

## Operational and System Cost Update



Audrey Ramsay – Commercial Optimisation Manager

## Cost Outturns for June - August 2014

---

Cost Category	June 2014 (£M)	July 2014 (£M)	August 2014 (£M)
Energy	26.8	31.6	31.8
Constraints	4.2	5.0	17.9
Others	9.6	9.2	9.5
Total Cost	40.6	45.8	59.2

## Cost Outturns for June

---

- Healthy margin over most of June
- Market long for the majority of the period.
- Some increased spend on STOR due to World Cup spend.
- Mainly low level of wind generation.
- Scotland and E&W constraint costs mainly associated with voltage.

## Cost Outturns for July

---

- Market was generally long for July
- Stormy days at the end of the month resulted in increased demand and plant shortfall across peaks and increased balancing costs.
- Mainly low level of wind generation.
- Scotland and E&W constraint costs mainly associated with voltage.

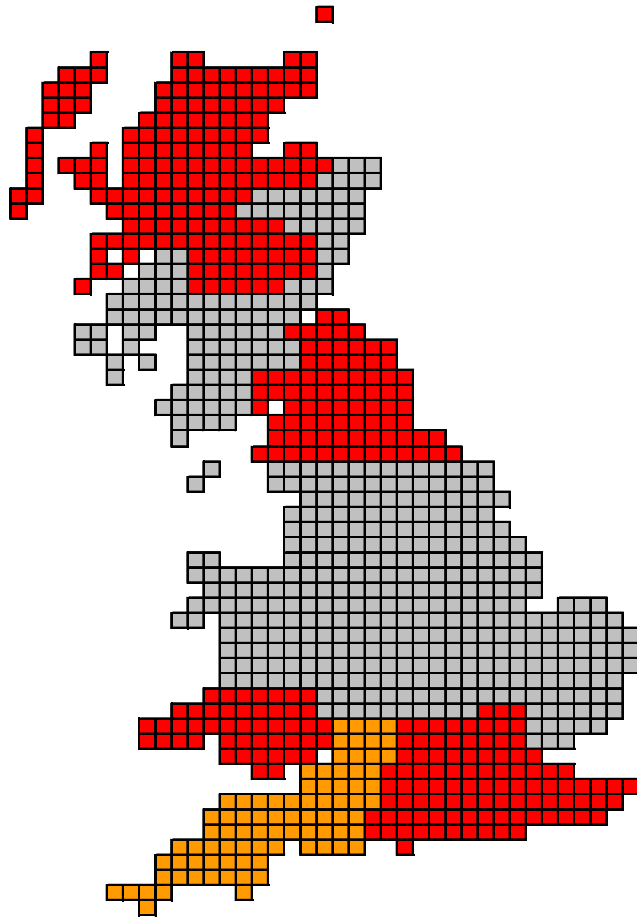
## Cost Outturns for August

---

- Demand up to 1GW lower than seasonal average
- Generally low winds except during two very high wind periods.
- Increased response costs during Dinorwig – Pentir outage.
- High constraint spend on Cheviot boundary during high wind (Hurricane Bertha) and low demand periods.
- Continued voltage management costs.

