



Overview of India's Standards and Labeling Program

8th October 2025



Flagship Programs of BEE



Buildings Energy Efficiency

Energy Conservation Building Code



Star label for Appliances

Standards and labeling



Perform, Achieve and Trade (PAT)

Energy Efficiency in Large Industry



Small and Medium Enterprises (SME)

Energy Efficiency in Small & Medium Industry



State Designated Agencies (SDA)

Energy Efficiency in States



Demand Side Management (DSM)

Energy Efficiency Through Demand Side Management



Journey of S&L Program



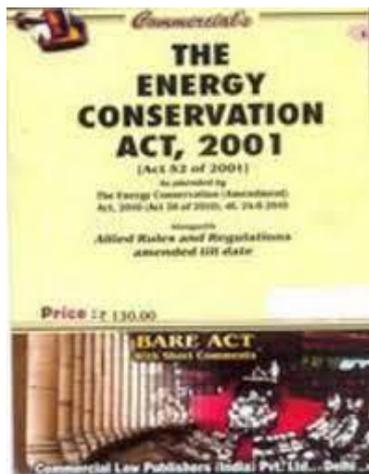
2001

Energy Conservation Act enacted



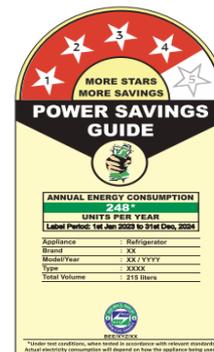
2006

Voluntary Labeling program launched for 2 appliances (AC and refrigerator)



2002

The Government of India set up BEE on 1st March 2002 under the provision of the Energy Conservation Act, 2001



2025

41 appliances covered under S&L program
17 under mandatory and 24 under voluntary phase





Institutional Framework



Ministry of Power (MoP)

Bureau of Energy Efficiency (BEE)

Standards and Labeling (S&L) program

Started in 2006 with 2 appliances. Currently, 41 appliances are covered



Objective of S&L Program



Scheme:

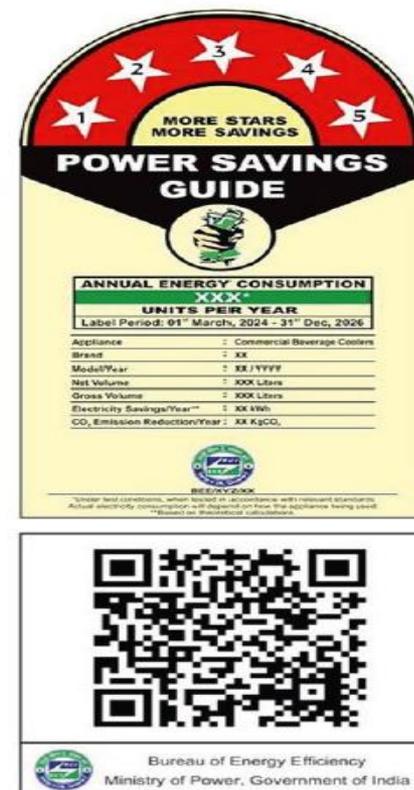
- ❑ The Bureau of Energy Efficiency, Ministry of Power launched Standard & Labeling (S&L) program for appliances/equipment under section 14 of the Energy Conservation Act, 2001.

Objective:

To reduce the end use energy consumption of appliances without diminishing the products quality.

To create awareness amongst the consumers, to make informed decision considering the cost effectiveness & energy performance while purchasing appliances .

To monitor and verify energy savings that incur annually through sale of energy efficient appliances.





Appliances Covered Under S&L Program



Mandatory

1. Frost Free Refrigerator
2. Direct Cool Refrigerator
3. Deep Freezers
4. Room Air Conditioner (Variable Speed)
5. Room Air Conditioner (Fixed Speed)
6. RAC (Cassette, Floor Standing Tower, Ceiling, Corner AC)
7. Light Commercial AC Fixed Speed
8. Stationary Storage Type Electric Water Heater
9. Tubular Fluorescent Lamps
10. LED LAMPS
11. Ultra-High Definition (UHD) Televisions
12. Colour Television
13. Distribution Transformer
14. Ceiling Fan
15. Chillers
16. Washing Machine (Semi/Top Load/Front Load)
17. Domestic Liquefied Petroleum Gas Stove (*To be effective from 1st January 2026)

