

## Summer Outlook 2018



Audrey Ramsay

# Summer Outlook Report 2018

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- Published 10 April on our website.
- Our view of the electricity and gas systems for the summer ahead.
- Analysis for full British Summer Time – April to October 2018.

## Electricity outlook

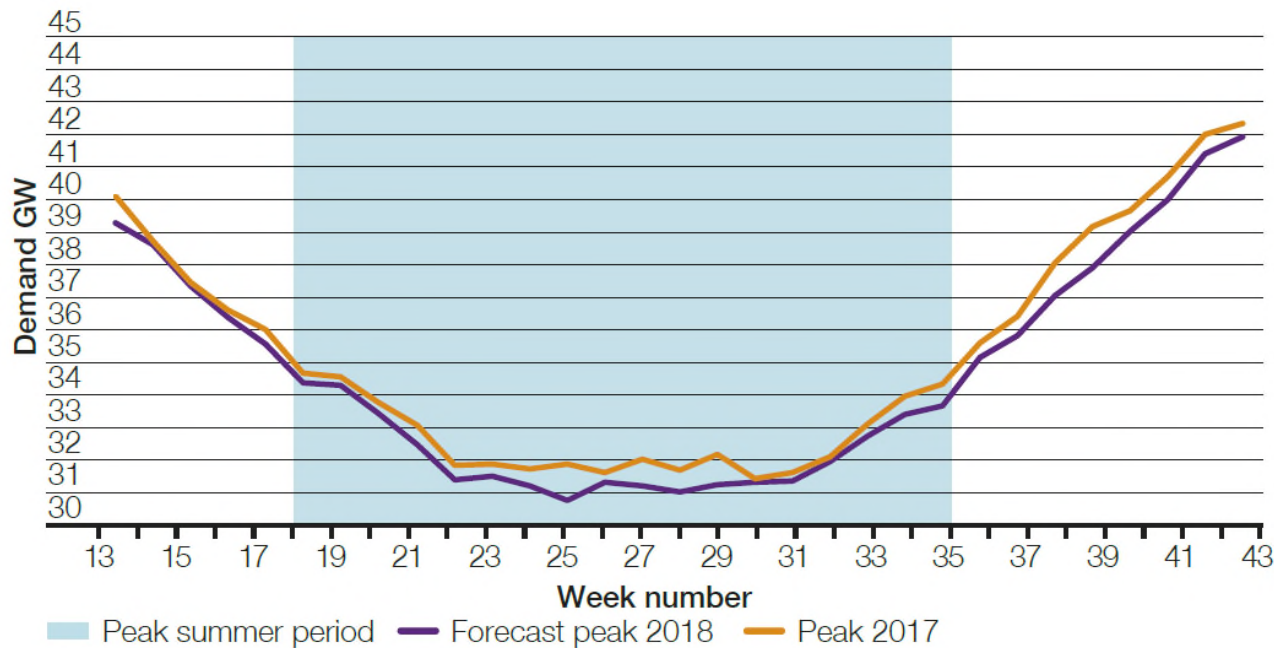


## 2018 Key messages

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- 1. Whilst underlying demand remains flat, we expect electricity demand on the transmission system to continue to fall.
- 2. Both peak and minimum transmission system demands are expected to be lower than last year's weather corrected output.
- 3. We may need to take more actions to curtail generation. We may also have to issue emergency instructions to inflexible generators to reduce output in order to balance the system.
- 4. Based on current data, we believe there will be sufficient generation and interconnector imports to meet demand throughout British Summer Time.

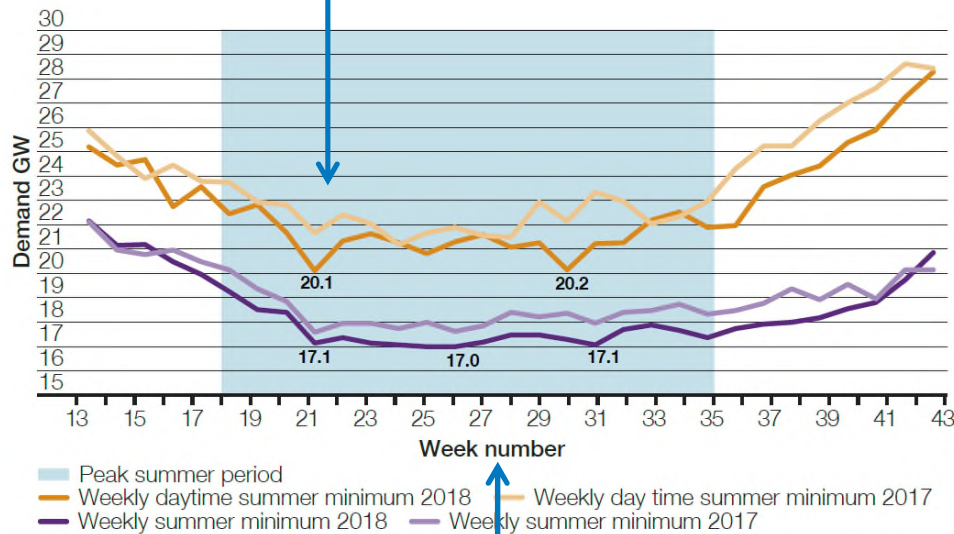
# 2018 peak demand continues to fall year on year



2018 summer peak demand forecast for the high summer is 700 MW lower at 33.7 GW compared with last years weather corrected outturn. This can be attributed to the increase in distribution connected generation and a reduction in underlying demand

