

Consumer Electronics Labeling Program to Address Standby Power in India

April 2, 2008



Standard & Labeling Program In India

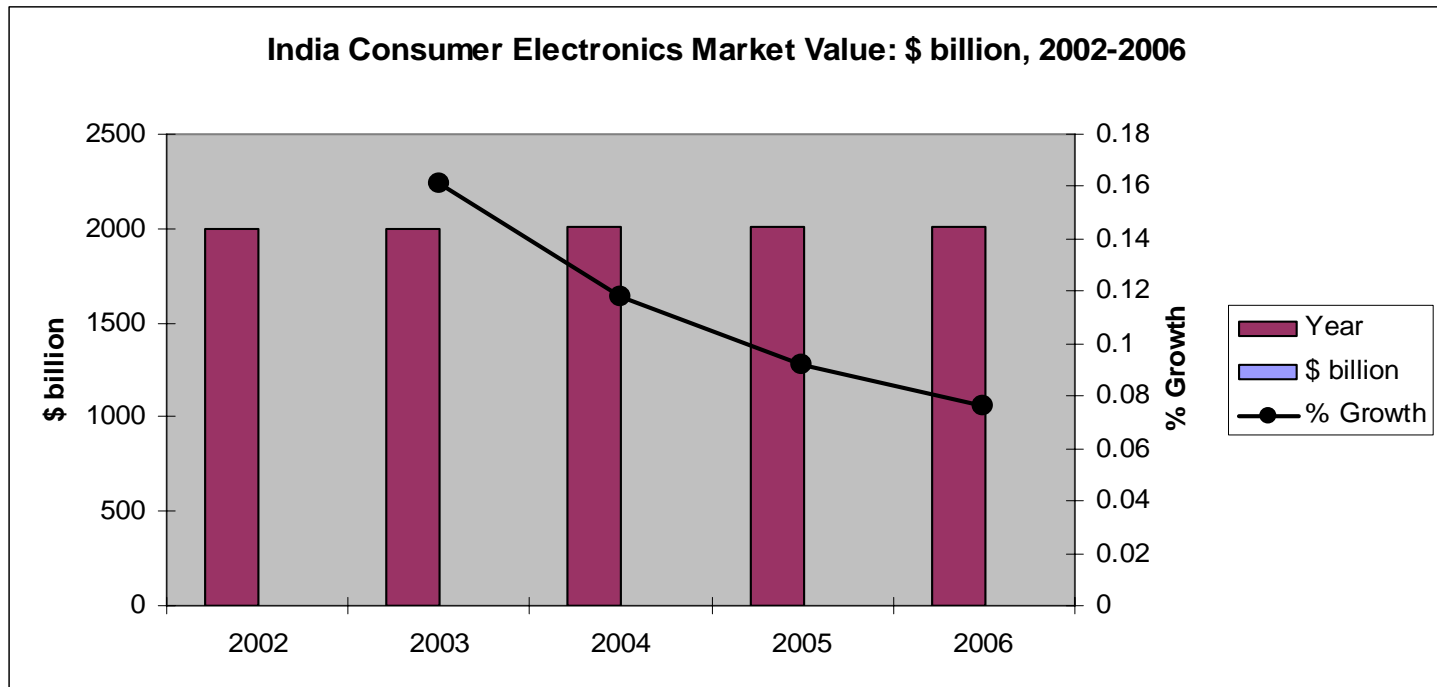
- The Energy Conservation Act 2001
- Star labeling program launched for refrigerators, air-conditioners, florescent tubular lamps and distribution transformers
- Endorsement labeling program to be launched in the year 2008 for consumer electronics products
- Color TV's and Set Top Boxes are the first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



