UK Gas Wholesale Market - Winter to Date

Ofgem Seminar
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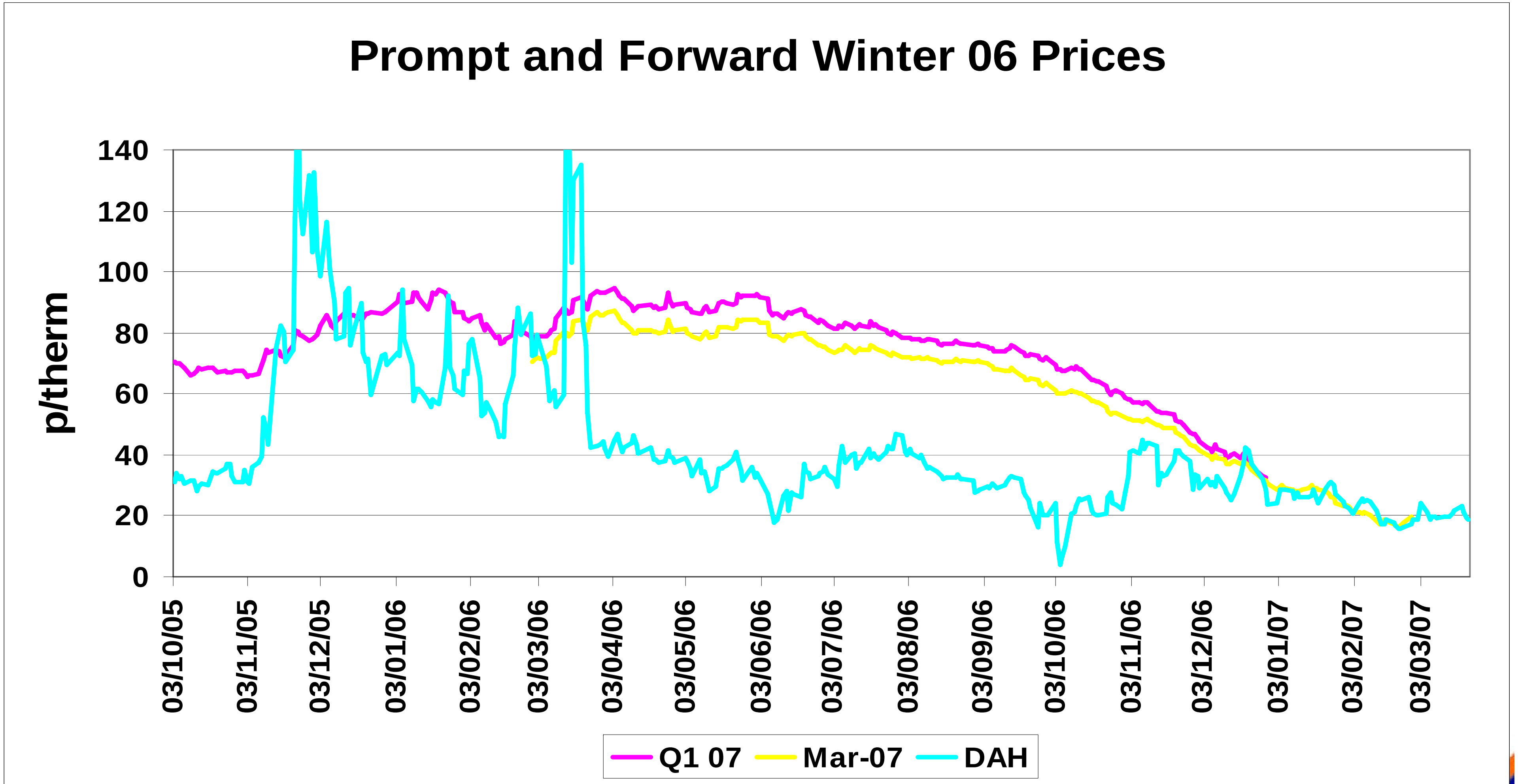
Agenda

- Winter 06/07
  - What we have seen
  - Key learnings
- Looking forward
  - Summer 07
  - Winter 07/08

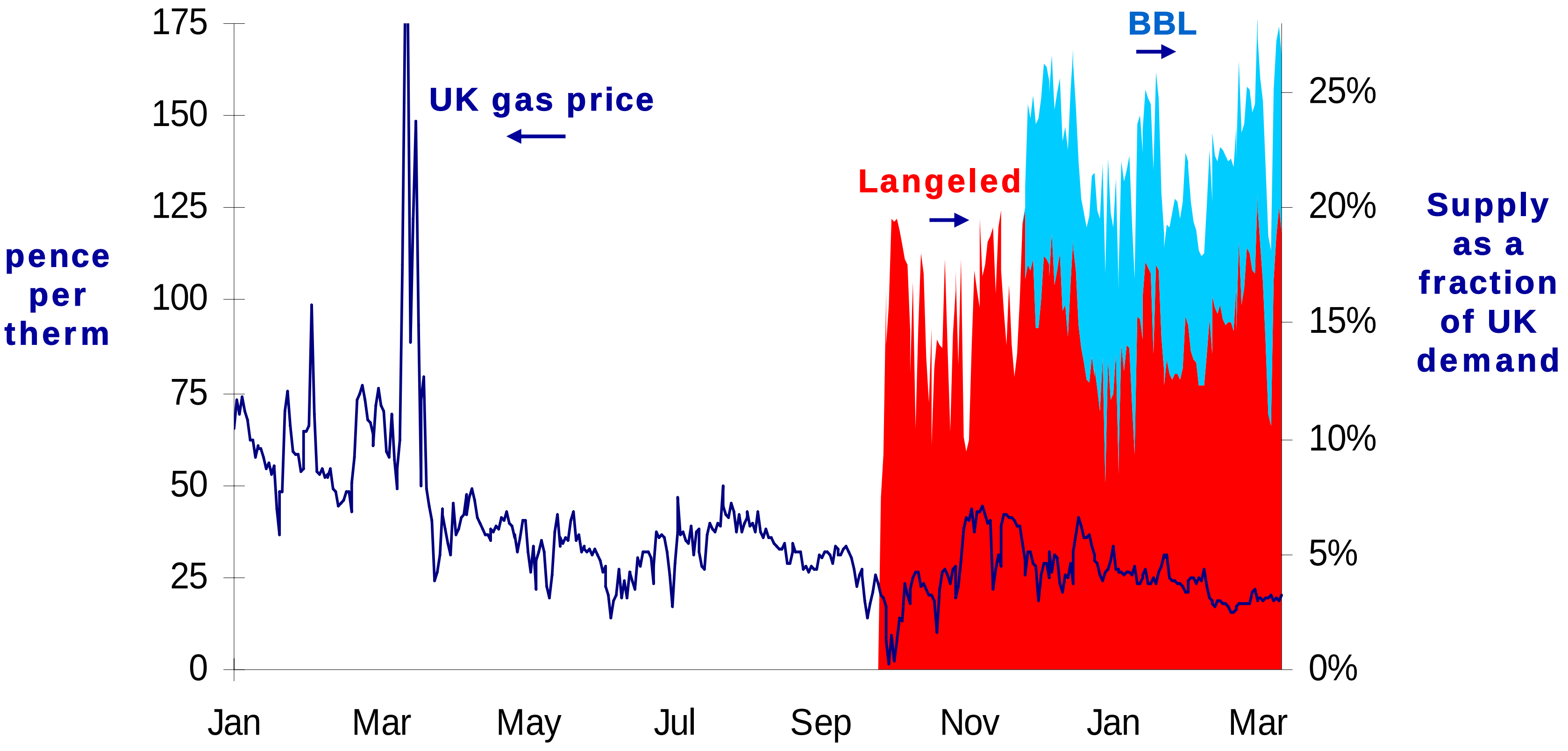
Following the unprecedented high prices of last winter, 06/07 winter prices have out turned lower than the 06 summer



