School of Social Science and Humanities
Geography and Environment

Loughborough University

Research Associate in Energy System Modelling (OSeMOSYS)

Climate Compatible Growth (CCG) Programme

Fixed term until 31st March 2025 and full-time or part-time (FTE1.0 - FTE0.7)

Job Ref: REQ221282

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Geography and Environment, School of Social Sciences and Humanities

Project Description

The Climate Compatible Growth (CCG) programme is funded by the UK's Foreign Development and Commonwealth Office (FCDO) to support investment in sustainable energy and transport systems to meet development priorities in the Global South.

CCG provides research and global public goods. These are to help countries develop economic strategies, plans, and policies to attract investment into low-carbon growth opportunities across multiple sectors. These are to support growth aspirations and better meet the Sustainable Development Goals.

The programme brings together some of the UK's leading research organisations and partners them with local researchers, governments, Multinational Banks (MDBs), and International Organizations (IOs) to identify appropriate low-carbon development pathways. This includes assessing the most fit-for-purpose policy, regulatory, market models, and risk mitigation options to implement them. The programme and its partners will develop a range of open-source tools, models, and datasets that will be global public goods available to all countries.

Job Description

Job Grade: Specialist and Supporting Academic, Grade 6

Job Purpose

The Research Associate will work closely with the CCG research team, an exciting programme including Imperial College London, University College London, Oxford University, Cambridge University, Loughborough and others tackling climate change mitigation and economic growth in FCDO target regions globally. They will conduct research in the area of systems analysis modelling for the CCG research programme alongside additional work related to the programme as required by the Programme Director.

Job Duties

- Be responsible for conducting the day to day running of the project including the systems analysis modelling, feed back to the project team on progress and make recommendations for next steps.
- To develop and apply national modelling (and other) data-kits, energy systems modelling tools, including interfaces and synthesise the scenarios that they produce in close collaboration with CCG partners.
- To support the project team by enhancing relationships with existing collaborators; engaging with project partners, national modelling teams, refining model input assumptions, designing specific scenarios,

interpreting results and ensuring they are communicated in a clear and policy-relevant manner, as well as assisting the establishment of relationships with new collaborators.

- To work across the CCG consortium, including the development and delivery of learning materials and agile outputs. This will include engaging with key activities such as the Summer School and Open Learn CCG course activities under the guidance of the CCG director.
- To develop project-related data collection and data-analysis.
- To review the current literature and prepare datasets, web-products, materials and write research papers suitable for publication in high quality academic journals.
- To contribute to project promotion and public engagement events.
- Attend some project meetings and make presentations to project partners.
- To attend and contribute to conferences.
- To support the project team in applications for grants.
- Contribute ideas for new research and enterprise directions.
- Maintain confidentiality at all times and ensure that intellectual property (IPR) agreements are not violated.
- To assist the academic staff in the project team with the supervision of undergraduate MSc and PhD project work and day-to-day supervision and support of other researchers.
- Where appropriate, to deliver teaching, tutorial and laboratory sessions to students.
- Engage in training programmes in the University (or elsewhere) that are consistent with the needs and aspirations of the project and those of the Department.
- Undertake other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed. The work schedule will be revised regularly together with CCG the CCG director and Programme Manager to ensure it is adjusted to fit dynamic demands. The items above may therefore be revised during the execution of the contract.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others, and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to the CCG Programme Director.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below.

Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

1 – Application
2 – Test/Assessment Centre/Presentation
3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Background in systems analysis modelling	1,2,3
	Experience of developing methods to allow for the rapid development of simple to complex standardised energy models.	1,2,3
	Demonstrable skill in the use of the Open-Source energy Modelling System – OSeMOSYS (which is employed widely in CCG). Those skills should include the ability to develop national decarbonisation data kits and teaching materials.	1,2,3
	Experience in the organisation and delivery of externally facing and international OSeMOSYS related teaching activities.	1,2,3
	Experience in developing interfaces that allow newcomers to use the OSeMOSYS for policy analysis.	1,2,3
	Involvement in some level of international coordination activities between modelling practitioners.	1,2,3
	Experience in the organisation of at least one international school on the use and uptake of energy planning models including OSeMOSYS and associated energy system analysis tool.	1,3
	Experience with the development of OSeMOSYS-based analysis in the North Western Asian region	1,3
	Experience in assisting with the tutoring of courses on the use of OSeMOSYS at MSc/MA level.	1,3
	Experience in developing online training videos for the use of tools such as OSeMOSYS for accelerated updake.	1,3
	Experience of delivering online coaching sessions for the practitioners on the uptake of OSeMOSYS	1,3
Skills and abilities	Proficient ability in the use of energy systems models, including OSeMOSYS and its clicSAND interface.	1,2,3
	Demonstrable ability to deliver outputs rapidly in collaboration with several other researchers and organisations.	1,2,3
	Working knowledge of software packages (including OSeMOSYS and the ‘clicSAND’ interface for OSeMOSYS)	1,3
	Good interpersonal skills.	1,3
Training	Demonstrate evidence of having undertaken further training.	1,3
Qualifications	A PhD in a related subject (or nearing completion), or an advanced degree in a related subject such as energy modelling systems, as well as related equivalent experience (or a combination of undertaking PhD studies with appropriate experience)	1,3

Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3

Desirable Criteria

Area	Criteria	Stage
Experience	Experience in capacity building activities in developing countries.	1,3
	Solid knowledge in energy modelling in developing country contexts and associated scenario development.	1,3
	Experience with dealing with multilateral agencies, managing networks and communication with diverse stakeholders.	1,3
	Working in a high-quality academic research environment	1,3
	Experience of teaching and/or supervision of energy modelling trainees	1,3
Skills and abilities	Ability to develop working papers, tools, data repositories.	1,3
	A strong publication track record (including the publication of data, software and paper pre-prints).	1,3
	Skill in the development, application, teaching (and developing teaching material for) clicSAND-OSeMOSYS.	1,3
Qualifications	PhD (or underway with relevant experience) in Geography & Environment or Energy Systems Modelling	1,3
Other	Able to travel independently	1,3

Conditions of Service

The position is available full-time or part-time (FTE01.0 – FTE0.7) and FIXED TERM until 31 March 2025. The position is subject to external funding. Salary will be on Specialist and Supporting Academic Grade 6 per annum (£32,348 - £42,155), at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's Terms and Conditions of Employment for STAFF GRADES 6 AND ABOVE, details of which can be found here.

The University is committed to allowing its employees to work dynamically with a combination of working on campus and remotely, where possible. This role has been identified as a role that could work dynamically and if successful your manager will discuss these informal arrangements with you. Please note there is a general expectation that, unless otherwise agreed, the successful candidate will spend the majority of time working on the Loughborough campus.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which can be found here.

The University offers a wide range of employee benefits which can be found here.

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html

In addition, the University is supportive, wherever possible, of flexible working arrangements.
We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see http://www.lboro.ac.uk/services/hr/athena-swan/