
Assessing the Multiple Benefits of Improving Product Energy Efficiency

Productivity, Innovation, Energy Access, and Services

Summary
7 April 2016, 12:00–14:00 GMT

Highlights of the discussion:

- A range of representatives from governments, international organisations, industry, civil society, and consultants from 13 countries participated in the fourth SEAD Policy Exchange Forum call (first call open to multiple stakeholders).
- The call featured an introductory presentation by the International Energy Agency on the multiple benefits that can derive from energy efficiency policies.
- Case studies from Ghana, Mexico, and India highlighted unintended positive benefits from EE programs, such as, creation of direct and indirect jobs and growth of local manufacturing.

Summary of Presentations:

International Energy Agency

- The Energy Efficient Prosperity concept recognizes that energy consumption needs to grow in order to improve standards of living and thus energy efficiency is key to doing even more with more
- Metrics of EE prosperity are difficult to define so IEA's initial approach has been to look at case studies.
- Case studies presented during an event held by IEA at COP21 link energy efficiency to improvements in businesses' performance and people's lives.
- IEA's [energy efficiency market report 2015](#) uses data to quantify the benefits of EE regarding avoided consumption, monetary savings, reduction in energy/fuel imports, and avoided GHG emissions.

Discussion:

- Economic impacts of EE investment were not included in the 2015 report. This type of information to be explored for future reports



- Future research areas to look at: what was the impact of shifting expenditure from other sectors of the economy to EE?; if households are spending less in energy in what other things are they spending their money and how is that affecting the economy?

Energy Commission Ghana

- Energy conservation is more cost-effective than generating energy
- Energy efficiency and conservation allows distribution of electricity to the unserved communities
- Power outages in Ghana were driven by a gap between supply and demand, system losses and inefficient appliances
- Ghanaian government took a series of actions (energy efficiency interventions) to address the issue:
 - The CFL replacement program resulted in cost savings for the government and an increased electricity access rate
 - Refrigerator market transformation program resulted in reduced average energy consumption, replacement of 9000 inefficient appliances and a refrigerators assembly plant set up
 - Installation of capacitor banks resulted in significant savings and the investment was paid within 10 months
 - Deep freezer campaign to collectively conserve energy

Discussion

- An unintended consequence of CFL replacement program was job creation via the establishment of 2 factories for CFLs. Including job creation as an explicit objective could create more support for future EE programs from governments
- The 2 factories for CFLs are private entities established with no government support
- Representative from Indonesia's Ministry of Energy and Mineral Resources showed interest in replicating Ghana's CFL program in Indonesia

National Association of Home Appliance Manufacturers (ANFAD) Mexico

- Tackling energy demand challenges through energy efficiency has lower costs than renewable energies
- There are multiple benefits of improving efficiency in society in general by creating awareness, creating economies of scale that reduce the cost of more efficient appliances benefiting vulnerable population, and increasing people's quality of life
- Impact of standardization in fridges - energy consumption was reduced by 66%
- Multiple benefits from the home appliance replacement program: social (direct and indirect jobs), user and subsidy savings, energy benefits, environmental benefits



Discussion:

- There has been export growth to the US and Canada from more stringent standards (or standards aligned with NA), but not the case for exports in Central America where the standards are less stringent
- Job creation was an unintended benefit for the program and resulted from the need to do proper disposal of the appliances that were replaced: jobs were created in disposal/recycling facilities and sales force

Energy Efficiency Services Limited (EESL) India:

- Discussion of the impacts of the LED program that distributed 770 million LEDs and replaced 35 million street lights. Some of these included demonstrating a successful business model for utilities, aggregating demand that reduced initial costs, ensuring quality was not compromised, among others
- The program has an online tool that monitors progress on real time, showing consumers the impact of the program and encouraging them to take a pledge
- Street lighting programs also had impacts on energy savings for municipalities, better luminosity and high public satisfaction
- The benefits of this program go beyond traditional energy efficiency impacts, including six fold growth in LED industry, enhanced local manufacturing, job creation, and satisfaction of consumers

Group Discussion:

Some of the topics covered during this open session were:

- How energy intensity can be used to assess the impacts of EE but needs to consider economic, population growth and other factors to disaggregate the effects
- Taking into consideration of rebound effects when analysing the multiple benefits of EE programs. Rebound effects can be direct (household level) and indirect (macroeconomic effects)
- How to communicate better the link between EE to growth and social development objectives to government officials. In Mexico, EE programs are explained in terms of the savings government can have in avoided electricity subsidies

If you have any questions to the presenters or to other country representatives, or would like further information, please contact the SPEx Coordinators, Nicole Kearney at nkearney@clasp.ngo, or Hans Alarcon at halarcon@clasp.ngo.