

# Drivers and trends in world energy markets - implications for 2007 policy

Westminster Energy Forum, 18 October 2006

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## Agenda

- › **World oil prices**
- › **Gas – pricing, sources and security**
- › **Power**
- › **Environment and carbon emissions**
- › **Conclusions – key issues**

## Quantitative analysis

### Global Gas Model



### European Gas & Power Service



## World oil prices

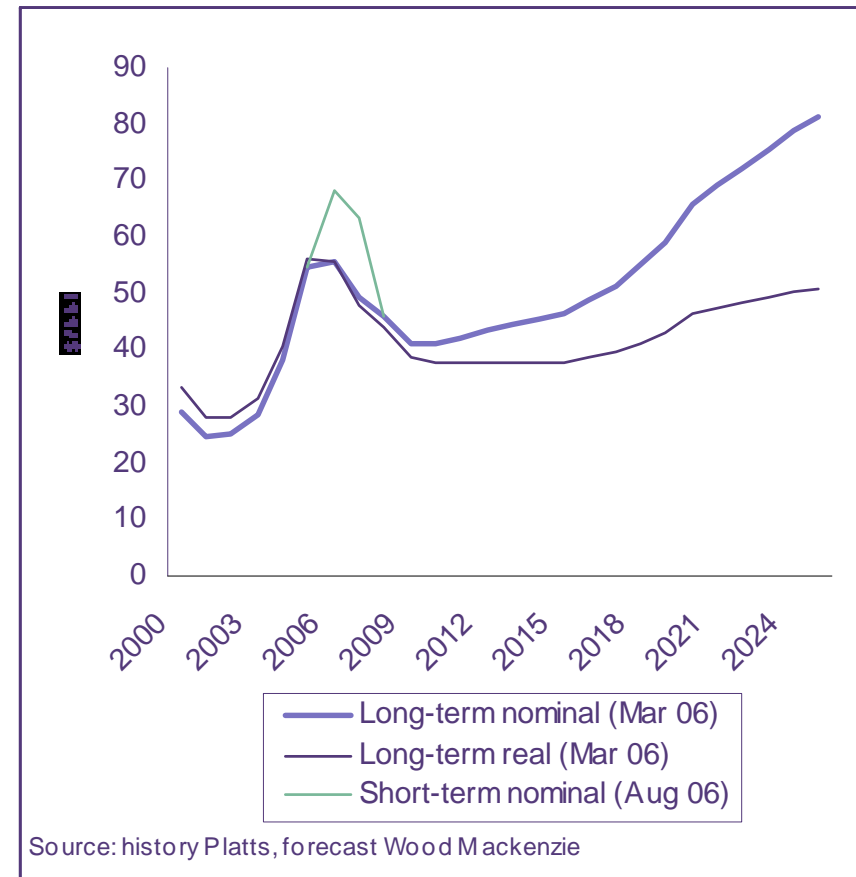
### › Long term

- supply has been outpacing demand for over two years – fundamentals point to lower oil prices
- non-OPEC supply forecast to increase until around 2013
- supplies become significantly tighter after 2015, non-OPEC peaks and OPEC has greater market share and pricing power

### › Short term

- Will fundamentals continue to be overwhelmed by political factors?
  - Lebanon, Iran, Iraq, Nigeria, North Korea

