

CARIMET CONFERENCE

HURDLES AND OPPORTUNITIES ON RENEWABLE ENERGY AND SMART GRIDS IN RURAL AREAS

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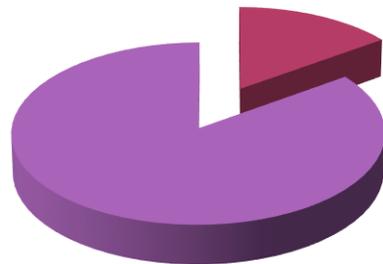
SHORT OVERVIEW OF PRESENTATION

1. **General view on electrification in Suriname. (4)**
2. **General view on Renewable in Suriname (highlight potentials) (3)**
3. **Opportunities and Hurdles in Rural electrification**
4. **Initiatives and recommendations**



GENERAL OVERVIEW

**163.000 square Km
of Land.**



- Urban Area (15%)
- Rural Area (85%)

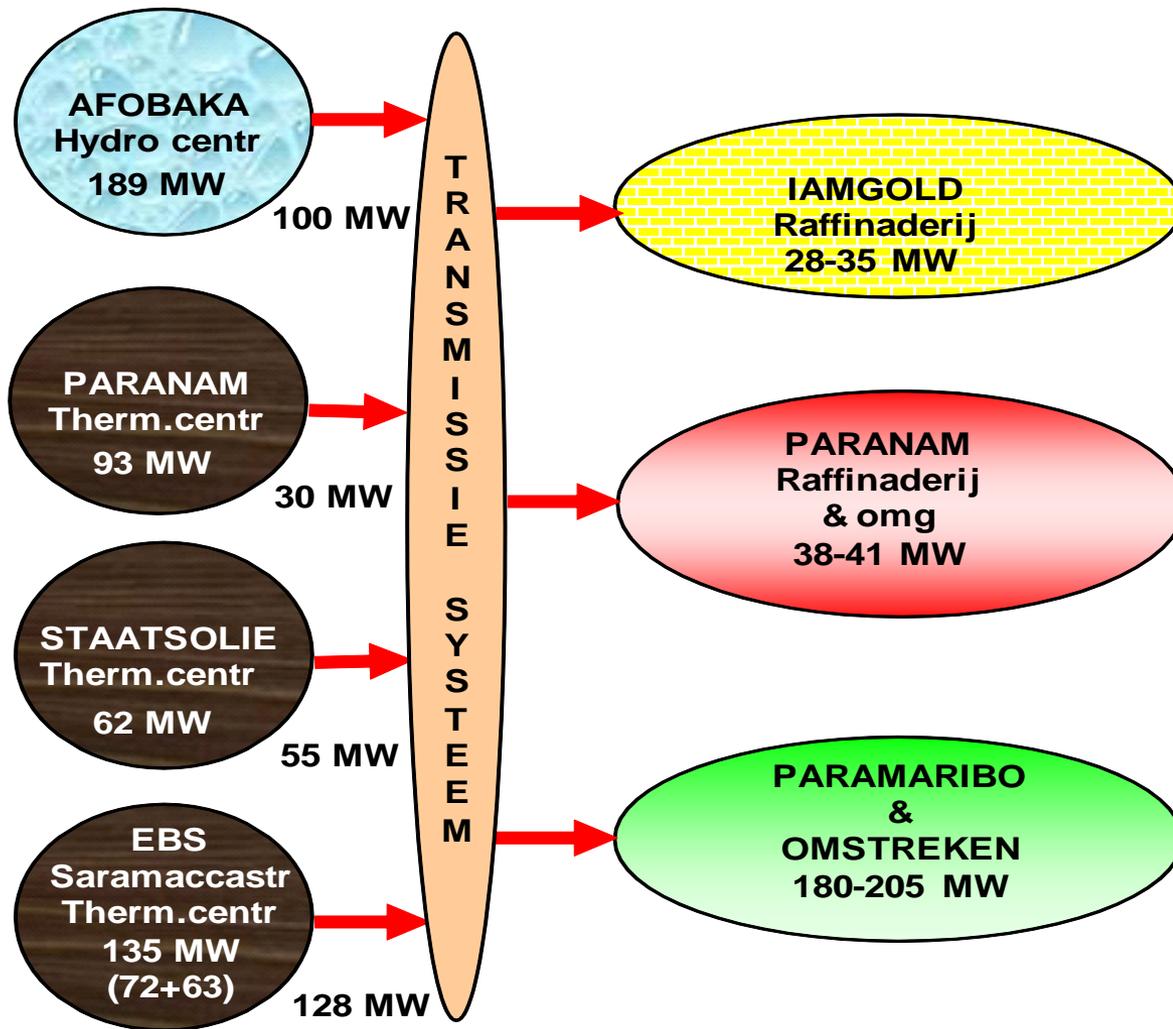
**Population of
500.000 people**



- People living in the coastal line (80 - 85%)
- People living in the Rural Area (15 - 20%)

