



Minutes of the Meeting

"Minimum Energy Performance Standards and Labels for Washing Machines in India "

Place: Ministry of Power

12.00 am, April 16, 2010

Participants of the Meeting

Ministry of Power

1. Sh. Devender Singh, Joint Secretary
2. Mrs. Rita Acharaya, Director

Bureau of Energy Efficiency

1. Dr. Sandeep Garg, Energy Economist

PricewaterhouseCoopers, Project Team

1. Mr. Rajeev Ralhan, Manager

Consumer Organization

1. Mr. H. Wadhwa

Manufacturers

1. Manoj Khatri, LG
2. Rajeevan, LG
3. Vikas Jain, Haier
4. B. Venkatesan, Whirlpool
5. Ahmed Sheikh, IFB

Key Discussion Points

The meeting was chaired by Joint Secretary, Ministry of Power. Key discussion points of the meeting are discussed below:

1. JS apprised all the participants about the objective of the program and asked all the participants to share their concerns about the washing machine labeling program.
2. Detailed presentation was made by BEE and PwC to JS and other participants about the approach adopted during this program.

Following key issues were raised during the meeting.

1. Whirlpool representative shared that as per existing rating plan, their front loading washing machine falls in star 1 category. To make improvements to shift to star 5 category, a cost of Rs. 1000/- machine is required. Against this, savings in terms of absolute value of units saved is very less, which gives a high payback period.

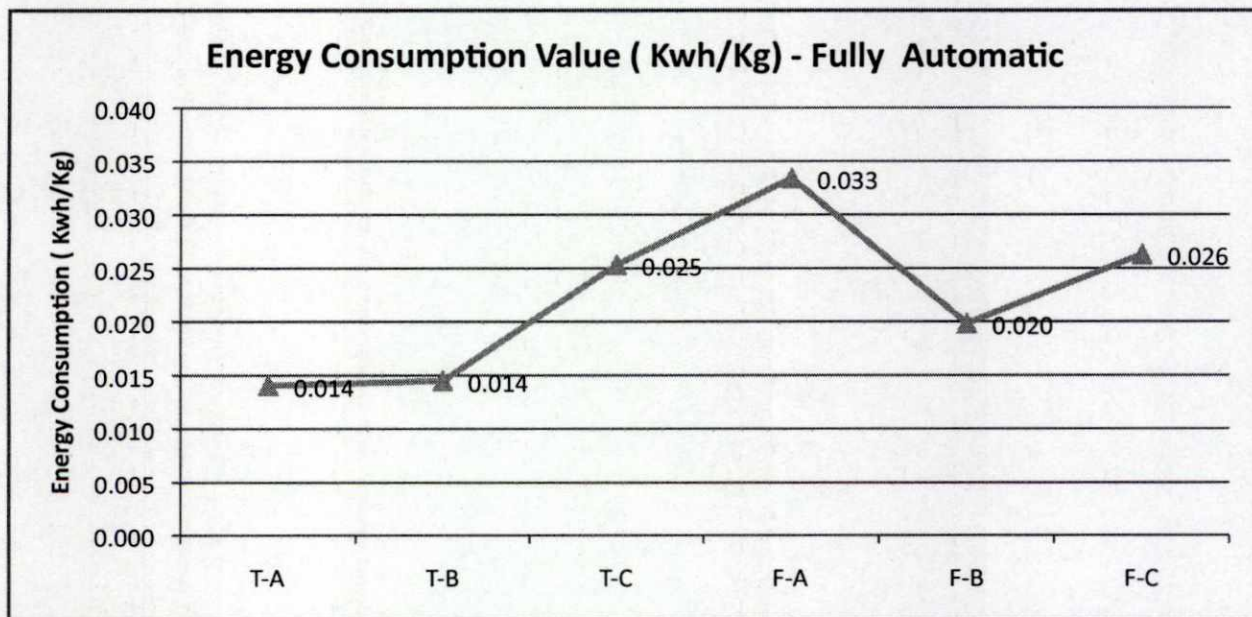
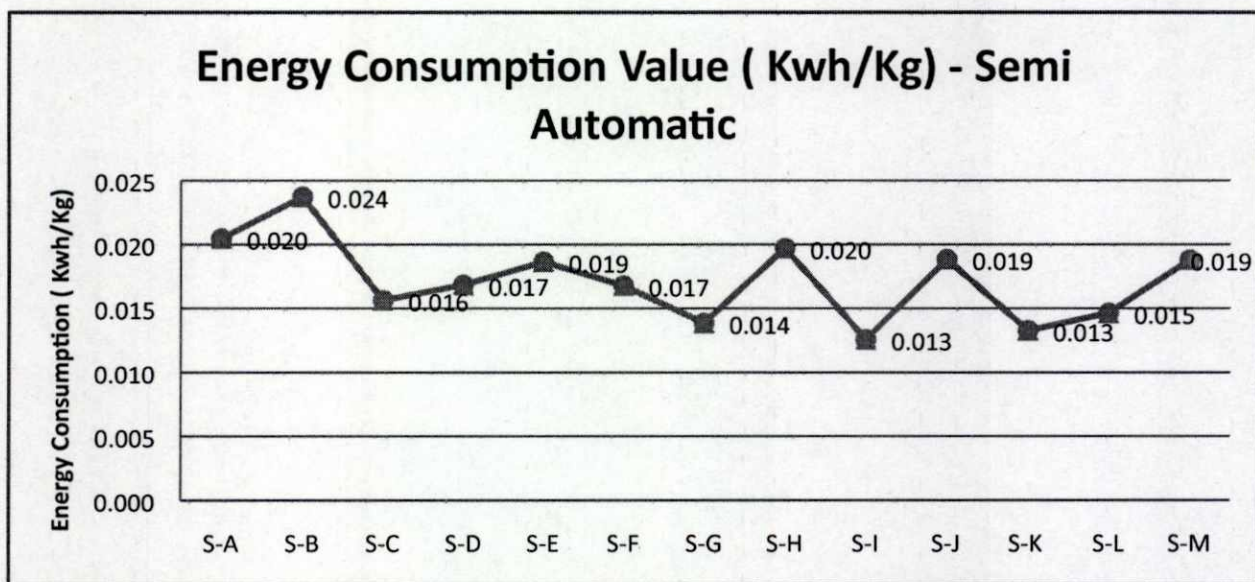
Justification

