



**NATIONAL EDUCATIONAL AND TRAINING
PROGRAMME (NETP)
ON
STANDARDS & LABELING
(Refrigerators and Air conditioners)**



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**Bureau of Energy Efficiency (BEE)
Ministry of Power
Government of India**

Supported By



National Educational and Training Programme (NETP) on Standards and Labeling (Refrigerators and Air conditioners)

Introduction

The Standards and Labeling programme is one of the major thrust area of BEE. The National Energy Efficiency labeling programme was launched on 18th May 2006 by Ministry of Power, Govt. of India, start with Frost free Refrigerators, Tubular Fluorescent Lamps. At present the voluntary labeling programme has been introduced for Air conditioners, Direct cool refrigerators, Distribution Transformers, Motors, Agricultural pump sets, Geysers, Colour Television, LPG stoves and Ceiling fan.

The star rating labels are informative labels fixed on manufactured products which describe the product's energy performance (usually in the form of energy use, efficiency or energy cost) and rate the product on a comparative scale, thereby providing consumers with necessary information to enable making informed purchase.

Mass media campaign through electronics and print media was created for energy conservation awareness for energy end users to purchase energy efficient BEE star labeled equipments/appliances, also it is aimed to educate the point of sales persons who is playing vital role to sale equipments/appliances.

Objective of the programme

To increase the awareness level about BEE star labeled products amongst channel partners the National Educational and Training programme (NETP) was initiated for 'Point of Sales Persons' of Channel Partners who is dealing with consumers on a day to day basis for selling home appliances. The programme was designed for conducting a half day workshop for the sales executives at different cities of the country.

The objective of the workshop is to educate the sales executives about the BEE star rating label and the information that they must communicate to the customers/purchasers by providing necessary information to select energy efficient BEE star labeled equipments/appliances.

Emerson Climate Technologies (Emerson) and International Copper Promotion Council India (ICPCI) were associated to facilitate implementation of this programme. 37 programmes covering the entire country have been conducted and more than 2179 retailers trained.

No. of participants attended the programme (City wise)

Sl. No.	Date	Name of the City	No. of participants	Sl. No.	Date	Name of the City	No. of Participants
1	16-Jul-08	Chennai	07	2	17-Jul-08	Bangaluru	14
3	22-Jul-08	Delhi	33	4	23-Jul-08	Jaipur	32
5	25-Jul-08	Mumbai	61	6	26-Jul-08	Vadodara	36
7 *	16-Jul-08	Voltas, Chennai	40	8 *	17-Jul-08	Voltas, Bangaluru	27
9	1-Aug-08	Kolkata	40	10	2-Aug-08	Guwahati	27
11 *	19-Aug-08	Reliance Digital Retail Ltd.	30	12	16-Sep-08	Pune	22
13	19-Sep-08	Chandigarh	38	14	22-Sep-08	Hyderabad	32
15 *	3-Dec-08	Carrier Aircon Ltd, Gurgaon	40	16	4-Dec-08	Madurai	95
17	5-Dec-08	Coimbatore	90	18	6-Jan-09	Indore	70
19	7-Jan-09	Bhopal	45	20	8-Jan-09	Gwalior	35
21	9-Jan-09	Nagpur	70	22	10-Jan-09	Raipur	80
23	20-Jan-09	Lucknow	90	24	21-Jan-09	Kanpur	83
25	22-Jan-09	Noida	75	26	23-Jan-09	Agra	80
27	3-Feb-09	Kozhikode	60	28	4-Feb-09	Cochin	77
29	5-Feb-09	Trivandrum	76	30	11-Feb-09	Vijayawada	85
31	12-Feb-09	Vizag	115	32	13-Feb-09	Bhubaneshwar	102
33	18-Feb-09	Ahmedabad	72	34	19-Feb-09	Surat	65
35	17-Mar-09	Patna	65	36	19-Mar-09	Gurgaon	45
37	20-Mar-09	Ludhiana	125				
Total Participants			2179				
* Special programme arranged based on the request							

Content of the programme

The programme covers the following presentation/lecture on Standards and labeling programme. The workshop descriptions are as follows.

1. BEE's initiatives on implementation of EC Act 2001 and Standards and Labeling Programme
2. Labels for Refrigerators and Air-Conditioners – Genesis, explanation and Usage
3. Concept of Life Cycle Cost Vs First Cost, Cost benefit and Energy savings calculator for labeled ACs
4. Questions & Answers

Certification of participation was given to all participants.

The information presented during the programme is as follows.

