

# Winter Outlook 2006/7

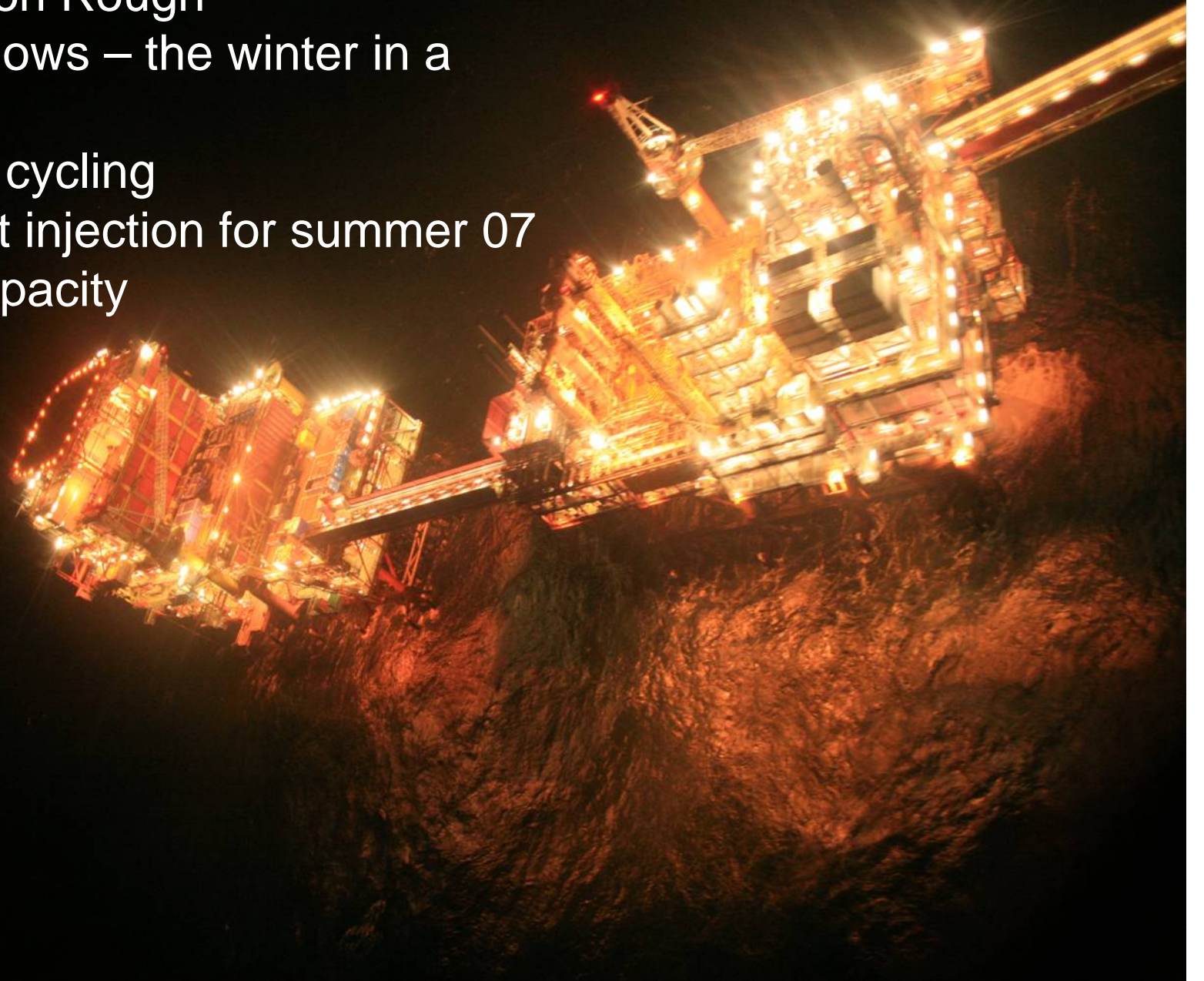
## March/April 2007

**James Lawson**  
**Centrica Storage Ltd.**

The Centrica Storage logo is located in the bottom right corner of the slide. It consists of the word "centrica" in a bold, blue, lowercase sans-serif font, with a small orange dot above the letter 'i'. Below "centrica" is the word "storage" in a smaller, blue, lowercase sans-serif font. The logo is set against a white rectangular background.

