



# **Promises, Promises...**

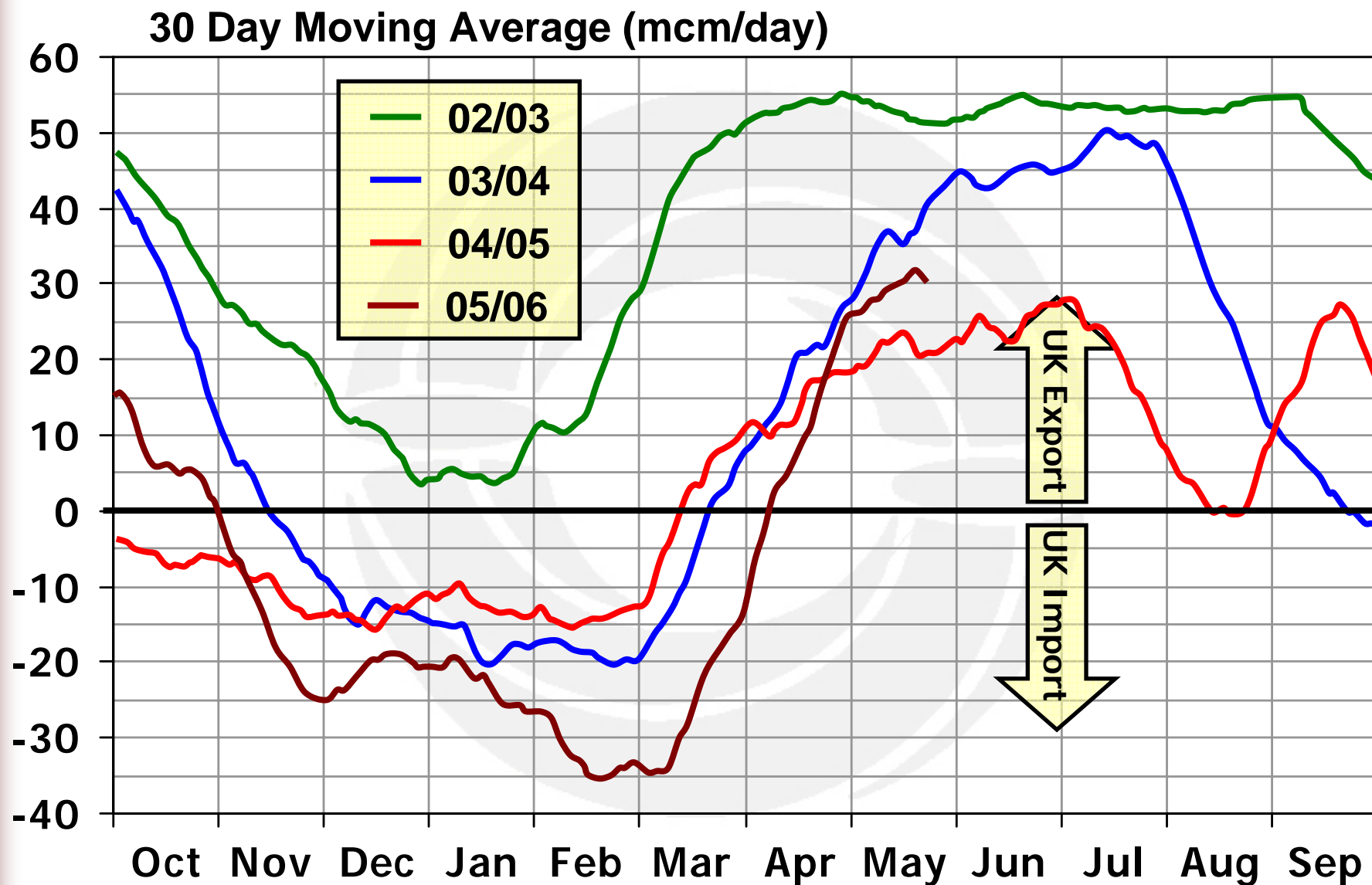
## **UK Gas Supply for Winter 2006/7**

**Roger Cornish – Managing Director, Interconnector (UK) Ltd**



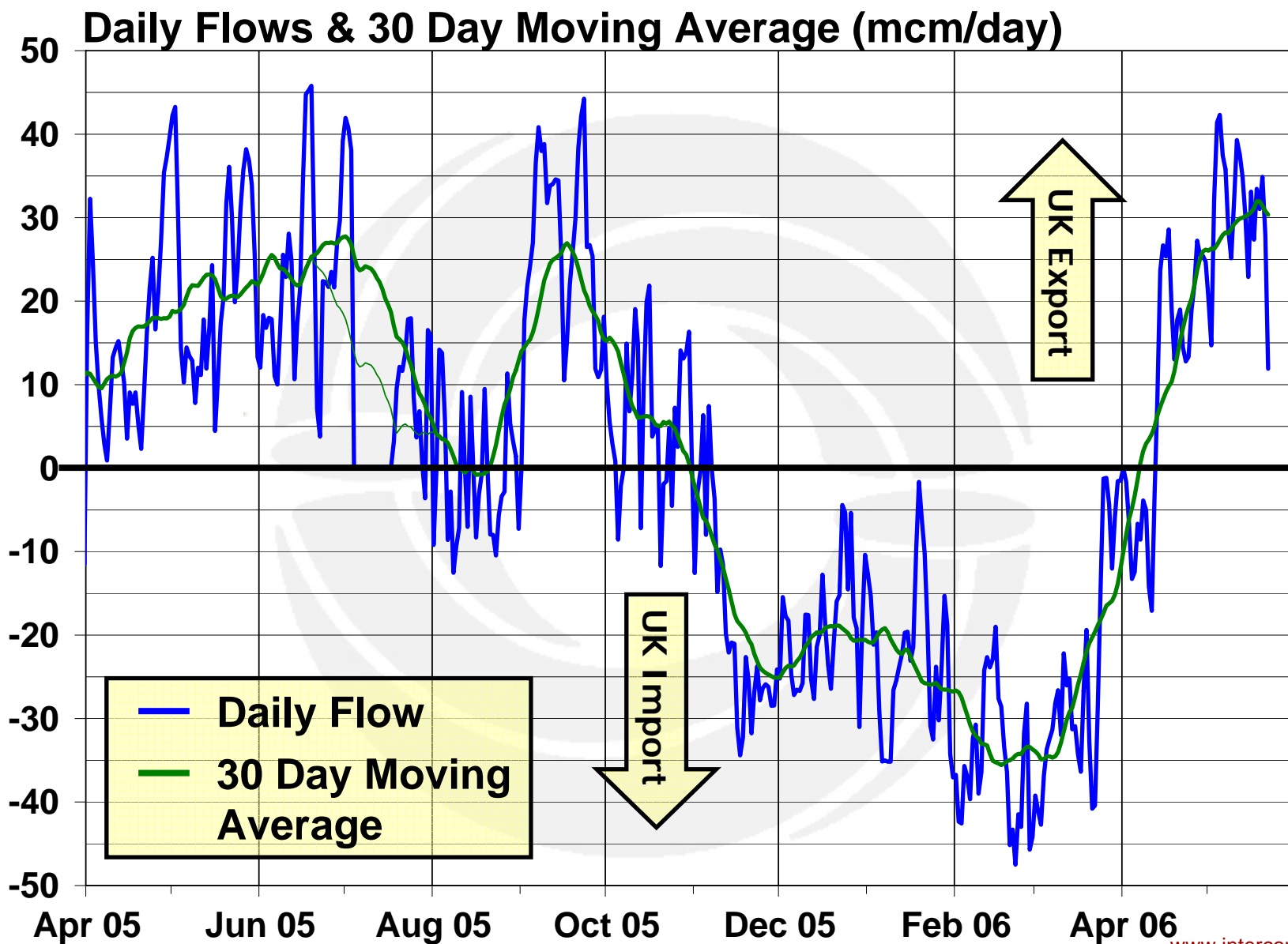


# Historic Flows





## Recent Flows





# Flow patterns on Interconnector

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## **Rough Outage**

Import period prolonged, as unable to use/empty Rough

Rough injection start-up may lead to Interconnector Imports  
(depends on UKCS outages and weather)