1. BEE's initiatives and implementation of EC Act 2001, and Standards and Labeling Programme.

- India's per capita energy consumption compare with developed countries/world average and target to reach at least 1000 kWh from 612 kWh by the year 2012.
- India's total power generation capacity as on date, and briefed about power generation, transmission and distribution and energy losses, % of power and energy shortages during 2002 -2008, % of petroleum product imports.
- Example for using energy efficient appliance (CFL) for power saving and CO₂ reduction and identification of energy efficient equipments/appliances based on the BEE Star labeling. Sector wise energy consumption and potential for energy saving.
- How to manage the power shortage and reduce the gap between the demand and supply.
- Energy conservation Act 2001 and BEE's initiatives on energy conservation and implementation of different schemes. Briefed about ECBC, EA/EM exams, designated consumers, DSM projects, EC day function, EC award, Children's painting and Star rating for office buildings, etc.

a. Standards and Labeling

- Why Standards and Labeling, benefit of the S&L programme, Status of S&L programme world wide and Energy efficiency label (comparative and Endorsement label) used in different countries, and status of S&L programme in India.
- Act empowers Bureau and Central Govt. for implementing S&L programme, and description about Standards and Label, selection of equipments/appliances for labeling.
- Equipments/appliances introduced for labeling as on date by BEE, Label information mentioned on the label, and comparison of different star rating label, energy consumption pattern, and efficiency level.
- Brand wise no. of models approved till December 2008 for refrigerators, Air conditioners and TFL.
- Impact assessment of Energy saving and CO₂ reduction achieved by three products during the year 2007-08 presented for information.
- Standards and Labeling awareness campaign through electronic and print media.
- Initiative on National Educational/awareness programme on Standards and labeling to educate sales executives, programme conducted in

different cities in the country and special programme arranged for manufacturers.

- Check and challenge testing of BEE star labeled equipments/appliances, label verification in the distribution and retail storeroom and NABL test laboratories.

Power point presentations are enclosed in **Annexure - I**

2. Labels for Refrigerators and Air-Conditioners – Genesis, explanation and Usage

- Technical Parameters considered for Star rating, testing procedures, test standards.
- Calculation of annual energy consumption, Difference between Gross, storage volume and information displayed on the label.
- Star rating band and declaration of star rating level, up gradation of star rating band in the future.
- Comparison of different brands with similar gross volume having different storage volume, energy consumption and star rating.
- Calculation for energy saving and electricity cost per year based on the star rating and annual energy consumption.
- Initial investment for purchasing different star labeled refrigerators, energy saving and money saving with life cycle cost, pay back period and benefit for the customer.

Power point presentations are enclosed in **Annexure - II**

3. Concept of Life Cycle Cost Vs First Cost, Cost benefit and Energy savings calculator for labeled ACs

- Technical Parameters considered for Star rating, testing procedures, test standards.
- Type of air conditioners considered for BEE star rating.
- Basic terms for Air conditioners and measurement units used for cooling capacity like TR, Btu/h, kCal/h and Watts, Electrical input power (Watts).
- Power consuming components in the air conditioners, energy (unit) calculation based on the input power and running hrs.
- Star rating calculation for Air conditioners based on the cooling capacity and input power and Energy Efficiency Ratio (EER).
- EER improvement optimizing cooling capacity, input power and incremental cost comparing international and Indian market.
- Technology and components used for improving energy efficiency.
- Comparison between BIS and BEE rating on cooling capacity and input power in the name plate and BEE label.

- Calculation for energy saving and electricity cost per year based on the star rating and annual energy consumption.
- Initial investment for purchasing different star labeled Air conditioners, energy saving and money saving with life cycle cost, pay back period and benefit for the customer.
- Benefit for OEMs, channel partners, end users and our country by selling and purchasing BEE star labeled air conditioners.
- Role of channel partners
- How to use promoter card to explain to the customer to select energy efficient BEE star labeled air conditioners.
- Estimating energy and cost saving compare with no star and star labeled air conditioners using promoter card.
- Using energy saving calculator for air conditioners (www.saveenergy.co.in) for selecting star labeled air conditioners, required size (cooling capacity) for buildings.


Power point presentations are enclosed in **Annexure - III**

Registration and Promotional materials

Attendance sheet was put at the Registration Counter in the form of a Visitors' Book capturing all the details of participants as they enter. They were given folders containing pad, pen, piggy leaflet, promoter card, Point of Purchase (PoP) posters, hand outs of presentation for notes & other related material.



Tools For Channel Partners





Shop Poster

Customer Looks At & Enquire



Promoter Card

Salesman Pulls Out Promoter Card From Pocket & Explains



Piggy Leaflet

Give A Copy To Potential Customer To Help In Decision Making

The workshop was very interactive and enthusiastic participation by the sales staff and management staff of channel partners / all major manufacturers.