- As washing machine is a performance oriented product, this program is designed to address three important issues :
 - Energy Consumption
 - Wash Performance and other performance parameters
 - Water Consumption

A. Energy Consumption

Total Washing Machine market in India is close to 2 million. When the program for washing machines was started, manufacturers were shifting to Chinese motors of rating 90-140 W against motors having rating 250-300 W used by them in the past. It was very clear from the start that savings in absolute terms would not be very high as baseline consumption is low. The program was designed to assess % saving potential in energy consumption and scope of improvement on comparative basis for washing machines.

There was no test facility available in India for testing of washing machines. Test Lab and Test standards were developed in lines with International standards. After testing of 20 different capacity washing machines, it was found that there is great potential for improvement because of considerable difference in energy consumption(kwh/kg) for different brand washing machines. The test results of semi automatic and fully automatic washing machines are presented at Fig at next page.



Proposed Rating Plan

Based on test Results i.e. energy consumption (Kwh/kg), rating plan has been developed for Semi automatic and Fully automatic washing machines. The rating plan is at table 1 and table 2.

Table 1: Rating plan for Semi Auto Washing Machines

Energy Consumption (Kwh/kg) Semi Automatic		
0.0173	0.0157	*
0.0157	0.0143	**
0.0143	0.0130	***
0.0130	0.0117	****
< 0.0117		*****

Table 2: Rating Plan for Fully Automatic Washing Machines

Energy Consumption (Kwh/kg) Fully Automatic		
0.0186	0.0169	*
0.0169	0.0154	**
0.0154	0.0140	***
0.0140	0.0126	****
< 0.0126		*****

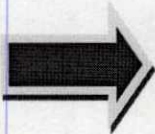
Key points associated with designing this option is given as under:

- It gives two rating plans one for semi automatic category and one for fully automatic category.
- Energy Consumption per kg of load sets same benchmark for different capacities and it is applicable for proposed high capacity washing machines.
- It has been adopted in few countries internationally
- For designing rating plan, lowest energy consumption per kg value in semi automatic and fully automatic category from test results is chosen and taken as highest value of 4 star and then move down to 1 and 5 star so as to push the manufacturers to achieve more.
- Band of 10% reduction/improvement is given in each star rating
- Saving potential between 4 and 1 star is 30% and improvement potential between 4 & 5 stars is more than 10 %.

In this option, 7 out of 13 semi automatic machine fall out of rating plan and 5 out of 7 fully automatic washing machines tested fall out of rating plan.

This rating plan gives enough potential to tap as manufacturers falling outside this band have to improve to qualify for BEE star rating. The saving potential in washing machine segment is close to 50% of their baseline consumption, once this program is implemented successfully. This can only be achieved by having comparative star rating plan for washing machines.

This rating plan pushes all the manufacturers to improve their technologies. Most of the manufacturers like LG, Samsung, Godrej have started working for this and have been interacting with BEE in this regard.



Can we disturb the program for one or two manufacturers, who are not qualifying for the program at this stage.

B. Performance Parameters

This program addresses all the important performance parameters wash performance, rinse performance and spin performance as per international standards, which has been accepted and appreciated by all stakeholders including manufacturers.

C. Water Consumption

After analyzing all the test results, it was found that there is an urgent need to address issue of water consumption.

On an average, considering 300 washing cycles per annum, the total water consumption per machine per year is
Semi Automatic – 27000 Its
Top Loading – 33600 Its
Front Loading – 19500 Its

The best approach was to address this issue is by asking manufacturers to report their actual water consumption on the label.

2. To have separate Rating Plan for Top Loading and Fully Automatic Washing Machines

Justification

Initially separate rating plans different category and capacity washing machines were prepared and submitted to BEE. After detailed discussions with Sh. Jiresh Nandan , it was decided to have one rating plan for semi automatic washing machines and one common rating plan for top loading and front loading fully automatic washing machines. The vision was to phase out inefficient products from the market.

3. Use of Reference Machine to see Repeatability of Tests

Justification

Indian Washing machine comprises of 65 % market of semi automatic washing machines and 35% market for fully automatic washing machines. It is not possible to have common reference machine. This issue was discussed in 1st technical committee meeting and it was decided not to have any reference machine.