# Summer minimum demand also continues to fall

Day time summer minimum demand 20.1 GW



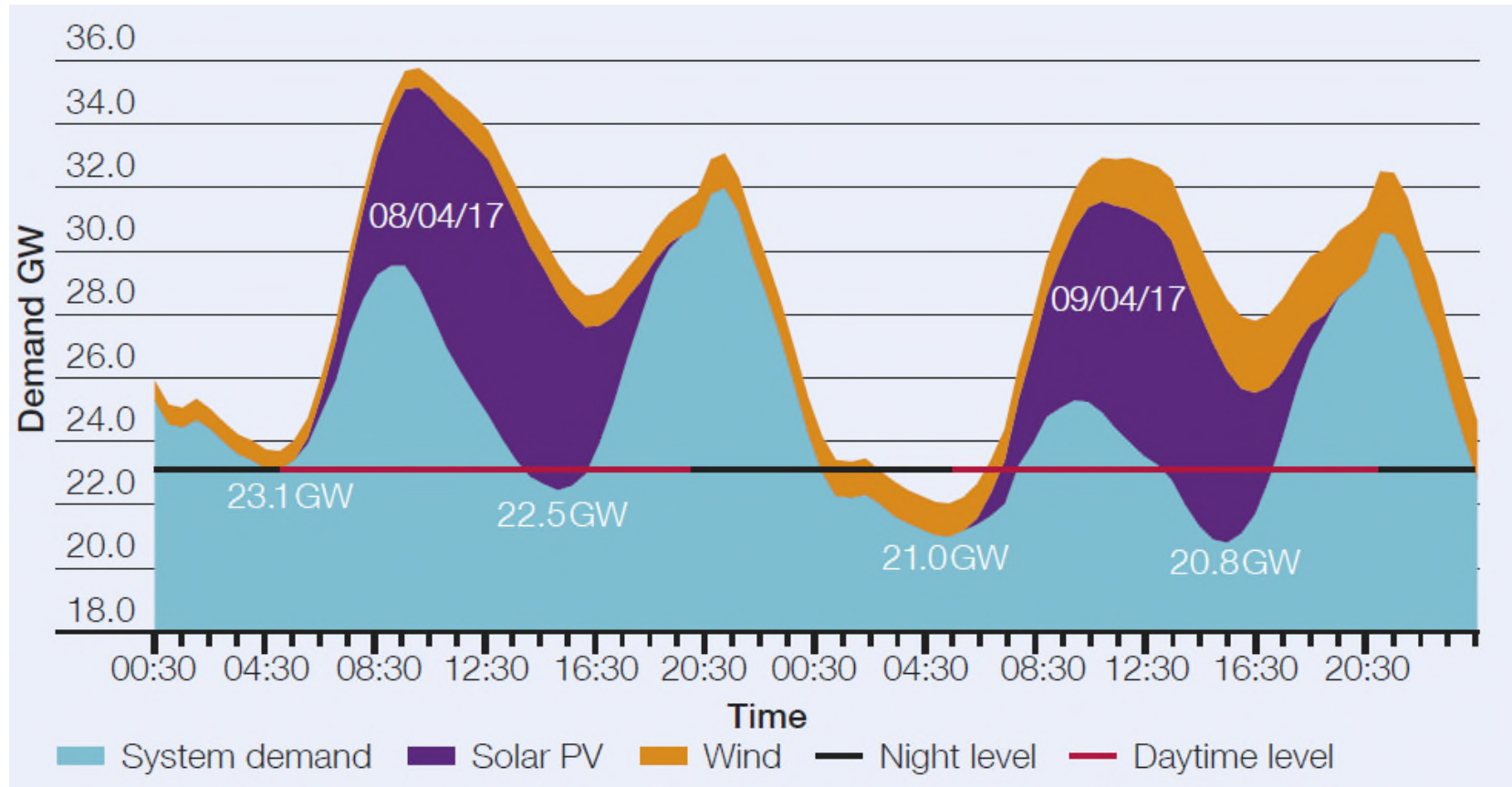
Summer minimum demand 17.0 GW

Embedded wind generation has increased by 1.6 GW to 5.7 GW. We anticipate this will be broadly flat this summer

Solar PV capacity continues to grow. Our 2- 52 week ahead forecast assumes 110 MW increase per month. Our long range forecast assumes around 14.7 GW of solar capacity by the end of March 2019

