TBE 2008

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TBE Process


Dec:
•Publish Ten Year
Statement
Feb/Mar:
•Consultation
Apr/May/Jun
•Demand & Supply
Forecasts
•Outline investment
proposals
July 10th:
•Industry seminar
September?:
•Long Term Auctions
Oct/Nov:
•Review Investment
Plan

TBE 2008: Demand Forecasting

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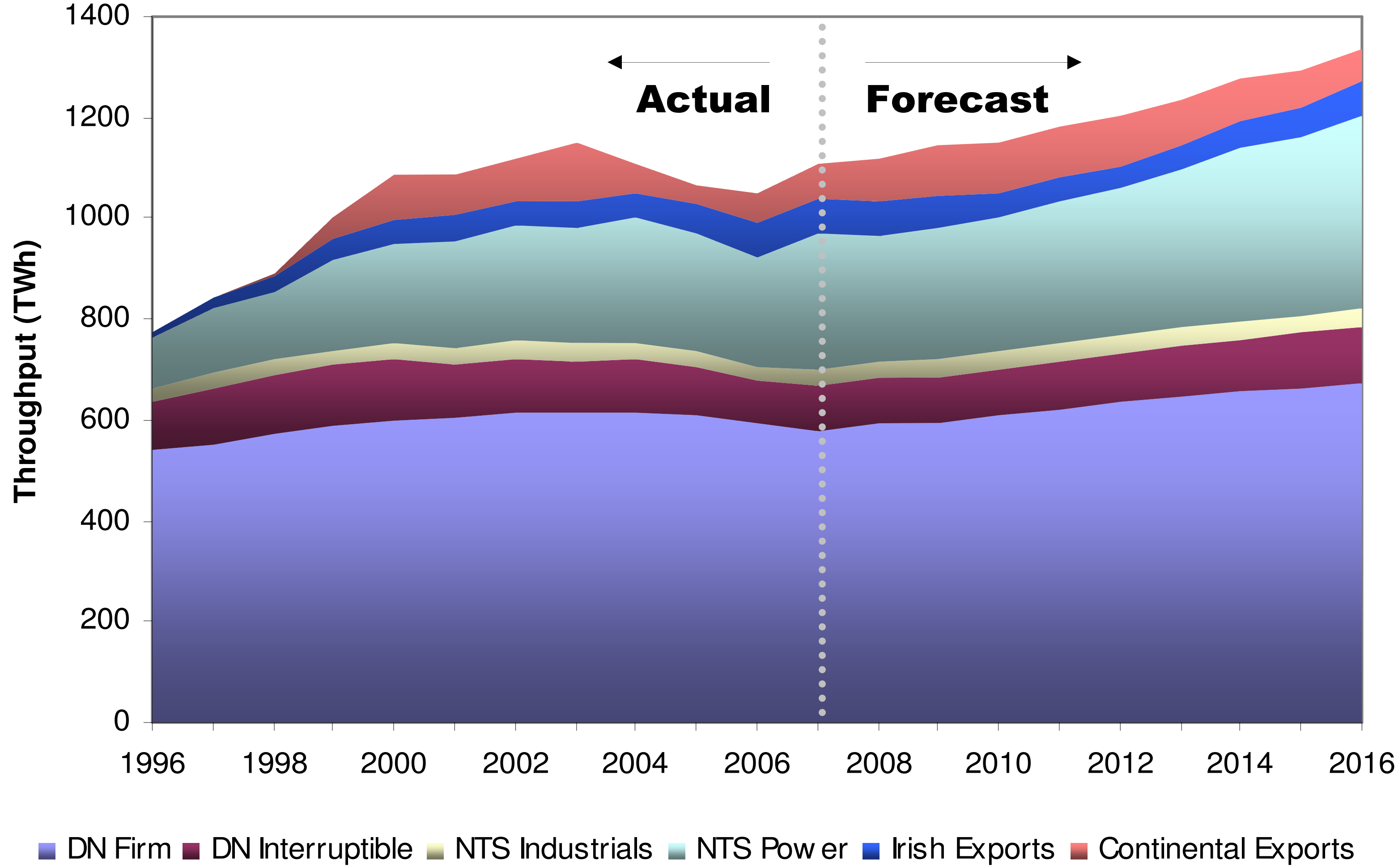
Forecast demand (November update)



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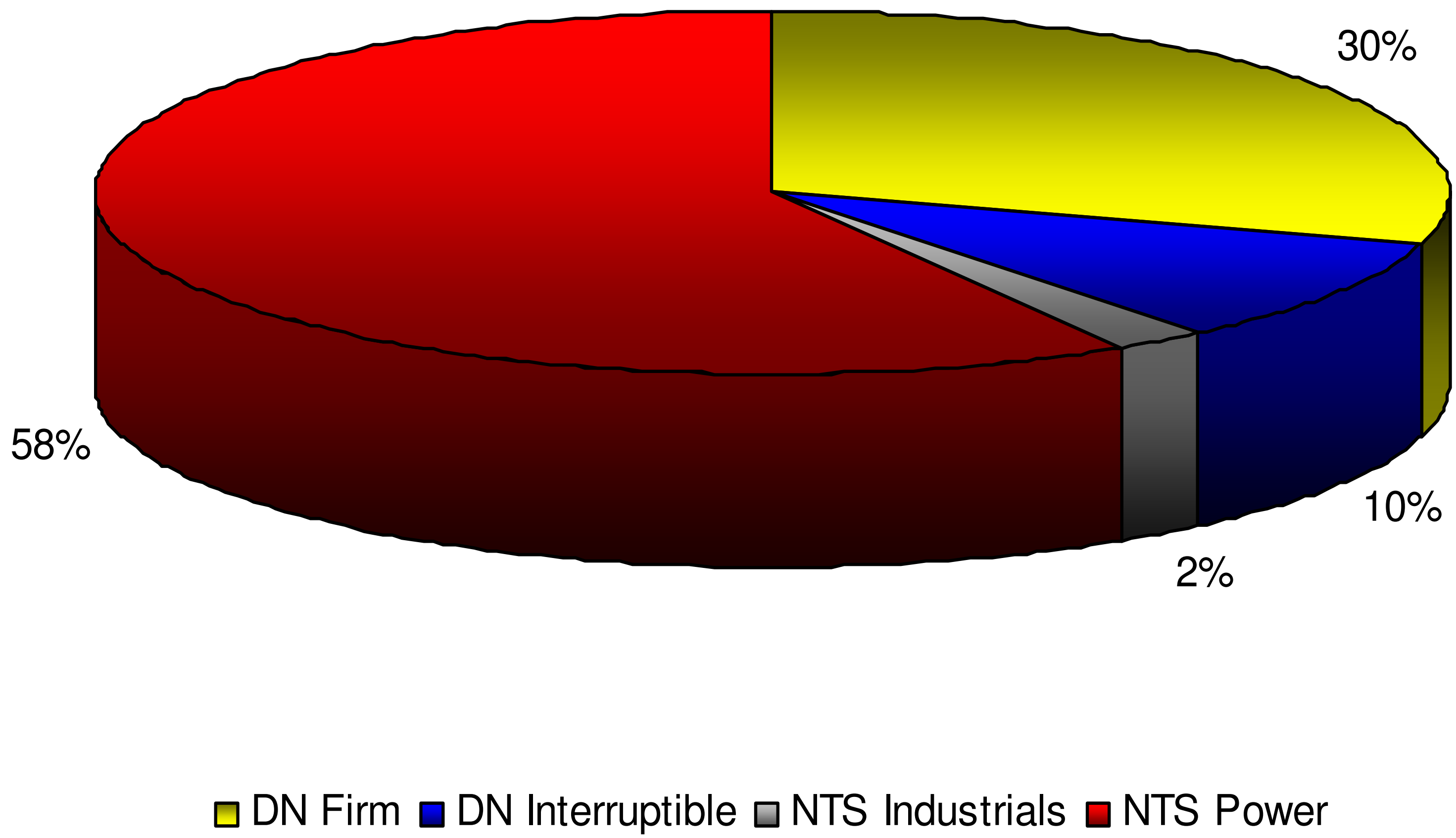
Sector Share of Forecast Gas Demand Growth 2006 – 2016 (excluding exports)



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Energy Efficiency

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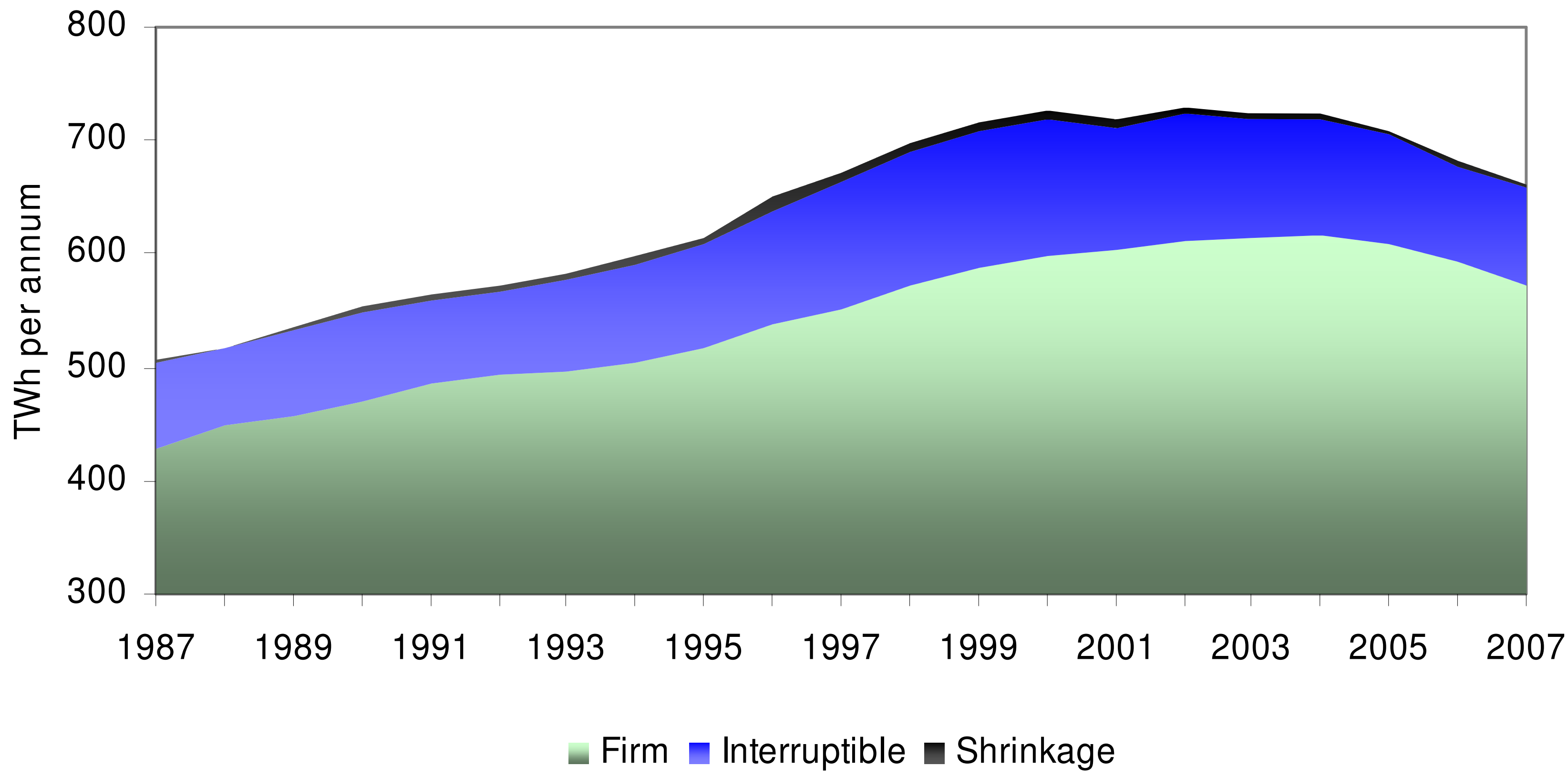
Historical DN demand



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Energy Efficiency

- Further falls in NDM gas demand in 2007
- Need to consider the effect of energy efficiency in the forecast
- Standard of living / comfort v energy efficiency
- Technologies
  - Insulation
  - Lighting: Compact fluorescent & LED
  - Smart meters/intelligent heating controls
  - Domestic CHP
  - Efficient appliances

