

# Energy Lancaster



*Energy Lancaster brings together Lancaster University's world leading expertise in a wide range of energy related areas, covering the demand and supply of energy. By combining cutting-edge research in these areas with expertise across Lancaster and beyond, Energy Lancaster is working in partnership with global organisations in the development and management of secure and sustainable energy supplies, in support of the world's energy needs.*

## Access Expertise

- Biogas and biomass gasification
- Carbon management
- Clean coal
- Energy and behavioural change
- Energy demand management and modelling
- Energy policy and economics
- Fuel cells
- Nuclear energy
- Photovoltaics and photocatalysis
- Transport and transport usage
- Water renewables
- Wind energy

## Forming Partnerships

Organisations can access our expertise through five types of collaborative partnership:

- Collaborative research
- Facilities for research and development
- Commercialisation of intellectual property
- Professional training
- Student engagement

## Benefits of Collaboration

- Access unique knowledge and technologies
- Access specialist training in energy from waste
- Gain extra resources through student engagement activities
- Tap into our global network
- Access multi-million pound facilities

"I was looking for a course which would develop my understanding of the energy and fuels from waste sector and the course at Lancaster did not disappoint. As well as providing a detailed assessment of the key technologies and feedstocks, the course developed a practical understanding of the legal and environmental obligations and challenges which face the sector. The course was effectively delivered by a range of industry experts, complemented by relevant and interesting site visits."

Mark Dawber, Landfill Gas Engineer, Viridor Limited.



Dr Ian Nickson, Business Partnerships Manager

### Working in Partnership

We have on-going relationships with a broad range of industrial partners including BAE Systems, BP, Centrica, Yorkshire Water, Fiat, IBM, E-ON, UK Energy, QinetiQ, Strategic Energy Consulting, Stopford Environment and Energy, Water Technology, EDF Energy, Pilkington, Oxley Instruments, and major food retailer outlets.

In addition, we work in partnership with the Technology Strategy Board, Department for Environment, Food and Rural Affairs, Department of Energy and Climate Change, Carbon Trust, the RCUK Energy Programme, The Royal Academy of Engineering, National Nuclear Laboratory, Nuclear Decommissioning Authority, Lloyds Register Foundation, and the Institute of Civil Engineers.

We work as part of a wider multidisciplinary team across Science and Technology at Lancaster. Our colleagues have expertise in advanced manufacturing, chemistry, environmental sciences, health and human development, information and communication technologies, mathematics and statistics, quantum technology, and security and protection sciences.

### Partnership Examples

#### Informing energy choices using ubiquitous sensing

A 24 month project team brings together a multidisciplinary group of researchers from the fields of computer science, economics, ethnography and carbon profiling, and is funded by ESRC Sustainability. The project aims to explore the feasibility of identifying and informing people of critical moments in their daily activities that have carbon impact, so they can individually and collectively make savings, by creating digital end-user applications and probes focused around behaviour intervention for lower-carbon lifestyles.

#### Hydro-power resource modelling

Hydro-power turbines produce one fifth of the entire world's electricity and work is in progress on the exploitation of hydro-power by converting water pressure into air pressure, which allows the use of much smaller, less-expensive turbines running in air. Our latest regional project, the hydro resource model project, looks at the economic and technical issues of hydro sites in the Northwest. Project partners include the National Trust, Environment Agency, United Utilities and Lancashire County Council.

### Route to Access

"As the Business Partnerships Manager for Energy Lancaster my specific remit is to develop and maintain relationships with businesses and other organisations.

"We achieve this via collaborative research partnerships, the co-location of businesses, a range of student-based activities, professional training and the commercialisation of intellectual property.

"We have a wide range of services and routes to collaboration and our experienced team aim to help each business find the specific expertise and solutions they need. As part of a wider multidisciplinary team, we can also draw on additional support from across Lancaster University and beyond. Please contact me for more information."

**Dr Ian Nickson**  
Business Partnerships Manager

### For further information contact:

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