Lectures and demonstration of Savings calculator / website based tools were presented, and it was followed by Q&A session.

The photographs shows the programmes conducted at various cities and other city photographs are enclosed in the **Annexure - IV**.



All the participants were given participant information form and feedback form to provide their contact details and feed back about the programme. This feedback forms covers all aspects of venue, training facilities, food, all sessions' deliveries, and quality of hand out, facilitation at programme & their learning level.

At the end of the programme the participants were given certificate of participation. Also promotional materials in the form of paper weight, car shade and car screen with BEE label along with Eco friendly bag provided by Copper were given to all participants.



Post Event

The Bangalore event was attended by one of the local news paper reporter. In Delhi press reporter came only when the program was over and briefed about the standards and labeling programme and workshop. Two journalists attended at Jaipur. A news article also appeared in local magazine at Guwahati. 'Voice', a consumer organization based in Delhi distributed lot of mailing letters containing information on Star rating and Labeling under the BEE logos. In Bangalore the SDA distributed piggy leaflet in Kannada Version. In Vadodara SDA's representative reported about developments of vernacular posters for consumer education on labels but sample was not available for appraisal.

Special In-house Programme at Chennai & Bangaluru for Voltas Co. Ltd.

Two in house programs covering Air-conditioner Labels in detail were conducted by Emerson and Copper as requested by Voltas that for their sales executives & canvassers. At Chennai program 40 participants joined the session whereas in Bangaluru 27 participants came forward. On attending the participants were of unanimous opinion that the program have been very useful & given them much deeper insight about star labeling program and how to explain the concept to customers, which they did not know earlier. Respective business managers also expressed hope that the program will improve their sales person's interaction with consumers while answering to the queries on labels. They further requested to organize similar program at other locations as well. Few of the photographs taken during the programme are pictured below.



The similar programme was conducted through a video conference for Reliance Digital Retail Limited at New Delhi and Mumbai, Hyderabad and Jam Nagar, also a programme was conducted at Carrier Aircon Ltd, Gurgaon.

Overall Effectiveness of the programme

When the program took first start at Chennai on 16 July 2008, only 07 participants were attended the programme. Through print media advertisement was given in all national leading news paper regarding the programme and regular E-mail communication was sent by the officer in-charge to all concerned manufacturers to depute sales executives to attend the programme, addition to that M/s. Quest Consulting & Training was appointed as a recruiter for supporting this programme, and they did the marvelous task of recruitment at all places. The last program at Ludhiana ended with a good number of participants 125. One can think of that how this programme started by 07 participants reached to 125 participants.

Effectiveness of Theory Sessions

In most training programmes, the delivery of theory sessions by the trainers was rated good.

- ❖ Computer-based power point presentation slides were used at all training programmes. These obviously enhanced the quality of presentations.
- ❖ Language for teaching was not a barrier in almost any of the programmes.
- ❖ The question & answer sessions were considered adequate in all 37 programmes.
- ❖ The classroom facilities were acceptable despite the fact that most of the programmes were outreach programmes.
- ❖ The quality of video on “An Inconvenient Truth” and “ BEE TV Spots” the audio-visual facility were generally considered good in all programmes.

The assessment of theory sessions is based on the following selected indicators:

- ❖ Observed competence of trainers in conducting theory sessions
- ❖ Quality of LCD video projector and version of training material used
- ❖ Language for teaching
- ❖ Question & answer sessions and interactivity
- ❖ Adequacy of classroom facilities
- ❖ Impression of comprehension by participants

Each of these abovementioned parameters have been met by all in conducting the workshop.

Punctuality and Drop-outs after Commencement

More or less all the 37 programmes started well in time and ended well in time. No drop out was there after the start of the programme. At few places the programme started late by one hour due to late arrival of participants.

Language for Teaching

Language for teaching was not a barrier in almost any of the programmes at all places, English slides were used but interaction went on in local language with help of participants.

Question & Answer Session and Interactivity

The question & answer sessions were generally considered adequate and answered all technical and non technical questions.

Impression of Comprehension by Participants

With the implementation of a more structured procedure, it was possible to measure the impression regarding comprehension by the participants in a more systematic manner for these programmes. In all of these 37 programmes, the impression was Excellent/Very Good/Good.

Number of Trainers

The number of trainers is a common factor contributing to the effectiveness of theory session. The following were the trainers associated for conducting the programme.