## **Isle of Grain settled production?**

May keep Interconnector in export mode for longer

## **Langeled start-up in September**

May keep Interconnector in export mode for longer

## **BBL start-up on 1<sup>st</sup> December**

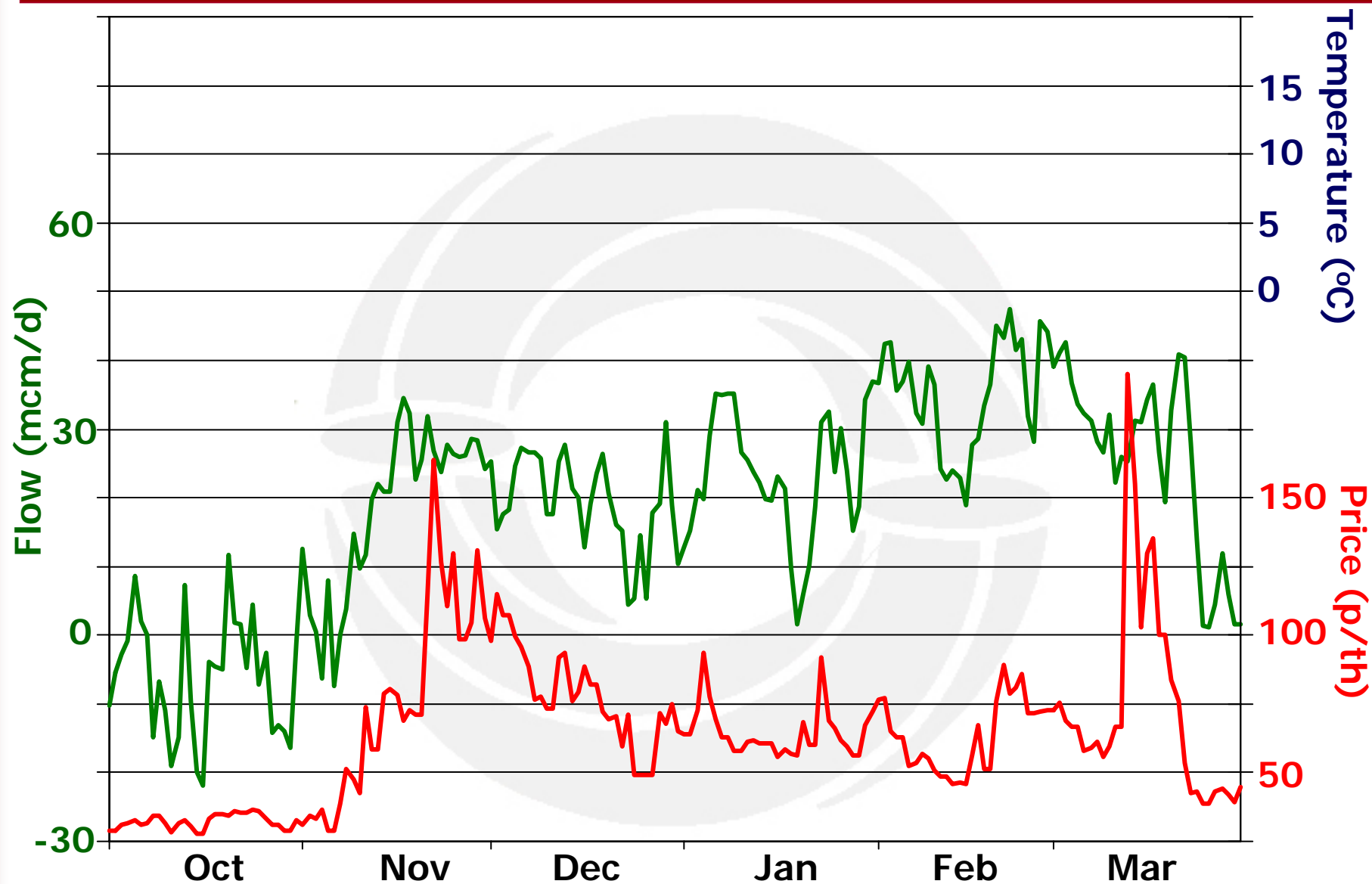
May keep/switch Interconnector in/to export mode