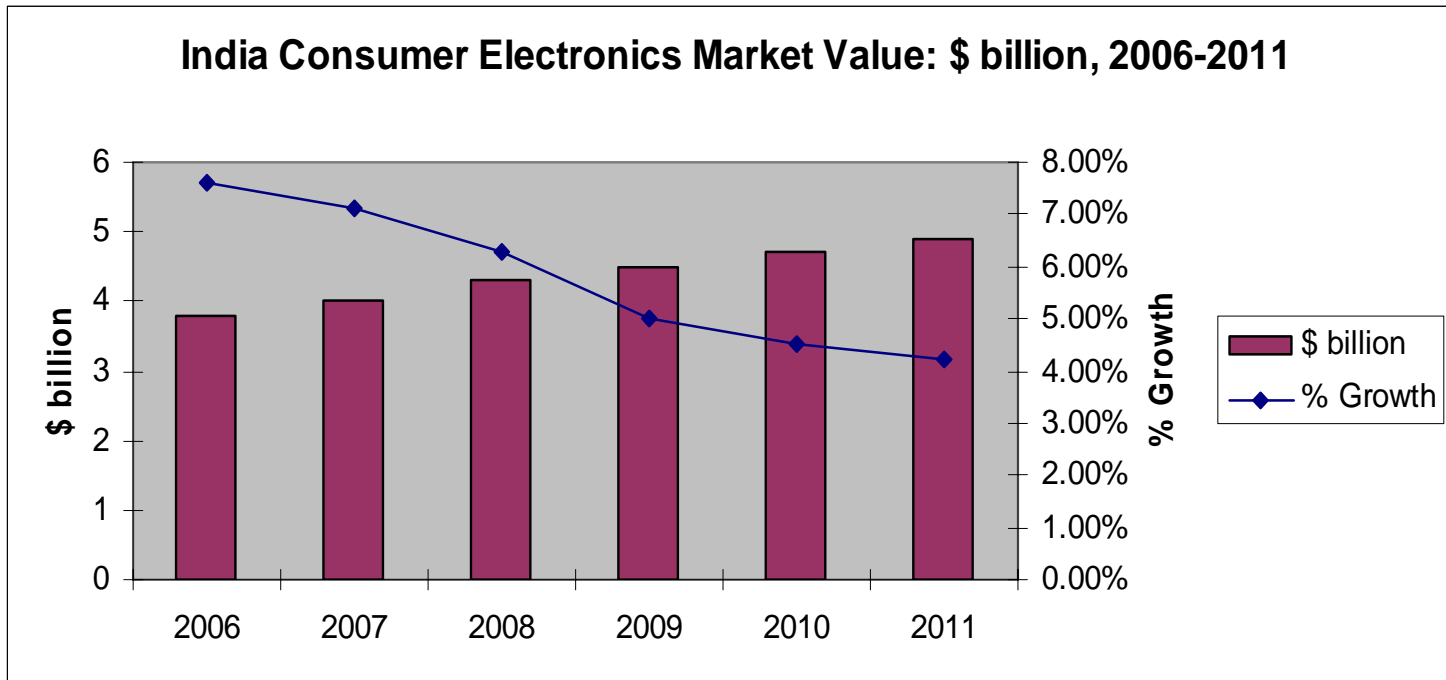
Consumer Electronics Industry in India

- 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