Average daily prices W05 65 p/t, S06 34 p/t, W06 26 p/t

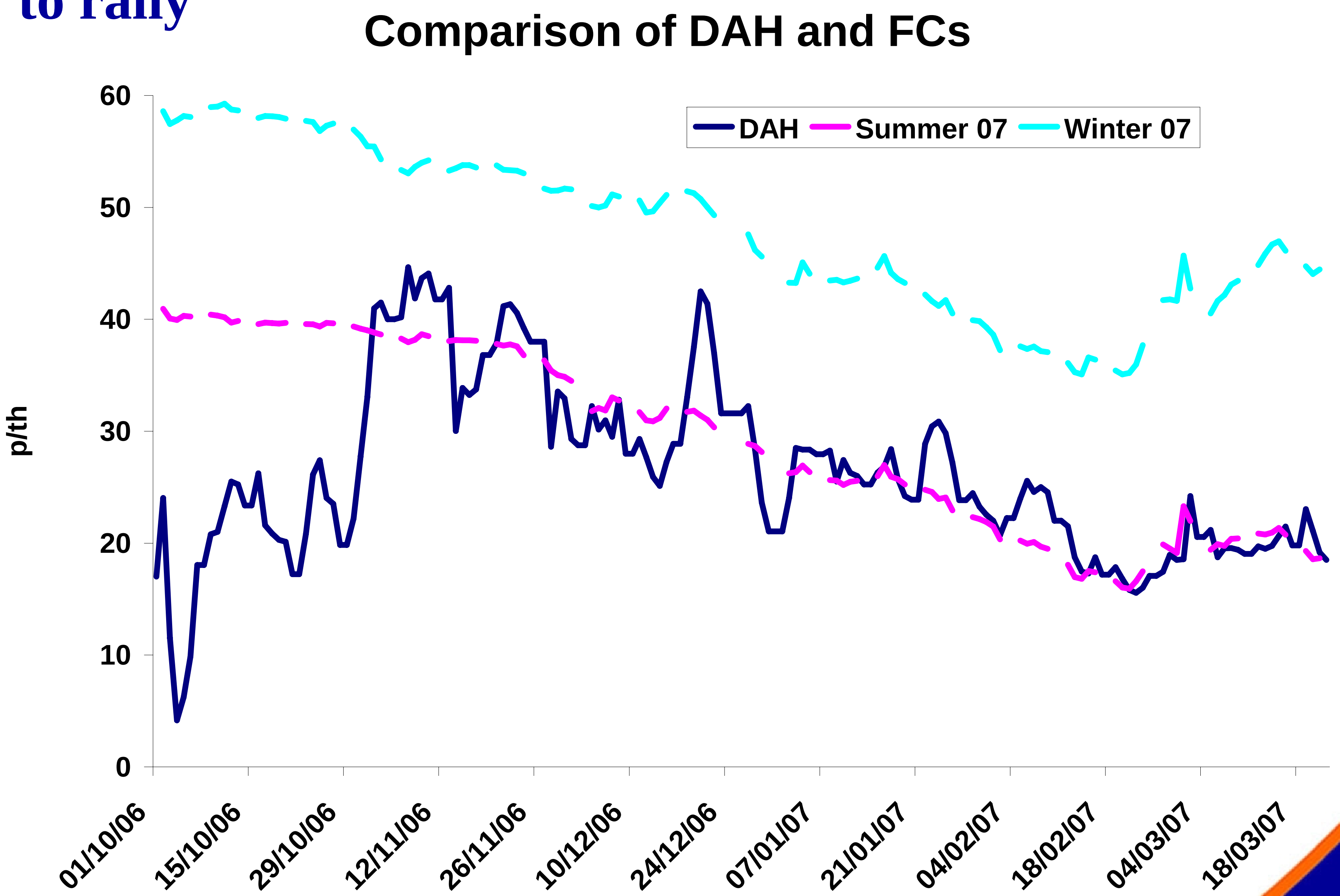
Impact of new infrastructure

UK gas price & flows from BBL & Langeled pipelines

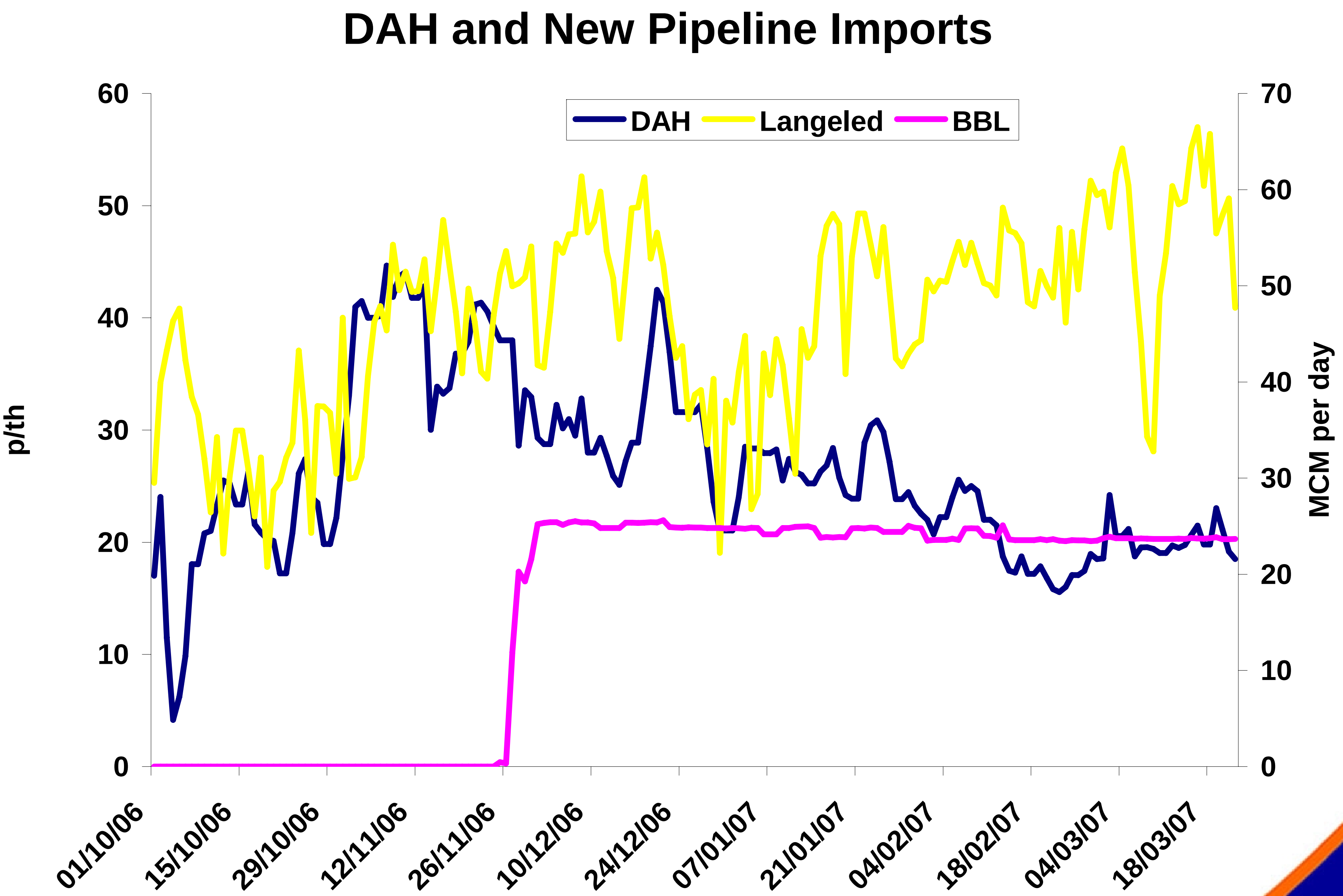


BBL/Langeled supplying 20-30% of UK demand

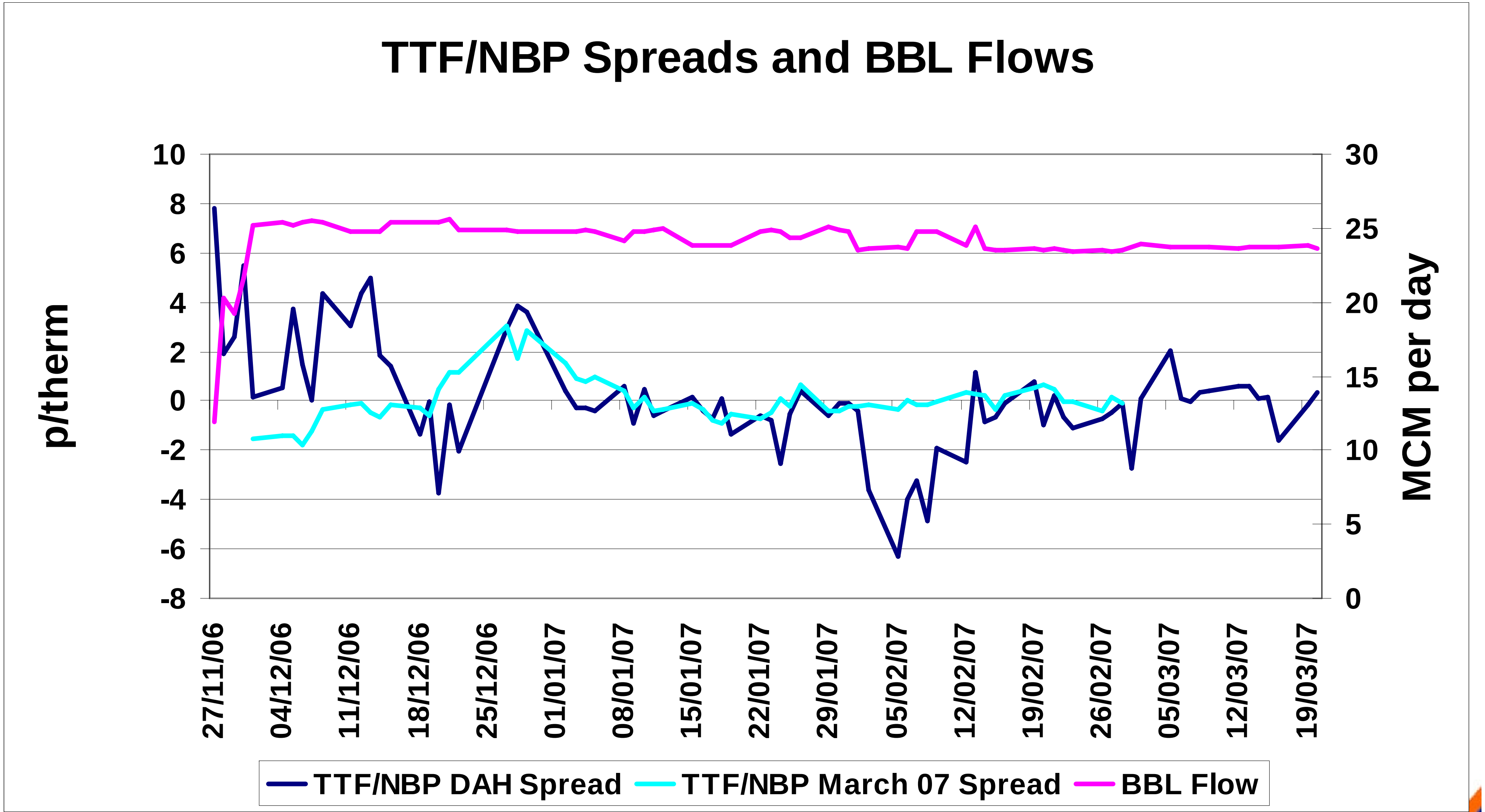