## **Interconnector Phase 2 enhancement on 1<sup>st</sup> December**

May reduce imports from other sources

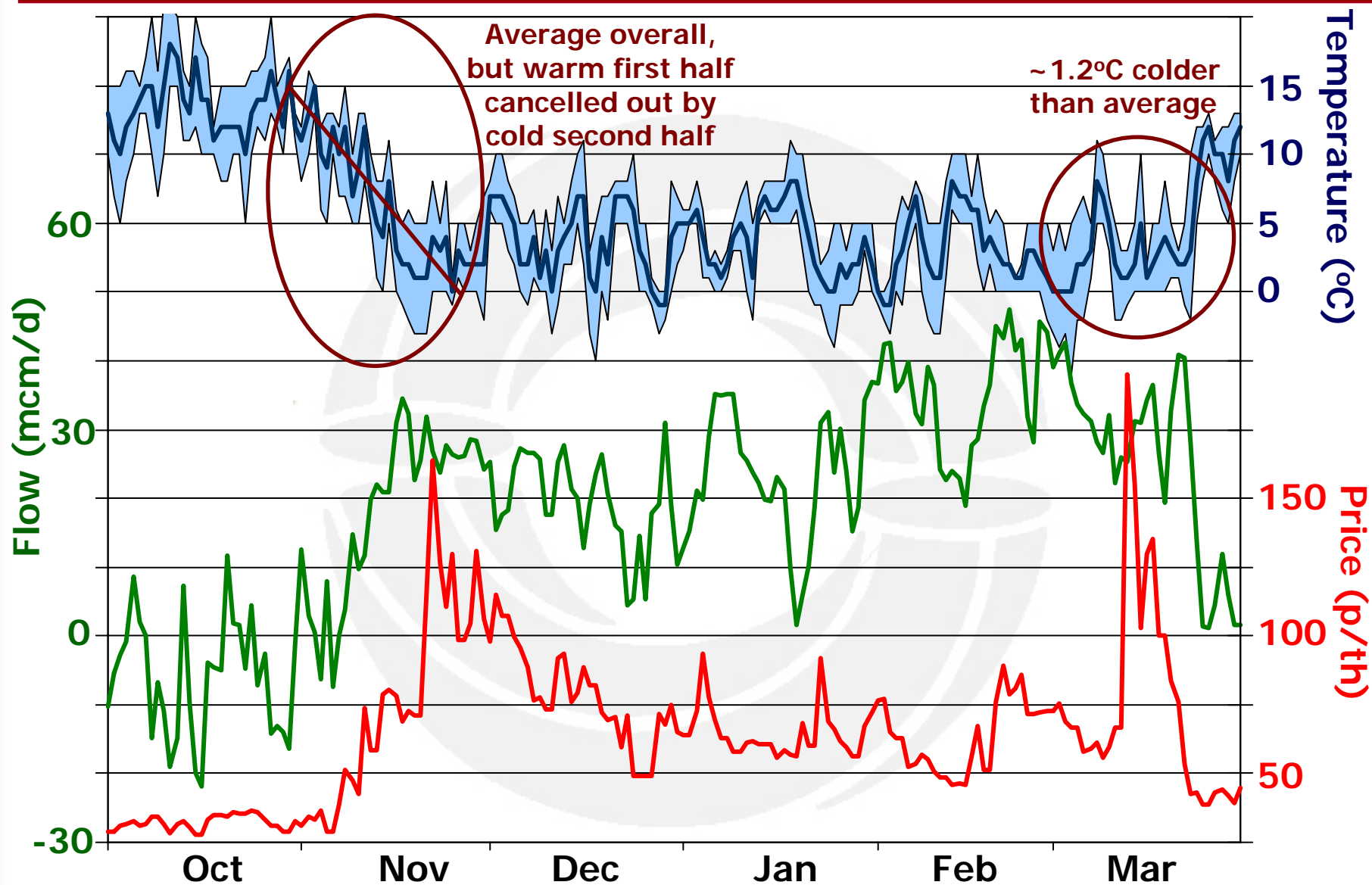


# Interconnector Flows





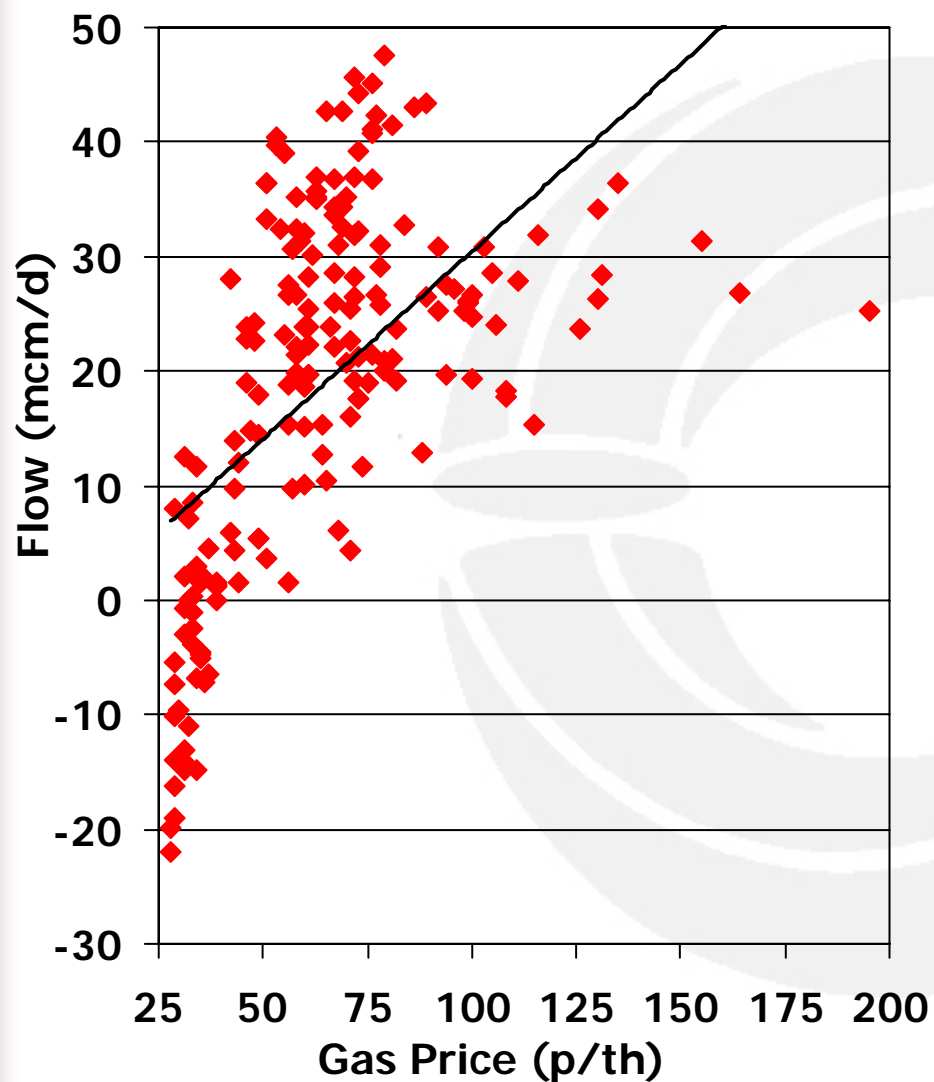
# Interconnector Flows



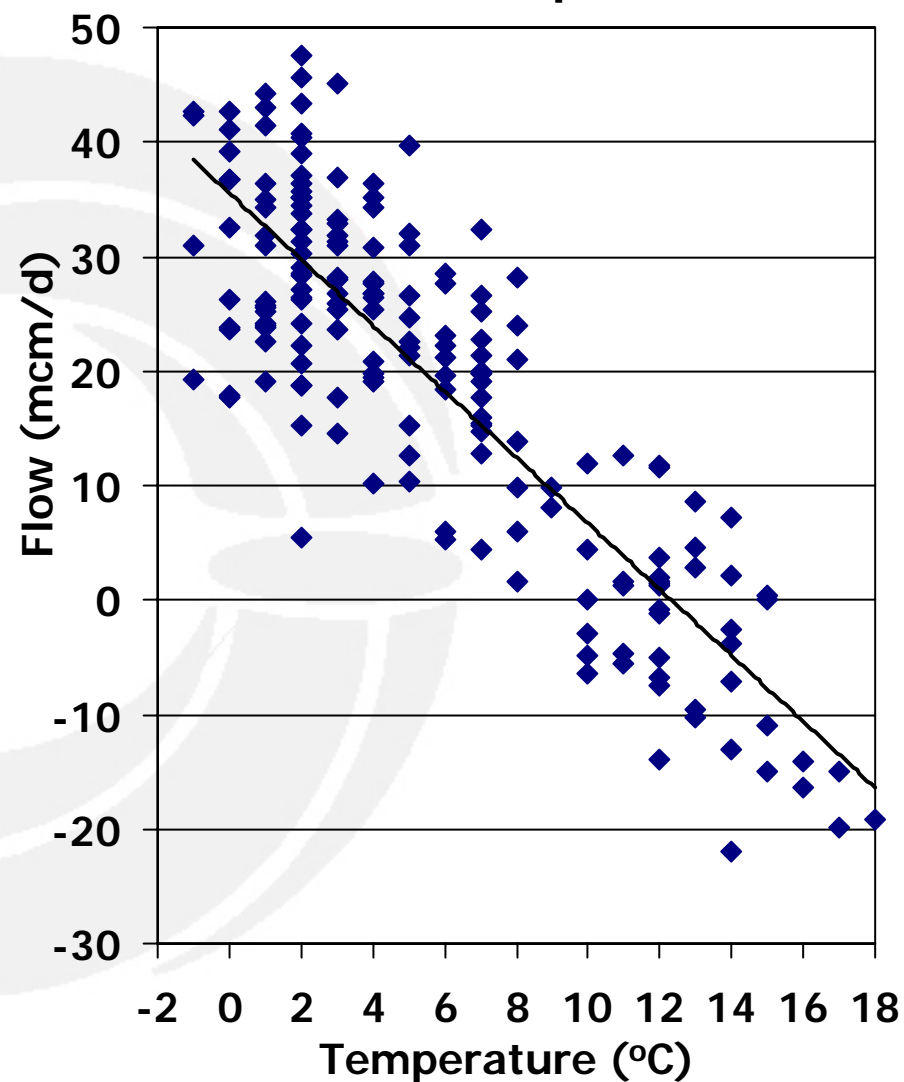


# Flow Correlations

## Flow vs Gas Price

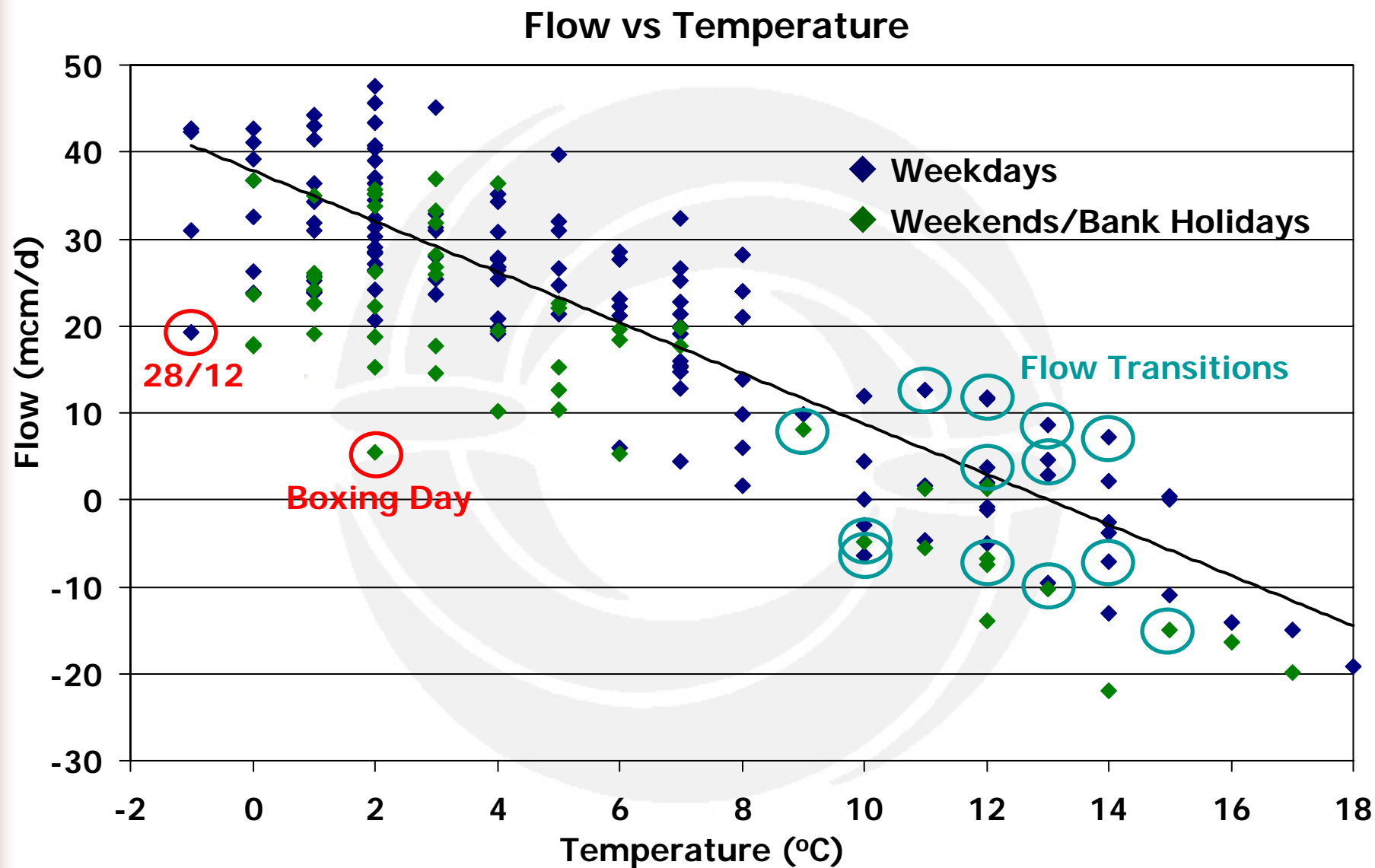


## Flow vs Temperature





# Flow/Temperature Correlation







# **Lessons learned from a winter of discontent**

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## **Infrastructure**

**Privately built infrastructure likely to be built too late for strategic supply**

**Investment signals are poor for the long run**

## **Gas Prices**

**Rose to record levels on the fear of supply crises**

**Emotive talk by politicians, regulators, CBI, Met Office and industry possibly drove prices higher**

## **Demand side response**

**Eased the situation, but do we want it as a regular supply management tool?**



## **Lessons learned from a winter of discontent**

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### **Gas Supplies**

**Interconnector provided a reliable and early expanded service**

**Price alone will not move gas across borders**

**There is no single market**

**Storage can step-up production instantly, traded gas takes longer**

**Complementary infrastructural investment across borders takes time**

### **EU Commission**

**Has assumed responsibility for and commitment to, the borderless market model ...