

Financing Off-Grid Electrification

- From Private Sector Financing Perspective -

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“Textbook” Project Financing of Power Project

- Typically large thermal/hydro power plants
- International sponsor with reliable track-record
- Take-or-pay, fully off-take by creditworthy state utility
- Turn-key, date-certain EPC contract
- Fully proven technology, dependable capacity certain
- Generation highly predictable (except for hydro)
- Full-service O&M by renowned manufacturers

But Off-grid Electrification would be...

- Very small relative to transaction costs
- Local sponsors, cooperatives or individuals
- Highly local tariff, paid directly by individuals or cooperatives/communities at best
- Construction and installation dependent on local workforce
- Technology not always fully proven
- Generation unpredictable, highly dependent on wind
- O&M needs to be localized



Straightforward project finance is not feasible

Other Structuring Considerations for Small Wind

- Biomass, mini-hydro: project co or village cooperatives
Equity/Debt, grant, CDM, commercial borrowing, etc.
- Solar: individual households (SHSs)
Buy-down grant, finance lease, microcredit, etc.
- Where does small wind lie (what and who are we going to finance)?

Affordability

- Lighting will contribute to poverty reduction but does not help them paying/repaying their obligations
- Income generating activities should be established to enhance affordability – irrigation, agricultural bi-products, battery chargers, IT kiosks and other entrepreneurial activities
- Microfinance institutions?
- Begin with relatively wealthy households/enterprises?

Risk Mitigation

- Subsidies, CDM, and other grant schemes (CEFPPF, GEF...)
- Commitment and cooperation of government (regulatory risk, consistency with overall energy policy)
- Local financial institutions (including microfinance institutions) important as they are familiar with risk management under local context
- Commitment of relevant private players and how to take advantage of economy of scale
- Capacity building activities (O&M, business opportunities)

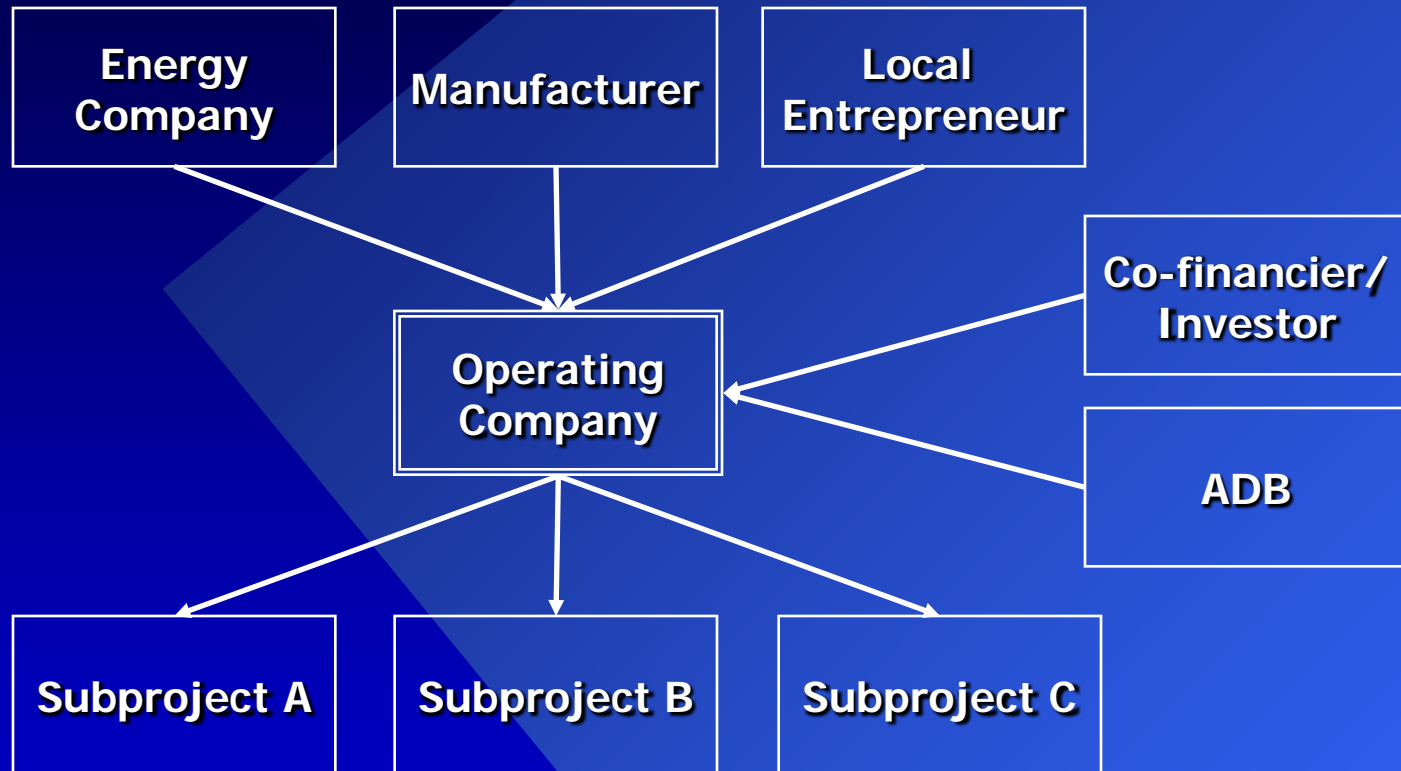
Options for Potential Private Sector Financing

