



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Energy and Macroeconomics

School of Earth and Environment, Faculty of Environment



**Salary: Grade 7 (£33,199 – £39,609 p.a.)** Due to funding limitations the post can only be appointed at no higher than spine point 30 (£33,199 p.a.)

**Reference: ENVEE1339**

**Closing date: 25 July 2019**

**Fixed-term for 3 years (external funding)**

**Job share and flexible working arrangements will be considered**

**The interviews are expected to take place in September**

## Research Fellow in Energy and Macroeconomics, School of Earth and Environment, Faculty of Environment

Would you like to further your career by applying your quantitative energy and economic skills at one of the UK's leading research-intensive Universities? Do you have an ability to work at the forefront of the emerging field of exergy economics to find new insights to an urgent global issue: how can we decouple energy use from economic growth? If so, this could be the opportunity for you.

**The research project: “Applying thermodynamic laws to the energy-GDP decoupling problem”**

Meeting the 2015 Paris Agreement's ambition relies heavily on reducing global energy use through increased energy efficiency. However, despite decades of energy efficiency policies and investment, global growth in energy consumption and economic output (GDP) remain tightly coupled. New insights and methods are thus urgently needed to unlock how energy-GDP decoupling can be achieved. In response the five year project, led by [Dr Paul Brockway](#), explores the decoupling problem using pioneering analytical methods being developed by the [Exergy Economics](#) research community, at which the University of Leeds is at the forefront. This emerging field applies 'exergy' as the thermodynamic-based measure of energy quality: the ability of energy to do physical work. You will be working to deliver the agreed work programme with the team at Leeds. You will apply your quantitative energy and macroeconomic skills to key research questions including: What is the relationship between energy efficiency and energy rebound? How much energy will we need to meet our future energy service demands? You will benefit from close links to project partners, including the Instituto Superior Tecnico ([IST](#)) in Portugal and the Department for Business, Energy & Industrial Strategy ([BEIS](#)). Through our access to key decision makers, there lies an opportunity to make real research impact.

Based at the Sustainability Research Institute ([SRI](#)), you will be part of a dynamic network of researchers who specialise in alternative energy-economy modelling approaches, including SRI-based research centres Living Well Within Limits ([LiLi](#)), and the Centre for Research into Energy Demand Solutions ([CREDS](#)). Together, we have a very strong track record of publishing in high ranking peer-reviewed journals. This post is based in Leeds, with some international travel required.



## What does the role entail?

As a Research Fellow, your main duties will include:

- Working with a range of quantitative energy-economy modelling methods aimed at discovering new insights into the role of thermodynamic-based energy (exergy) efficiency within the energy-economy relationship. These may include the: aggregate production functions; input-output analysis; agent-based / system dynamics models; macroeconometric analysis; decomposition analysis;
- Working with the Leeds-based project team and project partners including BEIS, IST Lisbon, and the Bank of England;
- Linking to collaborative workstreams across the international [Exergy Economics](#) research network and [SRI](#)-based research centres ([LiLi](#), [CREDS](#))
- Developing modelling and policy-relevant responses based on the assessment of the likelihood of energy-GDP decoupling;
- Working with energy-economy modellers and policy makers (e.g. BEIS, CCC) including design and delivery of research workshops to maximise impact;
- Generating and pursuing original research ideas in the subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including, where appropriate preparing proposals for funding in collaboration with colleagues;
- Communicating or presenting research results through publication or other recognised forms of output;
- Preparing papers for publication in leading international journals and independently writing reports;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, where appropriate, including assisting with the supervision of projects.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.



## What will you bring to the role?

As a Research Fellow you will have:

- A degree and PhD (or close to completion ie: the initial thesis needs to have been handed in at the point of application) in the energy/ecological economics field or a closely allied discipline;
- A strong background in economy-wide energy and/or economic analysis;
- Demonstrable experience of conducting empirically-based research;
- Excellent written and verbal communication skills including presentation skills and the ability to communicate effectively with a wide range of stakeholders;
- A good level of numerical literacy and demonstrated ability to interpret complex data;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;
- A proven track record of peer-reviewed publications in high impact factor journals;
- An ability and willingness to spend up research time outside the UK, typically in the EU, for attendance at multi-day research meetings, conferences and workshops. As a guide, in the past these have been undertaken in EU countries including France, Lisbon and Austria.

You may also have:

- Direct experience in the field of energy economics;
- Experience of handling large macroeconomic energy/economy datasets, e.g. International Energy Agency, World Bank, OECD;
- Experience of pursuing external funding to support research;
- Experience of using programming languages such as R, python.



## How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

## Contact information

To explore the post further or for any queries you may have, please contact:

**Dr Paul Brockway, University Academic Fellow**

Tel: +44 (0)113 343 5576

Email: [p.e.brockway@leeds.ac.uk](mailto:p.e.brockway@leeds.ac.uk)

## Additional information

Find out more about the [Faculty of Environment](#).

Find out more about our [Research and associated facilities](#).

## Working at Leeds

Find out more about the benefits of working at the University and what it's like to live and work in the Leeds area on our [Working at Leeds](#) information page.

## Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found in our [Accessibility](#) information or by getting in touch with us at [disclosure@leeds.ac.uk](mailto:disclosure@leeds.ac.uk).

## Criminal record information

### Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records information](#).