**

**... Will it deliver?**



# Why no gas in the line?

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## **No gas available - no single market**

**Continent unwilling (not surprisingly) to share their stored gas with others until their supply is assured ... or may be not at all**

**Market unable to step-up quickly to meet sudden demand ... why?**

**in future**

## **Limited capacity to deliver gas to the flange**

**IUK announced its expansion in 2002 and adjacent systems will respond by 2010**

**Complementary investment across borders takes time**

## **Gas quality**

**UK gas specification is tighter than the dominant continental specification which may constrain trades and physical flows**



## **No gas available – no single market**

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**Continent unwilling (not surprisingly) to share their stored gas with others until their supply is assured ...**

**... or maybe not at all**

**Pattern of release likely to be the same, i.e. restricted early/middle part of winter with release towards the end**

**Pressure from EU may result in modified behaviour?**

**Storage ownership rules and release still opaque**

**Economic nationalism increasing**

**IUK partly owned by the French state?**





## Unable to meet sudden demand

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**Market unable to step-up quickly to meet sudden demand ... Why?**

**Significant percentage of IUK flows are contracts linking dedicated demand to dedicated supply**

**Response to price is therefore tempered by underlying demand**  
**Liquidity at the Zeebrugge Hub partly reflects an opaque storage system and deters players**

**Levels of liquidity at the Zeebrugge Hub unlikely to change significantly for next winter**



## Limited capacity to deliver gas to the flange

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**IUK announced its expansion in 2002 and adjacent systems will respond by 2010?**

**Complementary investment across borders takes time**

**Zeebrugge LNG upgrading from ~13 mcm/day to 26 mcm/day output for winter 2007**

**German border constraints being partially removed for winter 2006 and completely by winter 2008**

**Belgian transit being upgraded for winter 2010 from 45 mcm/day to ??**

**Other changes to the Fluxys system?**



## Gas Quality (Wobbe)

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**UK gas specification (with respect to Wobbe) is tighter than the dominant continental specification which may constrain trades and physical flows**

