15-month scientist position offer for research and innovation in climate services for the energy sector

The Laboratoire des Sciences du Climat et de l'Environnement (LSCE-IPSL) is offering a 15-month scientist position for the development of new data and methods to process climate projections for the needs of the energy sector with focus on wind and solar power. The candidate will develop the data sets, methods for the European Copernicus Climate Change Service (C3S) for assessing risks linked to climate variability and climate change in the energy sector.

Context: Climate-related challenges constrain a rapidly evolving energy sector. Ambitious climate change mitigation requires that low-carbon energies grow very fast in the coming decades. This rapid transition towards renewables makes the energy production, transmission and distribution increasingly sensitive to weather and climate variability. Energy producers need to anticipate resources, their variability at seasonal time scales and their trends over decades. Grid operators need to identify black-out risks, demand and supply patterns. Climate change also modulates the weather impact to energy systems. Changing precipitation patterns may affect the management of hydropower, wind and solar power resource.

LSCE-IPSL participates to the C3S-ENERGY project, designed to develop datasets, methods and practical case studies for energy practitioners as an operational service. LSCE-IPSL is in charge of designing high-quality climate projection data sets for the energy sector, with an expertise on wind power and solar PV production.

Description of post-doc work: The work will consist in developing high-quality climate projection datasets tailored to the energy sector, together with metrics to ensure the users of such data sets can properly assess them for their needs. In particular, she/he will develop appropriate metrics for the evaluation of high-resolution climate projections over Europe, and further develop innovative bias adjustment methods and bring them to the operational level. Expected developments also include extreme event analysis using statistical extreme value theory. Climate projections will be based on high-resolution EURO-CORDEX simulations. The work will be done in a collaborative environment together with C3S-Energy partners. One or several articles will be expected from the science developments. The work will require a climate and statistical scientific background. Most analyses will involve the use of statistical theories and methods. An understanding of climate models and simulations is required. An interest in communicating research and innovation toward non-academic institutions is required.

Start, duration and salary: The post-doctorate will be hired by CEA, one of the research organizations supporting LSCE-IPSL, for a duration of 15 months with a net monthly salary depending on the experience. The position should start in November/December 2018.

Required experience: a PhD is required, with an experience in statistical analysis and statistical theory. Ease in using UNIX, shell scripting, and other programming languages (FORTRAN, Python, R) is necessary.

Contact for applications: Applications should be sent as soon as possible and before 15 September 2018. They should include a CV, a statement of research interests and the names of two references including e-mail addresses and telephone numbers. Applications should be submitted by e-mail to R. Vautard (robert.vautard@lsce.ipsl.fr) and Sonia Firion (Sonia.firion@lsce.ipsl.fr).

LSCE-IPSL is a research unit specialized in climate studies. It is located in the Paris region in France. For further information, see http://www.lsce.ipsl.fr