Winter Outlook 2006/7
March/April 2007

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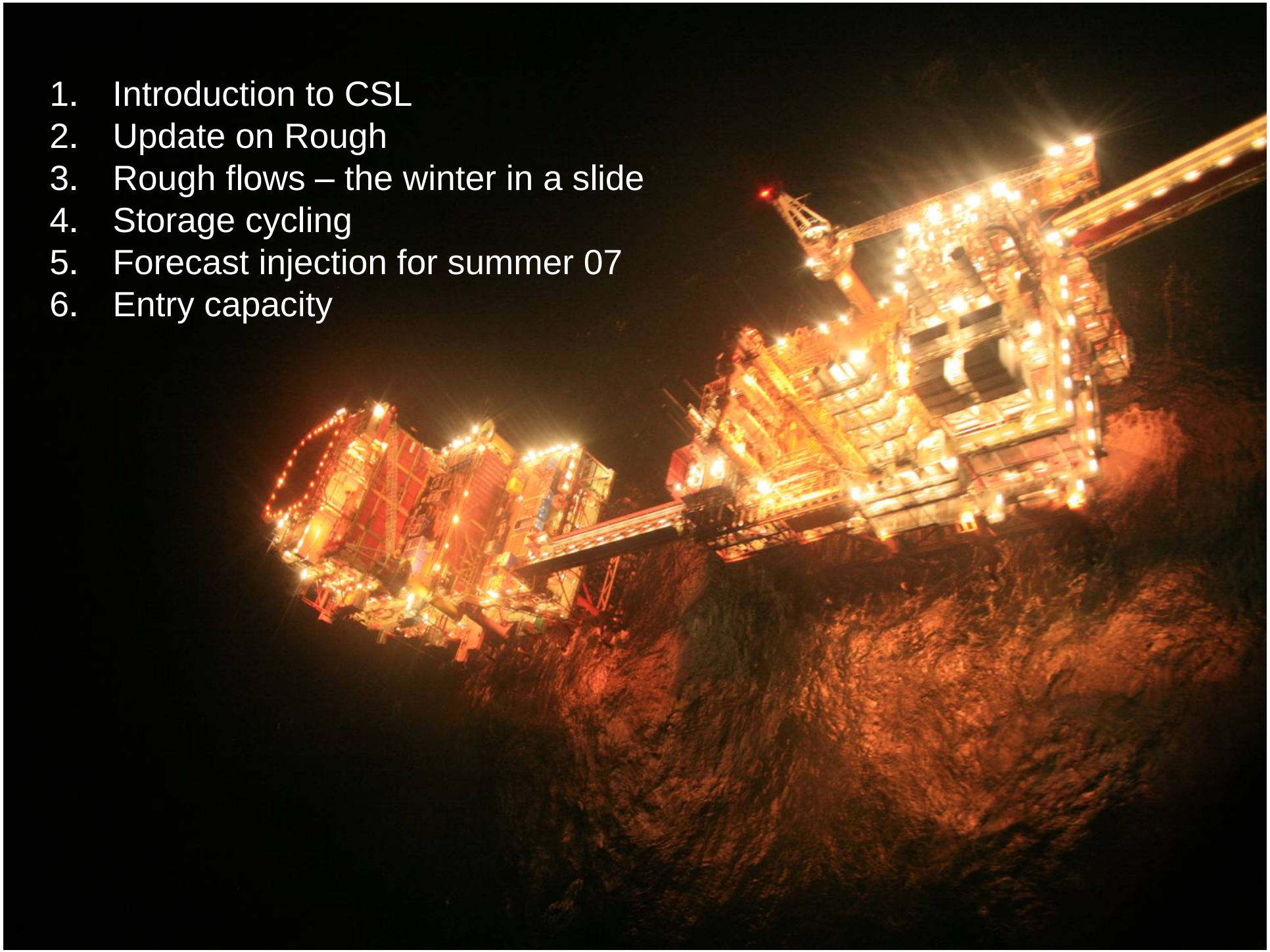
centrica storage

