

IMPROVES-RE News

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Improving Economic and Social Impact of Rural Electrification

Electricity Planning in Progress

The IMPROVES-RE project follows the project plan with only minor delays. Since the issue of the second IMPROVES-RE newsletter in May 2006, activities have mainly concerned identification of development poles and the elaboration of preliminary electrification plans.

Development poles are characterised by having a higher economic activity and a higher level of health and education services than other villages with the same size of population. This means that services in these villages reach out to more people in the surrounding areas, and therefore scarce funding for investment brings more service to more

people.

The identified development poles have been the foundation for developing preliminary electrifications plans (see article below) to be discussed with local stakeholders at consultative workshops. These workshops started in September in Cameroon (see page 2) and will be concluded in November in Niger, Burkina Faso and Mali.

First experiences with the innovative least-cost planning approach of IMPROVES-RE are encouraging. The method used to evaluate how electrification of a local area impacts on social and economic development can thus contribute to setting priorities.

The range of services available within the area and thus its relative attractiveness compared to other places plays a major role within this assessment.

As Mr. Bende Valentine, member of the Mbonge Rural Council in Cameroon said, "...even if the presence of a rural market is an important indicator of the level of economic activities in the local area, the number of people going there is even more relevant to determine its economic dynamism".

The next step comprises adjustment or redrawing the preliminary plans based on new information and comments acquired at the regional consultative workshops.

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Preliminary Rural Electrification Plans

Since the issue of the second newsletter, preliminary rural electrification plans have been elaborated for the selected pilot zones in Burkina Faso, Cameroon, Mali and Niger. The preliminary plans prioritise the identified development poles and are refined through the computing

tools (GEOSIM®) and visualised by the GIS interface.

The results address the electrification of 157 localities including 84 local development poles, and directly target about 290,000 inhabitants. The whole population of pilot zones benefiting directly or indirectly from this rural elec-

trification is around 1.2 million inhabitants in almost 900 localities. Various technical options are considered: isolated diesel, mini-grid diesel, connection to national grid and development of small-scale hydro power plants.

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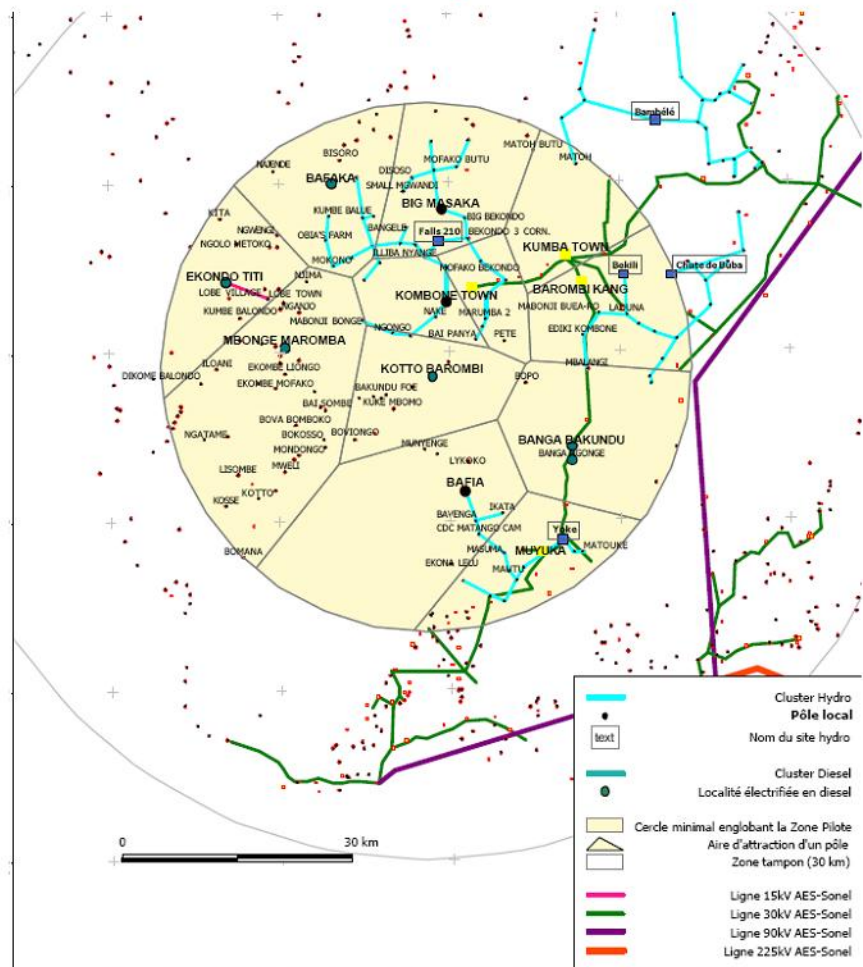
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Preliminary Rural Electrification Plans (continued)

The approach focuses on access to basic infrastructure (school, health) and the development of local economic opportunities, as well as considering pre-electrification options. According to the preliminary plans, pre-electrification targets 291 additional localities and about 380,000 inhabitants. It provides access to modern energy services (lighting, medical cooling, audiovisual equipment, etc.) for 254 schools and 11 health centres through the installation of photovoltaic kits. In addition, 160 localities with low potential access to development poles will benefit from the installation of motive power. This service reaches out to a further 74,000 inhabitants.

