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# Our Energy Future – Creating A Low Carbon Economy

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# Background

- Royal Commission on Environmental Pollution 2000 – significant reductions in carbon emissions needed to stabilise climate change by 2050
- California
- Prime Minister's Policy and Innovation Unit report 2002

# Challenges for the UK

- climate change is real and must be tackled
- increasing imports
- need to modernise existing infrastructure

## Economic analysis

- cost of trying to reduce UK emissions is relatively small: approx 0.5% to 2% of GDP in 2050 – by which time GDP will have trebled - if others engage
- opportunities as well as costs
- costs of not acting .....

## Four goals of energy policy

- putting ourselves on a path to 60% cuts in CO<sub>2</sub> by 2050
- maintaining reliability of energy supplies
- promoting competitive markets in the UK and beyond
- ensuring that every home is adequately and affordably heated

**Aim to achieve these together**

# Delivering our low carbon goals

- making further carbon cuts of between 15 and 25 MtC by 2020
- primary emphasis on energy efficiency and renewables
- emissions trading scheme

# Delivering our energy reliability goals

- fully evaluated UK position – stable, but watch carefully
- achieve security through diversity – of sources, supplies and supply routes

# What does this mean for coal fired generation?

- useful for security
- potential value in flexibility
- but must be clean

## What is “clean”?

- improving plant efficiency
- co-firing with bio mass and energy crops
- carbon capture and storage
- underground coal gasification
  
- .... different impacts/timescales ....

## Plant efficiency/co-firing

- limited C savings (15 - 25%?)
- cost of generation (relative to gas)
- driven by emissions trading?
- potential export value (incl under JI/CDM)?

# Carbon capture and storage

- long term potential?
- but legal, technical, public acceptability, economic issues must be resolved first
- working on a long term strategy

# Underground coal gasification?

- still some way off
- capture and store CO at source?
- legal, technical, economic issues?

# The way forward

- research to drive down costs
- putting in place the legal framework
- collaborative (eg US, EU FP6)
- .... a strategy for cleaner fossil fuels ....