



New concepts for Rural Electrification Concessions

Multi-Sectoral Energy Sub-Projects (PREMs)

Meeting the Energy Needs of the rural Poor
Thematic Group Day – ESSD 2005

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Rural Electrification: Failure of the “Public Monopoly / Grid Mono-technology” Model

- Mono-technology (Grid)
+ higher cost in rural areas
- Unsustainable unique Tariff
- Prohibitive up front Connection Fee
- Limited Capacity of Public Monopoly

Low
Geographical
Coverage

- Sectoral Compartmentalization
- « Before the Meter » only

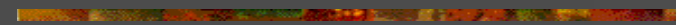
Very Limited
Impact on
Poverty and
Development

**Efficient
Scaling Up
of Rural
Electrification**

**Maximizing
Ratchet Effect
on Rural
Development**

**Private Public
Partnership**

**Multi-Sectoral
Partnership**



Potential > 10 000 customers

Subsidy + Refinancing + Tax Exemptions

International Bidding Process

Large enough and compact Markets

Private Equity + Cap. cost Subsidy OBA

Competition

Risk Management

Sustainable

Efficient

Bills ~ Payment Capacities

Prices differentiated and regulated

by Service Levels

Equitable

Long Term Commitments

Autonomous Rural Electrification Agency
O&M and renewal

Private Public Partnership

Regulation/Control

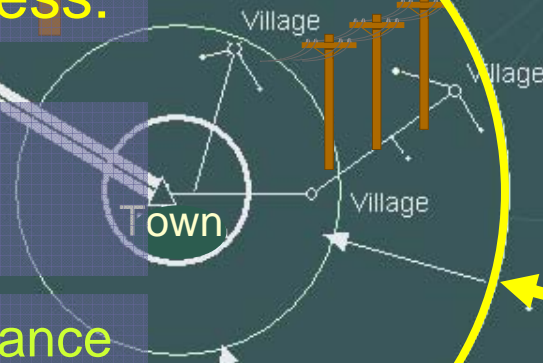
Quality of Service
Regulation by Contract
Technical Assistance to National RE Agency

Figure 1

Cost-Effectiveness:

➤ Technology Neutral

➤ GEF/Carbon Finance support to overcome barriers preventing adoption of Renewable Energy



