Centre for Energy Transition

Bringing the power of interdisciplinary research to bear on the climate crisis
Welcome

Our vision for the Centre for Energy Transition is for a dynamic, engaged and open research centre that brings the power of interdisciplinary research to bear on the climate crisis.

We recognise that energy transition is a scientific, technical, economic and societal challenge. Without a strong civic commitment to energy transition between communities, companies and governments we will simply not succeed in the uptake of new technologies that require structural changes in policy and societal behaviours.

What is novel therefore about the CET is that it champions genuine interdisciplinary science in partnership with industry, government and society, as it is this collective effort that is needed to address the climate challenge at scale and within the next decade.

The CET builds upon decades of energy-related research, education and partnership at the University of Aberdeen. We have a strong culture of research centres across our schools working on topics such as renewable technologies, energy storage, geosciences, integrated energy systems, data and AI, markets, decommissioning, energy law and economics and governance.

That is a powerful mix, and our approach is to pull together the diverse strands of this research and ensure we are connected into societal demands for energy transition.

Our long-term relationship with the energy industry in Aberdeen and beyond and our connections throughout the North East of Scotland ensure that our research is plugged into the energy sector on our doorstep. We are working with all parts of the energy industry, including oil and gas, to develop and apply research and education that decarbonises and diversifies the sector and grows capacity, skills and green jobs for a low carbon recovery.

It is a very exciting position to be in, and we look forward to working closely with our local and global partners on this critical societal challenge – a just energy transition.

Dr Tavis Potts
Interim Director
Centre for Energy Transition
Aberdeen 2040

The Centre for Energy Transition is playing a key role in delivering on the University of Aberdeen’s commitments to sustainability, as outlined in our Aberdeen 2040 strategy.

Our research will benefit our world, addressing the United Nations’ Sustainable Development Goals, the climate emergency, and energy transition to a net-zero carbon economy.

We will also contribute to the prosperity of our region and the civic life of Aberdeen, working for the good of the area which we were founded to serve.

Find out more at www.abdn.ac.uk/2040/
Aberdeen is internationally recognised as a major international energy hub, with over 40 years’ experience as a centre for excellence in offshore energy exploration and production. Today, the city and the surrounding region is leading the way in applying its world-leading technical and commercial expertise to the energy transition challenge.

The energy transition is visible across the north east region, with multiple large-scale energy transition infrastructure projects already up and running.

Equinor selected the Aberdeenshire coast as the location for Hywind, the world’s first floating wind farm. Vattenfall meanwhile chose Aberdeen as the location of the European Offshore Wind Deployment Centre, Scotland’s largest offshore wind test and demonstration facility.

Aberdeen’s pioneering Hydrogen Bus Project has created Europe’s largest hydrogen-powered bus fleet, while the city’s flagship events complex is powered by Europe’s largest hydrogen fuel cell.

The Energy Transition Zone – part of the £350 million Aberdeen Harbour expansion – will also act as a focal point for applying the tremendous R&D expertise built up over the last 40 years to fast track the development and deployment of wind, tidal, hydrogen, geothermal, and carbon capture storage technologies.
Research

The Centre for Energy Transition brings together experts into multi-disciplinary groups to tackle one of the world’s most pressing issues: the transition to net-zero. Working in partnership with government, policymakers and industry, we are producing research across the following main themes:

- Renewable Generation
- System Integration and Digitalisation
- Carbon Capture and Natural Capital
- Demand and Markets
- Hydrogen Economy
- Circular Economy
- Oil and Gas in Transition
- Energy System Governance

Explore our research at abdn.ac.uk/energy/research
Masters Programmes

The University of Aberdeen offers a huge range of energy-related Master’s level degree programmes across business, law, engineering, geosciences, biological sciences, natural sciences and computing. Many Masters programmes are also offered online.

- Advanced Chemical Engineering (MSc)
- Advanced Mechanical Engineering (MSc)
- Advanced Structural Engineering (MSc)
- Analytical Chemistry (MSc)
- Artificial Intelligence (MSc)
- Cybersecurity (MSc)
- Data Science (MSc)
- Decommissioning (MSc)
- Energy and Environmental Law (LLM)
- Energy Management (MBA)
- Energy Politics and Law (MSc)
- Energy Transition Systems and Technologies (MSc)
- Environmental Science (MSc)
- Geographical Information Systems (MSc)
- Geophysics (MSc)
- Industrial Robotics (MSc)
- Integrated Petroleum Geoscience (MSc)
- Law and Economics of Oil and Gas (LLM or MSc)
- Natural Resources Law (LLM)
- Offshore Engineering (MSc)
- Oil and Gas Engineering (MSc)
- Oil and Gas Enterprise Management (MSc)
- Oil and Gas Law (LLM)

- Petroleum Data Management (MSc)
- Petroleum Engineering (MSc)
- Petroleum, Energy Economics and Finance (MSc ECON)
- Process Safety (MSc)
- Project Management (MSc)
- Renewable Energy Engineering (MSc)
- Rural Surveying & Rural Property Management (MLE)
- Safety and Reliability Engineering for Oil and Gas (MSc)
- Subsea Engineering (MSc)
- Sustainability Transitions (MSc)

Find out more at abdn.ac.uk/study
On-demand Learning

Our flexible approach to learning means you can study full-time on campus or choose from a range of more flexible online options to fit around your work or family commitments.

**Online Degrees and Awards**

By studying for an online qualification at the University of Aberdeen, you will have all the practical advantages of fitting your learning around your location, work and personal commitments. Our online programmes are taught by the same outstanding academics as our on-campus programmes – the only difference is the flexible mode of delivery.

**Short Courses**

You can choose to study a wide range of energy-related short course online. With part-time Master’s level courses, you learn without having to take time off work or commit to the cost of a full degree. For the most part, course hours aren’t fixed, so you can set your own study hours, while some courses are ‘always-on’, so you can enrol and study whenever you like, 24/7. You can build qualifications, including Master’s degrees, one short course at a time.

Our energy-related online short courses include:

- Co-operative Contracts in the Oil and Gas Industry
- Data Science: From Data to Insight
- Decommissioning of Offshore Installations: Commercial Aspects
- Decommissioning of Offshore Installations: Regulatory Aspects
- Electrical Systems for Renewable Energy
- Energy Conversion and Storage
- Energy from Biomass
- Geothermal and Hydro Energy
- Governance and Petroleum Developments
- Introduction to Offshore Decommissioning
- Legislation, Economics and Safety
- Marine and Wind Energy
- Offshore Structures and Subsea Systems
- Petroleum Law: Resource Management
- Pipelines and Soil Mechanics
- Process Shutdown, Structural Decommissioning and Disposal
- Regulatory Law for Petroleum Operations
- Renewable Energy Integration to Grid
- Risk Allocation in Oilfield Service Contracts
- Safety and Risk Management
- Solar Energy
- Subsea Integrity

Find out more at on.abdn.ac.uk
The energy sector is ever-evolving, providing organisations with challenges around their key asset – their people.

We provide workshops, conferences, short courses, e-learning programmes and tailored training, all focused on improving an individuals’ knowledge and skills, providing an impact for employers.

If you are interested in developing tailored training contact cpdservices@abdn.ac.uk.
People

The Centre for Energy Transition facilitates engagement and collaboration between the University’s research community and our external partners. We are particularly interested in collaborating with industry, governments, researchers, and other organisations and groups working to deliver on net-zero and other important energy-related challenges.

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