## Active constraints – June

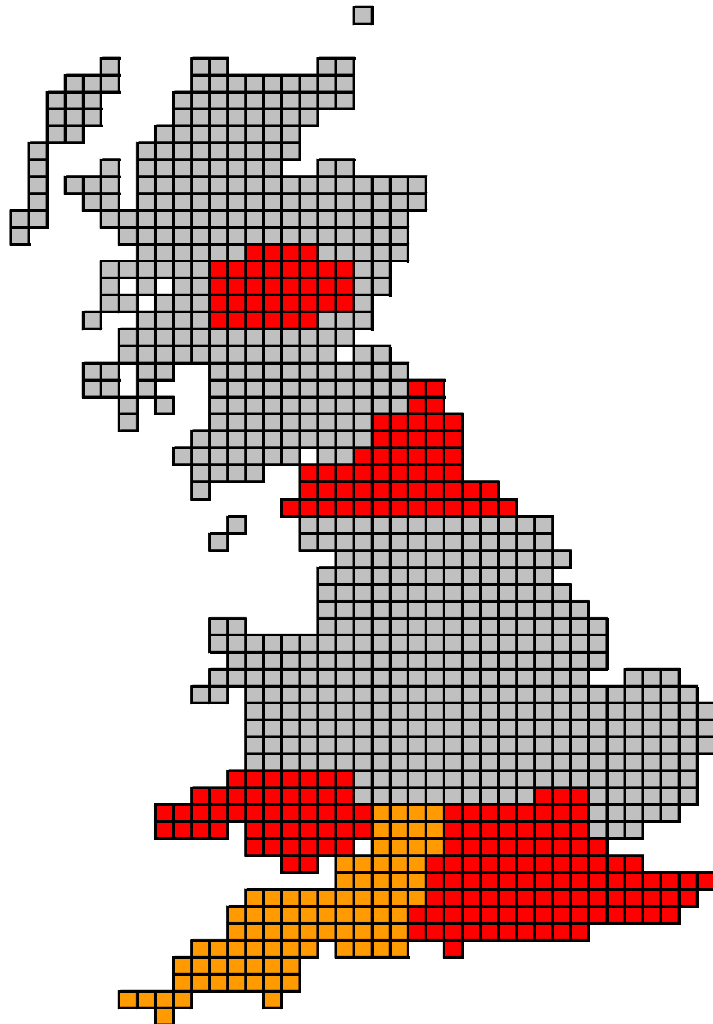
---



- E&W costs predominantly voltage related.
- Thermal restrictions in NW England and S. Wales – outage related
- Scotland – ongoing outages in Central-East – impacting Cheviot but dependent on wind output.
- NW Scotland – outage related and wind dependent

## Active constraints - July

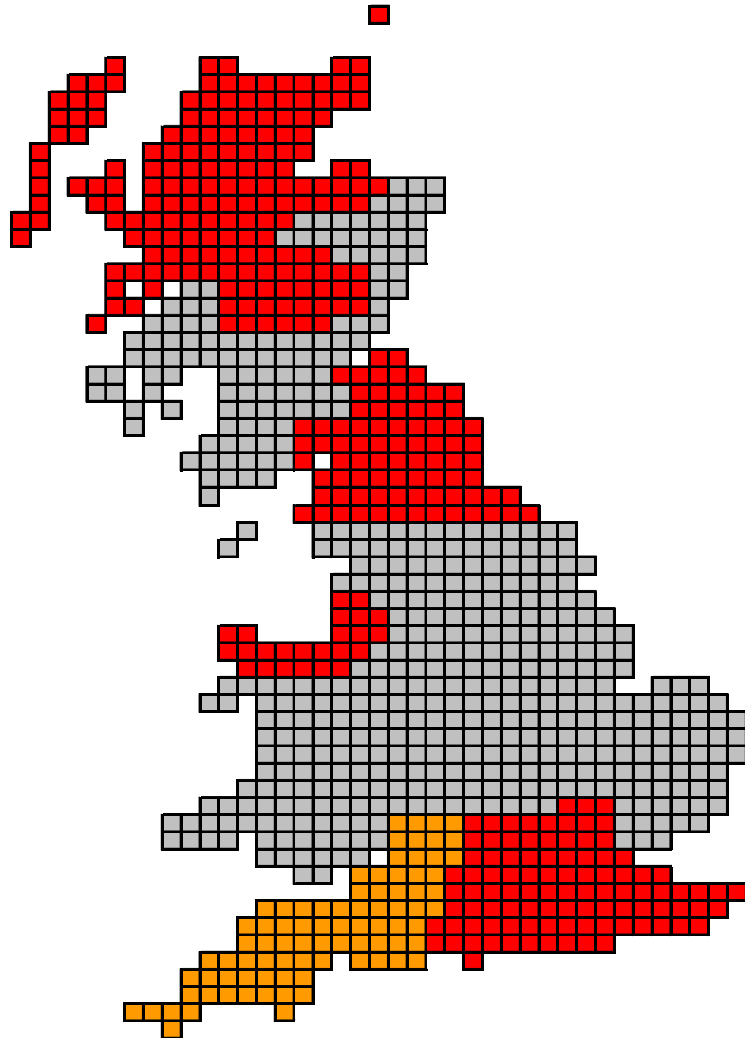
---



- E&W costs predominantly voltage related.
- Thermal restrictions in NW England and S. Wales – outage related
- Scotland –outages in Central-West – impacting Cheviot but dependent on wind output.