Altogether, the identified projects directly target 608 localities and about 744,000 inhabitants. The investment budget amounts to 15.1 billion FCFA, of which 12.7 billion FCFA is investment in "conventional systems" (diesel, grid, hydroelectricity) and 2.4 billion is investment in photovoltaic kits and motive force.

The preliminary electrification plans are presented in the report Rural Development Plans (deliverable D5), which was submitted in July 2006. The report presents several support measures to ensure the expected socio-economic impacts. More specially, it addresses the strengthening of exogenous effects of electricity by putting in place multi-sectoral coordination mechanisms, promotion and supporting productive uses



Example of a Preliminary Electrification Plan from Cameroon

of energy, establishing transparent mechanisms for granting and public-private partnership, strengthening project management capacities, reducing connection fees, adopting adequate tar-

iffs, and improving rural mobility, especially between development poles and localities in their hinterlands.

Consultative Workshop in Cameroon

The consultative workshop on the local rural electrification plan for the Rumpi pilot zone in Cameroon was held on 29 September 2006 in the conference room of the South West Development Authority (SOWEDA).

The workshop was chaired by Mr. Eneme A. Ngome, Rumpi Project Coordinator, and was attended by two local players, a local NGO, a micro-finance institution, three representatives of ministerial members of the GTMER (Multi-sectoral Working Group for Ru-

ral Electrification), a representative of the Electricity Sector Regulation Agency (ARSEL) and two SOWEDA executives. Participation of local actors in the workshop was unfortunately limited, mainly due to difficult transport conditions in the zone during the rainy season.

The main objective of the workshop was to submit the rural electrification local plan to the local players for validation and future appropriation; specific objectives were to:

- Mobilize potential players within the pilot zone to implement electrification schemes identified through IMPROVES-RE,
- Motivate local players (local communities, NGOs, village associations, drinking water service managers, small companies, etc.) to develop economic and social business opportunities provided by decentralised rural electrification,
- Stimulate the emergence of local operators to develop rural electrification services.

Consultative Workshop (continued)

Two representatives of the consultancy company, Études Engineering Développement (EED), presented the IMPROVES-RE approach for rural electrification planning and the preliminary planning result for the Rumpi zone. Both presentations were followed by an open debate among the stakeholders

THE PLANNING APPROACH

The planning approach was presented by the EED Manager, focusing on two components of the IMPROVES-RE approach: the spatial planning model and the electric planning model. Since IMPROVES-RE aims at improving the economic and social impact of rural electrification, he especially focused on the concept of impact and on the associated measurement indicators.

The spatial planning model had already been presented at the workshop on socio-economic survey results (31 March 2006). Nevertheless, some of the participants wished to investigate further the theory on which it is based, especially the gravitational models. Comments were made, especially by Mrs Esther Omam Njomoh, responsible for the local NGO Reach Out (REO) and Chief Peter Mbua, leader of the village of Bafia (Muyuka), on estimates of the potential population that could benefit from electrification of the

development pole. The alternative model for electrification planning, on the other hand, drew only a few questions, perhaps because of its more technical character.

THE LOCAL ELECTRIFICATION PLAN

The preliminary planning results for the Rumpi pilot zone were presented by the person in charge of energy programmes in EED. The various rural electrification scenarios were presented and commented upon.

In the subsequent debate, participants stressed the importance of ensuring smooth running of the future installations. Hydro-electrical plant and grid interconnections were preferred to diesel, and where diesel is the only solution, participants suggested having a backup group to ensure reliability. This was mainly due to past experience with poor maintenance and unreliable production.

Another important concern raised was how to ensure local appropriation of future projects generated by the planning approach. The concern was raised by Mrs Esther Omam Njomoh and Chief Peter Mbua. They emphasised that in order to avoid the "white elephant syndrome", namely that installation would be abandoned a few months after implementation, it was necessary to work out a capacity-building programme at the level of local authorities and thereby ensure the

sustainability of the investment.

IMPLEMENTATION OPTIONS

In partnership with the Ministry of Energy and Water, the Electricity Sector Regulation Agency (ARSEL) and the French engineering consultancy firm IED, the Rural Electrification Agency of Cameroon (AER) has submitted a proposal to the ACP-EU Energy Facility, for the implementation of projects identified under the IMPROVES-RE planning in the Rumpi pilot zone.

SOWEDA is associated with this new project and at the end of the workshop SOWEDA signed a letter of interest addressed to the Minister of Energy and Water.

