The ECOWAS Small-Scale Hydro Power Program
First Phase: 2013 to 2018

Mr. Mahama Kappiah, Executive Director of ECREEE, Mr. Martin Lugmayr, ECREEE-UNIDO expert, 31 October 2012, ECOWAS High Level Energy Forum
The ECOWAS Small-Scale Hydro Power Program

- Developed by ECREEE in partnership with UNIDO
- Validation workshop, held from 16 to 20 April 2012, in Monrovia, Liberia, with assistance of UNIDO, ESMAP, Austria and Spain
- Focus of program primarily on SSHP below 30 MW (partially also MSHP up to 100 MW)
- First Phase: 2013 to 2018
- Required budget: 15.5 million Euro
- Program seeks funding partners
Overall Objective: Promoting an enabling environment for SSHP investments and markets by addressing existing barriers
• SSHP can play an important role to enhance urban and peri-urban energy security and access to rural energy services

• Estimations of untapped feasible SSHP potential (up to 30 MW) range from 1,900 MW to 5,700 MW

• Reliable technology with competitive economics: in average 4,39 EUR/cents generation costs for LSHP and 7,89 EUR/cents per kwh for SSHP

• Complementary to the large hydro power project pipeline of the WAPP Master Plan (exceeding 30 MW)

• Contributes to the ECOWAS RE Policy on- and off-grid targets and the ECOWAS White Paper Implementation

• Synergies to mini-grid projects of the GEF Strategic Program for West Africa (SPWA)
483 potential sites with 1882 MW identified!
ECOWAS SSHP Program complementary to LSHP and MSHP projects of the WAPP Master Plan
SSHP could contribute with additional 2.449 MW to the regional on-grid targets of the EREP by 2030

SSHP could contribute considerably to the mini-grid objectives of the EREP
COMPETITIVENESS OF SSHP

**Resulting costs for RE grid-connected production - Commercial conditions**

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<th>Cap. Cost</th>
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**Resulting costs for RE grid-connected production - Soft loans conditions**

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KEY RESULTS BY 2018

- By 2018, **at least 35 projects** (new projects or rehabilitations) in different ranges of capacity up to 30 MW are **developed to feasibility stage** and at least **5 are brought to financial closure**.

- At **least 5 SSHP projects (< 100 kW) are operating** and - during their planning and implementation - have served as demonstration projects for capacity building.

- At least **2 refurbishment/rehabilitation projects (< 200 kW) are identified and realised**.

- At least **10 companies started to provide various SSHP related services** (planning, operation, repair etc.).

- **Bottlenecks of SSHP project implementation and operation**, of current policies and legal frameworks and roles and shortcomings of relevant stakeholders **are understood** and recommendations for improvement are elaborated and discussed.
ECOWAS countries obviously **improved their legal framework** (poverty reduction impact of SSHP in evidence in the legal framework, feed-in tariff defined, transparent licensing procedure etc.) and SSHP has become integral part of ECOWAS/WAPP planning documents.

A **capacity development strategy is elaborated** and SSHP initiatives and projects **increasingly rely on local expertise** from public and private sector (with limited international support).

**Quality guidelines are introduced during trainings and are generally applied** for development and implementation of SSHP projects.

**Facilitate open knowledge sharing on SSHP aspects** through the ECOWAS Observatory for Renewable Energy and Energy Efficiency (ECOWREX) and the provided tools and contents are utilised.
KEY RESULTS BY 2018

- An information base on relevant SSHP resources and sites is created and helps to facilitate the development and implementation of SHP programmes and projects.

- A communication strategy disseminating achieved progress and raising awareness about SSHP opportunities is developed and implemented.

- ECREEE is established as centre of excellence in the SSHP sector (cooperation with the UNIDO SSHP Centre based in Abuja, Nigeria).
IMPLEMENTATION STRATEGY

ECREEE Executive Board
- See Organizational Chart of ECREEE

SSHP Technical Committee
- SSHP Program Management Team
- Donor partners
- Technical experts (ECOWAS/International)

ECREEE Secretariat with backstopping of UNIDO HQ
- Int. Program Manager
- ECREEE SSHP experts & Consultants
- Administrative staff
- Other ECREEE staff

Other local, regional and international financiers
(e.g. loan, mezzanine)

Strategic guidance and approval of annual global budget and work plan of the SSHP Program

Technical guidance; review and appraisal of documents and identified projects to be co-funded:

Execution of the SSHP Program (administration, call for proposals, project cycle management, project appraisal, quality assurance, monitoring and evaluation, loan finance for investment phase of projects)
Thank you! Merci! Muito obrigado!

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