UPSCALING MINI-GRIDS FOR LEAST COST AND TIMELY ACCESS TO ELECTRICITY SERVICES

Action Learning Event

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SREP – GHANA CASE

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CLIMATE INVESTMENT FUNDS

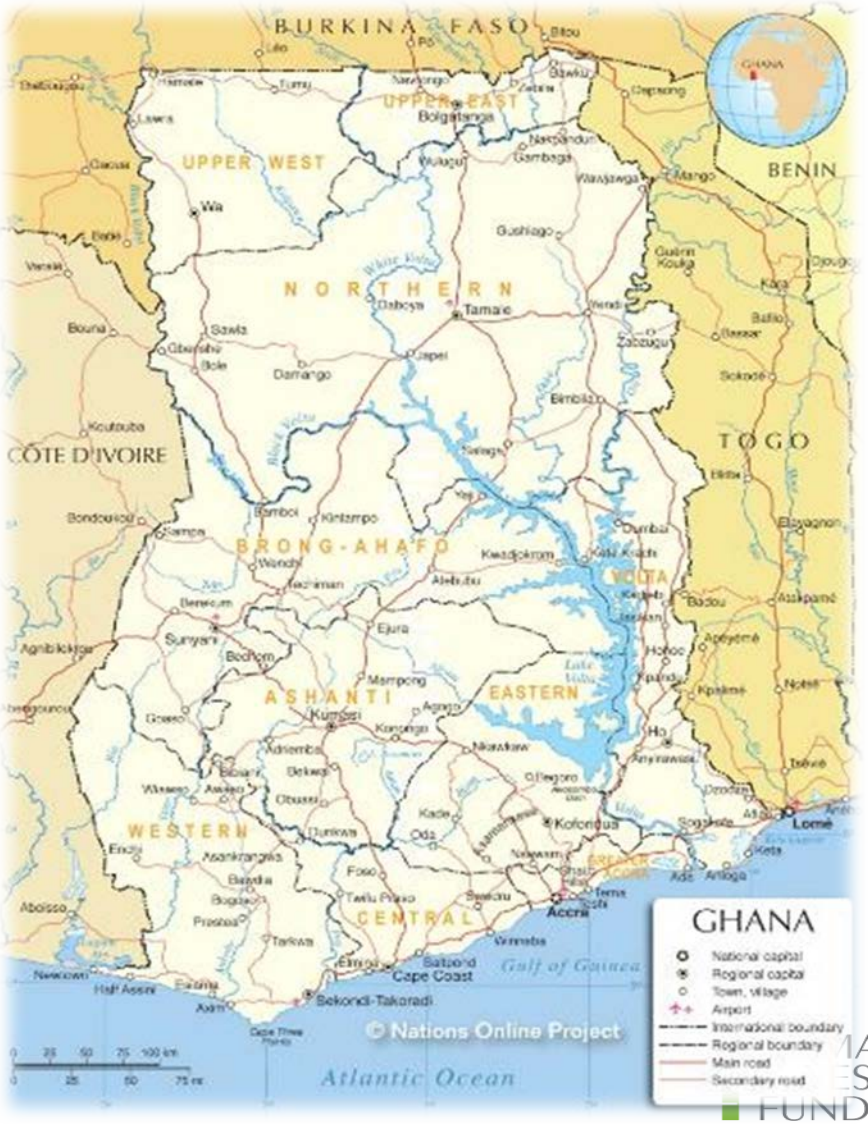
COUNTRY BACKGROUND

Total population: 26.9 million, nearly half of which live in rural areas (2016 est.)

Population growth rate: 2.2%

Urban population growth rate: 3.5%

- Politically stable and continues to consolidate democratic governance.
- Downturn economic growth. In 2016, GDP real growth rate dropped from 3.5% (2015) to 3.3%, while the GDP per capita stood at USD 4,300 (2016 est.)
- The service sector accounted for 56.4% of GDP, agriculture 19.5% and industry 24%.
- Electricity access rate 83% as of December 2016.



PROJECT OUTLINE

SREP GHANA PROGRAM

Investment Projects co-financed by SREP

PROJECT 1

Renewable energy mini-grids and stand-alone solar PV systems

Executed by: MoP and AfDB

Funded by:
- SREP: USD 17.5 million
- AfDB: USD 27 million
- DPs: USD 12 million
- GOG: USD 8 million
- Beneficiaries & private sector: USD 18.5 million

PROJECT 2

Solar PV based net-metering with storage

Executed by: Energy Commission and AfDB

Funded by:
- SREP: USD 12.5 million
- AfDB: USD 15 million
- DPs: USD 12 million
- GOG: USD 8 million
- Beneficiaries & private sector: USD 45.5 million

PROJECT 3

Utility-scale solar PV/wind power generation

Executed by: private sponsors and IFC/AfDB

Funded by:
- SREP: USD 10 million
- IFC: USD 10 million
- AfDB: USD 10 million
- Beneficiaries & private sector: USD 20 million

PROJECT 4

Technical assistance to scale-up renewable energy

Executed by: Energy Commission and AfDB

Funded by:
- SEFA: USD 1.5 million
- DPs: USD 2.5 million

PROJECT OUTLINE

Expected results-Project 1

- Estimated 55 renewable mini-grids
- Private sector investment in stand-alone solar PV systems to benefit 33,000 households
- About 1,350 schools, 500 health centres and 400 communities electrified

Expected results-Project 2

- 15,000 grid connected solar PV systems with storage capacity
- Financing facilities and instruments
- Standard contract between utilities and customers
- Technical studies
- Service provider-certification and training

Expected results-Project 3

- 150MW Ayitepa/Upstream wind project (IFC/WB structured)