Former Frontier

isolé

New Frontier

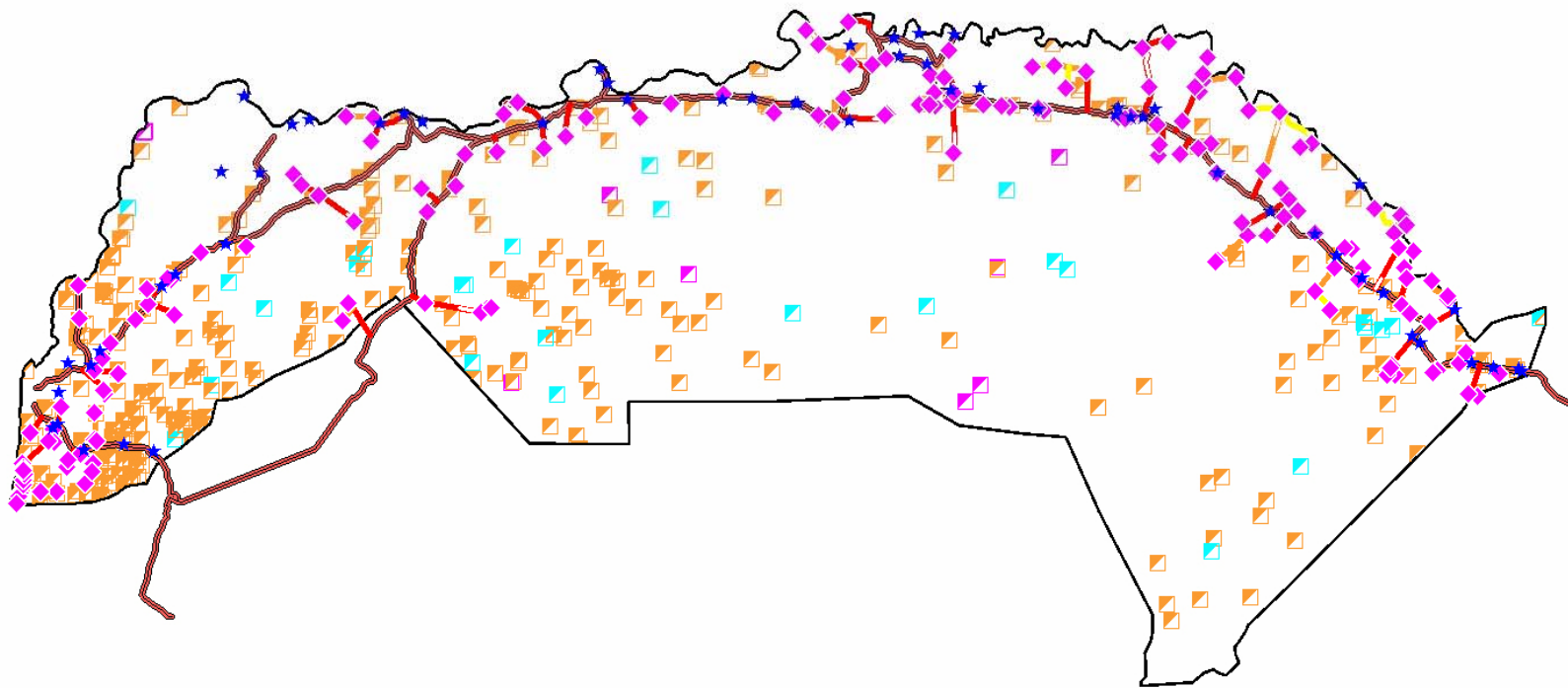
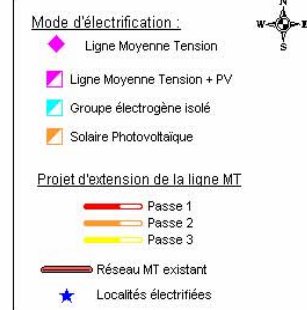


The technical progress, which has benefited to small off-grids systems, has reduced the maximum distance of competitive extension of the rural grid

Mode d'électrification SAINT-LOUIS, DAGANA et PODOR

Agence Sénégalaise d'Electrification Rurale

Example: Local Electrification Plan of the Dagana Podor Concession (SENEGAL) *(8 other PLEs done or in progress)*



Tivouane Concession

Awarded

Financing

IDA + Go

Kolda-Velingara Concession

Launching of the process

Choice of grantee

Signature of concession

financing convention

Financing

IDA + GEF + Gouvernement

+ Private sector

Fa

Aw

Kebener-Louga Concession +

Awarded 2005

Financing

ADB + Gouvernement + Private sector

+ Private sector

DAK

KEOU

D

finchi

IDA +

Choice of

+ Private

Kaolack-Nioro Concession

Awarded 2007

Linguere Concession

Awarded 2006

Financing

ADB + Gouvernement + Private Sector

THIES Concession

Awarded 2008/2009

Financing

IDA + Gouvernement + Private Sector

Financing

BAD + Gouvernement + Private Sector

Financing

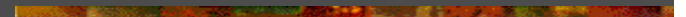
IDA + Gouverneent + Private Sector

**Efficient
Scaling Up
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**Maximizing
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Partnership**

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Economy of Scope and Scale,
Long term commitment,
Regulation by contract, etc.

Same Private Partner
than for RE customers

Maximize Impacts of
both Sectoral and
Electrification Programs

Stand alone Multiparty
agreements for each sector

Interface between
Electrification Project
and **Projects other Sect.**

Technical Assistance to
define Scope and
Responsibilities

Specific Financing

For TA and last resort for required
Energy Equipments (fridges, etc.)

