

Session 4: Rural Electrification Agency and Rural Electrification Fund



Tuesday, June 9,

2009

Many countries in SSA have established a new institutional framework supporting rural electrification through establishing rural energy agencies and funds. The session analyzed the experiences with this model, compared different institutional approaches for REA and REF and identified key lessons learnt, and challenges. The main question raised by this session was: what are the key drivers of successful REA/REF programs?

REFs/REAs: When and Why?

Wolfgang Mostert defined an REA/REF as “a specialized institution which manages multi-year grant funds on a transparent and non-discriminatory basis to support implementation of rural electrification projects by a multitude of actors.” He argued that the central empirical question is: are *economies of scale and scope* or *entrepreneurial competition* the most effective performance drivers in rural electrification?

Mostert took the position that a centralized approach to rural electrification (typically led by the national utility) is more likely to be successful because of economies of scope and scale in planning, financing, tendering and investment. He pointed to successes in Morocco, Tunisia and Ghana as evidence of the effectiveness of a centralized approach led by the national utility.

Mostert argued that a weakness of the decentralized approach, usually implemented by some combination of Rural Electrification Agencies or Funds, is that it requires too much coordination between separate entities and that the transaction costs are likely to be very high. He asserted that little private investment has been mobilized by REAs/REFs in Africa with the possible exception of Senegal and that banks were still reluctant to lend to private operators even if the operators have received significant grants from REAs.

His preliminary recommendations were that the national utility should take the lead on grid electrification and that REAs/REFs should take the lead in off-grid electrification. He also observed that the REA/REFs are not likely to be successful unless they are able to offer dedicated refinancing and partial risk guarantees for commercial loans to rural electrification operators. In other words, grant financing, by itself, is not likely to be sufficient for a sustainable program.

While favoring the centralized approach led by the national utility, he recognized that it may not always be feasible if the national utility is not well-managed or has weak finances.

REA and REF: How To?

- Gerard Madon argued that a decentralized approach which relies on a REA and an REF is likely to be more productive because it harnesses local entrepreneurial talent and benefits from “checks and balances.” He suggested that the ideal institutional arrangement for rural electrification requires a separate REB, REA, REF, Energy Ministry, and an independent regulator. He also described the functions of these different entities.
- He recommended that countries use two complementary and simultaneous approaches: top down and bottom up electrification (see Ekouvei and Thoenen presentation in Session 3).
- The success of the ideal institutional arrangement requires certain key documents and manuals including: a glossary, a reference cost table, a service equivalent table, an environmental and social standards manual, a standard business plan and a manual for service providers on how to present projects and financial projections.
- He concluded by describing an ongoing project that will undertake in-depth studies of rural electrification funds in 8 African countries (Cameroon, Uganda, Ghana, Mali, Mozambique, Tanzania, Senegal and Zambia). The project is being financed by the European Union.

Mali’s Rural Electrification Fund

- Amader promotes both top-down and bottom-up forms of rural electrification. Top down involves competitive solicitations to serve a large geographic area. Amader specifies the grant per connected household and bidders bid on the basis of lowest tariff. Bottom up projects tend to be smaller, spontaneous projects serving individual villages. In both cases, Amader will currently not finance more than 80% of the capital costs and a maximum of USD\$500 per connected household.
- Most of the bottom up projects are small private operators who use diesel generation to serve particular villages. Their customers are both metered and unmetered. While Amader gives grants, most of these operators still have difficulty obtaining access to loans from commercial financial institutions.
- Amader uses commercial banks to handle the disbursement of its grants.
- Amader is the *de facto* regulator for the grant recipients in that it sets a maximum allowed price as a condition for receiving a grant. This maximum allowed price is based on a cost of service financial model that has been developed by Amader. Amader also establishes quality of service standards.
- Amader provides multiple services to rural electricity service providers including: direct and indirect grants, engineering and commercial technical assistance, project feasibility studies and master plans.

During the discussion, there was no clear resolution of the debate on the relative merits of centralized versus decentralized institutional approaches to electrification. Moreover, one participant pointed out that the phrasing of the question implied that both options are always available to policy makers. This participant argued that in the absence of a strong and competent national utility, the decentralized

institutional approach may be the only option available to policymakers. Several participants raised additional questions that suggested the need for a more nuanced approach. These included:

- Does the centralized approach always imply that national utility will sell at retail in newly electrified villages or can it also be implemented through bulk sales to local private or community providers (as in Vietnam)?
- Does the national utility always have to be the lead entity in a centralized approach? For example, the Bangladeshi rural electrification effort (described by Nazmul Chowdhury in Session 3) seems to have been led by an independent Rural Electrification Board rather than the national utility.
- Does the choice of institutional model depend on starting conditions and the type of electrification that is being pursued? Strong versus weak national utility? Initial level of rural electrification (e.g., greater or less than 20%)? Whether the electrification will be conducted through grid or off-grid electrification?
- Can some of the benefits of centralization be obtained through standardization of technical and financial standards?

*This summary is based on presentations in Session 4 and follow up discussions in a related breakout session.

Presentations:

REFs/REAs: When and Why? Wolfgang Mostert, Independent Consultant

REA and REF: How To? Gerard Madon, Director, MARGE

Mali's Rural Electrification Fund, Alassane Agalassou, AMADER