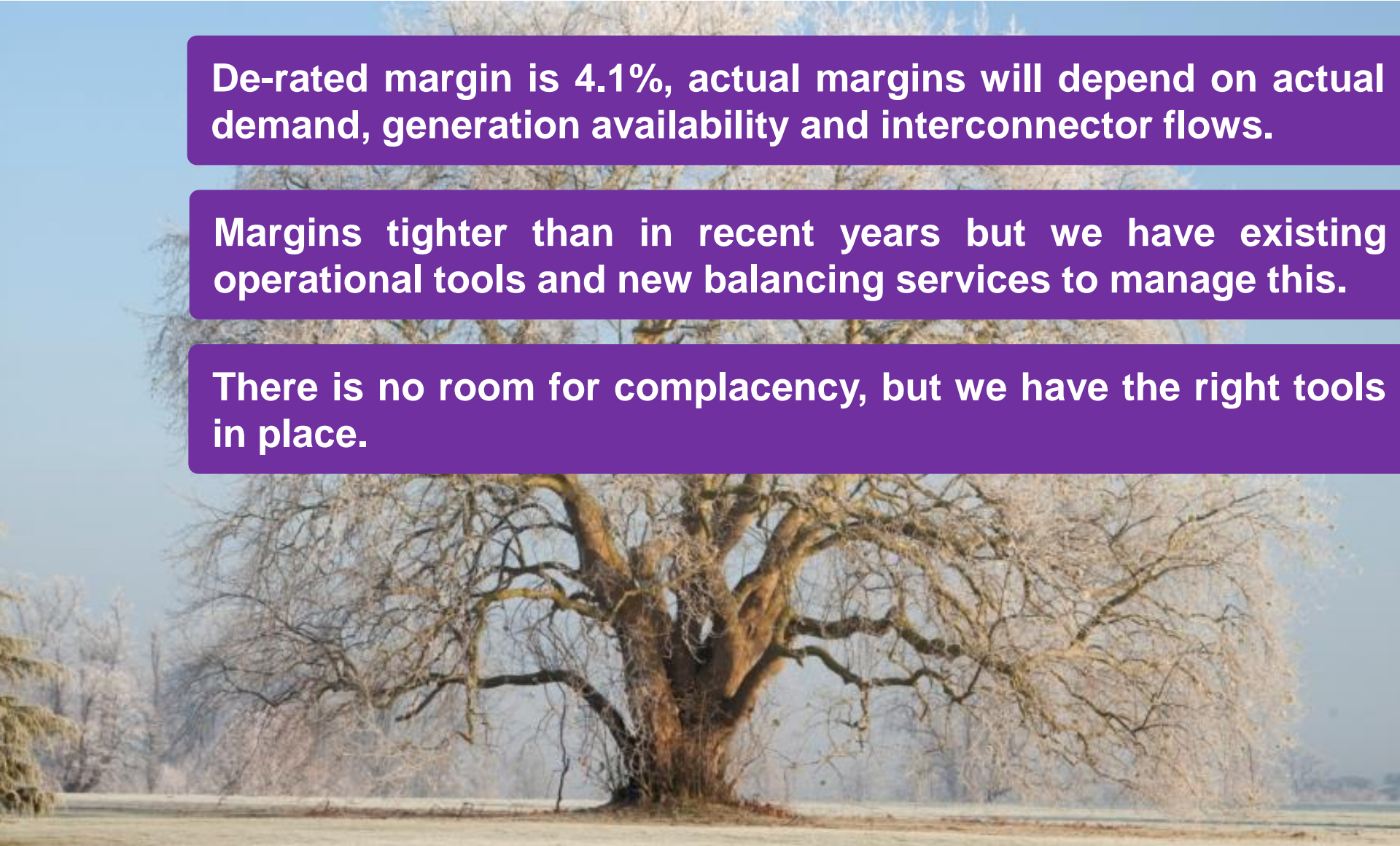
| | | |
|---|------------------------|-------------------------------------|
| 1 | Market Actions | Communication (NISMs) |
| | | Interconnector Trading |
| | | Market provision of capacity |
| | | Non BM STOR |
| 2 | New Balancing Services | DSBR and SBR |
| 3 | Emergency Actions | Voltage Reduction |
| | | Max gen service |
| | | Interconnector emergency assistance |
| | | Demand reduction |

Electricity Summary

De-rated margin is 4.1%, actual margins will depend on actual demand, generation availability and interconnector flows.

Margins tighter than in recent years but we have existing operational tools and new balancing services to manage this.

There is no room for complacency, but we have the right tools in place.



Questions