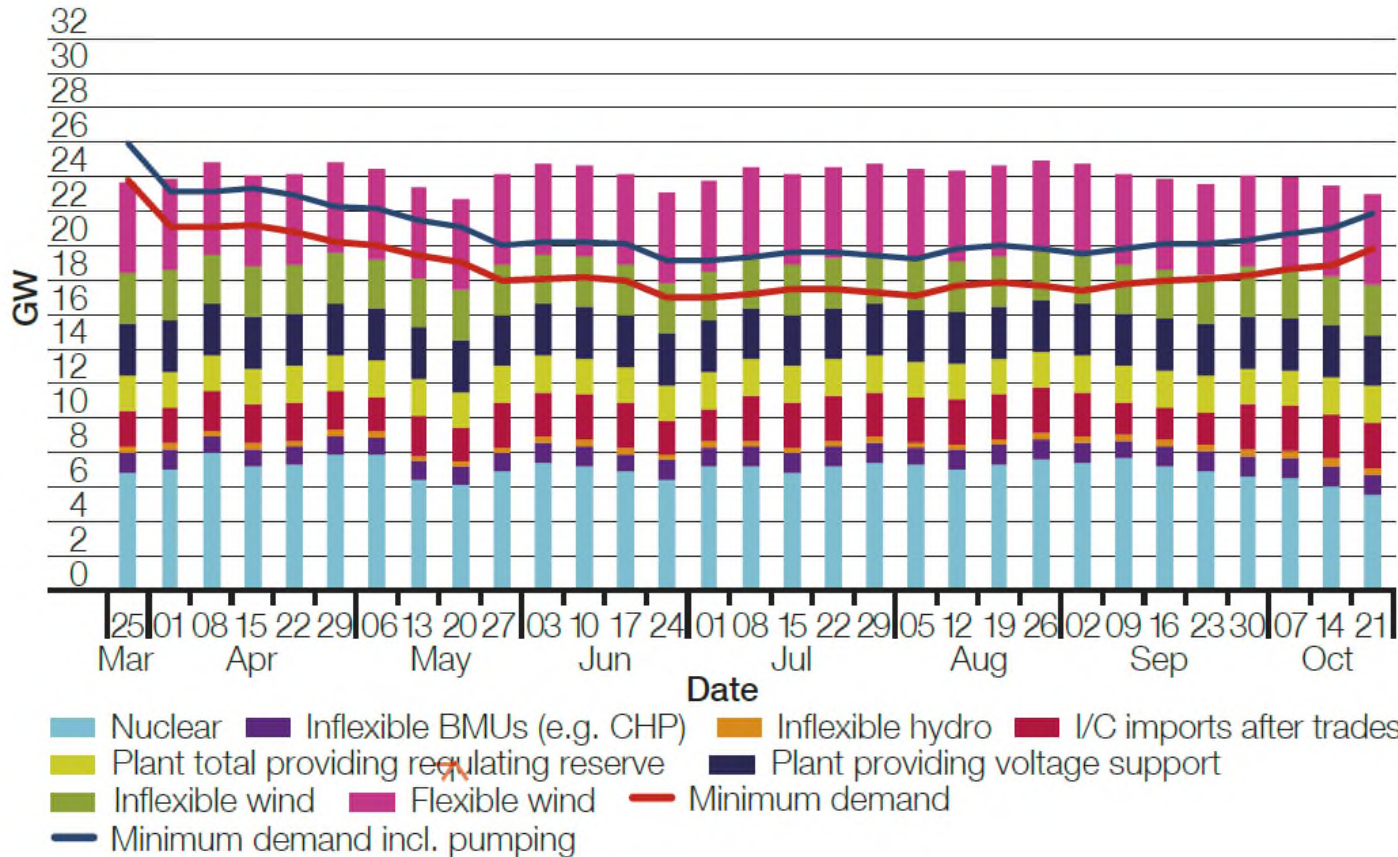
Distribution connected solar generation continues to reduce the demand seen on the transmission system

# Low daytime minimums





# Falling transmission demands can lead to actions

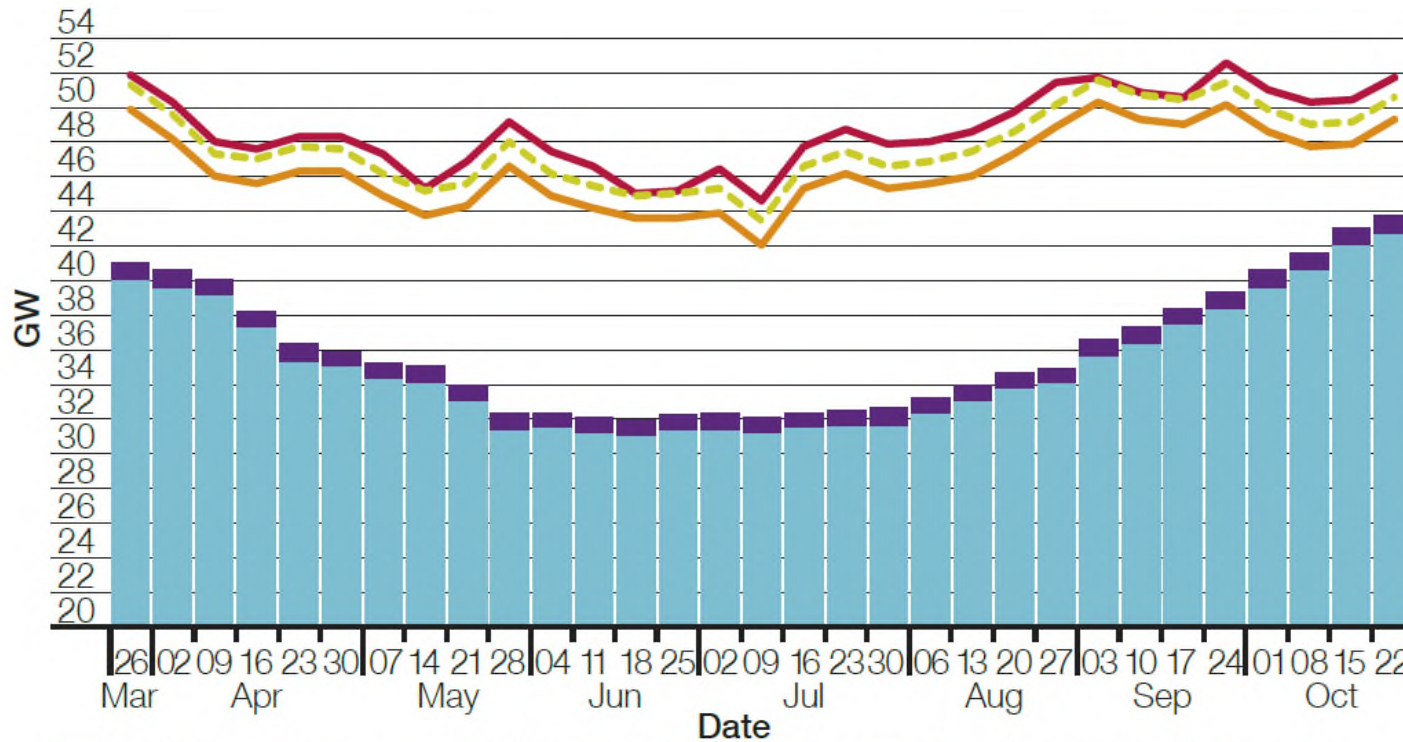


Flexible wind generation may need to be curtailed during periods of low demand

in order to balance low demand periods, we may also need to issue instructions to inflexible generators.



