

Options for Energy Buyers

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Options for Energy Buyers

Prices: History and Forecasts

Response

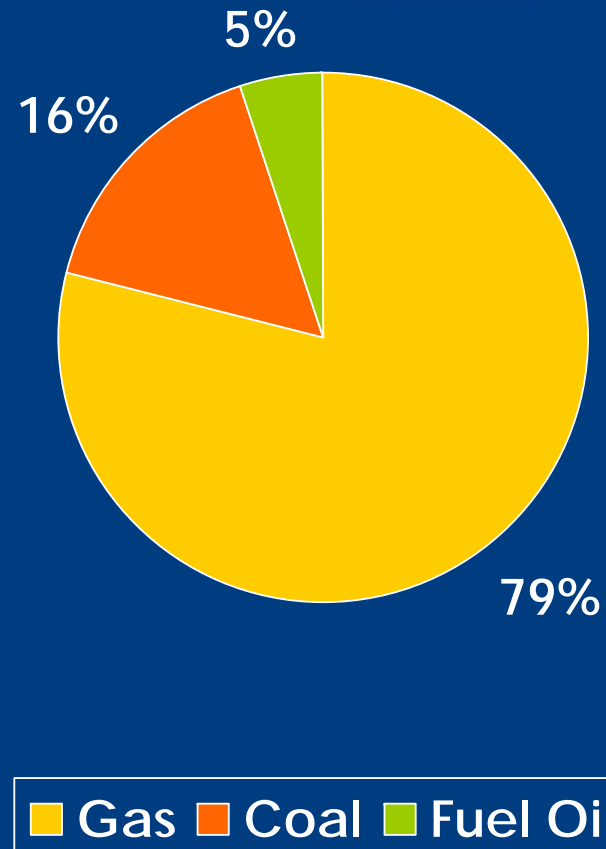
- Energy Efficiency
- Alternative Fuels
- Renewables
- CHP

British Sugar (UK only)

