



Overview of the ENERGY STAR[®] TV Specification Revision

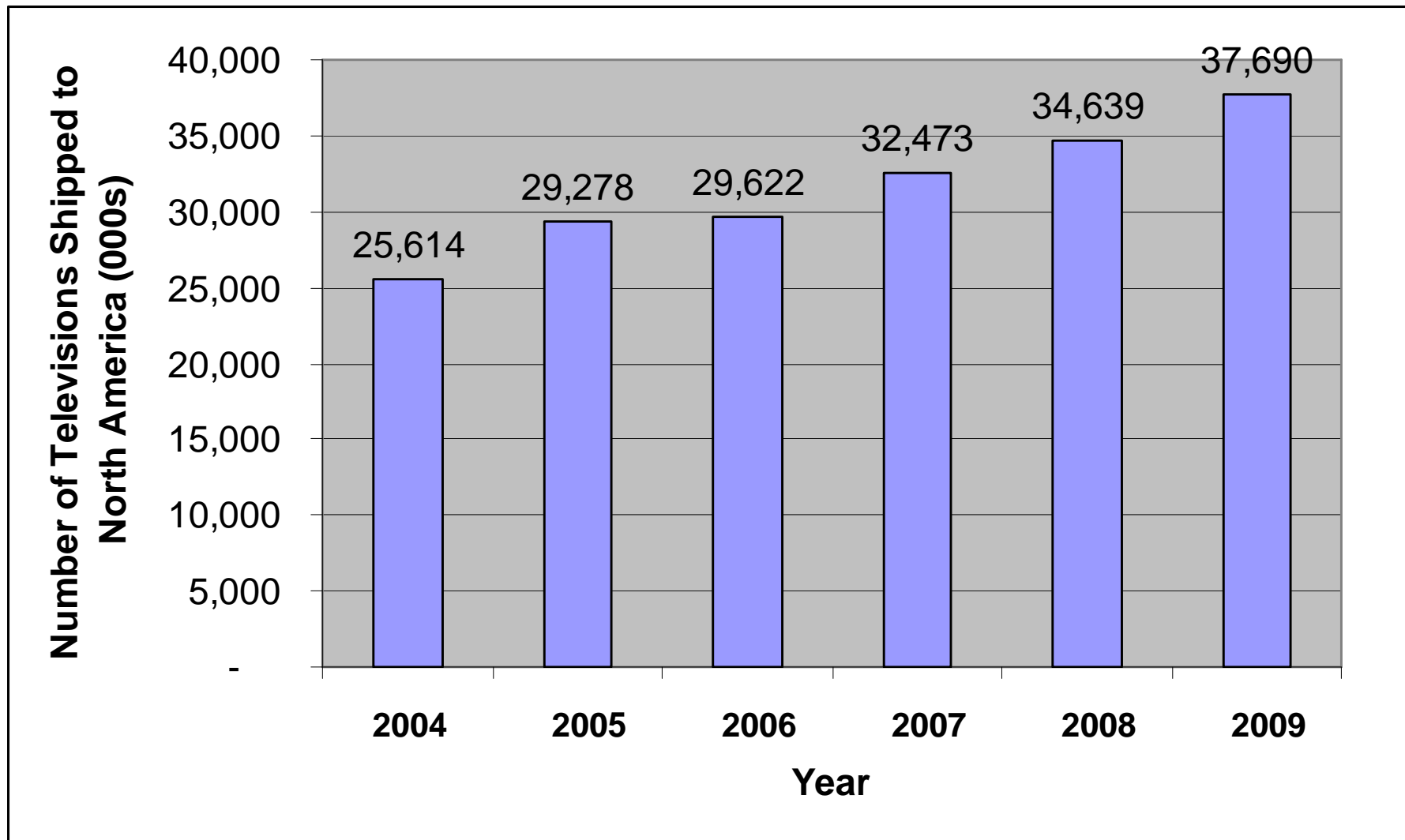
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Why Revise the ENERGY STAR TV Specification?



