

Living lab for solar PV systems, monitoring and data recording

Department: Copernicus Institute of Sustainable Development

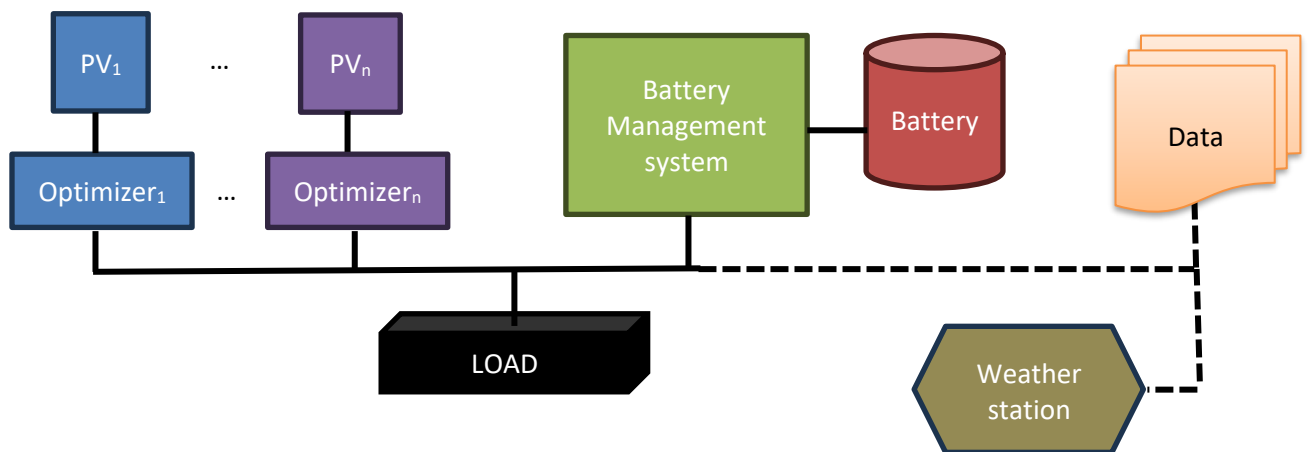
Research group: Energy and Resources

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Project description

Together with our colleague at the science faculty, we have initiated a Living Lab for a solar PV system. At this moment, we have obtained the necessary permissions and completed the initial system design. In this solar Living Lab, we will incorporate various solar PV technologies and a battery system that is completely off-grid. The system needs to run continuously, and all data, including solar PV data, weather data, and battery monitoring data, should be recorded. All recorded measurements will be used for educational purposes in our PV technology and integration course.



The single line diagram of the proposed system is shown above. The aim of the project is to:

- Develop the system design and optimize the battery size.
- Develop a user-friendly and efficient data logging system.

Job requirements

The assistant for this project needs to have, or be willing to learn, the following skills:

- Knowledge of PV-Battery systems
- Good understanding of optimizers and battery management systems
- Data recording and data management
- knowledge of Raspberry Pi and Arduino will be a big plus

This is a practical project, so we need an assistant who enjoys hands-on work.

What you will learn:

- Detailed understanding of PV monitoring systems
- Working with sensors and reading data