

Opportunity-driven skills development

Enabling youth employment in solar energy in Tanzania

01/2022 - 12/2023

Sector: Renewable Energy, Solar Photovoltaic (PV) systems subsector



Opportunity

The growing political importance of transitioning towards renewable energy solutions in Tanzania, coupled with rising foreign and domestic investments has triggered a significant demand for a skilled workforce in this sector. This shift will create new employment and income opportunities, particularly for the countries' youth.

While the solar photovoltaic (PV) home system market has been continuously growing over the last years, the ambitious investment agenda of the government is expected to increase the demand for qualified labour in renewable energy even further in the coming years.

The current VET system is not yet able to cater for this growing demand. To meet the skills needs, VET Toolbox aims to develop and pilot opportunity-driven and innovative training solutions. This is done in close collaboration with public and private partners, with the potential to scale up the models in other regions of the country.

The objective of this action is to respond to an immediate and specific need for qualified labour in solar energy while equipping the VET system to meet the increasing demand for specific/technical skills in the private sector (e.g. solar artisans).

VET Toolbox action

In Tanzania, VET Toolbox collaborates with key public and private partners to create a conducive environment for local job creation and future investments in the solar photovoltaic (PV) subsector. Notable achievements include:

- Developing a participatory process involving private and public actors to create new tailored solar PV course curricula and designing short training programmes, including industry attachment, to equip youth with fundamental skills to work as solar artisans in installation, service and maintenance.
- Offering matching services in collaboration with Tanzania Renewable Energy Association (TAREA) to connect graduates with member companies for internships and facilitate the transition to (self)employment.
- Building the capacity of the Arusha Technical College (ATC) as the main service provider supporting employment in the solar PV sector in technical artisanship and entrepreneurship.
- Rolling out Training of Trainers (ToT) courses in "Installation and Maintenance of Solar PV On-Grid Systems" and in "Solar Powered Cooling Systems" for service delivery partners.
- Establishing a public-private partnership platform for the renewable energy sector in Tanzania to discuss the (skills) needs of the sector.

Partners' contributions

Private Partners and Business Membership Organisations

Tanzania Renewable Energy Association (TAREA) is a non-profit, non-governmental business membership organisation that brings together the main renewable energy actors in Tanzania.

The following companies, all members of TAREA, were directly involved in the implementation of the action and were leading the public-private dialogue:

- Engie Energy Access Tanzania is fully owned by the ENGIE group, the global energy leader with French roots. It is the main private implementing partner of the action. Through close collaboration with TAREA, it provides work-based learning opportunities for most of the graduates and engages many of them as contractors.
- Photons Energy Ltd specialises in the design, consulting, supply and installation of renewable energy systems. It was actively involved in the work-based learning component of the action and continues to work with the graduates either as employees or contractors.
- ZOLA Electric is an international emerging market energy technology company, which delivers community-level off-grid solar home systems through its technology platform. It offers work-based learning to students, and hires some as employees, while others become self-employed agents of the company. Zola Electric is also very active in the private-public dialogue for renewable energy.

Public Partners

- The National Council for Technical and Vocational Education and Training (NACTVET) is a corporate body established to coordinate and regulate the provision of Technical and

Vocational Education and Training (TVET) in Tanzania. They are competent to accredit and approve all updated and new curricula in TVET in the country. In collaboration with TAREA, NACTVET leads the newly established public-private partnership platform for the renewable energy sector, initiated by the action.

- The Vocational Education and Training Authority (VETA) is a government institution responsible for providing, promoting, and facilitating financial support for the VET system in Tanzania. VETA provides training through 50 vocational training centres across the country, of which eight were actively involved in the public-private dialogue and received training (ToT) of the Action.
- The District Councils of the 4 targeted districts of the project managed student registration. Their gender branch ensured gender inclusion in the training, reaching 40% women

VET provider

- 13 training centres benefited from ToTs as part of the action, to provide quality training in solar PV systems. Among them, the Arusha Technical College (ATC), jointly established by Tanzania and Germany, works closely together with the private sector and hosts a permanent representative of TAREA.

Key success factors

- The action strategically met the immediate demand for technical expertise in on-grid and off-grid solar systems, setting the foundation for sustained success in larger-scale renewable projects.
- The project fostered collaborative investments between the public and private sectors to establish a thriving renewable energy ecosystem. This facilitated capacity building and youth and women empowerment in solar applications.
- The creation of a focused public-private dialogue platform for the solar energy subsector boosted practical private-public partnerships and led to direct and tangible benefits for both private and public stakeholders, ensuring their active engagement.
- Conducting Trainer of Trainers (ToT) sessions for TVET institutions allowed for rapid skill upgrading for solar energy trainers throughout Tanzania.
- Thanks to the strong public-private collaboration between TAREA, NACTVET and ATC, the private sector was early on strongly committed to the action and willing to provide the essential work-based learning component of the training.
- The integration of entrepreneurship and soft skills training and the provision of a toolkit for all graduates at the end of the training was essential for the smooth transition to the labour market, which is dominated by self-employed contractors or artisans.

Read the project's:

- [Policy recommendations](#)
- [Lessons learned](#)

Upscaling and sustainability

- There is a high probability that the public-private dialogue platform will be sustained in the format introduced by the action. All participating stakeholders recognize its importance and usefulness and express interest in continuing the dialogue, with private companies Zola and Engie committed to facilitating and funding future meetings.
- ATC, NACTVET and TAREA support extending the training to a minimum of 3 months, with accreditation as a short training course. Following public-private dialogue and private sector requests, a long-term solar artisan training will be part of the permanent NACTVET training plan from 2024 rolled out in selected VETA centres and hence contributing to VET reform in the country.
- The action, through the creation of a strong ecosystem involving the participation of the private and public sectors (including the training sector), alongside planned domestic and foreign investments, will catalyse rapid growth in Tanzania's renewable energy sector, creating positive spill-over effects in other sectors.