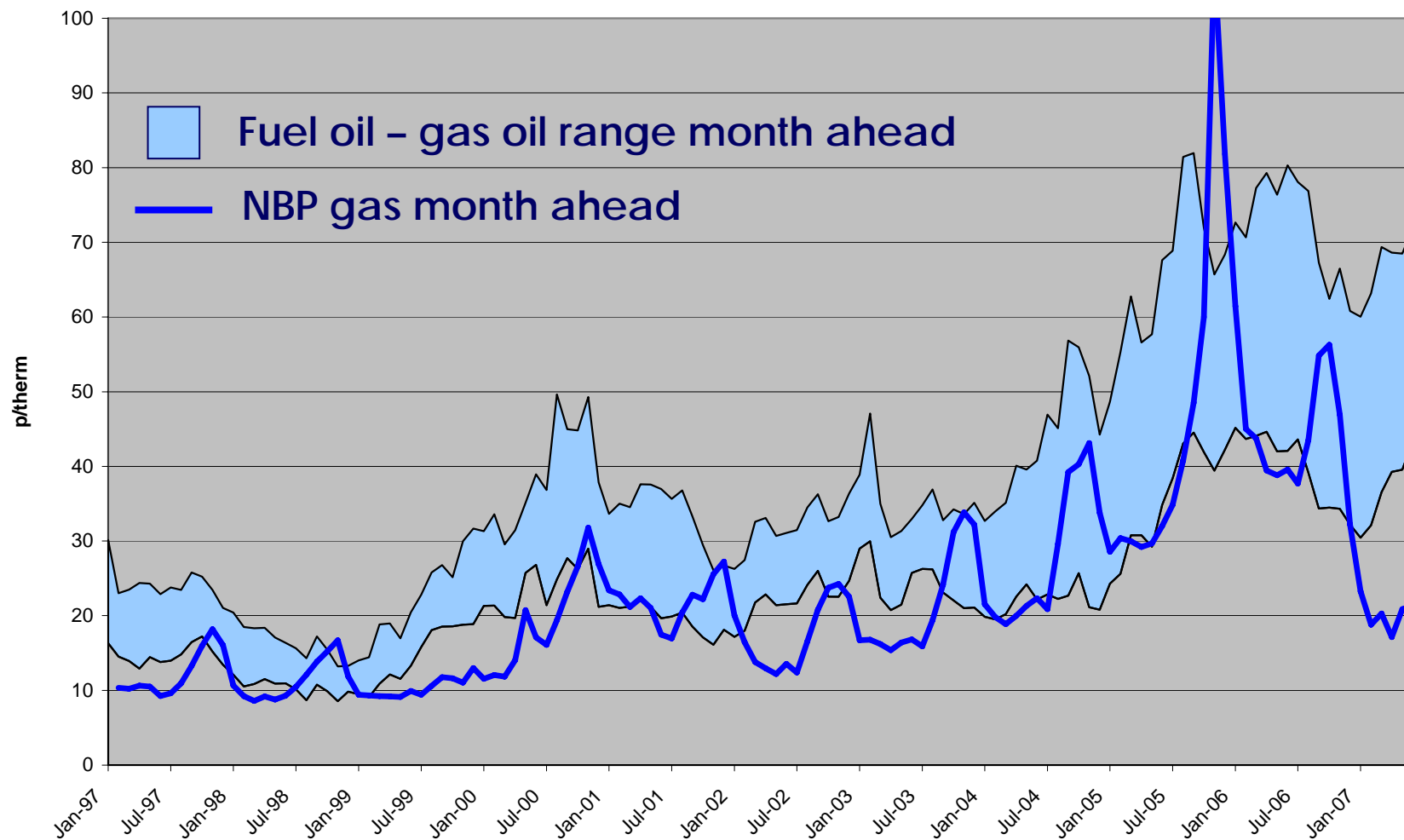
Fuel purchases
4,380GWh

Electricity sales
740GWh

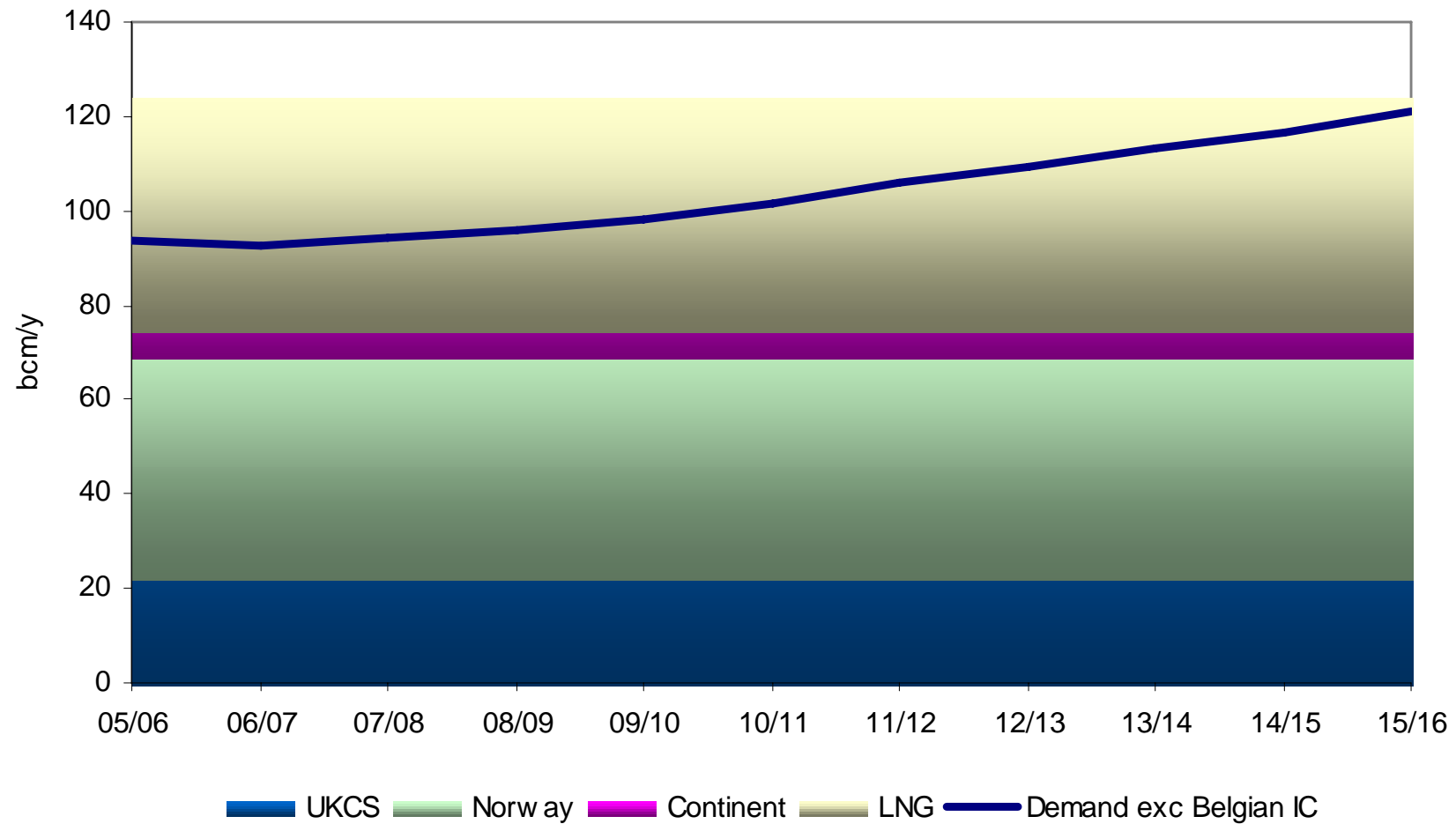
Net energy
consumption
3,640GWh



Gas and Oil Price History



Supply – Demand Forecast



Source: National Grid Ten Year Statement base case assumption

Price Forecasts

- Increasing linkage between global gas markets as use of LNG increases
- Continuing influence of high oil prices
- Environmental legislation to continue to increase energy cost in use

