Research Associate: Power Networks to Enable the Low Carbon Energy Transition

Department	Electronic and Electrical Engineering (www.strath.ac.uk/engineering/electronicelectricalengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	506453
Reports To	Prof Keith Bell	Grade:	7
Salary Range:	£34,308 - £42,155	Contract Type:	Fixed Term (24 months)
FTE	1 (35 hours/week)	Closing Date	27/02/2023

Job Advert

The Dept. of Electronic and Electrical Engineering at the University of Strathclyde has a history of impactful work on electric power systems. A key foundation of that work for many years has been close collaboration with Scottish Power Energy Networks (SPEN) which owns and operates the distribution networks in central and Southern Scotland, Merseyside and North Wales, and owns, develops and maintains the transmission network in central and Southern Scotland.

A Post-Doctoral Research Associate is sought to undertake research in partnership with SPEN helping to drive forward the low carbon energy transition and find solutions to real-world problems. The challenges are many and various, at root relating to facilitation of renewable generation and growth of demand due to the electrification of heat, transport and industry. What will be the most effective ways of using existing network capacity, enhancing it in a timely manner, developing networks sector practice and regulatory and commercial regimes, and meeting network users' different needs?

The successful candidate will work with colleagues at the University, in PNDC and at SPEN to co-develop and deliver research. The relationship with SPEN and the open format of this post-doctoral appointment offer a great opportunity to be creative and make a difference. Moreover, you will be part of a group at Strathclyde that has both strong links with industry, government and regulators, and excellent academic credentials. This position therefore offers not only the freedom to express curiosity and generate and share knowledge in an academic research career but also the opportunity to make a difference to industrial practice and policy and to further the energy transition in a material way.

The Research Associate will join one of the UK's most internationally recognised electrical energy and power systems research groups, working closely with colleagues including the holder of the Scottish Power Chair in Future Power Systems, Keith Bell. The appointed individual will be expected to hold or soon to gain in a PhD in a subject related to the development and operation of power networks to accommodate low carbon generation and new loads such as electrified heat and transport, or to have equivalent industry experience. They will also be expected to have strong analytical and energy system modelling skills and experience in presenting research results and advice to industry partners and policy makers. They should have experience in handling large volumes of data and in development of modelling tools, and evident capability in written communication, through industry reports or success in publishing in a reputable academic journals.

Job Description

Brief Outline of Job:

Undertake research on power networks and the facilitation of the low carbon energy transition in collaboration with colleagues at University of Strathclyde and Scottish Power Energy Networks.

Main Activities/Responsibilities:

1.	Carry out modelling and analysis of realistic present day and future power systems.
2.	Lead the development and delivery of specific research studies co-designed with colleagues at the University and at Scottish Power Energy Networks
3.	Lead the writing up of main high-level learning points from research and the dissemination of knowledge pertinent to GB power sector practice and energy policy.
4.	Publish research in suitable academic journals.
5.	Monitor relevant developments in the energy sector and communicate them to colleagues.
6.	engage with and, where agreed, pursue opportunities for further funding and collaboration in relation to electricity system planning and operation.
7.	Where appropriate, identify sources of funding and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals.
8.	Provide support to teaching within the Department of Electronic and Electrical Engineering, in particular in the support of project students at undergraduate, postgraduate taught and PhD levels.
9.	Manage and prioritise own workload within agreed objectives to ensure that all activities are completed to deadlines.
10.	Engage in continuous professional development.

Person Specification

Educational and/or Professional Qualifications
(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1	Honours degree (minimum class 2:1 or equivalent) in a cognate discipline.
E2	PhD in a relevant discipline or equivalent industrial experience in a relevant topic.

Experience

E3	Evident ability to design and conduct research work.
E4	Knowledge of key issues for electric power networks in facilitating the low carbon energy transition.
E5	Success in disseminating research results through conference and journal publications. (Applicants from an industrial background, will be required to demonstrate the ability to publish in such journals).

Job Related Skills and Achievements

E6	Good computer programming and data science skills, using e.g. the Python ecosystem or a similar appropriate language and libraries
E7	Ability to structure reports or academic papers in a clear and coherent manner and to clearly communicate engineering and energy policy ideas.
E8	Excellent interpersonal and communication skills, with the ability to listen, learn, engage and persuade, and to present complex information in an accessible way to a range of audiences.
E9	Ability to pick up and assimilate relevant information from a variety of sources.

Personal Attributes

E10	Ability to plan and organise own workload effectively, with evidence of having successfully completed research projects to interim milestones and completion.
E11	Enthusiasm, and keenness and ability to embrace and work constructively within a team environment.
E12	Creativity, initiative and rigour in solving engineering and analysis problems.

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted 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 Prof Keith Bell, Scottish Power Professor of Future Power Systems (keith.bell@strath.c.uk).

Conditions of Employment

Conditions of employment relating to the Research 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.

Probation

Where applicable, the successful applicant will be required to serve a 9 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.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

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.