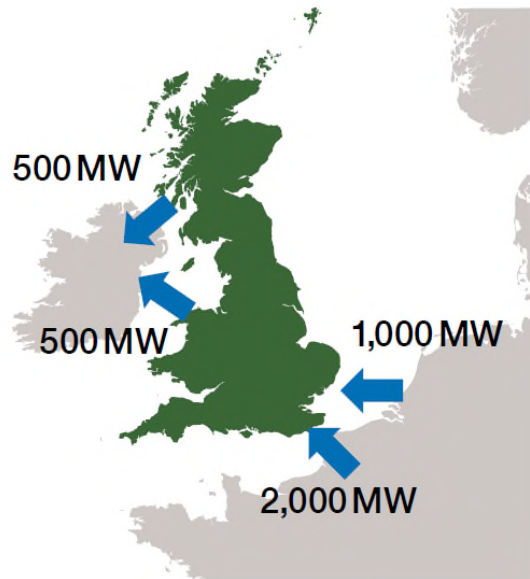
# Latest operational view



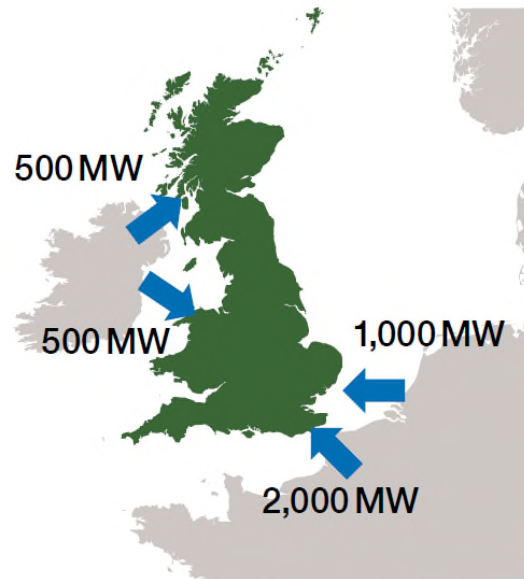
For the latest operational view, updated every Friday, visit [www.bmreports.com](http://www.bmreports.com)

- Max normal demand (including full Ireland export)
- Short term operating reserve
- Assumed generation with low interconnector imports
- Assumed generation with maximum interconnector imports
- - - Assumed generation with medium interconnector flows

# Forecast interconnector flows – peak and off-peak



Forecast flows on the interconnectors during peak times (7am to 7pm)



Forecast flows on the interconnectors during off peak times (7pm to 7am)

IFA currently on unplanned outage reducing capability to 1.5 GW until end April. Further 2 outages planned: 18-29 June and 03-14 September.

BritNed has 2 planned outages: 14-18 May and 17-21 September.

EWIC currently on unplanned outage reduced down to zero capability. Further planned outage 01-09 May reducing to zero capability

No outages planned for Moyle

## How we're responding

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- We're involved in a number of projects with external partners to improve monitoring and forecasting of solar PV generation.

- In particular we are working on:

- Improved accuracy of demand forecasting
- Real time estimates of national solar power output
- Weather forecasting accuracy
- Solar power forecasting and monitoring.



