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AGENCE SENEGALAISE D'ELECTRIFICATION RURALE

"L'Électricité Partout et pour Tous, pour un développement rural durable"

Renewable Energy in Electricity Supply Concession Schemes in Senegal

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Electricity access

- In 2003 : 12,47 % of rural households have access to an electricity service, corresponding to 750 000 people, for a rural population of 6 000 000 inhabitants,
- At the same time, 76,26 % of urban households were electrified.
- → At the national level, the electrification rate is around 40%, vs a world average rate of 60%.

On going renewable energy projects (summary)

- 8 Pv plants are being installed (from 10 to 40 kWc)
- 2648 PV public lighting systems,
- PV installations for 662 communauteary infrastructures (health centres, schools, mosques, churchs, ect ..) located in 227 villages in 10 régions
- 10 000 households already equipeb with 50 Wc solar home systems,
- Total : around 3 MW installed or to be installed in the short run, adding the existing capacity before 2000.

Technical diagnostic

Six main obstacles to a wide diffusion of electricity services in rural areas in Senegal were identified before the new electricity act :

- A unique cross subsidy based tariff system applied by the national electric company, without the required amounts of public financial resources ;
- A unique technical solution based on grid extension, with high costs building standards ;
- A unique source of financing : the Government ;
- High access costs (connection costs and domestic installations)
- The potential synergy between electricity and the other sectors, in the frame of sustainable development goals and poverty alleviation, not considered;
- The lack of consideration toward alternative technical solutions , specially renewable energies.

New strategic objectives

High ambitions of the Government toward rural areas, translated into ASER Objectives :

- **15 % rural electrification rate before the end of 2005, which means 71000 additional electricity users, in which are planed to be electrified with photovoltaics ;**
- **30% in 2015:**
- **at least 60% in 2022.**

A new electricity act

- **The strategy to reach these goals is based on the new energy law N° 98-29 of april 14th 1998, which define a new frame for electricity sector liberalisation.**

Public private partnership strategy

- *Promoting private sector as a major actor for rural electrification, within a public-private partnership;*
- *Adopting the concession scheme as the frame in which the new programme will be implemented,*
- *with the possibility to support local initiative projects initiated by local communities.*



A major implementing axe of the strategy : poverty alleviation

- Promoting income generator activities
- Multi-sectorial approach based on synergy between energy and : education, health, agriculture, water, fishing, telecommunications, etc.

The implementing strategy

- Subsidy to investments, not operating
- No technological discrimination
- Use of technical standards adapted to rural areas electricity demand level.

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The implementing strategy

The concessionner (private operator selected through an international bidding) will be in charge of :

- développement,
- exploitation,
- maintenance
- And renewing of installations.

INDUCIVE MECHANISM

Case study : Concession of Dagana-Podor-SaintLouis

- **Global electrification potential**

The potential electrification needs of the study zone involve 490 rural areas whose total population is, by 280,000 people, that is 18,650 households

INDUCIVE MECHANISM

Case study : Concession of Dagana-Podor-SaintLouis

Tax exemptions

- Exemption of duties and taxes collected on the entry of equipment and materials (exclusively imported) and specifically meant for the implementation of electric infrastructure in rural areas.
- Exemption of the value added tax invoiced by suppliers or local service providers necessary to the implementation of certified programs;
- Temporary importation of vehicles, machines or equipment imported or locally bought to be used exclusively in the implementation of such works;

INDUCIVE MECHANISM

Case study : Concession of Dagana-Podor-SaintLouis

Besides, pursuant to the provisions of the investment code and the general tax law, the State accepts:

- A five-year exemption of the lump-sum local taxes paid by employers, on the Senegalese staff salaries;
- The exemption for rural electrification concession subscribers of the VAT relating to the social band of electricity delivery.

INDUCIVE MECHANISM

Case study : Concession of Dagana-Podor-SaintLouis

In order to help the concessionar meet its objectives of earning capacity, and minimize risks relating to investments to be carried out, ASER sets up a Rural Electrification Fund (FER) whose mission is:

- **To administer a subsidy line that will be provided according to the results actually carried out by the beneficiaries**
- **Sustain the development of multisector-based projects (PREMs) aiming at poverty reduction and electricity access for basic social services;**

INDUCIVE MECHANISM

Case study : Concession of Dagana-Podor-SaintLouis

- **A re-financing line will be set up later for the agents, at a subsidized rate through commercial banks.**
- **A subsidy rate of 55% of the total investment cost is programmed, that is 8,651,481 Euros, in the case of Dagana-Podor-SaintLouis concession.**

The potential renewable energy market

- **The master plan for PV rural electrification, realised under JICA cooperation in 2001, estimated the potential demand for 50 Wc standard SHS at 86000, based on technical and economical analysis.**

The potential renewable energy market (end)

For each concession it is realised a local plan of electrification which define:

- The potential market for least cost technical options, including renewable energies
- The technical and environmental constraints to consider,

Regarding the available funds for the concession and the use criterias of these funds



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Merci