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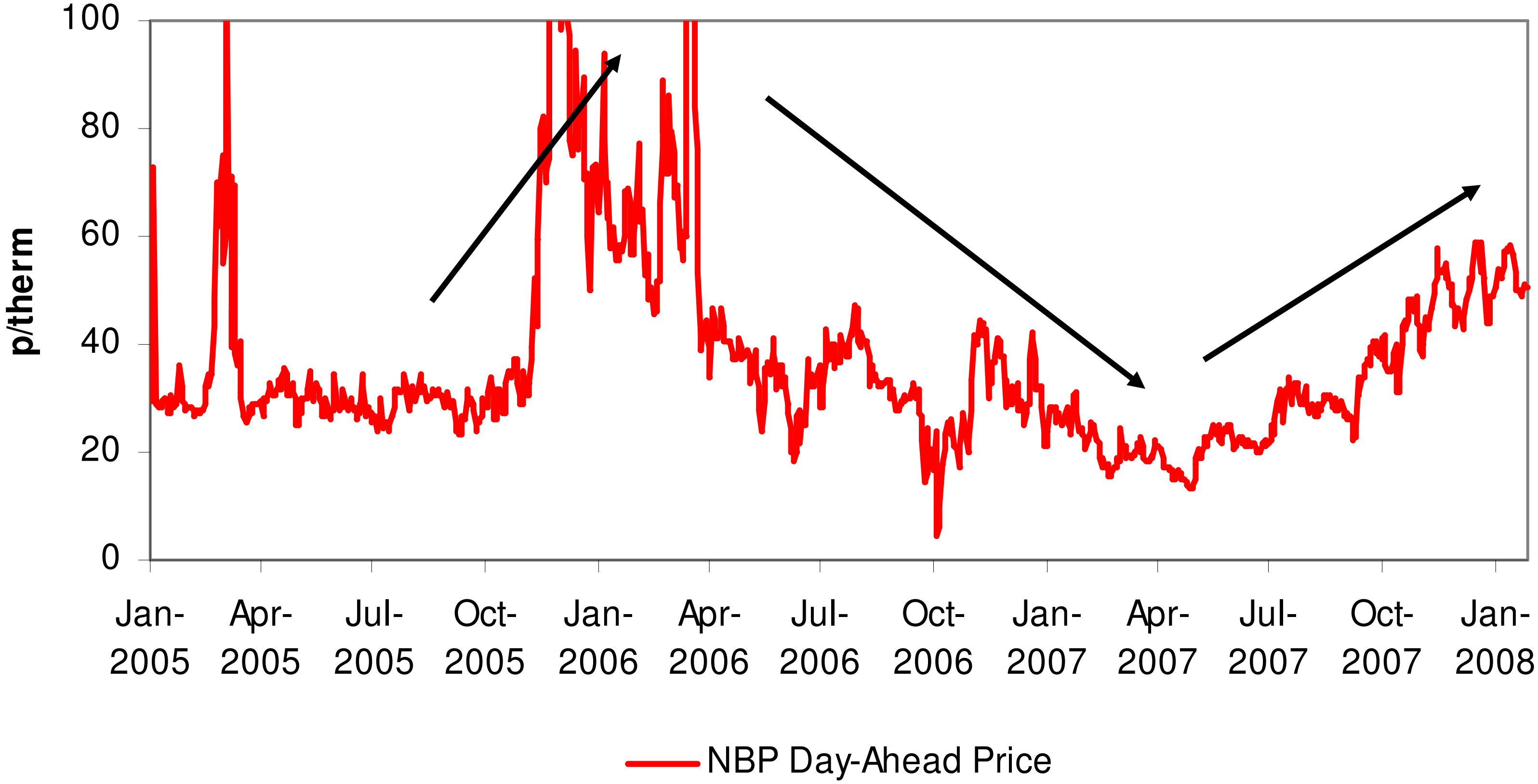
Fuel Prices

Wholesale fuel prices



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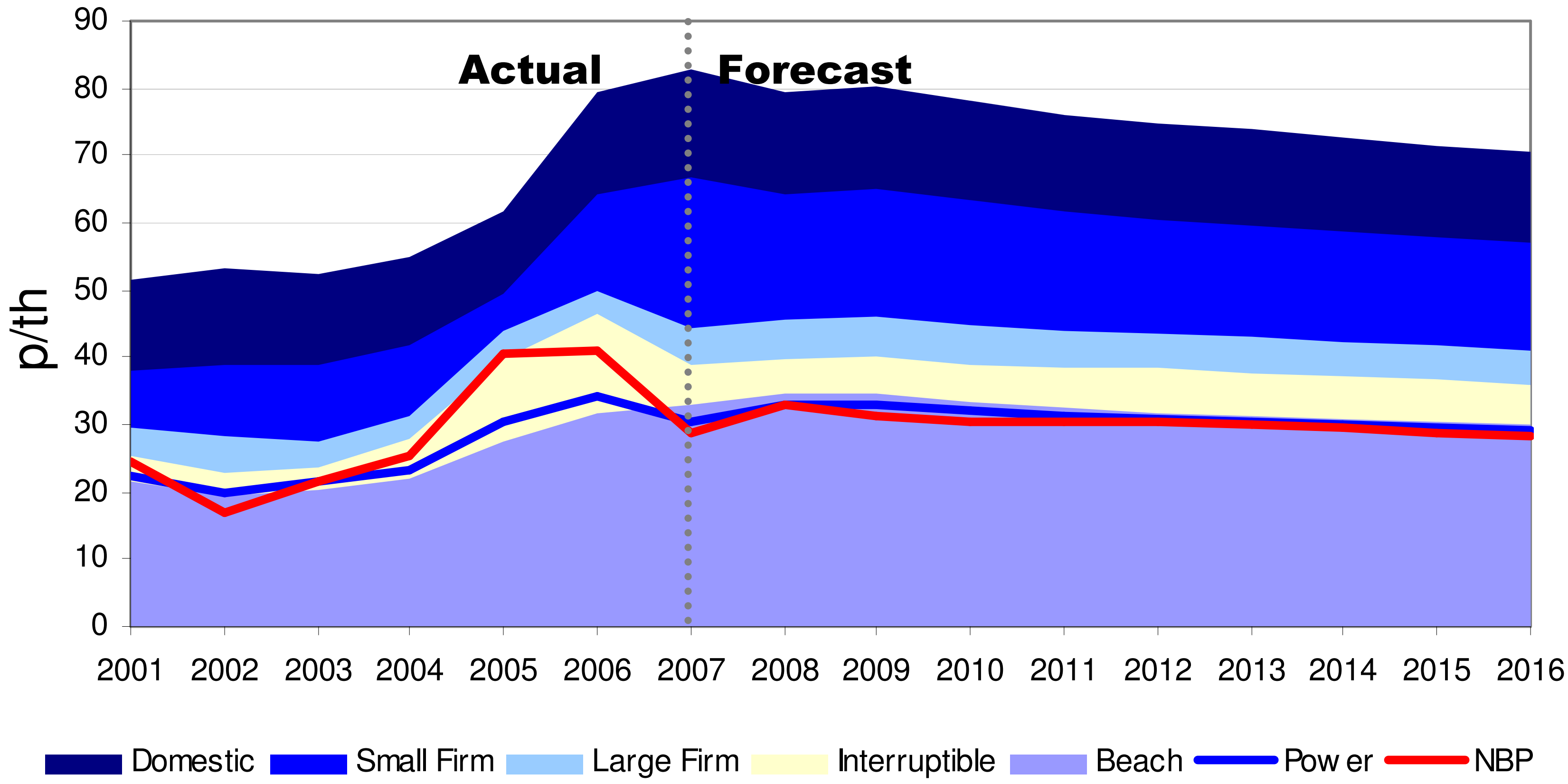
Sources: Nymex & Heren

Fuel Price Forecast (November update)



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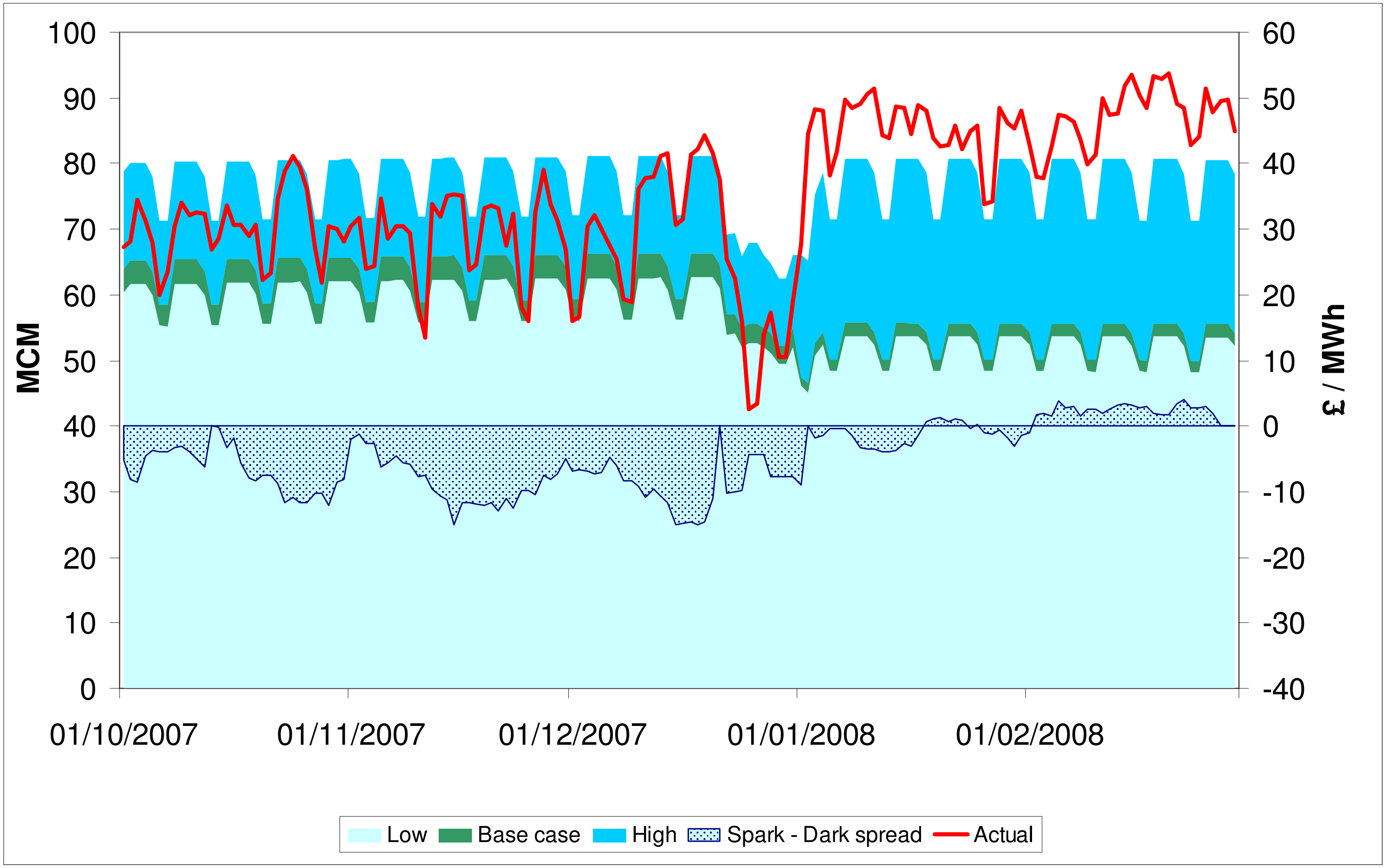
Power Generation

Power Generation – actual demand



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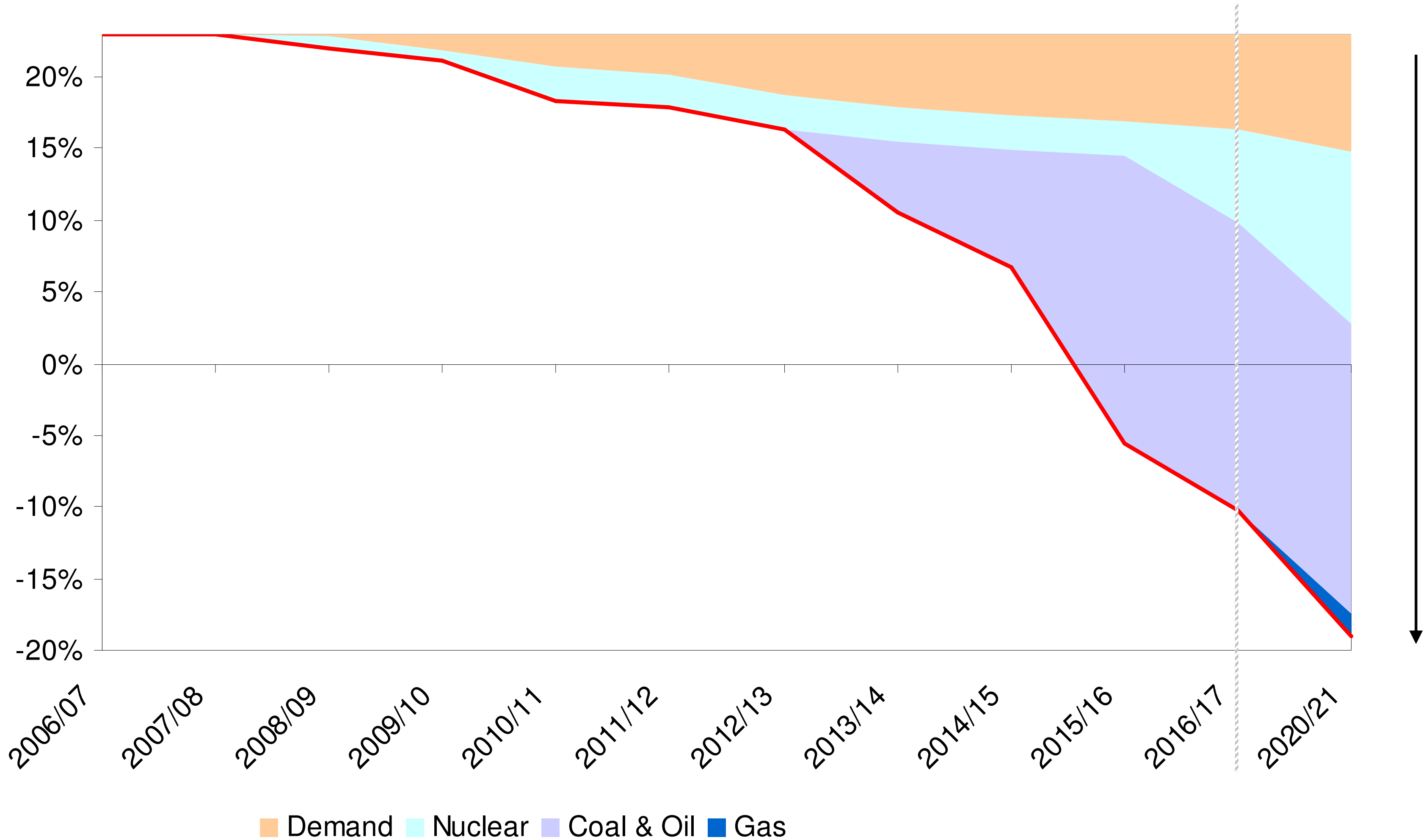
Plant Margin - Generating Plant Closure