**centrica**  
storage

1. Introduction to CSL
2. Update on Rough
3. Rough flows – the winter in a slide
4. Storage cycling
5. Forecast injection for summer 07
6. Entry capacity



# CSL overview



**Hedon, near Hull**  
Administration/engineering



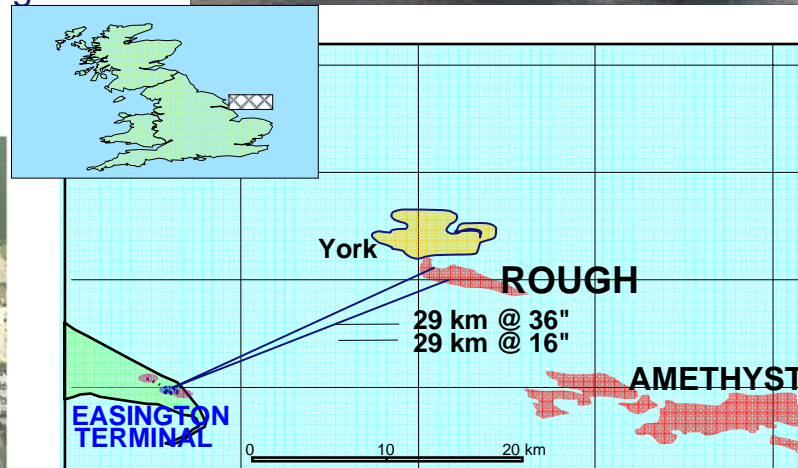
**47/3B**  
Installed 1983



**47/8A**  
Installed 1977



**Easington Terminal**  
Rough gas processing  
Amethyst gas processing  
Tie in to National Transmission System  
24/7 Operation