Geographic execution





Capaciteit - Gem. output

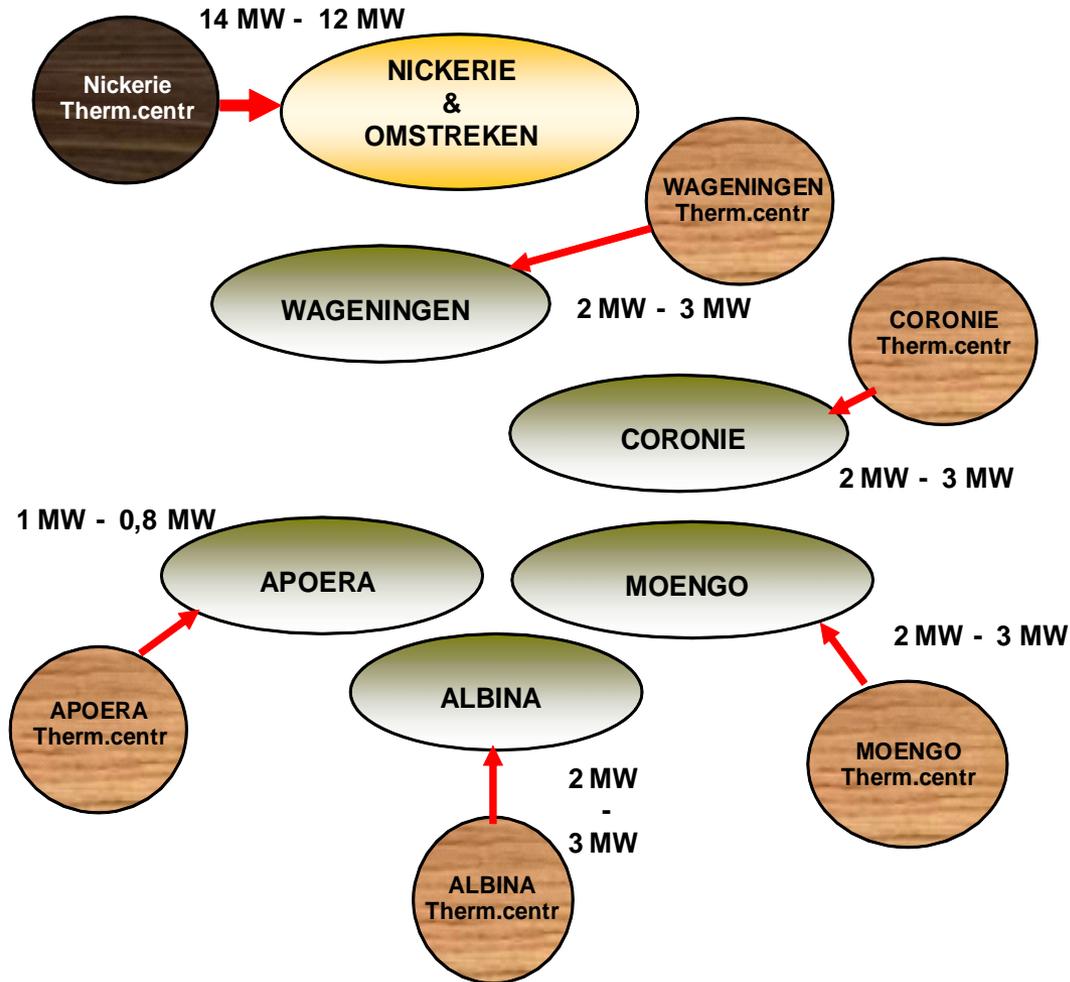
479 MW - 313 MW

Gemiddeld / Piekbehoefte

270 MW - 300 MW

Districten Electriciteitsvoorziening

nov.2014



Elektriciteitsvoorziening voor de afgelegen dorpen (in de kustvlakte en binnenland) wordt gedaan door D.E.V. van het Ministerie van N.H.

