Energy Conservation & Bureau of Energy Efficiency

## **Energy Efficiency**



- Energy efficiency is "Using less energy to provide the same service/output".
  - Improving energy efficiency can make a real difference. It saves money, reduces carbon emissions and
- decreases your country's dependence on foreign energy supplies... all at the same time!





# **Bureau of Energy Efficiency**



### Energy Conservation (EC) Act 2001

- Norms for Energy
  Intensive Industries
- Standard & Labeling
- Energy Conservation Building Code
- Demand Side
  Management
- Certification of Energy Professionals



BEE Established on 1<sup>st</sup> March 2002 under EC Act

- Implement regulatory and promotional functions of EC Act.
- Reduce Energy
  Intensity of our country
- Has State Designated Agencies in each state for enforcement and awareness





## **Functions of Bureau**



**Functions of the Bureau are as follows:** 

- The process and energy consumption standards required to be notified;
- The labeling of certain equipment requiring some input of energy, along with the prescription about the display of standards upon such labels;
  - To notify users or class of users as 'designated consumers' under this law.

# In addition to these, the Bureau according to its functions under the law has to take suitable steps to:

 create awareness and disseminate information for efficient use of energy and conservation

### training of personnel;

- strengthen consultancy services;
- promote research and development in the field of energy efficiency
- the develop good testing and certification procedure;
- promote use of energy efficient process, equipment, devices and systems;
- promote innovative financing of energy efficiency projects; etc.





# **BEE Portfolio**





# Why Star Labeling?



- Wide variation in energy consumption by products of manufacturers is observed.
- Information on energy consumption is often not easily available, sufficient or easy to understand from the nameplate.
- Lead to continued manufacture and purchase of inefficient equipment and appliances.

### **History and Success**

- Started in Poland way back in 1962
  - Worldwide 65 countries implemented including California USA in 1976
  - Australia, Canada, China, Brazil, Thailand, Japan, and the United Kingdom (U.K.)







### Brand – Star Label





- Voluntary labels for refrigerators and air conditioners introduced in December 2006
- Aggressive advertising and outreach promoted labels as a brand of superior products – manufacturers piggybacked on label advertising
- Labeled products bought for check testing
- Labeling seldom works if payback period is more than 4-5 years; maximum sales is of products with 2-3 years payback





### Journey so far.



Enactment of EC Act Establishment of BEE	First voluntary star labeling programme for Air conditioners and Refrigerators launched	12 Appliances included in voluntary labeling Programme	4 Appliances covered in Mandatory labeling Room AC Frost Free Ref Tube-lights Distribution Transformer	21 Appliances in labeling program 8 Mandatory appliances	10 Mandatory appliances by 2018 Star labeling for cars
2001-2002	2006	2007-2010	2010	2011-16	2016 onwards



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## What is standard or label?

### ENERGY IS LIFE BEEE CONSERVE IT

#### What is Standards?

- Prescribe limits on the energy consumption (or minimum levels of the energy efficiency) of manufactured products.
- "Standards" commonly encompasses two possible meanings:
  - well-defined test protocols to obtain a sufficiently accurate estimate
  - target limits on energy performance

#### What is Label?

- Describes energy performance (in the form of energy use, efficiency or energy cost)
- "Labels" mainly give consumers the necessary information to make informed purchase. There are two types of labels:

Comparative Label	Endorsement Label
Allow consumers to compare the	Provide a 'certification' to inform
energy consumption of similar	prospective purchasers that the product
products, and factor lifetime running	is highly energy efficient for its
cost into their purchasing decision	category.





## **Type of Labels**









# **Typical Cycle for Each Appliance**





Bureau of Energy Efficiency



**ENERGY IS LIFE** 

BEE

# Voluntary to Mandatory Labeling



		Mandatory Phase	
Voluntary Phase	<b>Transition Phase</b>		
After 2-3 years of the launch of the voluntary scheme, <b>Bureau</b> conduct market assessment to evaluate the market transformation; <b>Study</b> for enhancement in technology and related institutional requirements for transition from voluntary to Mandatory Phase	For transition: BEE sends draft proposal to Ministry of Power. Once approved by MoP, proposal is forwarded to Ministry of Law for legal vetting. Draft approved by MoL sent back to MoP. Draft regulations published in official gazette for seeking public comments Draft regulations, modified if required and again sent to MoP and MoL.	After regulation is notified in the official gazette, it becomes mandatory to display the star rating label on the appliance from the date of commencement of the regulation in the public domain.	
	<b>Once approved</b> , regulation is notified in official gazette		





### **List of Appliances**





### Where info is available?





### www.beestarlabel.com

### Search "bee star label"





# **Star Labeling Impact**





# **Star Labeling Impact**









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### **Market Transformation**









### Thank You for Your Kind Attention