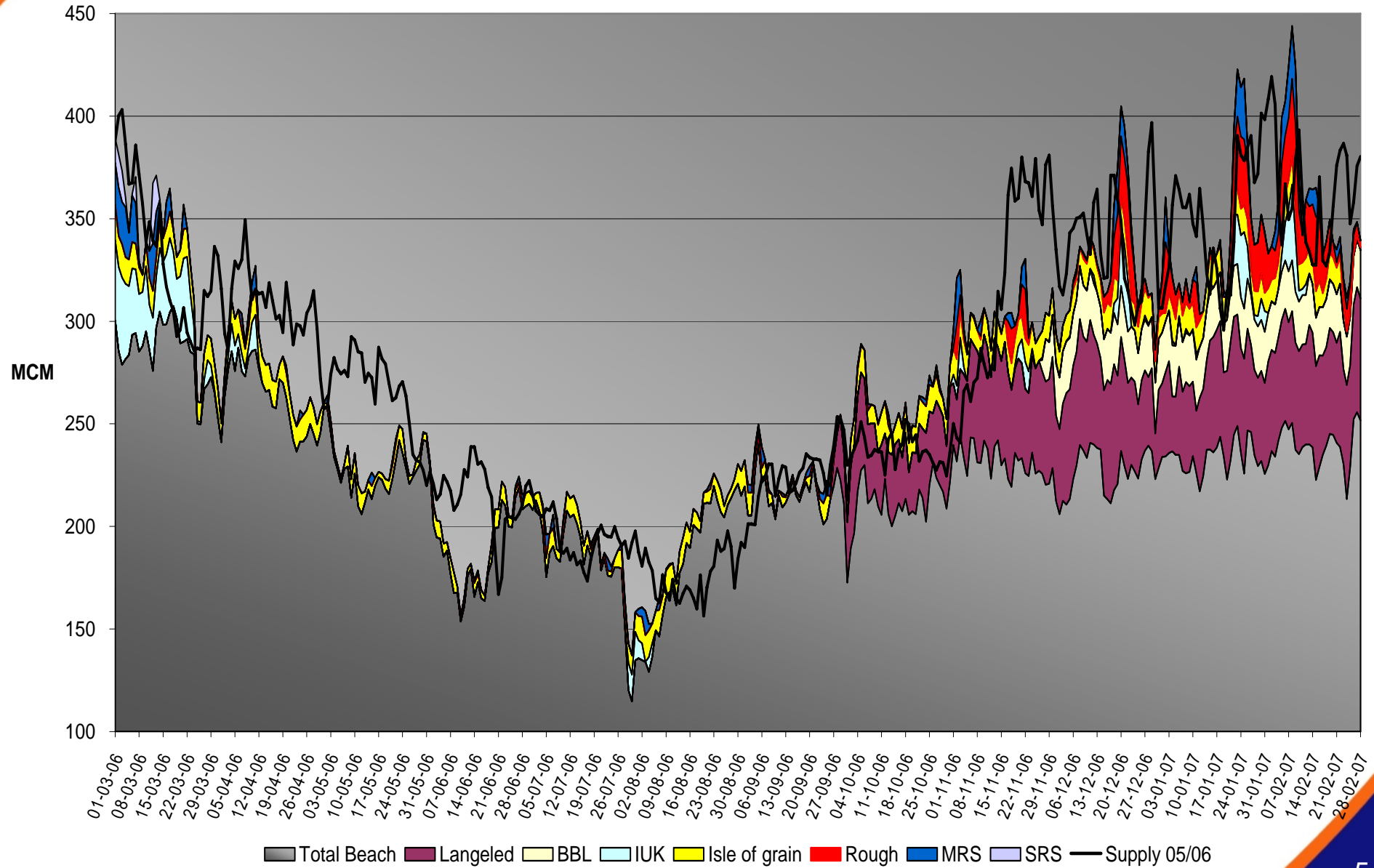
**Venture House,  
Staines - HQ**



## Centrica Storage delivered

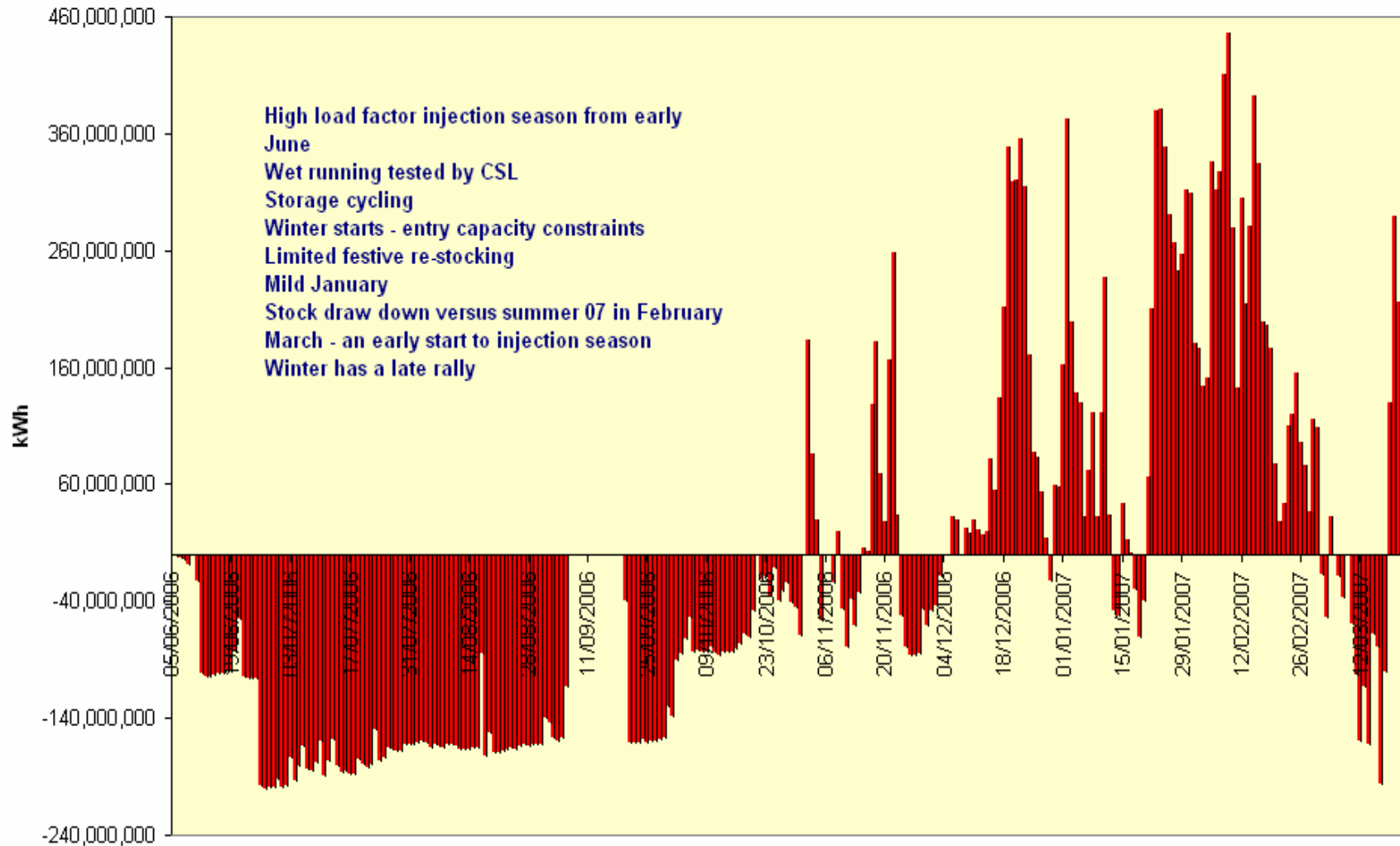
- Restored operations of both injection and withdrawal capacity allowing Rough to be filled and available to customers for winter '06
- Conducted and participated in internal and external investigations into the cause of 16<sup>th</sup> February 2006 incident
- No enforcement action by regulatory authorities
- No LTI's despite > 500,000 man hours of effort in recovery project
- Exceptional charge £48m.
- 100% of customer nominations achieved