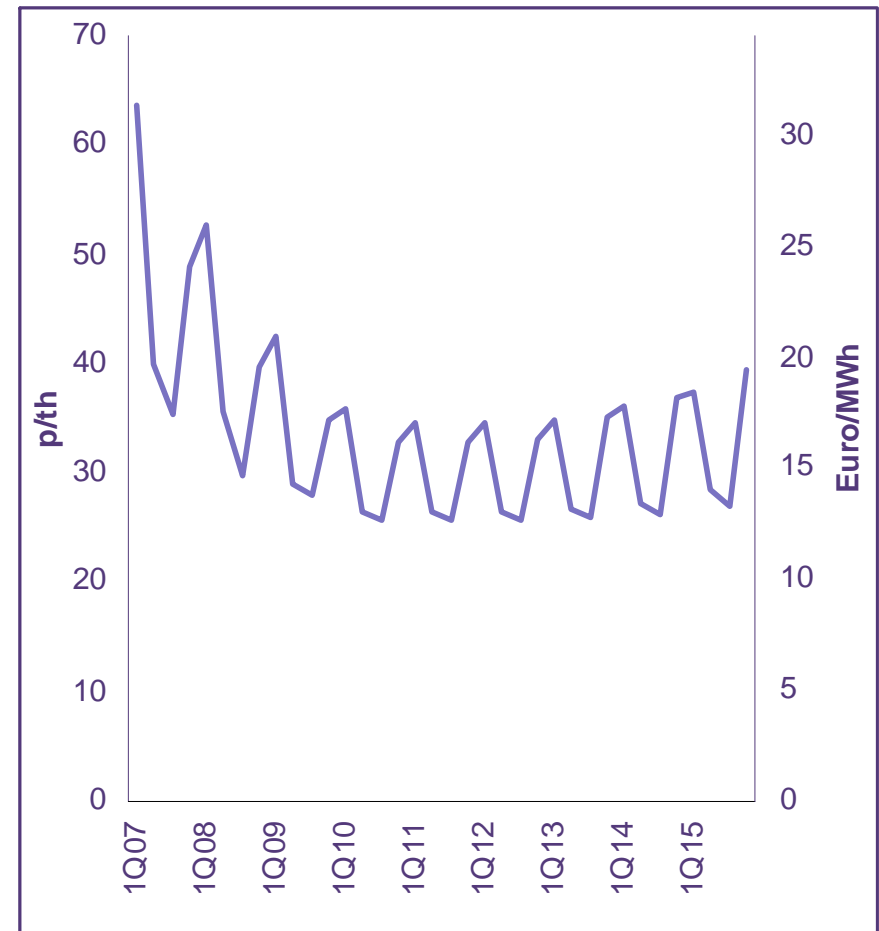
### Oil Price Outlooks



## Gas prices

- › **European gas prices follow oil prices downwards**
  - we expect oil indexation to remain dominant
  
- › **UK prices also fall**
  - surfeit of flexible import capacity (particularly Norway and LNG) more than compensates for loss of indigenous swing
  - current UK-specific scarcity premium fades away over the next two years
  - ...although we do not expect over-supply and price collapse
  
- › **Some upward price pressure in longer term**
  - General tightening in global gas situation (LNG, Russia, Norway) leads to higher prices

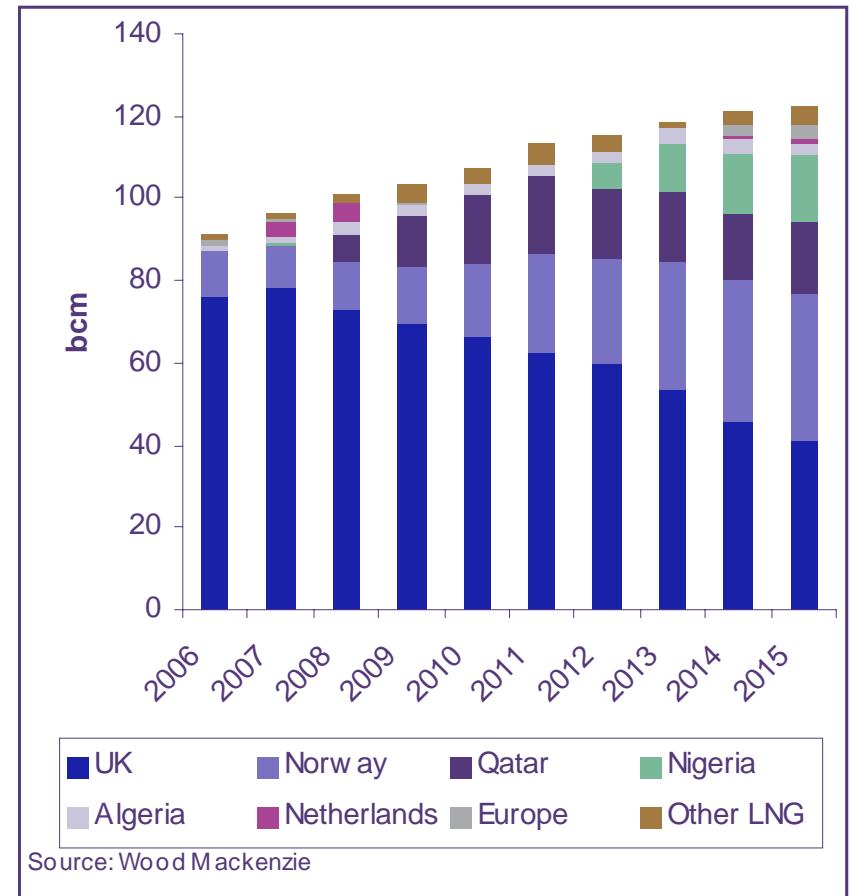
UK NBP gas prices



## Gas sources

- › **Norway to become largest source of gas for UK**
- › **LNG sources also important**
  - Qatar, Nigeria, Algeria
- › **No significant Russian volumes before 2015**
  - geography – Russian gas will stay in Europe
  - political and corporate relationships – countries with existing links with Russia are broadening and deepening them (Germany, France, Italy)
  - Gazprom will pick up UK customers and contracts, but physically these will be served by swaps

