

# Operational Update

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Network Operations

# Agenda

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- Recent Operational Performance
- System Operator cost update
- Demand Forecasting Performance

# Recent Operational Performance

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- ◆ No significant operational issues
- ◆ No System Warnings issued
- ◆ SIRs:
  - ◆ 1 SIR requested for operational events
    - ◆ Loss of 1.3GW at a power station due to gas supply failure
  - ◆ 1 SIRs requested for generation profile following
    - ◆ A unit generated without PN or instruction
  - ◆ Continues to be significantly improved over 2005 & 2006
- ◆ System Frequency
  - ◆ No frequency excursions outside of statutory limits
  - ◆ 1.3GW generation loss on the 10<sup>th</sup> September resulted in a fall to 49.67Hz
  - ◆ Demand uncertainty led to a rise to 50.34Hz on the evening of the 10<sup>th</sup> September

# August & September Operational Summary

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## August

- ◆ The market has continued to be shorter than in the past leading to higher energy balancing costs and NIA
- ◆ It has been noticed that the market has frequently become short over the evening peak.
  - ◆ This has been a major driver of margin costs as units are kept on by National Grid in to EFA block 6 to meet demand
- ◆ Some constraint issues associated with transmission system outages

## September

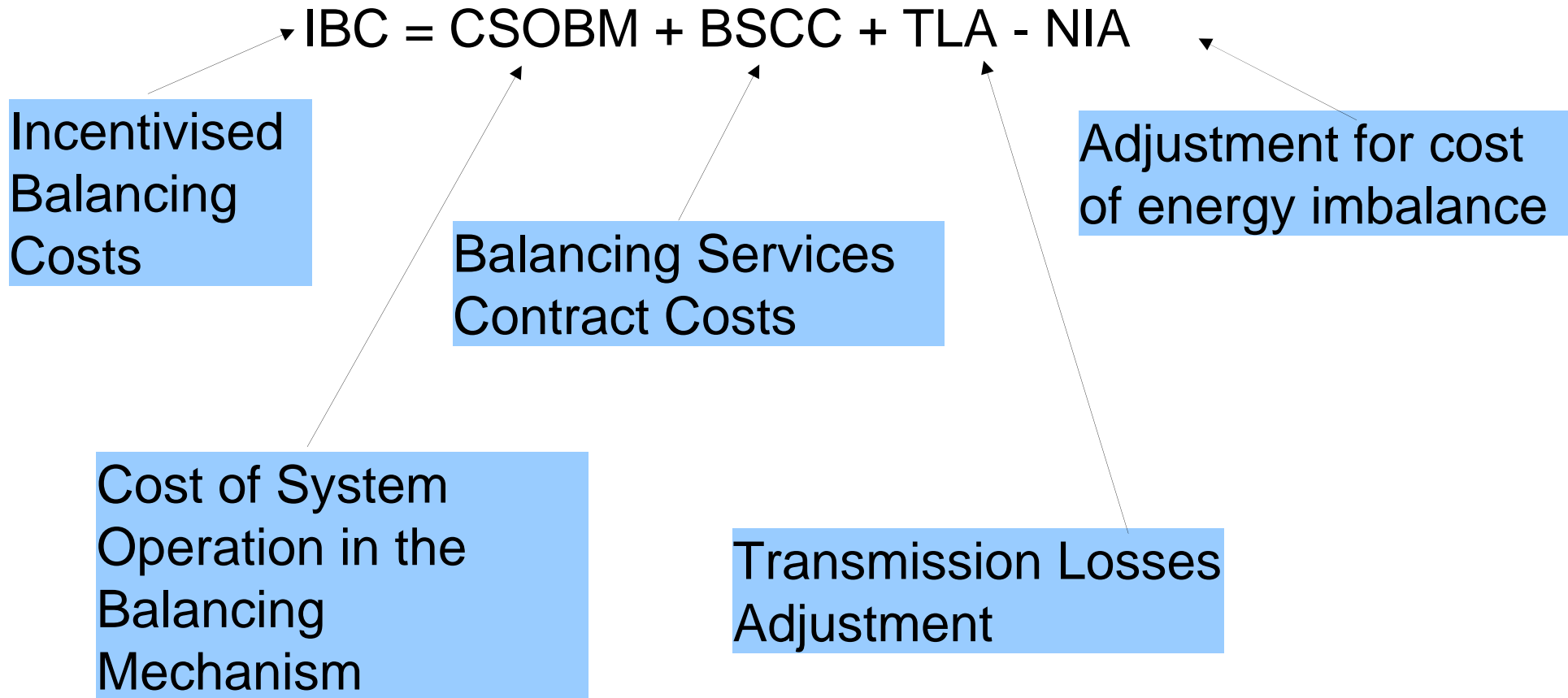
- ◆ Continuation of short markets over the evening peak

