Incentive Programs: Accelerating Market Transformation for Energy Efficient Appliances

Energy Efficiency S&L Project Inception Workshop
Pretoria, South Africa
30 May 2013

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Definition of Incentive Programme:

A financial stimulus (subsidized loan, cash rebate, etc.) or awareness programmes, where the goal is to motivate private investment in energy-efficient equipment.
Why Incentives...?

• For governments seeking to develop and expand their energy efficiency policy strategy
• To complement S&L policies and help increase the penetration of most efficient products on the market
South Africa’s Energy Efficiency Potential

Cost-Effective Efficiency Could Flatten Residential Electricity Demand in South Africa

- Freezers
- Washing Machine
- Cooking Products
- Clothes Dryers
- Water Heater
- Refrigerator
- Air Conditioner
- Policy Potential
- BAU for Included Products
- Best Available Technology

Source: BUENAS, DTI
SEAD global techno-economic analysis can be used to design specifications for market transformation programmes.
Accelerating “super-efficient” products diffusion

- Codes & Standards
- Incentive Programs

Diffusion rate of super-efficient products

- Early Adopters
- Early Majority
- Late Majority
- ‘Laggards’

Time
Different Incentive Programmes

Manufacturing
Upstream Programs

- Barriers Addressed:
  - Uncompetitive price
  - Lack of available product

- Main Advantages:
  - Lower transaction costs
  - Multiplier effect on retail price

Distribution & Retail
Midstream Programs

- Barriers Addressed:
  - Lack of available product
  - Lack of information

- Main Advantages:
  - Increases retailers knowledge of energy-efficient products
  - Meets customers at point of decision

Consumers
Downstream Programs

- Barriers Addressed:
  - Uncertainty of savings
  - Lack of information
  - Limited access to capital

- Main Advantages:
  - Allows incentive to be directed to specific groups e.g., the low income
  - Announcement effect*
<table>
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<tr>
<th>Programme</th>
<th>What is it?</th>
<th>Advantage</th>
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<tr>
<td>TAX CREDIT</td>
<td>Income tax credits or tax deductions - reduces expense of purchasing energy efficiency systems</td>
<td>Easy implementation</td>
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<td>REBATES</td>
<td>Price reduction to consumers to purchase new energy efficient appliances</td>
<td>Spillover effects to other customers</td>
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<td>UPSTREAM</td>
<td>Subsidies for manufacturers or retailers to bring down wholesale price of energy efficient appliances</td>
<td>Leverage investment, limit admin costs, increase product availability at point of retail</td>
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<td>REPLACEMENT</td>
<td>Replacing inefficient residential appliances before end of their useful lives with significantly more efficient ones</td>
<td>Low-income households, recycle materials; comply with Montreal Protocol to remove CFCs</td>
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<td>ECO POINTS</td>
<td>Awards system offering consumers carbon points, redeemable for discounts in price or cash, for high-efficiency electronic and electrical appliance purchases</td>
<td>Promoting low-carbon lifestyles by raising consumer responsibility and awareness</td>
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Case Study : SEEP in India

• Voluntary upstream subsidy programme
• Incentives for 5 million “super-efficient” fans over 3 years (1\textsuperscript{st} phase)
• “Super-efficient” fan will consume 35W, compared to market average of 70W
• “Super-efficient” fans will be more efficient than the 5-star rated, most-efficient, 52W fan
Case Study: Ghana Refrigerator Program

- ‘Promoting of Appliance Energy Efficiency & Transformation of the Refrigerating Appliances Market’
- Pilot Rebate and Exchange Program launched June 2011
- Pilot runs until mid-2014
- Downstream rebate program
- Provides residential electric utility to customers with a voucher for ± USD105 per unit
- Aims to replace 50,000 refrigerators
- Voucher for units rated between 2 – 5 stars
- End goal to save 216 GWh
Incentive Programme Benefits

• Provide a source of cost-recovery on electricity subsidies by reducing electricity consumption
• Increase penetration of “super-efficient” appliances
• Go beyond S&L policies – accelerating pace of technology to “super-efficient” products
• Prepare market for more stringent S&L programme
• Support local industries
Lessons Learned

• Value of effective monitoring and evaluation to measure success of programme

• Incentives should not be viewed as a permanent instrument - can be phased out as cost of efficient products decreases over time

• Financial incentives for most efficient products only
  – Impact of market transformation: incentives no longer effective if product has 30-40% market saturation

• Manufacturer involvement in programme design – particularly in upstream programmes
SEAD Incentives Activities

Incentives Database: Resource for policy makers and programme administrators of countries’ incentive programmes to facilitate Benchmarking and Programme Design

LBNL Energy Efficiency Revenue Analysis tool (LEERA): Compare cost of energy savings to cost of supply and analyze opportunity to design incentive programs, notably in subsidized economies

Upstream Programme Guidebook: Sets out framework for successful programme design based on current implementation of Indian Super-Efficient Equipment Programme

Webinar and Workshop: To aid and inform policy makers and programme administrators in SEAD countries on incentive programme design
Thank You!

U.S. Department of Energy (DOE)
Lawrence Berkeley National Laboratory (LBNL)
Collaborative Labeling and Appliance Standards Program (CLASP)