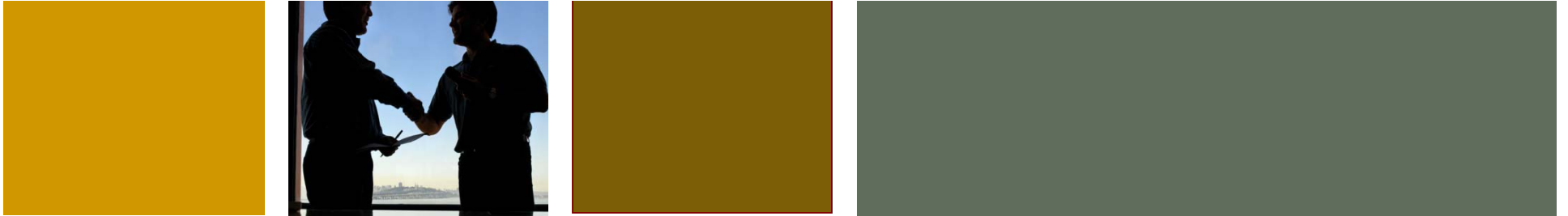




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DSM Dispatch Conditions

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Introduction

- Proposals in place affecting the dispatch of DSM
- Most notably, shift to unlimited hours of dispatch per year
- Also of relevance
 - Minimum notice period of dispatch: 4 hrs to 2 hrs + day before notice (best endeavours) of probable dispatch
 - Removal of the 3rd day rule
 - Improved telemetry requirements
- Given changes appropriate to review conditions for DSM dispatch

Agenda

- Conditions for dispatching DSM as a class
- The order of individual DSP dispatch
- Implications of moving to unlimited availability

Conditions for dispatching DSM as a class

- DSPs are Non-Balancing Facilities (along with Dispatchable Loads), which appear last on the dispatch order
 - All available capacity up-to the *maximum* available from Non-scheduled and Scheduled Generators dispatched first
 - This order confirmed with new Balancing Market rules (Clause 7.6.1C)
- System Management may change the dispatch order on 'reasonable grounds':
 - to avoid a High Risk (or Emergency) Operating State;
 - or return the SWIS to a Normal Operating State

What are 'reasonable grounds'

Identified cases

- Maintaining the Spinning Reserve Standard
 - In effect 70% of largest unit \approx 240MW
 - A high risk state automatic if Spinning Reserve Standard not met
 - Ready Reserve Standard may be important – but may be met by DSPs
- A fuel supply disruption whereby:
 - Its anticipated that later all available resources will be required
 - DSPs are dispatched ahead of Generators to preserve fuel stocks
- Notice periods
 - DSPs dispatched prior to Scheduled Generators with shorter lead times.

Not a significant change to order - All situations coincide with, or precede times, when all other resources may be exhausted

Problem of short-term uncertainty

- At time of dispatch (e.g. 2 hrs before required) there is uncertainty as to if, and how much, DSM required
- If DSM dispatched and there is subsequently an oversupply, then likely Scheduled Generators used to balance
- Currently – no rules that limit dispatch of DSM for this uncertainty

Proposal 1

A rule is established to ensure that the DSM quantity dispatched is not more than can be reasonably justified to manage the uncertainty of the short-term requirements consistent with the Dispatch Criteria.

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The order of individual DSP dispatch

Harmonisation proposals make individual DSP dispatch more important

- removing the 'three day' rule (currently on a third day of continuous dispatch a DSP need only provide best efforts)
- removing limits on total hours of dispatch, and
- System Management's ability to dispatch a limited amount of DSM rather than take an all-at-once approach is improved
 - (through the proposed telemetry requirements and a reduction in the notification period)

Currently

- Order determined by Non-Balancing Dispatch Merit Order (NBDMO)
- Rules require NBDMO determined by IMO according to:
 1. Lowest Consumption Decrease Price (which is nominated by DSP)
 2. Largest load registered in Standing Data
 3. In case of a tie a random allocation
- Additional rule
 - System Management selects Non-Balancing Facilities in accordance with the Power System Operation Procedure (PSOP)

Rank based on registered load problematic

- Some perverse effects
 - Could result in larger facilities being dispatched more often
 - May give incentive to split DSPs to reduce load size

- No benefit. Load size of little importance
 - Since RC_2010_29 loads aggregated into DSPs
 - Improved dispatch telemetry and dispatch processes should make load size less relevant

Alternative

- Replace 'load size' with 'time since last dispatch'
 - Still ordered first on Consumption Decrease Price
 - Measured over capacity year to avoid complications

- Ensures DSPs not dispatched relatively frequently compared to others (unless by choice through price)

Proposal 2

The rank-based-on-load size rule (in clause 6.12.1) in the Non-Balancing Dispatch Merit Order be removed and replaced with a ranking based on time since last dispatch (within the capacity year).

