



Winter to date Ofgem seminar

23 January 2008

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MD – Energy Portfolio Risk Management

EDF Energy

EDF ENERGY

Winter to date – Ofgem seminar

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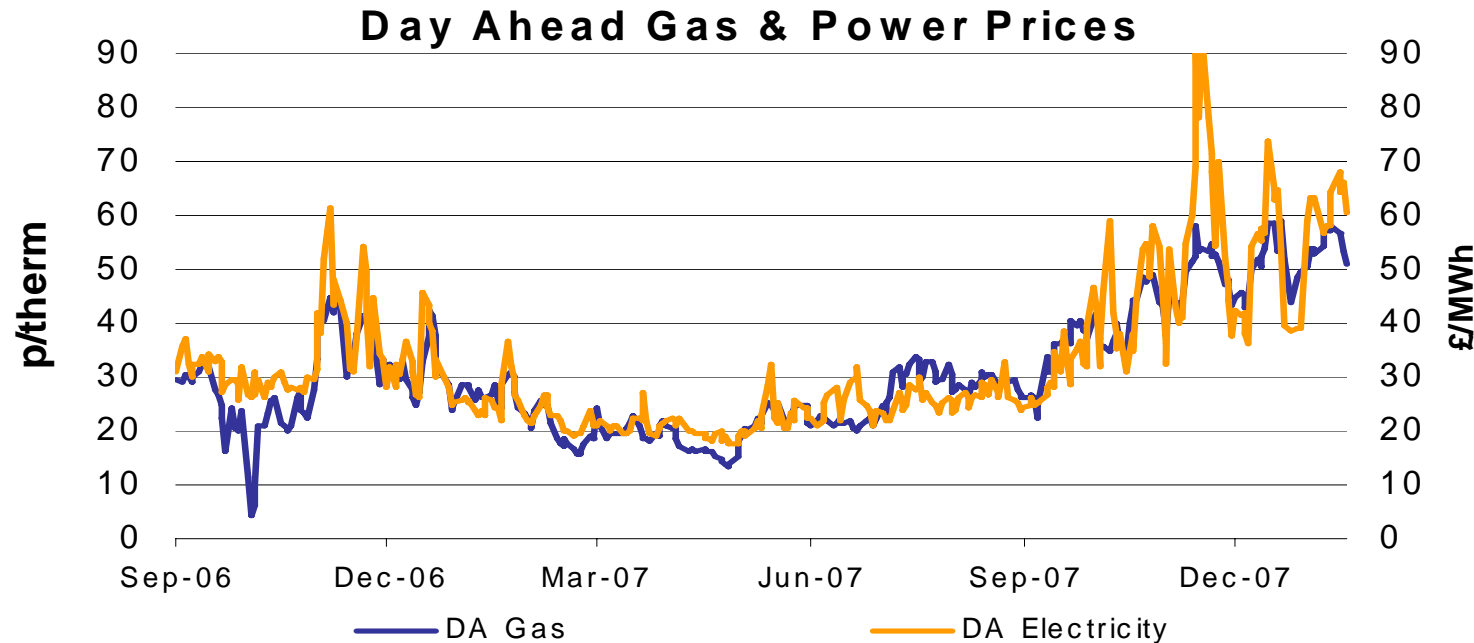
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Content