CLIMATE INVESTMENT FUNDS

SREP IMPLEMENTATION-PROGRESS

- Cabinet Approval obtained
- Letters of Agreements (LOA) signed
- Mini-grid policy approved and operationalized:
  - Uniform tariff for MG customers
  - Supports public sector-led business model
  - Distribution utilities responsible for MG distribution O&M & Customer service
  - VRA responsible for MG generation infrastructure O&M
  - Zero connection fee

CLIMATE INVESTMENT FUNDS

MINI-GRID DEVELOPMENT

Subsector issues

- Uniform tariff option implies cost difference should be paid for (through cross subsidy, levy etc.) or PURC incorporates it in rate setting approval mechanism,
- Potential overlaps of national grid electrification and mini-grids initiatives
- Technical requirements for mini-grids development and future integration into main grid

CLIMATE INVESTMENT FUNDS

COMMISSIONED MG FACILITIES /GEDAP/WB/MOP

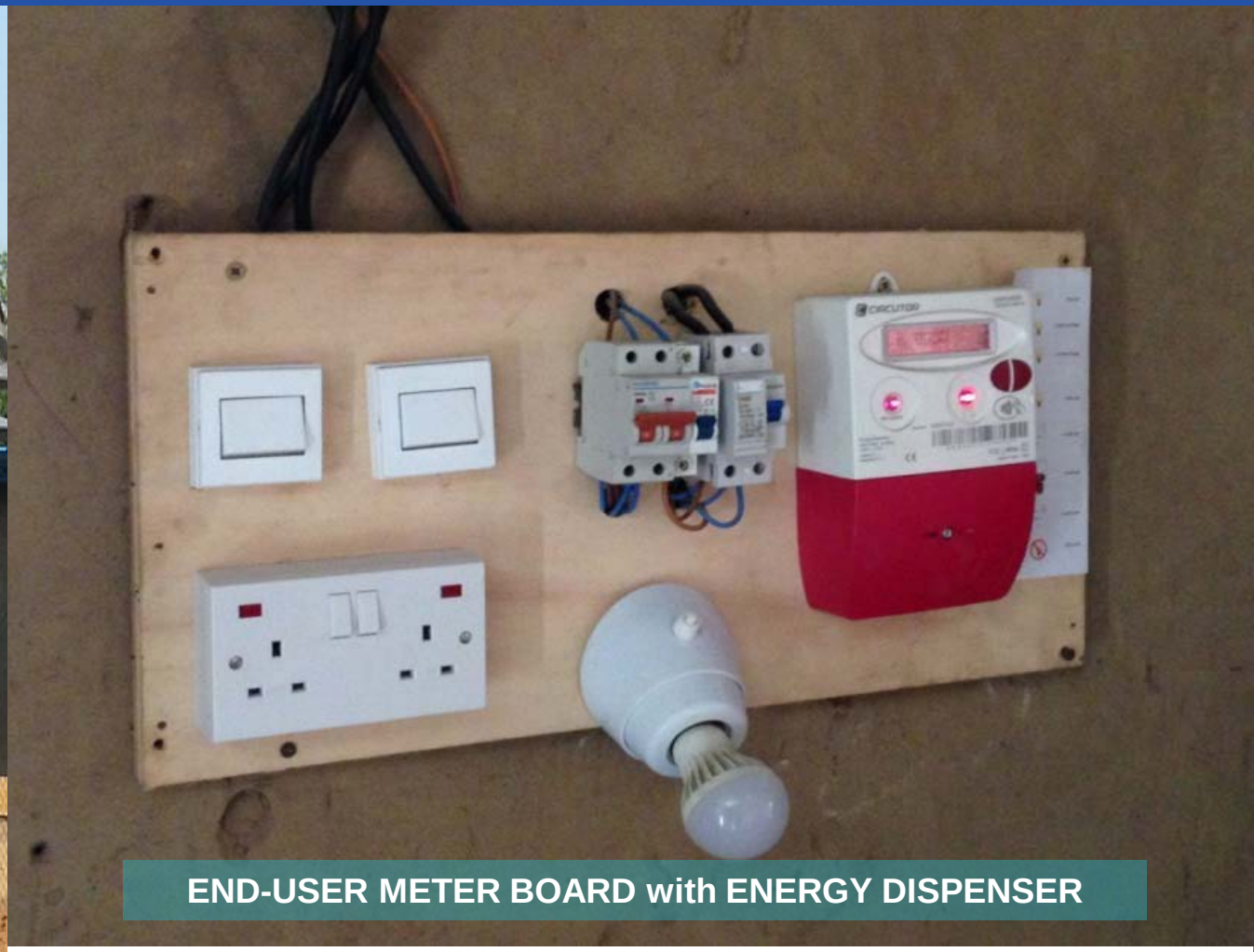
GENERATION SUB-SYSTEM – SOLARPV/ WIND & DIESEL GENSET BACKUP HYBRID SYSTEM @ Perdiatorkope

DISTRIBUTION SUB-SYSTEM – SINGLE PHASE WOOD POLE CONFIGURATION

CLIMATE INVESTMENT FUNDS

COMMISSIONED MG FACILITIES /GEDAP/WB/MOP

SOLAR PV PLANT with DIESEL GENSET BACKUP @ Kudorkope



END-USER METER BOARD with ENERGY DISPENSER

CLIMATE INVESTMENT FUNDS

NEXT STEPS

PLANNED ACTIVITIES FOR 2017	Q1	Q2	Q3	Q4
Set up the PCU and PIU at the MOP and EC				
Develop the two public sector investment projects into full (bankable) projects for SREP				
Subcommittee consideration and approval				
Launch of SREP				
Full implementation of Public sector-led SREP projects Commenced				

THE END

CLIMATE INVESTMENT FUNDS