



**UNIVERSITÉ
DE GENÈVE**

**INSTITUT DES SCIENCES
DE L'ENVIRONNEMENT
DPT. F.-A. FOREL**

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University of Geneva, Institute for Environmental Sciences, Energy Group

At the Institute for Environmental Sciences there are vacancies for

Experienced post-doc researcher on energy efficiency technology and policy and Ph.D. student on energy storage

The successful applicants will become members of the Energy Group within the Department F.-A. Forel for Environmental and Aquatic Sciences, Faculty of Sciences and will be housed by the inter-faculty Institute for Environmental Sciences (ISE, <http://www.unige.ch/environnement>) that is active in cross-disciplinary research in the domains of energy, climate change, surface waters and urban ecology as well as sustainability. The institute represents an enthusiastic, dynamic and international working environment. It offers an interdisciplinary Master programme in Environmental Sciences (MUSE) with a track on Energy to which the successful candidates will contribute.

Project and job description:

Energy efficiency and renewable energy play an important role in the European Union's Energy Efficiency Directive, in Switzerland's Energy Strategy 2050 and in the energy plans prepared by Swiss cantons. According to the Energy Strategy 2050, final energy use in Switzerland shall be reduced by 35% until 2035 and by 46% until 2050 (New Energy Policy scenario) which are very challenging objectives considering economic growth and the rise in population. The replacement of nuclear energy by new renewable energy sources (e.g., photovoltaics) is a further key objective of the Energy Strategy 2050. Against this background we are studying the current and future potentials for energy savings and the opportunities for energy storage in the Swiss context. The new positions within our group are expected to substantially reinforce and expand these research activities.

Post-doc researcher

The work of the post-doc researcher will deal with the analysis of saving potentials for electricity and for heat (space heat and process heat) in residential buildings, the commercial sector and selected industry sectors, thereby fully accounting for the newly emerging opportunities related to energy storage and distributed generation. A variety of methods will be applied including techno-economic analysis, decomposition analysis, regression analysis, bottom-up modelling (simulation), optimisation and geographical information systems. As further research objective, energy efficiency programmes of various types will be evaluated.

Ph.D. student

The Ph.D. student will participate in a project on modelling (optimization) of energy storage at the national scale in Switzerland, thereby covering electricity, heat and gas.

Requirements:

The positions are financed by funds of the Swiss Competence Center for Energy Research (SCCER) and by the National Science Foundation and they play an important role in co-ordinating various research tasks. They offer unique opportunities to the successful candidates to build a solid CV for an academic career by further developing a wide range of analytic skills, presentation and reporting skills and networking in a cutting-edge R&D area that is essential for the energy transition, nationally and internationally.

Candidates should have background in physics, engineering and/or environmental sciences and they must be able to combine thorough technical understanding with economic assessment and broader aspects of the energy transition.

For the post-doc position, experience in preparing energy policy studies is expected. Applicants for the post-doc position should ideally have (co-)published approximately ten articles in peer-reviewed journals and should have gained experience in supervising Ph.D. students (next to Master students).

Excellent knowledge of English (written and spoken) is a necessity and good knowledge of French and/or German are advantages.

Conditions of employment:

We offer a one-year appointment (with further extension by at least two additional years). The salary will be in accordance with the regulations at the University of Geneva.

Interested applicants are kindly requested to send until 10 May 2017 a letter describing their motivation and competences next to an up-to-date CV (with publication list and overview of M.Sc. and Ph.D. student supervision to date) as well as transcripts (with information on the course load and grades of the courses followed by the applicant). If necessary, the deadline will be extended until suitable candidates will have been found. Applications should be sent by email to (applications@cuepe.ch). More information about the position can be obtained from Prof. Martin Patel (Martin.Patel@unige.ch).