

The Energy Innovation Challenge

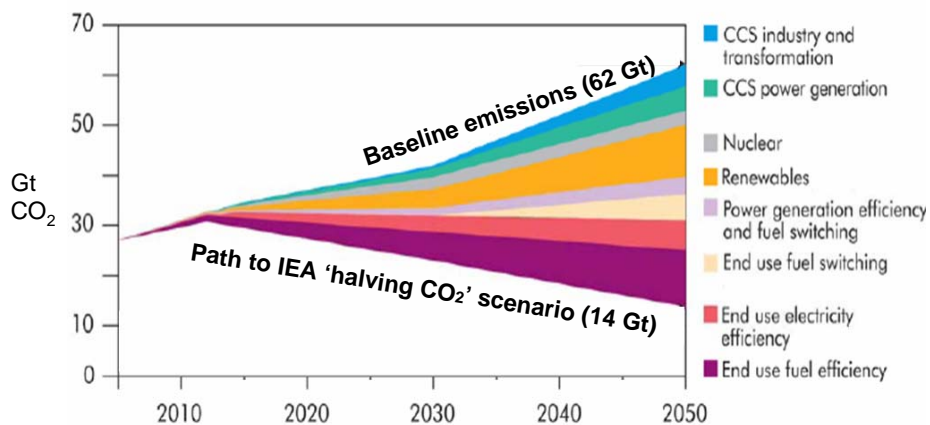
Willy Rickett

Director General, Energy Group



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The Global Technology Challenge



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Implications for the UK

Power Renewables, nuclear, Carbon Capture Storage and Networks	Heat Biomass, heat pumps and electricity
Transport Electricity & biofuels for road, shipping, aviation and H ₂	Energy Efficiency Vehicles, appliances, new buildings and old buildings

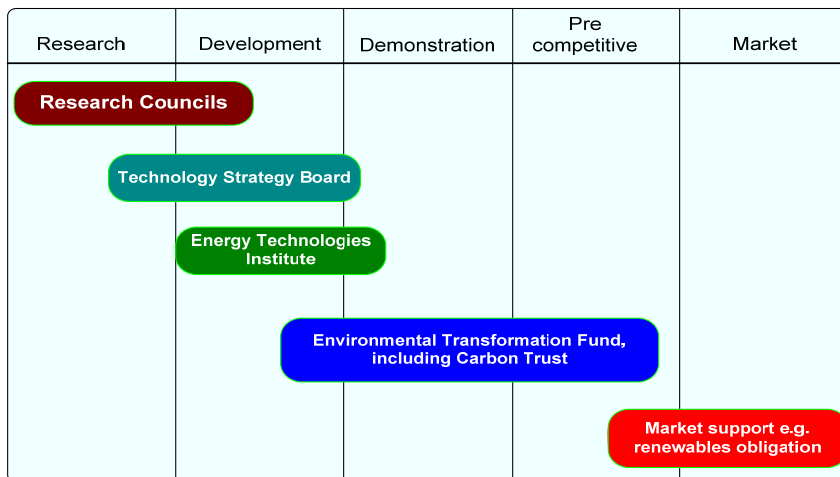
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Drivers of Change

“Push” Environmental Transformation Fund Carbon Capture Storage Demonstration Project Nuclear facilitation Supply chain & Skills initiatives Research Council and Energy Technology Institute Funding	“Pull” Market tightness Stable policy regime EU Emissions Trading Scheme (ETS) Renewable Electricity Obligation Renewable Transport Fuel Obligation Proposed Renewable Heat Incentive Feed In Tariff for Microgeneration
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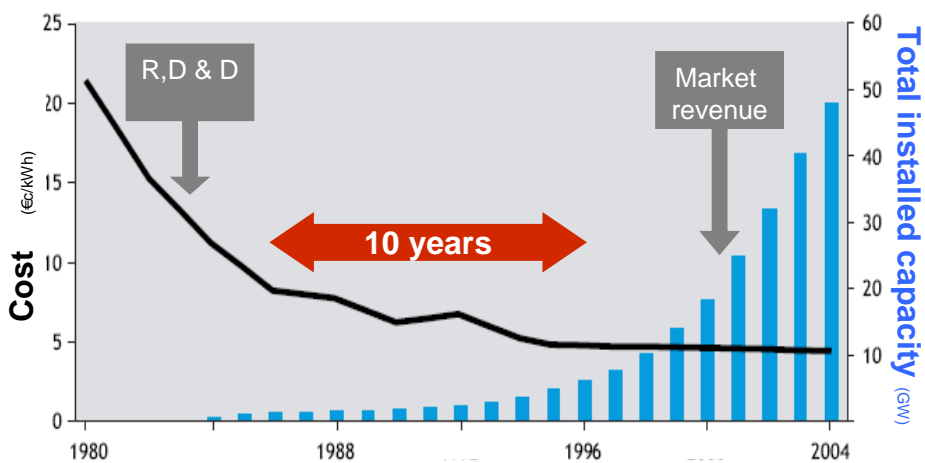
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The Innovation Landscape



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A "Valley of Death" ?




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Source: Carbon Trust


The Government role

- **Leadership and influence** in global & EU climate change policy – and leading by example.
- **Funding** for research, development and demonstration of technology advances
- **Removing barriers** to deployment, e.g. planning issues, grid development...
- **Consistent policy framework** – that recognises need for long term sustainability and security of supply.
- **Provide supportive environment** for business – e.g. skilled workforce

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Some issues

- Will energy demand for heat and transport shift to electricity and what does that mean for innovation policy?
- Are we overlooking transformational technologies – such as smart grids, electricity storage, future biofuels and PV?
- Have we got the balance right between push and pull?
- Does our innovation landscape work in terms of measures and bodies?
- Is there a valley of death and, if so, what's the remedy?
- What more can DECC do to join up supply side and demand side, and energy & climate change innovation?
- What are the priorities for international collaboration?

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