

# **Meeting the Energy Needs of the Urban Poor: the Case of Electrification**

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**Jacmel (Haïti): City of Lights.  
Village de Dieu: From cheaters to honest clients.  
Two successful pilot programs.**

- How and why did Jacmel become and stay the city of Lights?
- How and why did the inhabitants of *Village de Dieu* go from stealing electricity to becoming regular clients?
- Wealth? Miracles? Or well designed strategies?

# Haiti and the Caribbean: a Culturally Diverse Basin



## **Haiti: a painful and glorious past, a barely livable present, a future to plan**

- Population: 8 million inhabitants
- 201 years of independence
- 1st Independent Black Republic in the world (1804)
- 2nd Independent Republic of the Americas after the USA
- Poorest country in the region
- An annual per capita revenue of only US\$ 260

# The Electrical Sector in Haiti

*In 1998, after:*

- *29 years of dictatorship by the Duvalier family*
- *12 years of political turbulence dragging the country to the depths of despair*
- The sector is managed by the Electricity of Haiti (l'Électricité d'Haïti, EDH) a state monopoly in charge of generation, transmission, distribution and sale of electricity throughout the country.
- EDH no longer has the means to meet the objectives defined by this mission
- EDH can only distribute a few hours of electricity per day throughout the country, including the capital, Port-au-Prince.

# The Electrical Sector in Haiti (cont.)

- Production barely meets 40% of demand (70% of production is thermal, 30% hydro)
- Power delivery is unstable and undependable
- Quality of service is extremely poor
- Non technical losses (energy used but unpaid for) reach over 50% of production
- The rate of collect is 60-70% of billing, which is only 35% of collected revenue.

# The Electrical Sector in Haiti (cont.)

- With the exception of P-au-P, the grid is not interconnected and is composed of isolated regions of production and distribution throughout the country.
- The rate of electrification of the country is only 10%.
- Jacmel is a center similar to the 15 others with respect to electricity.
- A city of 40,000 inhabitants, situated in the South-East of Haiti, with naturally picturesque charm and a particular potential for tourism

# Jacmel and the ACDI/CIDA Strategy



## How did Jacmel become the City of Lights?

- The electrical sector was subject to a severe deterioration starting 1986. The utility (EDH) is sick.
- In 1998 ACDI/CIDA isolated a part of this patient (Jacmel) to apply a therapy.
- With a level of losses at 50%, the company can survive its agony only with an injection of new capital or subsidies.
- The organization is very centralized and each isolated region represents a cost center.

## How did Jacmel become the City of Lights?

### The objectives of the ACIDI/CIDA strategy :

- Build a reliable electric grid and offer quality service 24 hours a day.
- Make the center able to cover its operating costs without financial help from the head office.
- **Goal:** to promote economic, social and cultural development, as well as tourism, in the city of Jacmel.

## **How did Jacmel become the City of Lights?** (Cont.)

- The ACDI strategy was based on an investment of CA\$ 6.5 million to:
  - Guarantee the available capacity based on the N-1 criterion,
  - Renovate the distribution grid
  - Organize the sales department
  - Restructure the company's internal organization

# How did Jacmel become the City of Lights? (Cont.)

Collaboration of an experienced execution agency (HQ) to:

- Train technicians, plan organize and implement a process of decentralized management
- Instate discipline in operations and rigor in the financial management of the new plant
- Regain consumer confidence
- Engage the authorities and citizens of Jacmel
- Implement a good motivation campaign
- Install a fundamental skill set
- Develop a group synergy

# How did Jacmel become the City of Lights? (Cont.)

## Relative to EDH:

- Acceptance and support by the central management of the proposed strategy
  - The status of “semi-autonomous” given to the new plant for technical and financial management
  - A reserve fund equivalent to 3 months operating expenses is formed. It will cover the starting expenses, but more importantly it will signal the challenge awaiting after 3 months
  - Plant management is sheltered from any political influence of the local authorities
  - A competent and motivated management team is appointed
- Jacmel became the first profit center among the 15 plants in the Provinces and manages its own operations, its revenues and expenses without assistance from the head office

# Why has Jacmel remained the City of Lights?

## ➤ **The Results :**

- A consistent service (24 hours a day)
- Everyone without exception becomes a client
- A rapid reduction of total losses to 25%
- An increase in the rate of collection to 80-90%
- Continuous improvement of the quality of service
- An engaged, motivated and responsible staff
- The decentralization of the administrative, commercial and financial functions
- The capacity of Jacmel to finance its operations, but not its own investments

# Why has Jacmel remained the City of Lights?

## ➤ **The impact of the results:**

- Strong growth of the regional economy (from 75 hotel rooms, the region now has 400 with 4 new hotels)
- Small commercial and industrial activities have developed significantly (cyber cafes, beauty parlors, refrigerated and frozen goods,...)
- Cultural life in Jacmel rebounded
- The quality of social life is improved
- A benefit that native Jacmelians don't want to lose.

