Gas Demand Side Response

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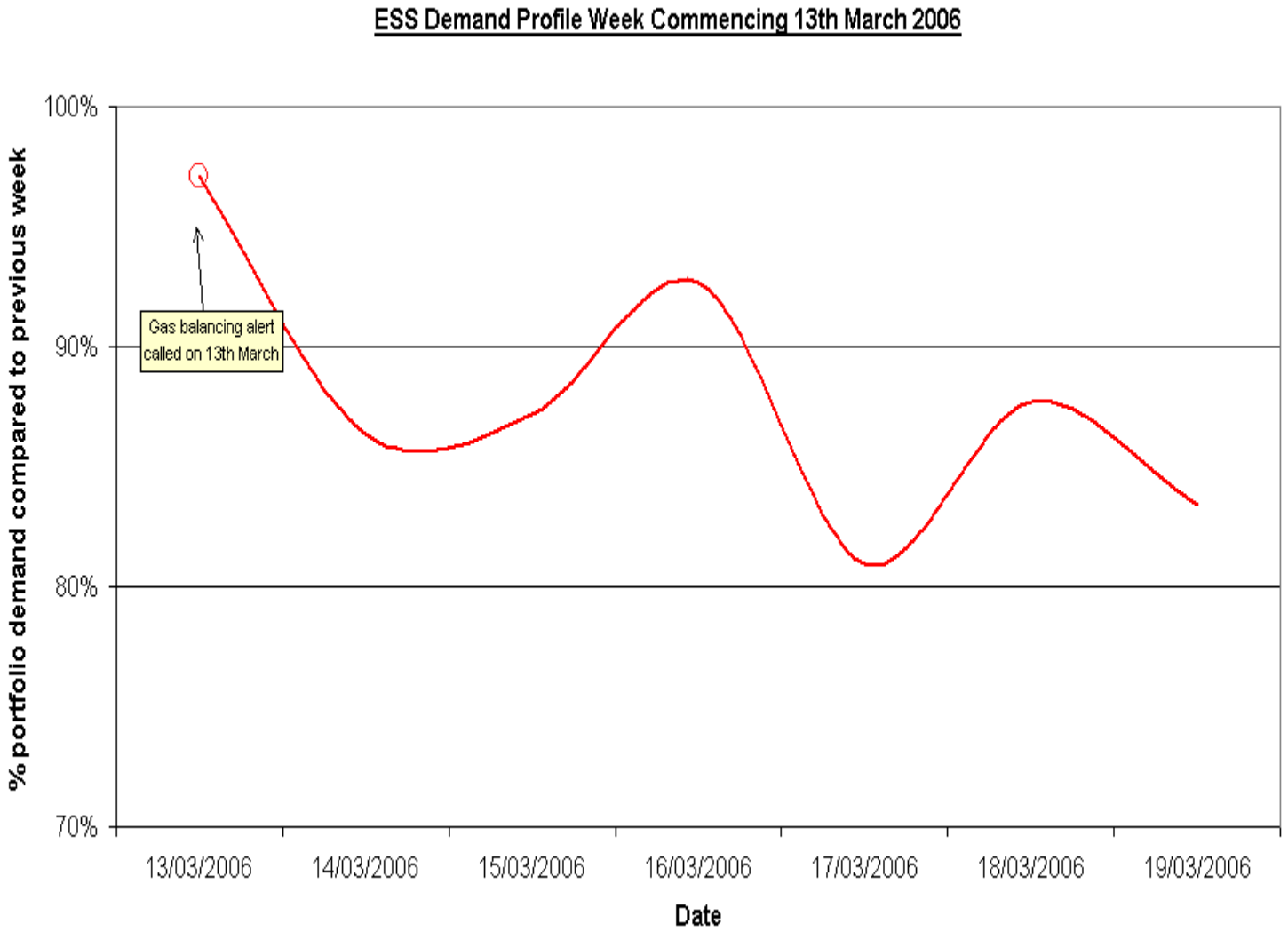
Winter 2005/6 Demand Side Response – GdF ESS