« Beyond the Meter » /
Demand Side Management

Micro-financing through the Bill
for DSM and Productive Uses

Multi-Sectoral Partnership

“PREMs”: Ensure Energy Provision for other
sectoral projects currently facing energy limitations:
-Milk Collect /Cooling Centers
-Health Centers, Rural Schools, water pumping...

Examples of Multi-Sectoral Activities in Rural Electrification Concessions in Senegal (PREMs)

| <i>Concessions</i> | <i>PREMs</i> | <i>Sector</i> | <i>COST OF SECT PROG (MFCFA)</i> | <i>COST OF PREM (MFCFA)</i> | <i>%</i> |
|---|--|----------------------|--------------------------------------|---------------------------------|-----------|
| Dagana- Podor <i>(first concession)</i> | Electrical Equipment for Health Infrastructure (SAN1/DP) | Health | 1,335 | 49 | 4% |
| | Milk Collection and Transformation LAI1/DP | Farming / Ind | 9,900 | 452 | 5% |
| | Sustainable Energy Supply to Rural Populations (ENE1/DP) | Energy /Biomass | 5,663 | 300 | 5% |
| | Villages Water Supply (HYD1/DP) | Hydraulic | 7,375 | 280 | 4% |
| | S/s Total | | 24,273 | 1,081 | 4% |
| Mbour | Electrical Equipment for Health Infrastructure (SAN1/MB) | Health | 258 | 53 | 21% |
| | Electrical Equipment for Rural Schools (SCO1/MB) | Education | 1,082 | 158 | 15% |
| | Electrification of Water Pumping(HYD1/MB) | Hydraulic | 5,178 | 111 | 2% |
| | Modernization of Fishing Wharfs (PEC1/MB) | Fishery | 1,989 | 56 | 3% |
| | S/s Total | | 8,507 | 378 | 4% |
| Kolda - Velingara | Electrical Equipment for Health Infrastructure (SAN1/KV) | Health | 252 | 52 | 21% |
| | Electrical Equipment for Rural Schools (SCO1/KV) | Education | 1,353 | 198 | 15% |
| | Corn Transformation (MAI1/KV) | Agric / indust. | 1,390 | 162 | 12% |
| | Equipment and modernization of rural communities infrastructures (INF1/KV) | Social | 27,900 | 57 | 0.2% |
| | Equipment and modernization of rural infrastructures (INF2/KV) | Infrastructure | 25,800 | 43 | 0.2% |
| | S/s Total | | 56,695 | 512 | 1% |
| Total (MFCFA) | | | 89,475 | 1,971 | 2% |

MUSD 162.7

MUSD 3.6

Example of PREM: Interface with Milk Collect and Cooling Centers Program_(LAI1/DP)

Sectoral Program : PAPEL

Objective : Improvement of milk collection, value increase of the milk production

Investments by PAPEL: Regional Milk Treatment Plant, Capacity Building, implementation of Village based Milk Collect Centers, cooling tanks, drilling equipment

