

## 23J007 - Internship proposal

### **Title: Development of optimization tool for minimization of hydrogen costs production**

Are you interested in working on energy modeling for industrial hydrogen application?

The European Institute for Energy Research EDF-KIT EWIV (EIFER) is looking for a

#### **Trainee (f/m/d)**

in the research group “Low carbon hydrogen systems”.

The European Institute for Energy Research was founded by EDF and the KIT in 2002 aiming at enhancing collaboration through joint projects applied to industrial issues and utilities’ needs. With its applied research orientation EIFER is bridging the gap between science and industry for more than 20 years. In the context of the European energy transition, EIFER provides research-based innovative energy solutions for the sustainable development of cities and communities, economic activities, and territories.

#### **The assigned tasks involve**

- Development of new functionalities of a tool developed for simulating the production, storage and usage of hydrogen in an industrial framework
- Adding new technological bricks: electrolyser auxiliaries, hydrogen purchase/sale from/to third parties, electricity purchase/sell from/to the grid
- Development of algorithm regulating hydrogen and electricity market
- Implementing Levelized Cost of Hydrogen calculation and updating economic parameters
- Running different case-studies and sensibility analysis
- Watch on the latest new on the Renewable Energy Directive (RED III)

#### **Required qualifications / skills / interests**

The position is aimed at Master-students in technical/economics sciences with engineering background who have

- Interest in the field of energy and environment
- Proficiency in modeling
- Programming skills in AnyLogic, Java, Python
- Fluency in English. Knowledge of German is considered as an asset
- Ability to work autonomously

#### **What you can expect**

- A stimulating, multicultural and multidisciplinary environment
- An institute at the intersection between academic research and one of the largest energy utilities in Europe
- If the opportunity arises: participation in conferences, involvement in scientific publications

## Conditions

- Duration: 6 months
- Starting date: as soon as possible
- Location: EIFER, Emmy-Noether-Str. 11, 76131 Karlsruhe, Germany
- Working hours: 39.5 hours per week
- Monthly compensation: 520 € for a compulsory internship

## Contact

If you want to join a highly motivated research group, please forward your electronic application **with one single pdf of max. 5MB** including all relevant information (curriculum vitae and cover letter) to [jobs@eifer.org](mailto:jobs@eifer.org). **Please refer to the offer number 23J007.**

For additional information concerning the work, please contact: **Renato Luise** ([renato.luise@eifer.org](mailto:renato.luise@eifer.org))