



Candidate Information

Position:	Research Fellow - Potential of Offshore Wind Energy
School/Department:	Mechanical & Manufacturing Engineering
Reference:	22/109773
Closing Date:	Friday 6 May 2022
Salary:	£34,304 per annum
Anticipated Interview Date:	Wednesday 25 May 2022
Duration:	Fixed-term - 24 months

JOB PURPOSE:

The postholder will be an integral part of Dr Foley's team and will be based in the Energy, Power, and Intelligent Control (EPIC) team in the School of Electronics, Electrical Engineering and Computer Science. The postholder will conduct analysis of the specific situation in Northern Ireland and the impact this may have on policy and offshore renewables deployment; they will understand potential and needs for industry and supply chain capacity to be grown in Northern Ireland, how to maximise on local content, the potential and needs for job creation, and for export of product and service.

MAJOR DUTIES:

1. Develop and execute research deliverables in accordance with the DfE funded project to determine the potential of offshore wind energy in Northern Ireland. With reference to Northern Ireland's ability to achieve net zero target, increase grid stability via hydrogen and battery storage, examine potential energy export markets and support wider economic growth in Northern Ireland.
2. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to the areas of research developed.
3. Present regular progress reports on research to members of the research centre or external audiences to disseminate and publicise research findings in close co-ordination with the industrial partners.
4. Prepare, in consultation with the project supervisors and other relevant people, material for publication in esteemed national and international journals and presentations at international conferences.
5. Support EPIC Lab, support PhD students, including assessing and contributing to training requirements, providing advice as requested on their individual research projects and carry out occasional undergraduate supervision.
6. Assist the grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out routine administrative tasks associated with the research centre to ensure that deliverables are completed on time and within budget.
8. Travel to meetings and conferences in the UK, Ireland and elsewhere in the world deemed necessary to undertake the research and associated project work.

ESSENTIAL CRITERIA:

1. Have a PhD or about to obtain in Mechanical, Electrical, Civil or related Engineering field.
2. Three years recent relevant research experience to include:
 - Demonstrable industry experience in engineering and project management
 - Experience in modelling one or more of energy systems, power networks, or equivalent
 - Track record of publication appropriate to career stage
 - Experience of leading laboratories and delivering tutorials.
3. Strong numerical modelling experience and knowledge of current approaches to modelling energy systems.
4. Evidence of contributing to the broader management and administrative processes in current research group.
5. Evidence of outreach and dissemination as demonstrated by links with industry, institutes, community groups etc.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
7. Excellent software skills e.g., MS Office, programming tools such as ArcGIS, Python, Tableau, PLEXOS.

8. Ability to communicate complex information clearly.
9. Ability to build contacts and participate in internal and external networks.
10. Good time keeping, interpersonal and communications skills.
11. Ability to work to deadlines, manage workload, complete tasks, and take initiative to complete tasks effectively.
12. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. Relevant process modelling qualifications.
2. Experience of modelling the interaction of complex systems.
3. Supervision of undergraduate students on project level.
4. Experience of working on an industry lead project or project with considerable industry input, working in a multi-institutional, interdisciplinary and international team.
5. Contribution to field through attendance at conferences, chairing any sessions at conferences and any journal activities such as reviewing and support of editorial activities.