### UK gas supply mix



## Gas security

- › **New gas import routes significantly improve gas security of supply for the medium term**
  - flexible supply from Norway and LNG, in addition to Interconnector and BBL
  - surfeit of capacity – “one project too many” – should ensure security in most conditions
    - just as well, given possible Milford Haven line consents delays
  
- › **Short-term storage position is also being improved**
  - Projects are coming forward, although encountering consenting delays
  
- › **Question of strategic storage remains**
  - covering the high-impact, low probability combination of events
    - severe winter combined with non-availability of one or more major import sources
  - gas physically located within the country does provide an additional level of security
  - ...but how to arrange without pre-empting market
    - Bank of England MPC model?

## The power sector

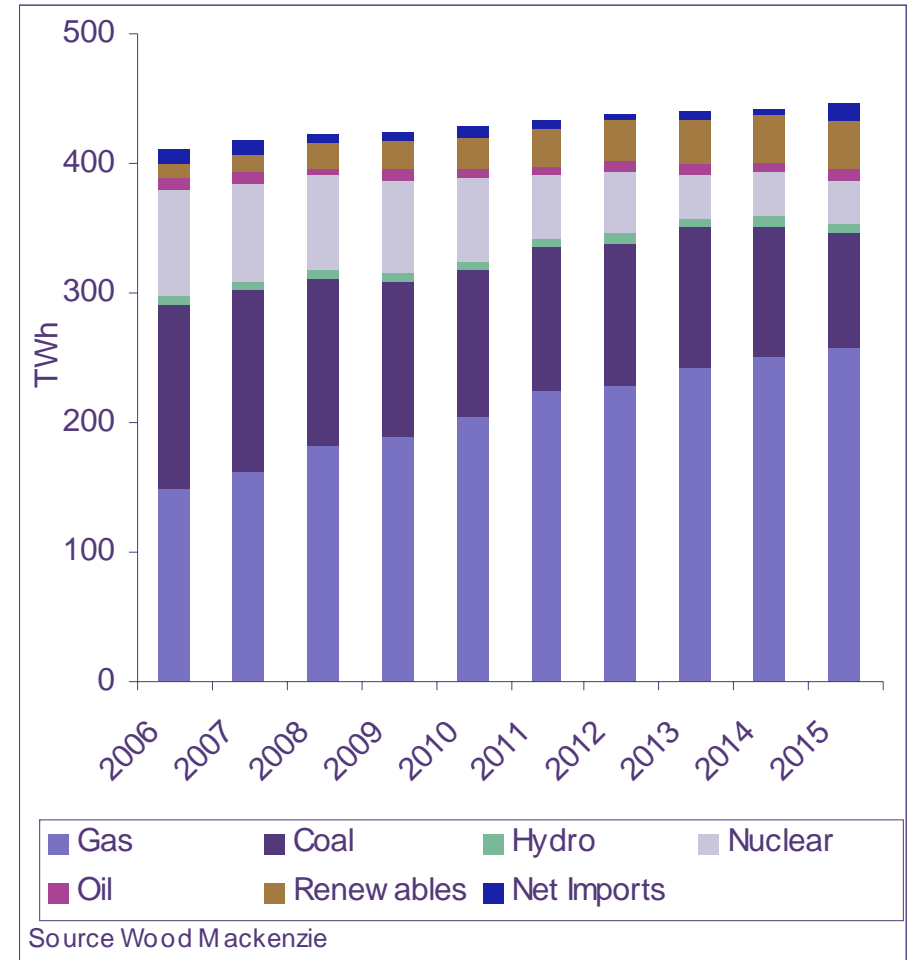
### › Langage and Marchwood mark the end of a hiatus in conventional plant build

- First such pause since 1945
- Queue of other projects from Eon, RWE, SSE, EdF etc.

