



ENERGY WHITE PAPER

Our energy future -
creating a low
carbon economy

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What does the Energy White Paper

***Our energy future –
creating a low carbon economy***

mean for the
Oil and Gas Industry?



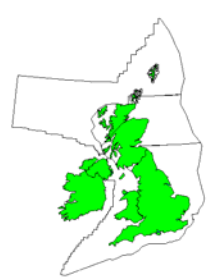
2003 – Energy in the UK

Now

- UK self-sufficient in energy
- liberalised markets – low prices
- relatively easy to make greenhouse gas cuts

Future

- more challenging carbon reduction obligations
- increasing import dependency
- European/global arena increasingly important
- infrastructure needs modernising – newer and more localised



The Main Themes of the White Paper (1)

- environment at the heart of policy
- moving to a low carbon economy with significant cuts in CO₂ emissions – 60% by 2050
- clear long-term policy framework for business – setting out short-term aims and with sufficient flexibility to change



The Main Themes of the White Paper (2)

- continued commitment to markets, market-based policy instruments, and competitive prices – intervention only when necessary to protect security and safety
- vital role for innovation
- raising our game internationally



How we will meet these challenges: four goals of energy policy

- Putting ourselves on a path to 60% cuts in CO₂ 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



Maximising our oil and gas reserves

- We are committed to maintaining an active and successful oil and gas industry in the UK, and to promoting future development of the nation's oil and gas reserves
- The sector is and will remain important to the wider UK economy in terms of jobs, investment and its contribution to national income
- We are keen to continue to encourage investment in both existing and new fields
- The PILOT initiative is central to this aim



Enhanced oil recovery (EOR) (1)

- EOR has benefits both in terms of extending our existing oil reserves and reducing carbon emissions, but is unlikely to be cost effective in a time scale that will fit the existing UKCS needs
- It would allow additional oil recovery from the UKCS - 1.5 billion barrels may be achievable over 20 years
- This compares to current annual oil production of about 0.9 billion barrels
- But the current rates of field depletion mean that this opportunity only exists in the short term and CO₂ injection needs to start by 2006/8 if it is to have an impact on the largest UK fields - such as Forties, Brent, Ninian and Fulmar - before the existing infrastructure is dismantled



Enhanced oil recovery (EOR) (2)

- The Government believes there is a strong case to examine more closely what might be done to help stimulate the take-up of EOR in the North Sea, given the spin-off benefits for carbon capture and storage (CCS)
- **It will therefore set up an urgent detailed implementation plan with the developers, generators and the oil companies to establish what needs to be done to get a demonstration project off the ground**
- **This study will reach conclusions within six months to enable firm decisions to be taken on applications for funding from international sources as soon as possible thereafter**

