

Vacancy for one Post-Doctoral candidate in Department of Energy and Environment, TERI University

Background

Eindhoven University of Technology, the Netherlands; TERI University, India; Power Research Electronics, the Netherlands; and Rural Spark Energy India Pvt. Ltd have initiated a collaborative project on 'Developing and implementing smart grids in rural India' with support from The Netherlands Organisation for Scientific Research.

In India, the smart grids are being critically considered not only to improve the performance of the existing grids; they are also seen as a crucial element of its decentralized rural electrification. Technological interventions, however, need to be embedded in society if they are to be successful. Past experience also underlines the need to consider socio-economic and institutional factors to ensure the distributed renewable energy grids' success. The bottleneck for the success of smart grids can thus be seen in the difficulty to embed the technology in society in a way that is both socially accepted and ethically acceptable.

This project, therefore, would try to focus on the overarching research aspect that is 'How can smart grids be successfully developed and implemented in rural India?' Five interrelated sub-questions help to specify and address the overall question:

- What are the technical requirements for smart grids for a rural Indian context?
- How can smart grids be embedded and commercialized in the rural Indian energy market?
- How do societal and institutional factors affect the viability of smart grid implementation and use?
- What are the ethical challenges in developing smart grids for rural India and how can they be addressed?
- What are the key factors that affect the potential for upscaling of smart grids throughout India?

Post-doctoral research focus

With the broad objective of studying how to successfully embed and commercialize the prototype in the rural Indian energy market, the Post-doc will conduct a theoretical investigation into existing smart grid hard/software options and how these fit into the specific rural Indian context. This research will result in a computer based smart grid model, ideally visualizing energy/money/control flows as well as an implementation roadmap. Theoretical insights together with trials will inform the actual prototype development. The Post-doc will also work closely with Power Research Electronics and Rural Spark Energy India Pvt. Ltd for prototype development and its field testing/optimization in rural village. S/he will be required to travel to the rural village for the associated field work.

Qualifications

Doctorate in electrical, electronics and communication, or power electronics disciplines from reputed institutions. Candidates with prior experience will be given preference.

Duration

Three years starting at the end of 2015.

Deadline for response

27 September 2015

Fellowship

The successful Post-doc candidate will be paid a consolidated fellowship of Rs.50,000 per month (equivalent of +/- 700 euro) for three years.

Location

The post-doc will be working at Delhi University and Rural Spark Energy India Pvt Ltd, both in Delhi, India. Moreover, some sight visits to pilot areas in different rural Indian areas are expected.

Contact

If you are interested, please send your motivation letter and resume to:

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