# System Operator cost update

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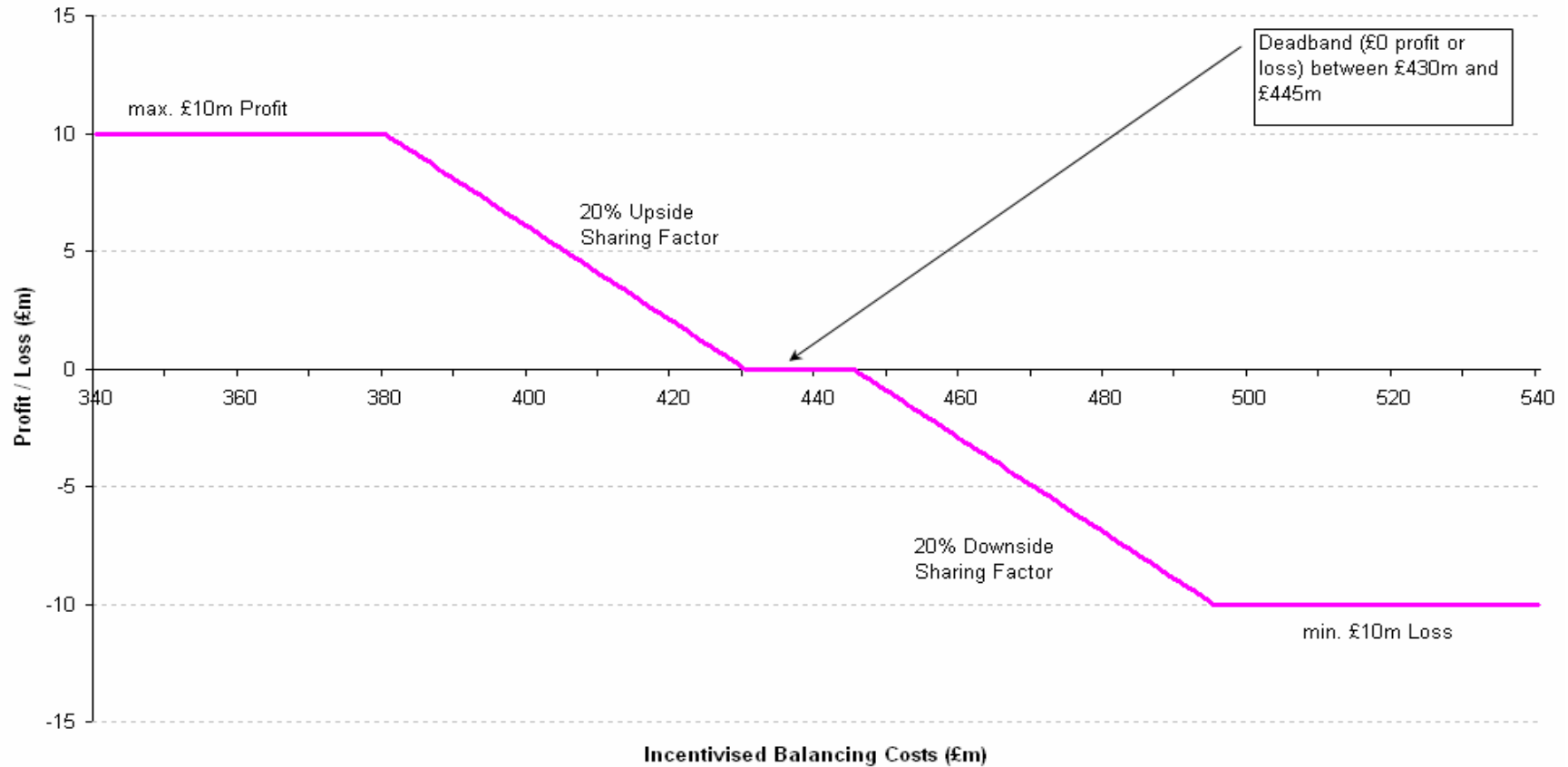
# IBC Component Breakdown