- Minimal demand response except CCGT and “demand destruction”
- Response entirely price driven
  - Reliant on customers who were exposed to short term prices
  - Limited response from customers who had hedged
- Concerns regarding next Winter
  - Buying behaviour may alter to move away from Day Ahead
  - Customers are much less price responsive to potential opportunities rather than avoiding costs.
- Our Customers response
  - 13th March 170,000 therms (P70)
  - More response on 14th and in the rest of the week

Customers Response

- Why was response higher after 13th March
  - Day Ahead Prices for 14th onwards much higher than for the 13th
  - 13th – 59.8p/th vs 14th – 195 p/th
- Customers need time to respond
  - Decide on trigger level
  - Discover the amount of alternate fuel available
  - No incentive to prepare
  - Switching may take time

Demand Side Response (&lag)



Why do we need gas demand side response?

- Prevent progressing into a gas deficit emergency and:
  - Help NG Gas by reducing the need for residual balancing
  - Facilitate market compensation for customers
- Supplies may not meet demand due to:
  - Very cold weather
  - Supply side failure eg. Storage, Beach, LNG, Interconnector
- How much demand side response is needed?
  - NG Gas 1 in 10 scenario for winter 06/7 requires 50-60mcm demand side response
  - Relatively low levels of demand response seen so far
    - 83% volume CCGT, 17% volume from customers

Where will Demand Response come from?

- Gas fired Generation
  - Response is limited due to impact on electricity plant margins
  - Limited availability/Reliability on fuel switching
- Customer Response
  - 1st priority is to run their business not sell gas
  - Fingers burned by exposure to short-term prices winter 05/6 therefore self-interrupt
  - May exhibit more risk averse purchasing for winter 06/7
- Demand response could be more restricted next winter if no further incentives

Market benefits of increased certainty of demand response

- Achieves greater certainty about actual demand reduction deliverable on the day
- May allow upward adjustment of GBA trigger level
- Customer response avoids passing through problems to electricity market
- Diversifies risk away from storage only options – hedges reliability (eg. Rough)
- Restore confidence in supply/demand balance which may reduce wholesale market volatility and smooth market prices
- Gives better knowledge of firm customers that may be available to respond

Benefits for Customers

- Get compensated for demand response v's no compensation in an emergency
- Guaranteed income from option payments for being available in certain circumstances – incentive to investigate opportunity
- Can still benefit from flexible contracts
- Smaller customers (<10m therms) can participate via shipper aggregation services
- Encourage investment in alternative fuels
- Structured and visible contract conditions for demand response
- Increased awareness within organisations
- Allows for faster decision making and response times

How could products work?

Contract Triggers

- Storage levels, Demand levels, Price Level, GBA trigger level (%)

Product structure

- Quasi-storage - aggregated bundles to mirror storage deliverability (by storage type or facility type)
- NG Gas contract with shipper but dispatch customer directly to avoid time delay
- Prices structured to best encourage investment in switching fuels by:
  - Option fee and exercise price or
  - Option fee, exercise fee plus exercise price
- Customers shouldn't be limited to contracting with their supplier

Issues for gas demand side

- Should all demand side offers be taken irrespective of price? (Before Emergency Procedures are used)
  - What is the true value of demand side response?
  - Where should offers be curtailed?
    - Fixed volume tender
    - Price capped tender
- Who pays?
  - National Grid/Transporters?
    - Protection from 3rd party claims if firm load shedding occurs
    - Impact on Incentive Scheme?
    - Demand side assists the system operator
  - Domestic Customers?
    - Domestic customers gain additional security
  - Shippers who are short?

Summary

- Improved Scheme vital to enable demand side response to prevent emergency measures
- Incentive for customers to participate
- Follow the lead given by Electricity
- Increased Demand Side Response could
  - Increase Security of Supply
  - Dampen Price Spikes