

<b>JOB TITLE:</b>	<b>Energy Research Associate</b>
<b>SECTION:</b>	Environmental Research Institute (ERI), North Highland College-UHI
<b>SCALE POINT RANGE:</b>	£25,550 – £27,709 (UCEA18-21)
<b>TERM:</b>	30 July 2024 (subject to probationary period) with the possibility to extend or transition to an open-ended position.
<b>START DATE:</b>	Negotiable, available immediately
<b>RESPONSIBLE TO:</b>	Dr Benjamin Williamson
<b>CLOSING DATE:</b>	2 March 2022

The Environmental Research Institute (ERI) is part of North Highland College, a partner in the University of the Highlands and Islands (UHI). The ERI is a distinctive research centre with significant industry engagement and development of business collaborations to maximise research impact.

We are seeking to recruit an Energy Research Associate to join our multidisciplinary group working at the forefront of the energy transition across Scotland and internationally. The Associate will assist in energy-related knowledge exchange activities and support collaborative and contract research projects as part of the UHI's Energy Knowledge Exchange (KE) Group.

The Energy KE group facilitates collaboration with industry, increasing the impact of research and access to UHI expertise and facilities to champion greater innovation with businesses and the wider community. This includes collaborative research, consultancy services, access to state-of-the-art facilities, equipment and services, innovation funding and knowledge transfer partnerships.

The post will be based at the ERI and will involve liaison with all UHI Academic Partners as well as national and international organisations. It will present opportunity to engage in diverse and cross-cutting projects including understanding the design, implementation and impacts of energy systems; life cycle assessment and carbon management, through to engineering, instrumentation and marine sensing research, ecology, environmental interactions and social science.

The successful candidate will facilitate new and existing projects across a range of energy technologies (wind, wave, tidal stream, biomass) and applications. The position offers a unique opportunity for a talented individual with strong technical or analytical background and an **interest in the role of different energy technologies to bring about the energy transition across sectors**. This multi-disciplinary role would suit candidates from an **engineering, environmental / physical sciences or social science background**.

Informal enquires can be made to [Dr Benjamin Williamson](mailto:benjamin.williamson@uhi.ac.uk), Lead Scientist for the ERI's 'Renewable Energy and the Environment' research theme, and Chair of the UHI Energy KE Group at: [benjamin.williamson@uhi.ac.uk](mailto:benjamin.williamson@uhi.ac.uk)

For full details of how to apply please visit: <https://eri.ac.uk/category/job-vacancies/>

## Job Description

The Associate will assist in energy-related knowledge exchange activities and support collaborative and contract research projects as part of the UHI's Energy Group.

## Key Duties

### Research:

- Make an effective and innovative contribution to the development of multi- and inter-disciplinary environmental research, exploiting knowledge exchange and commercial opportunities.
- Generate internationally recognised outputs of originality and scientific insight.
- Contribute to income generation at the ERI through grant capture, commercial activity or knowledge exchange activity in line with strategic objectives.

### Management:

- Provide effective and expert supervision of research projects.
- Contribute to development and implementation of ERI, NHC and UHI policies & strategies.
- Provide effective budget management for specific projects or areas of research.

### Networking and outreach:

- Develop an effective and responsive network of academic and research organisations and where applicable, commercial, stakeholder, business or public services organisations.
- Build new collaborations and partnerships in response to emerging challenges or opportunities.
- Take on an ambassadorial role using available opportunities and contribute to public engagement and outreach activities.

Other duties temporarily or on a continuing basis, as may reasonably be required, commensurate with the grade.

## Person Specification

Applicants should have a strong technical or analytical background, and interest in renewable energy, sustainable development or environmental science.

A desire to support knowledge exchange and innovation processes, project development and management, funding applications and stakeholder engagement is beneficial. Research experience is advantageous.

Candidates should be able to demonstrate:

### Communication (level 3):

- Communicate clearly, concisely and professionally ensuring understanding by a wide audience.
- Produce effective written communications in a variety of media for diverse situations/audiences.
- Communicate persuasively to influence change.

### Resource management (level 2):

- Plan, monitor and review time and resource allocation and discuss with other colleagues to ensure efficient delivery of project objectives and use of resources.
- Manage budgets and engage effectively with Finance experts when required.

### Teambuilding (level 2):

- Build wide networks and work with team members to support research and organisational goals.
- Take steps to become an effective team member.
- Draw on the diversity and experiences of others.

### Leadership (level 1):

- Build effective relationships with staff, colleagues, peers and external partners to achieve objectives.
- Demonstrate pride and professionalism in activities and actively promote these qualities in others.
- Motivate and inspire people to achieve, delegating effectively to provide development opportunities.

## The University of the Highlands and Islands (UHI)

UHI is based in the Highlands and Islands of Scotland, providing access to undergraduate and postgraduate study and research opportunities through a distinctive partnership of 13 colleges and research institutions with 40,000 students. Each partner has its own character and contributes to the wider UHI partnership. Some are relatively large colleges in the urban centres of the region such as Perth, Elgin and Inverness. Others are smaller institutions, including some whose primary focus is on research – all enriched by the people, natural environment, economy, culture and heritage of the Highlands and Islands and its communities.

Partners have their own micro-strategies and employ most research staff, make their own investments and exploit local autonomy in creating research activity within the wider university strategy. This breadth and diversity of the UHI partnership adds strength and impact to the main UHI research themes at the local level, often based

on our unique regional characteristics. It permits a growing cross-disciplinary approach which enriches our research and allows UHI to collaborate at the highest level. Particular research strengths, as measured through the Research Excellence Framework (REF), include environmental, marine and health sciences.