Voluntary

1. General Purpose Industrial Motor
2. Agricultural Pump Set
3. Domestic Gas Stove
4. Computer
5. Ballast
6. Office Automation Products
7. Diesel Engine Driven Moonset Pumps for Agricultural Purposes
8. Solid State Inverter
9. Diesel Generator Set
10. Microwave Oven
11. Solar Water Heater
12. Air Compressors
13. High Energy Li-Battery
14. Tyres/Tires
15. Side by Side/Multi Door Refrigerator
16. Pedestal Fan
17. Table/Wall Fan
18. Induction Hob
19. Solar photovoltaic module
20. Packaged Boiler
21. Commercial Beverage cooler
22. Grid Connected Solar Inverter
23. Refrigerant Compressor
24. Evaporative Air Coolers
25. EV Charger



Total No. of Brands and Models Registered



Mandatory



Total Brand registered – **2949 Nos.**

Total Model Registered – **22441 Nos.**

Total Production Data in 2023-24 – **585 Million**

Voluntary



Total Brand registered – **1017 Nos.**

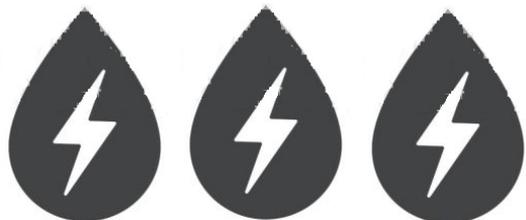
Total Model Registered – **8252 Nos.**

Total Production Data in 2023-24 – **2.4 Million**

Total Brand Registered till date – 3,966
Total Model Registered till date- 30,693



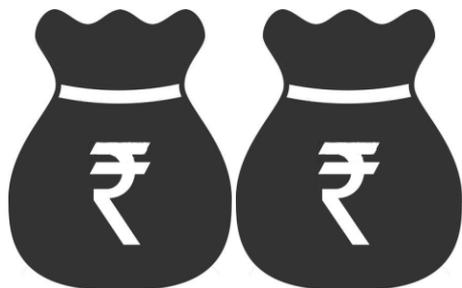
Key Achievements of S&L Program in FY 2023-2024



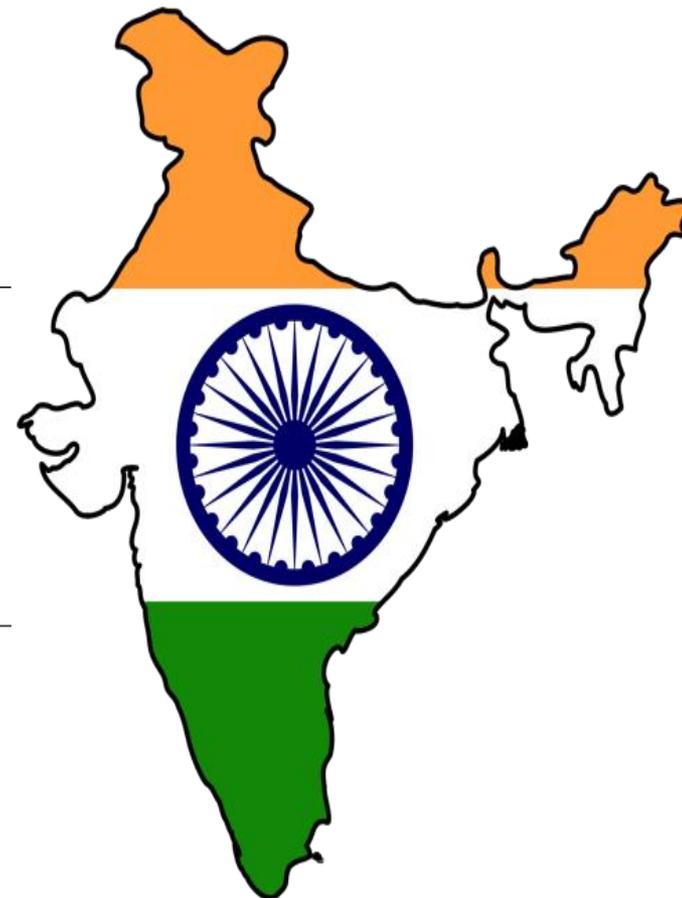
Electricity Saved
89.84 Billion Unit



Equivalent CO₂ Emission
Reduction
63.7 Million tons



Equivalent Cost Saving
INR 56,535.8 Crore



Source: BEE_India_Energy_Scenario_Report-2024.



Type of Labels



Comparative Labels

POWER SAVINGS GUIDE

ANNUAL ENERGY CONSUMPTION
248*
UNITS PER YEAR
Label Period: 1st Jan 2023 to 31st Dec, 2024

Appliance	: Refrigerator
Brand	: XX
Model/Year	: XX / YYYY
Type	: XXXX
Total Volume	: 215 liters

*Under test conditions, when tested in accordance with relevant standards Actual electricity consumption will depend on how the appliance being used.

