Energy Efficient Prosperity: IEA Energy Efficient in Emerging Economies COP 21 Side Event

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Ghana’s Policy on Energy Efficiency

Energy Efficiency Programmes

- Lighting retrofit programme 2007
- Refrigerator Market Transformation programme 2011
- Capacitor Installation Programme 2009
Electricity demand is growing between 6%-7%.

System losses in electricity distribution are about 25%.

Wastage in the end-use of electricity also estimated at about 30%. (2007).

Energy efficiency and conservation can help mitigate these high growth rates.

Reduction of losses in energy supply and more efficient use of energy would also mitigate the demand for energy.
Government is committed to ensuring efficient production and transportation, as well as end-use efficiency and conservation of energy.

**Challenge**

The challenge is to promote and finance energy conservation and efficiency.
The Government of Ghana with the advice of the Energy Commission procured and distributed for FREE 6 million CFLs as direct replacement of 6 million Incandescent Lamps

- Ghana is the first country in Africa to take such action.
- All 6 million lamps were distributed and installed in 3 months
Objectives of Lamp Project

- Peak electricity demand reduction 200-220MW
- Stabilisation of Electricity Grid System
- Reduction of Brownout and transformer overloads
- Reduction of Diesel and other Thermal generators to supplement the existing power generation mix
- Introduction of consumers to quality lighting technologies
Lamp transportation

Regions

Districts
Public Education Bill Boards/Media
Retrieved Incandescent Lamp
Results -1

◆ Peak Saving of 124 MW

◆ Energy Saving of 452MWh per day or 162.7GWh per annum

◆ At US$120/bbl, energy cost saving is US$3.3million per month or US$39.5million per annum.

◆ Between October 2007 and June 2008 Savings of US$29.6million was recorded.

◆ 2 Factories established to produce CFLs in Ghana employing 100 workers
Between Sept. 2007 and Sept. 2009

- Penetration of CFL increased from 3% to 79%
- Penetration of Incandescent decreased from 58% to 3%
- The average household income savings was USD36
- Electricity access rate increased without additional capacity
Effect of CFL on National Electricity Demand
Average Refrigerator in Ghana consumed 1,200kWh per annum

Large used refrigerator market share – 84%

Standards and labelling regime introduced in 2008

Law of prohibition of importation of used refrigerators passed in 2009

Estimated 2 million used refrigerators in use
Refrigerator Efficiency Rebate Scheme launched in 2012
Results -1

- The average consumption has been reduced from 1,200kWh to 385kWh per annum.
- 9000 used inefficient refrigerating appliance have been exchanged for the same number of new and efficient ones.
- The average consumer savings is 850kWh
- The direct and indirect savings of the project is 43GWh
- One refrigerator assembly has been set up. Small scale production has started.
Fig 2.3  Trended yearly imported refrigerating units by New and Used
Used Appliance Market
In an imperfect market, you need Standards and labelling to protect consumers
Thank You!

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