Data visualization of energy system model results

Name of supervisor(s)
Associate professor Marianne Zeyringer, Energy systems modeller
Postdoc Guillermo Valenzuela, Energy system modeller
Postdoc Muhmmad Shahzad Javed, Energy systems modeller

Preferred background of the candidate:
Computational Science, Informatics, Mathematics, Physics, Energy Systems or similar.
Having experience with Python coding will be mandatory.

Number of available projects
This is a project for one student.

Preferred project period
Part-time May-October

Brief abstract
This project aims to develop a user-friendly visualization interface (dashboard) for the open-source electricity system model, highRES. This model is used by the Energy Systems Modelling Group at the University of Oslo to study and address challenges and opportunities in large-scale energy system transition towards low carbon emissions in Europe. The student's responsibilities will include gathering internal requirements, creating/coding the interface to display key results, and integrating it into the highRES workflow.

Expected outcomes/deliverables
In the project, you will collaborate with your supervisors and other users of highRES to understand the current state of its workflow in terms of result visualization and collect the specific technical requirements for the dashboard. Moreover, the student will develop Python code with the technical requirements and then integrate it into the current workflow.
Expected Deliverables:

1. Brief report on the specific technical requirements for the visualization of key results.
2. Visualization/dashboard code: Python code used to display the key results of the model results.
3. Integration into highRES pipeline: integration of the visualization/dashboard into the highRES workflow.