

A day in the Life....

Analysis of September 9th 2002

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Managing Uncertainty - Balancing the System

- ◆ **Week Ahead Actions**
- ◆ **Day Ahead Actions**
- ◆ **Intra-Day: Actions / Consequences**
- ◆ **Imbalance: Supply & Demand**
- ◆ **Conclusions**

Why Mon 9th September?

- ◆ The 9th of September saw the highest Demand ever recorded in September, with areas of the UK experiencing over 100% of the average September rainfall in just 6 hours
- ◆ The 9th September was the most expensive day **in terms of balancing action** costs since NETA go-live



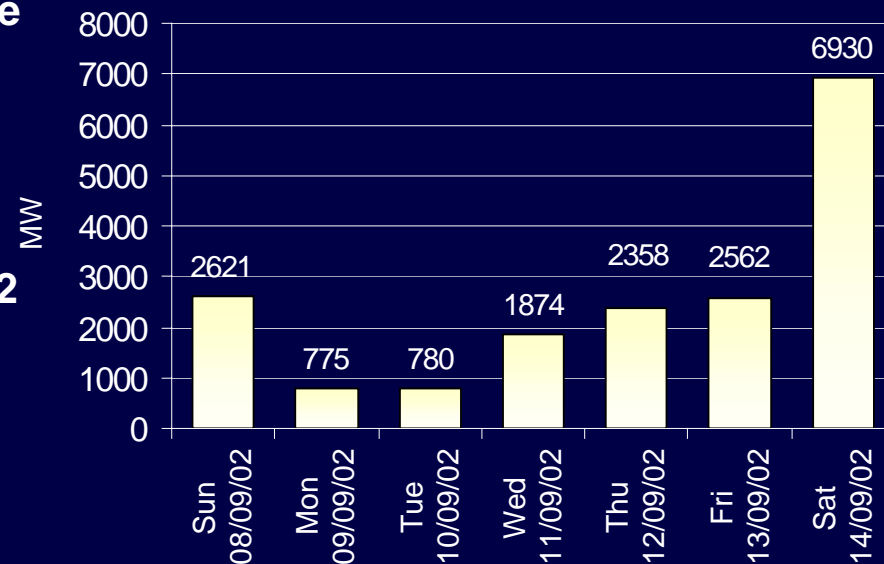
Week Ahead Actions

FEASIBLE BALANCING ACTIONS OPEN TO SYSTEM OPERATOR:

FORWARD TRADING / CONTRACTING

- ◆ With the expectation of a long market, energy sales of approx. -150MWh per settlement period were undertaken for the extended peak (15-46) in advance of the week ahead stage
- ◆ Margin Analysis on Thursday (5th) identified a 775MW surplus based on OC2 submissions of 44886MW and peak National Demand of **38400MW**
- ◆ Trading ceased as a precautionary measure over the extended peak

Generation Surplus for Week Ahead



Day Ahead

FEASIBLE BALANCING ACTIONS OPEN TO SYSTEM OPERATOR:

WARMING / FORWARD TRADING

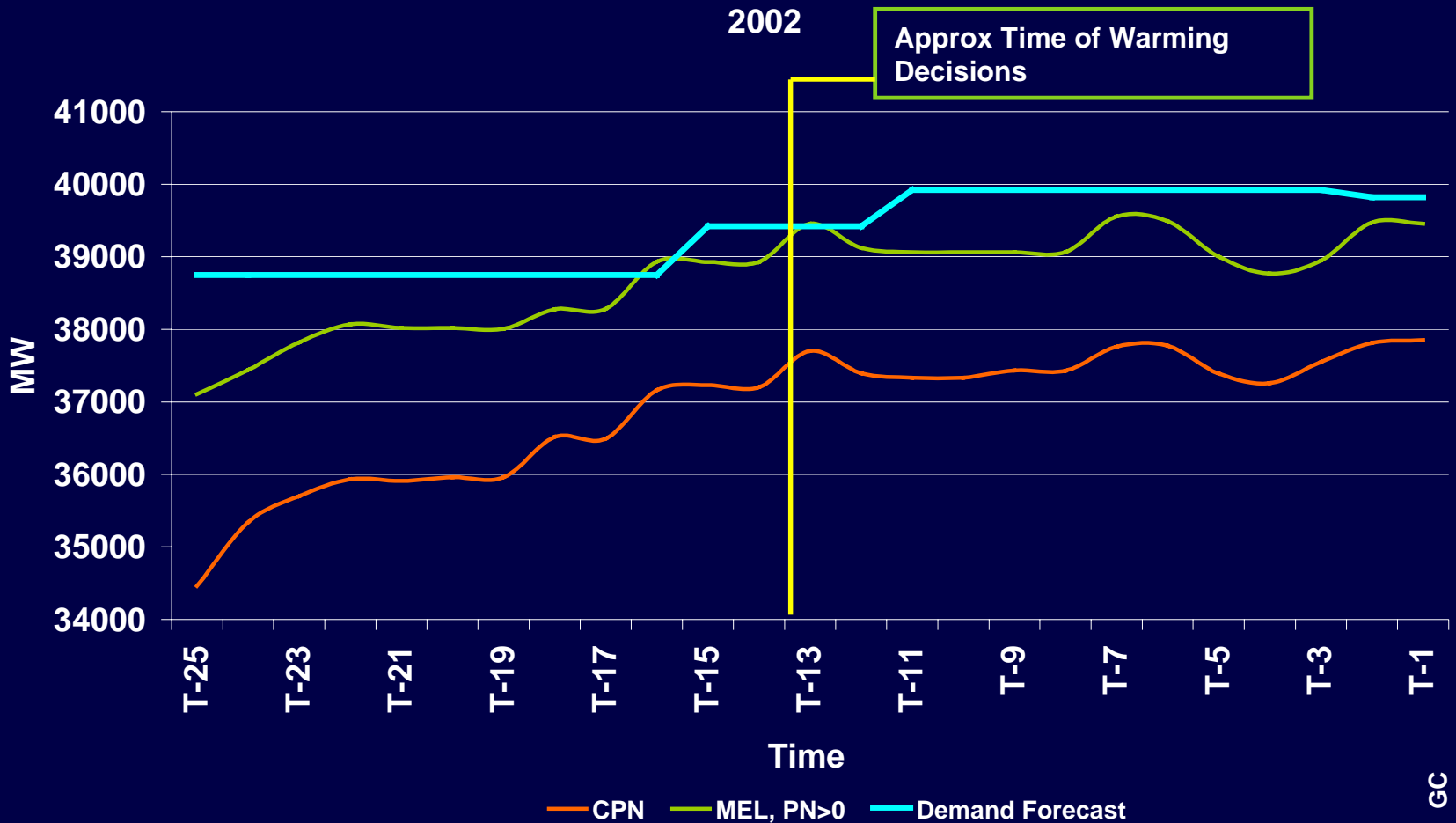
- ◆ Forecast for the Peak was set at **38700MW** and indicated *capacity* shortages across the day's extended peak
- ◆ MET office issued severe weather warnings for the Monday
- ◆ The Decision was made to warm plant for the Mid-day peak :

6 Units totalling 3470MW of extra Headroom



Warming Decisions for mid-day

MEL, CPN and Demand profile for period 25 (12:00 Hrs) on 9th September 2002

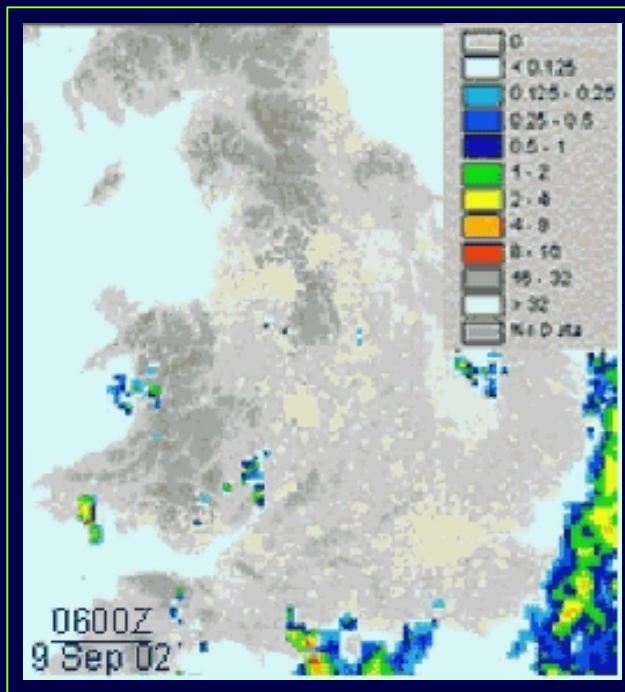


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On the Day - Morning

FEASIBLE BALANCING ACTIONS OPEN TO SYSTEM OPERATOR:

WARMING / PGBTs



Weather Front Moving over
on 9th September

- ◆ Severe weather warnings Confirmed and increased Forecast uncertainty
- ◆ 2B (~12:00) Demand out-turned some **600MW** higher than forecast (**1.5 %**)
- ◆ 3C (Highest Demand ~ 17:00) Demand forecast revised to **39970MW** (increased by **3 %**)
- ◆ Warmed Plant retained on the Bars, with the exception of 1 unit which became surplus to the requirement

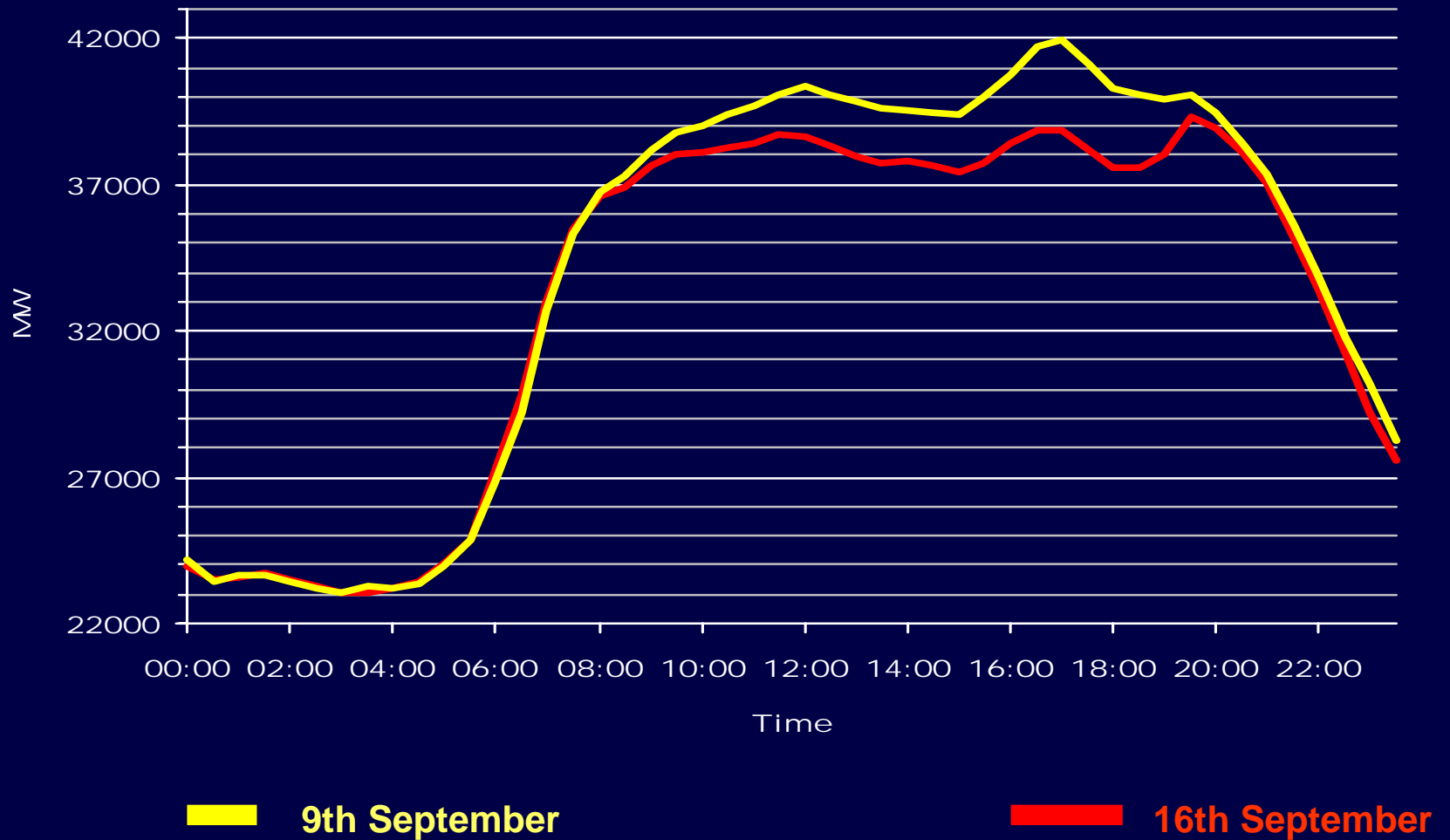
On the Day - Afternoon

FEASIBLE BALANCING ACTIONS OPEN TO SYSTEM OPERATOR:

BOAs / PGBTs

- ◆ Demands continued to Climb higher than forecast
- ◆ All available steam plant that could be committed for the evening peak was synchronised
- ◆ The Lead up to the 3C (~17:00) saw demand increase dramatically beyond the revised forecast of **39970MW** to **41577MW** on the back of continuing extreme weather conditions

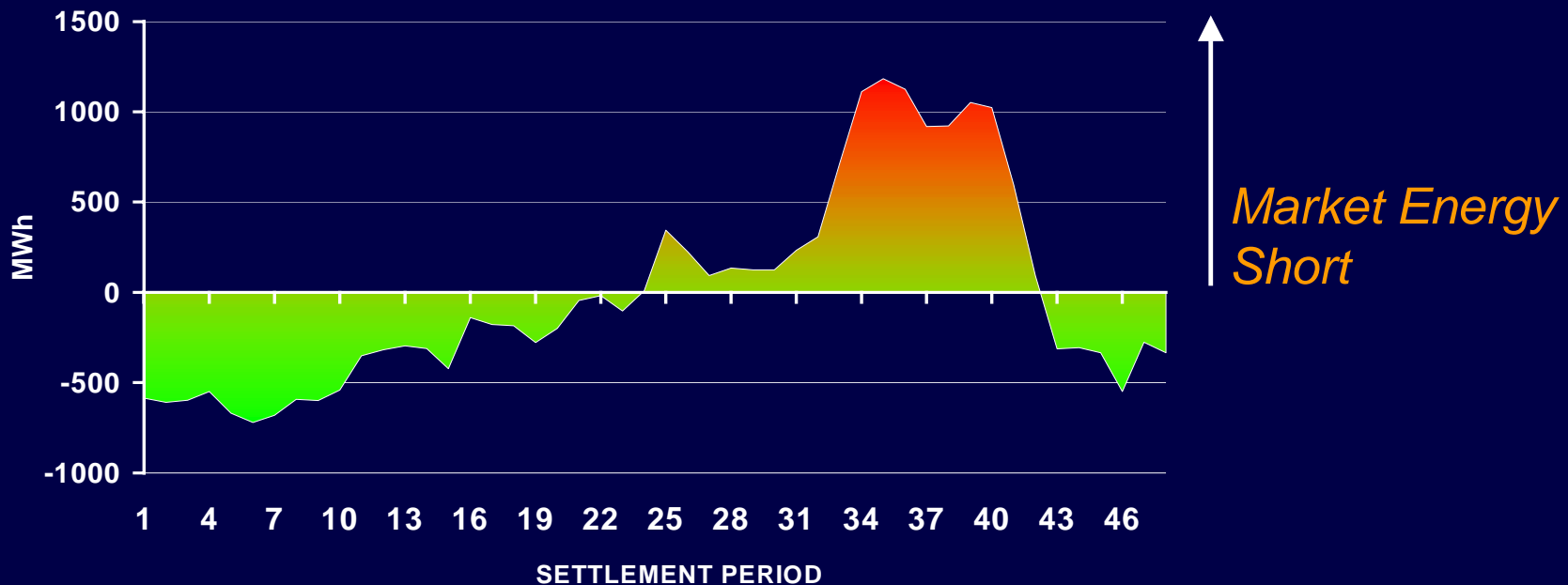
Weather Effects : Demand 9th September Versus subsequent Monday