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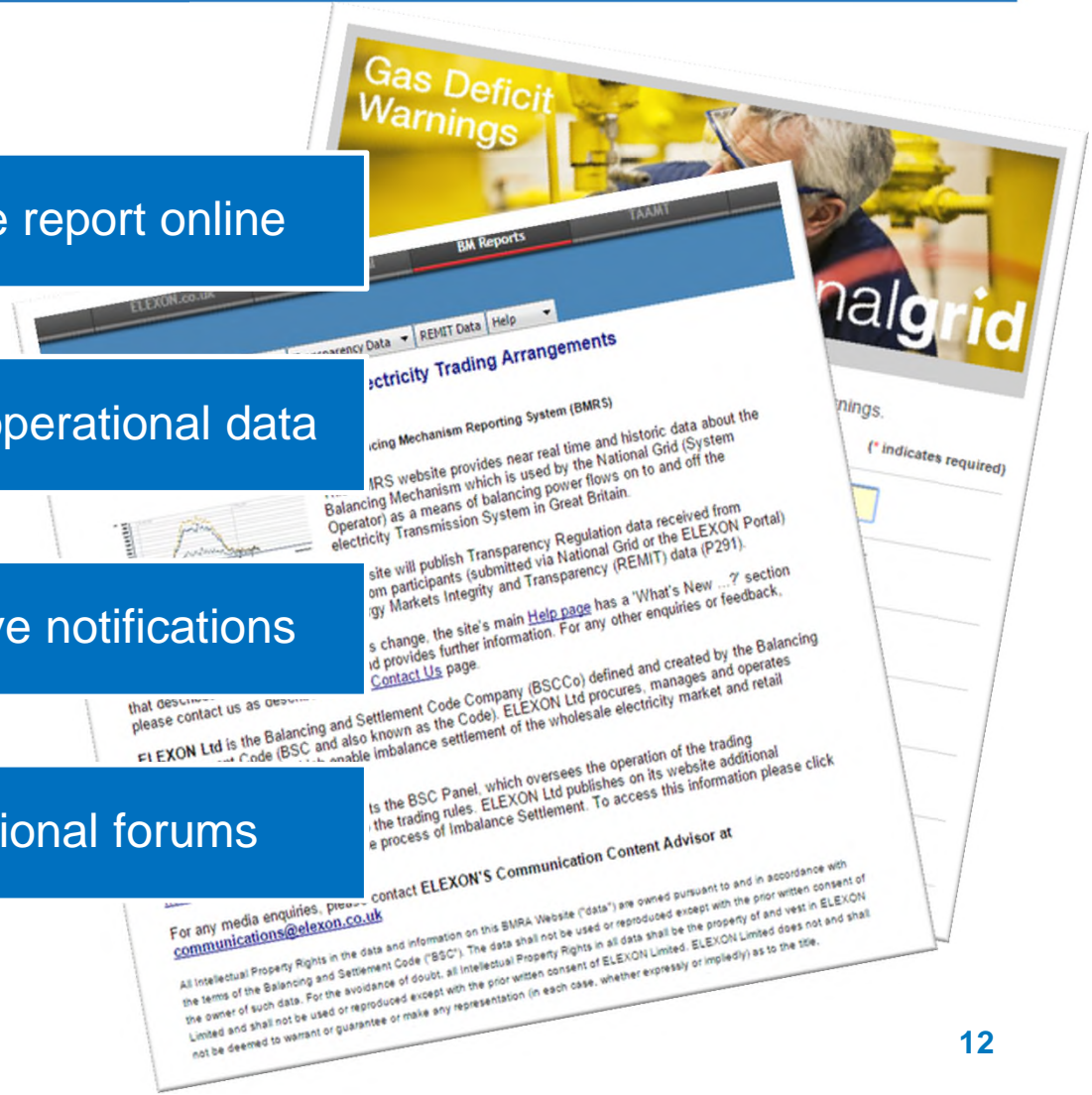
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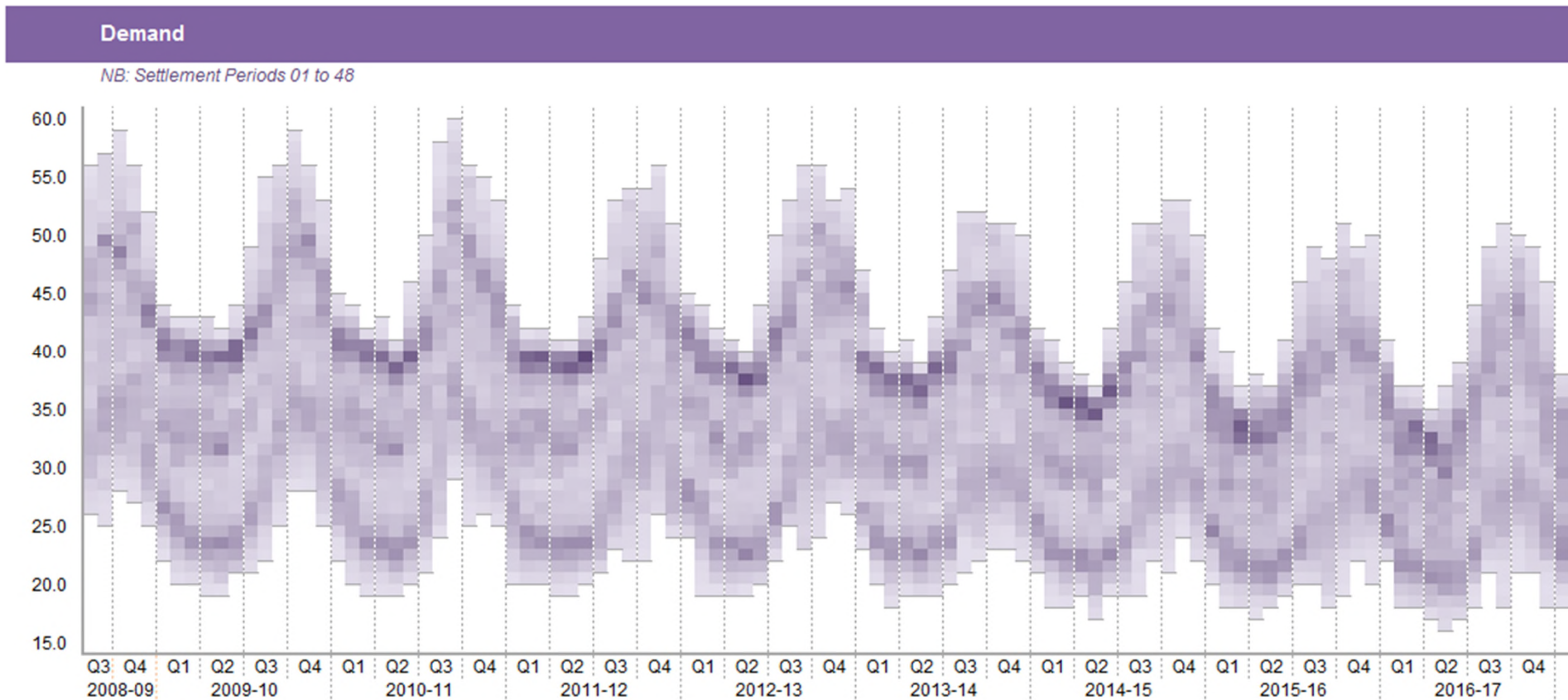
Contact us at [marketoutlook@nationalgrid.com](mailto:marketoutlook@nationalgrid.com)

