Toward the Adoption of Smart Microgrids on Farms in Morocco: Status, Challenges, and Enablers

PR22005T1- Research assistant - Master thesis

Our Company

MicroEnergy International GmbH (MEI) is an international consulting company headquartered in Berlin, Germany. The company consists of international experts and practitioners in energy and development finance. Since 2002, MEI has been cooperating with various international development organisations, governmental agencies, civil society organisations, inclusive finance institutions, and energy service providers in more than 56 countries in Africa, Asia, and Latin America.

Background:

The use of microgrids is turning out to be the most important factor for future electrification and an essential solution to achieving SDG7 by 2030. New smart agriculture is marked by modern and innovative ICT solutions, including smart microgrid, a novel concept based on smart metering data and energy-efficient systems that helps to enlarge farm electrification, develop irrigation systems and increase farm production and productivity.

At MEI, we are developing a new concept for smart microgrids as a solution for farm electrification; the project is designed to enhance renewable energy use and water management and improve Morocco's agricultural practices.

Research is already underway to identify energy and water use for food production within selected farming zones in Morocco. The study requires comprehensive research on current policies, strategies, and legislative frameworks in the energy, water, agriculture, and ICT sectors in Morocco. Therefore, inductive logic will be applied in the examination and assessment of the best practices in farm processing. The results will then be used to identify Microgrid potentials for the selected farms along with **the determination of the role of microgrids in increasing RE use in agriculture and improving agricultural production and productivity**.

MEI offers a multinational environment that helps you to consolidate your educational background with renewable energy projects, the company provides the best tools and supervision team to help you to shape your research.

Proposed Topic:

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Research objective:

- To conduct comprehensive research on Agriculture, energy, water, and ICT policies/ strategies in Morocco
- To identify existing legislative frameworks on developing microgrids in Morocco.

- Assess 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 Morocco).

Proposed methodology:

To achieve the project objectives, the candidate is expected to conduct holistic research using qualitative methods in data collection. Then, a framework for data collection and analysis will be applied to assess farms in Morocco and identify policy actors in Agriculture, water, energy, and ICT sectors.

Expected duration and package:

The project is expected to be implemented within six (6) months from selecting the candidate. The research will thus be accompanied by a series of capacity-building training for the selected candidate. The candidate will be assisted fully in collecting all data relevant for implementing the study objectives.

Requirements

- Be a Bachelor/Master's student.
- Have a solid educational background in Energy sciences, Agriculture and Environmental studies, or a related field.
- Familiarised with the water, energy, and food nexus in the North African/ MENA Region.
- Should be familiar with qualitative data collection and analysis methods.
- First experience in conducting interviews and document analysis
- Fluency in English (both written and spoken), French and additional languages are advantageous.
- Have advanced knowledge of MS Office and Google Suite

Application process

Application for this project will be strictly online. Interested candidates are required to send a copy of their CV, transcripts (if available), and a 1-page motivation letter describing how their background suits the project, how they intend to combine their experience to implement the project, and indicate the reference number in the subject to:
khadidja.sakhraoui@microenergy-international.com and copy redha.agadi@microenergy-international.com