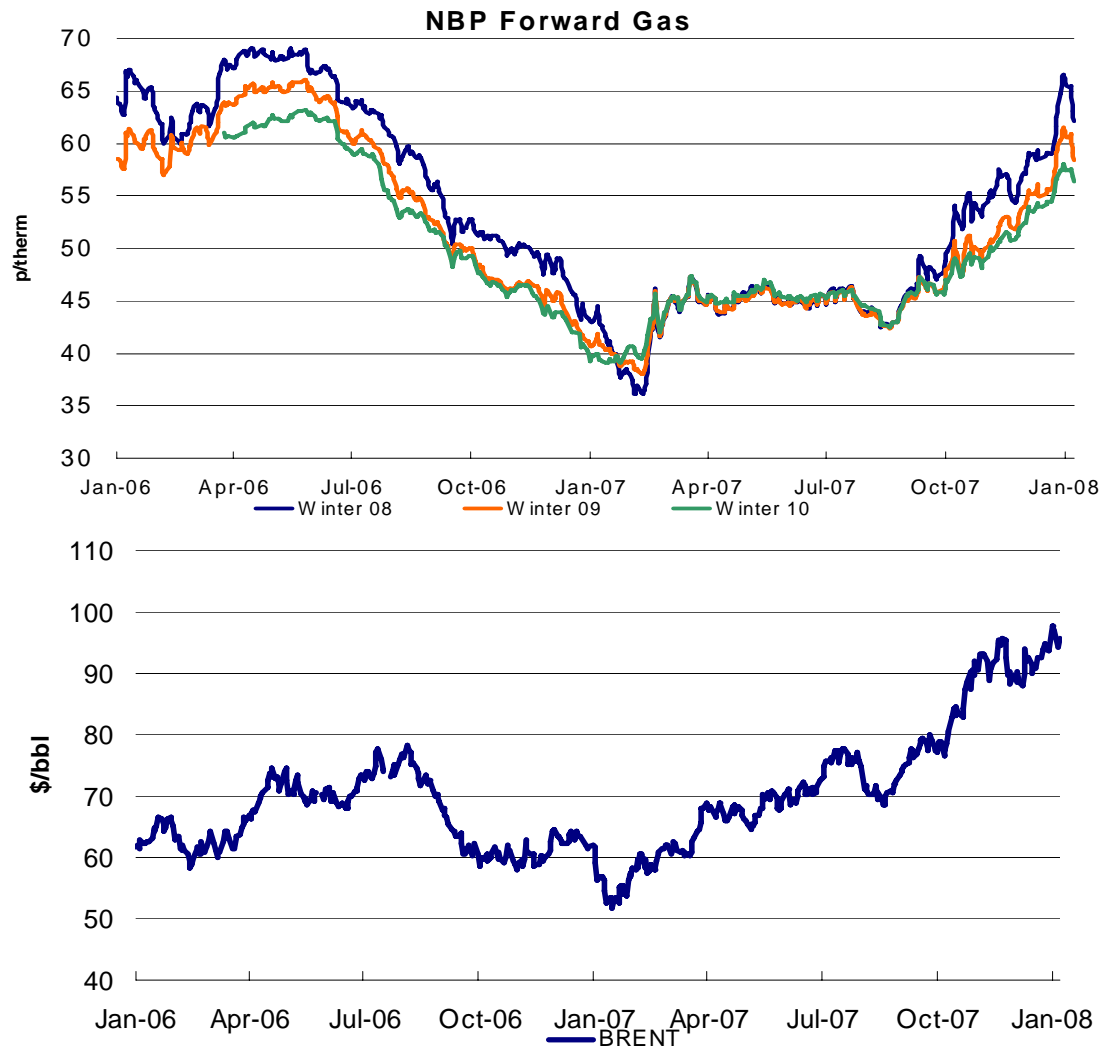
- Rising energy prices
- Increasing infrastructure and environmental costs
- Managing energy costs
- Generation profitability
- Supply profitability
- Making our tariff decision
- Conclusions

• Rising energy prices – Prompt gas and power



- Gas and electricity prompt prices are higher this winter than last due to:
 - Lower plant margins
 - LCPD and EU ETS Phase 2
 - Cooler weather
 - Less spot LNG gas
 - Impact of oil indexed gas at the margin

