

## 21J001 Internship proposal

### Title: Modelling of power-to-methane concepts

#### Background

EIFER (European Institute for Energy Research, [www.eifer.org](http://www.eifer.org)) was established in 2001 as a collaboration between the Karlsruhe Institute of Technology (KIT) and Electricité de France (EDF). The institute gathers about 110 research employees and offers comfortable working environment equipped with advanced research facilities (Technologiepark, Karlsruhe).

In order to support our activities in the fields of our modeling activities, EIFER looks for a trainee.

#### The assigned tasks involve

- The student will be in charge of improving and verifying a MATLAB model for the energy assessment of different concepts of power-to-methane units based on the pinch technology
- The main electrolysis technology investigated, the so-called SOEC, will be modelled based on cell experimental data generated from ongoing EIFER lab tests.
- The student will be working with two PhD students under the supervision of a senior project manager

#### Required qualifications / skills / interests

- Good programming skills with MATLAB, fully familiar with Microsoft Office® Suite of software
- An education in process or chemical engineering, as well as previous experience in process modelling and pinch analysis. A knowledge of technologies involved in power-to-methane conversion processes (electrolysis, methanation or CO<sub>2</sub> capture) would be advantageous
- Ability to write/communicate in English and German mandatory
- Synthetic and analytical thinking, ability to work in autonomy

#### Conditions

- Duration: 6 months, starting as soon as possible
- Working hours: 39.5 hours per week
- Monthly compensation: 450€ - basis / hourly rate depending on the student's education level
- Place of work: depends on the Covid-19 restrictions; Remotely or in EIFER, Technologiepark, Emmy-Noether-Straße 11, 76131 Karlsruhe

#### Contact

If you want to join a highly motivated research group, please forward your electronic application with **one single pdf of max. 5MB** to [jobs@eifer.org](mailto:jobs@eifer.org) (cover letter + curriculum vitae, copies of testimonials/university degrees etc.). Please refer to the offer number **21J001**. For additional information concerning the work, please contact Dr. Julian Dailly, [dailly@eifer.org](mailto:dailly@eifer.org)