Private Participation in rural electrification - Philippines

Washington

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Outline

❽ Background
- History
- Coverage
- Problems

❽ New Solutions – on grid
- Private Participation in Rural Electric Cooperatives (ECs)
- Regulatory improvement

❽ New Solutions – off grid
- Energy Services Contracts for new ‘Qualified Third Parties (QTP)
- OBA subsidy
Historical perspective

Rural electrification

1970
Municipal and small private systems
Rural Electricity Co-operative program launched, based on US model

1980

1990
100% Municipal Energization

2000
119 ECs (plus 20 IOUs) cover whole Philippines, with exclusive franchises
89% Barangay Electrification
80% Household Electrification

2004
100% Barangay Energization (‘06)
100% Household Energization (‘17)

Sector issues

1980

Sector Structure: National Power Corporation – Generation and Transmission, selling to Regional Distributors

1990
Bataan Nuclear plant cancelled
Power crisis

IPP program
Asian crisis (‘97)

Power glut

EPIRA 2001 – Classic Market Reform

Vertical disaggregation, retail competition, wholesale market
Structure of Electric Cooperatives

What goes wrong?

- National Electrification Administration
- National Power Corporation
- Elects

- Finance Supervision
- Wholesale Power

- Board
- Electric Cooperative

- Doesn’t pay for power
- Doesn’t repay loans

- Energy Regulatory Commission

- Inefficient. Tariffs below costs
- Regulates tariffs & services

- Customers
- Service and coverage suffer

- Revenue

- Power
Barangay electrification by EC

% of barangays in franchise electrified

Each bar is one Electric Cooperative
Household electrification by EC

Each bar is one Electric Cooperative
Financial performance by Electric Cooperatives

Average tariff 2002 US $c/kWh

Tariffs below costs for many
Modest operating profits
Nearly half making losses after interest payments (2002)

Operating profit (US$m)

Total profit (US$m)
Efficiency of ECs – not related to scale …

Operating cost per customer vs. number of customer

Number of connections

O&M cost per customer

$R^2 = 0.0002$
... or density

Operating cost per customer vs. Customers per km

R^2 = 0.0021
## Improvement options for Electric Cooperatives

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<th>Off-grid</th>
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<td>Third Party Provision in Unserved Areas</td>
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**Investment Management Contract - Dynamics**

- **Starting Point**: No Investment
- **Turn-around Phase**: Risk Capital from Contractor
- **Steady Growth**: Borrowing on EC Balance Sheet
- **Contract Termination**: Satisfactory level
Structure of IMC

- **Energy Regulatory Commission**
  - Regulates tariffs & services

- **Board**
  - Electric Cooperative

- **Investment-Management Contractor**
  - Delegation of Management

- **Electric Cooperative**
  - Share of profit
  - Elects

- **Customers**
  - Revenue
  - Power

- **Cost Plus**

- **Needs to offer price-cap regulation**
Third Party Participation in Off-grid electrification

1. DU waives areas
2. DOE publishes list of waived areas
3. DOE defines and publicizes Service Areas
4. Firms apply to be QTPs
5. Screened against Qualification Criteria
6. Given status as QTP
7. Competitive Tender
8. Energy Services Contract concluded

Coverage targets and service standards
Indicative “Socially Acceptable Tariff”

Cost of Service < SAT ⇒ Bid Tariff
Cost of Service > SAT ⇒ Bid Subsidy
Subsidy structured as OBA – cost per connection
Subsidy and tariff approved by ERC

Service Regulation
Tariff Regulation and Subsidies