- Name of supervisors **Maximilian Roithner, Marianne Zeyringer**
- Preferred background of candidate(s) **Meterology, Maths, Informatics, Physics**
- Number of available projects (one or two) **two**
- Preferred project period: **June and July 2021**

This research project applies to two of the four main research areas of UiO:Energi:

- Energy Systems
- Energy Transition and Sustainable Societies

Analysis of power systems relies on data from diverse sources and in different formats. In this project you can help to find insights in those piles of information. Our research group employs models to envision a future where our energy needs are satisfied in a safe, sustainable and reliable way. We need your help with finding, transforming and interpreting the vast sources of data out there. You can see yourself as a detective, chasing the faintest clues and using your imagination to track down that one usually overlooked piece of the puzzle. Doing this in a structured way and documenting your progress not only consitutes scientific practice, but also makes your work reproducible and may lead up to a publication, which offers the chance of contributing to the global scientific knowledge. Especially renewable energies are expected to play a major role in the future. Those are variable and highly dependent on weather data. Open reanalysis data sets such as ERA5 allow analysis of weather and climate over large areas. Dealing with those requires some skills with ICT. Programming experience is very handy. Specific technologies include the netCDF data storage format, the Python programming language as well as geographical information software packages such as QGIS or ArcGIS. A meteorological background is a plus. Those datasets span over large areas, but sometimes do vary from observed data. Adjusting for these biases makes conclusions drawn from such data more reliable. This ajdustment is one possible field of work for this project.