## Active constraints - August

---



- E&W costs predominantly voltage related.
- Thermal restrictions in North Wales – outage related
- Scotland – ongoing outages in Central-East – impacting Cheviot but dependent on wind output.
- NW Scotland – outage related and wind dependent



## BSUoS Forecast Update 2014/15



## BSUoS Forecast 2014-15

---

- External BSUoS costs estimated to be: ~£804m
- Internal Costs £132.6M
- Total BSUoS costs estimated to be: ~£936.6M
- Total Charging Volume:603TWh
- Est. BSUoS Charge: £1.55/MWh (range of £1.37/MWh to £1.70/MWh)

## 10<sup>th</sup> – 11<sup>th</sup> August – Hurricane Bertha



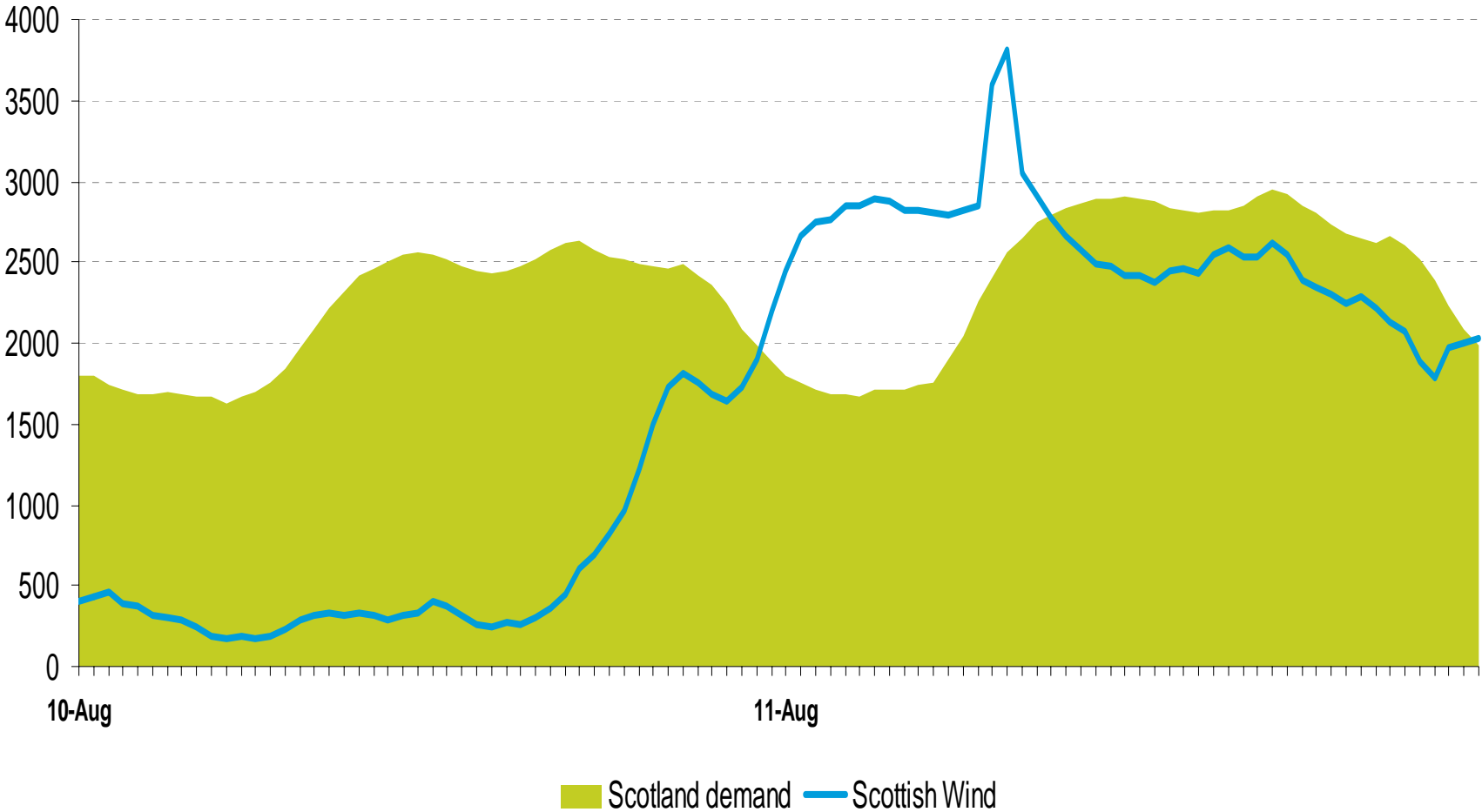
## Overnight 10<sup>th</sup> – 11<sup>th</sup> August

