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FACTSHEET

# Ghana Solar Photovoltaic-Based Net-Metering Project

## Strengthening the capacities of power distribution utilities to scale up photovoltaic installations for households and SMEs, and boost private sector investment in climate friendly technologies.

Country/region
Ghana

Executing agency
Ministry of Energy Ghana

Duration
2022-2026

Total budget
USD 111’000’000

SECO contribution
USD 14’000’000

Ghana is well endowed with renewable energy resources (solar, wind, etc.) and has both, conducive framework conditions and a National Energy Transition Strategy. The Ghana Solar Photovoltaic-based Net Metering Project funded by SECO together with the African Development Bank, the Climate Investment Funds and the Government of Ghana is part of the Scaling up Renewable Energy Program (SREP) and is fully aligned with the country’s national target of achieving 10% of Renewable Energy in the electricity mix by 2030.

**Rationale**

Ghana’s electricity demand grows at an annual average rate of 11%. The government owned utility companies often struggle to generate enough electricity to meet the increasing demand. This negatively impacts the reliability of electricity provision and affects industries, businesses and even essential public institutions like hospitals and schools. Despite the vast renewable energy resources available in the country, the Government of Ghana continues to rely on expensive and polluting fossil-powered thermal plants to meet its demand. The result is high electricity prices for households and businesses across Ghana and unsustainable emissions. Key to the Government’s strategy to tackling this issue is to strengthen the capacities of its power sector institutions to enable the country to transition from a dependency of fossil fuel to an affordable, reliable, sustainable and cleaner energy provision for its citizens by tapping into its renewable energy resources. This transition will require large energy infrastructure investments along with broad advocacy in order to encourage private sector participation.

The Ghana Solar Photovoltaic Net-Metering Project with battery storage will support the Government of Ghana with the necessary technical assistance, capacity building and infrastructure to roll out solar power. Specifically, the project wants to encourage both the public and the private sector to self-generate and invest in clean and affordable solar systems. The excess power generated by the rooftop photovoltaic systems will be released to the electricity distribution grids, strengthening their stability and reducing the expenditures on electricity of the participating households and businesses – the so-called net-metered customers.

**Objectives and activities**

The objective is to develop a comprehensive net-metering program that will equip the power distribution companies of Ghana to be able to integrate about 12,000 units of roof-mounted solar Photo-Voltaic systems to reduce the economic cost of power on SMEs and households. The project is expected to increase the contribution of renewable energy in the electricity generation mix by 62.5 Megawatts.

The following activities and expected outputs are foreseen under the Project:

1. **Solar Photo-Voltaic (PV) installations on the rooftops of public buildings**: Solar PV panels will be installed on 1'089 public buildings and connected to the power distribution grids. Hospitals, health centres, hundreds of schools as well as municipal and district assemblies will benefit from an aggregate power generating capacity of 13.3 MW and the possibility to reduce their energy expenditures.

2. **Incentives to SMEs and households for privately owned solar PV installations on the rooftops of their buildings**. Up to 6'001 SMEs and 4'910 households will receive subsidies and a free net-metering connection to the distribution grid for solar-PV installations on their rooftops. The targeted aggregate installed capacity on private buildings is 49.2 MW. To enable them to connect the above systems to their grids, two Distribution Utilities (ECG and NEDCo) will be provided with up to 12'000 bi-directional smart-meters, control systems, solar-PV testing equipment and a cost-covering contribution for actual connection of the private entities.

3. **Demonstration of battery storage capabilities to support the large-scale integration of RE-generated power into the grids of the distribution utilities and operation of centralised and de-centralised stationary batteries**. Batteries will be installed on selected power lines to demonstrate the capabilities of battery storage to enable the large-scale integration of RE-generated electricity into the grid and to build a knowledge base for the future of distributed power generation in Ghana.

4. **A comprehensive technical assistance and capacity building program for the stakeholders in the power sector extending over the project implementation period of three years.** To support the transformational impact of the project, trainings in the area of net-metering, distributed power generation and smart-grids will be provided for the various stakeholders and will be financed by the grant from SECO.

**Further information and contact details**

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