

# Environmental Energy Advice

**CAT's energy efficiency and renewable energy services**

## Energy and society

In just a few decades, our relationship with energy has moved from concerns about scarcity, both at the individual and macro levels, to concerns about the environmental effects of our profligacy with energy, particularly the damage to the climate from burning so much fossil fuel.

Fortunately for the environment, improvements in energy use and energy production can go hand in hand with good financial sense, although it still deserves to be said that energy is far too cheap for the environmental damage it causes.

This leaflet describes how CAT can help you in either or both of the twin processes of energy assessment - analysing the energy use of your business or your home and advising how to reduce it, and analysing the renewable energy resource available to you and how to take advantage of it.

## CAT energy expertise

In the 25 years since it was founded, CAT has prided itself on extracting renewable energy from its environment, and in running its business operations and site community in a way that draws on those resources to just the bare minimum.

- CAT designed and operates renewable electricity systems ranging from a large 600kW wind turbine down to numerous small wind turbines, two 4kW hydro systems and more than 15kW of photovoltaics.
- CAT's renewable heating systems include both wood chip, pellet and log-burning biomass systems and more than 130 square metres of solar hot water heating.
- To maximise efficiency the large-scale heating systems are interconnected in an innovative heat main system.



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- CAT has built some of the world's most energy-efficient buildings, including its new £600,000 environmental information centre, which produces more energy than it consumes and achieves energy standards 20 times better than official definitions of best practice! CAT's 20-year old Wates building is still the best-insulated building in the country.
- As a contribution to environmental transport, every year CAT hauls its 75,000 visitors up to its site by a cliff railway propelled by water.
- Energy policy analysis and advice to local, regional, national and international bodies.

Site visits are necessary for in-depth reports. However, initial assessments of outline feasibility can sometimes be achieved by a short desk study at fairly minimal cost on the basis of your records of energy use plus details of your site, coupled with analysis of the renewable energy resources that can be estimated to be available at your site from existing technical data.

## Energy advice from CAT

CAT's long experience of working and living with renewable energy and with highly efficient energy systems means we can offer you very practical advice. Energy assessment should be undertaken as a whole to get the best results, and CAT's range of experience enables us to take a broad overview of all the factors influencing your energy requirements and consider a wide range of potential solutions to assess what is most practical and cost-effective.

- Advice on how to improve the energy performance of your existing buildings.
- Advice on how to optimise energy use for a proposed new building.
- Analysis of the pattern of energy use in your business operations or day-to-day living and assessment of how to improve it.
- Assessment of your site and the renewable energy resource available to you.
- A feasibility study of whether your renewable energy resource can be practically and economically exploited.
- Recommendations on what kind of renewable energy system is most appropriate to match your energy requirements with the available resource.

At the broader scale we offer:

- Organisation-wide energy use and energy resource assessments.

Alternatively, if you prefer a more informal approach you can bring your site photos, maps and energy data to CAT and discuss your ideas and questions for an hour or two with an expert, which also has the advantage of an explanation from an expert of some of the relevant energy systems and low-energy designs at CAT.

CAT maintains a vast database of suppliers of environmental goods and services, so our reports can provide listings of appropriate contacts to supply specialist equipment appropriate to your project. Further advice is often supplied by phone or by email.

## Scale of charges

Charges will be by the day or the hour depending on what you require. CAT charges £50/hr (excluding VAT) for quick consultancies. Rates for larger projects are available on request.

## Contact

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