Consumer Electronics Labeling Program to Address Standby Power in India

April 2, 2008
Standard & Labeling Program In India

- The Energy Conservation Act 2001
- Star labeling program launched for refrigerators, air-conditioners, florescent tubular lamps and distribution transformers
- Endorsement labeling program to be launched in the year 2008 for consumer electronics products
- Color TV’s and Set Top Boxes are the first products to get the endorsement label in India
Consumer Electronics Industry in India

- Over 90% components used in the industry are imported
- During the year 2006-07 estimated exports were 2,584 million USD (source: ElectronicIndia 2008)
- The consumer electronics industry is expected to grow from $3.89 billion in 2006 to $5.8 billion in 2010 at a CAGR of 11%
Growth in Consumer Electronics Industry in India

India Consumer Electronics Market Value: $ billion, 2002-2006

![Graph showing the growth in Consumer Electronics Industry in India from 2002 to 2006.](image)
Forecasted Growth of Consumer Electronics Market

India Consumer Electronics Market Value: $ billion, 2006-2011
CTV Market in India

- There are 108 million TV homes in India out of which 61 million have cable & satellite access. The market is growing by 10%.
- The market for televisions in India is changing rapidly from the conventional CRT technology to flat panel displays (CRTs, LCD and Plasma TV’s).
- Currently the split between CRT & LCD is 98% and 2%. The industry forecasts suggest LCDs’ share of the market will increase to 10% by 2010.
Forecasted CTV shipment market share in India
Stock forecast of CTV in India

Stock Forecast of Color Televisions

- Plasma
- LCD
- CRT

Million

0 50 100 150 200 250 300 350

Industry participation & preparedness for labeling program

- Industry Associations participated in study tour to learn from ENERGY STAR experiences in US
- Associations are part of the decision making committees
- Opportunity exists as the demand for high quality & energy efficient products is increasing
- Leading brands are already taking initiatives to introduce energy efficient products in the market
- Gray market of cheap inefficient products is a concern for all
Stakeholders participating in the endorsement program

- Bureau of Energy Efficiency (BEE) – in Lead
- Bureau of Indian Standards (BIS)
- Industry Associations
  - Consumer Electronics & Appliance Manufacture Association (CEAMA)
  - Manufactures Association of Information Technology (MAIT)
- Consumer Protection Agencies
  - Consumer VOICE
- Test Laboratories
- International Expert Agencies
India labeling program design

- Formation of a Steering Committee for overall coordination & formation of product wise Technical Committees to support the technical analysis work
- Identification of candidate products & prioritize them for labeling
- Review of available international and Indian (BIS) test procedures to design the procedures for India
- Assessment of existing government, industry & third party test labs
- Develop a data baseline of selected products
- Compare with international standards and set the thresholds for India (standby & active mode)
- Finalize the label design
- Launch of program in the market
- Design & launch of awareness campaign (Along with the launch of program)
Existing BIS test procedures

BIS Test Procedures

Televisions
- IS 4545-1 for active mode of TV
- Developed by BIS based on IEC 60107-1
- Needs to be combined with IEC 62087 or IEC 100/1081/NP to get active mode test procedure for TV’s

Set Top Boxes
- Under consideration
Proposed test procedures for India

- **TV active mode** – BIS IS 4545-1 and IEC 62087*
- **TV standby mode** – IEC 62301
- **Set Top Box active mode** – IEC 62087 (CSA 380-06)
- **Set Top Box stand by mode** – IEC 62301 (CSA 380-06)

*IEC 100/1081/NP can be adopted once it is finalized
Recommended CTV standard for India (standby mode)

CRT – TV
A three tier structure is recommended for CRT TV stand-by power consumption standard
- <8 Watts – Till 2008
- <5 Watts – Till 2009
- <1 Watt – Till 2010

LCD – TV – 1.0 Watt

Plasma – TV – 1.0 Watt
Recommended CTV standard for India (active mode)

- Based on initial technical analysis & international review, \(0.3 – 0.5 \text{ Watt/sq inch}\) is recommended for basic operation of TV’s (without add-on’s)
- The Technical Committee is required to do some more work to recommend standards for add-on’s. The final standard should integrate both basic and add-on’s operations.
### Expected standby power savings from endorsement Labels in CTV’s

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<tbody>
<tr>
<td>CRT</td>
<td>² 3 W</td>
<td>1.345 mtoe</td>
<td>58.47 Million US$</td>
<td>3.42 MT CO₂</td>
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<td></td>
<td>² 1 W</td>
<td>1.919 mtoe</td>
<td>83.73 Million US$</td>
<td>4.88 MT CO₂</td>
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<tr>
<td>LCD</td>
<td>² 2.1 W</td>
<td>0.086 mtoe</td>
<td>3.47 Million US$</td>
<td>0.22 MT CO₂</td>
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<td>² 1.2 W</td>
<td>0.118 mtoe</td>
<td>4.79 Million US$</td>
<td>0.30 MT CO₂</td>
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<tr>
<td>Plasma</td>
<td>² 1 W</td>
<td>0.036 mtoe</td>
<td>1.49 Million US$</td>
<td>0.09 MT CO₂</td>
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<tr>
<td></td>
<td>² 0.5 W</td>
<td>0.043 mtoe</td>
<td>1.76 Million US$</td>
<td>0.11 MT CO₂</td>
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## Expected active power savings from endorsement Labels in CTV’s

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<td>CRT</td>
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<td>Million US$</td>
<td>MT CO₂</td>
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<tr>
<td>Level 1</td>
<td>0.5 W/sq.in</td>
<td>61%</td>
<td>14.01</td>
<td>602.52</td>
<td>35.62</td>
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<tr>
<td>Level 2</td>
<td>0.4 W/sq.in</td>
<td>38%</td>
<td>16.80</td>
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<tr>
<td>Level 3</td>
<td>0.3 W/sq.in</td>
<td>22%</td>
<td>19.24</td>
<td>828.18</td>
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<tr>
<td>LCD</td>
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<tr>
<td>Level 1</td>
<td>0.5 W/sq.in</td>
<td>100%</td>
<td>0.76</td>
<td>30.78</td>
<td>1.92</td>
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<tr>
<td>Level 2</td>
<td>0.4 W/sq.in</td>
<td>92%</td>
<td>1.29</td>
<td>52.01</td>
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<tr>
<td>Level 3</td>
<td>0.3 W/sq.in</td>
<td>43%</td>
<td>4.28</td>
<td>172.07</td>
<td>10.87</td>
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<tr>
<td>Plasma</td>
<td></td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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</tr>
<tr>
<td>Level 2</td>
<td>0.4 W/sq.in</td>
<td>62%</td>
<td>1.26</td>
<td>51.50</td>
<td>3.21</td>
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<tr>
<td>Level 3</td>
<td>0.3 W/sq.in</td>
<td>7%</td>
<td>1.26</td>
<td>51.50</td>
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<tr>
<td>All</td>
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<td></td>
<td>14.01</td>
<td>602.52</td>
<td>35.62</td>
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<td>18.85</td>
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<td>24.78</td>
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<td>27%</td>
<td>24.78</td>
<td>1051.74</td>
<td>63.00</td>
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Recommended STB standards for India

Standby mode consumption
- Recommended < 3 watts for both free to air and Pay TV type of STB - More discussion and work is required by Technical Committee

Active Power Consumption
- Digital STB (Free to air) – 8 Watts (under Consideration)
- Digital STB (Pay TV) – 15 Watts
THANK YOU