Standards & Labeling Program
M&V protocols

Abha Shukla
Secretary,
Bureau of Energy Efficiency
Legal Framework for Energy Efficiency

- Energy Conservation Act enacted in 2001
- Bureau of Energy Efficiency set up as the nodal central agency
- State Designated Agencies at the state level created for implementation of the Act.
- Energy Conservation Act, 2001, overcomes some market barriers by enabling:
  - Setting of minimum energy standards for, and affixing energy-consumption labels on appliances and equipment
  - Promulgation of Energy Conservation Building Codes
  - Energy use monitoring, verification and reporting by large energy users, and the establishment of energy consumption norms for these consumers- Creation of cadre of Energy Management professionals in the country
Mission- S&L Programme

• To reduce overall energy consumption by use of Energy Efficient equipments/appliances 18 BU by 2012 (~3000 MW).
Standards and Labeling program is a key thrust Area of BEE. Central Government, under the Energy Conservation Act, 2001 has powers to:

- Direct display of labels on specified appliances or equipment.
- Enforce minimum efficiency standards by prohibiting manufacture, sale, and import of products not meeting the minimum standards.
Standards & Labeling Programme

- To create appropriate legal and regulatory environment for energy efficient end use products
- To provide the consumer an informed choice about energy saving by using efficient devices
- To gear up Indian industry to compete in markets that have made/ are making such standards mandatory eg. US or EU
- To stimulate market transformation in favour of energy efficient equipments and appliances- both from supply and demand side
- To reduce overall energy consumption by use of 20 such equipments/ appliances- 18 BU by 2012 (~3000 MW)
- To provide assistance/ support to Small & Medium Manufacturers
- Scheme approved for Rs. 47.71 crores; fund fully utilized, and ECE submitted for Rs. 22 crore.

The National Energy Labeling Programme launched by Hon’ble Union Minister of Power on 18th May, 2006.
Benefits of EE S&L Programs

- Reduces capital investment in energy supply infrastructure.
- Enhances national economic efficiency by reducing energy bills.
- Enhances consumer welfare.
- Strengthens competitive markets.
- Reduces pollution and helps meet climate change goals.
- The harmonization of EE S&L programs often brings additional benefits:
  - Reduces program costs by adopting existing program;
  - Avoids or removes indirect barriers to trade.
Market transformation

Number of Customers

Energy Intensity

“Pull” with labels

“Push” with standards

Market transformation

Business as usual
**Institutional framework for regulation**

- **BIS – National Standards Body**
  - Formulation & Implementation of National Standards
  - Production certification, Quality system certification, EMS certification etc.

- **Bureau of Energy Efficiency (BEE)**
  - BEE is established to implement & monitor the Energy Conservation Act, 2001
  - One of the key thrust areas of EC Act, 2001 is Standards & Labeling Programme
  - Formulation of Energy Efficiency Standards.

- **Laboratories accredited by National Accreditation Board of Laboratories**

- **Educational Institutions.**

- **Manufacturers and Manufacturing Associations**

- **Consumer Organizations**

- **Ministries and key stakeholders.**
Products covered under Indian S&L Program

Current List
1. Frost-free Refrigerators
2. Tubular Fluorescent Lamps (TFL)
3. Air-conditioners
4. Direct cool /Frost Free Refrigerators
5. Distribution Transformers
6. Motors
7. Pump sets
8. Ceiling fans
9. LPG Stoves
10. Colour TVs
11. Storage Water Geysers
12. Washing Machines

Launched on 18th May 2006, for 4 products by BEE
More Stars = More Savings

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The Building Blocks of Energy Efficiency – Industry + Government

Energy Efficiency

Minimum Energy Performance Standards

Verification of Ratings

Testing and Rating Standards

Role of BEE
M&V Protocols-Governing body

Recommend to the Bureau on the following issues:

• Enforcement of provisions of the Act.
• Develop the criteria for deciding whether challenge test and further actions should be undertaken or not.
• Verification of the legitimacy of challenges to the label, and further action
• Selection of samples for verification and challenge testing
M&V Protocols-Scheme

The scheme seeks to create a new market for energy efficient products by not only carrying out a sustained programme for awareness and education but also putting in place institutional structure to –

• Oversee implementation at National level with involvement of States and other stakeholders.

• **Conduct market research and situation analysis** for each of the new equipment to understand the key indicators concerning the market, conservation potential and impact on national energy consumption.

• **Conduct research to arrive at parameters to be tested, test procedure to be adopted, collection of sales literature and efficiency levels and assess availability of NABL accredited laboratories for testing to assist the technical committee in arriving at informed decisions.**

• **Conduct engineering and economic analysis to arrive at optimum energy performance standards** and this would be the basis of discussions at the technical committee meetings.
M&V Protocols-Implementation

For day to day monitoring of the programme, there is a need for an institutional mechanism in form of an Independent Agency for Monitoring and Evaluation (IAME) to undertake:

- Scrutiny of application forms
- Conducting physical verification
- Selection of samples of equipments
- Getting the test checks done from designated laboratory;
- Witness the verification testing,
- Compilation and submission of test check results
Verification Testing - (1) The NSLIC shall arrange to oversee the oversight of verification testing for each equipment as under:

- At least one sample of each star labeled product is tested by designated lab.
- In case of failure a second test may be carried out with twice the initial test sample size, and all the samples should pass the test. The applicant will bear the expenses related to the second test.
- In case the equipment fails the second test, the Bureau directs the applicant to:
  1. Correct the label level or remove the defects or deficiencies.
  2. Withdraw all the stocks from the market to change the label.
  3. Change particulars/information on the advertising material withdraw the authority to affix labels.

In case the manufacturer fails to comply, the Bureau can:
  1. Notify the consumers by such means as it may consider necessary.
  2. Recommend the initiation of adjudication proceedings.

- The efforts resulted in saving of 3300 MW till 2009-2010.
Priorities For The Beginners

• Harmonization of standards with International standards.
• Information sharing to establish optimum technological standards best suited for the country.
• Knowledge sharing on required policy interventions for establishment of SOP.