Forward prices have fallen but recently W07 has started to rally



Imports via Langeled and BBL have not been price responsive

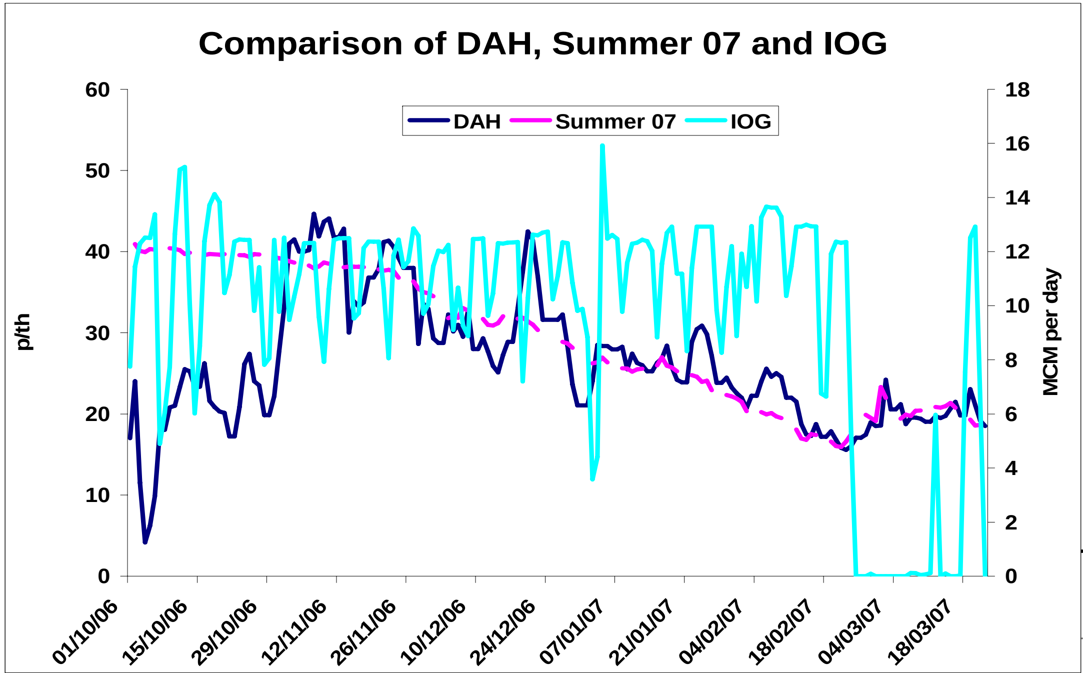


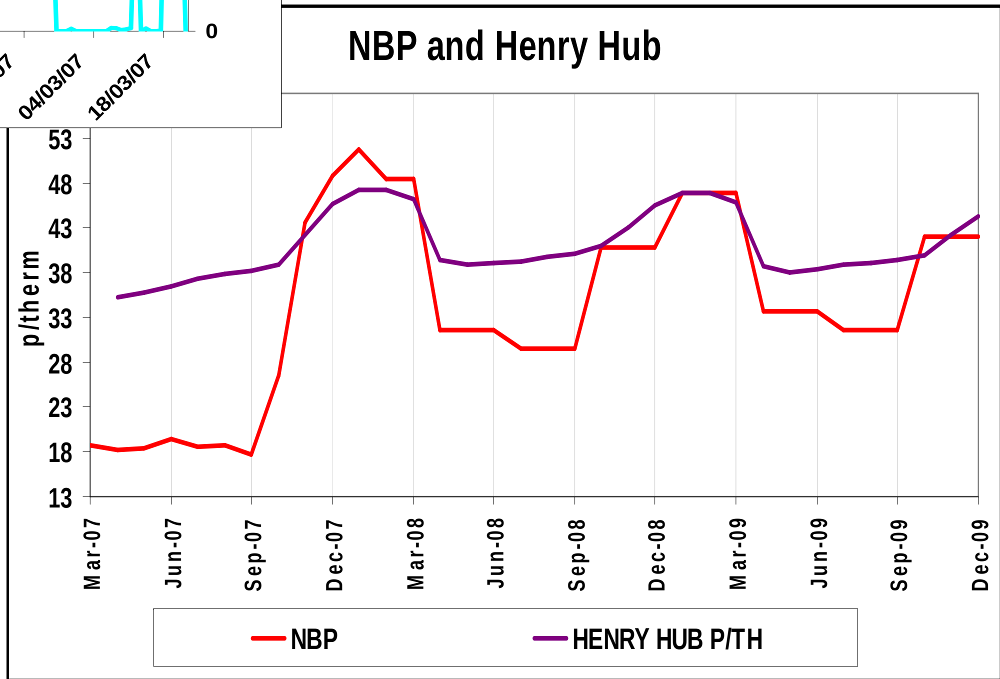
Since the first few weeks of BBL flows, opportunities to arbitrage a positive TTF/NBP spread have been limited



