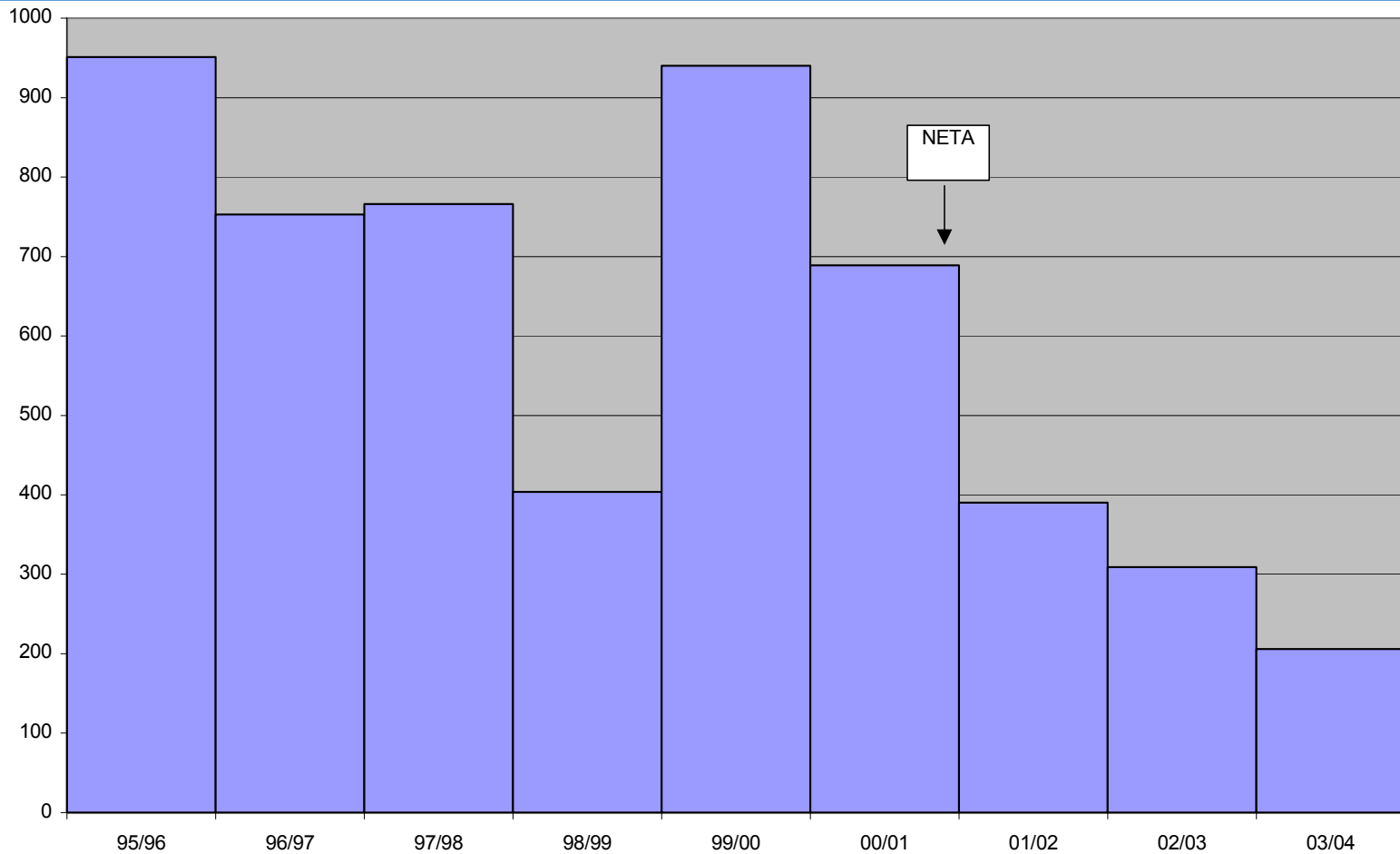


Customer Demand Management Notification for OC1/OC2 review

Chris Rogers

Maximum Notified Customer Demand Management on Triad Days



Existing Grid Code Requirement (1)

OC1.5.5.2 *Customer Demand Management:*

(a) Each **Supplier** will notify **NGC** of any **Customer Demand Management** proposed by itself which may result in a **Demand** change equal to or greater than the **Customer Demand Management Notification Level** averaged over any half hour on any **Grid Supply Point** which is planned to occur at any time in the **Control Phase** and of any changes to the planned **Customer Demand Management** already notified to **NGC** as soon as possible after the formulation of the new plans.