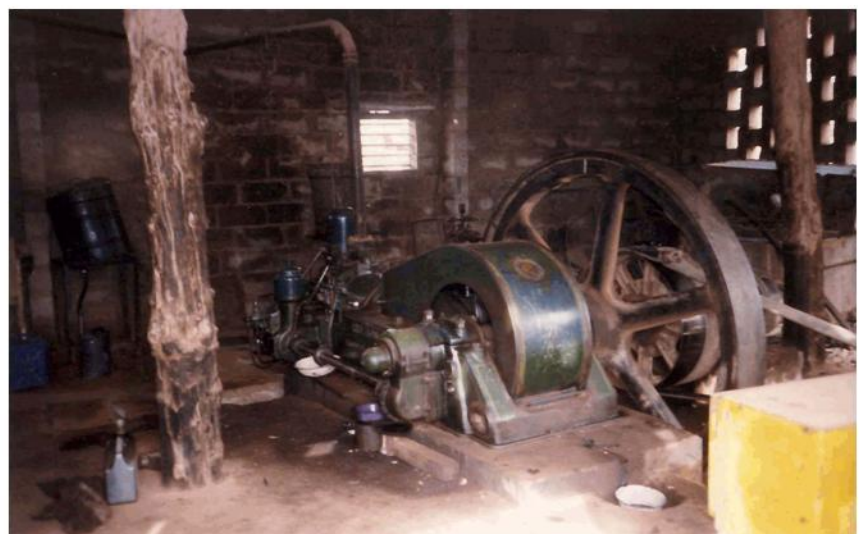
CLOSING SESSION

Following a fruitful debate, the SOWEDA representative closed the session by expressing the hope that some of the rural electrification scenarios worked out by the local plan will be financed, for instance through the ACP-EU Energy Facility, and enable part of the population of this zone to get out of darkness.

Profiles of Energy Entrepreneurs in Burkina Faso and Mali

To enhance the IMPROVES-RE approach the consortium partners find it useful to understand the dynamics and development paths of already operating actors in the local energy provision business. The IMPROVES-RE approach acknowledges that the impact of energy interventions increases when local actors are taken into account in energy planning. Therefore, the partners have found it important to understand the interest and priorities of local entrepreneurs.

Consequently, the consortium has recently launched a study aimed at enhancing the understanding of the profiles of local energy businesses in rural Burkina Faso and Mali.



Heavy equipment belonging to a private energy entrepreneur in Burkina Faso

Profiles of Local Entrepreneurs (continued)

These profiles will present the reality of non-electrified rural areas in these two countries, and the niche market where these energy businesses operate.

The study distinguishes between self-made entrepreneurs who have started up their business without any governmental or development-aid money; and the more traditional aid-supported entrepreneurs. In the latter group, the researchers will interview entrepreneurs who have, for example, recently received a PCASer subsidy in Mali.

The target group for interviews in the study will be small scale entrepreneurs active in the energy sector or energy provision in rural areas (preferably the pilot zones of IMPROVES-RE) not connected to the electricity grid in Burkina Faso and Mali.

The target group of the final booklet will be government employees and (energy) planners in West Africa and beyond. The objective of the book is to make government and (energy) planning institutes aware of important, already existing small-scale initiatives in the energy sector which have a large impact on the rural population.

The approach is based on interviews with existing entrepreneurs. These interviews will explore their current situations, and will also explore their needs and ambitions for further development.

The central questions will be:

How do current energy entrepreneurs operate in rural areas in Burkina Faso and Mali where no electricity grid is available? What problems do they face and how can they best be included in national electricity planning?

More specifically the study will look at the following business modalities:

1. Direct electricity supply and sale. For instance supply of electricity through a mini electricity grid, or solar panels.
2. Selling electricity for other services. For instance charging of batteries, mobile phones or solar lanterns.

Each modality will be analyzed through specific case profiling. The booklet will

serve as an additional result of the IMPROVES-RE project.

The study will be published before the end of 2006. It will also be used to complement the upcoming IMPROVES brochure.

IMPROVES-RE is a programme co-financed by the European Commission (COOPENER) for the period 2005-2007. It is executed in four western and central African countries: Burkina Faso, Cameroon, Mali and Niger. The programme

Future Activities

Over the coming months, the IMPROVES-RE project will conduct consultative workshops in Burkina Faso, Mali and Niger, at which preliminary plans will be discussed and later revised accordingly. By way of demonstration, an interface for making the planning results available on the internet will be developed in Burkina Faso before the end of December 2006. Finally, the consortium partners will dedicate a considerable time to elaborating and finalizing a number of reports presenting both methodological and practical achievements of the planning project, before a concluding final workshop is held in Bamako in February 2007.

The Programme IMPROVES-RE

enjoys a partnership with the national structures in charge of rural electrification: General Directorate of Energy (DGE) and Electrification Development Fund (FDE) in Burkina Faso, Rural Electrification Agency (AER) in Cameroon, Agency for Domestic Energy Development and Rural Electrification (AMADER) in Mali, and the Directorate of Renewable Energy in Niger (DE&ENR).

The global objective of the IMPROVES-RE programme is to improve the rural electrification impact on sustainable development and poverty alleviation. Achieving this objective requires putting in place efficient multisectoral investments, coordinated planning with the social services (health, education), services (drinking water, telecommunication, etc.) and the economic initiatives (SME, agro-industry, etc.), both at national and regional levels. The approach makes use of the Geographic Information Systems (GIS) functionalities.



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