Price Forecasts

- Danger of complacency after the low prices experienced in winter 06/07?
- The UK gas market will not remain over supplied for long

The Response

Energy Efficiency

- Most energy is bought for consumption in equipment and processes designed more than 10 years ago when gas was less than 20p/therm
- The cost-benefit analysis performed at the time is no longer valid

Energy Efficiency Examples

Insulation

- What did not pay 5 years ago will now

Process re-design

- British Sugar is investing £10M at Wissington sugar factory to reduce fuel consumption by 25%
- The technology was available 10 years ago but it was not economic

Alternative Fuels

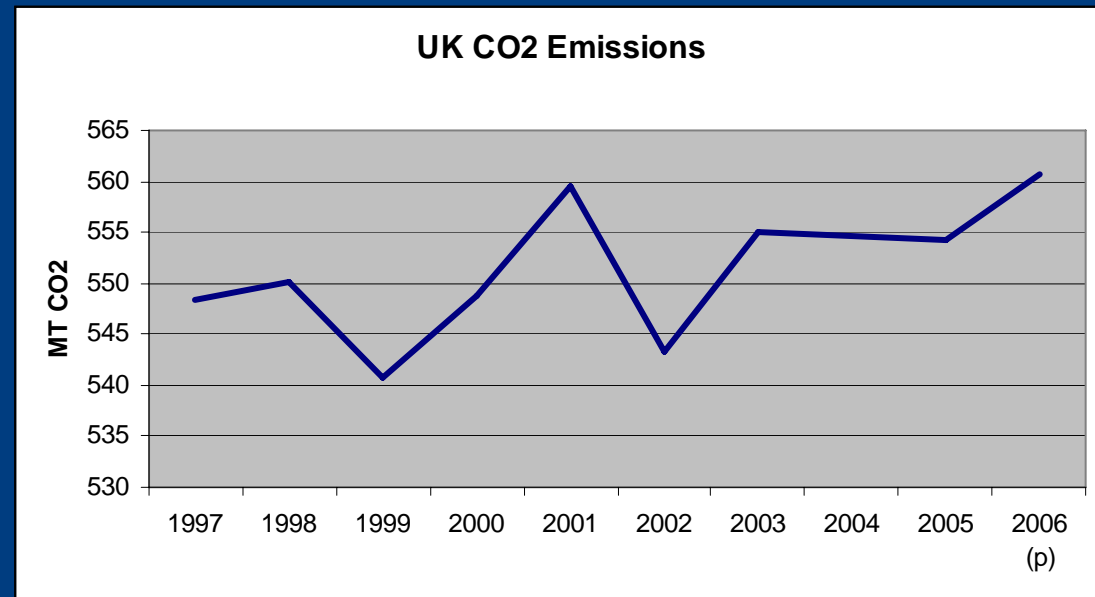
- Coal is a lower cost fuel than gas, even when there is a cost for CO₂
- Efficiency of coal is at least as good as gas in a well run boiler

	Gas (40p/th)	Coal (\$80 - 140/T)
Fuel	£16.00/MWh	£5.30 – 9.20/MWh
CO ₂ (€20/T)	£2.50/MWh	£5.40/MWh
Total	£18.50/MWh	£10.70 – 14.60/MWh

CO₂ Emissions

“CO₂ emissions grew an estimated 2.6 percent last year, while energy consumption grew 2.4 percent”

BP Statistical Review of World Energy 2007



Response to Price Spikes

- Turn it off!
- Turn it down?
- Alternative Fuels
 - Fuel Oil ~ 60p/therm
 - Gas Oil ~ 80p/therm

Renewables?

- Difficult for industry to make an economic case given lack of support outside of electricity generation

“Outside of transport heat accounts for 76% of all the energy we use, three times as much as electricity”

A manifesto for sustainable heat, Green Alliance

Renewables in British Sugar / ABF

- Anaerobic Digestion
 - Project recently commissioned at Bury St Edmunds factory generating ROCs using CHP plant
 - Project at sister company generating ROCs using dedicated gas engine
 - Potential for additional projects will be enhanced by ROC banding proposal
- Additional potential unlikely to be realised without support for renewable heat

Combined Heat and Power

- CHP is becoming increasingly valuable
 - Renewable Obligation
 - EU ETS Phase 2
- Potential for significant additional industrial CHP in the UK
- But UK still falling well short of target 10GW by 2010

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