



## MicroEnergy International GmbH– Internship

Research Assistant - Energy Modelling

### Our company

As the Swarm company, MicroEnergy International's (MEI) mission is the Bottom-Up Global Energy Transformation through various vehicles: Microenergy Systems, a research-oriented think-tank, is leading the scientific discourse with academia across the world; ME Consult, a multidisciplinary team of experts specialised in linking energy inclusion with financial inclusion, supports stakeholders through technical assistance; ME SOLdesign, an engineering lab, designs soft- and hardware to accelerate the Global Energy Transformation through technical innovation; finally, all our initiatives and ideas are brought together into a business incubation and replication process, with ME SOLshare, our first Bangladeshi spin-off, as our flagship.

### Background:

The modelization of energy transformation systems is becoming increasingly complex and a significant challenge in the 21st century. In farms, energy modelling involves transforming accurate agriculture data into mathematical models. Therefore, at MicroEnergy International, we use multiple energy modelling systems to develop micro-grid farms based on linear programming, linear optimization, and Graph-based bottom-up planning, plotting with AnyMOd.

The purpose is to understand the current energy system, optimize energy, water, and material flow within the farm, and investigate the best energy technologies needed to make the energy system in the farm more cost-efficient, more productive, and environmentally friendly. MEI is developing a new concept for smart microgrids as a solution to farm electrification; the project is designed to enhance renewable energy use and water management and improve agricultural practices in the MENA region.

This is a great opportunity to get first-hand experience in project management, inclusive energy modelling, renewable energy, micro-grids and the promotion of sustainability in developing countries. The intern will work in a young, dynamic environment with an international and multidisciplinary team.

### The position

<b>Title:</b>	Intern - Research Assistant - Energy Modelling Specialist
<b>Location:</b>	Berlin, Germany
<b>Reports to:</b>	Project Consultant
<b>Duration:</b>	3 - 6 months
<b>Preferred start date:</b>	March 2023
<b>Salary/month (EUR)</b>	450



### Description of tasks

The research assistant will support the project team with the following tasks:

- Literature and market research in the areas of micro-grids in agriculture, renewable energy, energy modelling, climate change mitigation and adaptation;
- Assessing the best agricultural practices focusing on energy and water uses (savings and consumption) for mitigation and adaptation to climate change in the region (farms in Algeria, and Morocco)
- Facilitate the sharing of lessons learned from previous projects in the field of energy modelling and micro-grids;
- Developing the existing models, adapt it to communication and policy consulting requirements as well as to replicate it for other contexts.
- Support of the team during field missions or in background research for project acquisition activities;
- Report writing and data analysis;

### Requirements

We are looking for people with the right competencies and skills for the role and who demonstrate personal qualities consistent with our values.

You should ideally:

- Bachelor's or Master's degree in a relevant area, such as industrial/ energy engineering or related fields.
- Experience in numerical modelling with Python and Julia or institutional economics.
- Extensive MS PowerPoint and MS Excel skills/financial modelling are advantageous.
- Knowledge of renewable energy systems and microgrids.
- A very good command of English; French is highly advantageous.
- Solution orientation and analytical skills.
- Distinctive analytical skills, a sense of initiative and the ability to communicate and work as part of an international team.

The MEI team is also open to collaboration for writing a thesis if it is related to MEI's area of interest / expertise, ideally aligned with an ongoing or upcoming project.

Please make sure to send your CV and Motivation letter to [khadidja.sakhraoui.me@gmail.com](mailto:khadidja.sakhraoui.me@gmail.com) and CC [redha.agadi.me@gmail.com](mailto:redha.agadi.me@gmail.com).