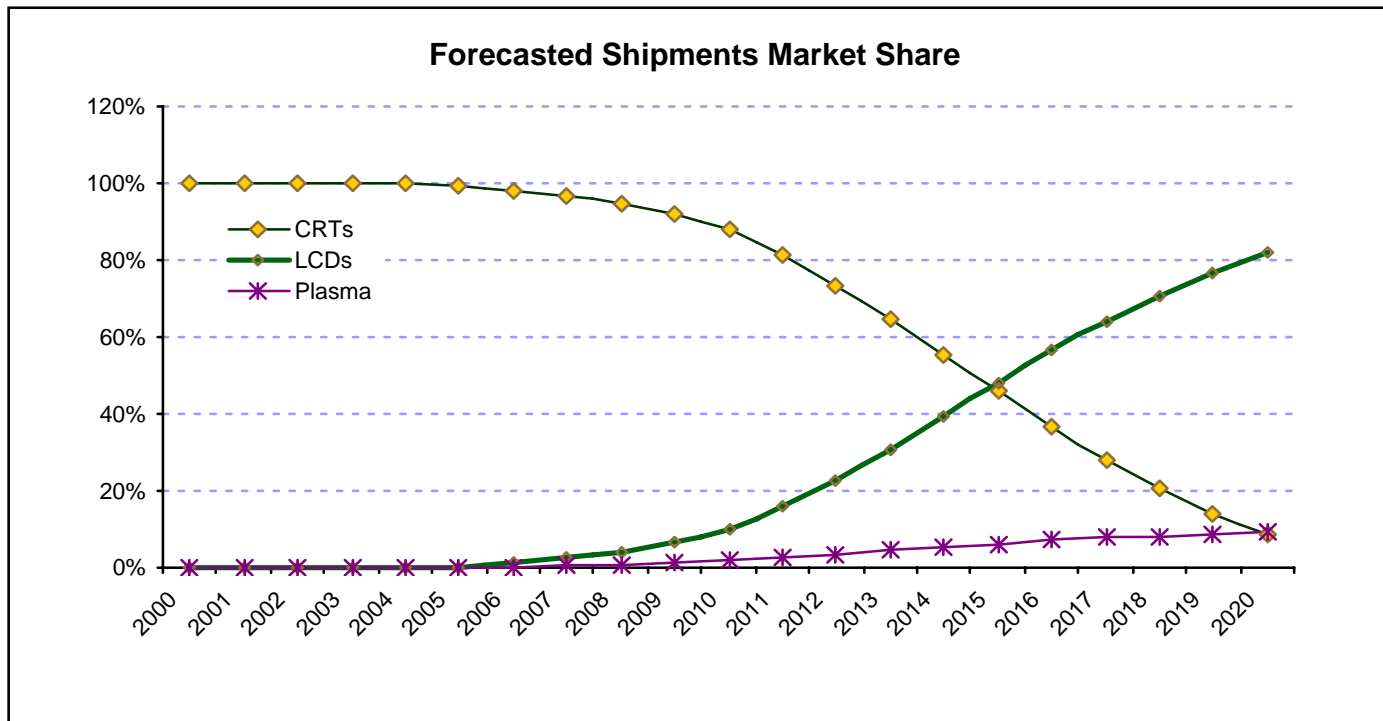
Forecasted Growth of Consumer Electronics Market