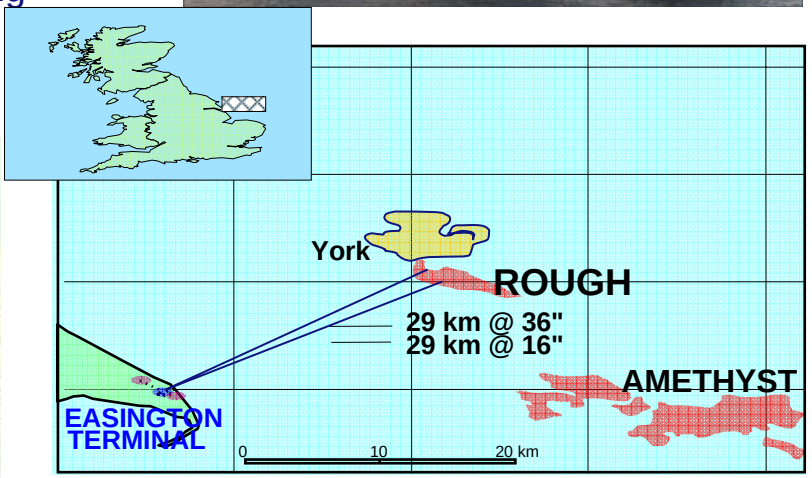
1. Introduction to CSL
2. Update on Rough
3. Rough flows – the winter in a slide
4. Storage cycling
5. Forecast injection for summer 07
6. Entry capacity



CSL overview

Hedon, near Hull
Administration/engineering

