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Financing Clean Energy in Sub-Saharan Africa:

Advantages for Increasing Energy Access

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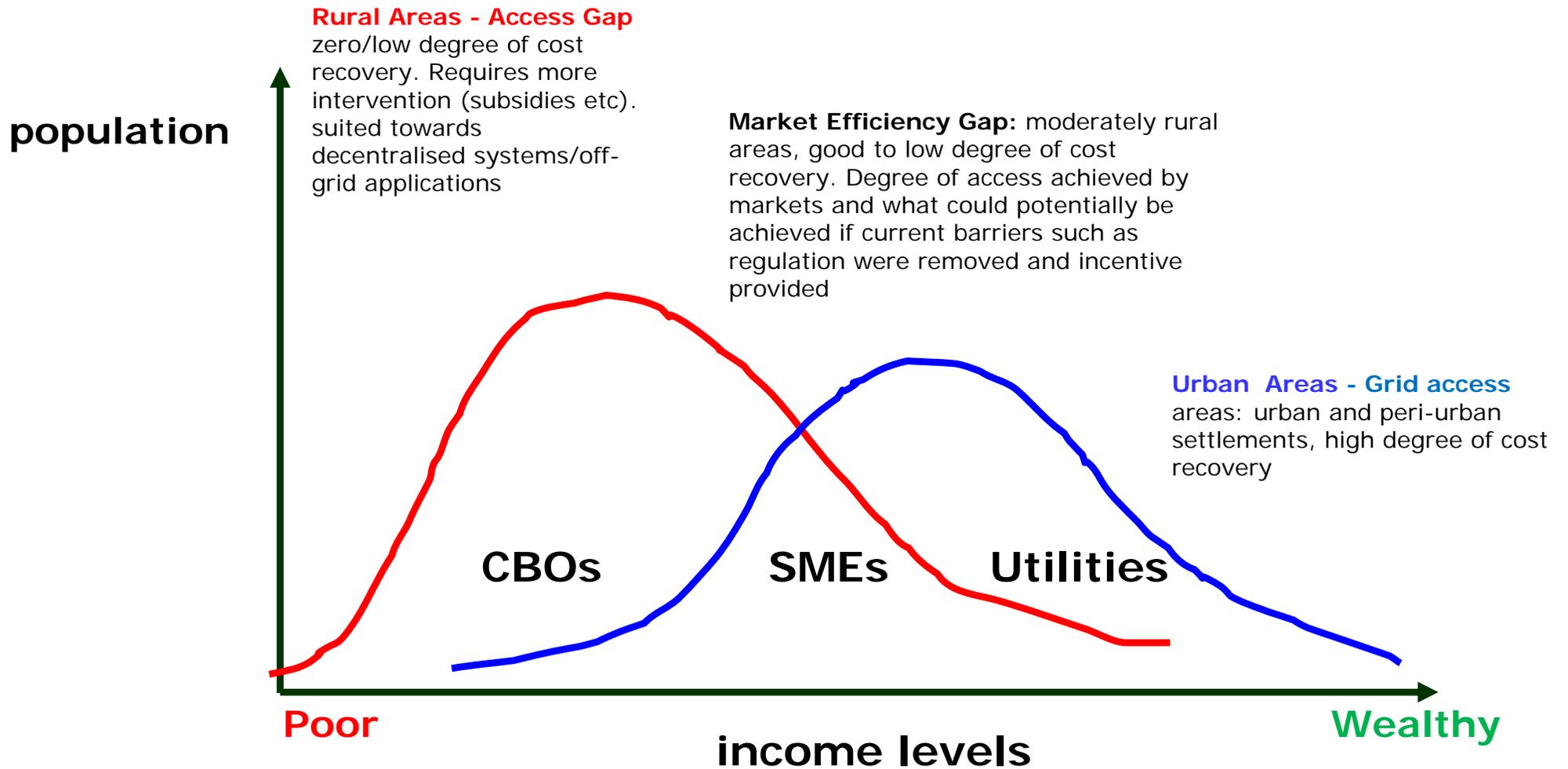
The Energy Sector - Context

- **Installed capacity in sub-Saharan Africa is 68GW**
 - Without South Africa falls to 28GW
- **Growth in capacity is stagnant**
- **Low electrification access**
 - Only about one-fifth of the sub-Saharan population has access to electricity compared with about one-half in South Asia and more than four-fifth in Latin America
 - At current trend, less than 40 percent of the African continent will reach universal access to electricity by 2050
- **Few economies of scale**
 - 33 out of 48 countries have less than 500 MW, 11 less than 100MW
- **Power outages are increasing and costly**