Endorsement Label

ENDORSEMENT LABEL

RECOMMENDED

Overall Efficiency (η) - XX%*

Label Period : 1st March, 2024 to 31st December, 2025

Equipment	: Solar Inverter
Brand	: XXXX
Model	: XXXX
Year of Manufacture	: XXXX
Rated Capacity (kW)	: XXXX

*Under test conditions when tested in accordance with relevant standards and given procedures in schedule.



POWER SAVINGS GUIDE

LUMINOUS EFFICACY (lm/W)

108*

Label Period: 1st July 2023 to 30th June 2026

Appliance/Type	: TFL/XX
Brand	: ABC
Model/Year	: XYZ/YYYY
Rated Power	: XXX (Watts)
Rated Luminous Flux	: XXX (lumens)
Rated Life	: XXX (hours)
Colour Temperature	: YYY(K)
Electricity Savings/Year**	: XX kWh
CO ₂ Emission Reduction/Year**	: XX KgCO ₂

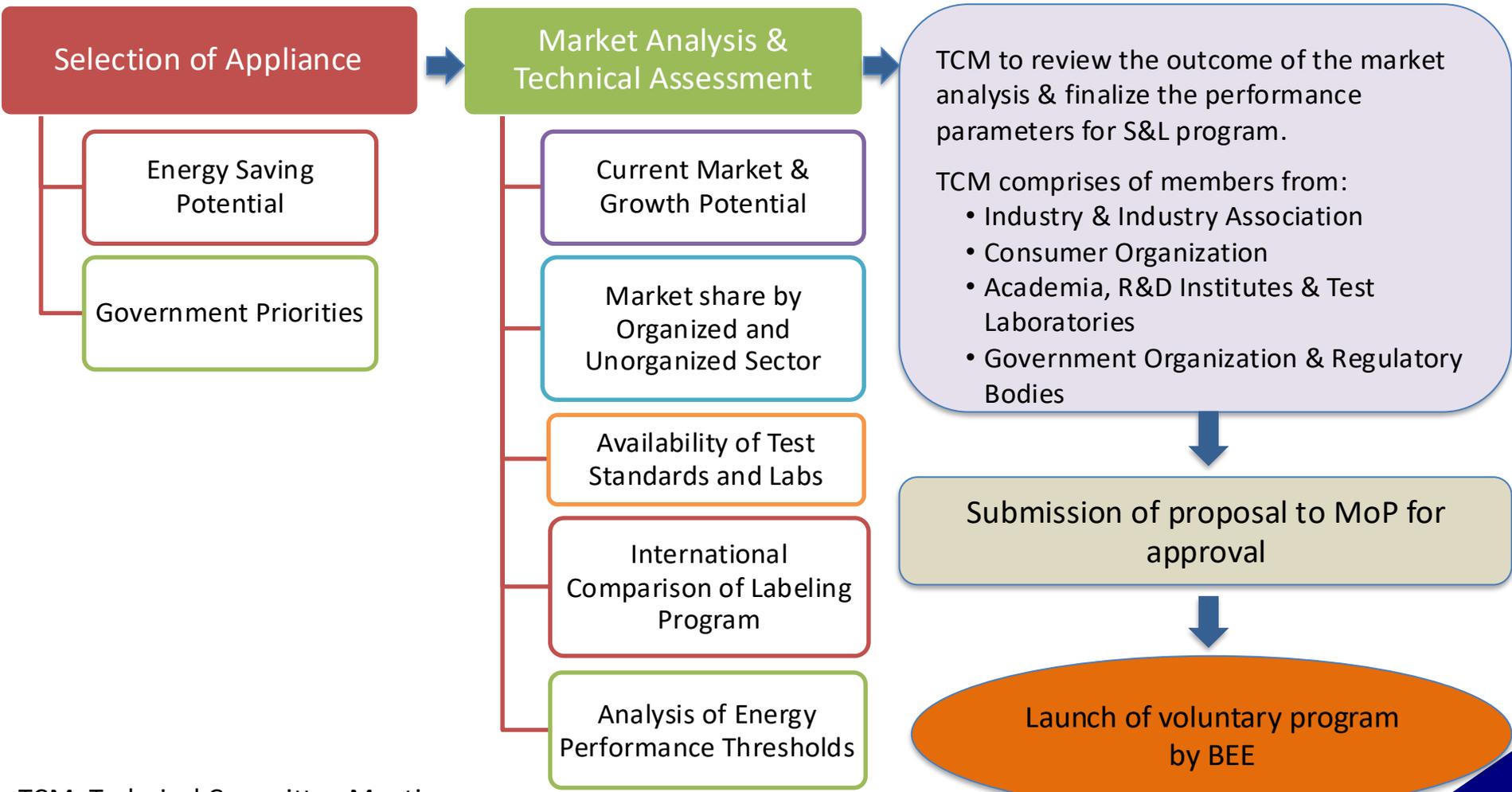
*Under test conditions when tested in accordance with relevant standards. Actual efficiency will vary as per site conditions.
**Based on the theoretical calculations.