# Supply 06/07



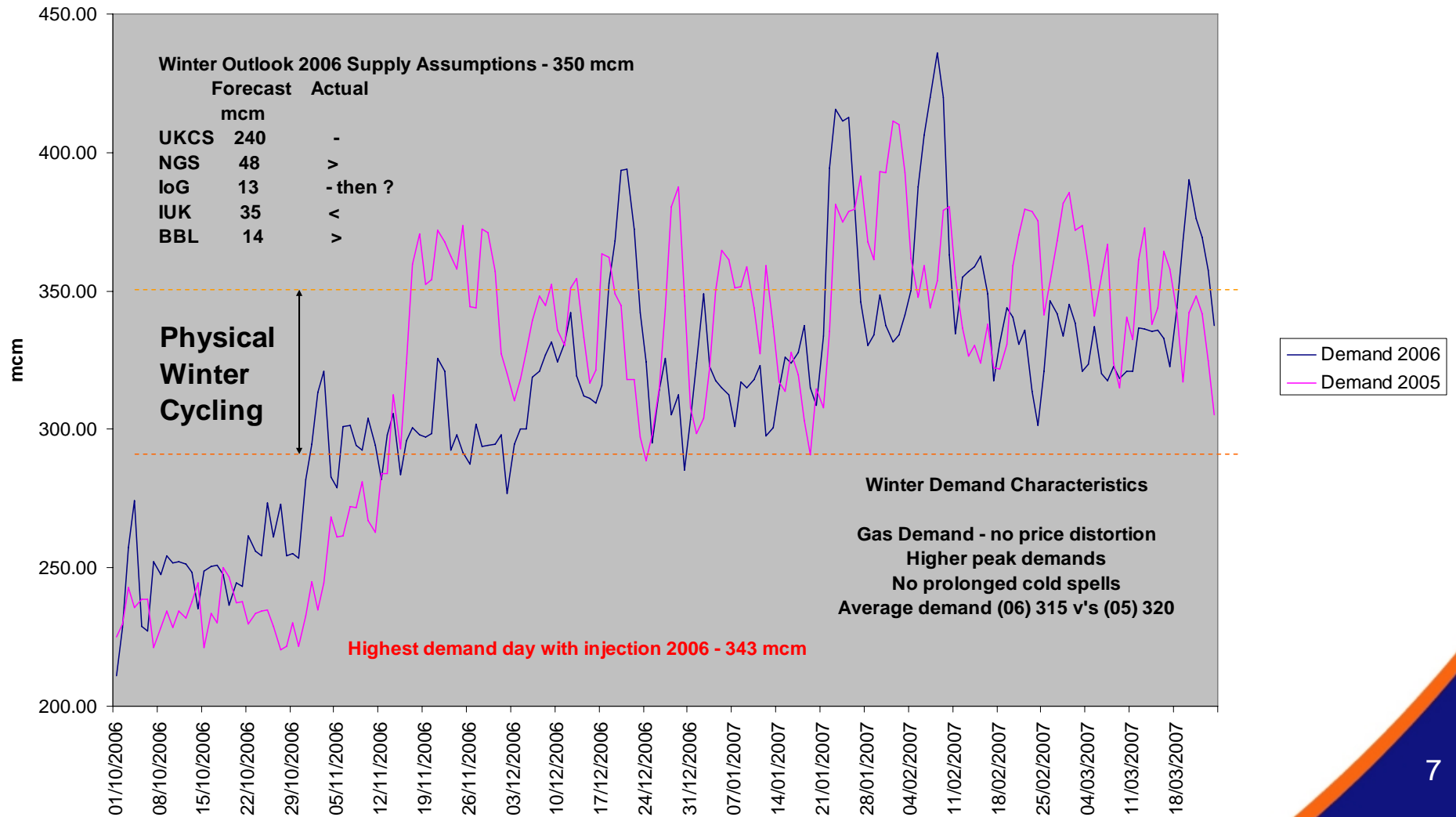
# Rough Storage Flows – 2006/7

Rough Storage Flows - 2006/7

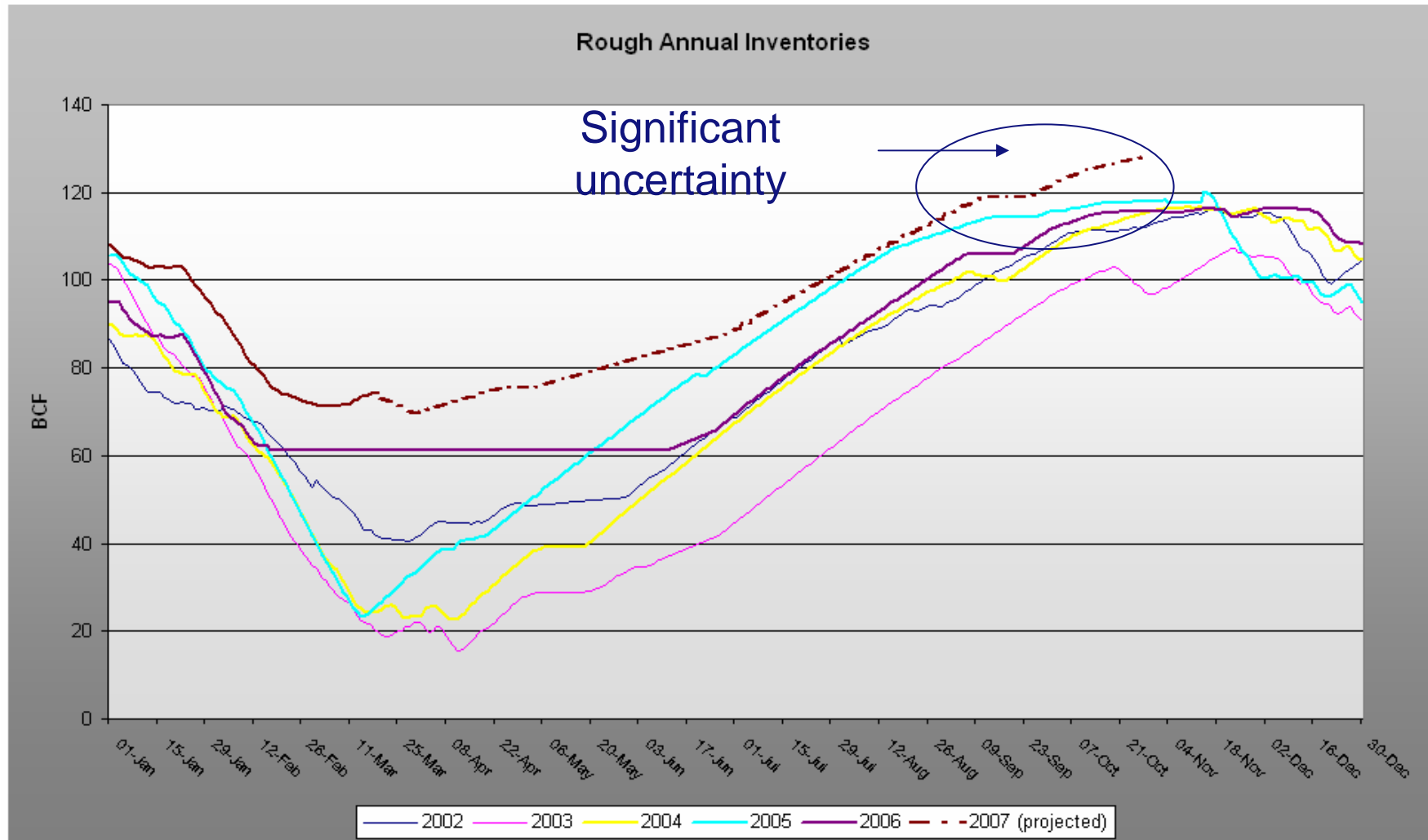


# Storage Cycling

Winter Demands - 2005 v's 2006



## Forecast and actual injection performance for the last five years

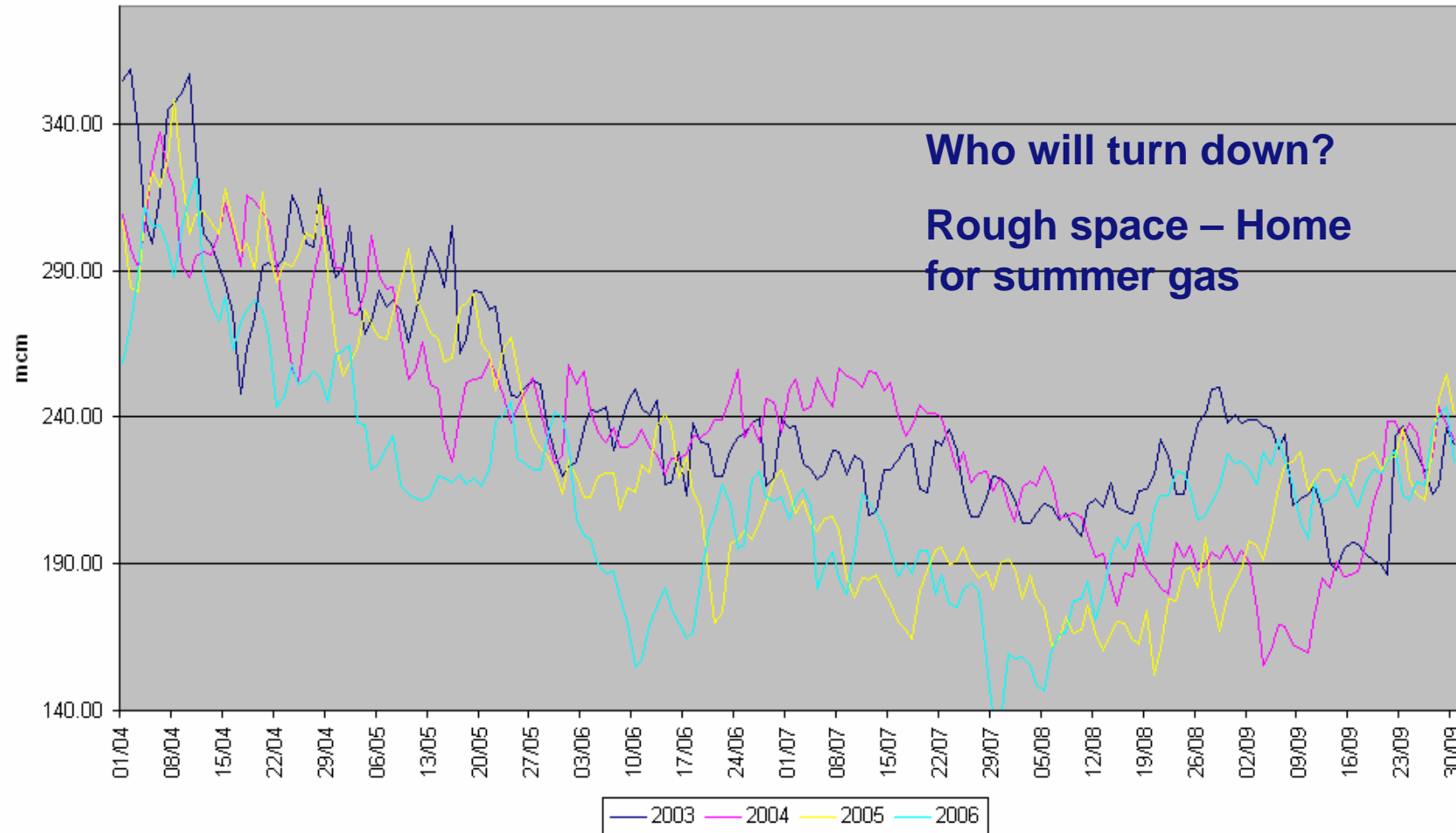


These stock levels will be dependent on customer nominations  
Released Space currently 115 bcf – 64% full

# Summer Outlook

## Anticipated Summer Demand Levels

Summer Demand





Can we  
build it?



## Entry Capacity – Functioning Market

- Functioning market
  - Responding to signals
  - Dynamic – always the need for change
  - Appropriate mechanism for facilitating change
  - Regulatory debate



## Entry Capacity – A system issue

Page 29. Gas Transportation Ten Year Statement, December 2005.

“Our supply forecasts, therefore, provide a range of potential supplies at each entry terminal. Ultimately, however, investments in the NTS will only be made where there is firm evidence that they are required. This will be determined through a combination of auction signals and consultation with industry stakeholders.”

