

**Powering Tanzania's future: policy recommendations**

**VET Toolbox programme:  
Enabling Youth Employment  
in Solar Energy**

**January 2022 to December 2023**

A man with short dark hair and a beard, wearing a blue jacket over a pink shirt, is looking up and to the right while holding a solar panel. The background shows a structure with solar panels and metal beams. The image is overlaid with a blue vertical bar on the left and a pink horizontal bar at the bottom.

# Context

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH project that trained 200 technicians in Tanzania to install and maintain solar photovoltaic (PV) infrastructure was so successful that it could be replicated in other sectors, says Kabongo Mbuyi.

Mbuyi is team leader of the GIZ's Employment and Skills for Development in Africa (E4D) programme in Tanzania, under which the Enabling Youth Employment in Solar Energy project ran as a pilot project, between January 2022 and December 2023.

Others were impressed with the project, too. Matthew Matimbwi, executive secretary of the Tanzania Renewable Energy Association (TAREA), says the project was a boon to Tanzania's robust solar energy market.

TAREA has its eyes on helping to increase Tanzania's on- and off-grid solar PV infrastructure from the 60 megawatts (MW) in place in May 2023 to the 700MW the government wants installed by 2030.

To do that Tanzania needs as many artisans as it can get, but the East African country's vocational education and training (VET) college sector is struggling to keep up with the demand for qualified technicians who are able to install and maintain on- and off-grid solar energy technology.

"The future is bright for our sector," says Hamisi Mikate, managing director of Ensol Tanzania Ltd, a solar contractor headquartered in Tanzania's commercial capital, Dar es Salaam. "We are always looking for trained technicians, and the biggest benefit (VET Toolbox) is that now we are able to access a larger group of well-trained technicians."

One of the project's downsides is the small number trained, when there are many more young Tanzanians who would benefit

from similar instruction, says Dr Jofrey Oleke, Director of Compliance, Monitoring and Evaluation at the National Council for Technical and Vocational Education and Training (NACTVET).

There is so much to do to reach the Tanzanian government's goal for the solar energy sector that there is room for all comers, national and international, says Johnson Kiwango, managing director of ZOLA Electric. "We can't really speak of competitors; we are all contributing to bringing energy solutions to Tanzania," he says.

There is certainly lots to do. Tanzania is still energy-poor, despite the impressive 146.2% increase in electricity access between 2008, when just 13% of the population had access to power - and 2017, when 32% of the population had electricity<sup>1</sup>. Solar PV technology is viewed by many as a solution to this challenge as it can be easily and rapidly deployed across the country of 65-million citizens<sup>2</sup>, boosting economic growth and human development.

A skilled workforce is critical to Tanzania's economic growth, and to attracting interest from European investors, says Mbuyi.

"That's why we implemented the VET Toolbox (Enabling Youth Employment in Solar Energy) project; to support investment in Tanzania from businesses in European Union member states we have to have a workforce that is ready and able to work."



## Objective

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In Tanzania, the Enabling Youth Employment in Solar Energy (VET Toolbox) project is aimed at training youth to become artisans who are able to install and maintain solar PV systems, on- and off-grid.

It is expected that the project will contribute to ensuring that Tanzania's skills development system delivers training for youth in the solar power sector that is more relevant and responsive to skills demands from the sector.

## Policy recommendations

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### Recognition of prior learning

It is suggested that NACTVET and/or other government institutions formalise policies around the recognition of prior learning (RPL) in Tanzania so that people who have varying knowledge levels can be more effectively and efficiently trained in skills the workplace needs. Already, through the project, a relationship between NACTVET and TAREA has been fostered, and the organisations have agreed to hold further discussions on RPL.

### Longer training time

Interviewees repeatedly praised the training for the 16 VET college trainers and for the 200 artisans/technicians but almost universally said that they wished both types of training had gone on for longer, so as to cover more subject matter in greater depth. They also suggested that the trainees receive workplace training so that they have a better understanding of industry needs, which can then be passed on to the people they teach. It is suggested that any future training include training for trainers, and that training time is extended so that subjects can be covered in greater depth.



## Modular training

When it comes to the (VET Toolbox) training, it was suggested that the training course, which is modular, be amended so that prospective students can be put through an RPL process and split into separate groups according to their individual knowledge base. A modular course format would allow those students who have a more comprehensive knowledge base to skip the elementary training modules.

This flexibility would support the RPL process and make the overall training process more efficient. This efficiency would benefit businesses that send employees to VET colleges for training, and encourage businesses to send employees to be trained.

## Formally accredit the training course

If high market demand for the artisan training course is proved, consideration should be given to ensuring that it is formally recognised by NACTVET and aligned to Tanzania's national qualifications framework.

ICAL TRAINING ON:  
WINDING  
& WINDING OF TRANSFORMERS  
INSTALLATION

# Conclusion

There is large scope in Tanzania, where many citizens and rural businesses do not have access to electricity, to extend access to power through solar PV installation, especially off-grid.

The VET Toolbox project, through the Enabling Youth Employment in Solar Energy project, which ran as a pilot project between January 2022 and December 2023 in four regions - Simiyu, Shinyanga, Manyara and Geita - has been an overall success and should be considered for other regions.







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