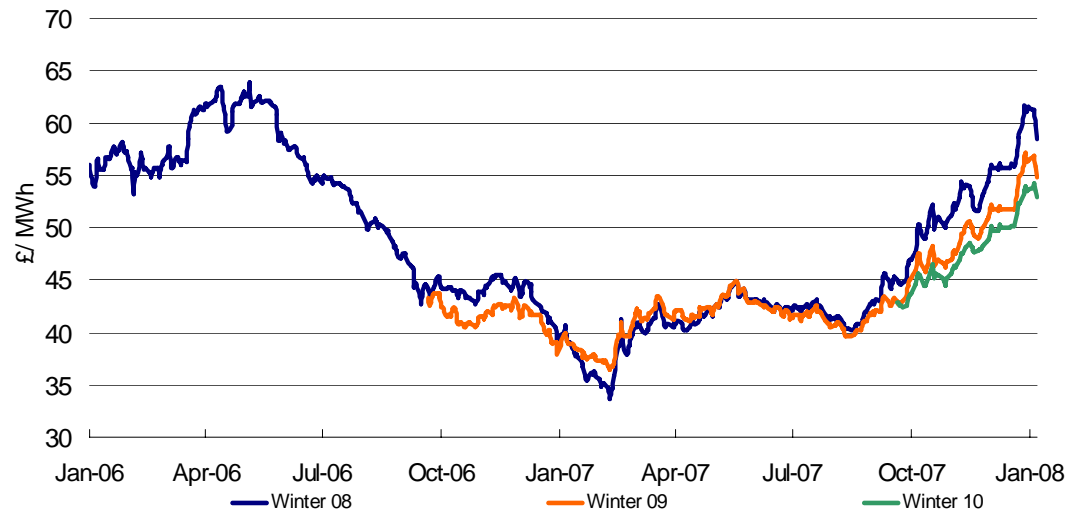
❖ Rising energy prices – Forward gas and oil



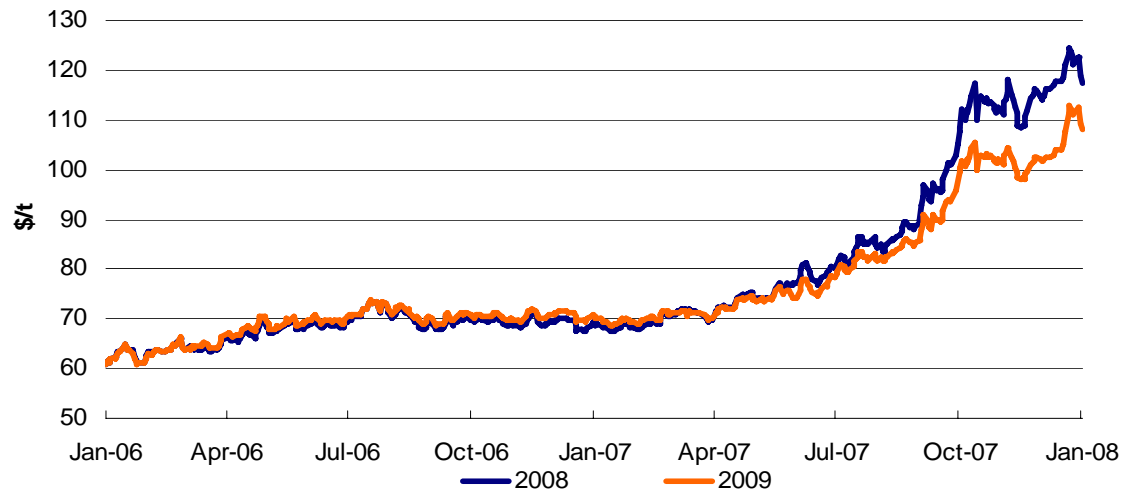
- **Gas forward prices** have risen dramatically due to:
 - Gas prompt prices
 - Oil prices
- Less evidence of supply/demand pressures
- **Oil prices** have reached record levels due to:
 - Growing demand from China and other emerging economies
 - Geopolitical pressures and dollar depreciation