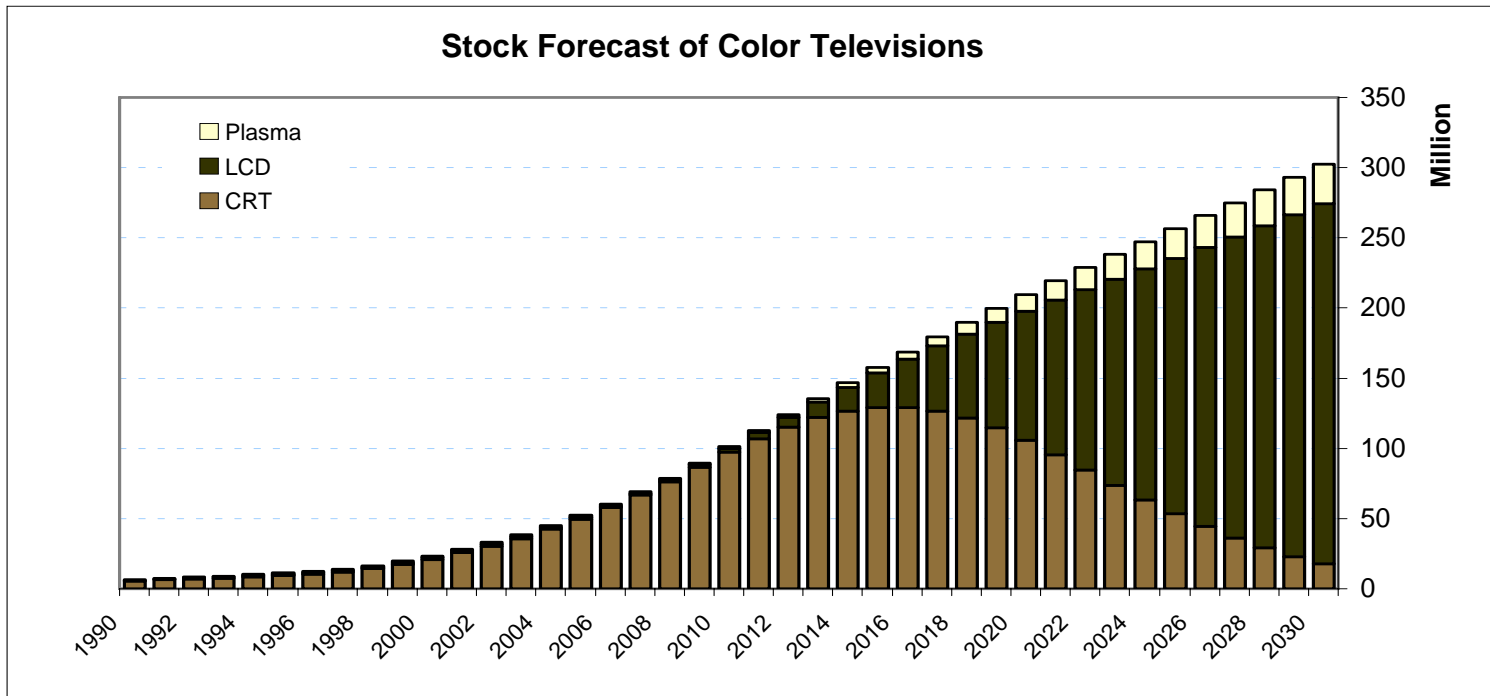
CTV Market in India

- 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



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 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

Product Category	Standby Mode	Energy Savings (2010-2020)	Financial Impact (2010-2020)	Carbon Saved (2010-2020)
		mtoe	Million US\$	MT CO ₂
CRT	² 3 W	1.345	58.47	3.42
	² 1 W	1.919	83.73	4.88
LCD	² 2.1 W	0.086	3.47	0.22
	² 1.2 W	0.118	4.79	0.30
Plasma	² 1 W	0.036	1.49	0.09
	² 0.5 W	0.043	1.76	0.11



Expected active power savings from endorsement Labels in CTV's

Product Category	Active Power	Market Leaders	Energy Savings	Financial Impact	Carbon Saved
			(2010-2020)	(2010-2020)	(2010-2020)
			mtoe	Million US\$	MT CO ₂
CRT	Level 1 0.5 W/sq.in	61%	14.01	602.52	35.62
	Level 2 0.4 W/sq.in	38%	16.80	722.94	42.72
	Level 3 0.3 W/sq.in	22%	19.24	828.18	48.91
LCD	Level 1 0.5 W/sq.in	100%	0.00	0.00	0.00
	Level 2 0.4 W/sq.in	92%	1.29	52.01	3.29
	Level 3 0.3 W/sq.in	43%	4.28	172.07	10.87
Plasma	Level 1 0.5 W/sq.in	100%	0.00	0.00	0.00
	Level 2 0.4 W/sq.in	62%	0.76	30.78	1.92
	Level 3 0.3 W/sq.in	7%	1.26	51.50	3.21
All	Level 1 0.5 W/sq.in	81%	14.01	602.52	35.62
	Level 2 0.4 W/sq.in	61%	18.85	805.73	47.93
	Level 3 0.3 W/sq.in	27%	24.78	1051.74	63.00



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