47/3B
Installed 1983
24 wells
24/7 Operation



47/8A
Installed 1977
6 wells
24/7 Operation

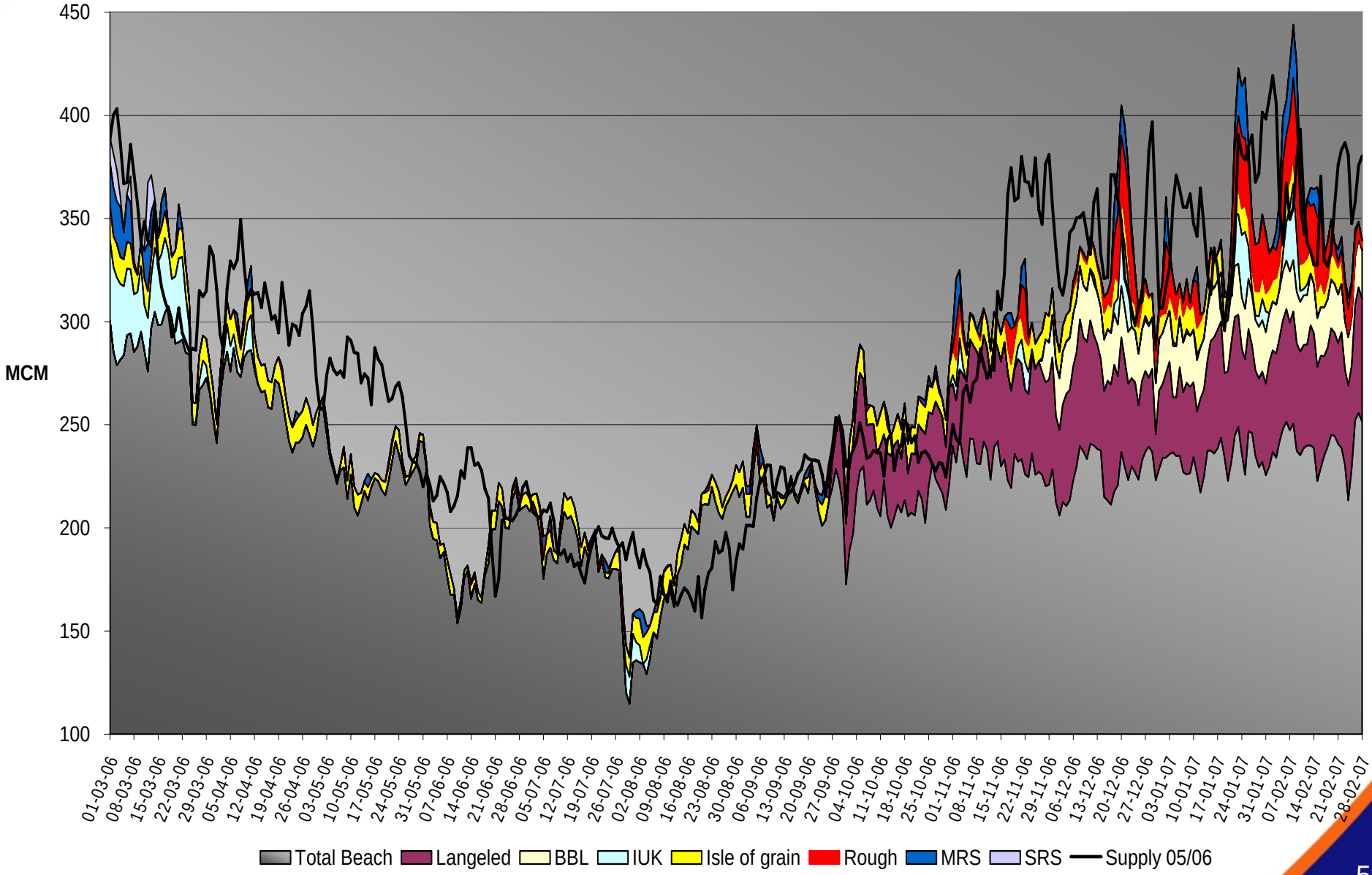
Easington Terminal
Rough gas processing
Amethyst gas processing
Tie in to National Transmission System
24/7 Operation