- Financing established business enterprises
- Financing an operating company to be established by private investors (or JV) which will invest in multiple subprojects (portfolio approach)
- Financing through local financial institutions (risk participation)

Option 1: Financing Established Businesses

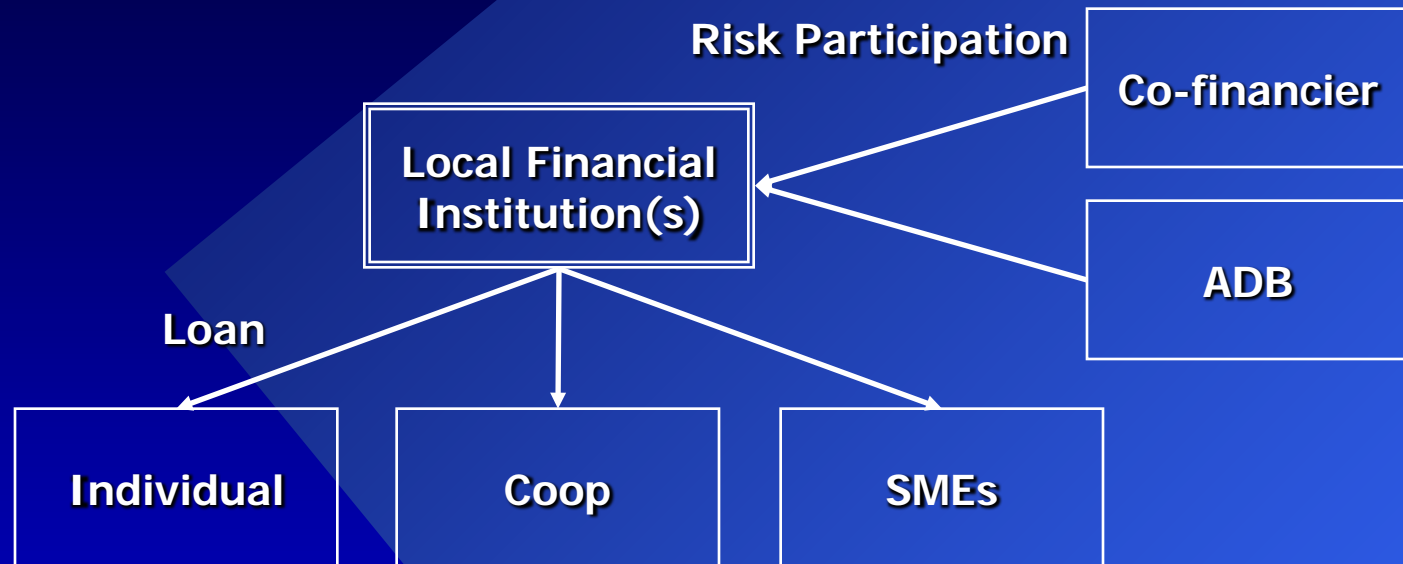
- Financing bigger enterprises which are currently relying on diesel due to geographic conditions and/or distance to grid
- e.g. plantations, resorts, and mines
- Not ideal from poverty reduction viewpoint but credit risk can be much lower
- May be combined with electrification of nearby communities

Option 2: Portfolio Approach



- Sufficient private sector interests?
- Some track record would be necessary for commercial borrowing
- Business plan/strategy crucial

Option 3: Participating through Local FI(s)



- Capacity and interest of local FIs
- Eligibility criteria
- Monitoring costly (technical assistance?)