



Department for
Business, Energy
& Industrial Strategy

OFFICIAL

GB SECURITY OF ELECTRICITY SUPPLY

Winter 2017/18





Winter Outlook 2017/18

Forecast Peak Demand
= **62.3GW** (including
assumed 900MW operating
reserve)

Total maximum technical
generation capability:
102.2GW

De-rated generation
capacity:
66.1GW

De-rated margin of 6.2GW

= 10.3% (Underlying
demand)
= 11.5% (Transmission
demand)

Includes. 2.4GW
interconnector net imports

Equates to loss of load
expectation (LOLE) of 0.01hr
per year (against a standard
of 3hrs per year)



Comparison with 2016/17

Margins

- 17/18 de-rated margin = 11.5% (transmission demand basis)
- 16/17 de-rated margin = 6.6%

Loss of Load Expectation (LOLE) – standard = 3hrs per year

- 17/18 = 0.01hr per year
- 16/17 = 0.5hr per year



Capacity Market

- **2017/18 is first delivery year of the Capacity Market**
- **Bulk of capacity secured up to 2020/21 so far (auction for 2021/22 takes place in Feb)**
- Capacity Market provides regular payments to capacity providers in return for being available to produce energy (or reduce demand) when the system is tight
- Capacity secured through auctions held 4 years and 1 year ahead of delivery
- Penalties apply for failure to deliver
- Forecasts based purely on the level of capacity secured through the CM auction give a margin of 6.6% (TD basis), similar to the last two winters

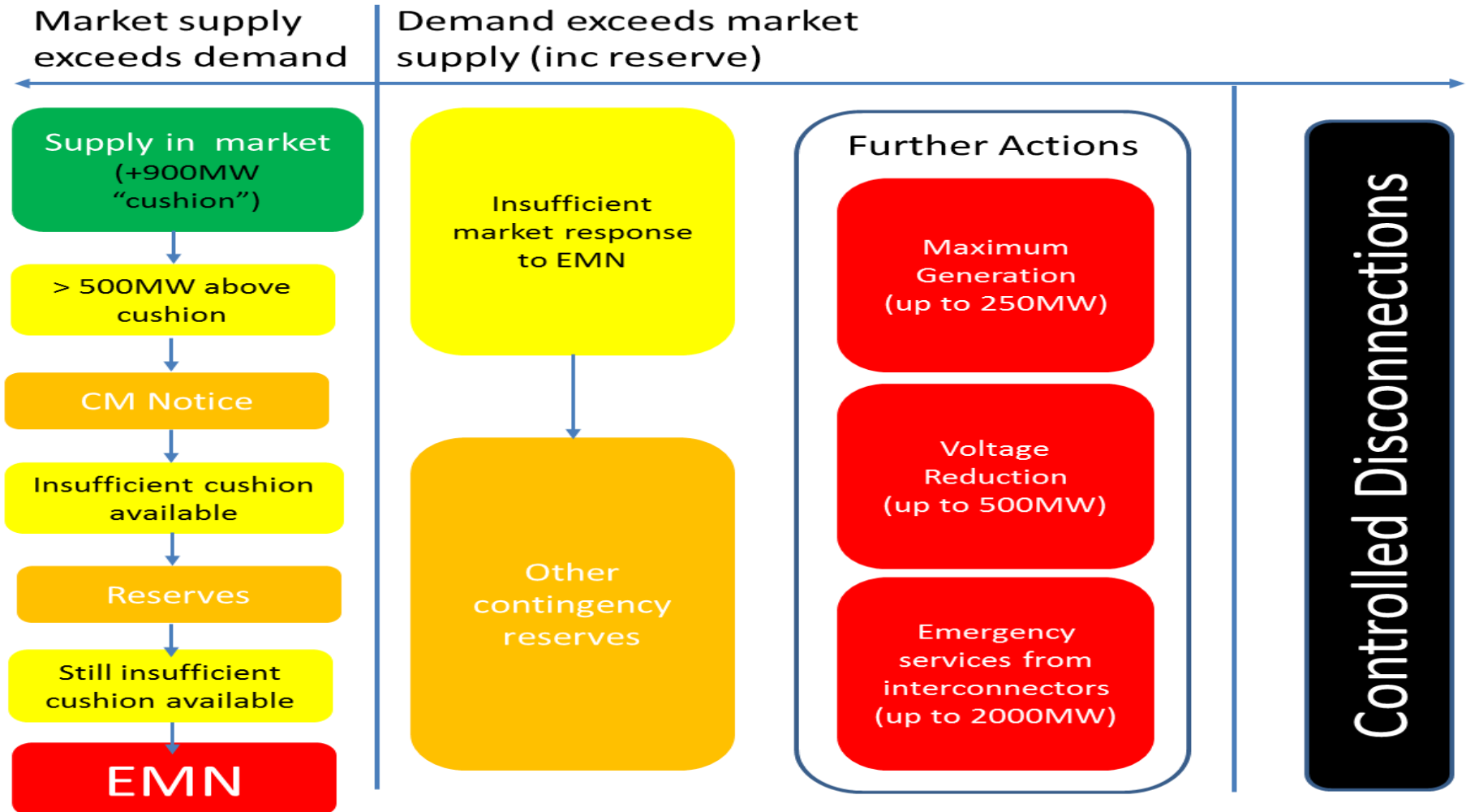


National Grid Tools

- **Capacity Market Notices (CMN)** – Automatic notice to the market (especially CM participants) to be alert to the potential for system notifications. Issued four hours ahead of time when margin is forecast to drop to 500 MW or less above operational margin. *Not a call to bring forward additional capacity.*
- **Reserves** – Range of small scale reserves (e.g. Short Term Operating Reserve) that can be utilised in certain circumstances.
- **Electricity Margin Notice (EMN)** – Call for additional generation and demand turn-down to restore margins to operational margin levels of approx. Issued at NG discretion but rough trigger point approx. 500MW below the operational margin.
- **Voltage control** – Slight reduction in voltage output to “stretch” available capacity. Low impact on consumers.
- **Maximum Generation** – Short term instruction to generators to operate at maximum output.
- **Emergency interconnector assistance** – call for extra interconnector flows from continent (governed through bilateral agreements)
- **Controlled Disconnections**



Illustrative response process





So far this winter ...

- Electricity margins have been consistently adequate or better
- As a result there has been no requirement to use the Capacity Market (CM) reserve so far this winter