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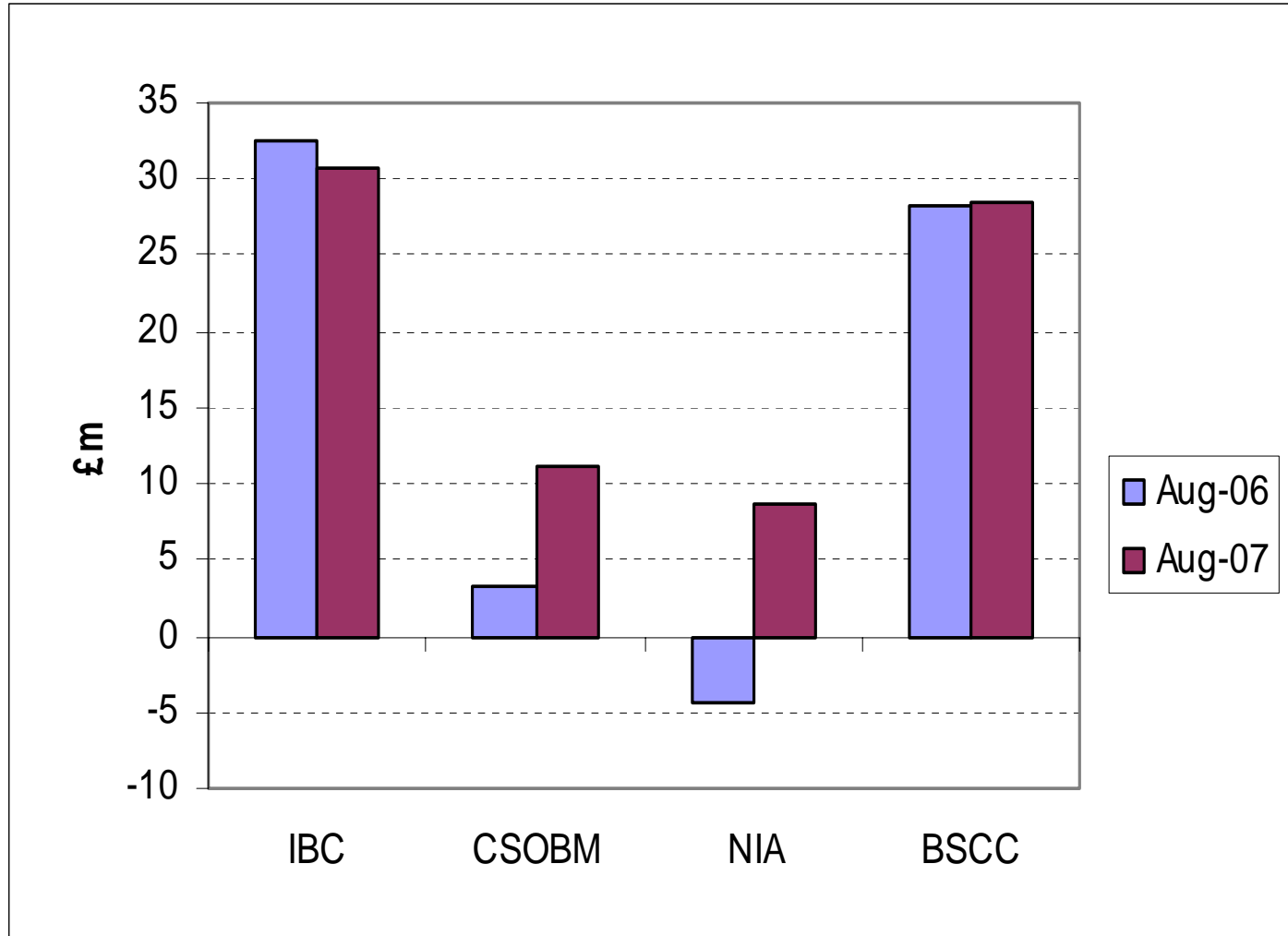


