

Centre for Energy and the Environment
Renewable Energy

Renewable energy is an essential part of building a sustainable future, but finding the most suitable technologies can be challenging. We provide monitoring, feasibility studies and technological evaluations which can help our clients to make informed decisions on the appropriateness of renewable energy technologies.



Renewable Energy



The Centre has been evaluating renewable energy technologies for over thirty years. During this time, we have used our expertise to give advice on individual projects and to inform national policy. We believe that our experience enables us to offer our clients impartial advice based on the latest research and relevant information to enable them to make informed choices.

Policy

We have produced strategic and resource assessments for a range of renewable energy technologies. Our work has included:

- **Anaerobic Digestion**

Anaerobic Digestion (AD) produces biogas from farm waste. It leaves behind a residual solid called a digestate, which can be used as fertilizer. We have conducted an assessment of AD and examined its viability for farms in Devon.

- **Biomass Supply Chains**

Many new developments are now considering biomass as a viable alternative fuel for boilers. We have produced biomass resource assessments, supply chain studies and are engaged in a European project called FOREST aimed at fostering long term supply partnerships.

- **Microgeneration**

We have conducted studies on the uptake of microgeneration. This includes both domestic and non-domestic installations of biomass, photovoltaics (PV), solar hot water and other small scale renewables.

Buildings

Choosing renewable energy as part of a combination of low carbon solutions in a building can lead to conflicts in the design. Technologies must be chosen and implemented in a way that is suitable for each building and reflect the way that it is used by its occupants. Changes in the local climate can also affect the choice of technologies, and we can provide environmental analysis to find optimum solutions.

- **Cost-benefit Analyses**

Economic factors can often restrict the range of technologies considered in a project. Financial considerations such as whether a technology can pay for itself over a reasonable period are clearly important, but the availability of natural resources and the potential for carbon saving should also be looked at. We can help to qualify and quantify these factors to give clients a range of sensible choices.

- **Performance Assessments**

Through a program of monitoring and data analysis we can assess the real world performance of a range of technologies. Where systems fail to meet manufacturers' guidelines or otherwise do not perform as expected, we can help to isolate the causes and find solutions.

- **Integrated Design**

We provide an integrated approach to incorporating renewable energy into buildings and believe that renewable energy should go hand-in-hand with energy efficiency and low carbon building techniques. Members of our team come from a wide range of disciplines so we are well placed to consider different aspects of improving building performance.

Contact the Centre

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Case Study

Working with Regen SW and the Energy Saving Trust

We have been working with Regen SW to provide technical support for the Energy Saving Trust (EST) advice centres in the South West. The range of support offered has varied from purely technical advice on the operation of micro renewables or the suitability of different technologies, to more complex issues relating to grant provision, legal definitions and tax implications for non-standard installations. The Centre has also organised training events for the EST advisors including input from experienced installers and site visits to renewable energy installations.

The financial incentive schemes for small scale renewable energy installations are expected to continue to develop, and the introduction of a renewable heat incentive will add to range of options open to Local Authorities, businesses and members of the public. Our work with Regen SW and the EST has helped installers, local government officers and the public to understand the technology and changes in the legislative framework. The work with Regen SW and the EST is typical of the wide range of activities undertaken at the Centre, and we are continually looking for new ways to use our expertise to benefit our clients.





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