(b) The following information is required on a **Grid Supply Point** and halfhourly basis:-

- (i) the proposed date, time and duration of implementation of **Customer Demand Management**; and
- (ii) the proposed reduction in **Demand** by use of **Customer Demand Management**.

Existing Grid Code Requirement (2)

OC1.5.6 Post-Control Phase

The following will be supplied to NGC in writing by 0600 hours each day in respect of **Active Power** data and by 1000 hours each day in respect of **Reactive Power** data:

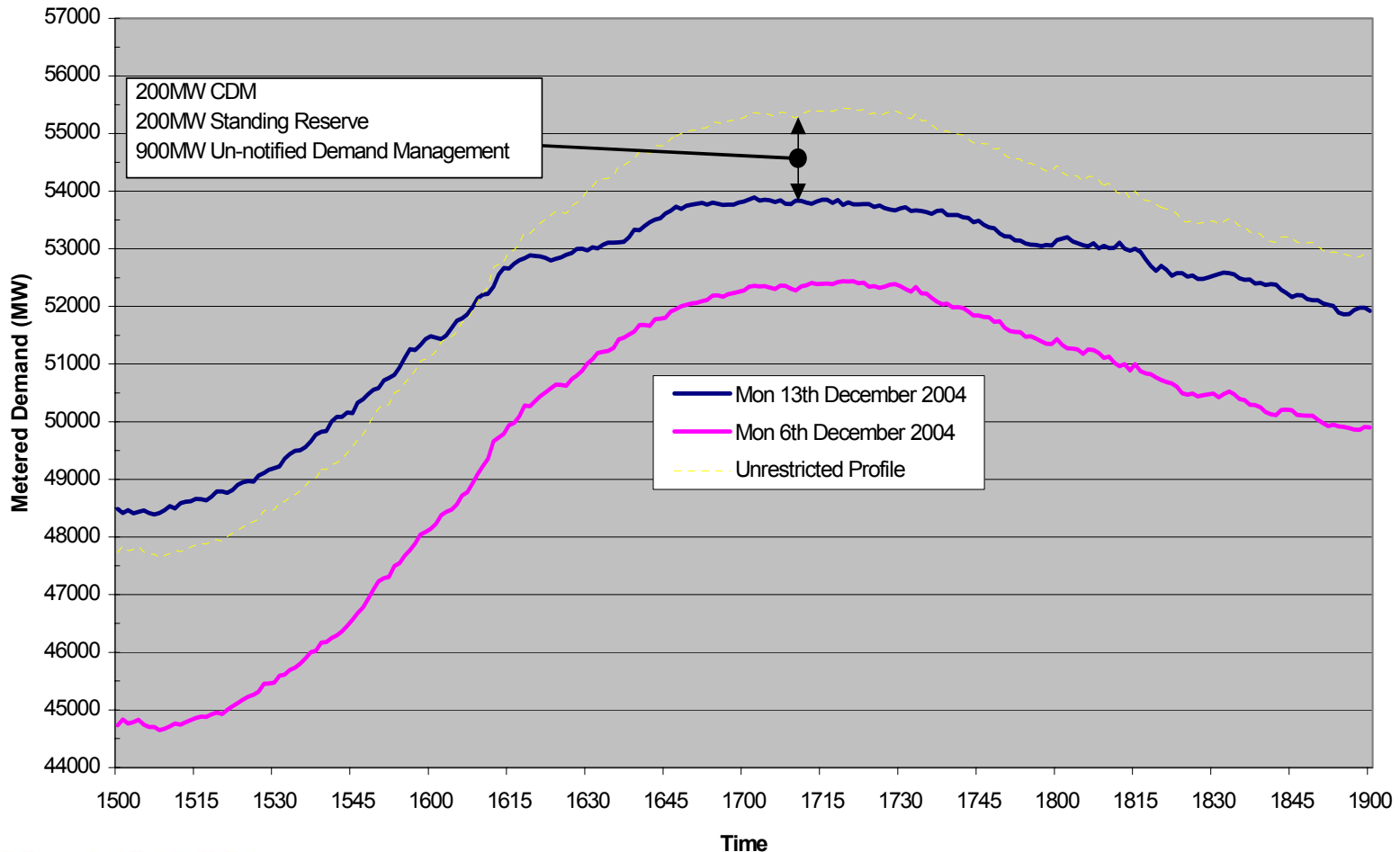
(a) *Demand Control:.....*