# 2007/8 BSIS scheme

2007/8 Balancing Services Incentive Scheme

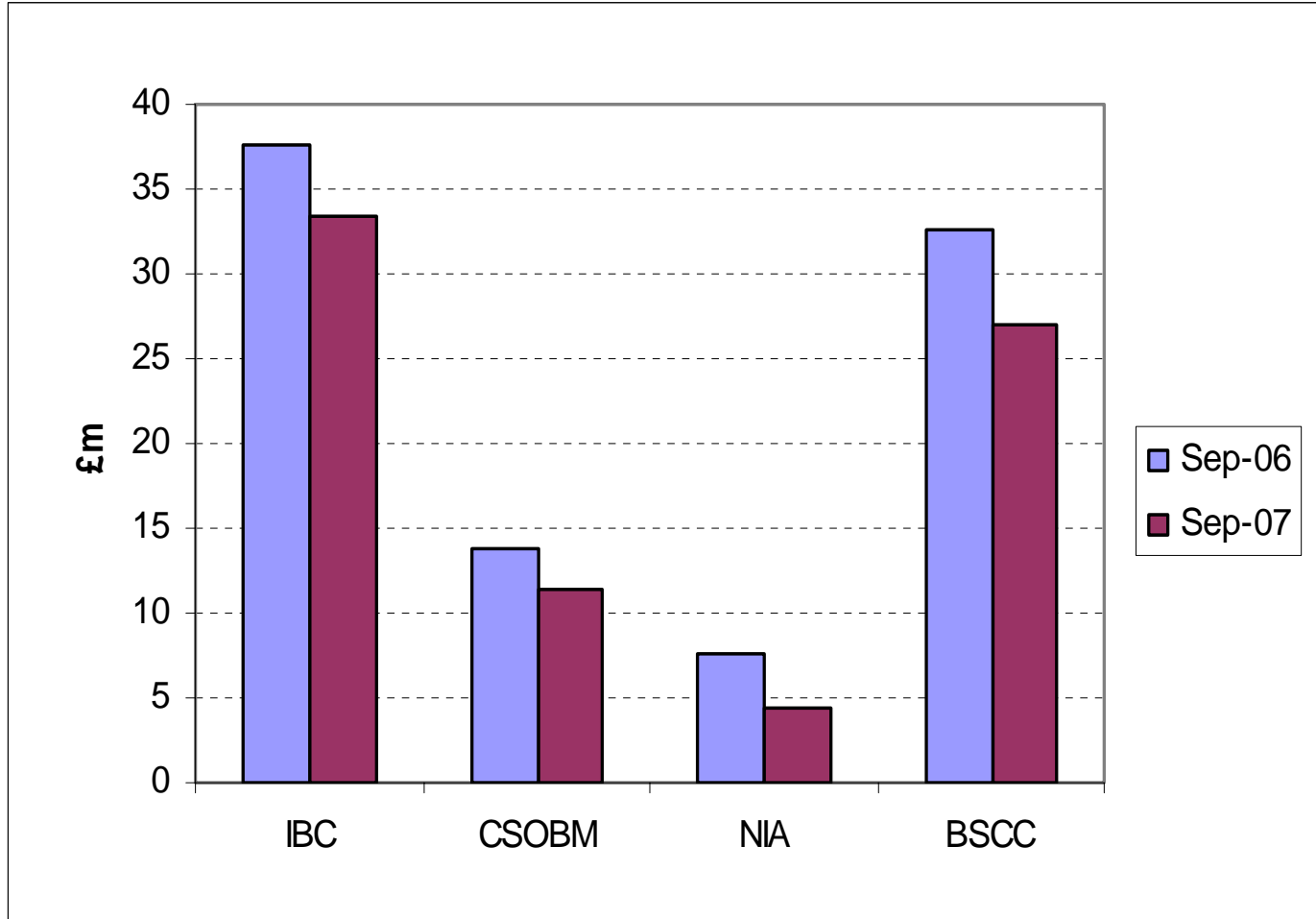


# IBC component comparison – August 2006 vs 2007



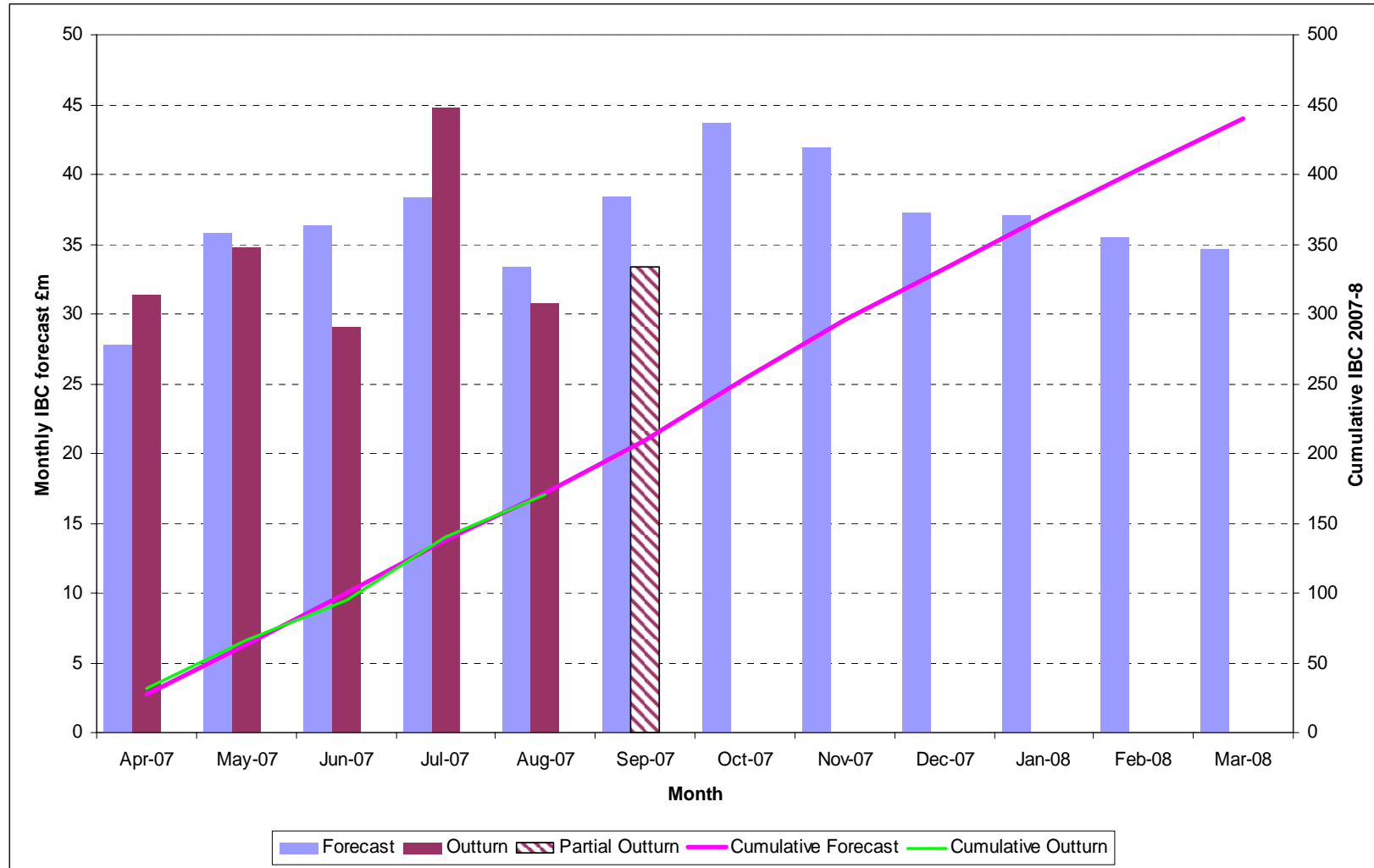
- ◆ Shorter markets than 2006 result in higher CSOBM and NIA compared to 2007
- ◆ BSCC in August 2007 within £1m of 2006's value

