# Lead R&D Engineer (Whole Energy Systems)

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| Department | Power Networks Demonstration Centre (PNDC) (https://pndc.co.uk/), Department of Electrical and Electronic Engineering (http://www.strath.ac.uk/engineering/electronicelectricalengineering/) | | |
| Faculty | Faculty of Engineering (www.strath.ac.uk/engineering/) | | |
| Staff Category | Knowledge Exchange | Reference No | 395093 |
| Reports To | PNDC R&D Director | Grade: | 9 |
| Salary Range: | £53,348 - £60,022 | Contract Type: | Open Contract |
| FTE: | 1 (35 hours/week) | Closing Date | Sunday, 26 September 2021 |

## Job Advert

The Power Networks Demonstration Centre (PNDC), part of the University of Strathclyde (Times Higher Education Awards University of the Year 2019 and Scottish University of the Year 2020), wishes to appoint a Lead R&D Engineer (Whole Energy Systems) to inspire our innovation activities focussed on the development, realisation and integration of whole energy system solutions (electricity, heat, transport). By bringing your expertise to our project teams and key stakeholders, our aim is to accelerate innovation and de-risk the deployment and integration of new technology and business models, ultimately deploying them within the net-zero energy system of the future.

The Lead R&D Engineer (Whole Energy Systems) will be responsible for the leadership, development and delivery of a wide range of technical projects to support the growth of PNDC's whole energy system activities, with a particular emphasis on experimental validation and testing. The postholder will also be responsible for the development, growth and leadership of a team of R&D Engineers to support these activities, and will be expected to develop and lead on high value industrial funding proposals in addition to working with PNDC's industrial partners.

Opportunities for innovation are extensive, through the strong working relationship and routes to market afforded by PNDC's industry members and collaborative opportunities with other research and industry teams in the UK and abroad.

PNDC offers a dynamic and varied environment, providing the opportunity to be involved in leading edge work within the energy sector. As part of the University of Strathclyde, PNDC can offer a wide range of benefits to the post holder, including a generous holiday entitlement, pension scheme, and discounts to the state-of-the-art Strathclyde Sport gym and leisure facilities. The University also currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

To be considered for the role, you will

- Possess the knowledge, skills and experience normally associated with a PhD in a relevant field or you will be educated to Honours Degree level with relevant industrial experience
- Have significant innovation experience in low-carbon technology and whole system integration across the electricity, heat and transport sectors
- Be able to apply this knowledge in a highly practical environment, have experience of leading the delivery of research and development projects in collaboration with industry or in an industrial context, and have strong leadership and communication skills
- Be able to lead and contribute to high value industrial funding proposals
- Be a self-starter, and be able to plan, conduct and co-ordinate research and knowledge exchange activities with minimal supervision, as well as generate new ideas and concepts, with the capacity to work in a dynamically changing team environment

# Job Description

**Brief Outline of Job:**

The Lead R&D Engineer (Whole Energy Systems) is a senior technical role with responsibility for the leadership, development and successful delivery of an integrated portfolio of research and development projects to support the PNDC's innovation activities focussed on whole energy system solutions. They will also be responsible for the leadership of a team of R&D Engineers to support these activities. The role requires strong engagement with industry, as well as with the PNDC colleagues and the wider University team, to support the realisation of relevant and valuable results. While part of the University, the PNDC is an off-campus industry facing facility based near Cumbernauld.

**Main Activities/Responsibilities:**

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| 1. | Lead the development and growth of the PNDC's portfolio of research and development projects focussed in the area of whole energy systems innovation. This will include aspects of:<br>- Developing, securing and delivering an integrated portfolio of research, development and testing activities in the whole energy systems domain (across the electricity, heat and transport sectors including hydrogen applications) in collaboration with industrial and academic colleagues<br>- Providing technical leadership of these projects<br>- Leading the development and submission of geared collaborative funding proposals<br>- Developing project requirements specifications through engagement with external partners and by incorporating learnings from previous research<br>- Technology and system design, whole system integration, and engineering studies including system modelling, simulation and transient performance studies<br>- Techno-economic assessments and feasibility studies<br>- Producing technical guidance, insights and briefings to maximise impact<br>- Timely and on-budget delivery of complex projects, ensuring deliverables are met and clear reporting is achieved |

