



## Briefing note (June 2012)

### *The case for and against onshore wind energy in the UK*

#### Summary

The Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy have published a new policy brief: the case for and against onshore wind energy in the UK.

It investigates the extent to which onshore wind can contribute to future electricity generation, whether there are technological constraints, what the economic costs are and what the environmental impacts might be. Some key policy lessons are drawn from a rigorous analysis of the most up-to-date evidence.

#### Key points

- Decarbonisation of the electricity system is required to meet the UK's emissions reduction targets beyond 2020 and cannot be achieved through gas-fired power plants alone without carbon capture and storage technology.
- Wind and other renewables have often been criticised for not being able to produce electricity on demand, but there are several ways of compensating for the variability of supply and the cost penalty and grid system challenges of intermittency are often exaggerated.
- Onshore wind is currently the cheapest renewable technology in the UK, but it raises potential local environmental issues, and, as such, more expensive renewable technologies may be more attractive.
- The choice between more affordable electricity and local environmental protection is ultimately a political one, but the best approach seems to be a portfolio of different energy technologies to balance the cost to consumers and environmental concerns.
- Onshore wind clearly has a role to play in the UK's future energy mix, and there are a number of regulatory measures that can help to encourage onshore wind farm developments where they make sense, and prevent them from happening where they do not, including:
  - A clear price on carbon.
  - A planning system that (i) reduces costs and uncertainties for developers; (ii) prevents developments in important environmental areas; and (iii) ensures appropriate compensation in areas where local impacts are acceptable.
  - Flanking measures, such as smart grids, energy storage and interconnection with other energy markets, are required to ensure that the electricity system can cope with intermittent resources.

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