# Lessons from the Experience

- **COMPLETE SANITATION OF JACMEL**
  - *The financially disadvantaged need consistent and quality service as well as the wealthy*
  - *People are ready to pay for different reasons depending on their means and their social status*
  - *People no longer want to live in the dark (solidarity)*
- ***This Centre is a reference, considered by many donors to be a successful pilot experiment which may help to improve the electrical sector in Haiti***

# The Flaws of the Experience

- The inadequacy of the tariff (a unique tariff throughout the country)
  - Inability of plant management to index the regional tariff (to follow the increase of fuel costs)
  - The clientele is not yet motivated towards conservation
  - Choice of technology for generation
  - Training, motivation of personnel, developing a team mentality
- The strategy applied to Jacmel, replicated elsewhere with adjustments with respect to these flaws, is capable of improving the electrical sector in Haiti

# Village de Dieu

An area of P-au-P where live 1200 families ( 6000 inhabitants) under human conditions

- Out of all basic services
- Fed completely by illegal connexions with a high risk of electro-choc
- How find the proper solution to satisfy the needs in electrical energy of this segment with incomes for EDH and spread it to other shanty town?

We're in year 2000

# Village de Dieu

- Village de Dieu has been kept to implement a pilot project
- Team for the planning and the implementation of the project was selected
- Total Cost (USD152,000)
- 50% participation solicited from the comity, about USD 40 from each family
- Many of them couldn't bear this initial expenses.

# Village de Dieu

- The electrical feeding made with one electric meter from which a group of houses are connected from fuses box.
- 5,10,20 small houses are connected to each fuses box
- Each family paid a fix amount according to its declared
- The management comity had a tariff equal to the product cost
- The management comity has a contract to collect the amount due with a remittance of 10 % of the collected amount.

# Village de Dieu

The results:

- Complete sanitation of the village,
- All families are become customers, no more illegal connections and pay their consumption
- Elimination of the other EDH of the village
- The control of the cheaters in the village
- Regularization of 900 illegal costumers
- Reduction of aggressions against the grid and risks of electrocution

# Village de Dieu

## Learning lessons

The residents of shanty towns also

- Are ready and want to become costumers
- Also want a quality of service
- Use electricity according to their means
- They are always on the watch to prevent theft of the electricity in their shanty town.

# Village de Dieu

## **Learning lessons ( cont.)**

- The collective meter represents a very important saving
- The level of costumers' consumption is so small that it takes a very long time to recover the cost of the meter

# Village de Dieu

## **Learning lessons (cont.)**

- The poor level of consumption often doesn't succeed in the meter turn
- Possibility of integrating the basic services to improve the quality of life for residents ( economic, social, educational )

# Pilot expériences of Jacmel and Village de Dieu

## Conclusion

- Jacmel experience will show that is possible to straighten the sector with a well thought strategy with adjustments with regard to the flaws
- The Village de Dieu experience will prove that is possible to go far away in electrification of large communities of shanty towns.
- Both experiences demonstrate that people pay when they have a continuous and good services and not because they are rich
- Both experiences recommend a gradual therapy instead of a therapy of choc

# Pilot experiences of Jacmel and Village de Dieu (cont. )

In may 2004, the international community and the haitian Government have defined a strategy for the sector after Aristide departure with these main objectives:

- Support the electrical sector by financing some projects (short term)
  - Modernize the sector through a management contract
  - Increase the rate of electrification of the country from 10% to 40% (2009) and 50% (2014) (medium term)
- The implemented strategy of those two experiences has served and their lessons will serve to any operator interesting to the management contract.

# Electricity /objectives of the millenium

Because electricity

- Allows children to study at night and have a better result
  - Brings nations near and allows to form people through different medias
  - Has facilitated industrial development and creates job
  - Facilitates the conservation and the transformation alimentary and industrial products
  - Uses as lever to give access to other services
  - Improve people quality life, and because
  - 2 billions (25%) world-wide population live without this basic service
- Can a person develop himself and bring a contribution to his country and to the future society without access to this basic service in a world in full race to reach objectives of millennium development?