



Ghana's Energy Sector: Opportunities for Research to Guide Policy Design and Implementation

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Ghana Power Sector

- ▶ Reforms initiated in late 1990s
 - Sector unbundled
 - Independent Grid Operator – GRIDCo
 - Regulators Established
 - Technical – Energy Commission
 - Commercial – PURC

- ▶ Status of Grid
 - Inadequate generation capacity
 - Tariff “under-recovery”
 - Chronic power shortages

Meeting Demand Growth

Increased Power Generation (new power plants)

⇒ Attractive tariff (cost recovery)

⇒ Assurance of payment (ability/willingness to pay)

⇒ Availability of fuel

Reduced Energy Losses

⇒ Investment in transmission & distribution

⇒ Reduced power theft

Increased Energy Efficiency in End Use

⇒ Behaviour change of consumers



What Tariff is “Sustainable”?

- ▶ Cost recovery + ROI is easy to calculate, but what about
 - Equity: level of income, regional pricing
 - Survey of power pricing in ECOWAS region, indexed to income levels and cost of living
 - Ability/Willingness to pay: What motivates this and is there a deviation between Ability & Willingness
 - Are Ghanaians able but unwilling to pay? If so why?
 - Is quality of service really the key to increased willingness to pay?

Increasing Energy Efficiency

- ▶ The Energy Commission promotes the Efficient use of Energy
 - Switch to CFLs and now LEDs
 - Ban of import of used refrigerators and air-conditioners
 - Standards and Labelling programme for lighting, refrigeration and air-conditioning
- ▶ Results mixed
 - Successful elimination of incandescent bulbs
 - Interest in LED bulbs prior to any legislation
 - Success of refrigerator rebate programme
 - ...but
 - Complaints about cost of efficient appliances
 - Resurgence of used refrigerating appliances
 - Poor choices in building design

What motivates “Energy Saving”?

- ▶ Is electricity price in Ghana too low to motivate energy saving?
 - What role can “smart metering” systems play in motivating saving?
 - Will prepayment metering motivate saving (by reducing non-payment)?
- ▶ Is there a cultural imperative working against energy saving?
 - Are awareness creation and public education campaigns the key tools required?

Universal Access to Electricity

Will require private sector participation

⇒ Economic tariff (cost recovery) or Subsidy

⇒ Assurance of payment (ability/willingness to pay)

⇒ Availability or access to capital

Ghana has a “policy” of equal tariffs throughout the country, and this has been applied to;

- Petroleum Products
- Electricity Services
- Water Services
- Gas Transmission Service

Uniform Tariff

▶ Some Contradictions

- Off-grid electrification requires higher tariff
- Poor rural communities appear willing & able to pay
- Higher tariff not permitted because it is anti-poor

▶ Questions

- Is uniform tariff or its level the problem ?
- Is rural willingness to pay “sustainable” ?

Thank You