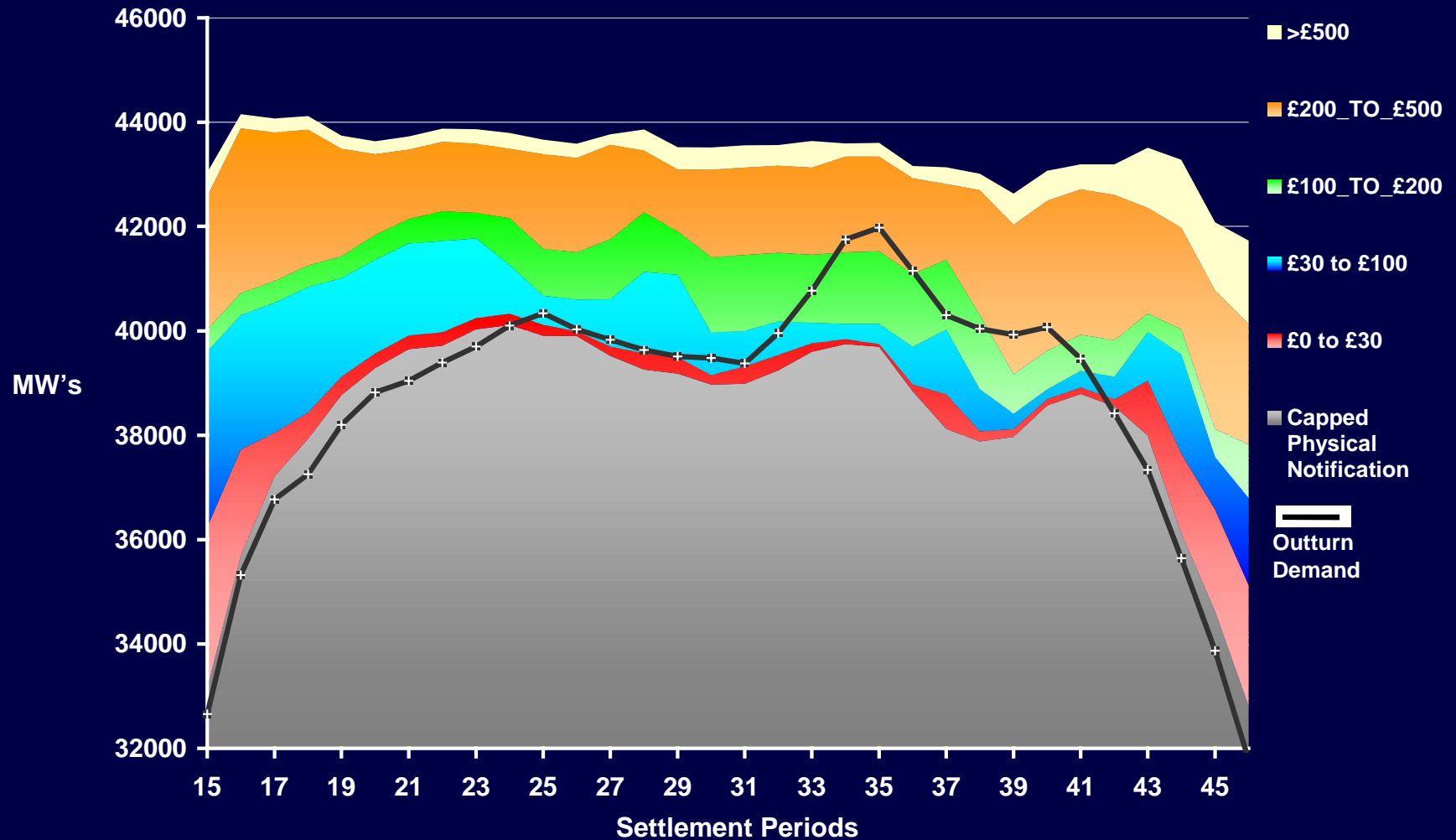
Influences on System Length

- ◆ No plant loss experienced
- ◆ Exceptional Demand as a result of severe weather conditions
- ◆ The Energy Imbalance resulted in a tight market becoming Energy short

Net Actions taken by System Operator



Only expensive offers available to meet energy imbalance



System Buy Price



Balancing Actions over the Peak (Periods 35-40)

- ◆ 199 individual BOA instructions
- ◆ 96% Of the available standing reserve utilised
- ◆ An average of 2262MW of offers were accepted
- ◆ Prices:
 - Average Accepted Offer Price: £183/MWh
 - Maximum Accepted Offer Price: £489/MWh

BSUoS Charges

- ◆ Average BSUoS price in September = **£0.79/MWh**
- ◆ Average BSUoS price on 9th September = **£2.40/MWh**
(300% higher)