# IBC component comparison - September 2006 vs 2007

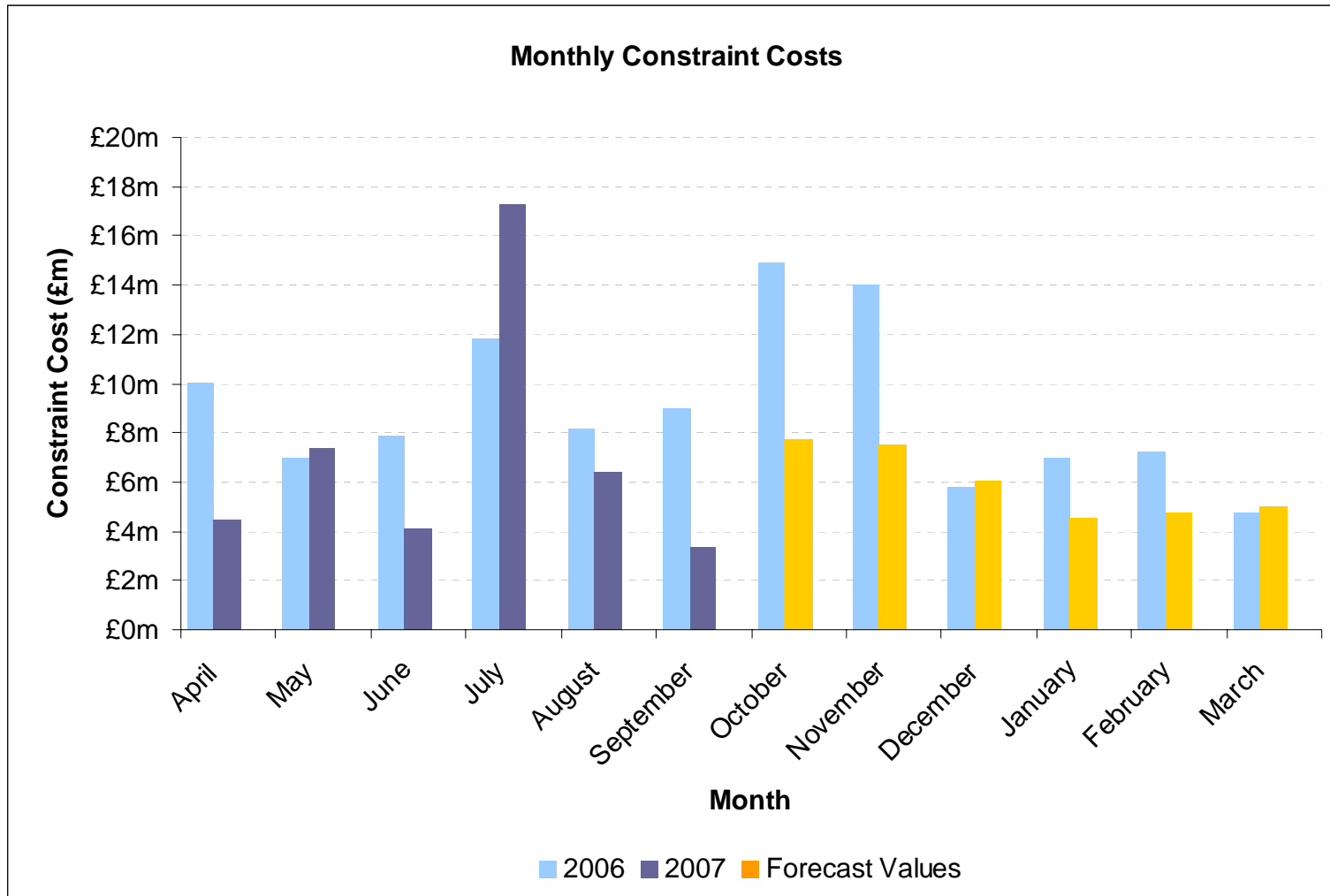


- ◆ Transmission constraints much lower in 2007 than 2006
- ◆ NIV both less long and less short compared to 2006 leading to overall lower NIA and CSOBM