---

- Total GB demand dropped to 18GW at 4am 11<sup>th</sup> August
- Coincided with Hurricane Bertha reaching UK
- Providing 5.6GW wind

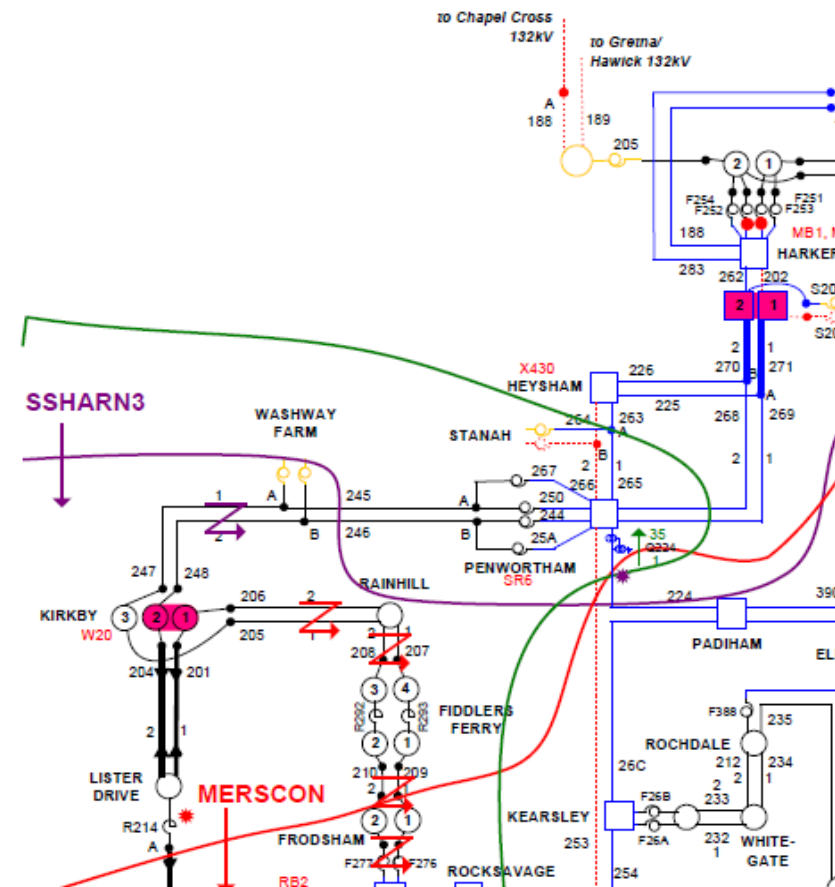