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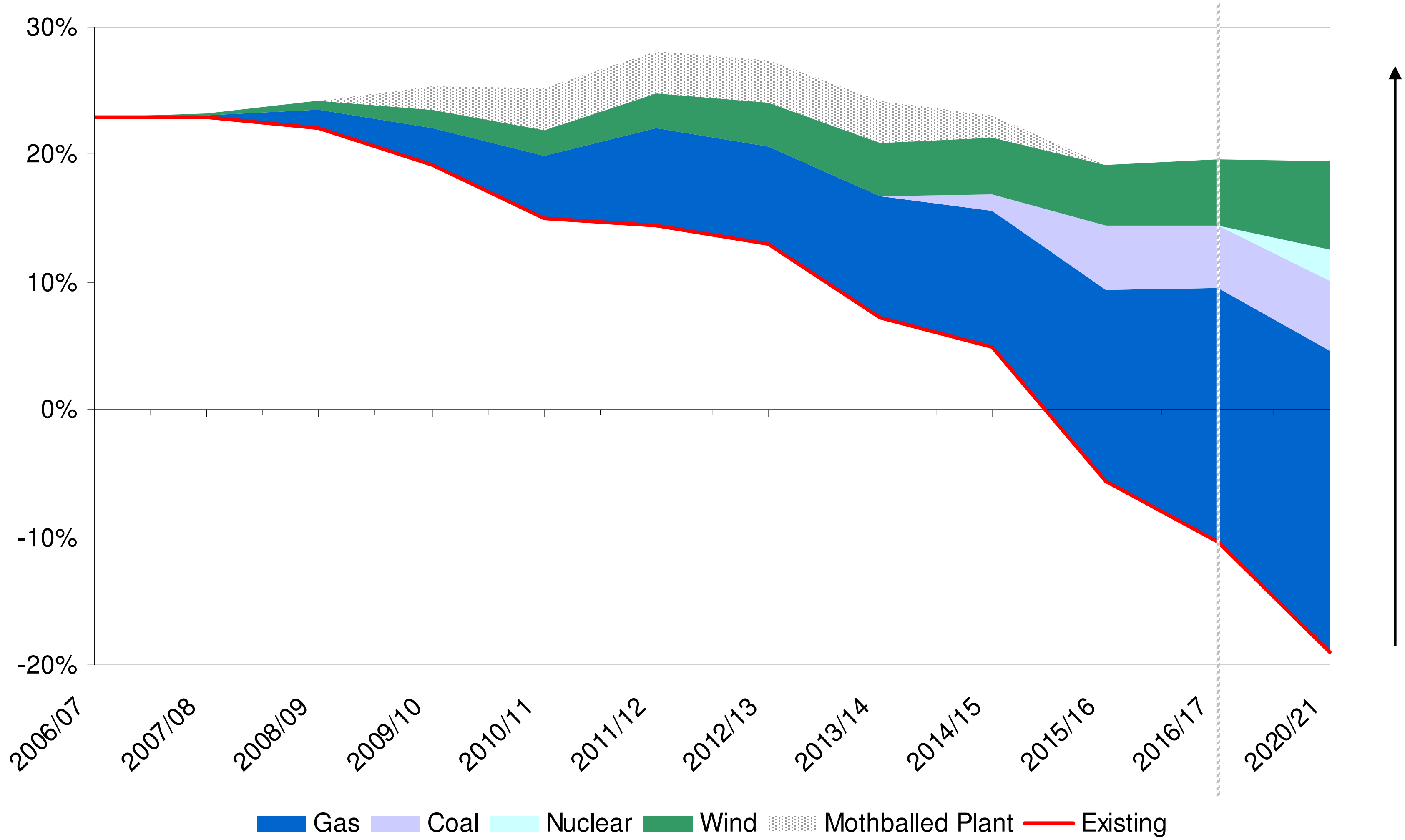
Plant Margin – New Generation



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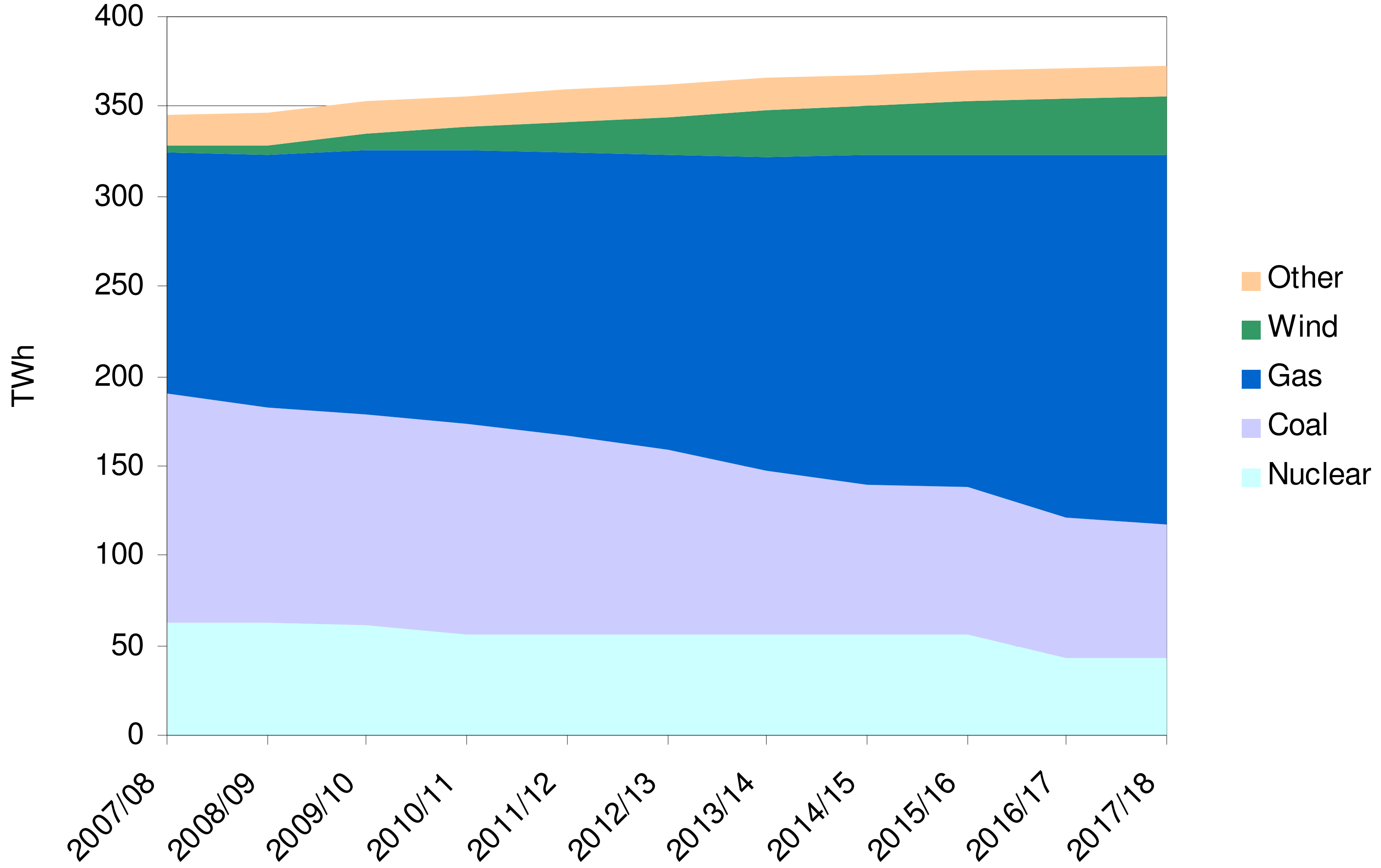
Generation – output by fuel



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Nuclear power

- Closures
  - 7.4 GW of plant to close by 2020 (assumes five-year extensions for AGRs) leaving 3.6 GW of existing plant.
- New Nuclear
  - Connection agreements with British Energy
  - 10.8 GW from 2016 at four sites
- Now a question of when and not if...

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Climate Change Targets

EU renewable energy targets

- 20% of EU gross final energy consumption from renewable sources by 2020
- Includes heating, lighting, industry, agriculture, transport, distribution losses and energy used in energy production.
- UK target 15% (1.3% in 2005)
- 10% of vehicle fuels from bio-fuels
- Will require 30-40% of electricity generation from renewable sources
- Renewables to be given priority access to transmission and distribution networks.

Power Generation - renewables

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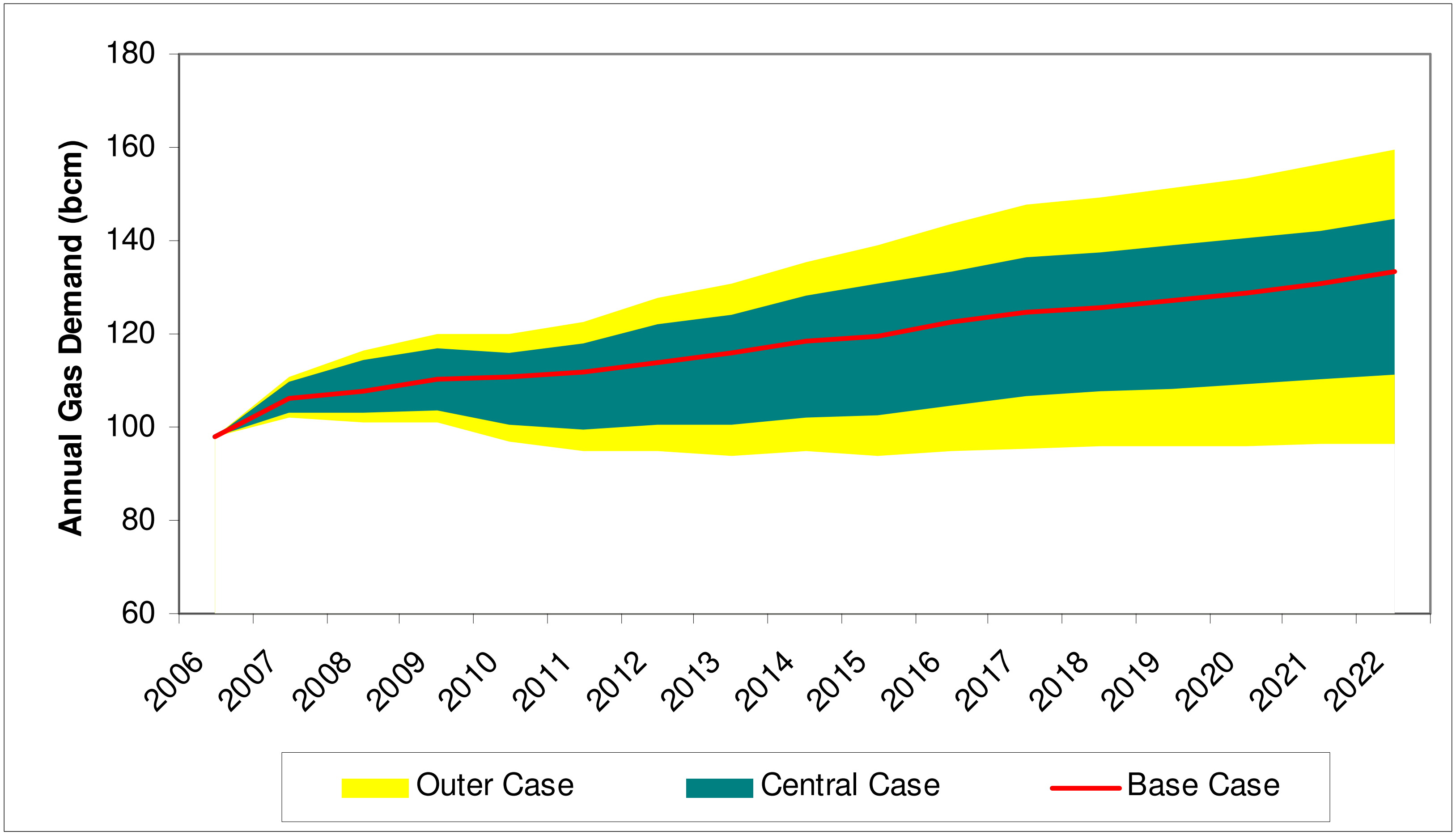
EMO Sensitivities