- High market penetration of ENERGY STAR TVs
- Changing landscape of TV market leading to increased energy consumption of TVs:
 - More TVs per U.S. household (~2.8)
 - Larger TVs
 - By 2009, iSuppli estimates 71.5% of North American market will be comprised of flat panel televisions with screen sizes 30 inches and above
 - More feature-rich models
 - TVs in 'on mode' more hours per day
 - Per Nielsen Media Research, for September 2004 – September 2005 viewing season, average US household was tuned into television an average of 8 hours and 11 minutes per day
 - More peripherals that contribute to additional hours in 'on mode' (game consoles, DVRs, increased cable/satellite programming)

Growth in TV Shipments to North America (2006 Onwards Projected)



Source: iSuppli's TV Systems Market Tracker – Q1 2006

Why Are TV Shipments Growing?



- Consumers showing higher preference for larger screen sizes
- Value brands entering the market
- Consumers investing in new units in preparation for the move from analog to digital over-the-air (OTA) signal transmission
- Increased adoption of flat panels
- Decline in average selling price of televisions

Result: Increase in the number of TVs per household – now 2.8 (up from 2.3 in 2000)

Increased Energy Consumption of TVs



- EPA estimates that currently, all US televisions consume 69 TWh/year
 - Costs consumers \$5 billion annually to power their sets
- In 2010, projected that this number will rise by approximately 75% and US televisions will consume 121 TWh/year
 - Will cost consumers over \$8 billion annually to power their sets

Television Display Type	All Modes - Average Power Consumption per Unit (kWh/yr)	Active Mode Only - Average Power Consumption per Unit (kWh/yr)
CRT	244	216
LCD	256	192
Plasma	679	532
DLP	444	311

Source: Prepared by LBNL. Data derived from testing conducted by Ecos Consulting and CNET in 2004 - 2005. Recognize manufacturers are making technology improvements, leading to lower power consumption, which may not be reflected in above data.

CNET TV Power Consumption Estimates



- Good opportunity for ENERGY STAR to act as a point of differentiation in the market
 - Potential for significant energy savings exists
- Per independent testing by CNET of 20 TVs (varying screen sizes and technologies):
 - Two 50” plasma TVs had on mode power consumption which varied by 178 watts
 - Two 32” LCD TVs had on mode power consumption which varied by 38 watts and standby mode power consumption which varied by 7 watts
 - Opportunity to address power consumption within technologies; not only between technologies
 - View testing at: http://reviews.cnet.com/4520-6475_7-6400401-3.html?tag=nav

Current ENERGY STAR TV Specification



Table 1: Energy-Efficiency Criteria for ENERGY STAR Qualified TVs, VCRs, DCR TVs with POD Slots, TV/VCRs, TV/DVDs, VCR/DVDs, TV/VCR/DVDs, Television Monitors, and Component Television Units.

Product Category	Phase I Standby Mode (effective 7/1/02)	Phase II Standby Mode (effective 7/1/04)	Phase III Standby Mode (effective 7/1/05)
TV	≤ 3 Watts	Analog: ≤ 1 Watt *Digital: ≤ 3 Watts	≤ 1 Watt
VCR	≤ 4 Watts	≤ 1 Watt	≤ 1 Watt
Television Monitor	Analog: ≤ 1 Watt Digital: ≤ 3 Watts	—————→	≤ 1 Watt
Component Television Unit	≤ 3 Watts	—————→	≤ 1 Watt
TV/VCR Combination Unit	≤ 6 Watts	—————→	≤ 1 Watt
TV/DVD, VCR/DVD, and TV/VCR/DVD Combinations	≤ 4 Watts	—————→	≤ 1 Watt
DCR TVs with POD Slots	No POD Installed: ≤ 3 Watts POD Installed: ≤ 15 Watts	—————→	—————→

Why Important to Address Standby Mode for TVs?



