



## Job description - Energy Modelling Analyst

### Background

The Energy Technologies Institute (ETI) is looking for an Energy Modelling Analyst to join its modelling and strategy team. This role will be on a 2 year fixed term basis.

ETI is a public private partnership between global energy and engineering companies (BP, Caterpillar, EDF, Rolls-Royce, Shell) and the UK Government. The ETI works to accelerate the development, demonstration and eventual commercial deployment of a focused portfolio of energy technologies which will increase energy efficiency, reduce greenhouse gas emissions and help meet energy and climate change goals.

ETI's strategy team works to identify valuable technology opportunities and to assess the strategic challenges surrounding the commercialisation of new technologies. This work is underpinned by an analysis of the UK energy system including ETI's Energy System Modelling Environment (ESME – see <http://www.eti.co.uk/project/esme/>). Over time ESME has developed into one of the most powerful energy system models for the UK, with outputs and insights from the modelling used in a variety of contexts.

Energy policy is highly relevant to ETI's work: many of the key challenges are in creating market and policy conditions to enable investment in new technology and secure adoption by users and consumers. Major questions remain around business models, market designs and policy instruments to best support an economically efficient and low carbon future energy system, and these questions motivate ETI's analysis and modelling.

This role offers an exciting opportunity to bring to bear your strong quantitative, modelling and policy skills in a creative and forward looking environment.

### Purpose

To support the ETI's energy systems analysis work by applying modelling tools to develop strategic insights into the options for the UK energy system. You will undertake modelling, interpretation and analysis, and you will present results to colleagues and to a broad set of energy stakeholders.

### Principal accountabilities

Working with the Strategy Manager for Modelling you will use ETI's modelling tools to deliver insights on the options for the future energy system and implications for energy policy. Specific accountabilities may include:

- Support the Strategy Manager for Modelling in using ESME and other models for technical and economic analyses of key low carbon technologies for the 2020-2050 energy system
- Perform targeted model runs, e.g. sensitivity analyses of key scenarios, using your judgement to translate policy-related questions and technology-related questions into the modelling framework.

- Support ETI analysis of pathways, decision points, option values and barriers to transition. This work will include developing an understanding of 'real world' costs and constraints, and how well they are represented in modelling work.
- Assist in projects to research specific technology areas. This could involve background research of technology performance, cost, subsidies or uptake.
- Produce high quality summaries and analyses of modelling work for the ETI strategy team and external audiences.
- Build understanding of the economic implications of modelling methodologies (e.g. discount rates, treatment of timing). Support the Strategy Manager for Modelling in exploring alternative approaches to using systems modelling to inform policy debate.

### Qualifications, experience & competencies required

This role requires:

- Quantitative skills – experience of quantitative analysis and use of computer models, preferably in an energy context
- Good presentation skills – ability to present technical work to colleagues and to external audiences
- Economic and policy skills – ability to understand and critique economic analyses, business strategies or public policies (preferably with an energy sector focus/interest)
- Graduate in relevant quantitative subject, e.g. science, engineering or economics, preferably with a further degree
- High quality writing and analytical skills – ability to distil key messages from complex source data/reports
- Strong inter-personal skills, articulate and able to work with a diverse team of colleagues with backgrounds across science, engineering, business, economics and policy.
- Exposure to and understanding of a range of energy policy issues (desirable)

For more information please contact:

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