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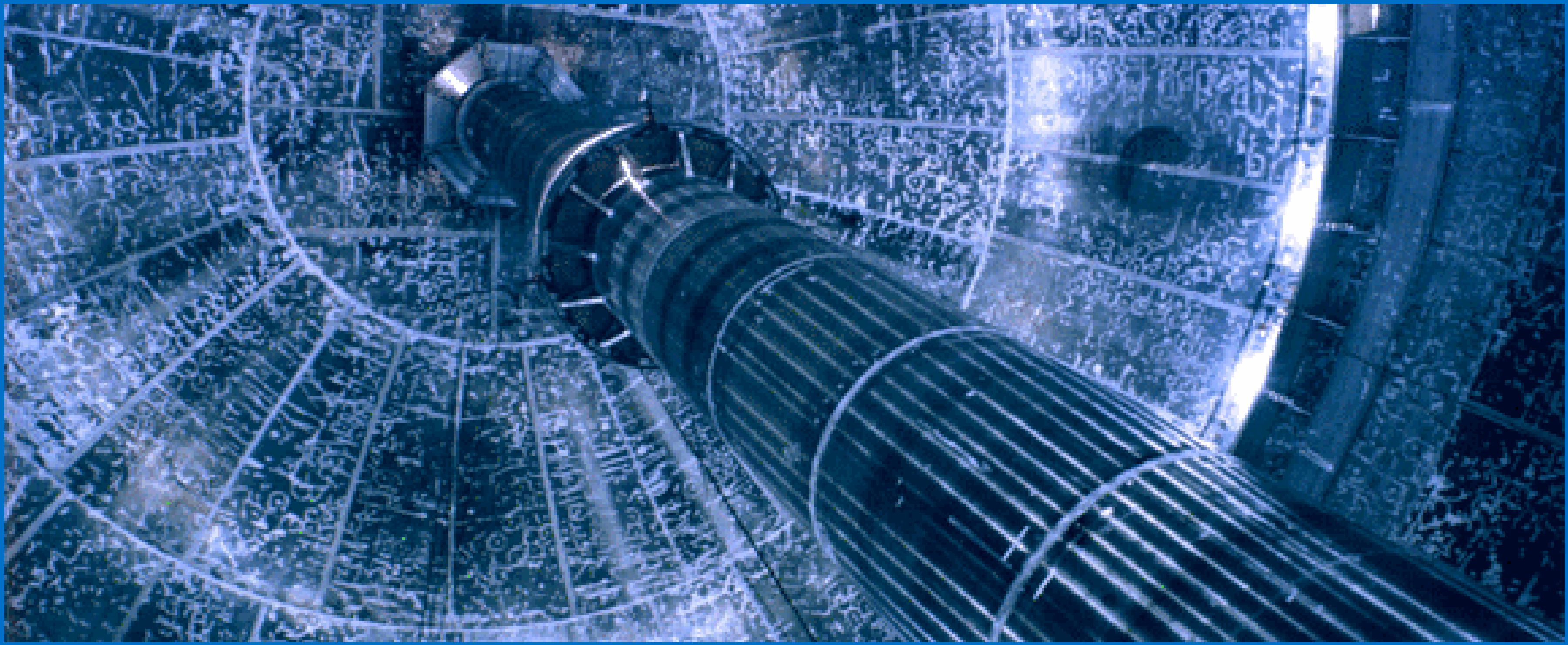
TBE 2008: Gas Supply Forecasting



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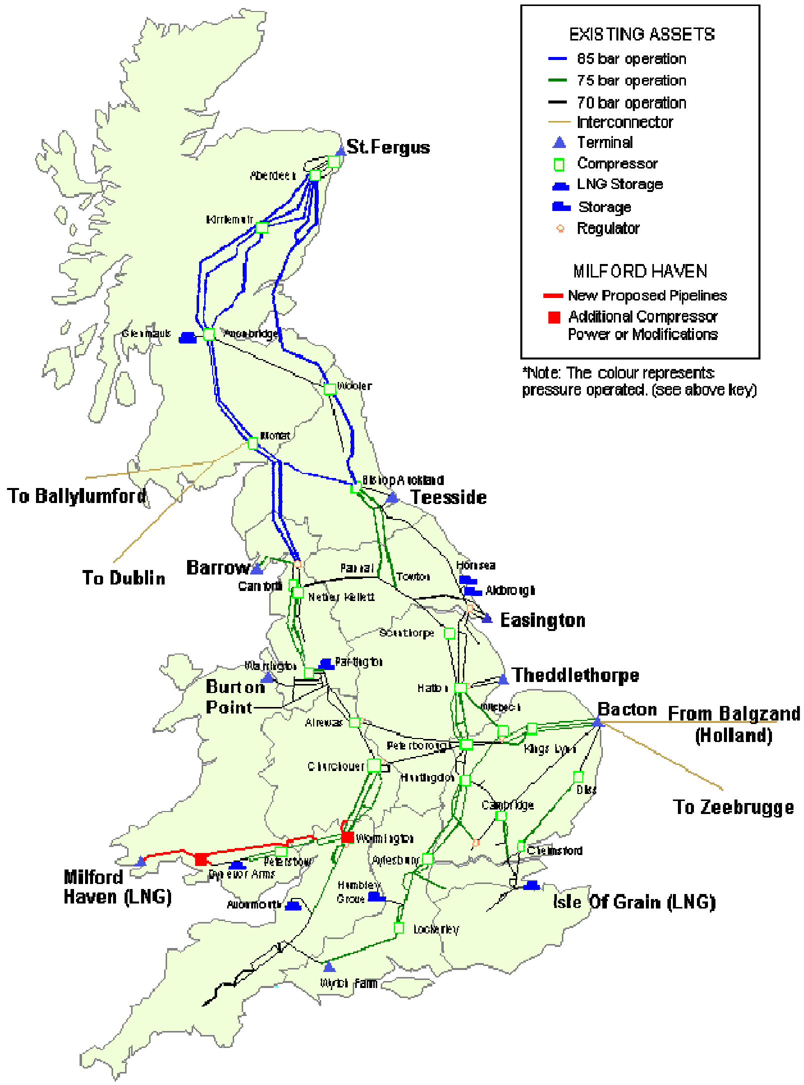
National Transmission System



~ 420km pipe added for 07/08

Current NTS ~ 7,400 km

Milford Haven to Aberdulais- 128km

Felindre to Tirley pipeline – 186km

Pannal to Nether Kellett – 93km

NTS Charge average ~ 1.9p/therm (Entry/Exit & Commodity)

Average domestic charge ~ 85p/therm

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Supply Performance (winter to date)

- All flows broadly in line with forecasts
  - UKCS in line with forecast
  - Norwegian imports marginally lower than forecast due to higher flows to Continent
  - Continental imports in line with forecast with higher BBL offsetting lower IUK imports. Higher IUK post January 1st
  - Intermittent LNG imports via Grain, no Teesside GasPort
  - Storage flows in line with demands
- Release of discretionary interruptible capacity
- Interruptible scaleback at ASEPs

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Summary

- Weather – warmer than average
- Gas
  - Dragon LNG, South Hook and Aldbrough delayed until 2008
  - UKCS and storage use in line with forecast
  - Introduction of Transfers and Trade, main impact at Isle of Grain

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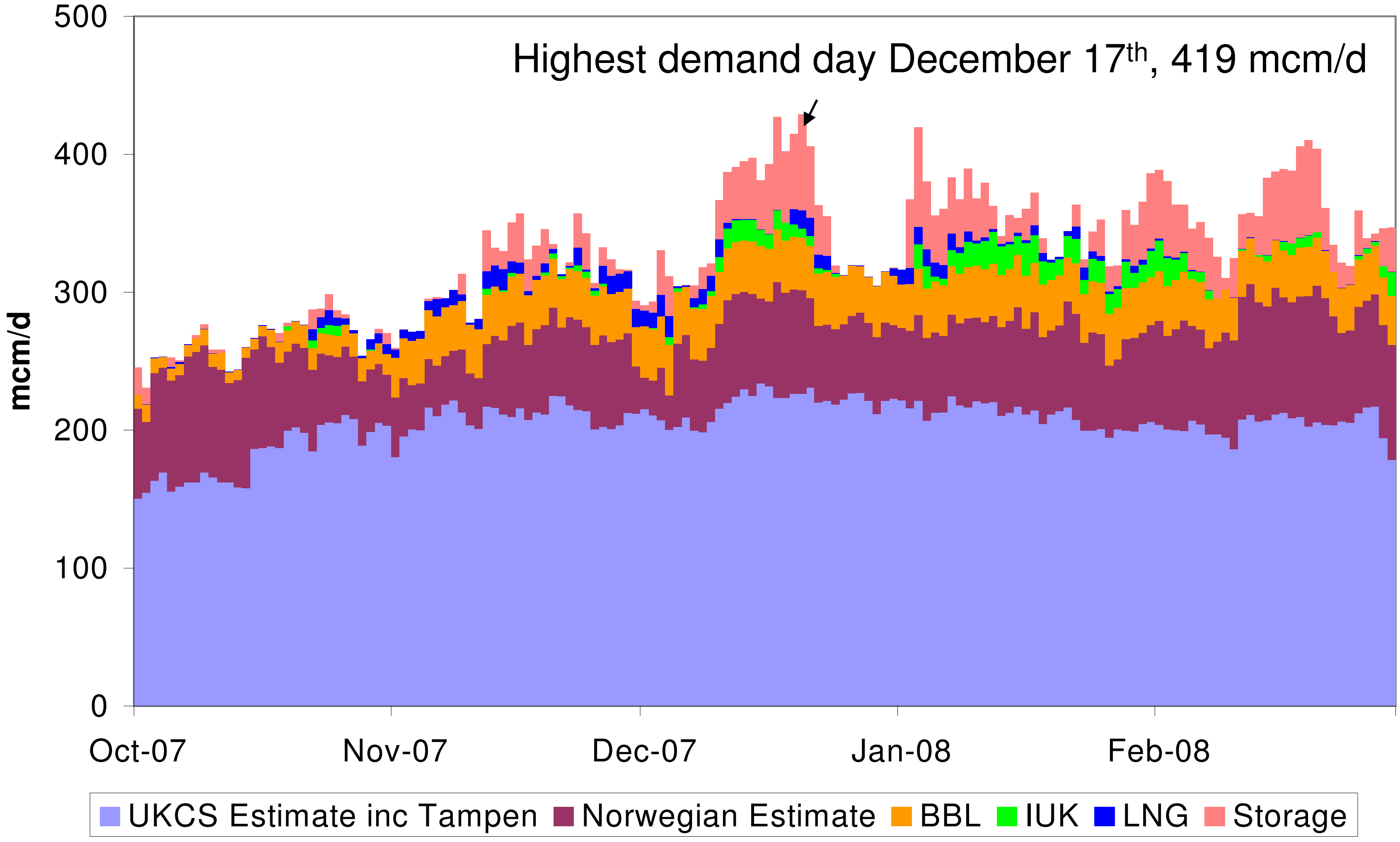
All Supplies



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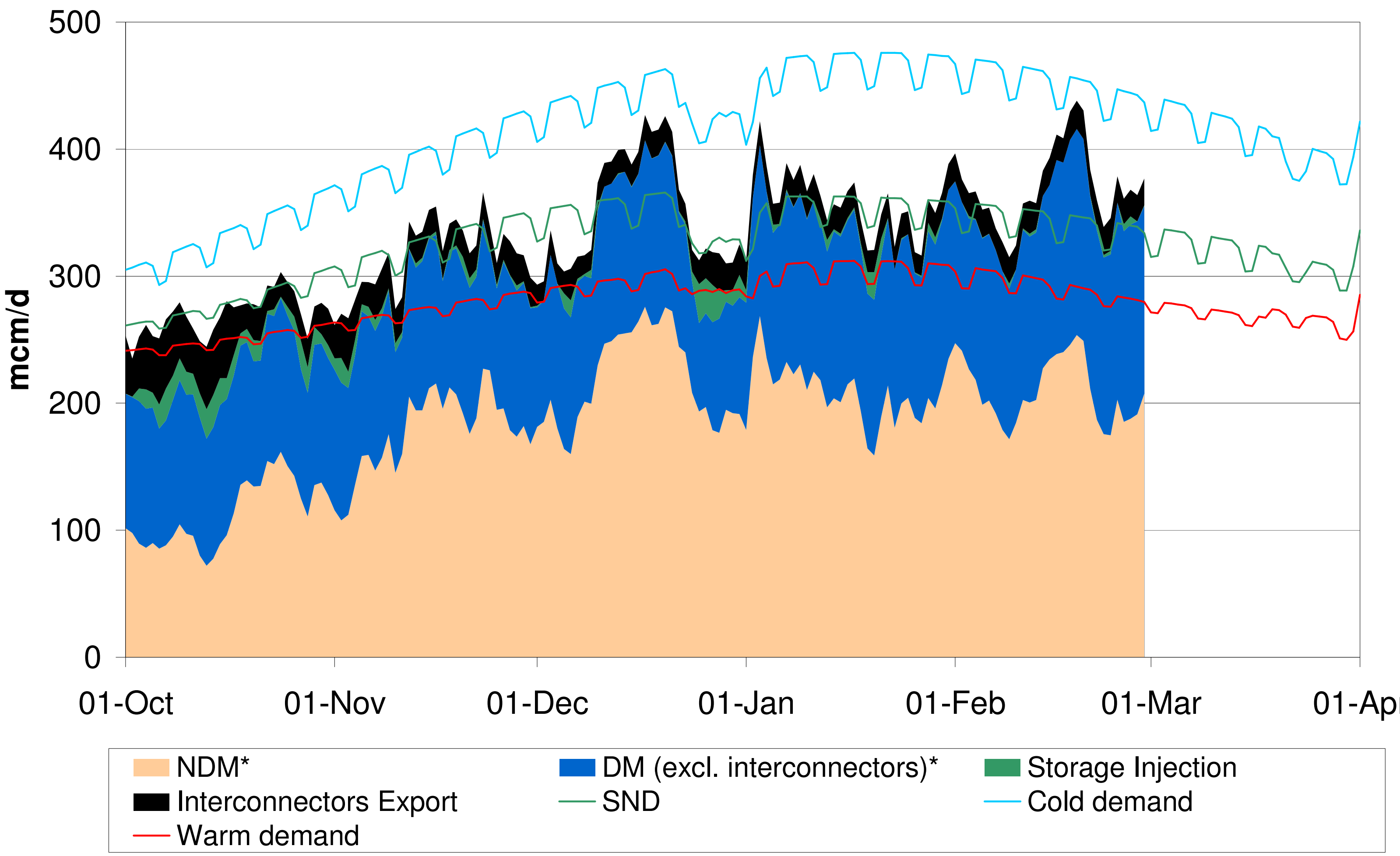
Gas Demand vs Seasonal Conditions