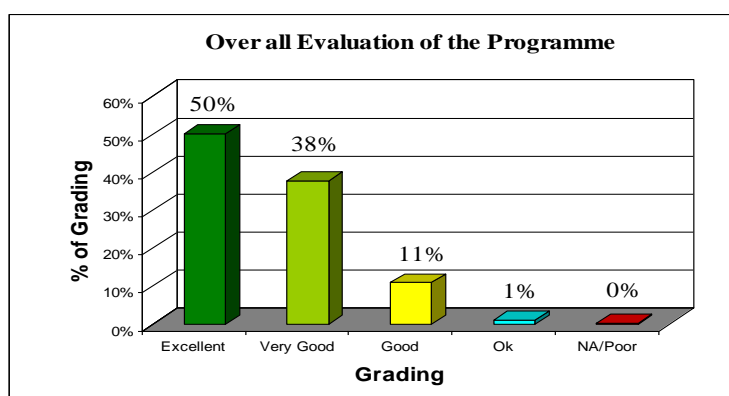
1. BEE's initiatives on implementation of EC Act 2001 and Standards and Labeling Programme by Shri. G. Pandian, Energy Economist, Bureau of Energy Efficiency
2. Labels for Refrigerators and Air-Conditioners – Genesis, explanation and Usage Shri. V. Subramaniam or Shri. Anshu Kumar, Official Trainer of Copper/Emerson.
3. Concept of Life Cycle Cost Vs First Cost, Cost benefit and Energy savings calculator for labeled ACs - Shri. K. Raghavan, Emerson or Shri. Manas Kundu, ICPCI or Shri.V.Subramaniam or Shri. Anshu Kumar Official Trainer of Emerson/Copper

Filling up of Forms

All the trainee Information sheets were filled perfectly at the time of the end of the session. All the information sheets are with telephone numbers & are attached in separate file.

Feedback sheets

All the participants have filled the feedback sheet, so that further improvement can be done for conducting these programmes. Out of the total number of 2179 trained sales persons & owners the following is the outcome of the Evaluation of the programme.



The over all programme was well appreciated by all participants and expressed their feelings to extend their support for promoting energy efficient equipments/appliances particularly BEE Star labeled products. City wise programme evaluation is as follows.

Sl.No.	Name of the City	Total No. of Participants	Number of Feedback Forms Received	Overall Evaluation of the Programme				
				Excellent	Very Good	Good	Ok	NA/Poor
1	Chennai	7	7	3	3	1	0	0
2	Bangalore	14	14	7	5	2	0	0
3	New Delhi	33	33	15	14	4	0	0
4	Jaipur	32	32	20	10	2	0	0
5	Mumbai	61	61	23	27	9	1	0
6	Vadodara	36	35	16	11	4	1	3
7	Voltas, chennai	40	0	0	0	0	0	0
8	Voltas, chennai	27	0	0	0	0	0	0
9	Kolkata	40	40	9	25	5	1	0
10	Guwahati	27	27	13	13	1	0	0
11	Reliance Digital	30	0	0	0	0	0	0
12	Pune	22	21	15	6	0	0	0
13	Chandigarh	38	35	19	13	3	0	0
14	Hyderabad	32	28	10	9	9	0	0
15	Carrier Aircon Ltd,	40	26	12	12	2	0	0
16	Madurai	95	42	20	14	7	1	0
17	Coimbatore	90	65	38	14	8	5	0
18	Indore	70	70	39	20	10	1	0
19	Bhopal	45	45	25	12	7	1	0
20	Gwalior	35	28	12	15	1	0	0
21	Nagpur	70	48	25	16	7	0	0
22	Raipur	80	80	40	34	6	0	0
23	Lucknow	90	83	31	35	16	1	0
24	Kanpur	83	72	31	32	9	0	0
25	Noida	75	63	42	16	5	0	0
26	Agra	80	72	29	36	7	0	0
27	Kozhikode	60	60	28	20	6	6	0
28	Cochin	77	75	26	40	9	0	0
29	Trivandrum	76	70	35	29	6	0	0
30	Vijayawada	85	76	36	25	15	0	0
31	Vizag	115	111	55	44	12	0	0
32	Bhubaneshwar	102	96	63	23	10	0	0
33	Ahmedabad	72	59	30	27	2	0	0
34	Surat	65	61	32	23	6	0	0
35	Patna	65	65	35	23	7	0	0
36	Gurgaon	45	45	28	16	1	0	0
37	Ludhiana	125	117	71	39	4	3	0
Total		2179	1862	934	701	203	21	3

Excellent	Very Good	Good	Ok	NA/Poor
50%	38%	11%	1%	0%

CHENNAI



BANGALURU





DELHI



JAIPUR



MUMBAI



VADODARA



KOLKATTA



GUWAHATI



Indore



Bhopal



Gwalior



Nagpur



Raipur



Kozhikode



Cochin



Trivandrum



Vijayawada



Vizag



Bhubenswar



Ahmedabad



Surat



Ludhiana