# Summer 2018: Operational Outlook

Audrey Ramsay



# Evolution of demand

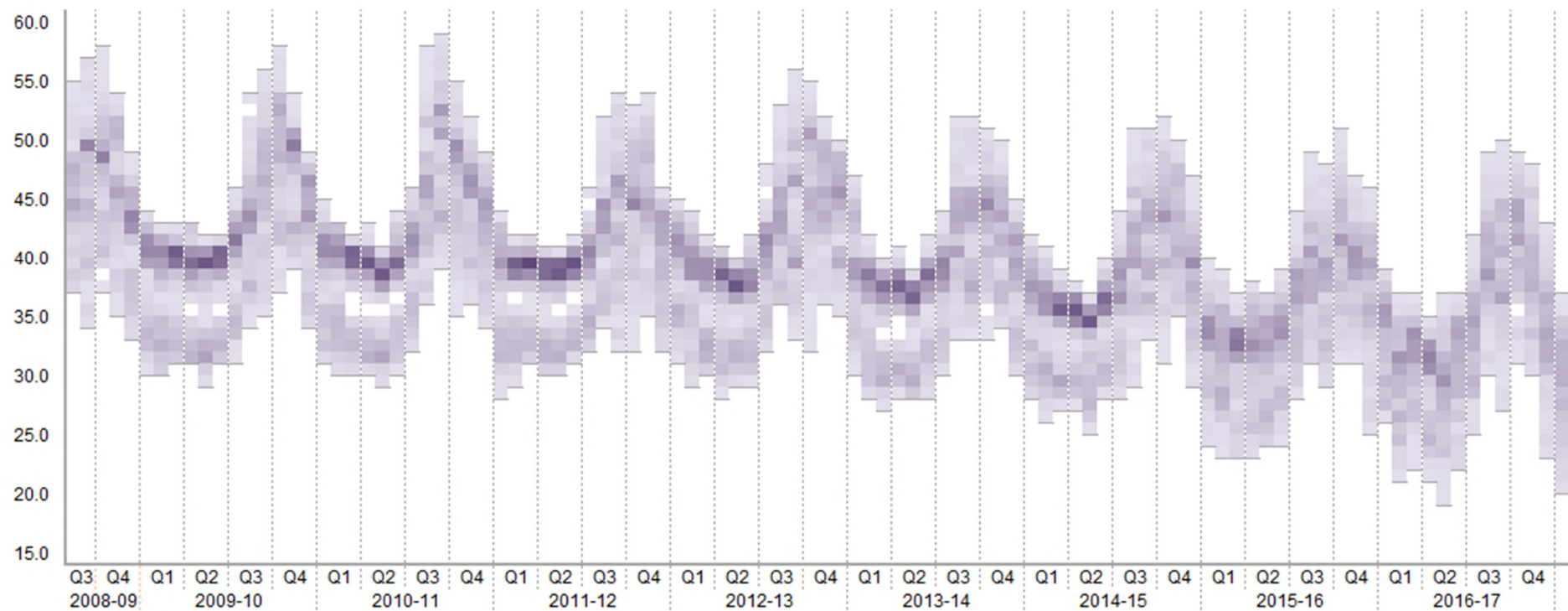




# Evolution of demand: afternoon period

## Demand

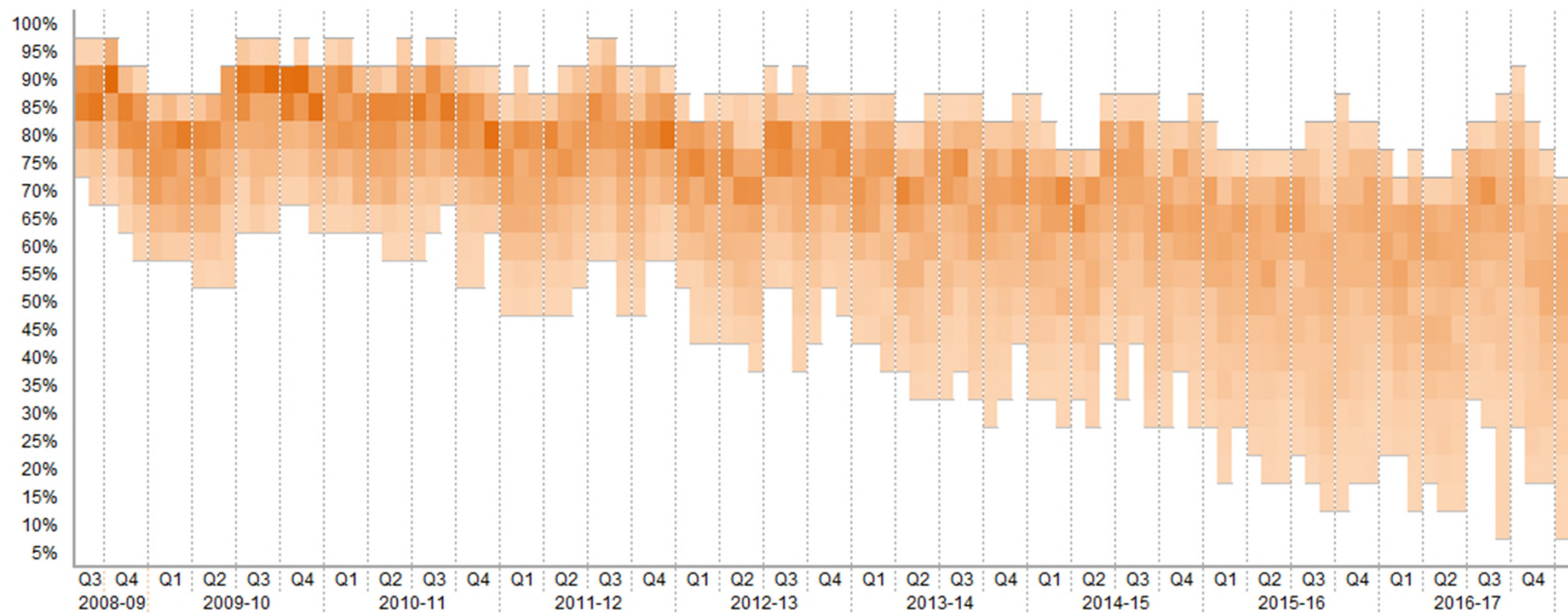
NB: Settlement Periods 23 to 34