### › Combined with continuing renewables build, adequate plant margins should be achieved

- although one impact of renewables is to gradually increase the required margin

### UK Power Generation Mix



## Power security

### › Uncertainty in the power sector increases around 2015

- drop-dead date under LCPD for non-FGD coal and oil plant
- AGRs also potentially dropping dead around this period
  - AGR uncertainty possibly inherently irreducible, other than by deliberately cutting short lifetimes
- risk of closing fossil plant and then unexpectedly losing AGRs
  - case for retaining flexibility on closing fossil plant

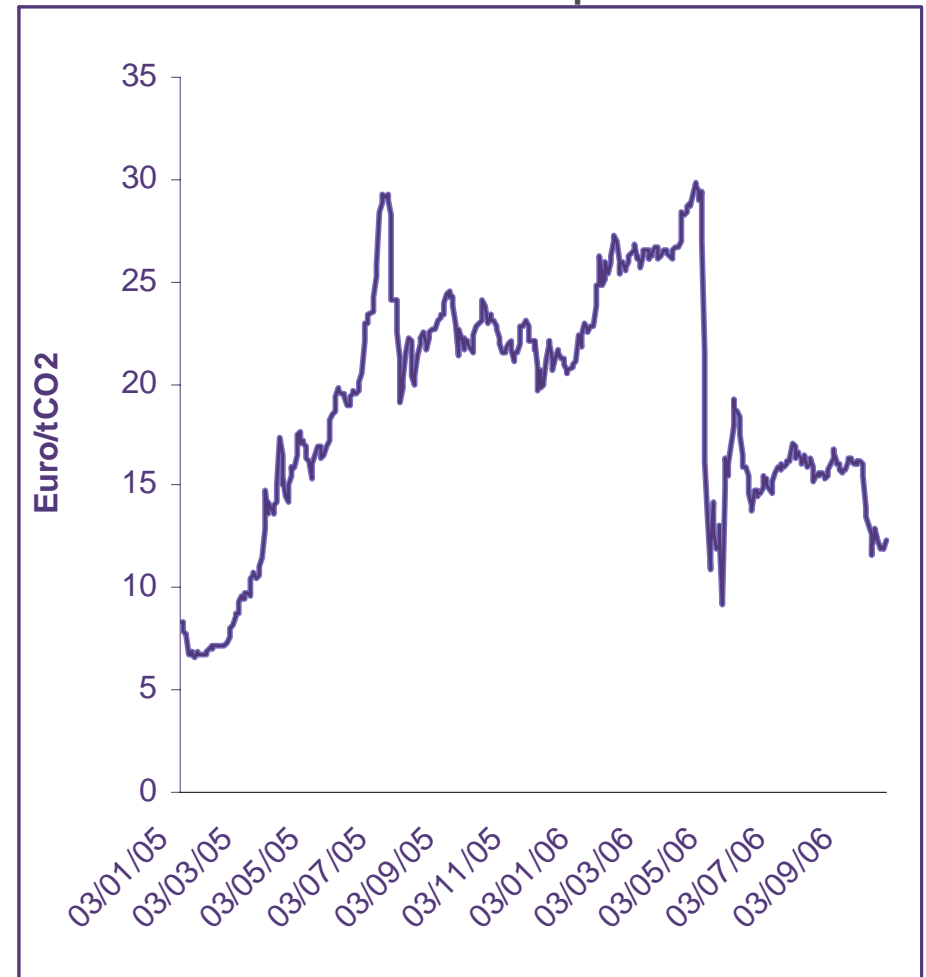
### › Which plant will pick up the demand peaks from 2015?

- remaining FGD coal already running at peaks
- older CCGTs
  - technical capability?
  - still dependent on gas – additional backup fuel capacity
- need for new (clean) peaking plant?

## Environment and carbon emissions

- › **EU ETS successful in its own terms, but hardly provides a stable long-term framework**
  - prices unpredictable, non-transparent
  - political developments (rather than fundamentals) are the key influences
  - nothing beyond 2012
  
- › **Does not provide signals of the size and stability needed for the investments we are now told are necessary**
  - e.g. 70% CO<sub>2</sub> reduction by 2030
  
- › **In addition, planning consents issues look likely to constrain renewables build**
  - e.g. Beaulieu-Denny grid upgrade

### EU ETS carbon prices



## Conclusions – key issues

- › **Gas**
  - strategic storage?
  - become / remain the market of choice for Norway and LNG suppliers
    - too late for us to strike a strategic gas relationship with Russia, but that may not matter anyway
  
- › **Power**
  - prepare for uncertainty / instability around 2015
  
- › **Carbon**
  - “beyond ETS” – a long-term and stable framework for carbon
  - concrete steps to encourage and enable the large investments in low-carbon energy which are apparently necessary
    - including streamline of planning consents system

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