(b) *Customer Demand Management:*

Each **Supplier** will supply MW profiles of the amount and duration of **Demand** reduction achieved by itself from the use of **Customer Demand Management** equal to or greater than the **Customer Demand Management Notification Level** (averaged over any half hour on any **Grid Supply Point**) on a half hourly and **Grid Supply Point** basis during the previous calendar day.

Demand Management on Monday 13th December 2004

Metered Demand shown (200MW of notified demand management)



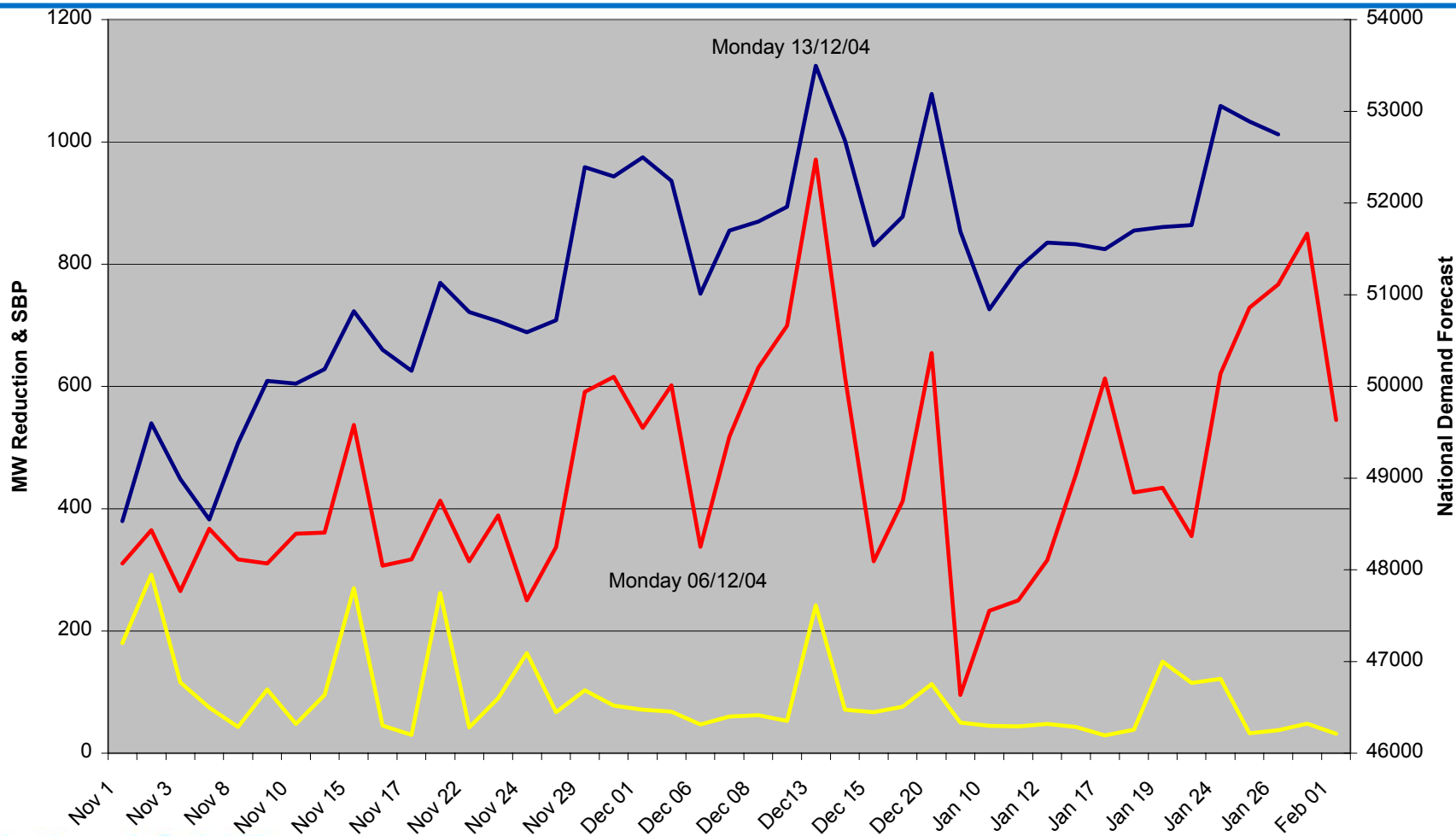
Detail of 13th December un-notified Demand Management