Page 56. Gas Transportation Ten Year Statement, December 2006.

“The 2006 investment planning process has been undertaken on a similar basis to those conducted in previous years, with the TBE consultation process providing the primary source of information, supplemented by auction signals.”

Similar wording in each TYS since 2003!



## Entry Capacity (2)

### Suitability of Long Term Auctions for the Entire Market

– ERGEG Open Season (auction signals plus robust forecasts)

- Different User types

- Producing field

- TPA storage

- No incentives to buy long term capacity until the location is constrained

- Only new entrants know this will occur



## Entry Capacity (3)

- **Why did Grid not use its planning process in place in 2003 to propose new investment?**
- **... when did Grid shift investment planning process to apparent sole reliance on auction signals?**
- **... why did Grid shift investment planning process to apparent sole reliance on auction signals?**



## **Entry Capacity (4)**

- **Booking of long term entry capacity at Easington together with NGG's annual consultation process on supply/demand provided appropriate signals to invest in 2003**
- **December 2004 – TBE statement included plans for substantial new investment to increase capacity at Easington and Aldborough (Trans-Pennine link / green field compressor?)**
  - **Are we now seeing the results of delays in this reinforcement?**
  - **Have Langedled flows surprised everyone?**
- **Extension to lead-times**

## Entry Capacity (5)

Wider issue than Easington – Issues at entry points involving new supplies trying to access the market

<b>Baselines (Price Control)</b>	<b>New Build</b>
Teesside	St Fergus/Bacton
All LNG Sites	Milford Haven/ Isle of Grain
Net >1 in 10 units of baseline removed from April 2007	Easington/Garton

(mcm)	<b>2002-2007</b>	<b>Initial Proposals – June 2006</b>	<b>Update Proposals – Sept 2006</b>	<b>Final Proposals Dec 2006 2007-2012</b>
<b>Easington</b>	98	136	128	98
<b>Teesside</b>	70	70	63	33

