Financing Clean Energy: USAID Experiences and Lessons Learned

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Introduction

- **What is clean energy?** *Renewable energy (grid-connected and off-grid) and energy efficiency (industrial, commercial and public)*
- **Why is clean energy important?** *Energy is a key input for economic growth and quality of life improvement; clean energy is sustainable and can be least cost*
- **Why is commercial finance important?** *Finance drives transactions for on-the-ground results, forces commercial discipline and provides reality check for donor programs*

Barriers

Barriers to Clean Energy Financing

Policy / Regulatory

- Energy pricing
- Small power purchase agreements
- Energy performance contracts
- Concessions

Service Providers

- Project development costs
- Higher capital costs
- Limited equity
- Limited scalability of business models

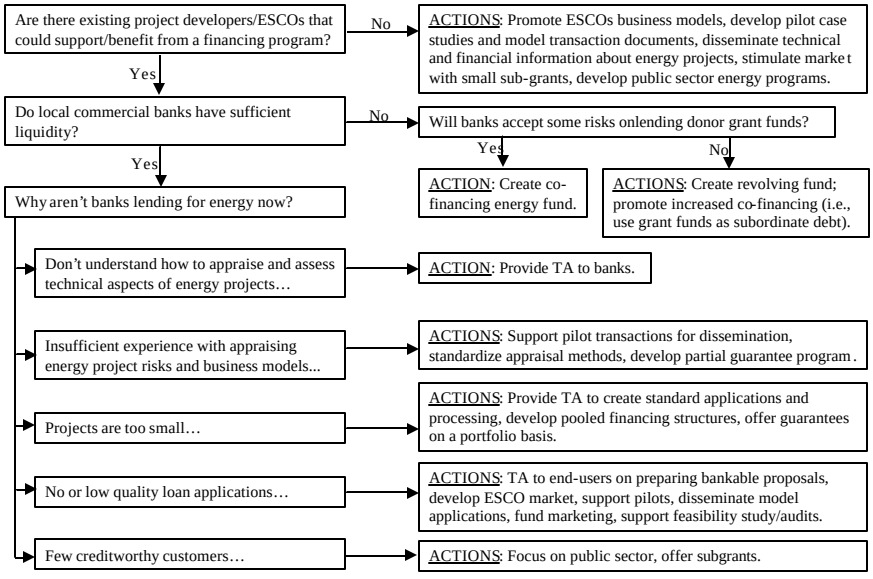
End User

- Ability and willingness to pay
- Limited collateral
- Diffuse and diverse market

Financiers

- New technologies
- New contractual mechanisms
- Small sizes/high transaction costs
- Longer tenors
- High perceived risks
- Other higher return, low risk projects
- Behavioral biases

Sample decision tree for energy financing programs



Sample project structures

Project Structure	Example(s)
Portfolio guarantees	UBB in Bulgaria for municipal EE (~$270k), Yes Bank in India for clean energy (~$3m)
Pooled financing	Tamil Nadu (~$900k) & Karnataka (~$3.1m) in India for municipal bonds for water
Guarantees for multiple banks	5 banks in Central America for clean production ($20k-130k)
Support a local guarantor	LGUGC in the Philippines for water (~$4.4m)
Special purpose fund	CAREC, a regional mezzanine fund, in Central America for clean energy (~$500k-1.75m)
Portable guarantee	GJMC in South Africa for municipal infrastructure investments ($25m)

Lessons learned

- **Upfront, holistic market analyses** are essential to determine target markets, service providers, financing constraints, skills gaps
- Program models should prioritize and address critical barriers in a sustainable manner and **customized to local conditions**
- Programs should be **flexible** to respond to changing market conditions and implementation realities
- Participating stakeholders must have **proper incentives** to participate in programs and share in rewards commensurate with risks

Lessons learned cont.

- Program must encourage **competition** (among service providers, equipment suppliers, banks)
- Programs should be **commercially-oriented** and **demand-driven** (i.e., end users/communities should drive projects)
- Subsidies should be used **judiciously, transparently** and have a clear **exit strategy**
- Pilot programs should test **scalability** of institutional and financial arrangements, clearly documented for target audiences (e.g., private sector, banks) and then intensively marketed

Lessons learned cont.

- **Early deals** help build organizations confidence and program credibility
- Ongoing **technical support** is needed to address emerging barriers, ongoing skills enhancement and counteract behavioral barriers
- Close **donor coordination** is needed to avoid competition and confusion

But, many challenges remain

- Despite growing energy costs, bias towards conventional energy production/supply remains
- Business bias towards production expansion rather than cost reduction inhibit high return EE projects
- Need for new strategies to bring successful business models and parallel financing schemes to scale
- Innovation to bundle projects to attract more private sector investment, financing and participation
- Promotion of sustainable energy policies, regulations, markets and enabling environment

Thank you!