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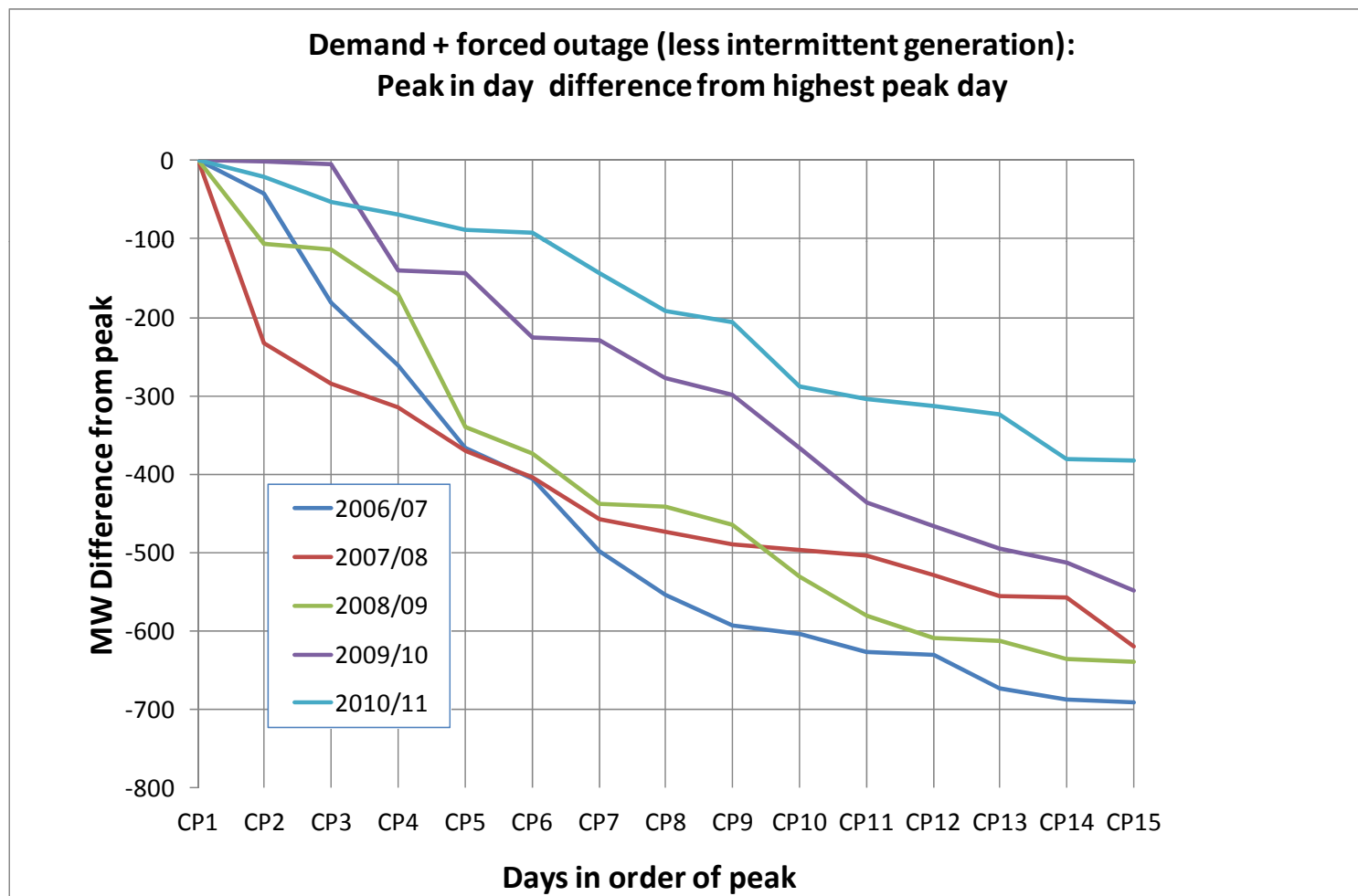
Implications of moving to unlimited availability

- As DSPs last on dispatch order, unlimited availability doesn't change the likelihood DSPs will be required
- By design unlikely that in any single year all available capacity resources will be required to meet security
- Significant dispatch of DSPs dependent on coincident forced outages e.g. Feb 2011 but bigger scale.

In the unlikely disaster scenario

- For DSPs to be called a large number of hours
 - Disaster would need to be significant
 - Due to the nature of demand, a disaster so large as to caused forced curtailments during peaks

Peak by-day load profile



In the unlikely disaster scenario (continued)

In such an event, advantages and disadvantages for DSM

- DSM Loads curtailed more frequently than non-DSM loads
- However DSM Loads advantaged in that
 - receive advance notification of being curtailed
 - are compensated on dispatch by the nominated Consumption Decrease Price.



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End