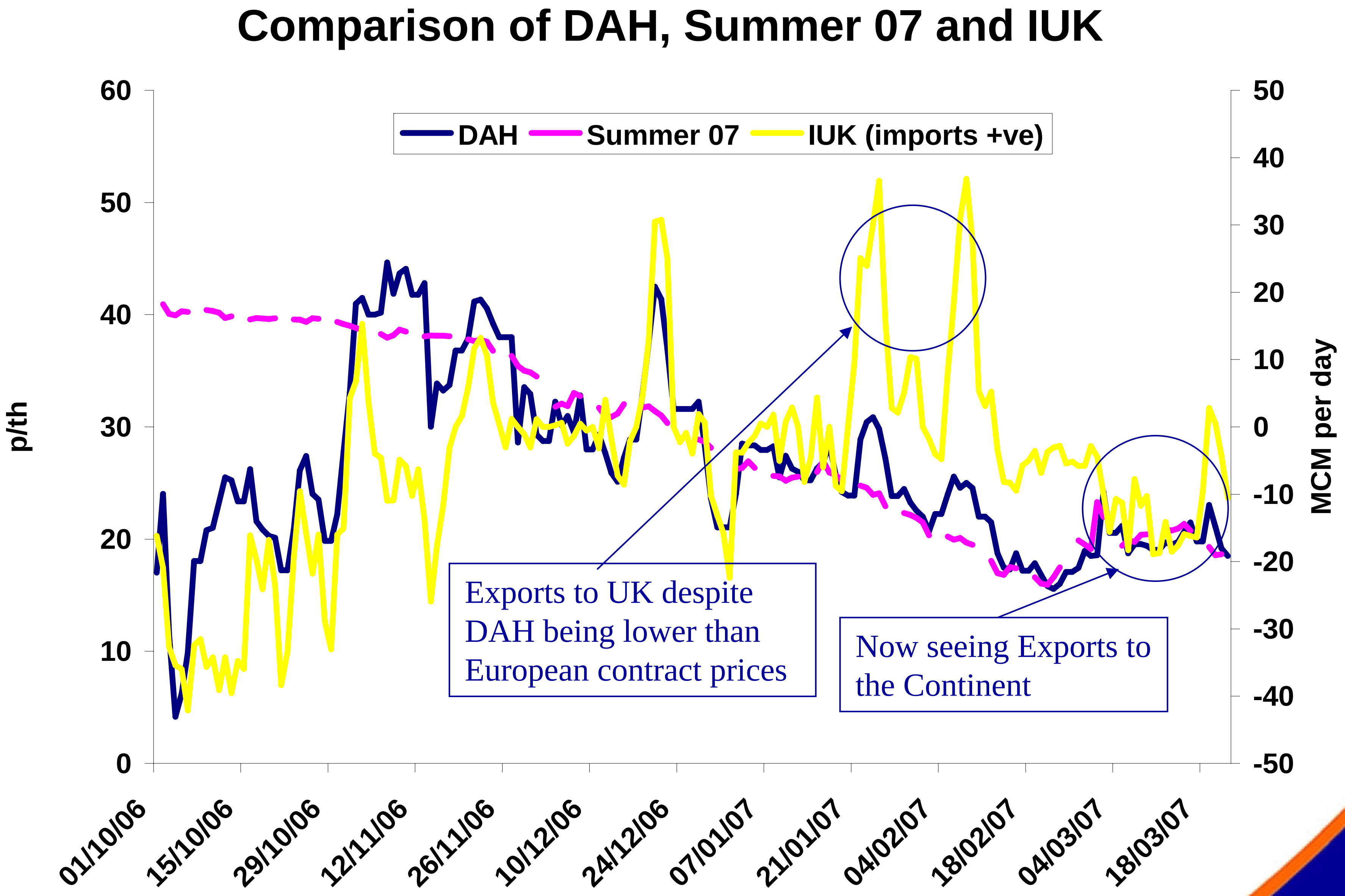
How liquid is the TTF hub – how much diverted gas would be required to collapse the spread?