### Energy Knowledge Exchange

The Energy KE group works across all academic partners of UHI to drive innovation. Our objective is to help business and public agencies find innovative solutions and grow, whilst expanding our own research and KE activities, and increasing the impact of UHI research. We work across energy sectors, including resource assessment, policy and regulatory challenges, spatial planning, environmental monitoring, social licence and sustainable development.

Through networking, consortia building, capability mapping and marketing, we target business development and industry engagement, seeking to form long-term partnerships and collaboration. Engagement ranges from online presence and printed material, to interaction at conferences, trade fairs and events to facilitate these connections.

### The Environmental Research Institute (ERI)

The ERI is part of North Highland College, Thurso, one of the academic partners of UHI. The ERI seeks to address and advance understanding of environmental issues through high-calibre research (including knowledge exchange), enterprise (including commercial and consultancy), learning and teaching, and outreach.

We use our proximity to outstanding natural resources combined with state-of-the-art facilities to build internationally recognised research capability. Our approach is underpinned by strong, strategic partnerships and collaborations with academic, commercial and stakeholder organisations at regional, national and international levels.

We aim to ensure that our work is highly significant to the advancement of scientific understanding and of tangible socio-economic worth. We address new societal and policy demands related to improving understanding of the natural environment, particularly in relation to offshore renewable energy, and to decarbonising modern society.

### ERI Thematic Priorities

The ERI is focussed on the thematic priorities of:

- Renewable Energy and the Environment
- Carbon, Water and Climate
- Environmental Contamination and Ecological Health

And the cross-cutting theme of:

- Environment, Economy and Society

### Renewable Energy and the Environment (REE)

The ERI is located close to many of Scotland's outstanding wind, wave and tidal energy resources, notably the Pentland Firth, the foremost tidal resource in the UK, and the Moray Firth, containing multiple offshore windfarms and many future ScotWind lease areas. Sustainable use of these resources will play a key role in achieving the Scottish Government's renewable energy and carbon emission targets.

The REE theme seeks to capitalise on our multi-disciplinary expertise to address environmental uncertainties and issues underpinning development of the renewable energy sector. We do so by actively seeking and developing effective collaborations and partnerships, including with our UHI partners, and within regional, national and international settings.

Our team exploits distinctive blends of in-situ measurement, environmental survey, experimental, modelling and remote-sensing approaches. These provide new insights that are relevant not only to renewable energy, but also to ecosystem functioning and anthropogenic impacts more generally within the fields of marine biology, behavioural ecology and oceanography.

As well as developing and disseminating environmental knowledge, we also aim to promote understanding of closely coupled social and economic issues. These relate to development of the region, including the relationship with other key sectors. This will assist in establishing sustainable industries that can have a transformational impact on prospects of this region, its economy, its people and its communities.

The REE theme comprises around 20 PhD students and researchers working across engineering, ecology, oceanography, marine sensing, modelling, robotics and socioeconomics. It is led by Dr Benjamin Williamson.

## Renewable Energy and the Environment Activities

**Innovative sensors and platforms** – development and application of novel cross-cutting approaches and technologies to gaining new environmental insights including hydroacoustics, sensor fusion, computer vision, machine learning and big data.

**Bio-physical and environmental interactions** – understanding biological and ecological responses to changes in the marine (wind, wave, tidal) and terrestrial (wind, hydro) environments, together with oceanographic and hydrodynamic drivers of biodiversity, and environmental interactions around renewable energy devices.

**Renewable energy resource assessment** – field, modelling and remote sensing approaches to advance understanding of tidal stream, wave, hydro and wind energy resources (temporally and spatially).

**Movement ecology** – understanding the behavioural ecology of key species using techniques such as telemetry, remote sensing and observation.

**Energy vectors, storage, smart grids / micro grids** – supporting optimal use of intermittent renewables into grid and off-grid applications, including remote communities and developing countries.

**Economically and ecologically-sustainable energy transition and decommissioning** – supporting the move to renewable sources, informing decommissioning and environmental / habitat considerations with pre- and post-decommissioning monitoring and pre- and post-consent monitoring.

REE is housed within the Centre for Energy and Environment, a state-of-the art facility with a dedicated research boat 'Aurora', modern offices, instrumentation and electronics laboratories, and workshops. Cutting-edge instrumentation includes hydroacoustics (multi-frequency echosounders, multibeam sonars), broadband ADCPs, AWACs, multi-frequency sidescan sonar, multi-sensor seabed observatories, ROVs, X-band radar, fish and seabird tracking tags and receivers, Waverider buoys, weather stations, and a large fleet of UAVs including RTK and high-payload water-landing hexacopters with multi-spectral imaging systems.

## Key Terms and Conditions of Employment

Hours of Work	A full-time working week is one of 35 hours. This may include evening and weekend work, where required.
Holidays	A full year's holiday entitlement is 31 days. In addition, there are 14 days public holidays of which 10 are taken at Christmas and 2 at Easter, the remaining 2 are treated as floating.
Salary	To be negotiated within advertised range £25,550 – £27,709 (UCEA18-21)
Location	The position is planned to be based at the ERI in Thurso although you may be required to work from other sites as appropriate to the duties. There may be the possibility of flexible remote-working arrangements – please indicate this in your application if it is of interest.
Pension	You will be contractually enrolled into the Local Government Superannuation Scheme. Further details are available on joining.
References / PVG Scheme	For external candidates, appointment will be subject to references and admission to the PVG Scheme.