Development of S&L Program



Launch of S&L Program for appliance(s)



TCM: Technical Committee Meeting



S&L Program Development & Implementation in India



- Market analysis & technical assessment
- Test standard analysis
- International review
- Efficiency thresholds



- Assessment of market transformation
- Technical assessment
- Regulation and notification

- Lab capacity building
- Retailer training program
- Consumer awareness and outreach through social, print and electronics media

- Operations & enforcement manual – **DISHA** (Dissemination of Star Labeling in Household Appliances)
- Check testing
- Challenge testing
- Market surveillance
- Impact evaluation



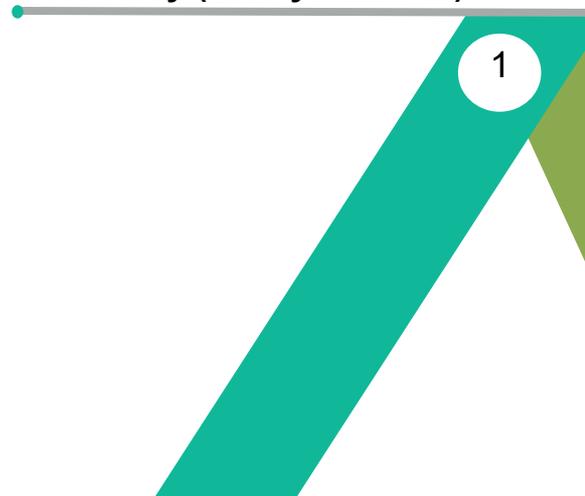
Achievements of S&L Program in Calendar Year 2024 and 2025



11 Appliance policies revised and 6 policies launched

- 1,2,3. Room ACs (Fixed, Variable and Cassette type)
- 4. Ceiling Fans
- 5,6. Refrigerators (FFR & DCR)
- 7. Color TV
- 8. UHD TV
- 9. Deep Freezer
- 10. Distribution Transformer
- 11. Light Commercial ACs

Mandatory (Policy Revised)



Mandatory (Gazette to be published)

