

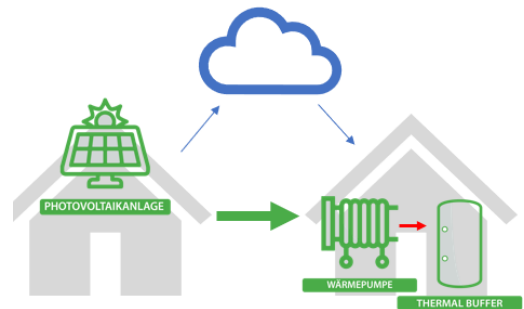
**Sustainability is important to you and you would like to be part of a successful team?
Don't wait any longer and apply now!**

Paid Master's thesis:

Optimizing the energy consumption within an energy community

Your task

Energy communities do not yet fully exploit their full potential. Members are only partially consuming the power produced within their energy community even though flexibility is available. For example, when there is surplus power from a photovoltaics plant of another member, a heat pump can be switched on to feed hot water into a thermal buffer. Your task is to implement a first prototype of an energy community controller where the consuming members directly utilize surplus energy of other members.



Your objectives

- Literature study on energy community controllers
- Development of algorithms to distribute energy within energy communities
- Prototype development for a very up-to-date topic (implementing the exchange over the cloud)
- Comparison and validation in simulation studies

Your profile

- Field of Study: Software Engineering and Management, Digital Engineering, Information and Computer Engineering, etc.
- Programming experience (cloud)
- Ideally with background in control engineering or optimization

General information:

- Joint supervision of the master's thesis by BEST and the Institute of Automation and Control
- Integration into a dedicated team with good support
- Perspective of participation in follow-up projects after successful completion
- Financial compensation based on student staff salary scheme

Start: February 1st, 2025,

Location: Graz

www.best-research.eu



Contact persons

Markus Gölles

BEST | Area 2.2 Automation and Control
markus.goelles@best-research.eu | +43 5 02378 - 9208

Martin Horn

Institute of Automation and Control
martin.horn@tugraz.at | +43 316 873 - 7025