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| 2. | Grow, develop and manage a team of PNDC R&D Engineers to support the delivery of PNDC's whole energy systems innovation activities |
| 3. | Manage and provide technical and professional support for broader PNDC activities, including taking responsibility for devising strategy development and implementation programme for whole systems integration activities. |
| 4. | Ensure high-quality technical and progress reporting of R&D activities, developing best practice approaches to effective knowledge transfer to internal and external stakeholders to maximise impact, and leading the dissemination at conferences and in peer-reviewed journals whilst ensuring that any IP generated is recognised and managed appropriately |
| 5. | Lead and develop internal and external networks of professional experts, researchers, and leading thinkers in the field of whole energy systems to foster collaboration, deliver common objectives and generate research income |
| 6. | Collaborate with colleagues in the wider university teams, draw in appropriate expertise into project and proposal activity and exploit synergy with other research programmes in order to provide key industry members and stakeholders with innovative game changing innovation programmes. |
| 7. | Engage in continuous professional development, participating in external networks and consultations to maintain current knowledge of relevant state of the art, patent positions, products and technology readiness levels |
| 8. | As a senior member of the PNDC innovation team assume responsibility for carrying convening or participating in relevant committees, leading on onsite engagements with industry partners and preparing submissions to government policy consultations. |

# Person Specification

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| **Educational and/or Professional Qualifications**<br>(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable) |
| E1 PhD in appropriate discipline and/or equivalent relevant industrial experience |
| D1 Membership, or working towards membership, of a relevant Professional Institution |
| **Experience** |
| E2 Knowledge of the whole energy system innovation and demonstration activities with specific experience in whole energy system design, analysis and systems integration |
| E3 Knowledge of low carbon transport, heat, and electrical power systems design and systems integration, including knowledge of the role of hydrogen-based systems |
| E4 A sustained track record of developing and leading successful multi-disciplinary innovation programmes by leading and developing networks of professional experts and researchers. |
| E5 Experience in modelling and simulation in a relevant discipline including building and using techno-economic models to generate insights and/or to inform innovation activities |
| **Job Related Skills and Achievements** |
| E6 Track record of securing funding for multi-disciplinary innovation programmes |
| E7 High level of initiative with the ability to apply knowledge in a highly practical environment, and to generate new ideas |
| E8 Ability to oversee testing activities, data analysis, the preparation of test programmes and reports, and to present findings to experienced technical audiences |
| E9 Ability to engage with external stakeholders at senior level |
| E10 Demonstrable ability to play a senior role within a team environment and motivate and manage staff, with experience of leading teams of less experienced staff |
| **Personal Attributes** |
| E11 Enthusiastic self-starter and able to work to deadlines, with a customer focus |
| E12 Excellent organisational, interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences |

## Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

## Other Information

Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).

Informal enquiries about the post can be directed to Richard Knight, Director for Strategy & Technology (richard.knight@strath.ac.uk).

### Conditions of Employment

Conditions of employment relating to the Knowledge Exchange staff category can be found at: Conditions of Employment.

### Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found here.

### PVG Check

This position involves regulated work, making it a legislative requirement that the successful candidate becomes a member of the Protection of Vulnerable Groups Scheme. If appointed, employment with the University will not be confirmed, until membership of the Scheme has been received. The successful applicant will be precluded from working with protected groups until that time.

### Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

### Probation

Where applicable, the successful applicant will be required to serve a 12 month probationary period.

### Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from Payroll and Pensions.

### Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

### Interviews

Formal interviews for this post will be held in October 2021.

### Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing gender equality in academia across all academic disciplines and professional and support functions.

### University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. Our Values have been derived from how we act and how we expect to be treated as part of Strathclyde.


Athena
SWAN
Bronze Award

disability
confident
EMPLOYER

CARER POSITIVE
Employer in Scotland
EXEMPLARY

happy to
talk flexible
working

Healthy
Working
Lives
Gold Award

COVENANT
PROUDLY
SUPPORTING
THOSE WHO
SERVE.