Key Issues and Challenges – Financing Clean Energy

- **Identification of appropriate financial mechanisms** to support RE deployment and mainstreaming these mechanisms into national plans and policies and other incentives.
 - governments risk averse.
- **Conventional financial mechanisms e.g. FITs non-existent and/or too tricky to apply in the short term**
 - no definitive evidence of the usefulness of RE procurement mechanisms in the African context as RE markets are still emerging and relatively new.
- **Difficulties in assessing the investment cost of energy access**
 - clean energy technologies not yet on competitive par with conventional energy sources (fossil fuels and hydro).
- **Lack of Technical Support**
 - entrepreneurs need capacity to translate available resources and opportunities into bankable projects.
- **Commercial approach to energy delivery won't meet all of the energy needs.**
Expectations on the private sector to service both rural and urban energy is too high – rural areas likely to require some form of subsidies initially.

Poverty and Energy Access: Impact of poverty and geographic isolation on conventional energy access



Key Lesson 1: Clean energy creates opportunities for local entrepreneurs.



- RETs provide opportunity to create retail supply chains, networks of sales and servicing to meet consumer demand.
- Most low income households are already spending a significant portion of their incomes on energy sources e.g. kerosene thus, there's a real market for energy services.
- Business opportunities are usually dispersed and local. There's a need to shift demand from fossil fuels to RE.
- E.g. REEEP supported project in Mozambique, Danish organisation OVE set up 3 local energy shops to provide a range of clean energy alternatives to communities.

Key Lesson 2: Clean Energy attracts substantial finance for scaling up energy access.



- Need to make use of local finance available from local commercial and agricultural banks in developing countries
- Successful clean energy pilot projects and renewable energy-specific investment can help attract existing resources to address the energy access challenge.
- Mobilising locally available equity and debt for energy access is key.
- E.g. CTI PFAN is a coaching and investor matchmaking service that assists clean energy project developers to prepare bankable projects that will appeal to investors.

2 of the projects (a mini hydro project and solar led distribution project), alone have raised \$2.65mil through AFRICEF.

Key Lesson 3: Clean Energy opens up income generation possibilities in a healthy environment.



- There is a link between RE and income generation opportunities.
- E.g. Selco Project in India created RE powered income-generating products such as solar powered sewing machines and solar light rental systems

Local microfinance institution recruited to finance the sale of those items to entrepreneurs which were mostly women. 12 business loans benefited some 650 people.

- Therefore, support to energy service business through micro energy enterprises with local community members has a higher chance of succeeding.

Key Lesson 4: Clean Energy addresses thermal energy needs more efficiently.



- Heavy reliance on traditional biomass - most successful pilot projects have focussed on improved design cookstoves and capacity around sustainable forest recovery.
- Grant pilot projects though not sustainable from a finance perspective, can create demand for RETs that in turn can create a future market for those RETs after proven performance.
- REEEP supported project by IT Power in Uganda promoted the uptake of cookstoves:
 - Mobilising 3 micro-finance institutions to develop energy loan products.
 - Training 20 loan officers on the specifics of improved cookstoves and bringing in 5 distributors to sell them.
 - CDM potential.

Key Lesson 5: Clean energy frees the poor from recurring fuel costs.



- After clean energy systems are paid for poorer consumers are freed from recurring fuel costs.
- Instalment payments can be lower than cost of kerosene.
- E.g. In the Solomon Islands a REEEP project enabled cash poor villagers without access to the banking system to trade crops as payment for LED solar systems:
 - During loan, the value of the crops traded is significantly lower than costs of kerosene just €0.28 than €0.63.
 - Local entrepreneur has attracted financing to scale up model to another 600 households.
 - There are alternatives to conventional means of doing financial transactions. Sometimes local non-monetary resources can be used to leverage finance for RET deployment.

Concluding remarks...

- Pilot Energy Access Projects – to demonstrate value added by RETs to economies.
- Develop and establish loans and micro-finance institutions with funds earmarked for RE – need to build capacities of these institutions to provide innovative financing mechanisms to grow RE markets.
- Subsidies in most cases are needed initially to reduce costs of RETs for those who can't afford market prices.
- PPPs - public entities can partially cover/underwrite up-front costs to attract venture capitalists.
- Increased R&D for locally appropriate technologies.
- Create Demand - funding for creating awareness and marketing for sustainable energy products.

Thank you!

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