# Monthly IBC 2007/8 forecasts and outturn



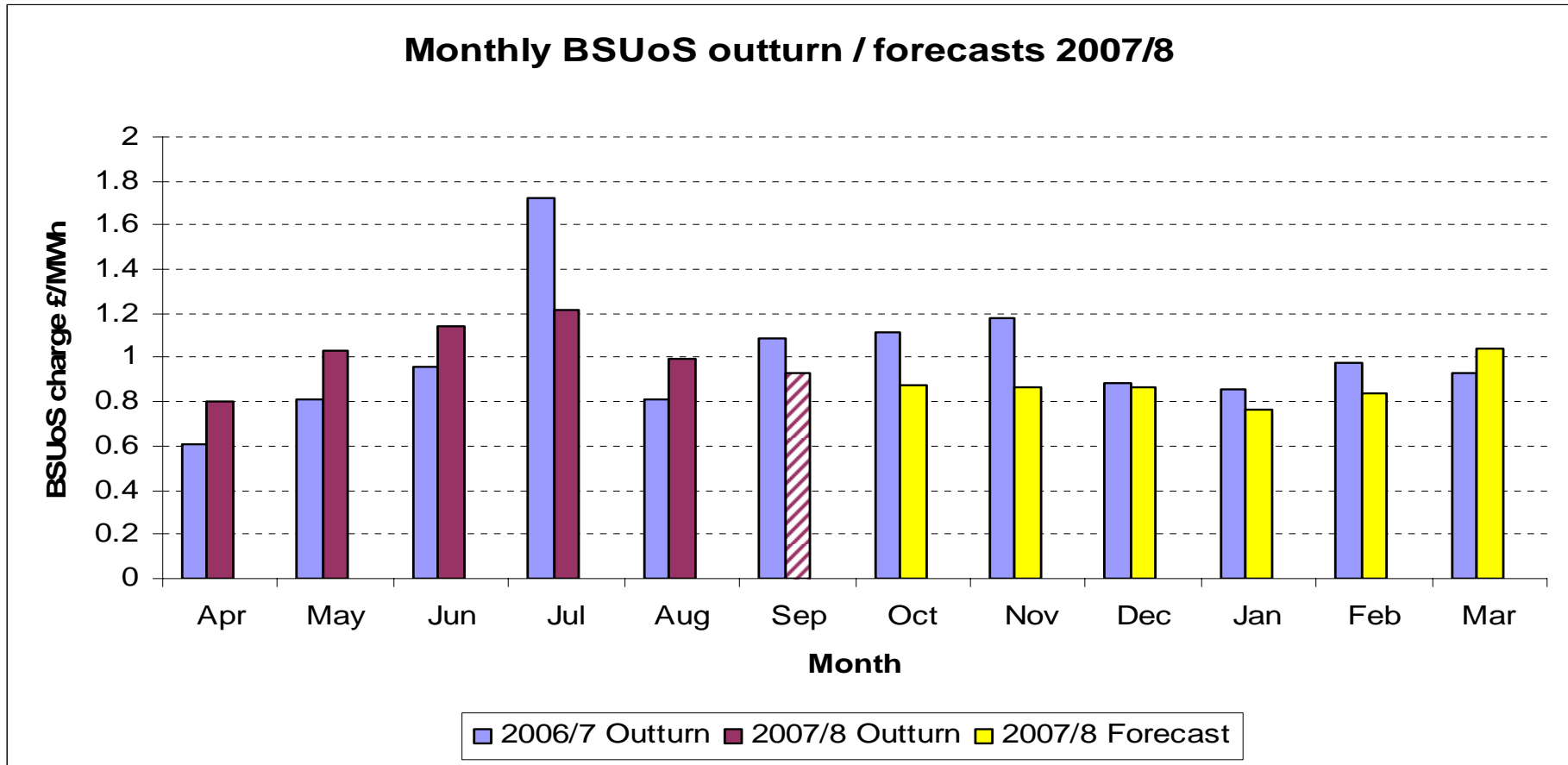
# Constraint Costs 2006 vs 2007



- ◆ £12.5m associated with TRAs in 2007 to date. £20.3m to end Sep. 2006
- ◆ Total in 2007, to date £46m vs 54 in 2006 to September

