

Carbon Capture and Storage: What role for R&D in delivering cost-competitive CCS projects in the UK in the 2020s



Project selection criteria and assessment metrics



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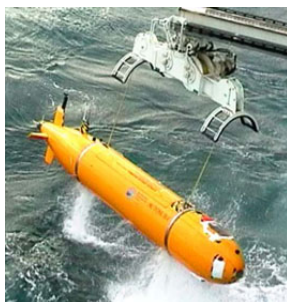
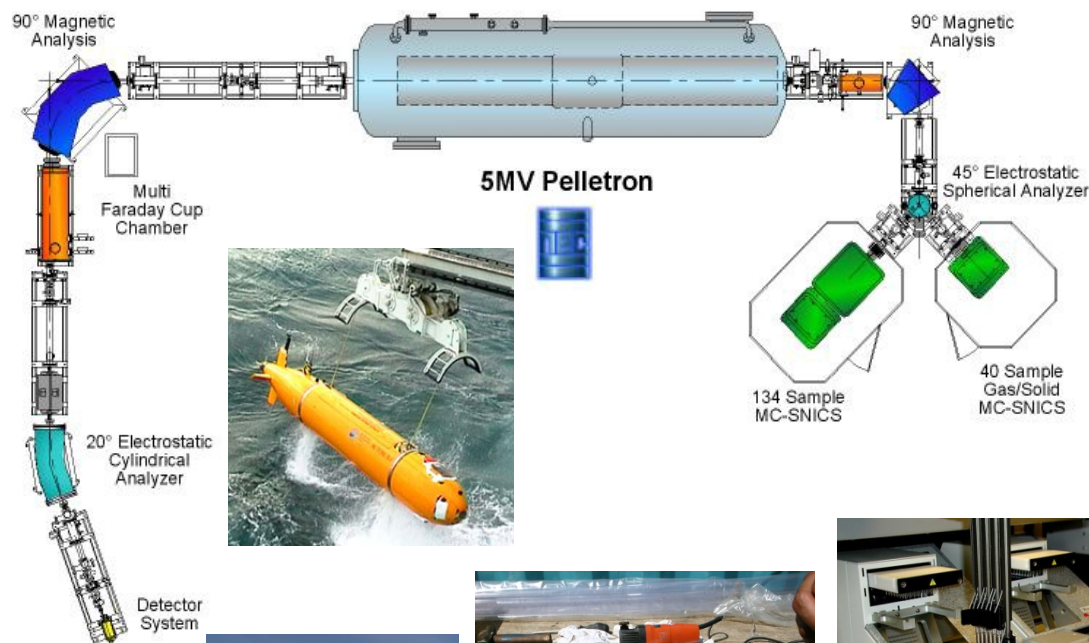
Grant Award



- Excellence of research & training
- Future science & innovation
- Independent (especially for environmental science credibility)
- Peer Review (competitive)
- Inform evidence-base (translation as well as new science)
- Strategic calls
 - Towards a Sustainable Energy Economy (2004-2009)
 - Sustainability of Carbon Capture and Storage (2009-2014):
science goal to quantify the risks and understand the response of marine and terrestrial ecosystems to CO2 leakage
- Potential for CCS cost reduction (NERC science)
 - More efficient monitoring (storage)
 - Informed regulation
 - Research gap filling
 - Risk reduction



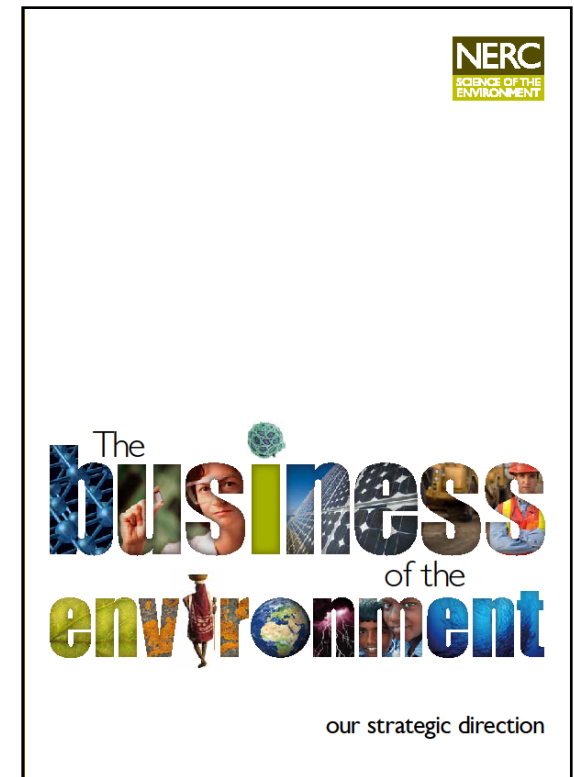
NERC Funding

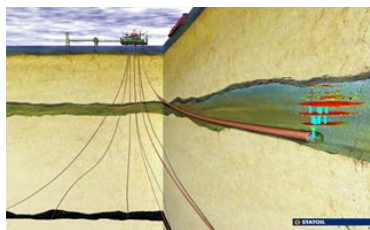


Whole-Systems Energy Research



Whole-systems energy research aims at a better understanding of the energy landscape, incorporating socio-economic, physical, natural, environmental and biological systems, at all spatial and temporal scales. It addresses complexities, interactions and interdependencies within the landscape, and with other systems. Whole-systems energy research necessarily draws upon a wide range of disciplines and methodologies. It does not demand comprehensive coverage at the level of individual projects, but projects must be aware of and demonstrate this approach.





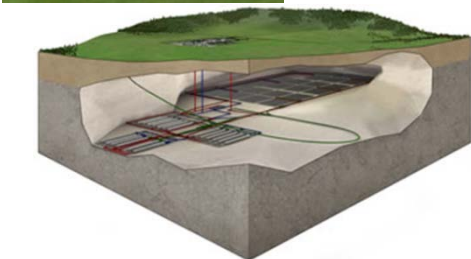
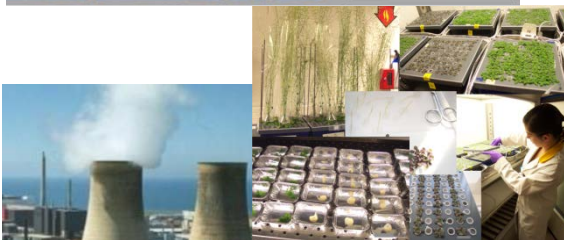
- **Carbon Capture and Storage (2009-2014) £3.9M, co-funded by EPSRC**

- Science goal to quantify the risks and understand the response of marine and terrestrial ecosystems to CO2 leakage.

- Two consortia funded: i) Quantifying and Monitoring Potential Ecosystem Impacts of Geological Carbon Storage; ii) Predicting the fate of CO2 in geological reservoirs for modelling geological carbon storage

- **Radioactivity and the Environment (2013-2018), 8.6M, co-funded by RWM and EA with STFC Challenge Networks**

- Radionuclides and pathways in deep geological disposal; pathways to human and wildlife exposure
- Three consortia projects with Capacity building



FAPESP-NERC Sustainable Gas Futures



- Role of gas in current and future energy systems, considering both economic and environmental sustainability
- CCS theme (1 of 7 themes)
- £1m matched by Brazil
- Call closes **10th November 2015**



Thank you



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