Triad Background:

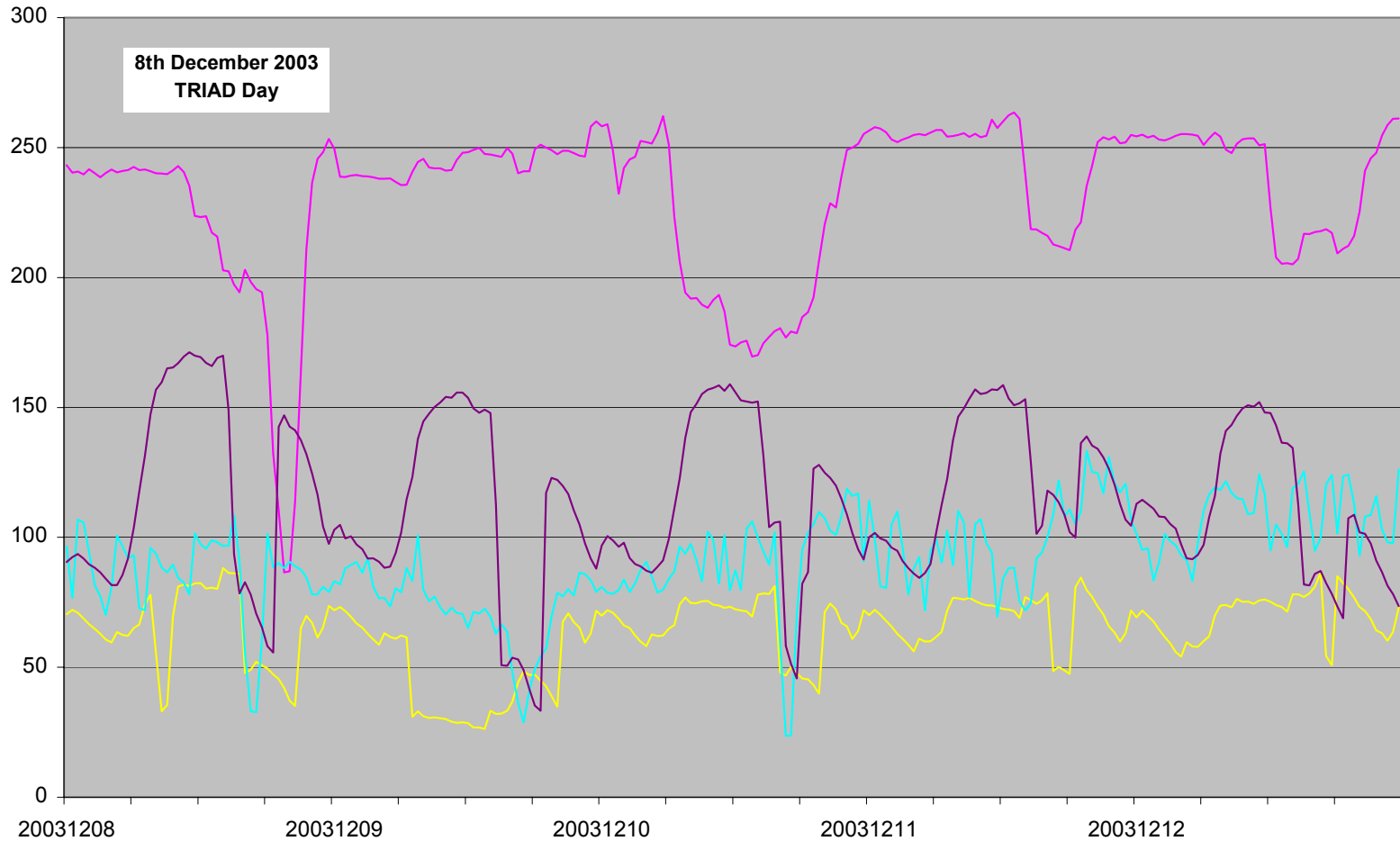
- Demands had been low for the winter up to to 10th December with only one possible low Triad.
- The weather was forecast to turn cold well in advance the previous week for the following Monday.
- Demands were expected to fall rapidly throughout the week into the Christmas period.
- There had been no higher demand within 10 days.