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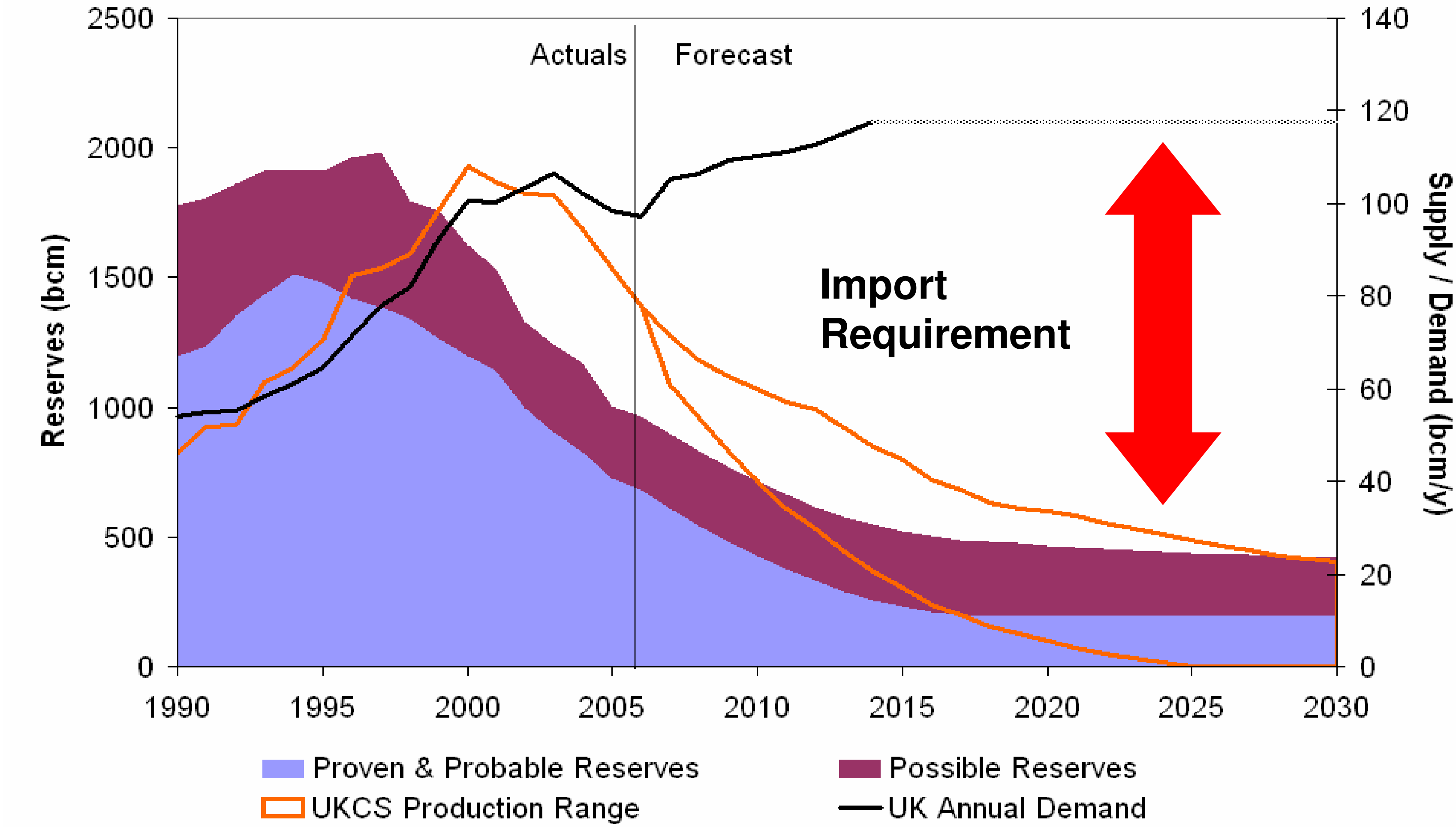
Remaining UKCS Reserves and Production



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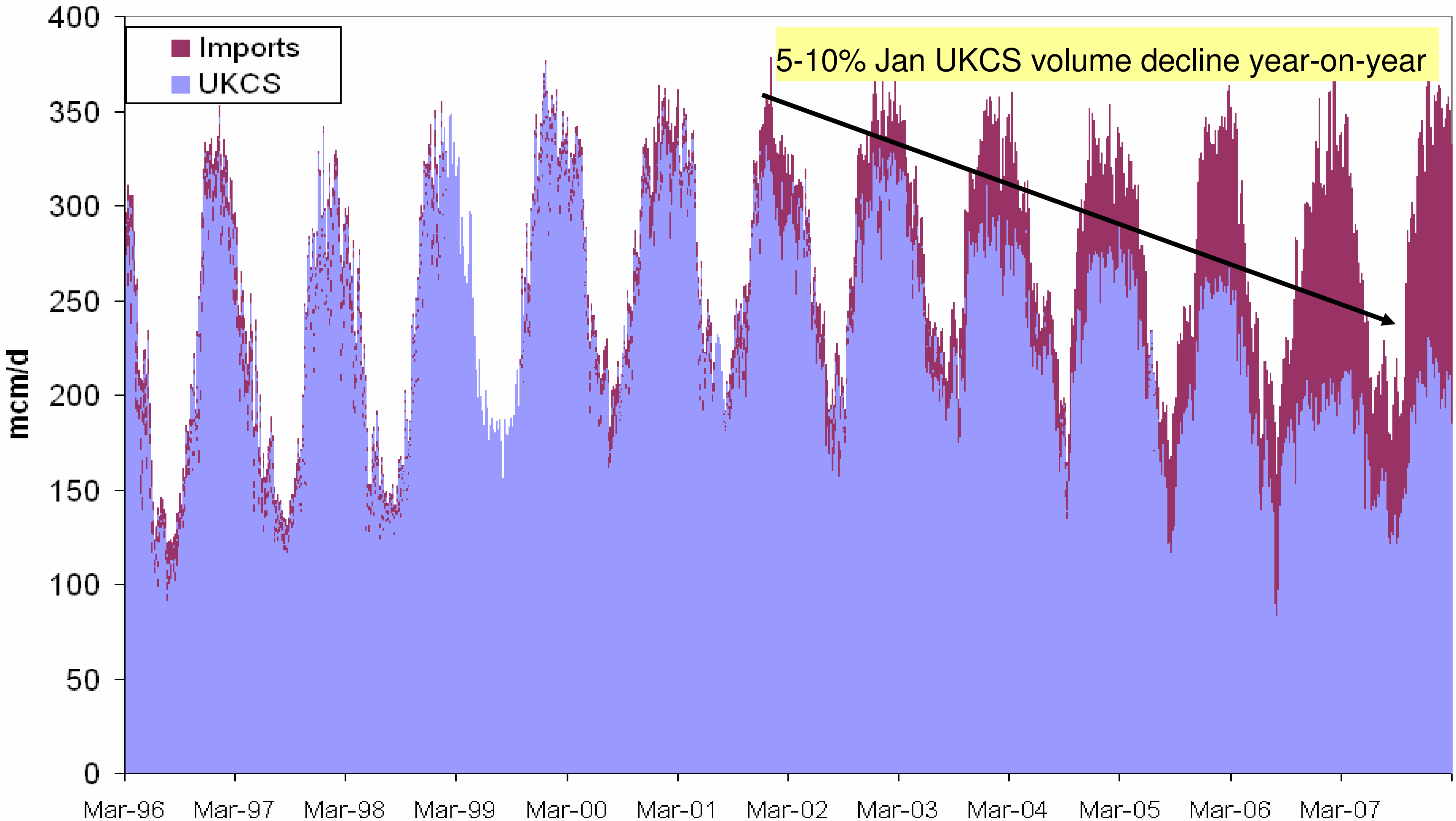
Actual UKCS/Imports - March 1996 to Present



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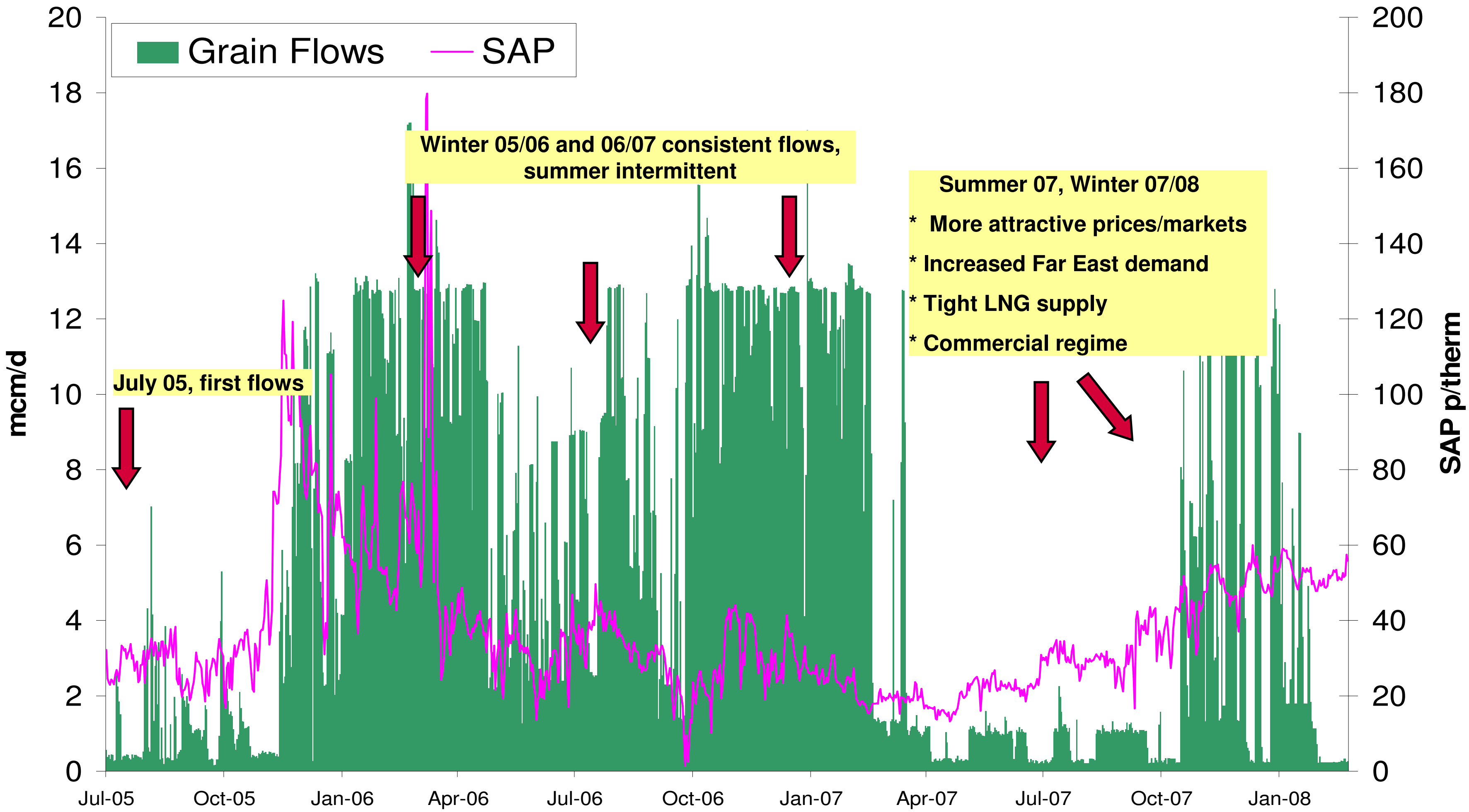
Grain LNG flows to date