We are now seeing LNG diversions

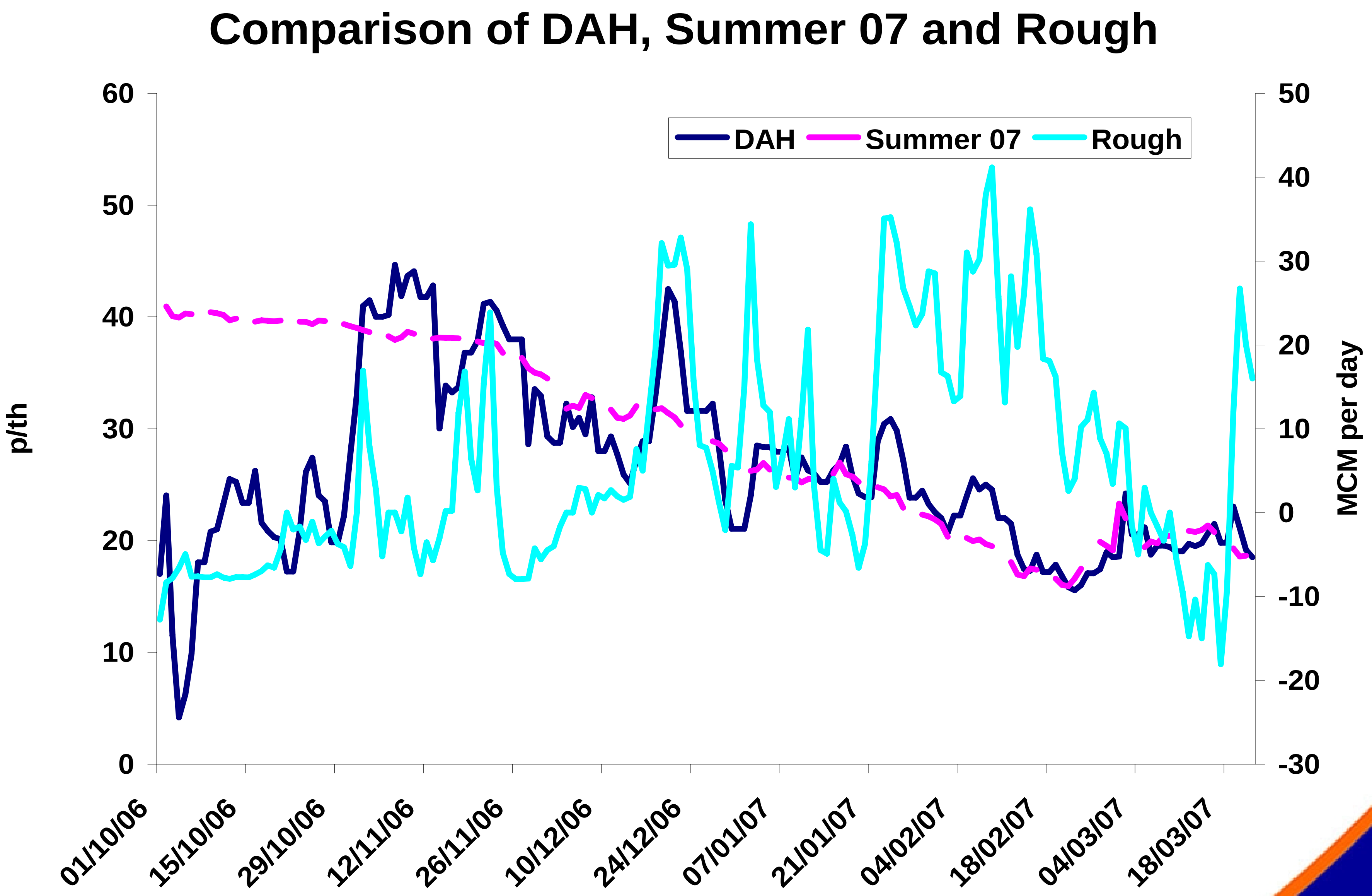




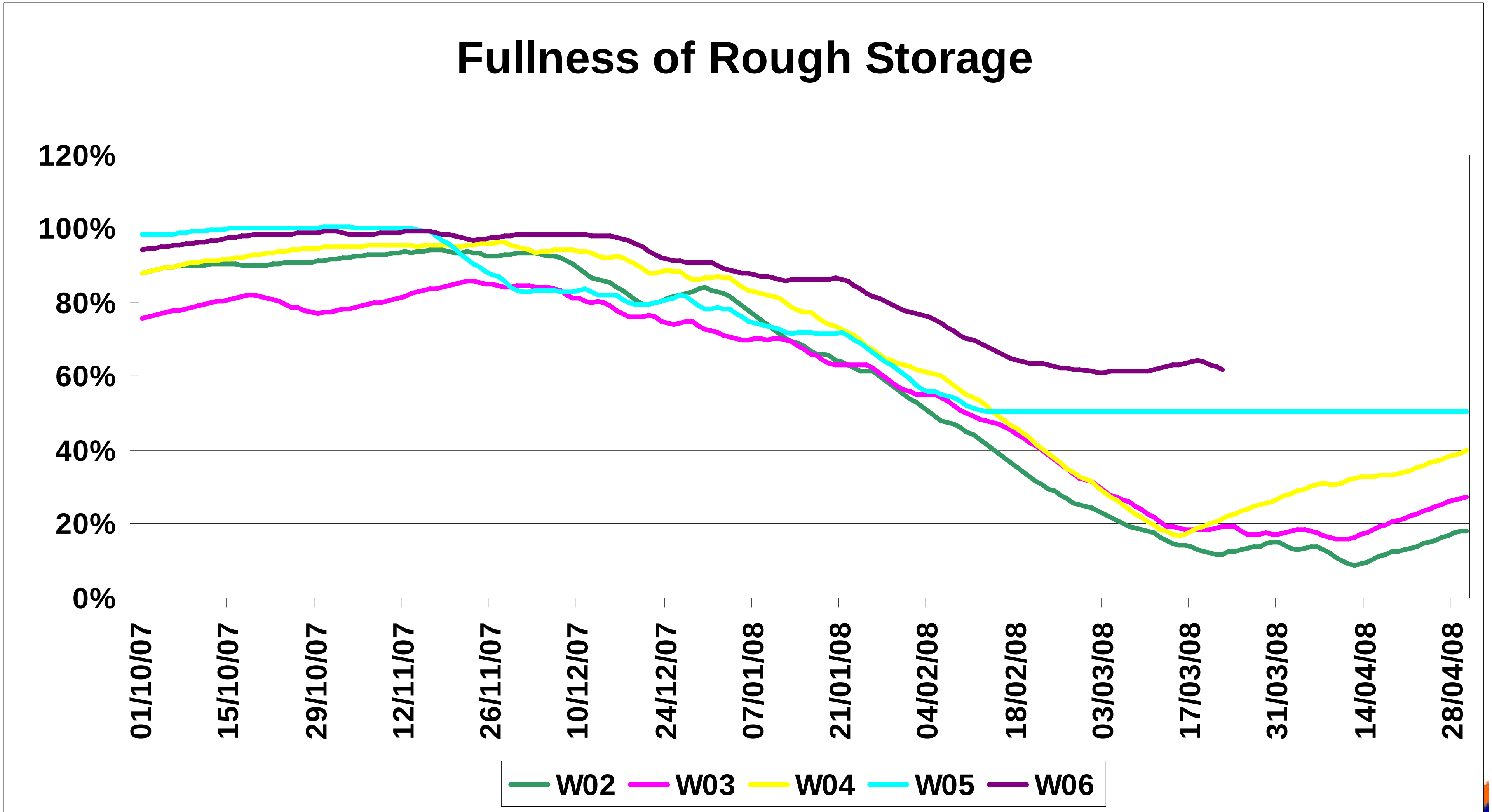
IUK flows – evidence of TOP issues?



