



## **SWARM-E Project Concludes Successful Exploratory Workshops in Rwanda and Tanzania to Advance Inclusive Energy Access Solutions**

**30th July 2025**

The [SWARM-E project](#), a Horizon Europe initiative co-funded by the European Commission, is pleased to announce the successful completion of two **high-impact Exploratory Workshops in Rwanda and Tanzania**. These sessions marked a key milestone in the project's mission to promote sustainable, inclusive, and community-driven energy access across Sub-Saharan Africa.

SWARM-E introduces an innovative, bottom-up approach known as SWARM electrification, **a modular and dynamic infrastructure designed to create, maintain, and scale access to affordable, reliable, and modern clean energy**. The system interconnects households and businesses equipped with solar home systems (SHS) to those without, via a low-voltage distribution grid. These decentralized "SWARM grids" are scalable and can be integrated with existing renewable energy infrastructure, such as mini grids, thereby reducing redundancy and enhancing energy reliability.

The first Exploratory Workshop took place on **February 19, 2025**, in **Kigali, Rwanda**. It brought together a wide range of stakeholders including policymakers, researchers, and energy experts from both Africa and Europe. The session was hosted with the participation of **Rwanda's Ministry of Infrastructure (MININFRA), the Ministry in Charge of Emergency Management (MINEMA), the EU Delegation Energy Private Developer's association (EPD) and the Rwanda Energy Group**. Participants exchanged insights on the progress of the project, explored shared challenges, and reflected on opportunities within the regional energy landscape.



Kigali, Rwanda: Swarm-E Exploratory event.

The second workshop was held on May 27, 2025, in **Dar es Salaam, Tanzania**, during Renewable Energy Week 2025. Co-organized by **TAREA and RES4Africa Foundation**, and hosted by **TAREA TZ**, the event convened a diverse group of stakeholders, including policymakers, engineers, NGOs, community representatives, and private sector actors. Special attention was given to advancing energy access in underserved communities such as those on Kwale Island, where the SWARM-E model could provide scalable, sustainable solutions.



Dar Es Salaam, Tanzania: Swarm-E Exploratory event.

Both workshops fostered open dialogue between SWARM-E consortium members and local stakeholders. Discussions explored **regulatory frameworks, the long-term sustainability of decentralized energy systems, and the need for integrated approaches that respond to the unique conditions of each context.** In Tanzania, participants expressed concerns about existing market inefficiencies, particularly the impact of underperforming developers on new investment. Government representatives acknowledged these challenges and pointed to ongoing reforms aimed at improving regulatory oversight and easing transitions when the main grid reaches previously electrified areas.

A central focus throughout both events was **ensuring the long-term sustainability and local ownership of the SWARM-E model.** The consortium reiterated its commitment to embedding ownership within the communities it serves by **prioritizing local capacity-building efforts, designing inclusive and context-specific business models, and aligning closely with national institutions** such as the Ministry of Energy and the Vocational Education and Training Authority (VETA). Authorities were encouraged to engage early and consistently in supporting decentralized systems, particularly when identifying failing infrastructure or transitioning to more capable operators.

These workshops reaffirmed SWARM-E's role as both a pilot project and a collaborative platform for learning. They also underscored a growing consensus across stakeholders: **community-led, decentralized energy solutions, when integrated with national policies and implemented in partnership with local actors, can drive inclusive and transformative development in Tanzania, Rwanda, and across the continent.**

At its core, SWARM-E is not only about electrification; it is about empowering people, especially women, to lead in energy entrepreneurship, digital inclusion, and climate resilience.

“We believe that energy access is the foundation of development,” said **Sisty Basil**, Executive Director of **ELICO Foundation**. “Through SWARM E, we are creating an ecosystem where communities, particularly women, can harness clean energy to improve healthcare, education, productivity, and connectivity.”

Key features of the SWARM E Project include:

- Deployment solar minigrids with prepaid metering systems for House Holds and Businesses
- Community-led ownership and governance/management models
- Targeted support for women-led enterprises and productive use of energy
- Peer-to-Peer energy sharing/selling within the connect House Holds or Business
- The first pilot under SWARM- E is currently being rolled out in Kwale Island in Kisiju bringing sustainable power to over 140 households and small businesses, with the goal of scaling the model to more locations in the near future.
- ELICO foundation invites the public, media, and partners to join hands in advancing clean, inclusive energy for all.

Over the past year, SWARM-E has laid critical **groundwork to pilot innovative decentralized energy solutions in Rwanda**. Through a coordinated effort between OffGridBox and our national & international partners, we have advanced preparations for deploying the country’s first peer-to-peer (P2P) solar microgrid in four sites of Rwanda including Mahama refugee camp; a bold step toward inclusive, community-driven energy access. This work is not only focusing on energy access, but also integrating other components of productive use of energy (PUEs), such as water purification, e-mobility, and hydrogen-LPG clean cooking innovation.

With that said that **SWARM-E model goes beyond energy access, it envisions a bundled service delivery approach where energy becomes an enabler for improved health, mobility, economic resilience, and local entrepreneurship**. This past year, the SWARM-E consortium engaged with almost all government institutions whose mandates relate to the project’s scope, private entities like products’ suppliers, local technicians, and potential users to assess community interest in connecting to the P2P grid and adopting different PUEs equipment. These consultations have shaped our technical designs and are now guiding a deployment strategy that reflects both user needs and Rwanda’s regulatory landscape.

As we prepare for full implementation, OGB and the SWARM-E consortium remain committed to co-designing solutions that are adaptive, scalable, and rooted in Rwanda partnerships.

“Access to energy alone is no longer the goal — it’s about enabling services that improve lives. SWARM-E gives us a real opportunity to test what integrated, people-centered energy systems can look like in complex settings like refugee camps and last mile communities. Happy that Rwanda is serving as a testing ground for such transformative energy approaches. I am glad that Rwanda is serving as a testing ground for such transformative energy approaches, and remain hopeful for stronger engagement to help shape the path forward.” **Adeline ICYIMPAYE**, Business Development and Partnerships Manager at **OffGridBox Rwanda Ltd.**, Local Coordinator, **SWARM-E**.

## About SWARM-E

The inter-disciplinary collaborative project between European and African research institutions and private sector proposes a solution for clean energy that LEAVES NO ONE BEHIND and meets the energy and water and food productivity needs of all users in communities in the SSA.

## For more information:

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**SWARM-E Website:** <https://swarm-e.eu/>

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**Co-funded by  
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