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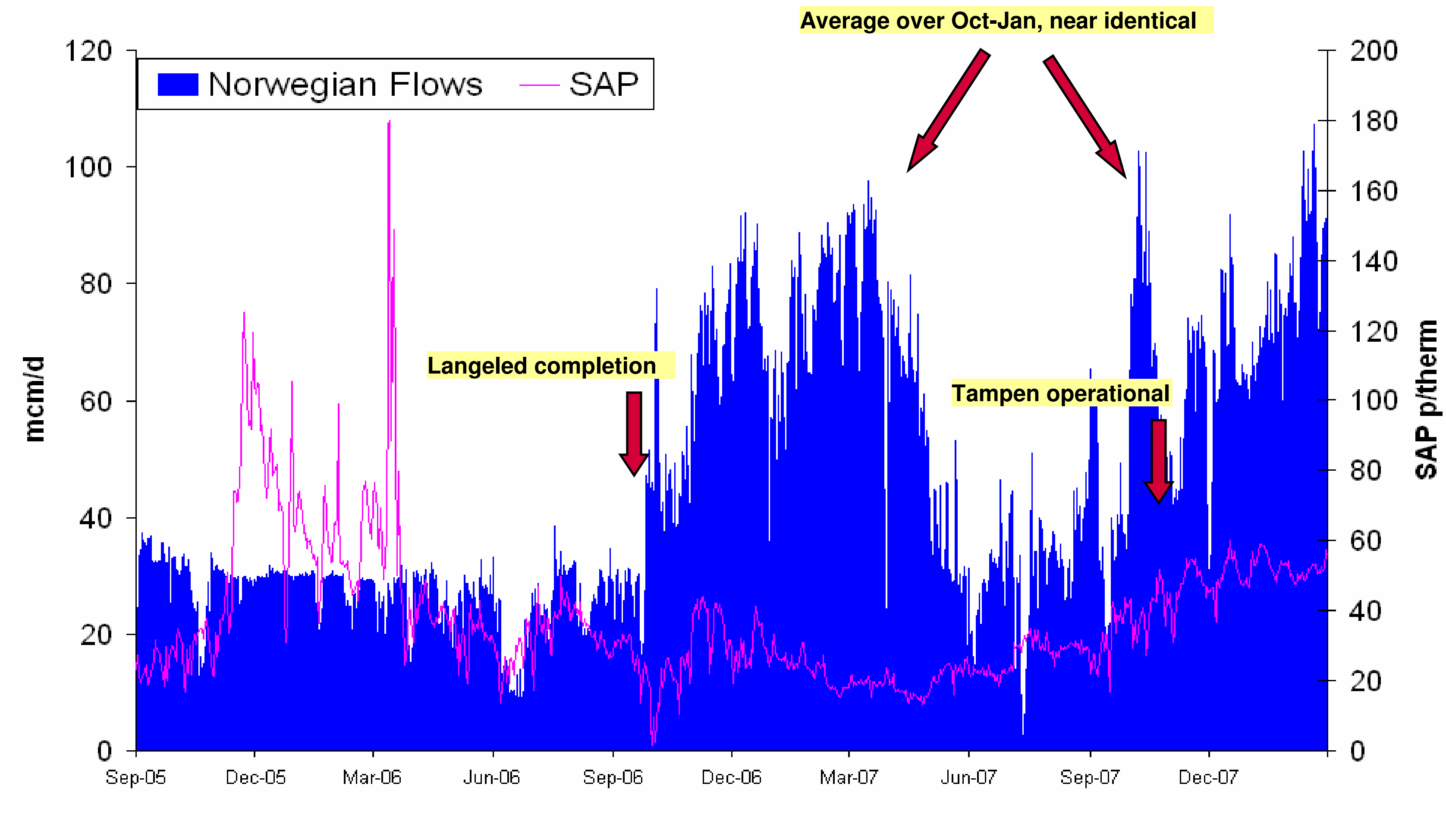
Norwegian (est)



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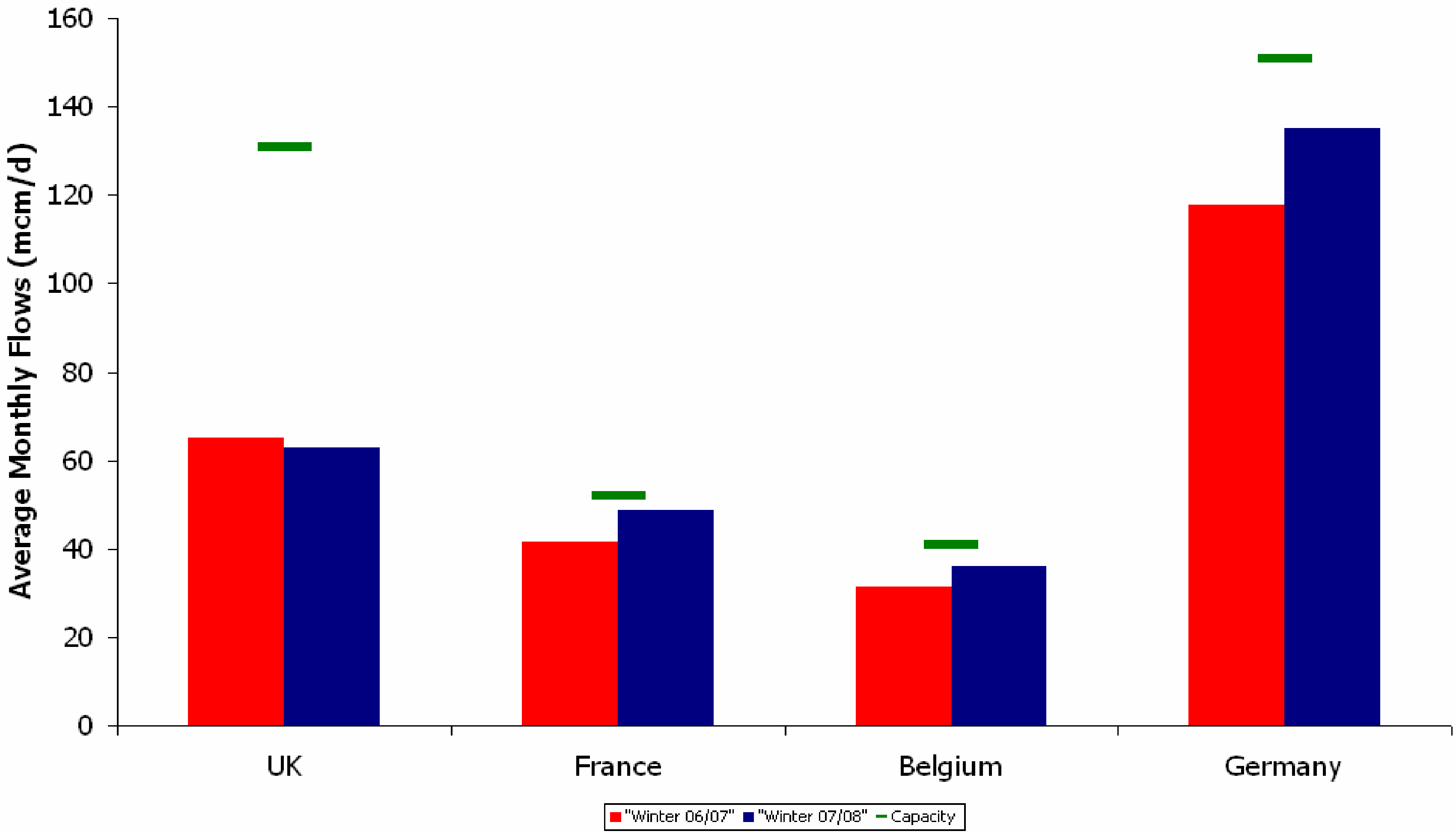
Norwegian Euro Flows



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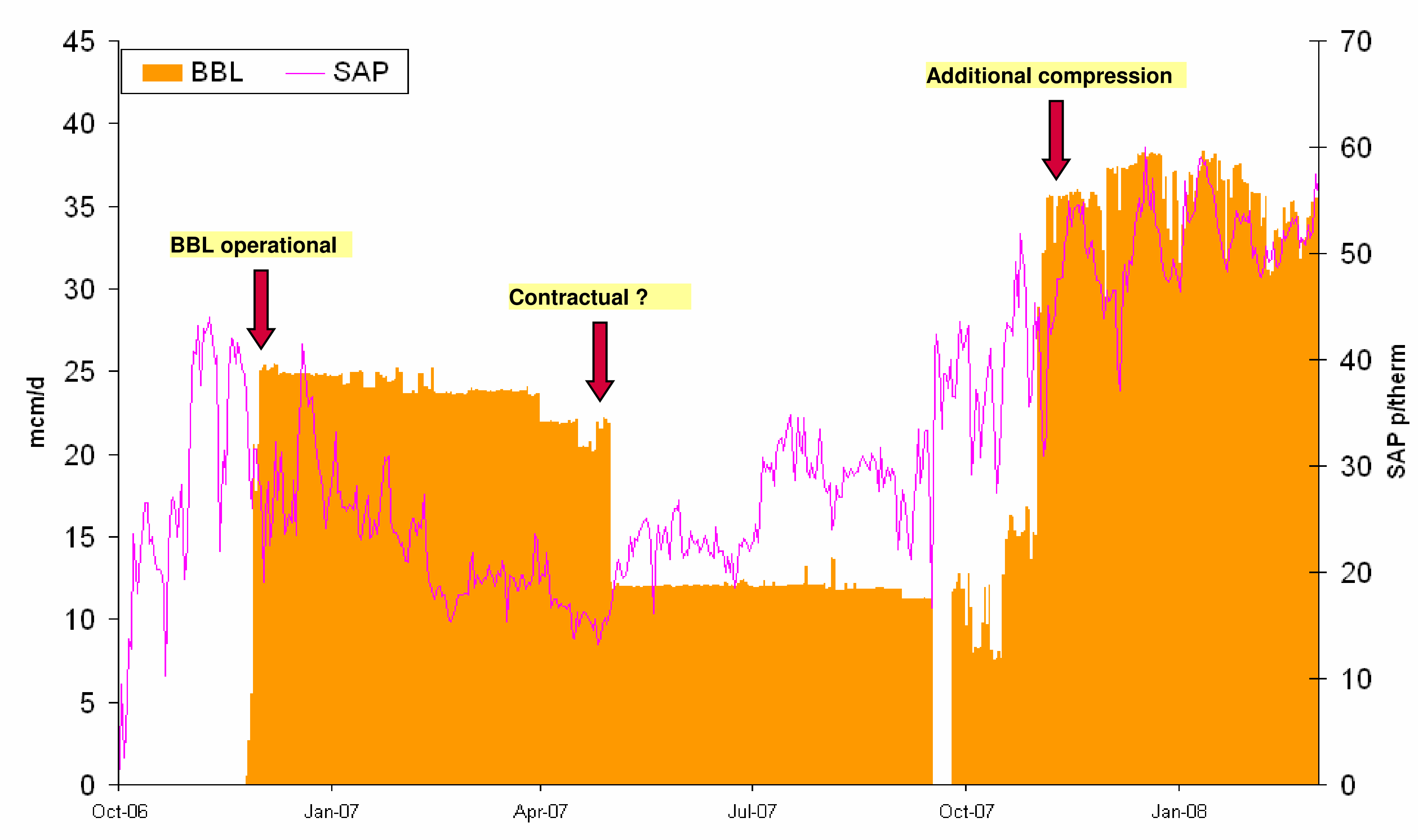
BBL flows



