



Reiner Lemoine Institute is an independent non-profit research institution that contributes to a transformation towards a sustainable energy supply based on 100 % renewable energy. Our three research fields are *Transformation of Energy Systems*, *Mobility with Renewable Energy*, and *Off-Grid Systems*. We conduct applied research to scientifically support the long-term transition of the energy supply system towards renewable energy.



We are offering the following topic for a

Master's thesis: “Climate resilient energy system planning for island communities in Southeast Asia – Tool Development”

OffGrid_32_290621

Berlin, July 2, 2021

within the Research Unit Off-Grid-Systems

Description:

In the Research Unit Off-Grid Systems, we develop renewable-energy-based electrification strategies for developing regions and optimize hybrid mini-grids applying energy system simulations and geoinformation software (GIS).

We are offering the master's thesis topic in context of the PhD research project [Climate resilience for island communities in Southeast Asia](#) which analyzes evidence for the hypothesis that sustainable electrification has the potential to support Southeast Asian island communities in improving their climate resilience.

Your master's thesis will support the PhD project by developing appropriate approaches to integrate identified climate risks of Southeast Asian island communities and suitable technical adaptation measures into electrification planning. Therefore a pre-energy system modelling tool (REST – resilient energy system tool) is to be developed in order to represent climate risk in common energy system modelling tools (e.g. OEMOF, Homer). You will work closely with your supervisor (PhD researcher) to develop and code this pre-modelling tool.

Your tasks:

- ▶ Create an input criteria matrix that allows input criteria for each system component to be listed and stored in a data base (e.g. extra cost per installed kW solar in cyclone risk areas)
- ▶ Include automatized location based data retrieval for specific locations (climate risks and suitable adaptation measures including extra investment cost)
- ▶ Test the pre-modelling tool for island case studies

Your profile:

- ▶ Candidates must be enrolled in a master's degree program, preferably Renewable Energy, Energy Systems Engineering or a related relevant field.
- ▶ Coding skills are required (e.g. Python)

- ▶ Energy system modelling skills and/or geographic information system skills are preferred
- ▶ Excellent English language skills are required (C1)
- ▶ We expect successful candidates to work independently, systematically, and thoroughly with minimal supervision. He/she should be able to communicate and document research results on his/her own.

What we offer:

- ▶ A friendly and open work environment with a young team (RLI currently has about 100 employees, with approx. 40 students)
- ▶ A transparent and participatory corporate culture
- ▶ Participation in an interdisciplinary, international research project
- ▶ Academic support and supervision
- ▶ Optional in-house trainings
- ▶ Potential career opportunities
- ▶ Flexible working hours and places according to your needs
- ▶ Office on the Science Campus Adlershof, excellent public transport access

Hard facts:

- ▶ Position to be filled 1 September 2021
- ▶ Fixed-term contract for 6 months (extension possible)
- ▶ Allowance of 355 EUR per month

Contact:

Kindly upload your application (cover letter, CV, transcript of records) in **one single** PDF file with the file name **YourFirstname.YourLastname** under [this link](#).

We regret that we cannot consider applications that do not meet these criteria or are sent to us in other ways.

Questions regarding tasks and scope of the work are answered by [Katrin Lammers](#).

Your contact person for the application process is [Michaela Weiske](#).

RLI has signed the German Diversity Charter (Charta der Vielfalt). We welcome and value diversity in our institute and, in addition to our commitment to the energy transition, we actively advocate for the equality of all people.

You and your application are welcome with us! Sex, gender identity, sexual orientation, nationality, ethnicity, religion, world view within the Liberal Democratic Basic Order, disability, or age do not play a role.



charta der **vielfalt**

UNTERZEICHNET