ADVANCED POWER GENERATION TECHNOLOGY FORUM

WORKSHOP ON KEY ISSUES FOR R&D IN FUTURE ENERGY POLICY

Energy Research Review

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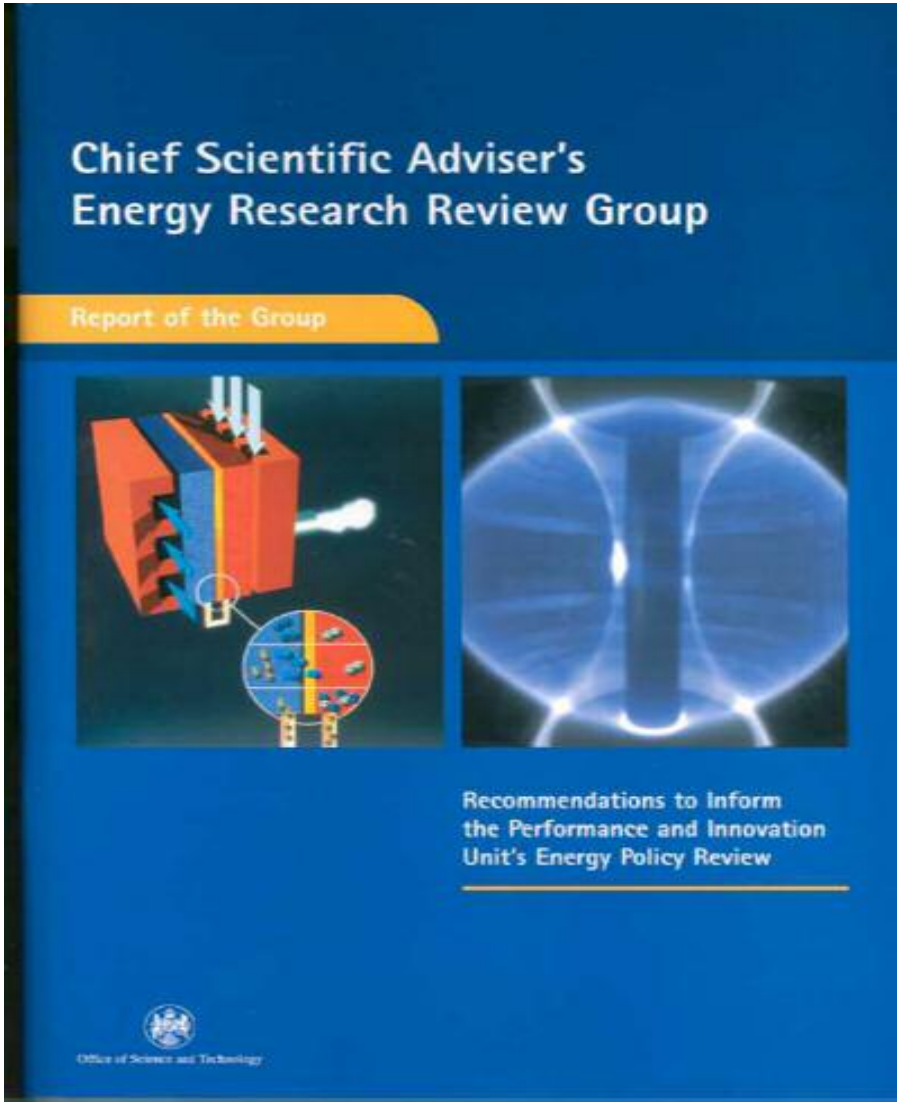
The Energy Research Review Group's Report



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ERRG's terms of reference

To examine Government funded energy RD&D programmes considering:

- adequacy of expenditure in the light of future energy needs;
- whether funds are appropriately deployed;
- who should maintain an overview across Government

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15 Key Recommendations

1. Further research needed on non-technical policy drivers and understanding market context;
2. Government should have regard to how environmental costs and benefits of different energy options are assessed;
3. Government should ensure sufficient funds for basic research;
4. Government should support more cross-boundary research to optimise different technologies;
5. Energy research spending should be increased; and opportunities for cooperation under EC programmes considered;

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Key Recommendations (continued)

6. Further work needed to assess and quantify the energy sector "skills" gap;
7. Research is needed especially on: CO_2 sequestration, energy efficiency, hydrogen production and storage, nuclear waste, solar PV, wave and tidal power;
8. Increase support for cross-cutting energy efficiency technologies, management and control systems, etc
9. Establish a dedicated hydrogen research programme, covering production and storage
10. Support research into nuclear fission waste handling and storage;

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Key Recommendations (continued)

11. Support materials research for nuclear fusion applications;
12. Support R&D into novel solar PV materials and systems;
13. Nominate an independent body to collect and coordinate information on energy R&D;
14. Government should consider setting up a national energy research centre to act as a hub for a wider network of centres of excellence
15. Government should find ways to continue the work of the Energy Research Review Group.

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non-technical policy drivers and understanding market context

- need to build the bridge between academic research and market driven RD&D to deliver low carbon commercial products/services;
- non-technical drivers (regulation, fiscal incentives, advertising campaigns) often more powerful than support for RD&D but need to be designed coherently;
- market context often overlooked – what will business and consumer reaction be to new technologies;

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increase energy research spending; consider opportunities for cooperation under EC programmes

- post-privatisation, UK support for energy R&D lagging behind other key OECD countries: Government beginning to reverse decline;
- energy R&D does not carry high academic priority – UK not (generally) leading edge; serious skills gap;
- UK should focus its R&D capacity on those technologies offering the biggest market opportunities;
- scale of energy technology is such that UK should play full part in EC RD&D, integrated projects and networks of excellence.

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national energy research centre concept - a hub for a network of centres of excellence

- a focus for energy RD&D;
- multi-disciplinary approach drawing on physical, environmental, behavioural sciences;
- promote networking between centres of excellence and with business;
- attracting high calibre people from academia and business.

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ERRG - next steps

- recommendations under consideration as part of Government's Energy Review;
- high level group established to consider specific issues in more detail including;
  - coordination of energy research;
  - adequacy of support in the key areas;
  - role of basic research
- national energy research centre concept under discussion.

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some conclusions

- ERRG – a hurried exercise, but made a good start in a highly complex area: the work continues;
- energy RD&D faces big challenges – eg power generation from centralised and distributed sources, intelligent, reactive infrastructures; storage; fossil fuels and sequestration; lower/zero carbon kWhs; energy efficiency; cleaner energy for the developing world;
- big strategic energy investment decisions ahead – how can RD&D offer options and inform decisions.

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