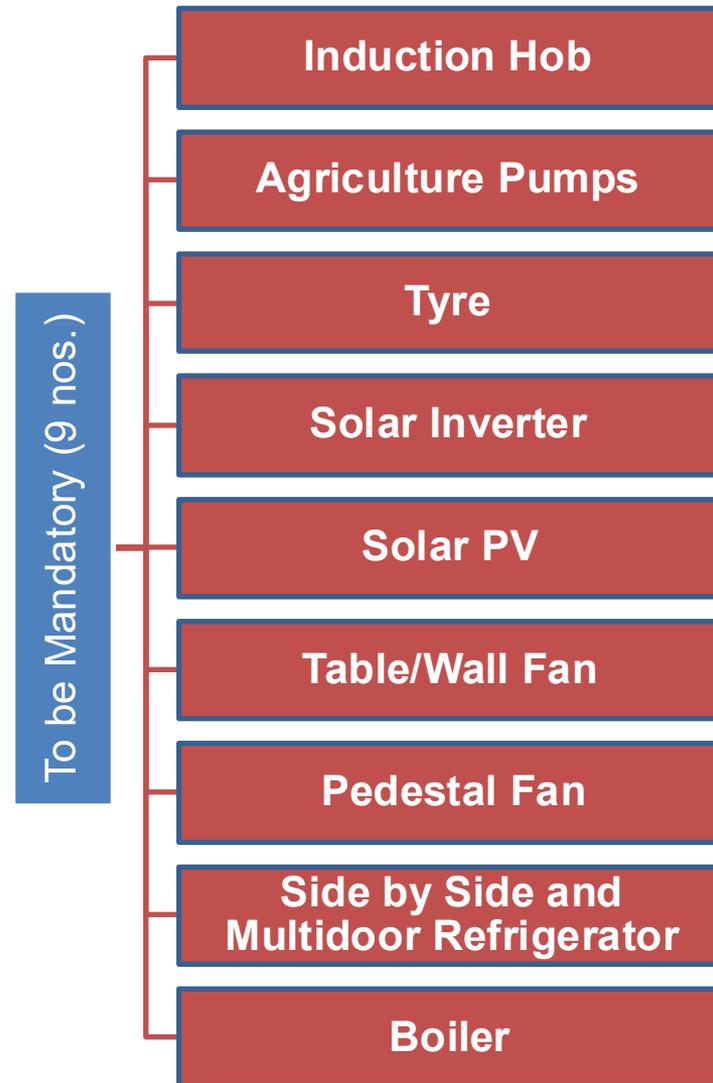
- 1. Chiller
- 2. Water heater

New Appliances Launched

- 1. Packaged Boiler
- 2. Visi Cooler
- 3. Solar Inverter
- 4. Refrigerant Compressor
- 5. Evaporative Air Cooler
- 6. EV Charger



Appliance(s): Transition into Mandatory Phase





Photos of New Products' Launch - 2024



Packaged boiler



Visi Cooler



Solar Inverter



Overview of MV&E under S&L Program



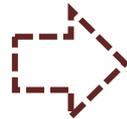
Check Testing



BEE or SDAs conduct product testing to ensure that product models meet the performance as claimed on the label



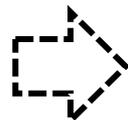
Challenge Testing



BEE conducts testing on receipt of written complaint against a any registered product



Market Surveillance



Conducted by BEE or SDA to check the accuracy, correctness and validity of label for the products sold in the market



Operation Manual



- Operation Manual (**DISHA**) - A User guide to promote Star Rated Appliances in India; available on BEE's Star Label portal
- Manual includes information on:
 - Institutional mechanism under S&L program
 - Appliance/equipment selection procedure
 - Brand and Model registration
 - Timeline for application processing
 - Fee structure
 - Method of affixing the label
 - MV&E of S&L program





BEE's S&L portal



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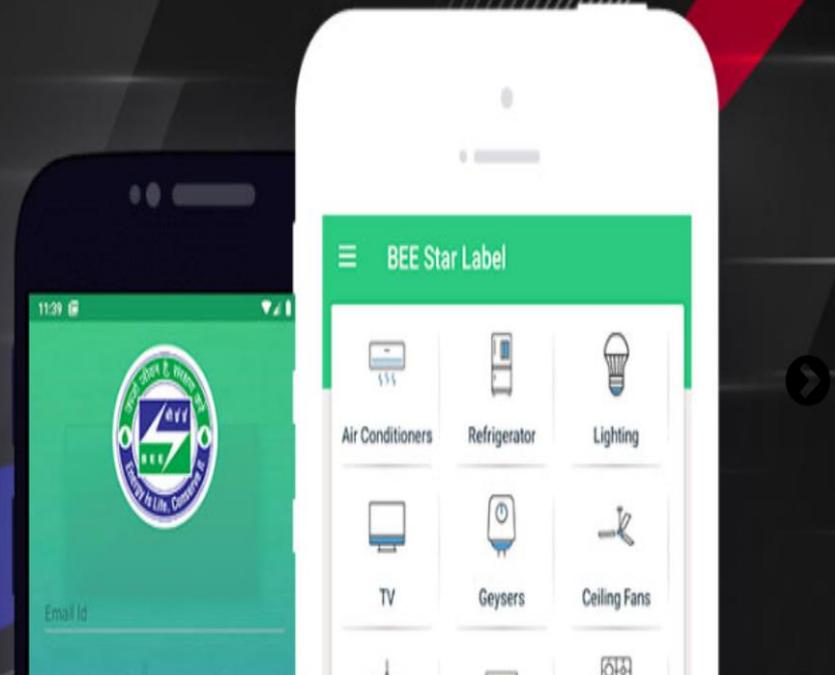
Mandatory Appliance Voluntary Appliance

Addendum in Disseminating Star Labeling in Household Appliances

BEE Star Label

Get Our **UPDATED** Mobile App Now!

Available on Both
Google Play & App Store



Website: www.beestarlabel.com



Future Plans



Expand the coverage of the S&L Program from 41 appliances to 50 appliances by 2030 to meet India's climate goals.

Strengthening the compliance framework through collaborations with States Governments

Aligning India's Energy Efficiency Standards with Global Best MEPS for Key Appliances

Harmonize of energy efficiency standards with South Asian countries



Thank You





Development of S&L Program



Phase-2: Transition from Voluntary to Mandatory Phase

Market study to evaluate the market adoption and average efficiency
(after 2-3 years)



Final recommendation by Technical Committee for transition to mandatory
phase



Submission of proposal to MoP for approval



Ratification by Ministry of Law and Justice

Published in Gazette of India



Implementation Mechanism of S&L Program