# Managing Scotland Constraint

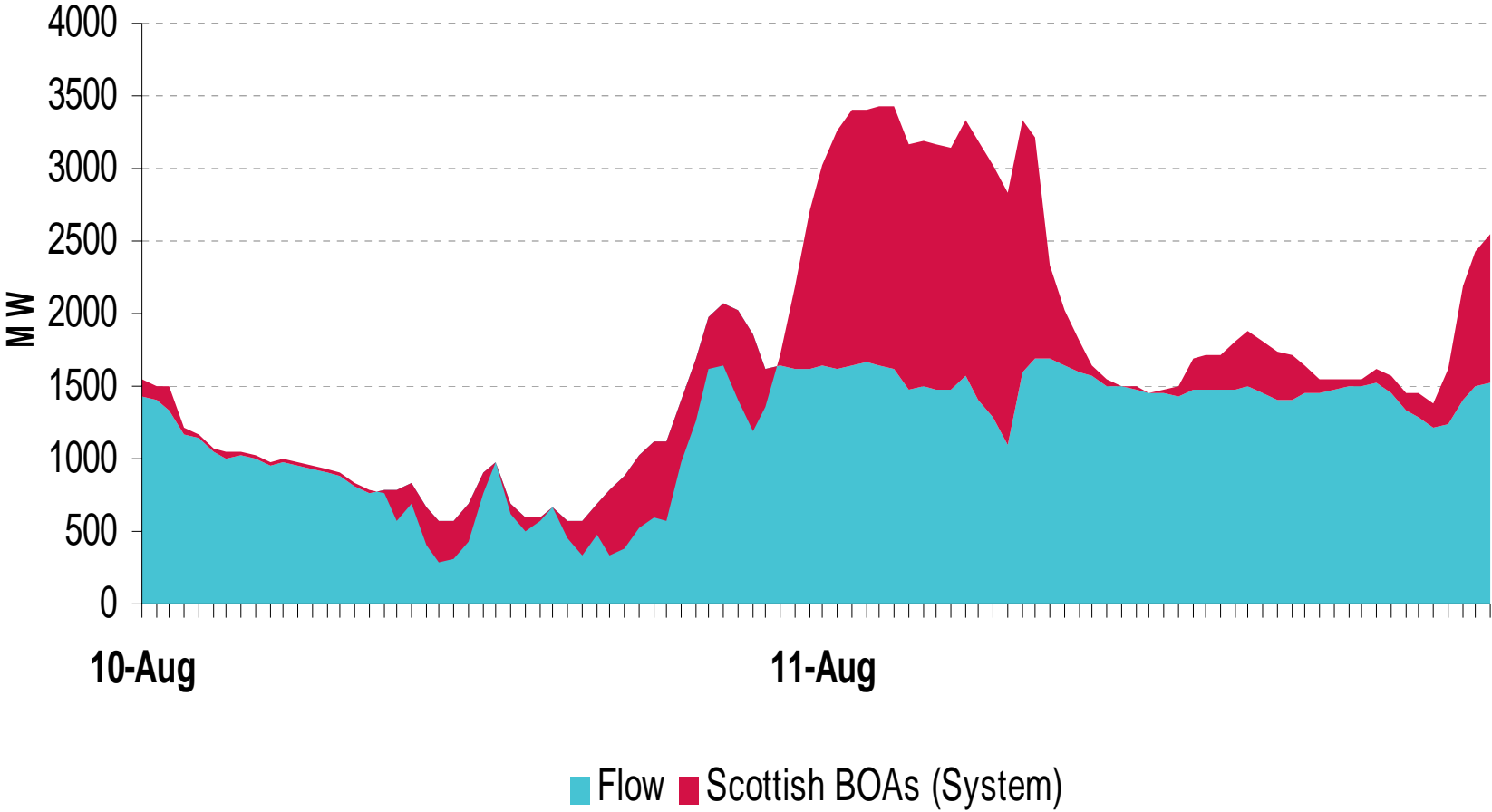


# Managing Scotland Constraint

- Several active constraints limiting Scottish transfer
- Most onerous limit at 1900MW