**LNG sourced gas at Zeebrugge cannot meet UK specification**

**Zeepipe gas has traditionally met UK specification but is not contracted to do so**

**German sourced gas may not meet UK specification but de-bottlenecking will improve supply quality by winter 2006 and will be able to meet the required specification by winter 2007**

**Gas can be ballasted with nitrogen or blended in order to meet the required specification**

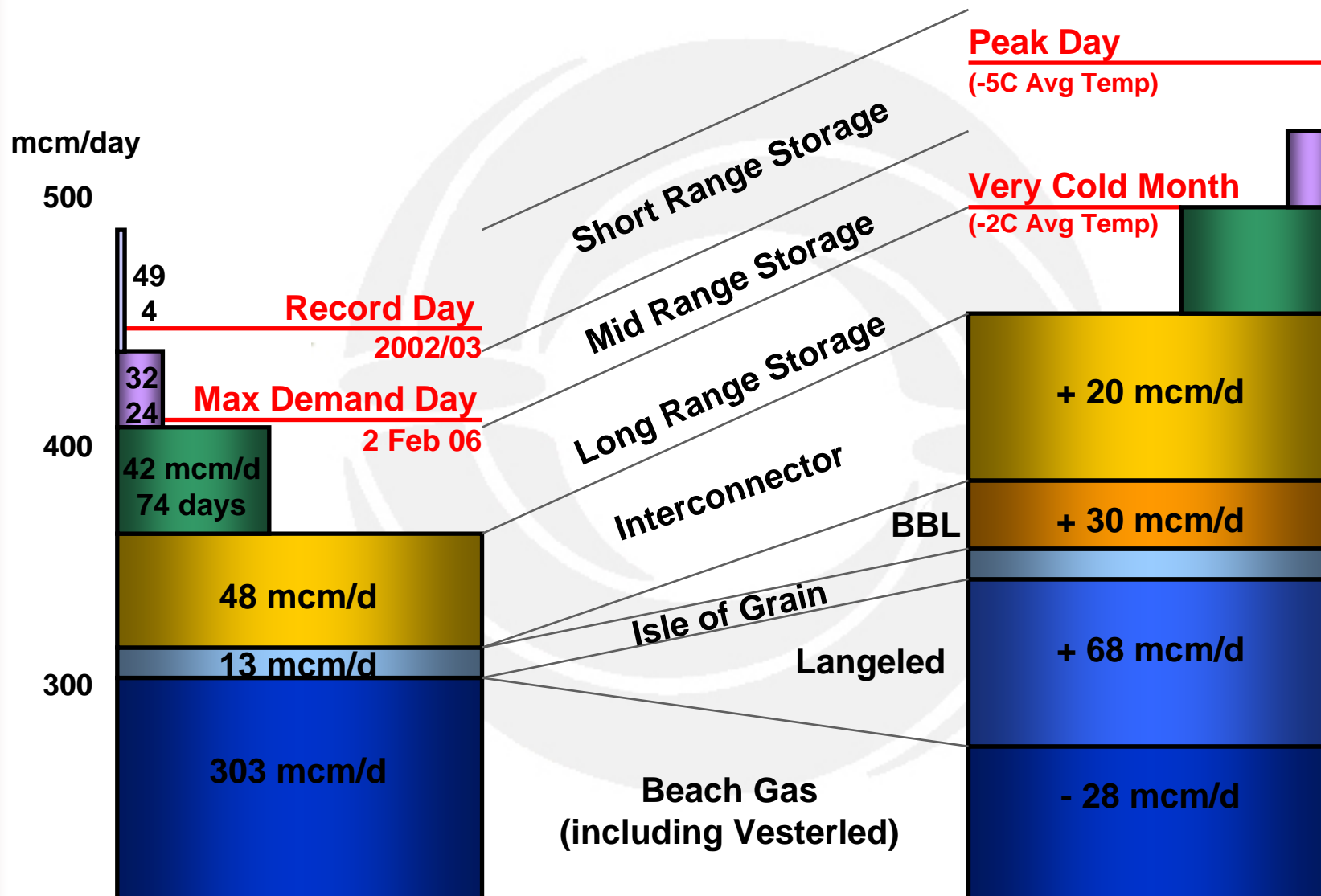
**Either the gas seller should discount its gas or the buyer pay for treatment depending on the market fundamentals**



# Max UK Winter Gas Supply (Capacity)

Winter 2005/06

Winter 2006/07







# Max UK Winter Gas Supply (Flow)

Winter 2005/06  
Maximum Demand Day  
2 February 2006

Winter 2006/07

mcm/day

500

400

300

Record Day

2002/03

Max Demand Day

2 Feb 06

Short Range Storage

Mid Range Storage

Long Range Storage

Interconnector (-50%)

BBL (-25%)