Venture House, Staines
Headquarters and Commercial office
24/7 Operation

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 16th 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


MCM
450
400
350
300
250
200
150
100
01-03-06
08-03-06
15-03-06
22-03-06
29-03-06
05-04-06
12-04-06
19-04-06
26-04-06
03-05-06
10-05-06
17-05-06
24-05-06
31-05-06
07-06-06
14-06-06
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02-08-06
09-08-06
16-08-06
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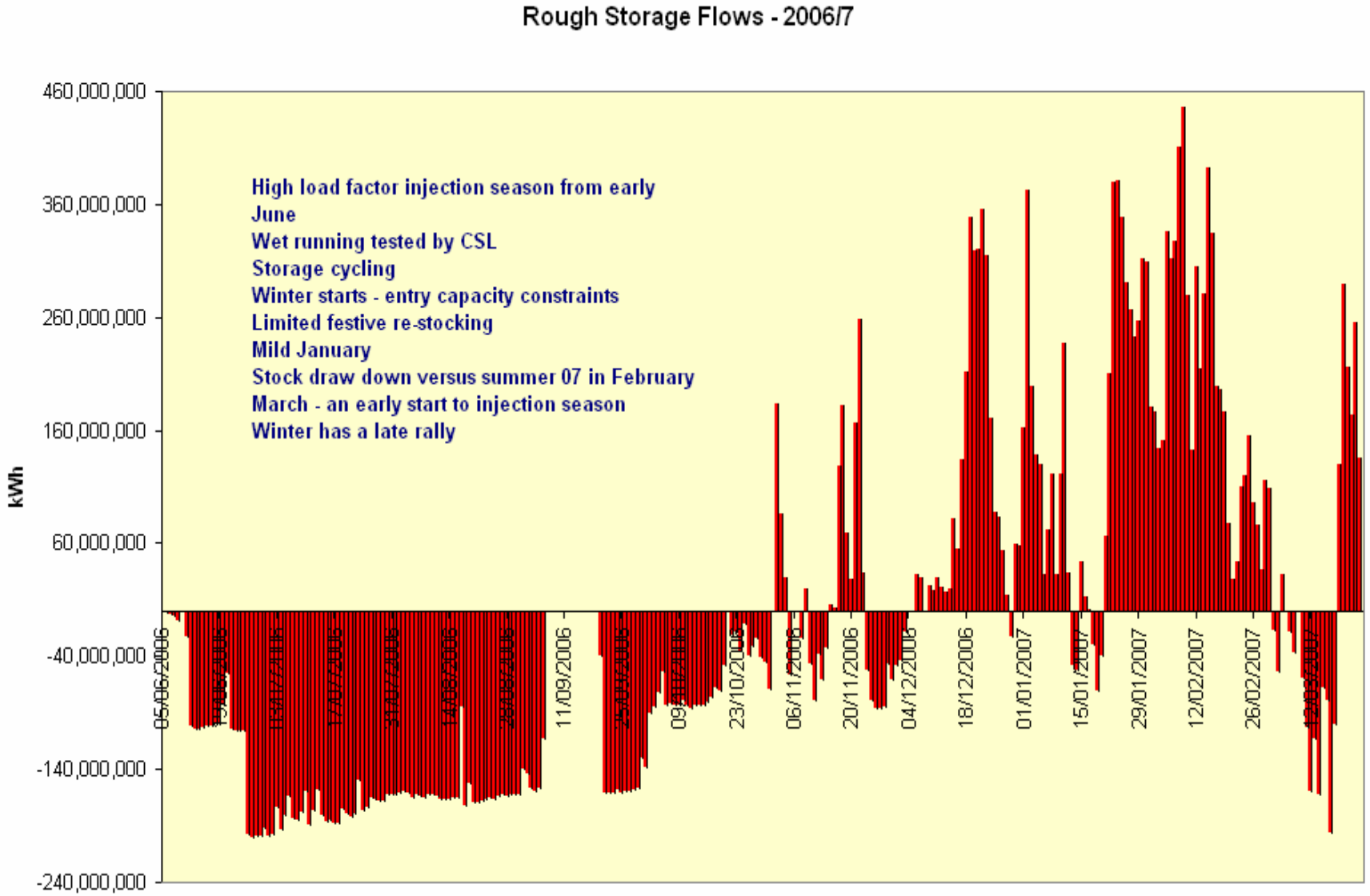
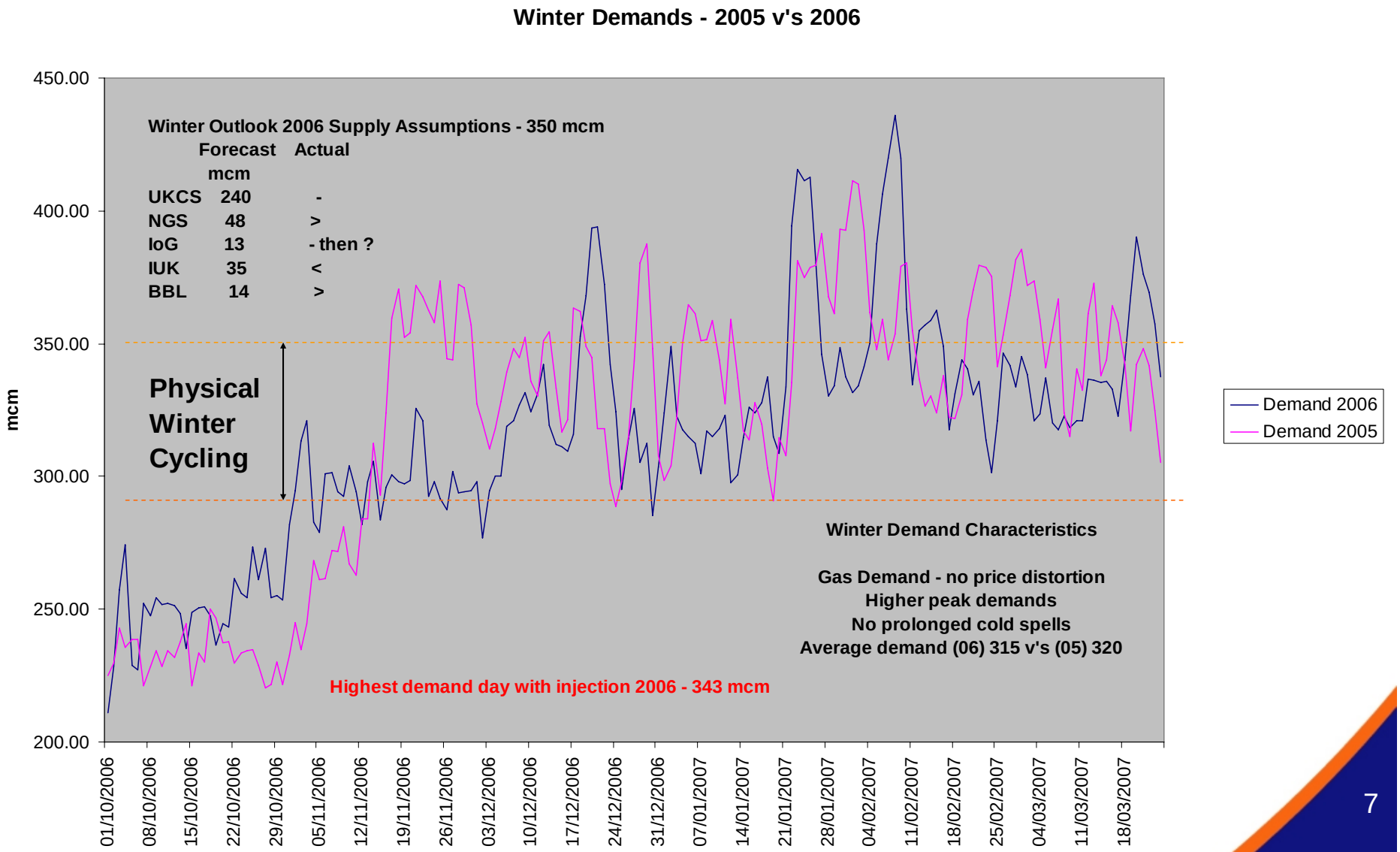
27-12-06
03-01-07
10-01-07
17-01-07
24-01-07
31-01-07
07-02-07
14-02-07
21-02-07
28-02-07
Total Beach
Langeled
BBL
IUK
Isle of grain
Rough
MRS
SRS
Supply 05/06

