ENERGY STAR® Displays Stakeholder Webinar: Power Consumption Requirements for Displays ≥ 30”

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Overview

- Welcome
- Introductions
- Agenda review
- Discussion of Power Consumption Requirements for Displays ≥ 30”
- Next Steps and Timeline

Today's Agenda

11:00 a.m.	Welcome & Introductions
11:10 a.m.	Review of agenda
11:15 a.m.	Review of topics addressed in Data Analysis

- Data received
- Draft On Mode power equation
- Luminance
- New Sleep and Off Mode criteria based on new data
- Comparison to TV On Mode power requirement

12:15 p.m.	Timeline and next steps
12:30 p.m.	Meeting adjourned

Review of Data Received

- Represents 4 manufacturers
- Includes 32 models
- Screen sizes from 32” to 103”
- Includes 768 and 1080 resolutions
- Includes Plasma (38%) and LCD (62%)
  - Representative of 2008 market breakdown from Display Search

Data Received - Comments

- Consistency in results for three types of image and video content

- Wide ranges on luminance during testing for LCD monitors of similar screen sizes
  - Possible adoption of percent maximum luminance protocol

Proposed On Mode Requirement for Displays ≥ 30”

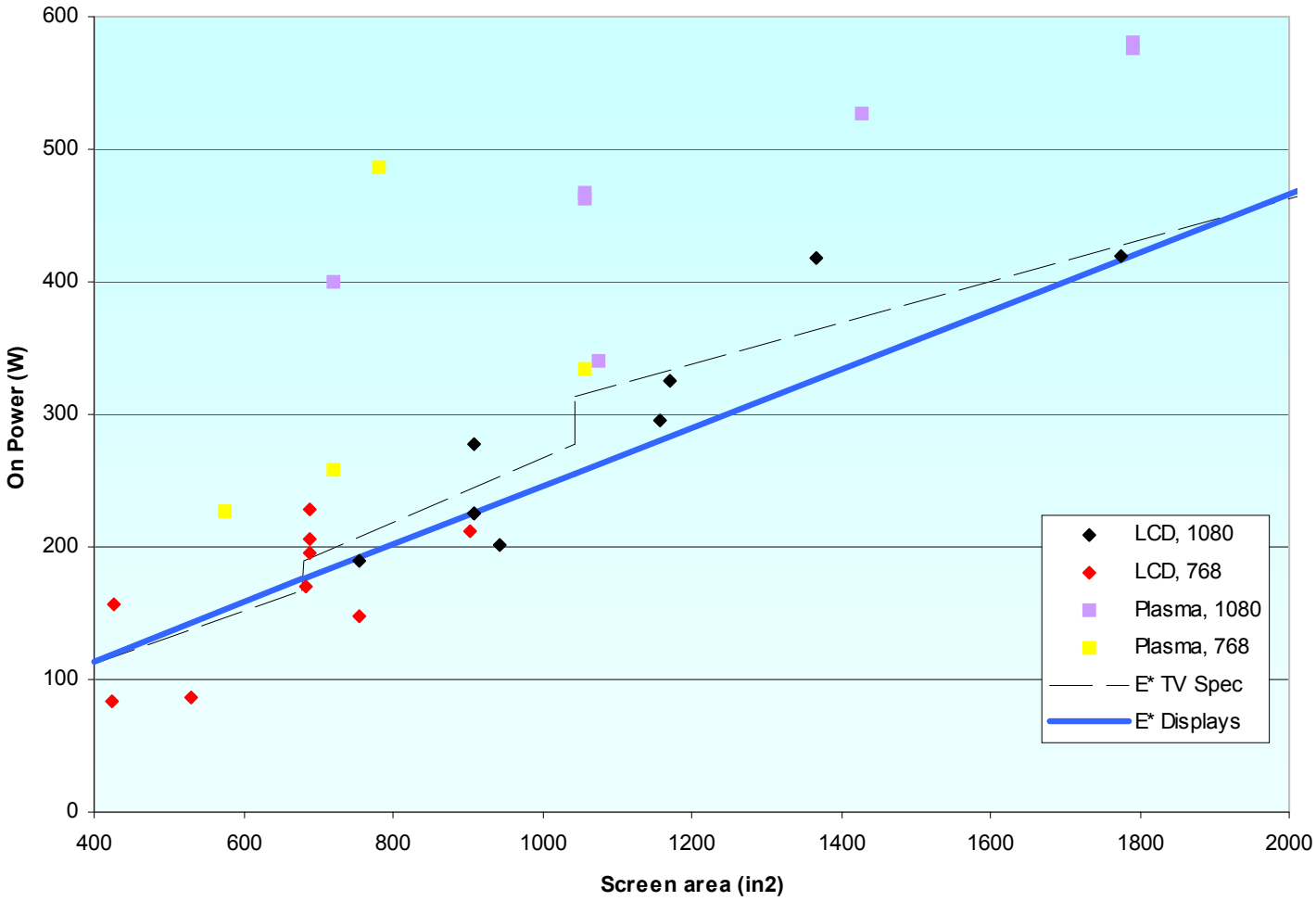
- Proposal: **$P_o = 0.22 * (A) + 26$**

  where A = screen area measured in square inches
- Based on IEC 62087 broadcast content: technology neutral & consistent with TVs
- For displays ≥ 30”, resolution is not a significant factor in power consumption
- Its “Own” Line
  - Drawn independently of TVs with goal to realize a ~25% On Mode pass rate for professional displays

Proposed On Mode Requirement for Displays ≥ 30” (cont.)