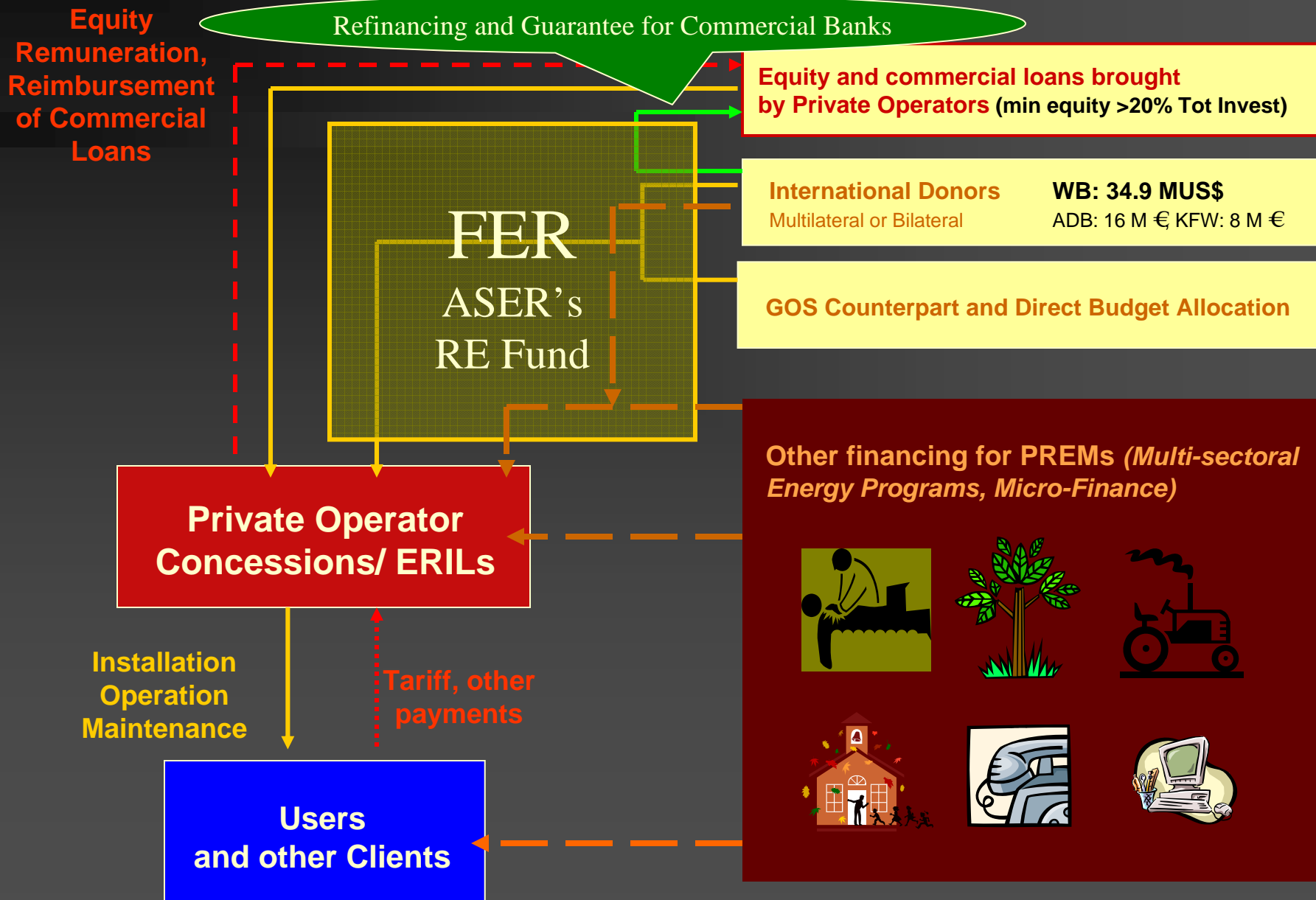
Sponsors: COVAPE, MDE, Senegal Government, PNIR...

Localisation : Dagana Podor

Calendar: Beginning of implementation in 2004

PREM Investment: 452 Millions FCFA for 20 Genset (16-30Kva), MV/LV connections for 20 Milk Collect and Cooling Centers

Overall Outline of Financial Flows - SENEGAL



Conclusion

- ✓ **Public Private Partnership** to leverage private skills and funds to accelerate and sustain expansion of access
 - ✓ **Multi-sectoral Partnerships:** Address precisely interface with Projects in other Sectors to maximize impacts (WIN-WIN PREMs)
 - ✓ Develop a **good knowledge of Markets** (size, payment capacity, costs) to mitigate risks
 - ✓ **Legal Framework adjustments, contractual arrangements** are very important to avoid judicial bottlenecks
 - ✓ **Long Term Institutional Framework and TA**
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