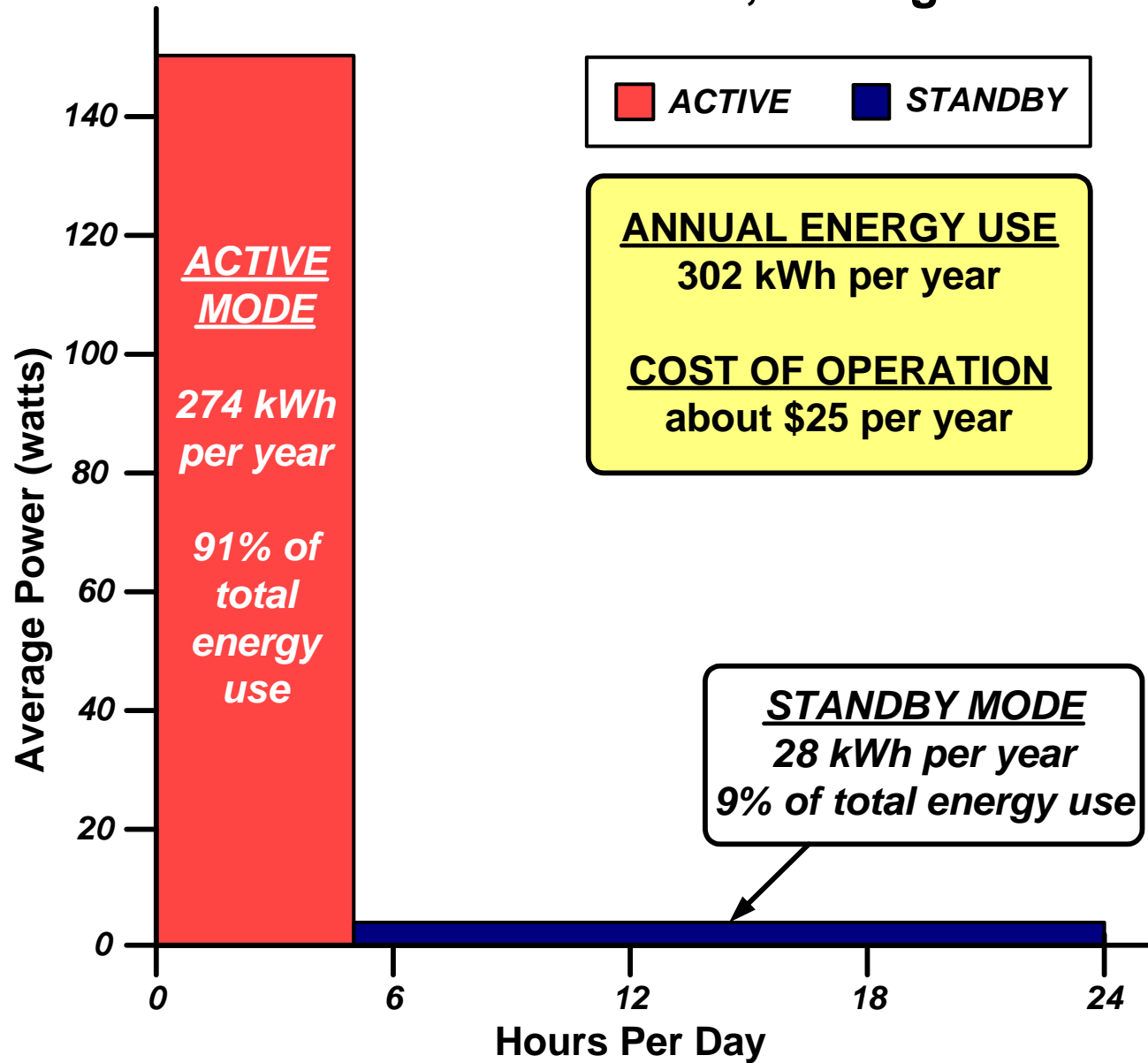
- Allowed EPA to set a specification to capture low hanging fruit
 - To date, approximately 2.6 MtC of carbon saved since the launch of the TV specification
 - Equivalent to removing over 1.8 million cars from the road
- TVs spent vast majority of time (over 80%) in Standby Mode
 - Significant savings to be earned by moving to one watt
- One watt consistent with FEMP levels and international goals
- Regardless of technology or screen size, manufacturers able to meet one watt for TVs
 - EPA now considers this market transformed

On Mode Provides Next Opportunity



- ENERGY STAR moving towards on mode specifications for electronics products:
 - Monitors (effective 1/1/2005)
 - External power supplies (effective 1/1/2005)
 - Imaging equipment (effective 4/1/2007)
 - Computers (effective 7/1/2007)
 - DTAs (effective approx late 2007)
 - TVs (effective approx early 2008)
- Significant opportunity for additional savings

Power Use in a 36" CRT, Analog TV



Source: Testing conducted by Ecos Consulting for NRDC.

Key Elements of New Specification



- Will address both active/standby mode power consumption of TVs
- Built-in TV peripherals, such as a DVD player, to be turned off during testing
- Will be based on performance (e.g., screen size); not technology
 - Screen size will be considered
- Test data provided by stakeholders will inform specification levels

Anticipated Timeline for TV Specification Revision