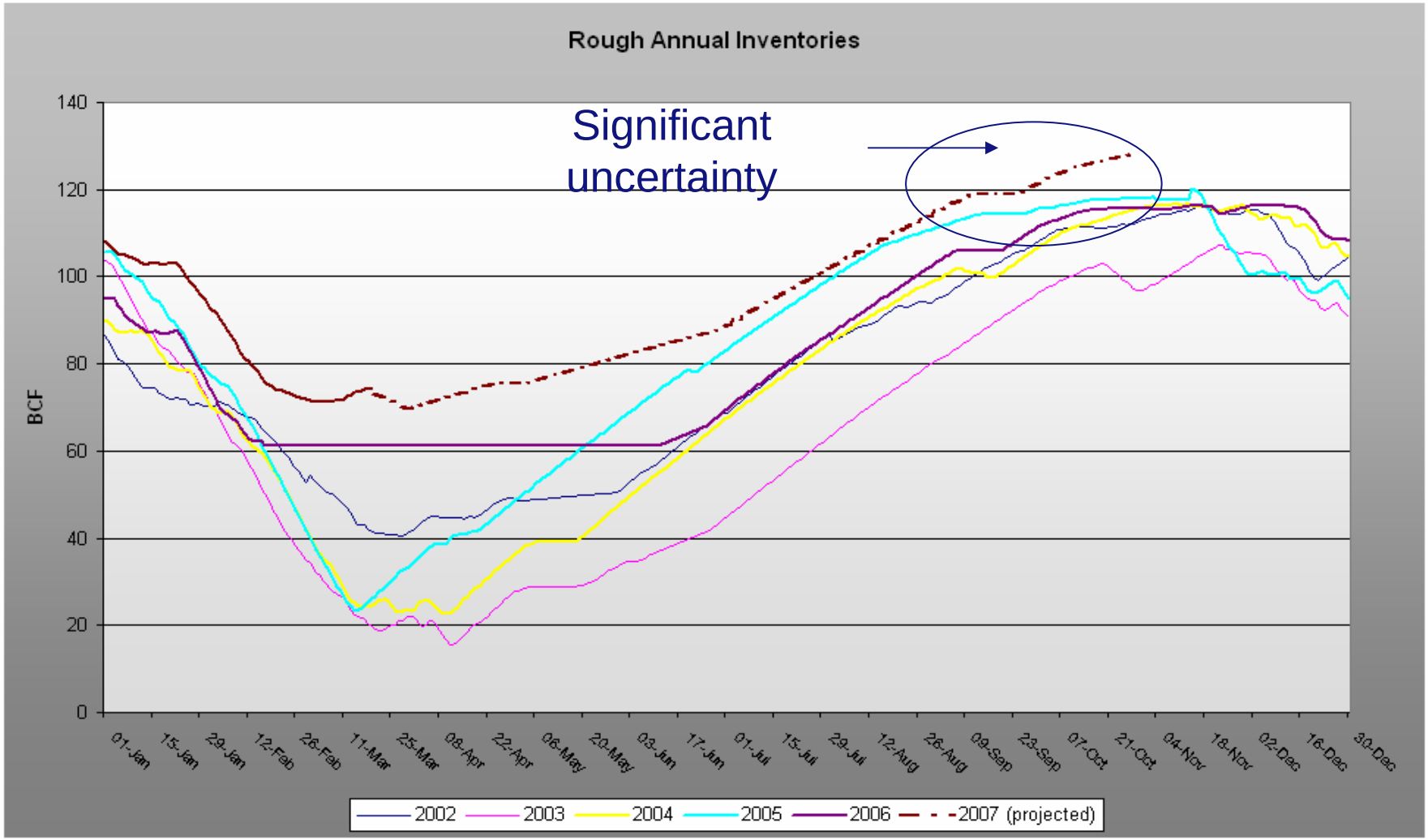
Rough Storage Flows – 2006/7



Storage Cycling

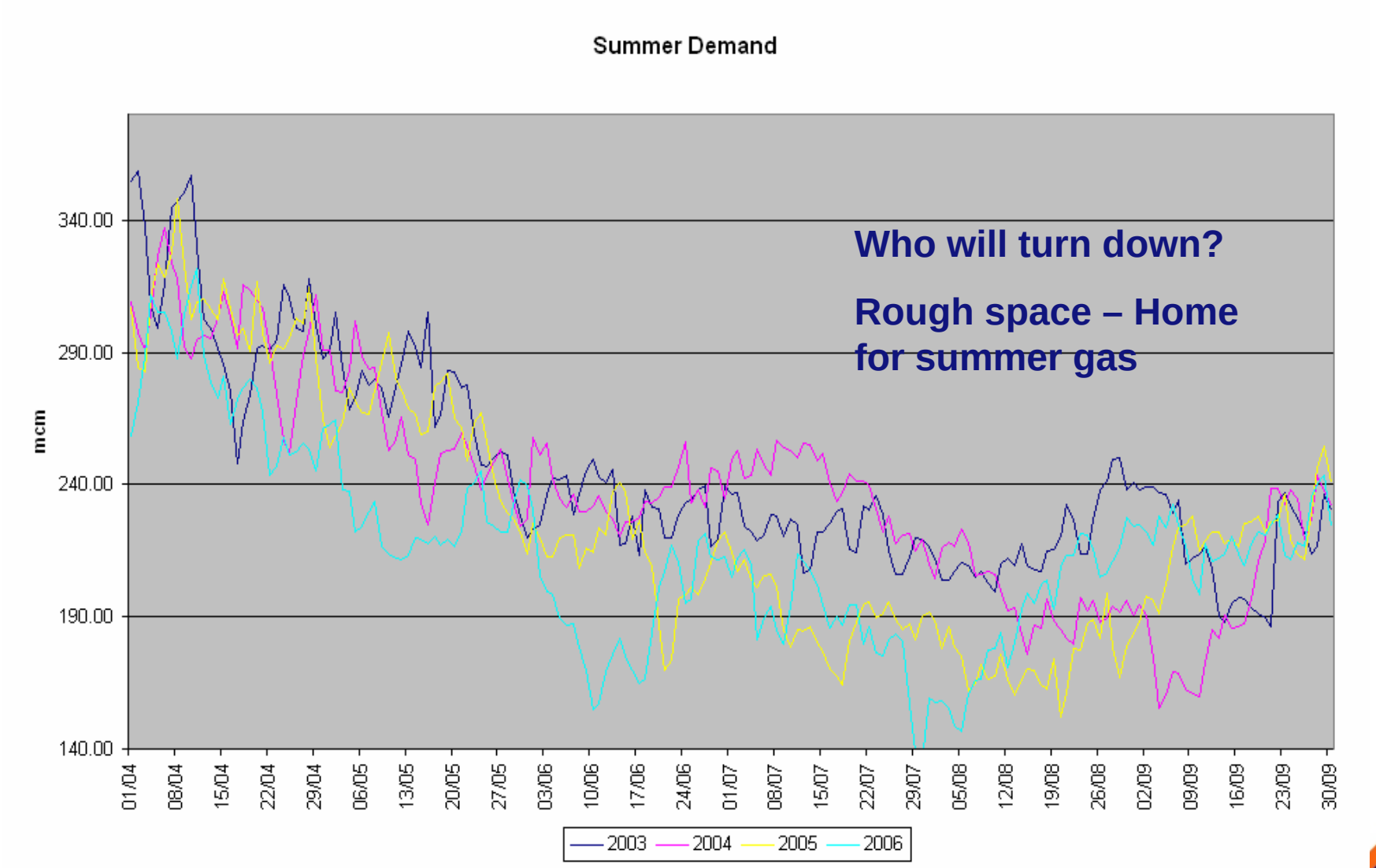


Forecast and actual injection performance for the last five years



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

Summer Outlook
Anticipated Summer Demand Levels



Can we build it?

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)

•Producing field

•TPA storage predominantly booked (and hedged) where the curve is liquid - storage customers therefore not the same as gas field producers as focused on the market – not asset life

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

•Only new entrants know this will occur

Entry Capacity (3)

- Booking of long term entry capacity at Easington together with NGGs annual consultation process on supply/demand provided appropriate signals to invest in 2003
  - Rough existence
  - National Grid can see new entrants buying capacity within the long term auctions to assess what infrastructure is required (i.e. their stated planning process).
- 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 Langeled flows surprised everyone?
- Baseline expansion extended to 4 years in late 2005 at every entry point where new build is needed
- Easington justification was to build a greenfield compressor – no sign of this?

