Directorate of Estates and Development

SEND Development Manager

Grade 8: Starting salary £40,523 per annum

To take a lead role in the design, specification, installation, commissioning, operation and maintenance of the Smart Energy Network (Demonstrator) to facilitate the installation and coordination of existing and new electrical and mechanical systems and equipment, including taking ownership of compliance and safety of the network.

Responsible for providing campus-wide Smart Energy Networking expertise to ensure compliance with all relevant utility distribution legislation, standards, procedures including the life-cycle management of the SEN(D).

To lead on the acquisition of required information, including existing data sets, performance specifications and standards for technologies being connected to the Smart Energy Network (Demonstrator). Support the design of system specification and implementation planning for research led interventions to the SEND. Prepare technical evaluations and appropriate impact statements and risk assessments of proposed technologies.

The SEND project, and the SEND Development Manager, are part financed by the European Regional Development Fund (ERDF), as part of the England 2014 to 2020 European Structural and Investment Funds (ESIF) Growth Programme.

Please see the link below for more information.

https://www.keele.ac.uk/business/newsandevents/ournews/send.php

For full post details and to apply, please visit: www.keele.ac.uk/vacancies

Closing date for applications: 20/02/2017

Interviews will be held on: TBC

Post reference: KU00000319

Promoting Equality, Valuing Diversity.
See job description for further details

Keele University Smart Energy Network Demonstrator The Vision

Objective

The Keele University Smart Energy Network Demonstrator (SEND) will provide a real community based demonstrator for Central and Local Government, the research community, the energy industry and business and local communities of how a smart, flexible network of energy supply, storage and monitoring can improve energy security, reduce energy costs and reduce carbon emissions within a mixed environment and community.

Where will the Demonstrator be? The demonstrator will be installed at Keele University, Staffordshire near Stoke-on-Trent. It will use the University's size and self-contained location to mimic a small town. In all, the Demonstrator will operate within a six- hundred acre campus, ten to twelve thousand inhabitants and users, a built environment of over 2millions ft^2 including a mixture of teaching, residential and commercial space, and 90km of installed utility networks.

What will the Demonstrator do?

The Demonstrator will provide an overlay to Keele's developing Smart Energy Network (SEN) so that the benefits of aligning energy demand and supply at this scale can be demonstrated, reviewed and evaluated.

This will require smart monitoring and distribution equipment so that any mix of on-site and imported energy can be adjusted to cope with peaks and troughs in demand, diverted to storage and/or exported to the grid.

The Demonstrator will also enable "what-if' modelling to evaluate emergent technologies and simulate scenarios. This will support research and inform the design of future Smart Energy Networks.

How will the Demonstrator connect with existing or future energy supply and storage technologies?

The Demonstrator will provide enhanced control and monitoring to the energy network at Keele University to allow scenario modelling, including mimicking third party demand profiles, monitoring and recording supply source profiles and informing demand response management

The Demonstrator will allow new and evolving technologies to be connected in a 'plug and play' way to the network for evaluation and testing. Some technologies are already in place on the campus and others are currently being evaluated in terms of installation and delivery. It is expected that the overall range of energy generation technologies on the site will evolve over time as technologies emerge and mature and as market conditions change.

How will the Demonstrator be paid for?

Keele University in conjunction with the Stoke-on-Trent and Staffordshire Local Enterprise Partnership has secured UK Government funding to initiate the project from the Department for Business, Innovation and Skills. This covers the outline design stage plus a significant contribution to the detail design and the implementation of the Demonstrator. Further funds will come from the UK Government and may be part funded by the European Regional Development Fund Programme 2014-2020.

It is envisaged that new energy generation and storage technologies connected to the Demonstrator will be funded by the University through commercial arrangements within specific technology and energy supply agreements.

How long will it take to develop the Demonstrator?

The outline design of the Demonstrator will be completed during 201 5.

Funding for detailed design and installation of the Demonstrator will enable a start in 2016/17. It will be a phased delivery utilising the benefits of the Demonstrator to inform each phase of installation to maximise benefit to future users, with completion by 2020/21. The commercial (Private Investment) funding of the energy generation and storage technologies will enable these to be installed in parallel with the Demonstrator. This is just the foreseeable plan for the Demonstrator. If it is successful then subsequent stages of development will follow.

How will stakeholders outside Keele benefit from the Demonstrator?

The Demonstrator will be designed to appeal to a wide range of stakeholders. Businesses will use the demonstrator to enable them to develop new products and services, which increase the deployment and efficient use of smart energy networks locally and via knowledge transfer, more widely. Academic and commercial researchers will be able to use the Demonstrator to test their energy products and their energy network scenarios. Local Authorities will be able to examine how a town-scale smart energy network might work in practice, to help them achieve their own energy targets and to inform local planning and design. Central government will be able to incorporate the results from the Demonstrator into planning and to inform future policies regarding energy security, carbon reduction and incentives for energy t e c h n o l o g i e s .

The use of the Smart Energy Network Demonstrator will strengthen the ability of the UK, its communities and its businesses to respond to the challenges of low-carbon secure energy supply and help stimulate the growth of the Energy Industries and Business across the UK.