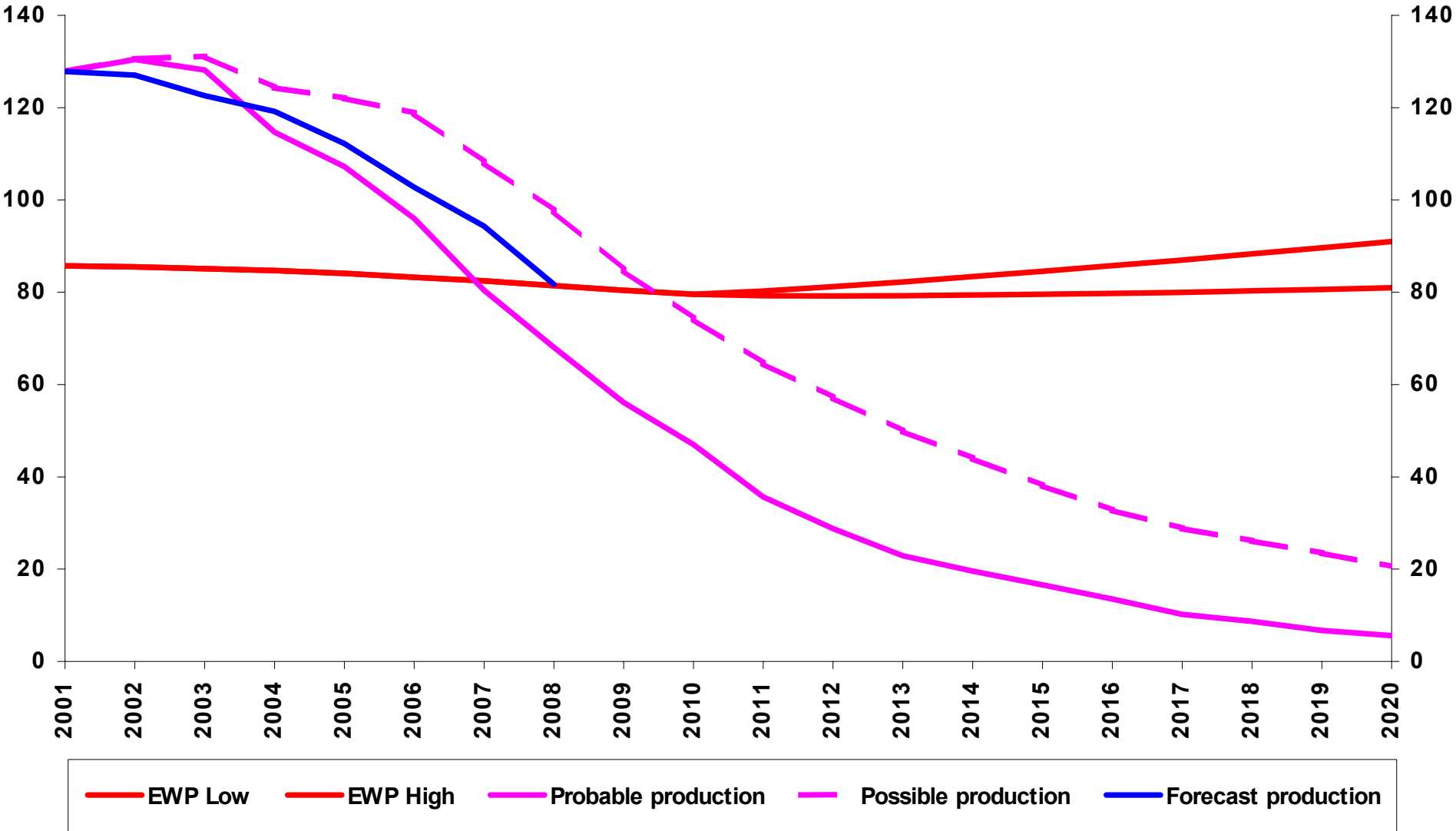


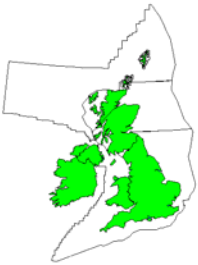
Supply/demand balance

- The UK is expected to become a net importer of gas by around 2006 and of oil by around 2010
- The best way to achieve security is through diversity – of sources, supplies and supply routes
 - Norway and North Africa for gas
 - South and Central America for oil
 - Russia and the Middle East for both
- The extensive analytical work at www.dti.gov.uk/energy/whitepaper/ includes demand projections consistent with the White Paper goals