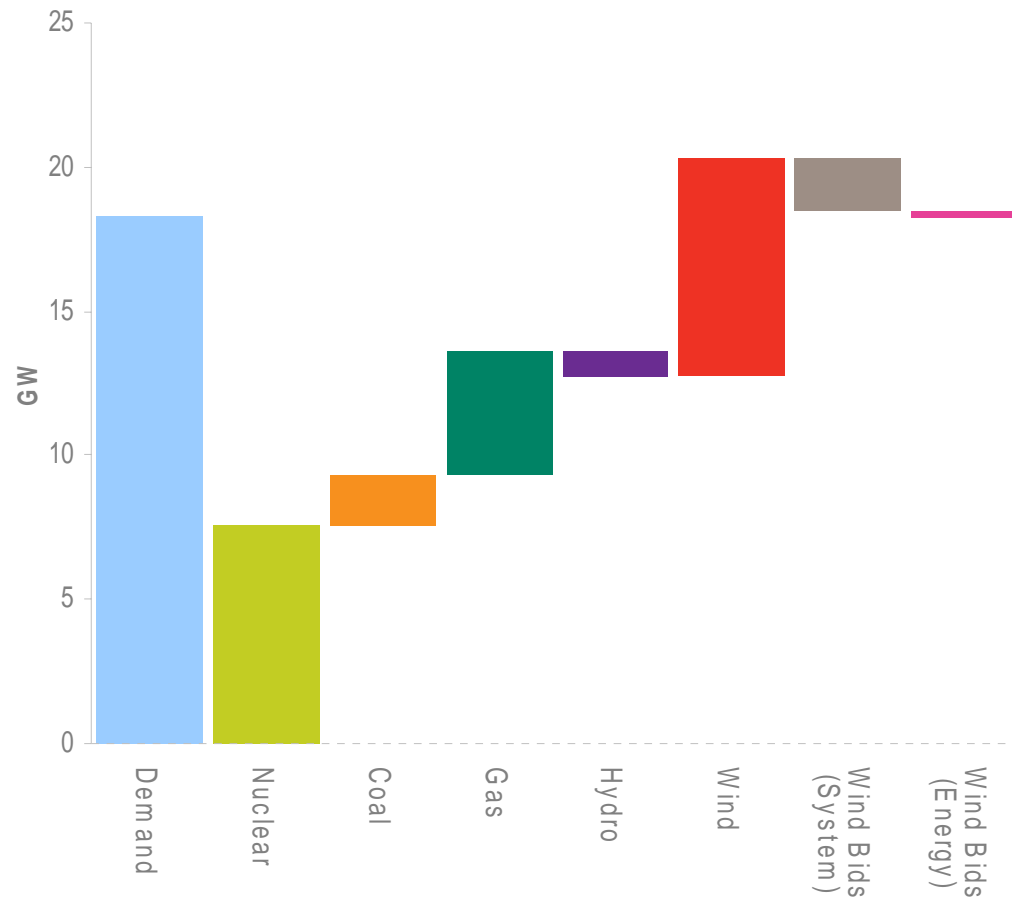


# Managing Scotland Constraint



# Managing GB System

- Lowest demand = 18.3GW
- Wind output = 5.6GW
- 1.8GW Wind bids taken for system constraints
- 210MW wind bids taken for Energy (Downward Regulation)
- Britned Emergency Instructed to 900MW (System Inertia)





## Trading to Manage NIV



# Trading to manage NIV (Net Imbalance Volume)

## Background

- Historically NIV very pronounced, trading to manage NIV accounted for a significant majority of trading activity in early BETTA days.
- As time went by imbalance became smaller and less predictable, and consequently risks of NIV trading increased while rewards decreased.
- NIV trading was abandoned in 2011.

## Initial Investigation

- Trading team recently challenged to investigate whether it could be revived.
- National Grid NIV model recalibrated to take account of current risk levels, and conservative trading strategy developed.
- NIV trading restarted in late May with some marginal benefit.

## Recommendations

- Continue NIV trading under current strategy
- Based on outcomes of continued trading, enhance and refine strategy to maximise value.



# Q&A

[audrey.ramsay@nationalgrid.com](mailto:audrey.ramsay@nationalgrid.com)