Rough over 60% full

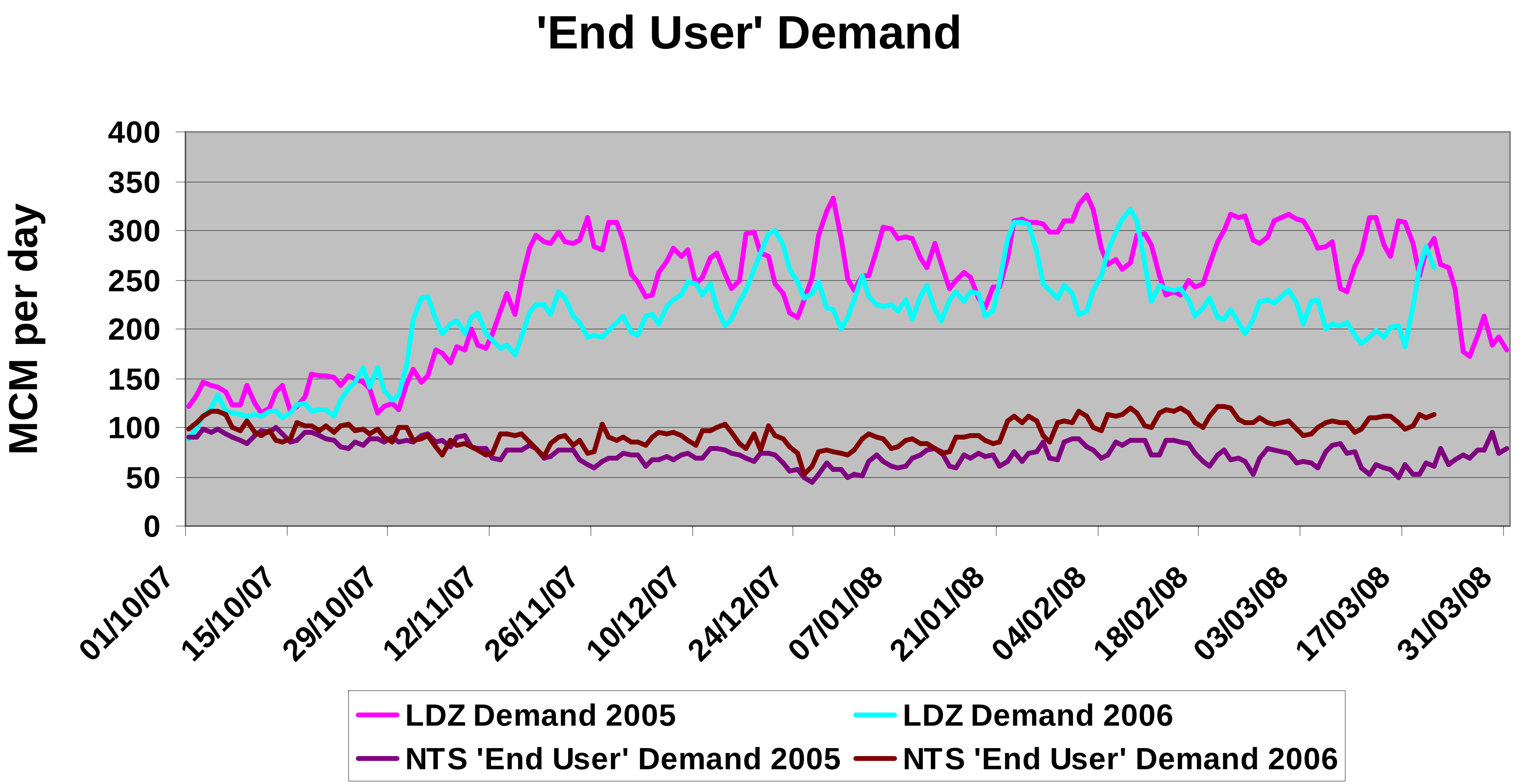


Limited storage injection demand in Summer



Rough is currently three times as full as we have seen historically

LDZ demand about 14% lower than last year – weather corrected it is still around 4% lower



NTS 'end user' demand is about 28% higher largely reflecting the higher power generation demand given the lower gas prices

Winter 06/07 – Key Take Aways

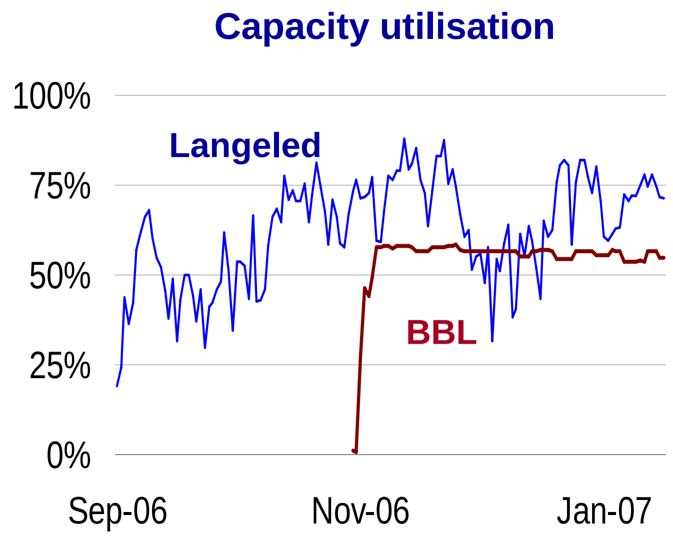
- The mild weather has resulted in lower demand in the UK and doubtless North West Europe but power generation demand has been high given the low gas prices
- Weather corrected LDZ has been about 4% below last year
- Infrastructure has delivered to timescale with strong supply via Langeled and BBL – meeting 20% to 30% of UK demand
- Norwegian, Dutch and LNG imports have not appeared particularly sensitive to NBP price levels (now seeing LNG diversions)
- IUK imports/exports have been price sensitive but imports to the UK at prices below likely summer European Contract prices suggest potential Take or Pay problems on the Continent
- Given the lower demand vs last year and strong supply from new imports, a balance has been achieved through taking less gas from storage, IUK and dry UKCS gas fields.

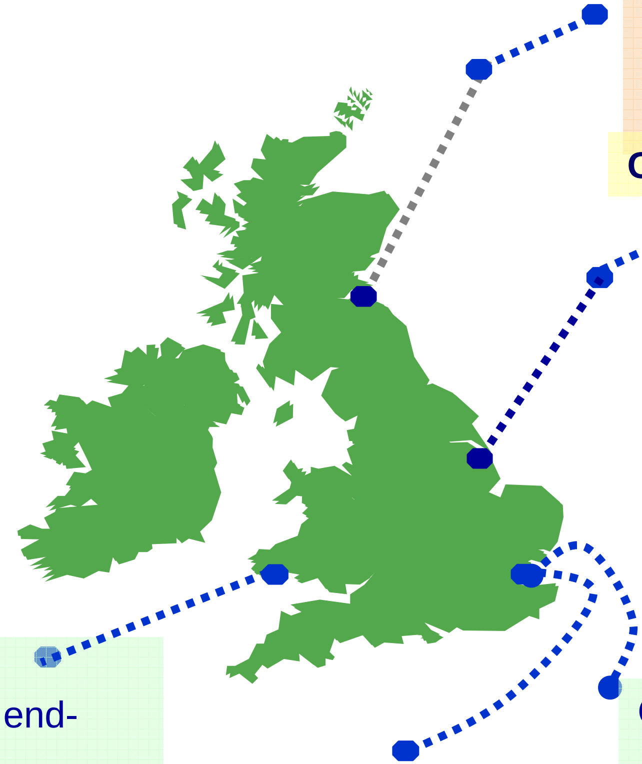
Looking Forward

Summer 07 - Overview

- Prices expected to remain soft given the storage overhang following the mild winter
- Given the exceptionally high level of gas in Rough it is likely to be used for cycling in the summer which should help to dampen day to day price volatility
- When will Ormen Lange start commissioning? More downward pressure on prices?
- LNG diversions from Europe to the US likely to continue given the substantially higher Henry Hub vs UK prices – to the extent that the US has available regas capacity.
- Will we see the impact of any Norwegian/Dutch production caps?
- How will any Continental Take or Pay issues be resolved?

