

## **Candidate Information**

<b>Position:</b>	Research Fellow (Centre for Advanced Sustainable Energy) CASE
<b>School/Department:</b>	Environmental Change and Resilience
<b>Reference:</b>	20/108295
<b>Closing Date:</b>	Monday 24 August 2020
<b>Salary:</b>	£33,797 to £38,017 per annum
<b>Anticipated Interview Date:</b>	Wednesday 2 September 2020
<b>Duration:</b>	12 month fixed term contract with a funding end date of 29th September 2021

### **JOB PURPOSE:**

To be an active member of the research project/team assisting in the delivery of the 'Eden Project Foyle– Intelligent Sustainable Integrated Energy Management System' (FRG-IEMS) Project by delivering the following objectives:

- Design of objective orientated control for a forced ventilation drying system.
- Integrate control and monitoring system into current forced ventilation drying system.
- Assessing energy profiles using historic and forecast data from the Brook Hall Estate and Eden Project Foyle.
- Assessment of renewable energy contributions from proposed on-site Solar PV and other renewable energy sources.
- Liaise with project industrial partners: Eden Project Foyle, Brook Hall Estate, B9 Energy Ltd and academic collaborators at Ulster University.

### **MAJOR DUTIES:**

1. Undertake a programme of research using site data and resources to develop a controller with suitable monitoring for the forced ventilation bed drying operation.
2. Data collection / collation for use in project monitoring and reporting processes.
3. Develop strong working relationships with industrial partners working in this CASE project.
4. Disseminate the results of the research within the sector through presentation of conference papers and attendance / presentations at exhibitions etc.
5. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
6. Present regular progress reports on research to project partners, members of CASE management team or to external audiences to disseminate and publicise research findings.
7. Carry out administrative tasks associated with the project to ensure it is completed on time and within budget, e.g. organisation of project meetings and documentation, risk assessment of research activities, collection and collation of industry time sheets.
8. Read academic papers, journal and textbooks to keep abreast of developments in own specialism and related disciplines.

### **Planning and Organising:**

1. Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme.
4. Plan in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

### **Resource Management Responsibilities:**

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

**Internal and External Relationships:**

1. Liaise on a regular basis with colleagues, students and members of the research project.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration. Actively participate in the CASE Researcher group.
3. Join external networks to share information and ideas.
4. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

**ESSENTIAL CRITERIA:**

1. Have or be about to obtain a PhD in energy systems or process engineering or a related subject.
2. At least 3 years relevant research experience in energy systems or process engineering.
3. Proven experience of research methods and techniques used in established research programmes.
4. Record of accomplishment appropriate to career stage.
5. Ability to contribute to broader management and administrative processes.
6. Contribute to the School's outreach programme by links with industry, community groups e.tc
7. Proven ability to assess and organise resources to ensure delivery to project milestones.
8. Confident to communicate complex information clearly.
9. Ability to build contacts and participate in internal and external networks.
10. Demonstrable intellectual ability.
11. Ability to meet the travel requirements of this post, eg site visits to Derry-Londonderry from Belfast for planned phases of the research project.

**DESIRABLE CRITERIA:**

1. Recent relevant research experience in bio-energy and/ or thermodynamics with proven experience of research methods and techniques used in established research programmes.
2. Previous experimental experience in using data acquisition, data analysis and post processing tools.
3. Experience of working on an industry led project or project with considerable industry input, working in a multi-institutional and interdisciplinary team.
4. Previous experience of managing resources and project finances.