❖ Rising energy prices – Forward power and coal

UK Forward Baseload Power



API #2 Forward Prices



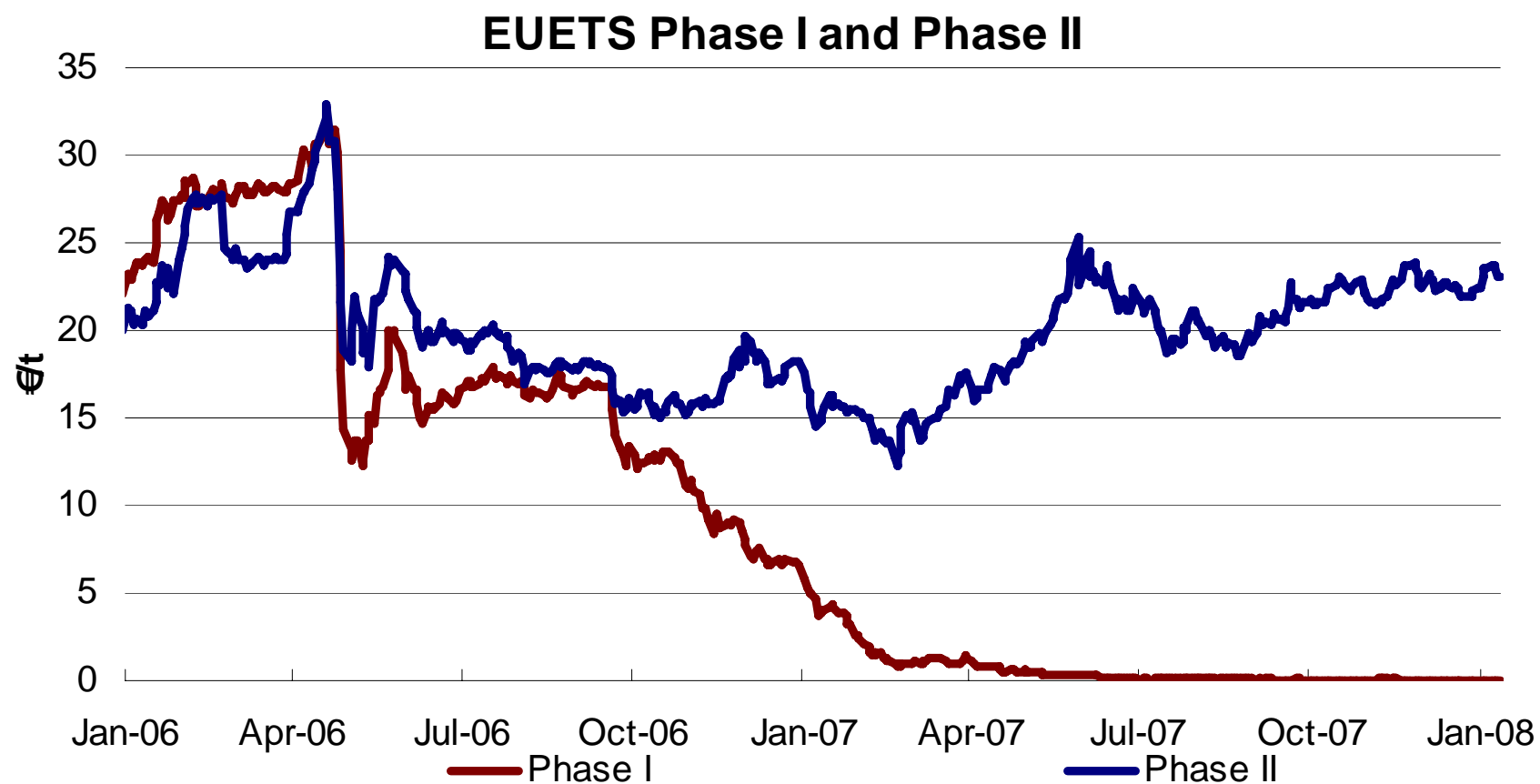
- **Power forward prices** continue to be influenced by rising gas prices but more recently:

- Coal prices
- LCPD
- EU ETS phase II prices.

- **Coal prices** have risen steeply during 2007 due to:

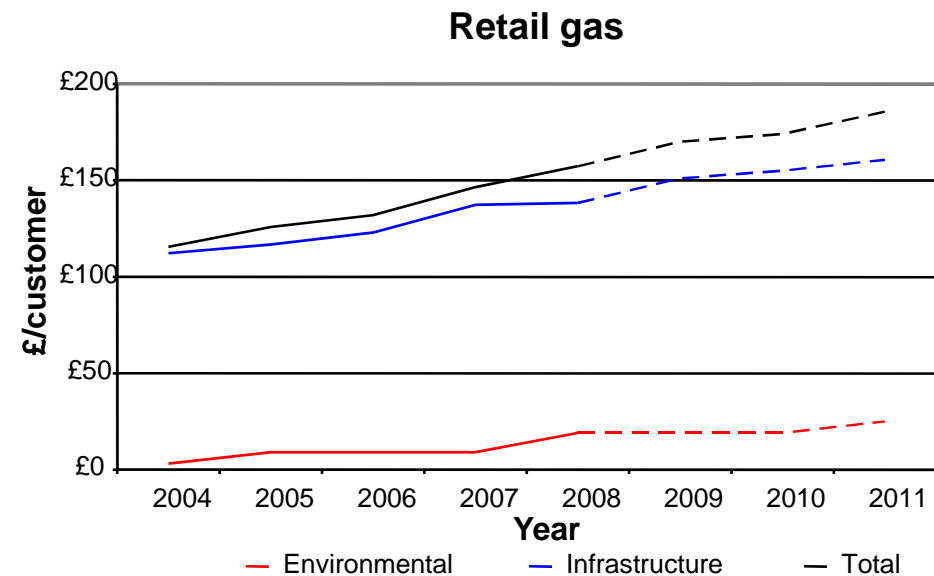
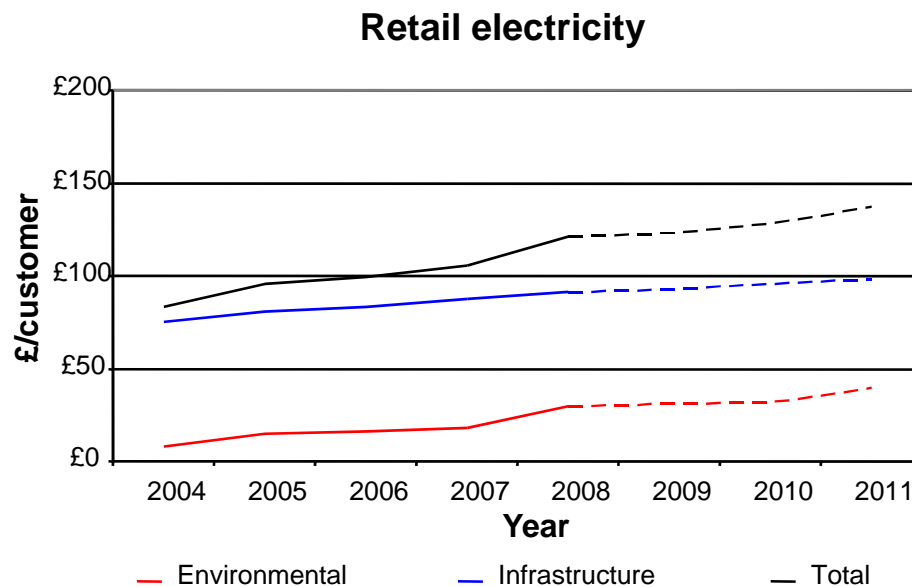
- Freight charges
- Rain impacting Indonesian production
- Australian rail infrastructure disruptions
- Increased demand from India and Korea, China and Japan

❖ Rising energy prices – Carbon



Increasing infrastructure & environmental costs

- Infrastructure and environmental obligations have increased due to:
 - Rising energy efficiency commitments with the introduction of CERT (Carbon Emissions Reduction Target) scheme from 2008.
 - Rising impact of Renewables Obligation.
 - Rising transmission, transportation, distribution and metering costs.



