Candidate Information

Position:	Research Fellow
School/Department:	Energy, Power and Intelligent Control
Reference:	23/111458
Closing Date:	Monday 11 December 2023
Salary:	£37,841 per annum
Anticipated Interview Date:	Wednesday 10 January 2024
Duration:	Fixed term for 9 months

JOB PURPOSE:

The School of Electronics, Electrical Engineering & Computer Science (EEECS) at Queen's University Belfast is currently seeking a Techno-Economic Assessment Specialist. The specialist will be dedicated to analysing the viability, costs, and advantages of incorporating tidal energy into the Irish power grid. A key aspect of the role will be to assess how the predictable and consistent nature of tidal power generation can economically propel us towards our net-zero objectives. The project is funded by the Department of Economy (For more information, please visit https://www.case-research.net/). This role offers the opportunity to work collaboratively with SONI Ltd, the Electricity Transmission System Operator for Northern Ireland.

The post is a critical role, and as such, successful applicants will be responsible for independent and collaborative research, planning activities, as well as regular meetings and discussions with the research team and industrial partners.

MAJOR DUTIES:

1. Conduct technical and economic assessments of tidal energy integration in the Irish power system, working under supervision and as part of a research team.
2. Evaluate grid integration challenges, including infrastructure needs, system stability, and compatibility issues.
3. Develop models to predict the economic benefits and costs associated with tidal energy integration.
4. Collaborate with R&D teams to optimize design solutions based on economic assessments.
5. Monitor and report on global trends and advancements in tidal energy technologies.
6. Provide insights and recommendations on project feasibility and return on investment.
7. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team on outputs.
8. In consultation with the project team, promote research milestones and outputs at national and international conferences and through social media.
9. Assist grant holder in the preparation of funding proposals and applications to external bodies.
10. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
11. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. Minimum of 2:1 Honours degree in Electrical and Electronic Engineering, renewable energy (or related discipline).
2. Have or be about to obtain a PhD in a relevant area.
3. Research experience in power system planning and operation, as well as in renewable energy technologies.
4. Advanced computer skills, including proficiency in programming with Matlab and/or Python.
5. Experience in developing and utilizing power system models for optimisation analysis.
6. Demonstrable evidence of effective collaboration within a research team to develop and promote the research theme.
7. Ability to contribute to broader management and administrative processes.
8. Contribute to the School's outreach programme by links with industry, community groups etc.

9. Willingness to undertake additional training in research methods and other related skills as required.
10. Practical problem-solving skills, independence of thought and initiative.
11. Ability to communicate complex information effectively in oral and written format.
12. Ability to build relationships to develop internal and external networks.
13. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. Proficiency in modelling software such as PLEXOS, or similar.
2. Track record of high quality research publications.
3. Strong understanding of power system planning and operations, grid codes, and renewable energy technologies.