



Ghana SREP Project Solar Minigrid & Net Metering

The Global Center on Adaptation (GCA) is working with the African Development Bank to support the development of climate-proofed renewable energy systems including mini-grids, standalone home systems, and Net metering with Solar PV in the Volta Lake region and island communities in Ghana. GCA is providing this support through the Africa Adaptation Acceleration Program (AAP). The Scaling up Renewable Energy Program (SREP) is part of the Bank's Climate Investment Fund. Under this initiative in Ghana, the Government and the AfDB are seeking to increase access to clean and reliable electricity services for island communities that account for the remaining 15% in achieving universal access to electricity by 2030.

Adaptation Need

Ghana's Roadmap for Resilient Infrastructure in a Changing Climate, jointly developed with the GCA, had revealed that some of the communities where Ghana's solar assets will be located fall within fragile climate ecosystems and climate hazard hotspots. To further support this investment project, GCA deepened the climate risk analysis and developed guidelines for the integration of specific adaptation options, tailored to each of the 58 communities targeted through the program.

GCA's Added Value

GCA analysis quantified how climate hazards such as heatwaves and drought (affecting all 58 communities) and floods (affecting 72% of the communities at a high intensity) impact the operation and output of the solar energy assets, by shortening their lifetime, increasing costs of maintenance and repairs, and reducing annual energy generation. Specific adaptation options for the siting, technical design, operations, and maintenance of the solar systems, were developed, with benefits to costs ratio ranging from 5 to 10 across all districts.

Total Investment Value Influenced

\$85.18M

Beneficiaries

84,255

IFI Implementation period

2022 - 2027

Program

Infrastructure and NbS

Partners

African Development Bank

Status

Completed

Countries



SDG contribution



PROJECT GOALS

Mainstreaming Adaptation and Resilience

Following up on GCA technical assistance to road and energy projects in Ghana and the region, GCA is delivering Masterclasses on Resilient Infrastructure in Accra, Ghana, to train infrastructure practitioners across sectors embedding climate adaptation into infrastructure investment projects. More specifically building on technical results on the Energy sector in Ghana and across countries in Africa, GCA is now developing Technical Briefs and partnering with academic universities to better capture the implication of Climate Change and impactful adaptation solutions – from design to operations, revenue generation and governance – to support climate-proofing large-scale investments programs in the sector such as Mission 300.

Expected Outcomes

GCA's support will strengthen SREP's outcomes:

Improved energy access for 84,255 people
Deployment of 35 mini-grids for 60 communities, 12,000 units of roof-mounted net-metered solar PV systems for public institutions, Small and Medium-sized Enterprises, and up to 11,000 standalone solar home systems.

TIMELINE

GCA Support Status

Technical Assistance Preparation

GCA Support Implementation

January, 2022

GCA Support Completion

Monitoring

FINANCE

Project Investment Value

Total Investment Value
\$85.18M

IFI INVESTMENT VALUE

\$69.18M

OTHER INVESTMENT
VALUE

\$16.00M

IFI partners



African
Development Bank

GENERAL MEDIA INQUIRIES

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REQUEST FOR INFORMATION

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