Regarding the 07 Winter - More import infrastructure is coming





Tampen link
4 BCM capacity by Oct-2007
Contract awarded

Langeled
Connection to Ormen Lange gas field end-2007
On Track

Capacity increase to allow greater supply into existing pipeline

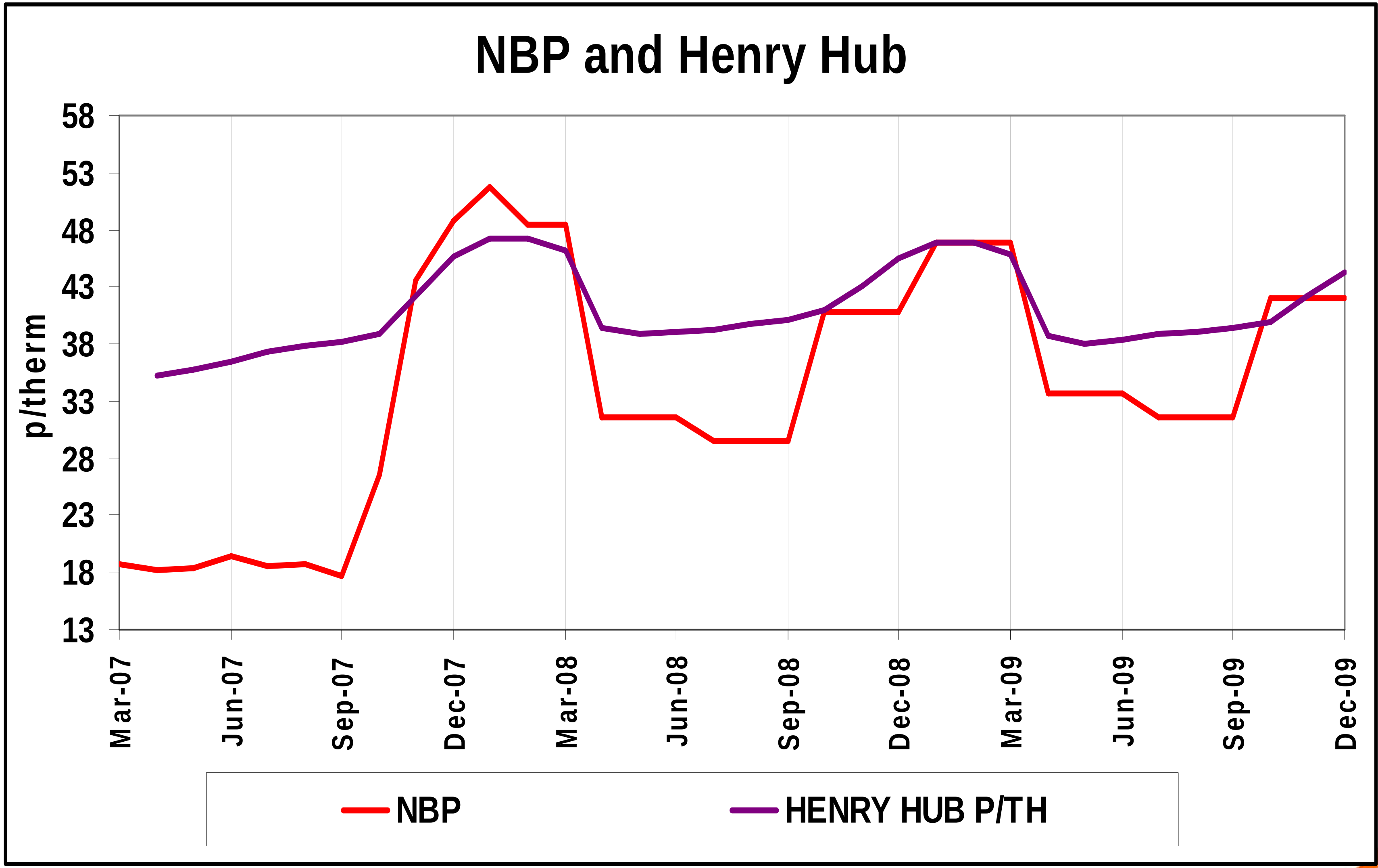
LNG regas

Milford Haven
Dragon 6 BCM by end-2007
South Hook 10 BCM from 2007/8 + 10 2008/9
Terminals under construction and planned

Isle of Grain
+8 BCM by end 2008
+7 BCM 2010
New capacity under construction and planned

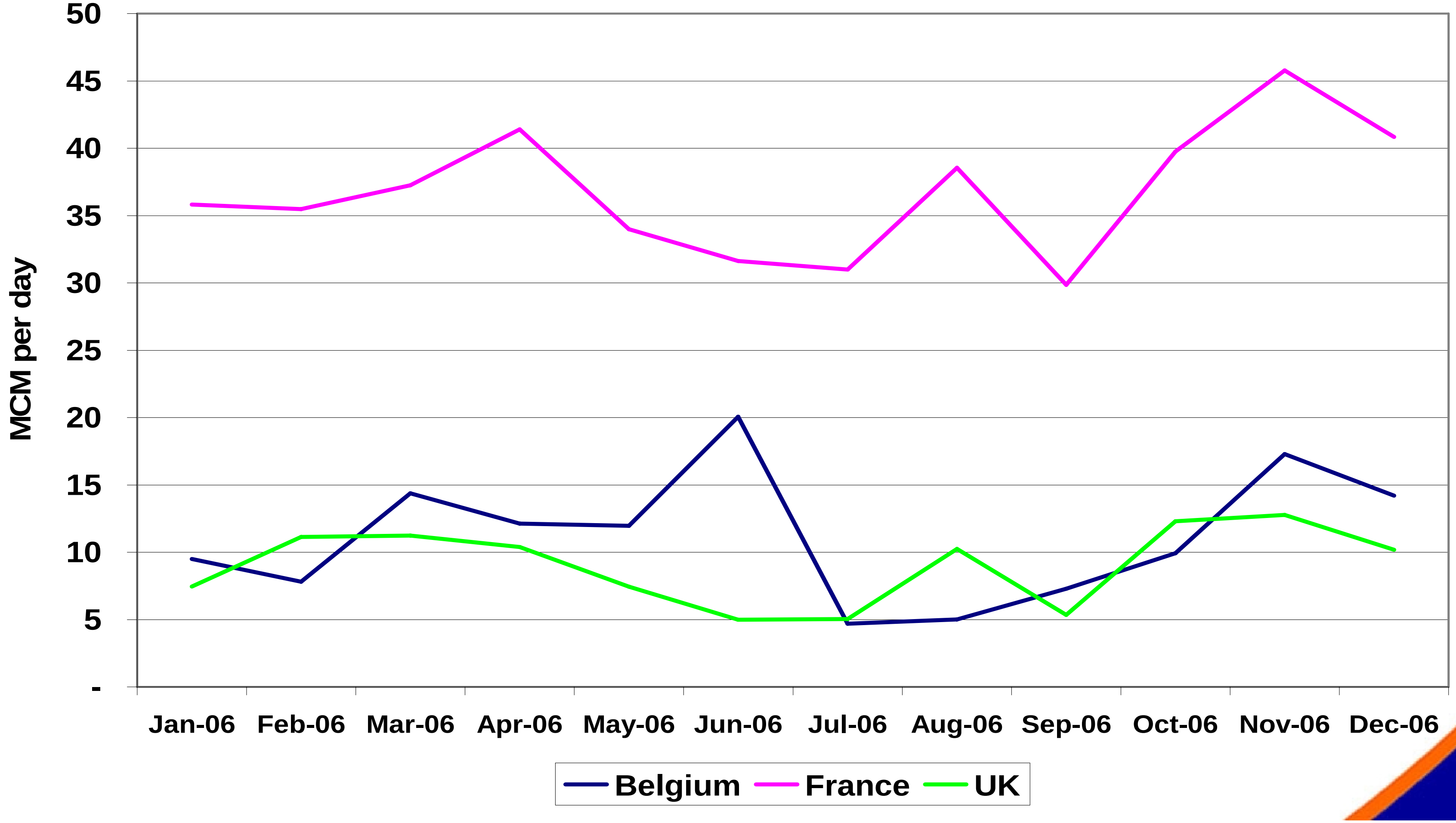
Canvey
5.4 BCM post 2010
Subject to planning appeal

The UK is signalling LNG should come to Europe in W07 – but will this create over supply?



The potential for diversions to the US is significant but how likely is it that we will see winter diversions from the Continent until there is strong confidence in supply?