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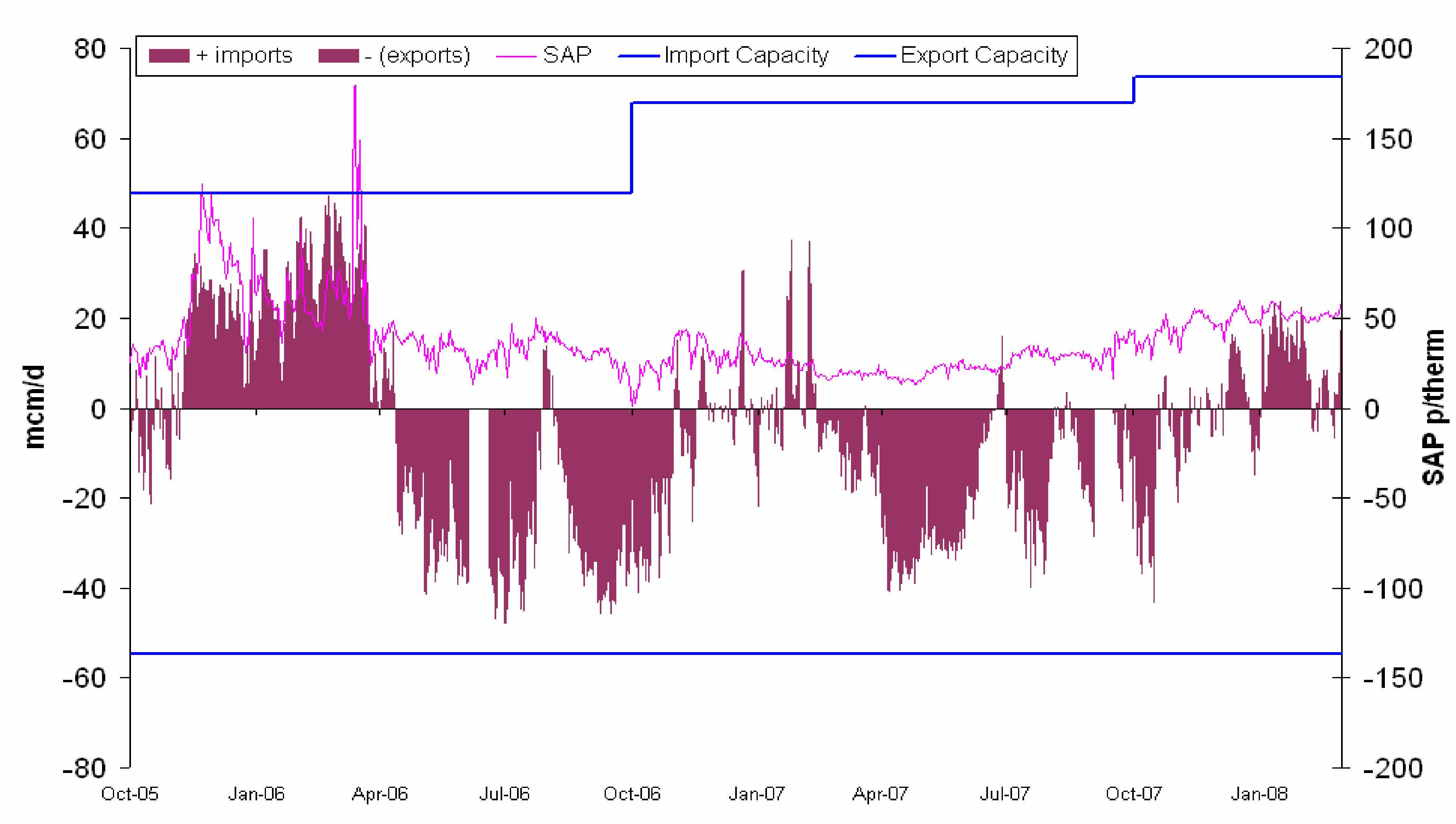
IUK



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Base Case 2007

- UKCS declines continues
- Assume Norwegian volumes underpin import deliveries
    - Troll project cancelled, lower long term volumes to Europe/UK ?
- LNG flows more variable due to competition from alternative markets, LNG supply tightness
- BBL volumes initially more certain pending possible reverse flow capability
- IUK more price/market driven

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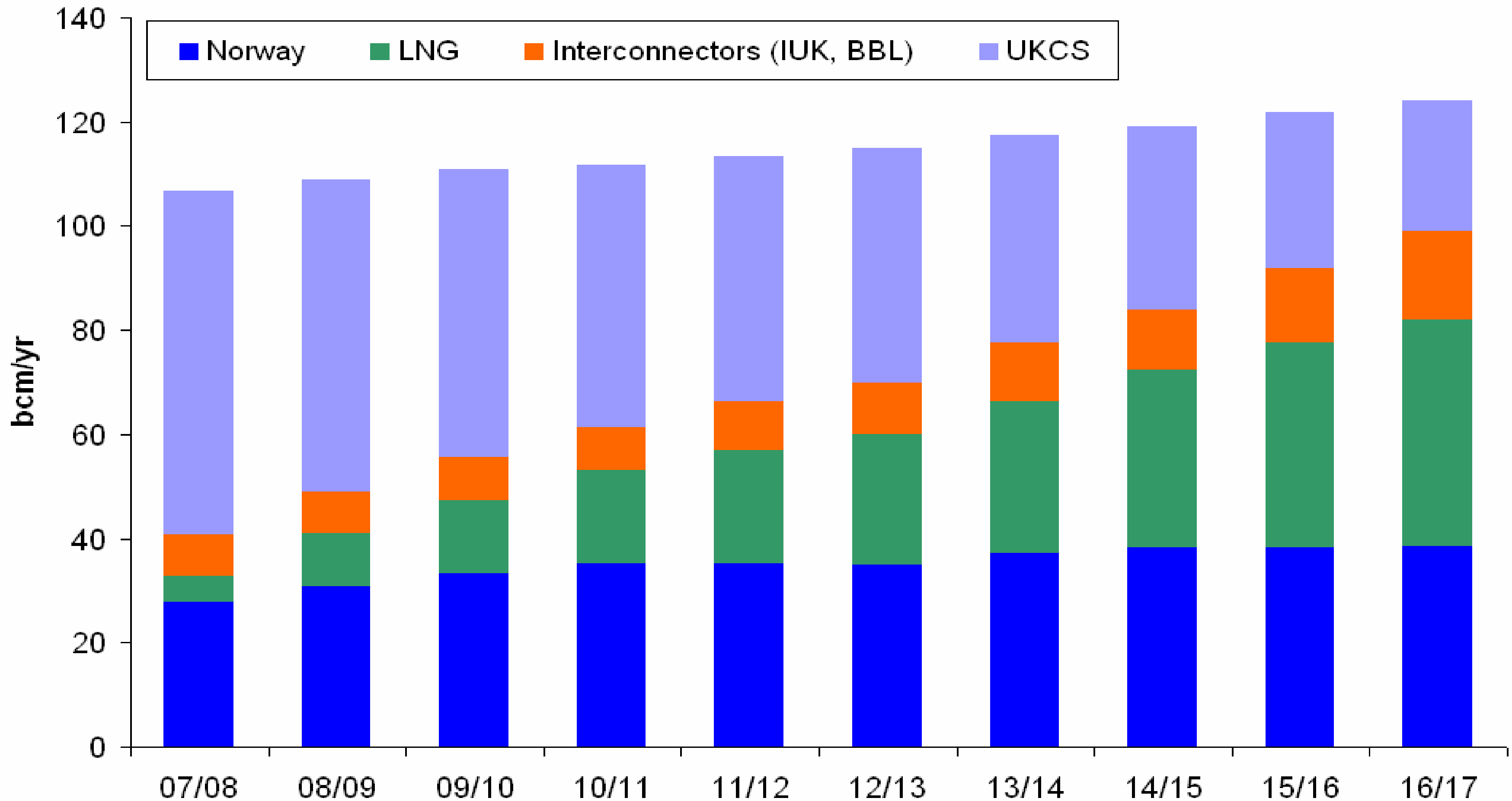
UKCS decline and potential import make up (Base Case)



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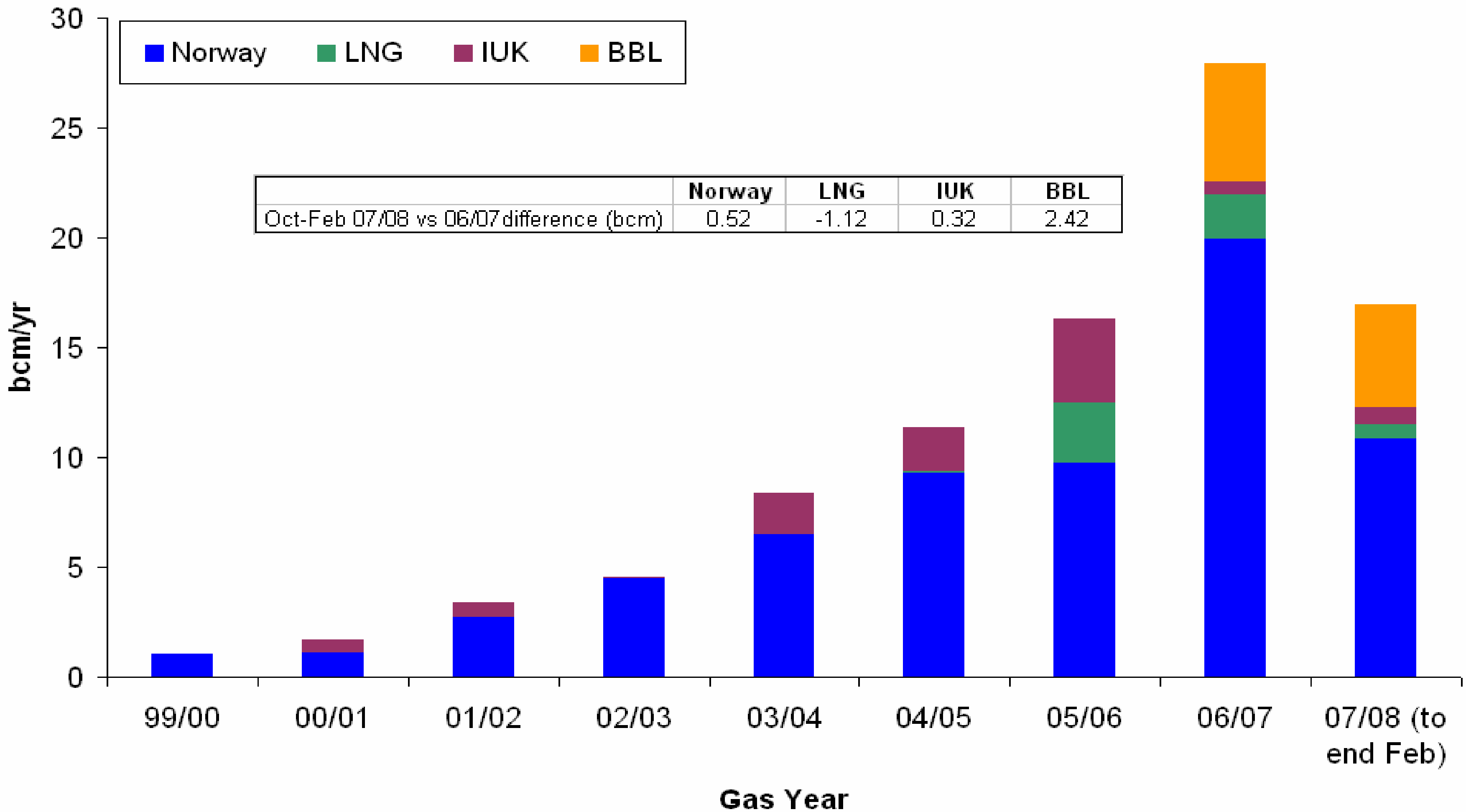
UK Import Flows (Gas Year)



	Norway	LNG	IUK	BBL
Oct-Feb 07/08 vs 06/07 difference (bcm)	0.52	-1.12	0.32	2.42

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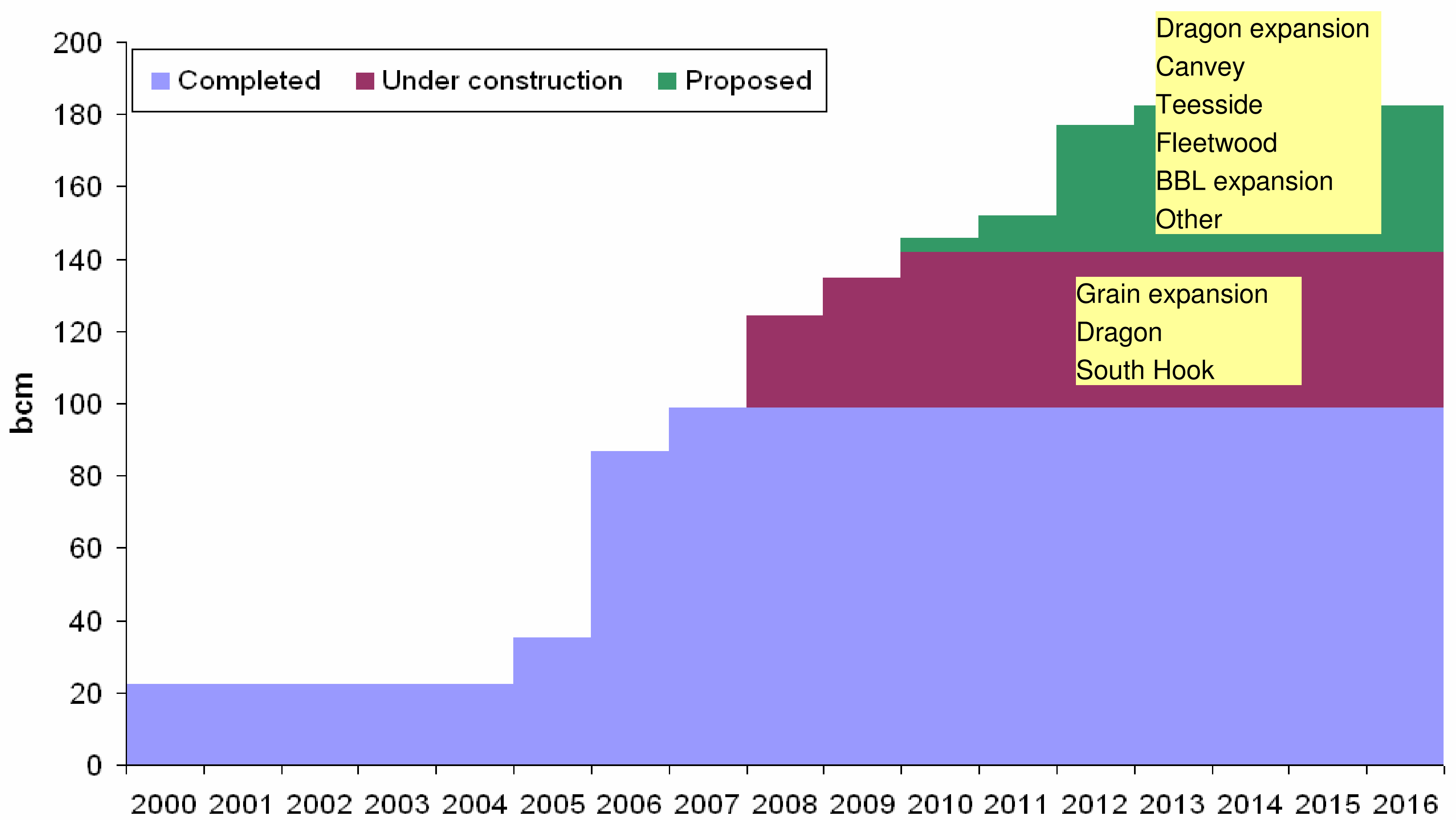
Import Capacity build-up