# Monthly BSUoS outturn / forecasts 2007/8

Current BSUoS charge forecast lower than 2006/7 at £0.94/MWh compared to £0.99/MWh last year



# Demand Forecasting Performance

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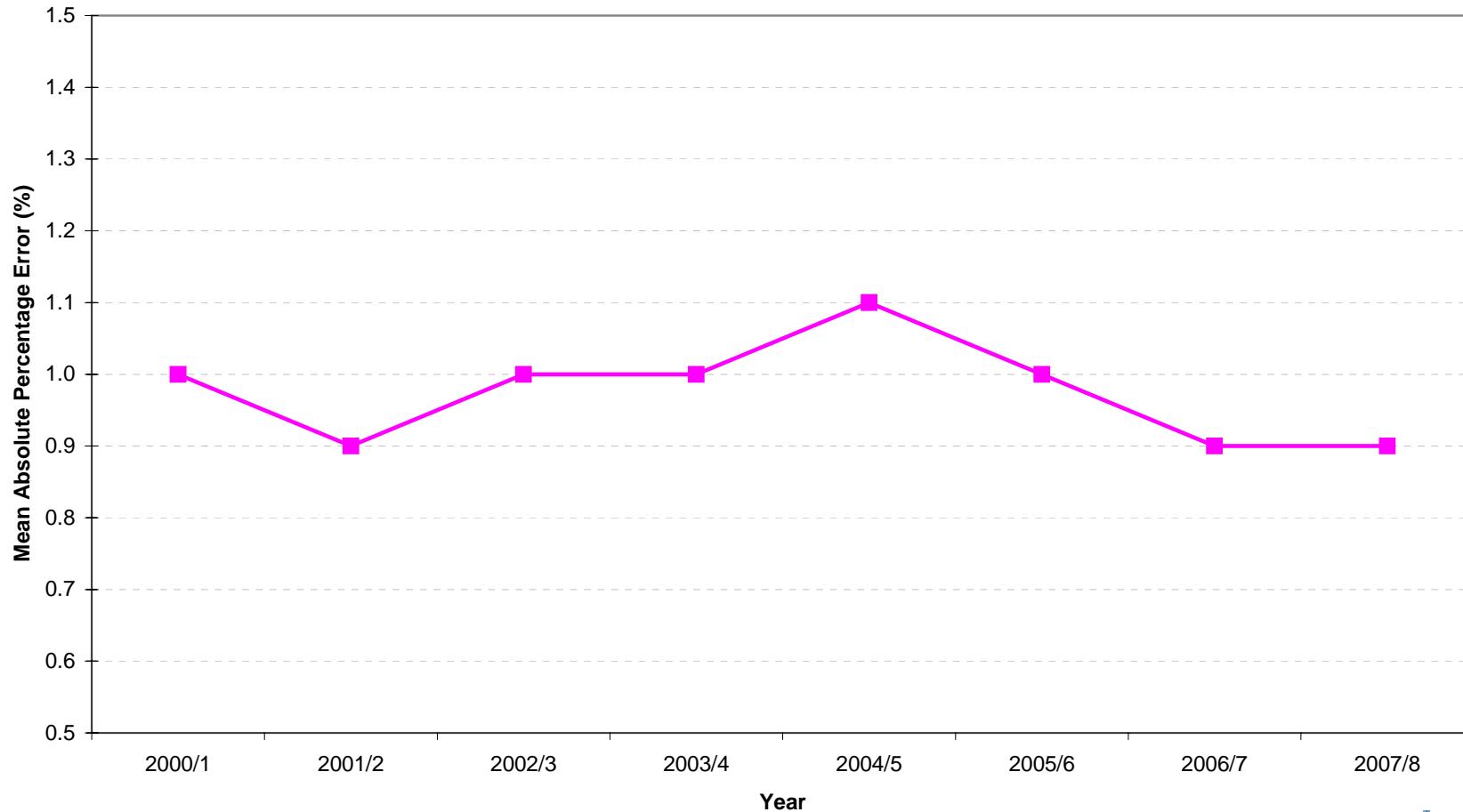
# Active Power Demand Forecasting

