Energy Efficiency:
Economic and Social Results, through Greater Energy Security, Job Creation and Development Opportunities in the ECOWAS Region

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Content of Presentation

1) Overview of the Energy Efficiency Scenario in the ECOWAS Region
2) EE Potential and Target in ECOWAS Region
3) Economic and Social opportunities to promote job opportunities and investment in the EE Sector

1. Regional Context: The Energy Situation

- **Area**: 5,115,000 km²
- **Population**: 339 million (2014)
- **GDP/capita**: US$ 2,122 (2014)
- **Electricity production**: 59 TWh **32% from renewables**
- **Installed capacity**: 16.1 GW of which **4,5 GW are RE** (i.e. 28%)
- **Access to electricity**: ~ 42%
- **Access to modern energy for cooking**: ~ 25%



2. ECOWAS Energy Efficiency Potential and Target

- ECREEE energy efficiency program aims to implement measures that would free at least **2,000 MW** of power generation capacity.
- For instance, by transitioning to efficient on-grid lighting only, the ECOWAS Region could attain annual energy savings of approximately 6.75% of total electricity consumption.

3. EE Potential Areas and opportunities in the ECOWAS Region

There is a wide range of options that are available to improve efficient energy measures

i. Efficient **energy production and supply,** efficient **energy distribution** and the demand side efficiency:
   - The technical and commercial energy losses due to theft and/or illegal operators lie in the range of 25% to 40%.
   - This is quite high in comparison to the 7% to 10% range in Northern America and Western Europe

ii. **Regional EE standards and labels**, introduction of minimum energy performance standards (MEPS), energy efficiency labels with implementation at national level

iii. Energy **efficiency in buildings** (EE Building guides and EE building code). It is estimated that in ECOWAS, 25% to 30% of the total electricity supply is consumed in the building sector, namely cooling and hot water heating.

EE Potential - continued

iv. Energy **efficiency in Industry** (introducing Energy Management System (EnMS), Certification of industries to ISO 50001: This will lead to the promotion energy efficiency market in industries, creation of jobs, increase energy security through savings

v. Introducing **Energy Efficiency Network** (EENs): Commitment of industries to energy saving mechanisms from top management to energy engineers, awareness creation and capacity development

EE Potential Social and Economic Results (continued)

- vi) **Energy Efficiency in lighting:** These savings would be enough to supply the total annual electricity consumption of at least 2.4 million households. In monetary terms, regional annual financial savings on electricity bills, from transitioning to efficient lamps, could exceed US$220 million

- **vii. Clean cooking fuels and stoves:** inefficient cook stoves with wood, charcoal, dung or coal continues to be prevalent in the West Africa region and pose gender-specific health hazards as well as threats to the economy and the environment.
- Key technologies to be promoted will include small-scale biomass gasification, biomass rural electrification, as well as domestic, community and industrial biogas

- vii) **Energy Efficiency in transportation:** Reduce fuel consumption, costs, congestion, accident risks, and greenhouse gas emissions while contributing to sustainable economic development
- ECREE will initiate studies and analysis as well as facilitate the formulation of a regional strategy for energy efficiency in transportation

- ECREEE to **promote ESCO development** through TA and related Energy Performance Contracting (EPC) in buildings and industries in the ECOWAS sub-region

Energy Poverty

- Energy poverty and its consequences for local economies and social development are projected to remain the predominant challenge for West Africa through to 2030.
- Household access to electricity across the region is about 42%
- Urban areas that average 60% and in rural areas with about 18%.
- Moreover, significant energy access and energy pricing inequalities exist between urban and rural areas
- Climate change impacts (temperature rise, extreme weather events and droughts) will challenge the energy security of West African countries and will have to be mainstreamed into energy policy planning (particularly for impacts on water flows and hydro-power generation).

Cooperation and collaboration

- Identify cooperation opportunities with international and regional organizations for the design and implementation of EE Programs to generate jobs
- Identify opportunities for EE program implementation with regional and international financial institutions



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