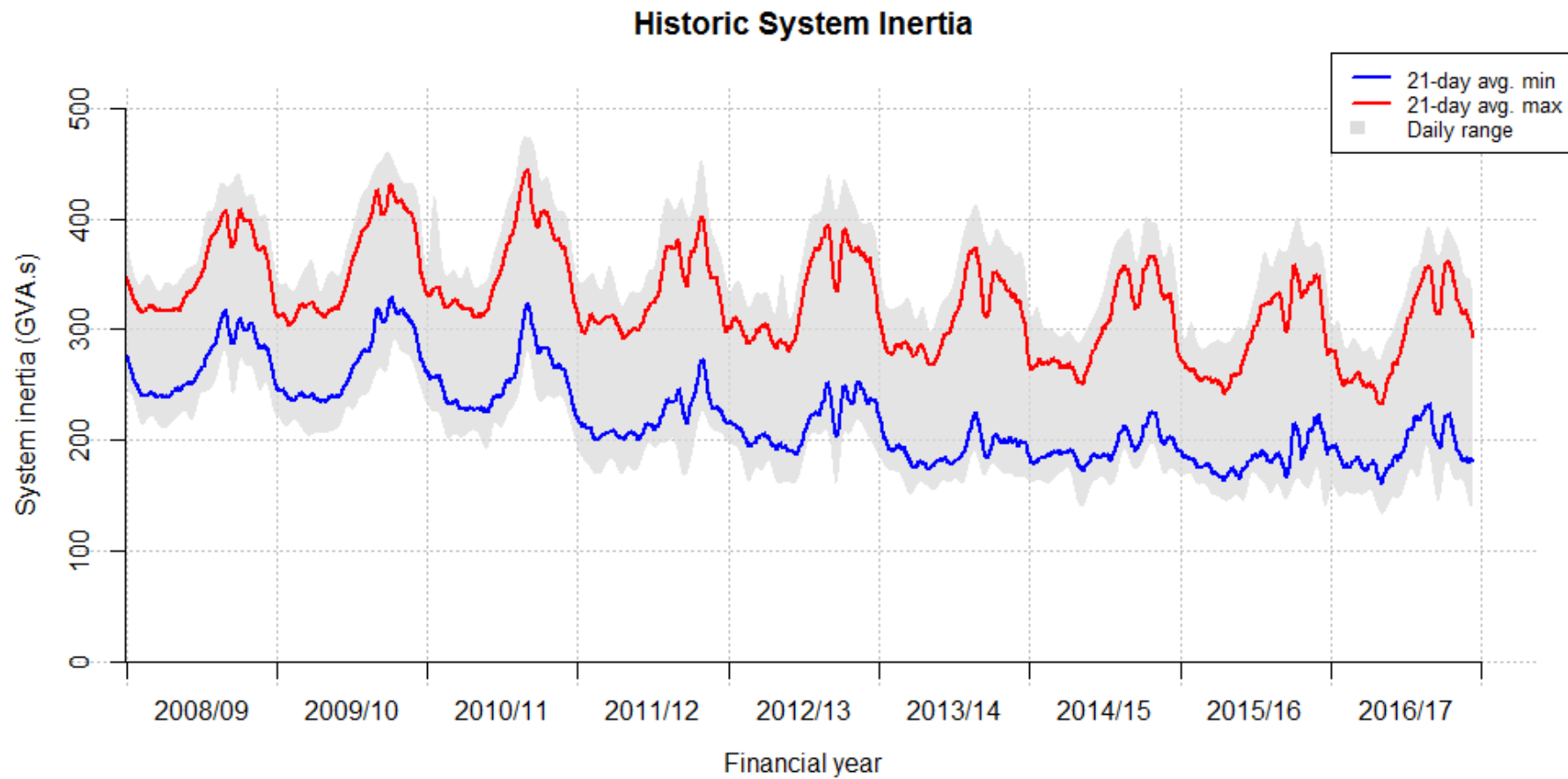
# Evolution of the generation mix

Proportion of National Demand met by { CCGT + Coal + Hydro + Oil + OCGT }

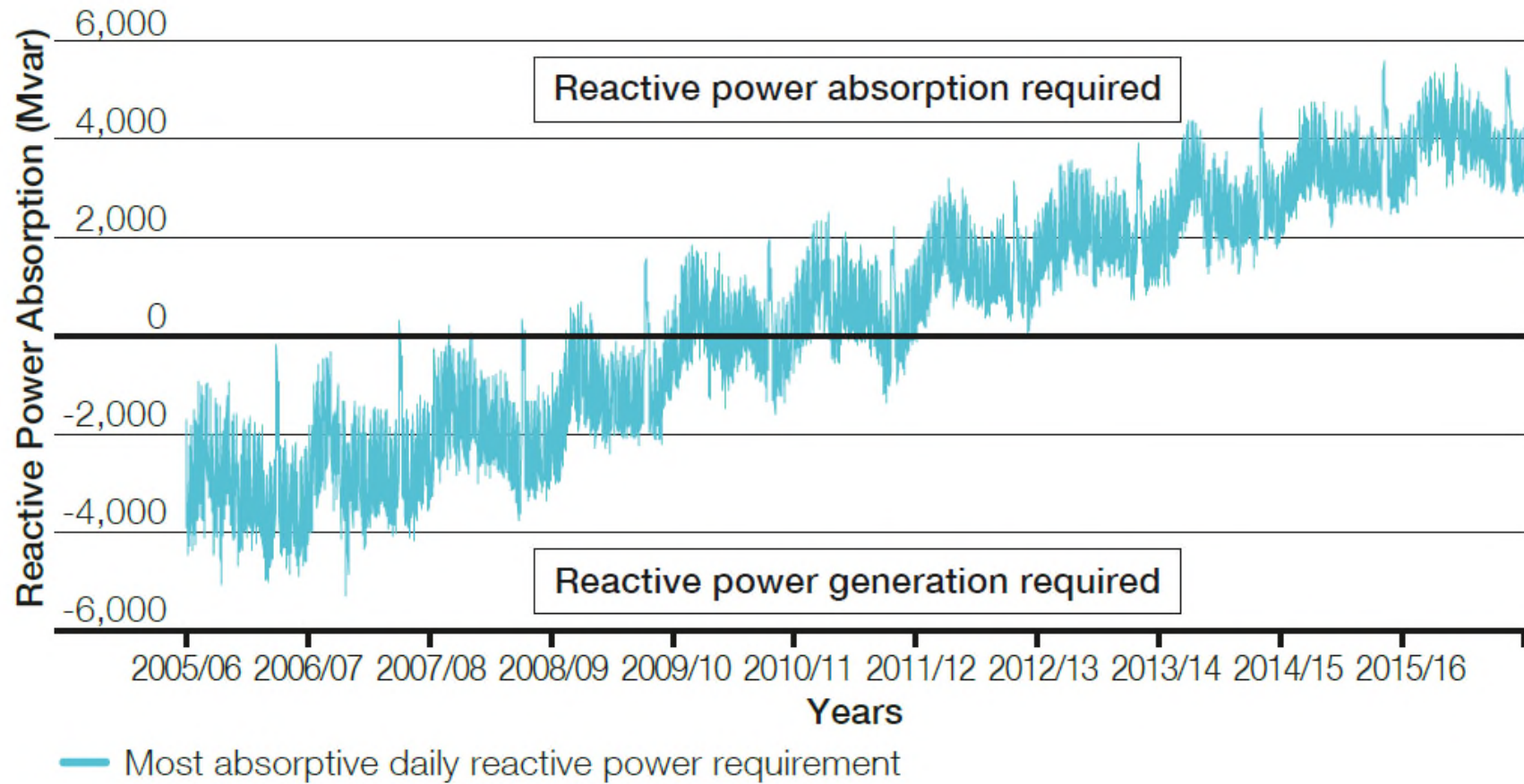
*NB: Settlement Periods 01 to 48, unwound for forward trades by NGET*