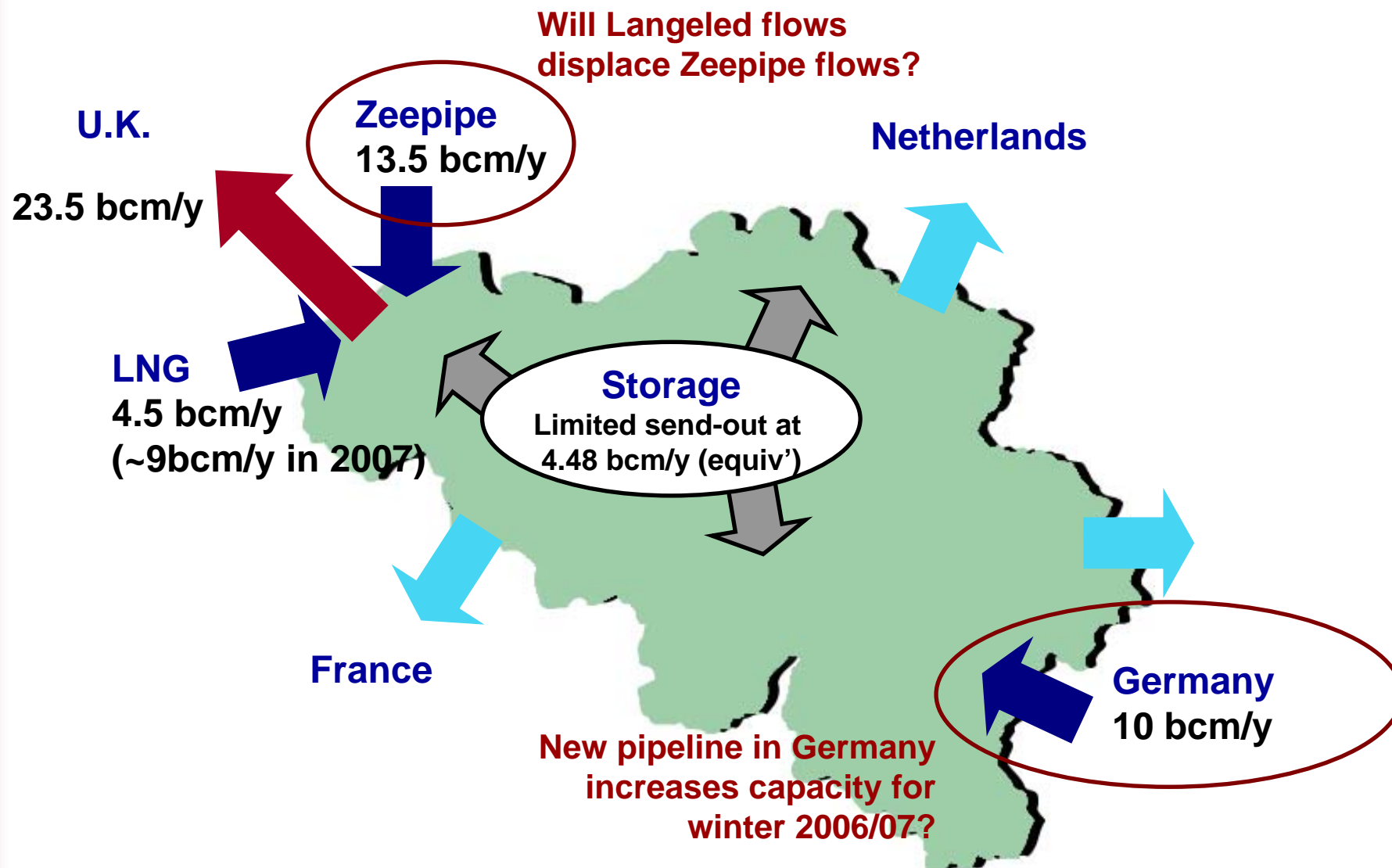
Isle of Grain

Langeled (-50%)

Beach Gas  
(including Vesterled)



## Gas Sources for Interconnector?





## **Interconnector Phase 2 enhancement**

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**Compressors delivered**

**Electric motors delivered**

**Cooling systems complete**

**Metering systems require upgrading**

**Control systems upgrade ongoing**

**Pipework requires hook-up to existing operating system**

**Testing and commissioning to commence in June/July**

**Still someway to go but confident of 1st December  
start-up**





## Zeebrugge: Site nearing completion







# Zeebrugge: Motor / Compressor





## Bacton: Boiler House







# Bacton: Let Down Train/Heat Exchanger







# Bacton: Pipework







# Interconnector Phase 3 enhancement

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**Increasing UK import capacity  
from 68 mcm/day to 74 mcm/day**

**Possible by winter 2007**

**Important to maximise the asset**

**Important to send firm signal for infrastructure expansion in  
Europe**

**Approached authorities in February**

**for confirmation that this new capacity enhancement would be  
treated the same as previous capacity enhancements in  
Interconnector ....**

**... awaiting an answer prior to marketing**



## Conclusion

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**“There are only two kinds of forecasters ...  
those who don't know and ...  
those who don't know they don't know”**

**J. K. Galbraith**