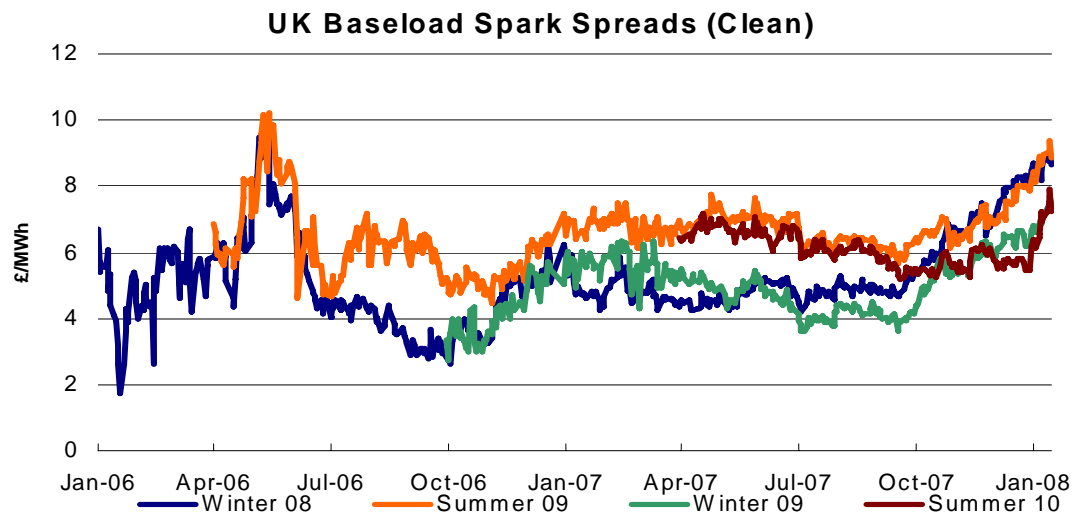
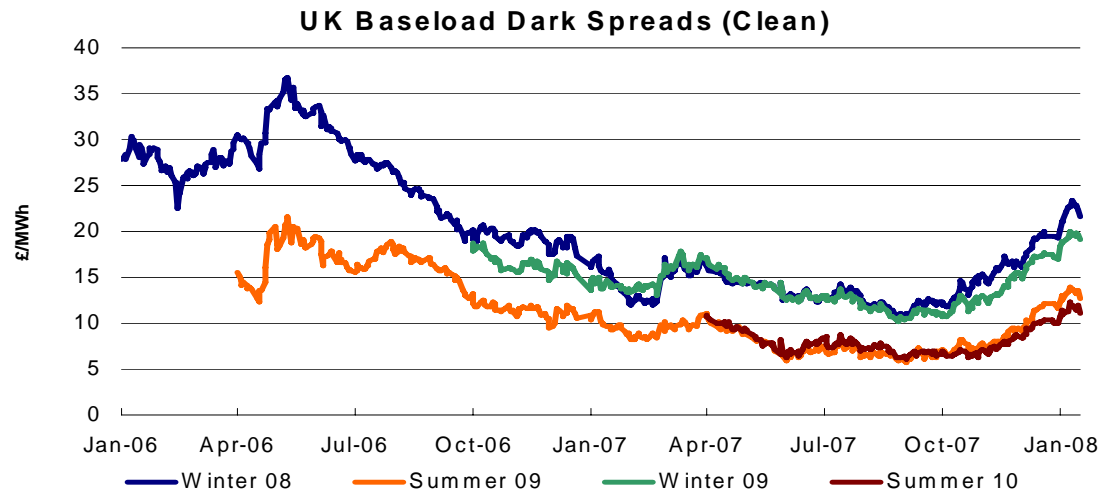
Note: projections estimated

❖ Managing energy costs

- Energy markets are extremely volatile and small movements can wipe out profits.
- EDF Energy does not speculate but hedges its exposure on the forward market across the trading horizon.
- Credit is very important and can become a limiting factor.
- Hedging:
 - reduces our exposure to wholesale market from rising prices but
 - increases our exposure to retail market from falling prices
- Getting the right balance is key.



❖ Generation profitability – Dark & spark spreads



- Generation profitably linked to forward spreads.
- Gains in power prices largely offset by gains in coal and gas prices.
- Spreads remain below the levels required to support:
 - Existing plant
 - New plant investment

❖ Supply profitability – Retail spreads

- Supply profitably linked to retail forward spreads.
- The collapse in spreads experienced since 2003 have been managed through
 - Hedging
 - Vertical integration

Note: Retail spreads based average UK tariffs.

❖ Making our tariff decision

- Tariff changes are one of the biggest decisions we make.
- Need to consider:

- **Our financial targets**

- Are we delivering the profit required to support our investments?

- **Our customers**

- How will this impact the vulnerable?

- What about our other customers?

- What is the impact on sales?

- **Our competitors**

- What will be their response? Will they follow? Will they target our customers?

- **Our timing**

- Is it better to go now with a smaller increase versus later with a larger one?

- What is our exposure to energy price movements?

- **Our stakeholders**

- Energywatch, Ofgem, DBERR, media

❖ Conclusions

- Energy prices remain extremely volatile and difficult to predict.
- The recent rises in energy prices have been compounded by increasing infrastructure and environmental costs which are set to rise further.
- Both the generation and retail markets remain highly competitive.

