



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow / Senior Research Fellow in Energy and Input-Output, Faculty of Environment



Salary: Grade 7 (£32,548 – £38,833 p.a.) / Grade 8 (£39,992 – £47,722 p.a.)

Reference: ENVEE1263

Closing date: 15 August 2018

Fixed term for 3 years (external funding)

Job share and flexible working arrangements will be considered

Research Fellow / Senior Research Fellow in Energy and Input-Output, School of Earth and Environment, Faculty of Environment

Would you like to join the largest national research centre on energy demand in the UK? Do you want to further your career by applying your quantitative analysis skills as part of a leading research group on energy, materials and economy modelling in one of the UK's foremost research intensive universities? If so, this could be the opportunity for you.

Research: Exploring low energy demand futures for materials and products in the UK by applying MRIO models.

You will join a highly successful research group within the Sustainability Research Institute that conducts research on energy demand reduction and low carbon transitions using a range of modelling techniques such as Multi-Regional Input-Output Analysis (MRIO), macro-econometric models, energy and exergy analysis and scenario development. This position allows you to apply your knowledge of MRIO to specific applied policy relevant questions on the role of industry in achieving a low carbon future.

The team, led by Professor John Barrett, is funded under a new £19m 5 year initiative involving leading UK universities, entitled the UK Centre for Research on Energy Demand Solutions (CREDS). This is a substantial commitment by the UK Government to fund research to understand the drivers that determine our energy demand and the mechanisms by which to reduce it. The research team also hosts the Centre for Industrial Energy, Materials and Products (www.ciemap.ac.uk) and is a core partner of the UK Energy Research Centre (www.ukerc.ac.uk). You will be joining an established research group of 10 researchers from a wide range of disciplines including economics, engineering, mathematics, geography and environmental science. The research group has a very strong track record in publishing in many of the top peer-reviewed journals. You will be working to deliver the agreed work programme with the team.



What does the role entail?

As Research Fellow (Grade 7), your main duties will include:

- Adapting the existing UK MRIO database to answer specific questions involving aggregating/disaggregating sectors to establish sector level benchmarking;
- Applying structural decomposition techniques to understand the drivers of changes in energy use;
- Applying structural path analysis to unpick supply chains;
- Developing detailed scenarios for low energy demand futures for UK industry (combining MRIO with macroeconometric approaches);
- Providing insights into the role of the Industrial Strategy to deliver productivity gains while addressing energy demand reduction;
- Developing and assessing strategies related to the more efficient use of resources to deliver reductions in industrial energy demand;
- Working with and in support of Prof John Barrett research grant to ensure the project is successfully completed;
- Generating and pursuing original research ideas in the appropriate 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;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- 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 research culture of the Institute, where appropriate;
- Contributing to the training of both undergraduate and postgraduate students, where appropriate, including assisting with the supervision of projects in areas relevant to the project.



As Senior Research Fellow (Grade 8), your main duties will include:

- Working with Professor John Barrett and the centre's senior research fellow to ensure the projects are successfully completed;
- Contributing to setting the direction, outputs and outcomes of the research projects listed in the work programme;
- Undertaking modelling to link industrial energy with materials and products by combining input-output approaches with other modelling techniques;
- Working with other team members to run simulations with our economic scenario model (MARCO-UK) on low energy industrial futures;
- Revising/amending the Multi-Regional Input-Output Model or/and MARCO-UK model if improvements are required;
- Communicating and presenting research results through publications or other recognised forms of output at international conferences;
- Publishing research papers with the team on this work in high-ranking, peer reviewed journals;
- Planning and managing your own research activity in collaboration with others;
- Interacting with, and providing assistance to, other staff and research students within the research group and the School;
- Identifying other research project opportunities and directions as they arise, and assisting in the writing of grant proposals;
- Playing a key role in fostering the wider dissemination and impact of research findings, including actively engaging in knowledge exchange activities in collaboration and support of the project team.

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 Research Fellow (Grade 7) you will have:

- PhD (or close to completion) or relevant experience demonstrating an interdisciplinary approach to problem orientated research;
- A good level of numerical literacy with an appreciation of input-output;



- Ability to code in r, python or matlab;
- A demonstrable commitment to research, including:
 - Ability to identify research objectives
 - Independence/initiative in tackling research problems
 - Ability to work effectively as part of a collaborative team
- Excellent communication skills, including presentation skills, evidenced by contributions to international conferences and/or meetings;
- Track record of, or good potential, for publication of peer-reviewed journal articles;
- You will have a strong desire to engage extensively with key stakeholders;
- Enthusiastic approach and helpful manner combined with a willingness to help colleagues during times of pressure;
- Ability to work under pressure and to meet deadlines.

In addition for appointment as Senior Research Fellow (Grade 8) you will have:

- At least 4 years' experience as a researcher in the field beyond your PhD;
- Strong track record of, or good potential, for publication of peer-reviewed journal articles;
- Evidence of project management;
- Experience of managing junior staff.

How to apply

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

Your application should include:

- a supporting statement evidencing how you believe your existing knowledge and experience equips you to carry out the role;
- a copy of your curriculum vitae giving full details of qualifications and experience.



Contact information

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

Professor John Barrett, Professor of Energy and Climate Policy

Tel: +44 (0)113 343 2394

Email: j.r.barrett@leeds.ac.uk

Additional information

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

Find out more about [Athena Swan](#) in the Faculty.

Find out more about our [School](#).

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

Working at Leeds

You can find out more about our generous benefits package and more about what it is like to work at the University and live 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 on our [Accessibility](#) information page or by getting in touch with us at 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.