Entry Capacity (4)

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

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

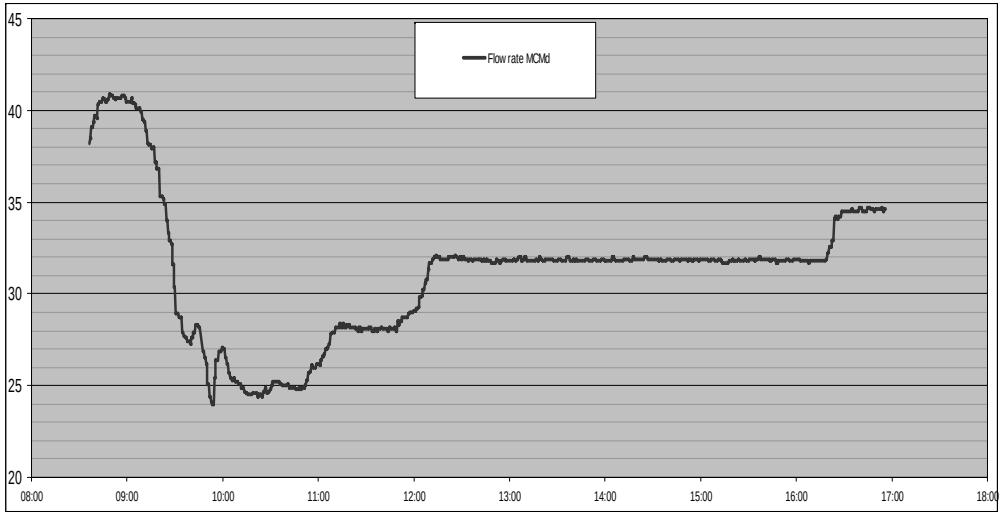
(mcm)	2002-2007	First Proposal	Final Update	2007-2012
Easington	98	136	128	98
Teeside	70	70	63	33

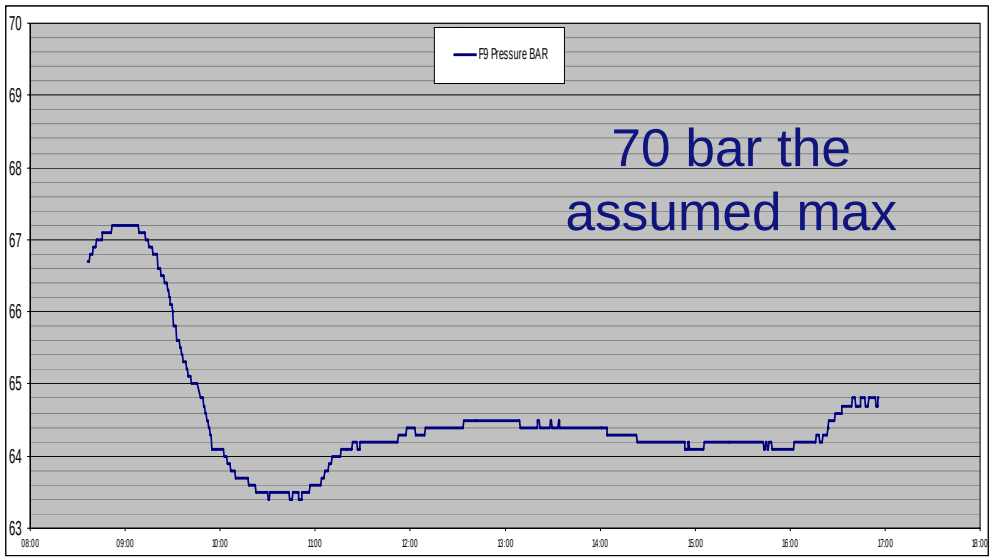
Is this due process?

Entry Capacity (5)

- Why did Grid not use its planning process in place in 2003 to propose new investment?
- … when and why did Grid shift investment planning process to apparent sole reliance on auction signals?
  - Despite what is published in their own documents
- 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
- No transparency to wider market on monopoly decisions – UNC006 for shippers
- Configuration of compressors on system – which terminals are favoured
- Incentives - baselines v's operationally available
- Incentives – curtailments and energy balancing/linepack incentives
  - Price Control negotiation (?)
- 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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