# Evolution of system inertia



## Evolution of MVar demand

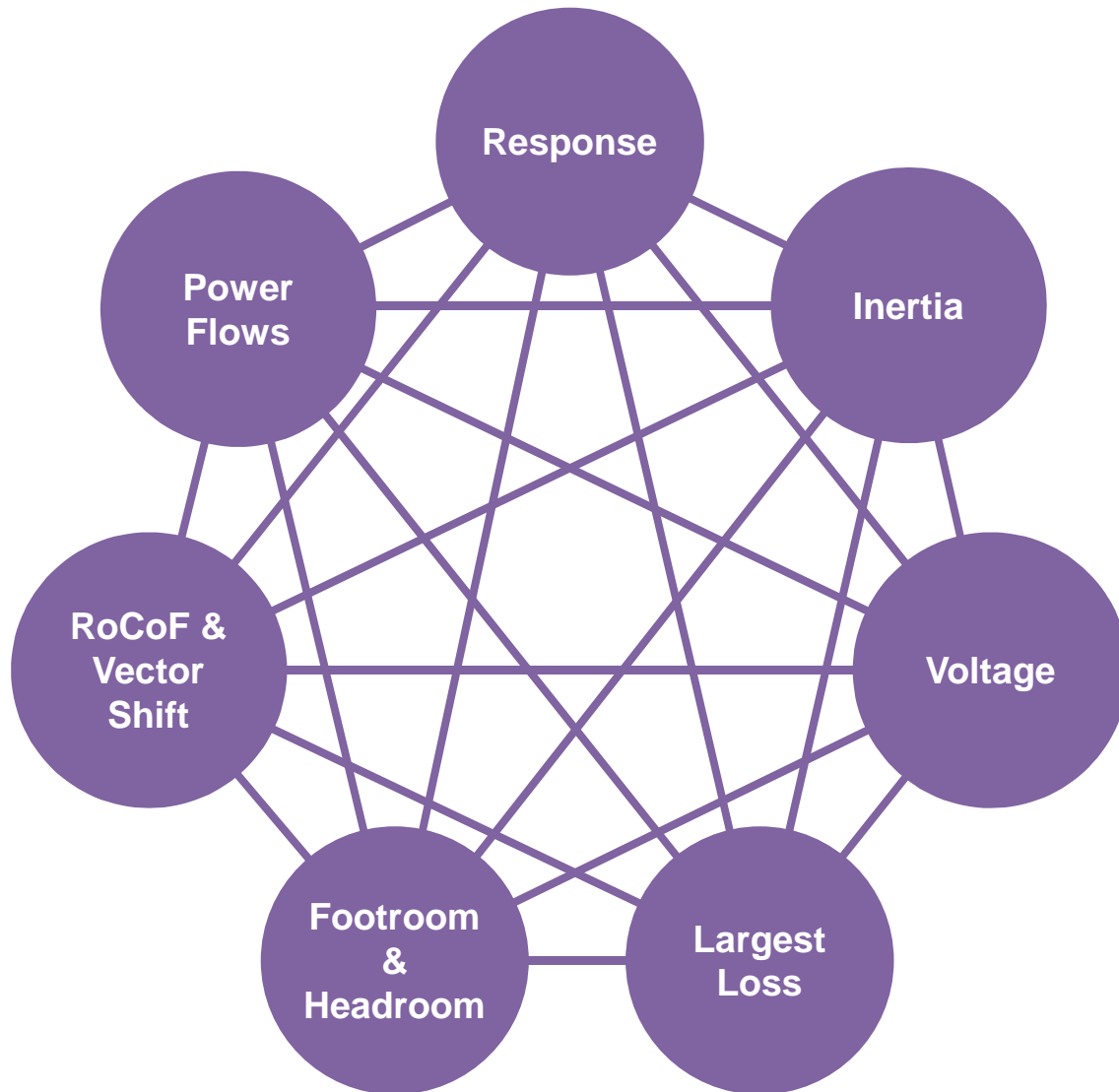


# Location effect of MVar demand



# “The fundamental interconnectedness of all things”

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- Interactions are key
- Exacerbated by:
  - Low inertia
  - Low demand
- New tools
- More actions