



KTN Workshop

# Our Vision for the UK Power Sector post 2020

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## Overview

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- The UK needs to be well on track to meet its emission reduction commitments under the Climate Change Act
- The near-decarbonisation of the power sector will play a key role in achieving this vision
- We support a decarbonisation which:
  - is as environmentally sustainable as possible, and
  - maximises economic benefits for the UK.



## Key areas of priority

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- **Energy Demand Reduction:** must play a key role in delivering a sustainable & cost-efficient decarbonisation of the power sector;
  - **Maximising potential of renewables in the UK:** both technically & economically
  - **Grids:** “Smart” and “Super” grids will play a key role
  - **Developing a capacity mechanism designed as a balancing tool,** not just a generation back-up mechanism
  - **Other areas:** greater role for micro-generation and CHP, environmentally safe demonstration / deployment of CCS, addressing the challenges around bioenergy use
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## A Key Role for Energy Demand Reduction

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- Strongly disagree that electricity demand will have to double in run up to 2050
  - Considerable evidence shows that the potential to reduce demand is huge & makes great economic sense: UKERC 2050 work, ECF 2050 Roadmaps, WWF EV & International Energy Reports, etc...
  - Electrification (improved efficiency in heat & transport), better insulation (through Green Deal type measures) are key ... but so are behavioural change & shifts in demand patterns
  - Agreeing long-term energy demand reductions through long term contracts: example of PJM market in the United States
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## Role of Renewables must grow: 2020s is a key decade

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- **Meeting 2020 target is important but not be all and end all:** avoid boom & bust approach to renewables (current concern about the EMR)
  - **Technical potential of renewables in the UK is huge:** UK Offshore Valuation Report scenarios, ECF Roadmap 2050 findings, China
  - **Real potential to reduce cost of renewables:** through technological improvements, gradual economies of scale, development of a UK supply chain & repowering of existing sites (lower levelised costs)
  - **Economic benefits can be huge as well:** Renewable UK employment survey, Offshore Valuation findings, 300,000 currently employed in Germany
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## Grids & balancing mechanism: a key part of the solution

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Increasing amount of intermittent renewables on the system will require:

- **A greater regional interconnection:** findings of ECF report / North Sea Grid Initiative...but there are important regulatory challenges to address
- **A greater ability for short term demand side response:** “smart” grid
- **A well designed targeted capacity / balancing mechanism:** flexible back up plants are important but short term demand side response, development of electricity storage solutions have an important role to play



## Other important areas

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- Further development of decentralised micro-renewables generation
  - CHP plants (roughly 7.5GW on system today) could have an important bridging role to play towards a higher renewables future
  - Environmentally safe demonstration and deployment of CCS
  - Challenging issues around certification & prioritisation of bioenergy use
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## A quick word about WWF's international energy report

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- A 2 year long study with Ecofys to answer the question: **is a 100% global renewable energy system possible by 2050?**
  - Yes, a 100% renewable energy is not only possible but could save world economy up to €4trillion / year by 2050 through energy efficiency and reduced fuel costs
  - Key areas of action & challenge: reducing energy demand, fulfilling technical potential of renewables, regional grids, challenges around bioenergy use & large up-front investment required
  - A great basis for further debate with all stakeholders
  - Find out more on: **[www.panda.org/energyreport](http://www.panda.org/energyreport)**
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Thank you

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