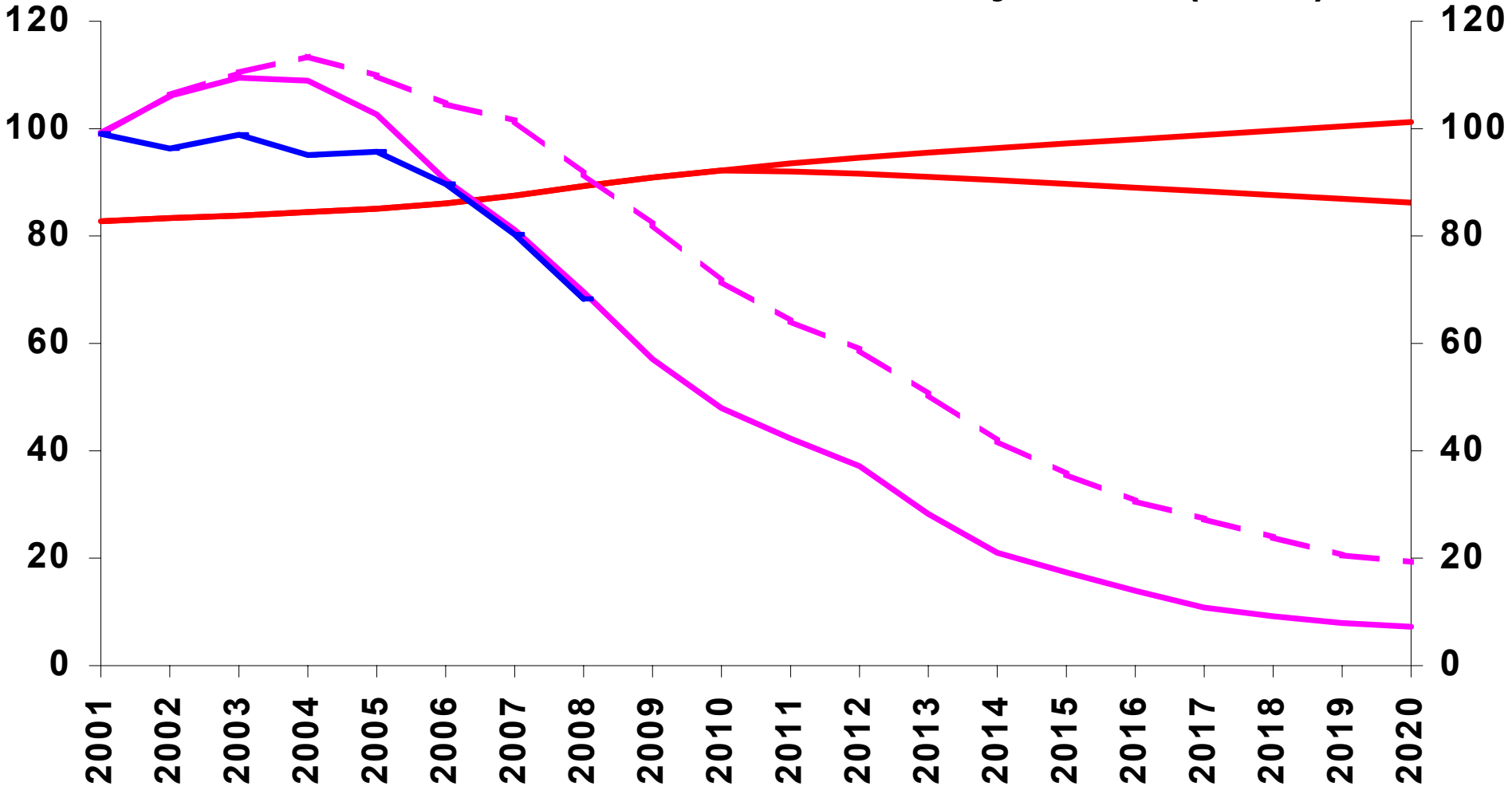


UK Oil Demand and Production Projections (mtoe)

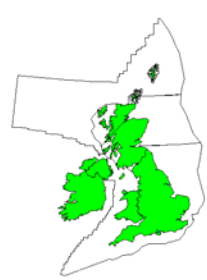




UK Gas Demand and Production Projections (mtoe)



— EWP Low
 — EWP High
 — Probable production
 - - - Possible production
 — Forecast production



Natural Gas Supply and Demand Projections (bcm)