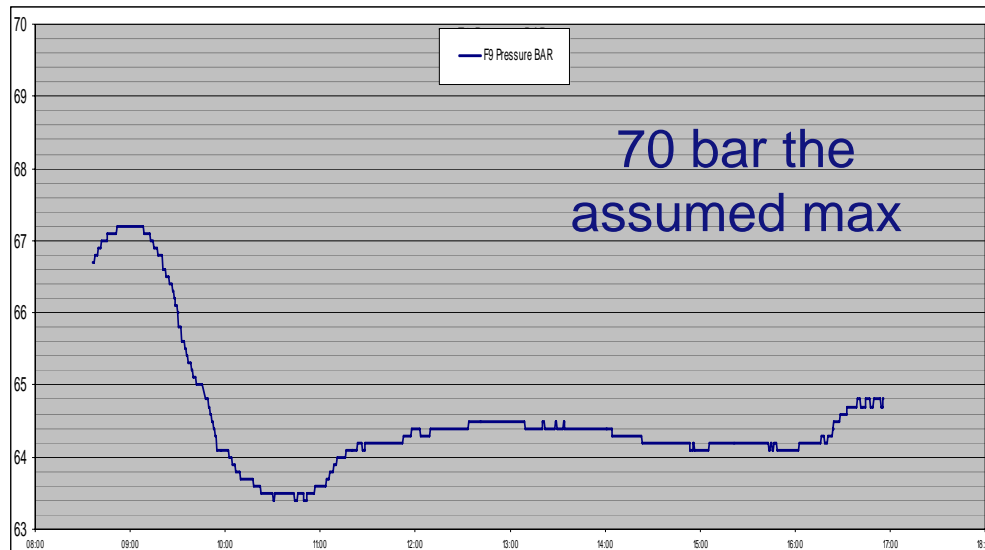
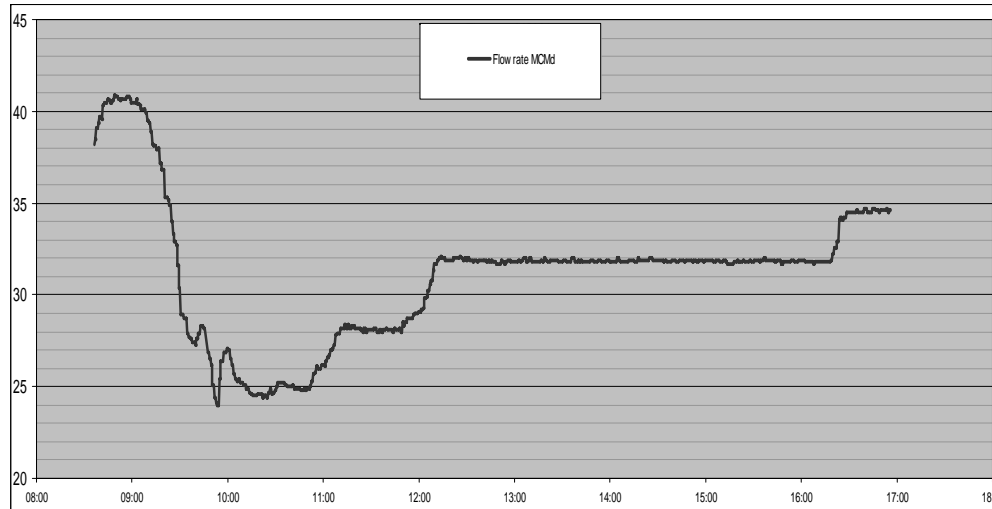
Is this due process?



## Entry Capacity (6)

- **In 2005 CSL participated in the Long Term auction despite our contention that**
  - **investment signals for new entry capacity at Easington were already clear since 2003**
  - **we still don't know if our customers are also competing for the same units for the same purpose?**
  - **Is this efficient?**
- **For the interim we have to look at**
  - **Creating transparency and accountability about Grids performance on capacity release;**
  - **More transparency on Grid Pressures/compressor configs; and**
  - **development of a transfer mechanism to move capacity between terminals.**
    - **Entry capacity buy back mechanism is repeatedly used to stall modification development and dilute investment incentives;**

# Feeder Pressures – A typical day



- Easington Feeder pressures significantly away from maximum at curtailment

- Within day interruptible fully constrained – never partially

- No within day firm capacity released

- Interruptible never reinstated

- UIOLI from CSL – effective

- Configuration of compressors on system

- Incentives

- baselines v's operationally available

- curtailments and energy balancing/linepack incentives

- Actual operational capacity at Easington likely to be far in excess of 98 mcm at optimum configuration



## Centrica Storage - Conclusions

- Restored operations of both injection (112 days) and withdrawal capacity with intensive project management in terms of man hours / capital employed after catastrophic failure of cooler unit
- No enforcement action by regulatory authorities
- 100% of customer nominations achieved – 99% physically
- Wet running – likely to stay
  - Sweep rates v's pigging operations
- Key enhancement projects at Rough ongoing to create more storage capacity
- Key now the provision of sufficient flexible entry capacity across the entire network –
  - network changing from North South flows
  - Assumed high load factor pipelines
  - Divertible LNG and interconnected loads



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