

### TANZANIA

**Title:** Feasibility study for grid connexion: Shinyanga photovoltaic power plant

Category: SE4All On-grid TA  
Request from: Ministry of Energy

#### Context

Primary energy consumption in Tanzania includes 90% biomass; 80% of which is consumed in rural areas, heavily contributing to deforestation.

The project aims at improving energy generation needs in Tanzania and more importantly, the aspirations within The Ministry of Energy and Minerals ("MEM") and TANESCO in achieving goals of providing cost effective and reliable power generation and distribution within the country.

According to the Power System Master Plan 2016 Update, TANESCO planned to have a 40/60 renewable/conventional power generation mix by 2025. Eventually TANESCO desires to have cost effective generation mix portfolio by taking advantage of opportunities of available renewable energy sources. The construction of 150MWp Solar Power Project will substantially enhance TANESCO's power generation and supply capabilities in the region, which is key to the development of the Tanzanian economy as a whole. The power plant would also serve to stabilize the grid against power fluctuations and outages that are a major source of concern to TANESCO customers.

Therefore, TANESCO wished to prepare a detailed Feasibility Study to evaluate the technical, economic, financial, environmental and social feasibility of a 150 MW Solar Photovoltaic (PV) Project in Shinyanga Tanzania.

#### Technical assistance

The TA consisted in:

- Activity 1 : Carrying out the study of the technical, economic and financial feasibility of the project, including, an interconnection study and all geotechnical surveys required before tendering for the construction of the Plant and the evacuation transmission line;
- Activity 2: Supporting project tendering, including tender document preparation and assistance during bid evaluation and contract negotiation
- Activity 3: Organizing a study tour to visit an operational solar PV power plant in Africa
- Activity 4: Carrying out a seismic acceleration assessment
- Activity 5: Elaboration of the Environmental and Social Impact Assessment (ESIA), the Environmental and Social Management Plan (ESMP) and the Resettlement Action Plans (RAP) for the project.

#### Status & impacts

*Feasibility study for the Shinyanga 150 MWp solar PV project has been finalized and approved by Tanesco by December 2019. Financing of the first phase of the solar PV plant (50MW) has been approved by AFD Board in December 2019 (approx. 60 M EUR). A second phase of the financing of the remaining 100MW was approved in 2023. Construction works shall start in Q1 of 2024 and commissioning of the PV plant in 2025.*

**Final report available on request.**

  
  
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**A facility to develop innovative projects in renewable energy and boost electrification on the African continent.**

The AFD Group, with the support of the European Union, has set up the "African Renewable Energy Scale-Up facility" (ARE Scale Up facility) to boost private sector investment in on-grid and off-grid renewable energy production in Africa.

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