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- ◆ Large database of historic demands
- ◆ Large database of historic weather
- ◆ Predicts demand at each cardinal point based on this history and weather forecasts
- ◆ Interpolated from cardinal points (5/day) to fit the overall demand curve

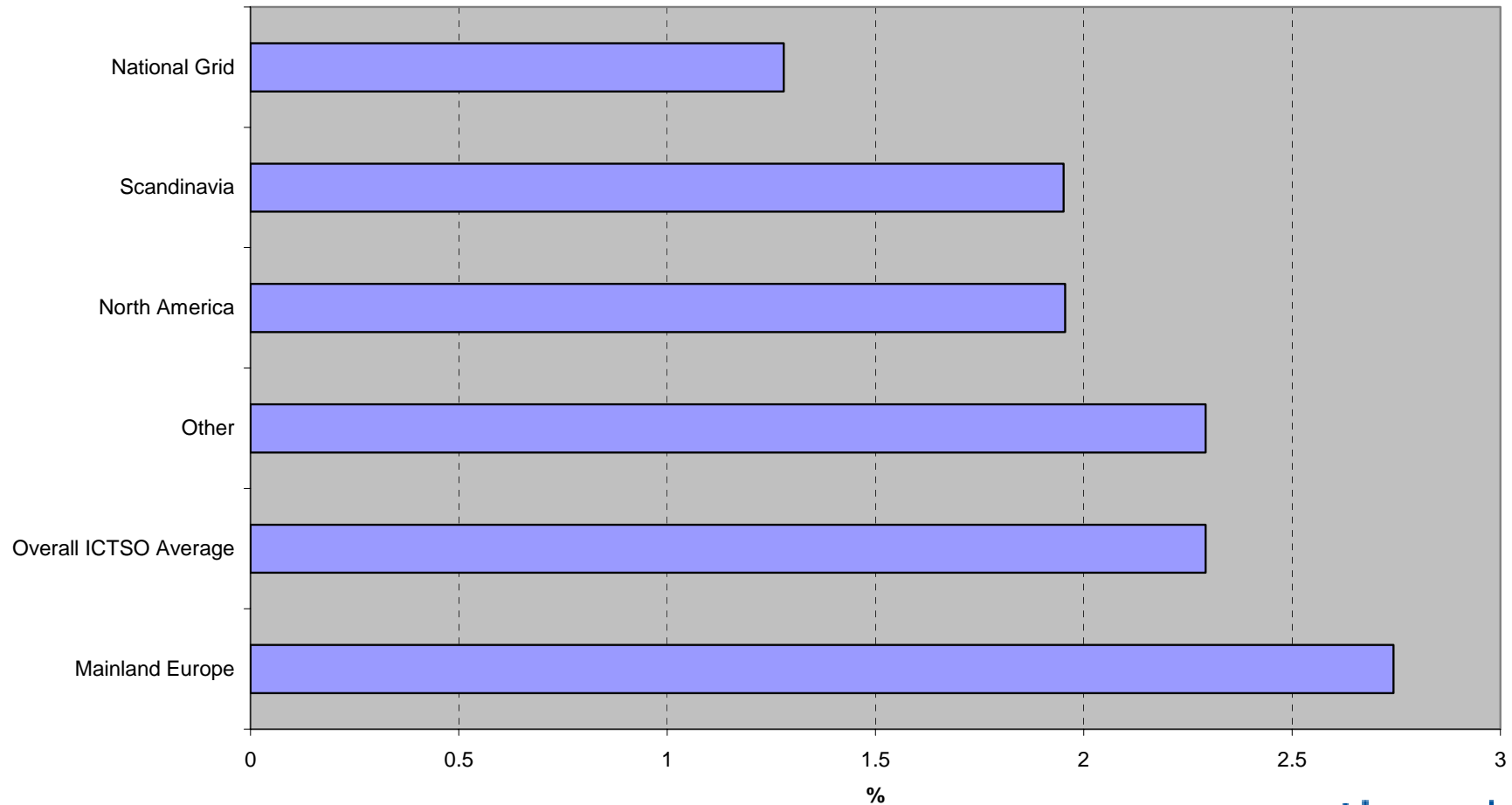
# Demand Forecasting Performance – Trend since 2000

Day Ahead Peak Demand Mean Absolute Percentage Error



# Demand Forecasting Performance – Comparison to other System Operators

Average of Accuracy of peak load forecast  
(ICTSO 2005)



# Demand Forecasting Performance

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- ◆ National Grid are one of the best in the world at forecasting demand
- ◆ Error at day ahead for the peak demand around 1%