Trend of un-notified demand management Winter 2004 (Based on GSP nodal analysis)

— Demand Reduction
 — System Buy Price
 — Forecast National demand



Demand Changes at 4 GSPs in a TRIAD Week in 2003



NGT Unrestricted Demand is Corrected for:

- Demand Losses/Disconnections
- Notified Customer Demand Management
- Standing Reserve Utilisation
- Metering Errors

- **No** Correction is made for un-notified demand management because it is not known.

Definition of Notified CDM

The total estimated demand reduction instructed by a supplier seen at a GSP Group as a result of demand management or running of embedded half hourly metered generation *and Notified to NGT*.

CDM should NOT include Standing Reserve, Demand Turndown or other contractual arrangements visible to NGT.

At the present time Demand PNs do NOT reflect proposed demand management.

Advantages of a greater amount of Notified Demand Management

- Improved Forecast Accuracy.
- Fewer balancing actions.
- Market Information more reflective of expected demand.
- Increased accuracy of signals to the market.
- Improved Plant Margin accuracy.
- Reduced possibility/severity of NISMS.
- More embedded generation expected in future.
- Scottish LEGs visible to market.

Advantages of Reported Demand Management

- Forecast Modelling more accurate.
- Better models for forecasting and weather correction.
- More accurate TRIAD warnings.

NGT Requirement for Notified CDM

- Suppliers to notify NGT by fax or email the estimated Customer Demand Management at a GSP group as a result of demand reduction or running of embedded generation.
- NGT to be notified of the GSP Group, Start time, End time and MW reduction.
- NGT to be notified by **11:00 on the day before** the reduction is to take place.
- Changes in demand to be notified for the peak demand over the Triad charging period between November and February inclusive.
- NGT will change the market forecast to reflect notified demand management.

Current OC1 Demand Definition

- 2-52 Week Ahead
- 2-14 Day Ahead
- Initial Day Ahead Demand Forecast
- Initial Day Ahead Market Information
- Current Day and Day Ahead Information

2- 52 Week Ahead (NDFW)

- Weekly Peak Demand forecast
- Based on Normal Weather
- Generation Requirement
- Includes Station Transformer Load
- Unrestricted
- Issued Weekly at 15:00 on Thursdays

2- 14 Days Ahead (NDFD)

- Daily Peak Demand forecast
- Based on Normal and Forecast Weather
- Generation Requirement
- Includes Station Transformer Load
- Unrestricted
- Issued Daily at 15:00

Initial Day Ahead Demand Forecast (DF)

- Settlement Period Demand forecast 05:00 to 05:00
- Based on Forecast Weather
- Generation Requirement
- Does NOT Include Station Transformer Load
- Unrestricted
- Issued Daily at 09:00

Initial Day Ahead Market Information (DF)

- Settlement Period Demand forecast 05:00 to 05:00
- Based on Forecast Weather
- Generation Requirement
- Includes Station Transformer Load
- Includes Exports and Pumping
- Unrestricted
- Issued Daily at 12:00

Current Day Market Information (DF)

- Settlement Period Demand forecast ending 05:00 on following day
- Based on Forecast Weather
- Generation Requirement
- Includes Station Transformer Load
- Includes Exports and Pumping
- Unrestricted
- Issued half hourly following the Initial Day Ahead Market Information

Extra slides follow

Three minutes silence for Boxing Day Tsunami Disaster

5th January 2005