START RENEWABLE IN SURINAME

- Dam built from 1961- 1964 with a capacity of 180 MW.
- The dam was build mainly for Alluminium smelter.
- After the Alluminium center closed, a great deal of the energy is used for domestical use by the Grid company.



GENERAL POTENTIALS AND INITIATIVES ON RENEWABLE.

- ◉ Two major (1) Hydro power projects (Kabalebo - 800 mw)/ (2) Tapajai project to double the capacity of existing dam.
- ◉ Ethanol project from the State oil company.
- ◉ Biomass energy from rice husk.
- ◉ Large and small Photovoltaic projects.
- ◉ Small hydro plants in rural areas.

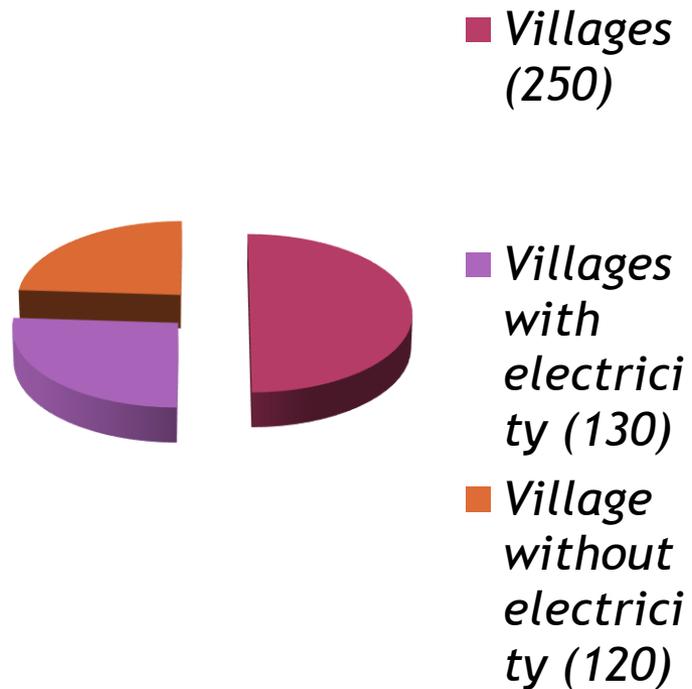
2014 SET UP OF 5 MW SOLAR FARM BY GOLD COMPANY.

- 5 megawatt solar energy installation for Gold Company.



BASIC FACTS RURAL AREA

Villages in Rural area



RURAL ELECTRIFICATION

- ⦿ 130 villages are supported with 5 to 6 hours at night through a micro grid and a diesel Generator.
- ⦿ Electricity is free in rural Areas
- ⦿ The cost per kwh is estimated around USD 1,- and above.

VARIOUS RENEWABLE INITIATIVES IN THE RURAL AREAS.

- Telesur
(telecommunication towers on Solar)
- All 56 polyclinics in rural areas on solar
- Water projects on solar.
- Two village projects



OPPORTUNITIES FOR RENEWABLE IN RURAL AREAS.

- Provision of electricity services to far off villages through renewable energy initiatives.
- Upgrading the educational system by providing schools and teachers residence more electricity through renewable energy.
- Solar Water projects

OPPORTUNITIES FOR RENEWABLE IN RURAL AREAS.

- ◉ Using the existing micro grids to implement hybride systems by interconnecting renewable initiatives with existing operating generators.
- ◉ Implementing standalone systems through micro loan or subject subsidy.

HURDLES FOR RENEWABLE IN THE INTERIOR

- ◉ WWP ? (Who will pay)
- ◉ Wide spread and difficult to reach communities.
- ◉ High operational cost. (transport etc.)
- ◉ Lack of knowledge on local and national level.
- ◉ The tension on what to emphasize on :
Technical aspects or social- economic aspects.

HURDLES FOR RENEWABLE IN THE INTERIOR

- ⦿ Lack of Government policy
- ⦿ Lack of effective financial tools such as micro loans.

INITIATIVES AND RECOMMENDATIONS.

- ◉ The Government is currently implementing with funding of the IDB a project to execute Pilot projects and Research on RE in rural areas. (4,9 Mil).
- ◉ Various projects through private and international funding.



INITIATIVES AND RECOMMENDATIONS.

- ◉ More coordinative work between Public and private sector.
- ◉ More emphasize on Renewable as a method, than as a goal on itself.
- ◉ More regional cooperation to learn from other countries.

INITIATIVES AND RECOMMENDATIONS.

- ◉ State and private actors work with the educational sector on standards for Renewables in Rural Areas.



THANK YOU !