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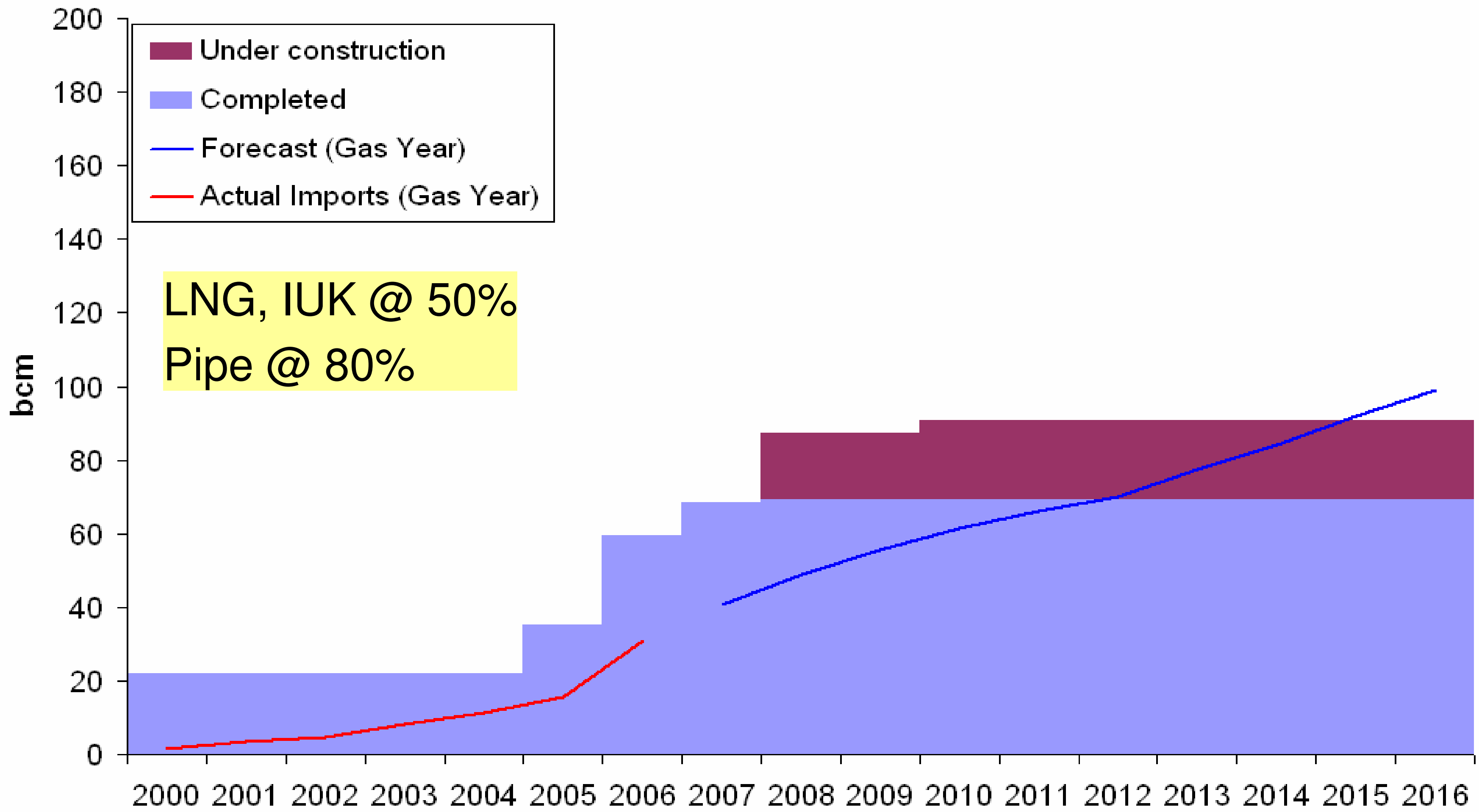
Import Capacity build-up (load-factors)



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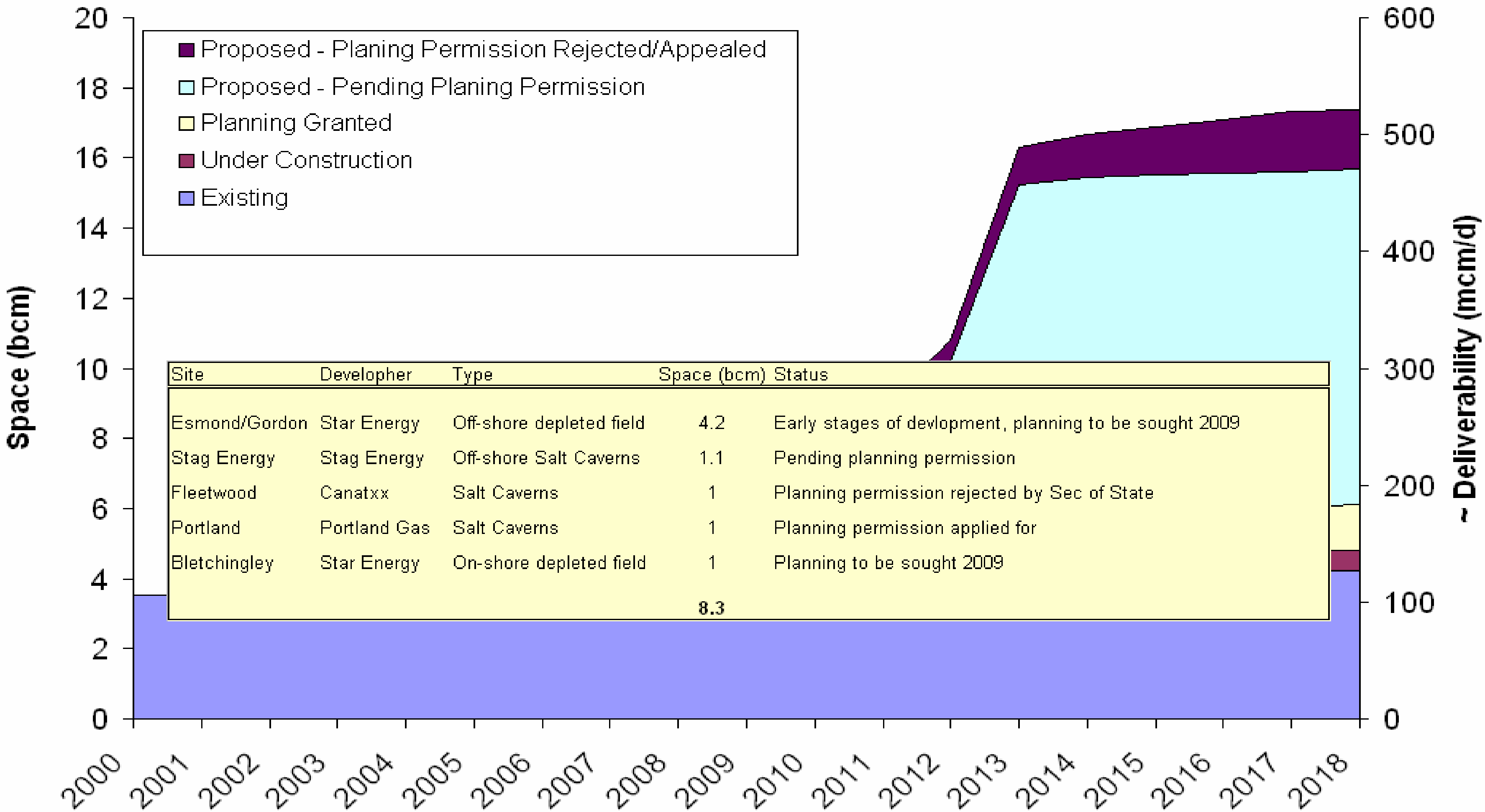
Storage developments



Site	Developher	Type	Space (bcm)	Status
Esmond/Gordon	Star Energy	Off-shore depleted field	4.2	Early stages of devlopment, planning to be sought 2009
Stag Energy	Stag Energy	Off-shore Salt Caverns	1.1	Pending planning permission
Fleetwood	Canatxx	Salt Caverns	1	Planning permission rejected by Sec of State
Portland	Portland Gas	Salt Caverns	1	Planning permission applied for
Bletchingley	Star Energy	On-shore depleted field	1	Planning to be sought 2009
			8.3	

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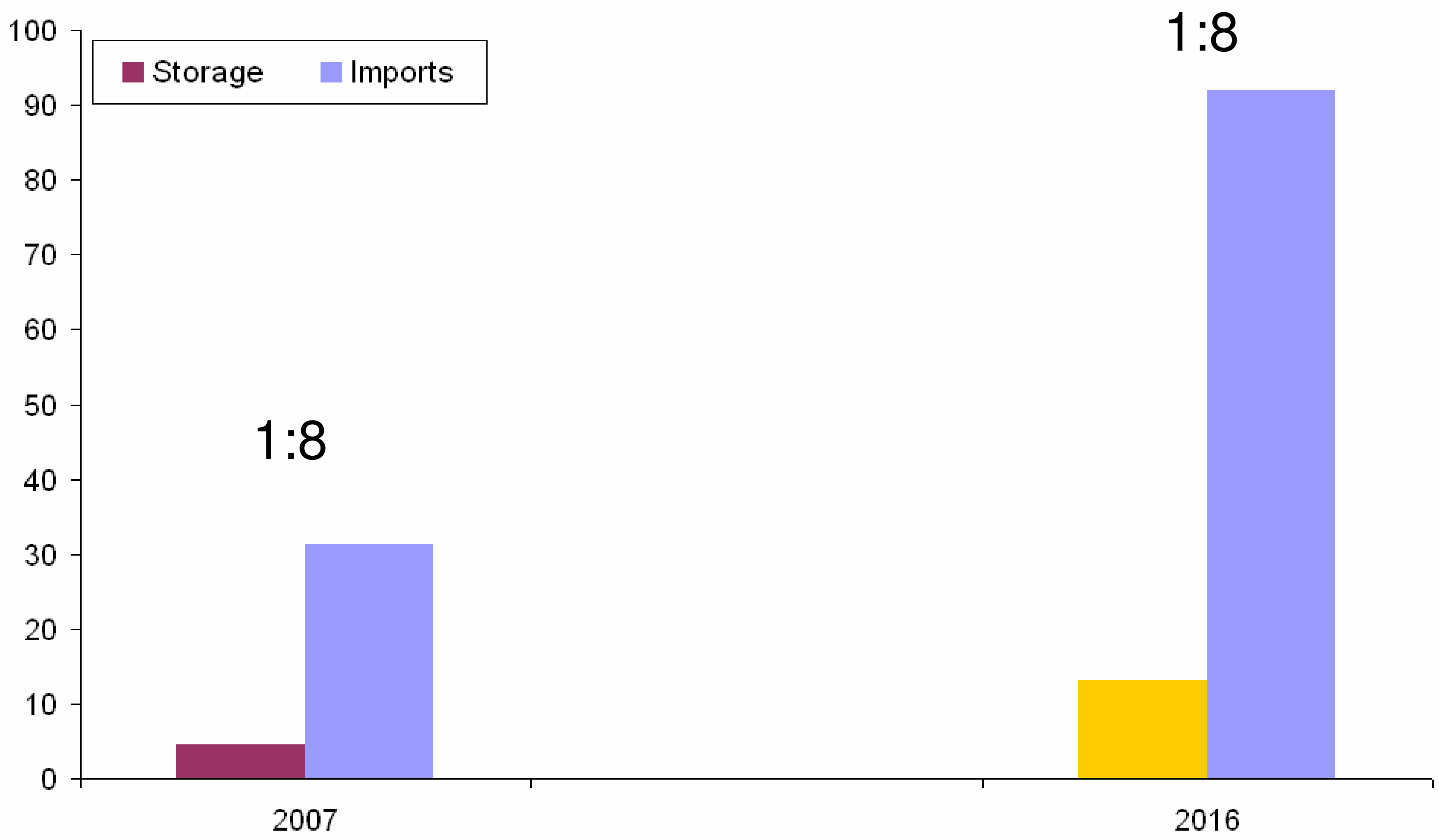
Storage/Import changes



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Supply Summary

- Increasing import dependency
- First phase of infrastructure projects have provided significant additional capacity
- Requirement for additional capacity or high utilisation rates of infrastructure in place will be required
- UK Storage low as a legacy of domestic gas reserves
- Significant storage projects proposed but even if majority developed, storage level will only be comparable to major European importers
- Storage and Import projects face significant delays in planning process
- Significant price volatility

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