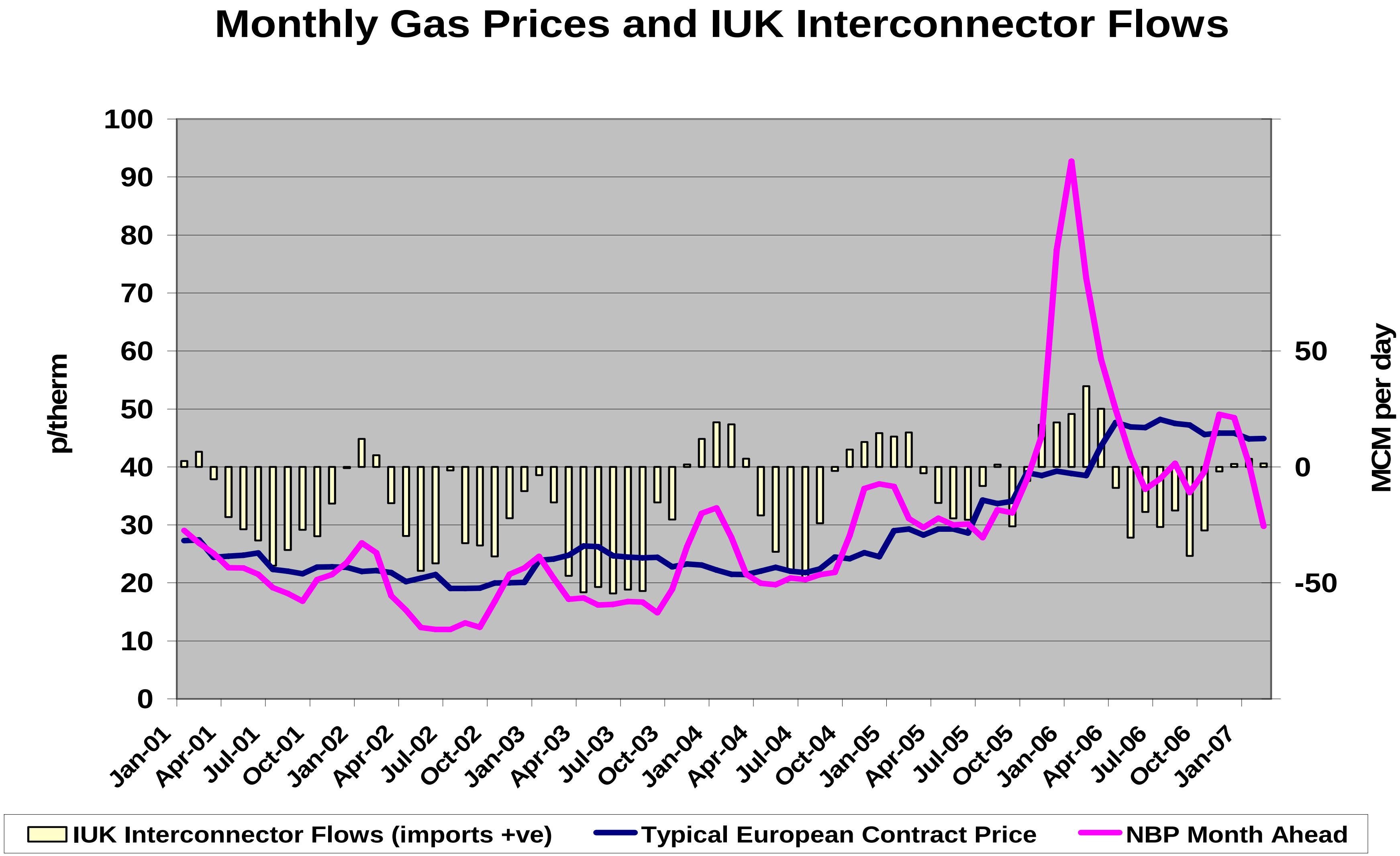
2006 LNG Imports to France, Belgium and UK



The liberalised UK market is 'grating' against the non-liberalised continental market

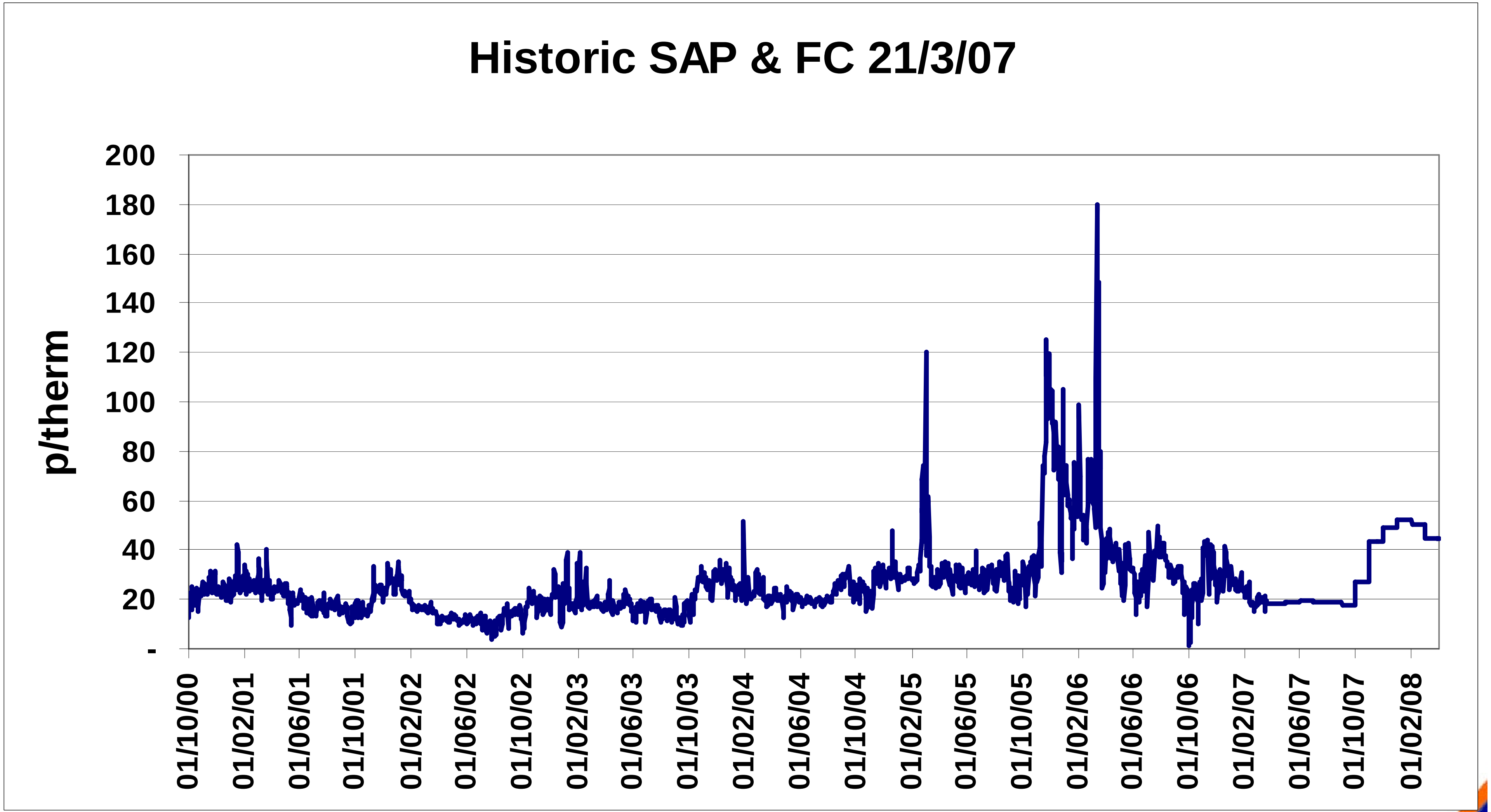
- Gas supply/demand matching in Continental Europe is managed through long term contracts/TOP and storage
- The UK posts prices for all of Europe to see, so gas surpluses can be dumped in the UK or when there are shortages there is always a price at which gas can be purchased from the UK
- The UK is therefore managing the extreme supply/demand events for all of North West Europe – which can create high market price volatility
- We need to increase the liquidity of trading hubs in Europe (which requires access to capacity) – through increasing liberalisation

Overview of price formation in the UK market



European Contract Price – from Cap to Floor to Cap?

If next winter outturns at current forward prices it would be the second highest price winter we have seen …….



…. despite the experience of low prices this winter and further new import capability?

Looking Forward – Conclusions/Issues

- Summer 07 prices expected to stay soft
- Current winter 07 prices look high given the experience of this winter and the expectation of new import capability
- However, uncertainties remain:
  - How much of the low prices this winter have related to weather?
  - Will the new infrastructure be delivered on time?
  - How much LNG will be diverted from Europe during the winter?
- Looking to the medium term:
  - We need European liberalised gas market to deliver more liquid hubs, will this happen?
  - Will we see a break from oil linkage in European gas contracts?
  - How will the global LNG market evolve?
  - How will climate change and resultant Gov’t/EU policy impact on gas demand/planning/costs?
  - Need to avoid physical constraints to importing gas (e.g. around entry capacity, NTS reinforcement and gas quality)