- Allows for a 28% On Mode pass rate across multiple screen sizes
- In comparing non-passing models with the proposed “On” criteria, the specification
  - Results in an average 26% improvement
  - An average delta of 86 W in On Mode
- Similar to TVs, but the TV specification will be made more stringent under V4.0
  - Since the V3.0 launch in 11/08, EPA has qualified more than 470 products from over 20 manufacturers
- V5.0 Tier 2 will harmonize with TV V4.0 efforts

Proposed On Mode Requirement for Displays ≥ 30” (cont.)



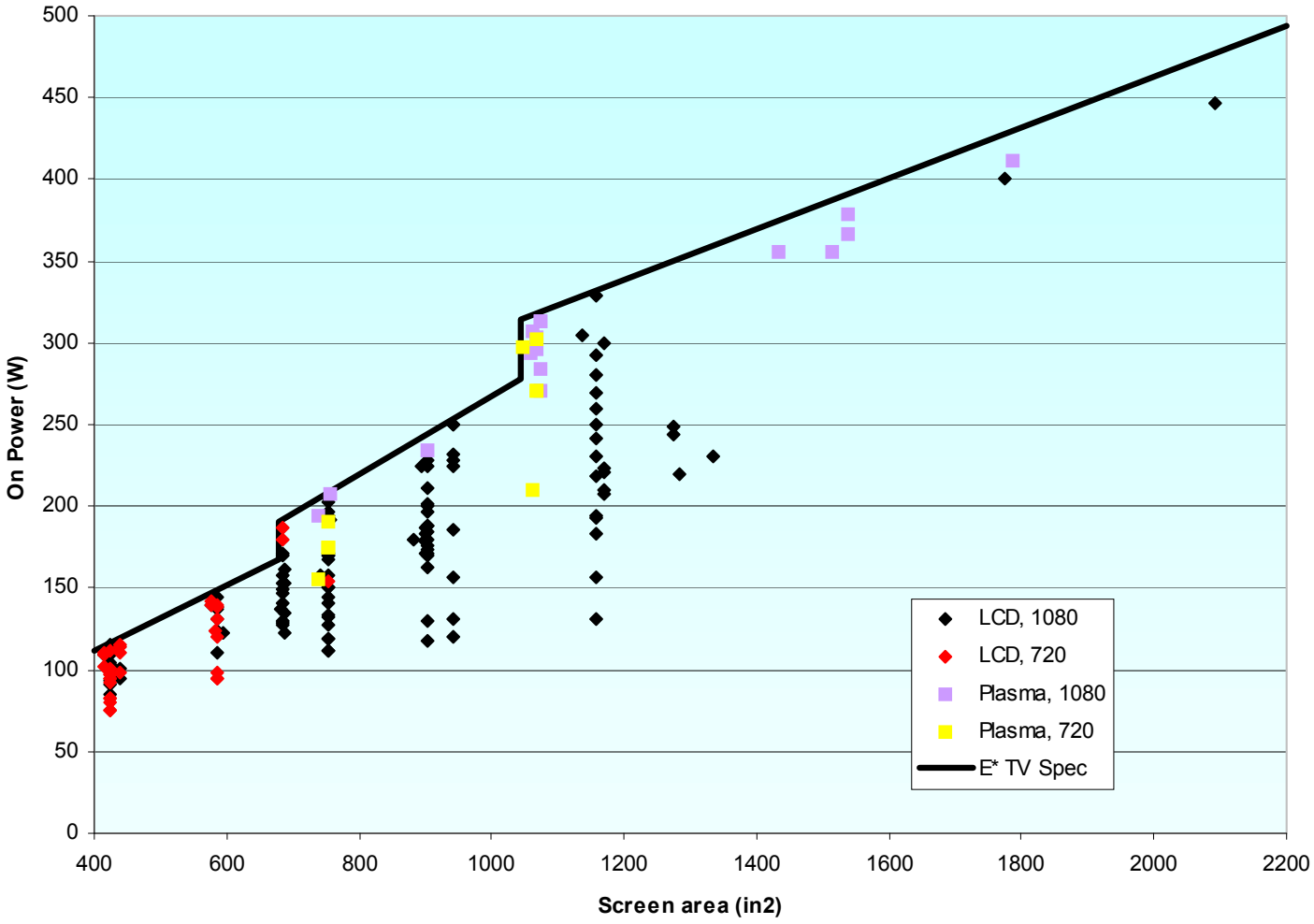
Luminance

- Test at Default luminance
  - If product has a menu option, select the mode most resembling actual use
- EPA is considering adopting % of maximum luminance protocol in addition to required reporting of luminance
  - Revised TV specification proposal has suggested testing at 80% of maximum luminance (2/9/09 memo)
  - Australian and EU draft requirements at a % of maximum luminance

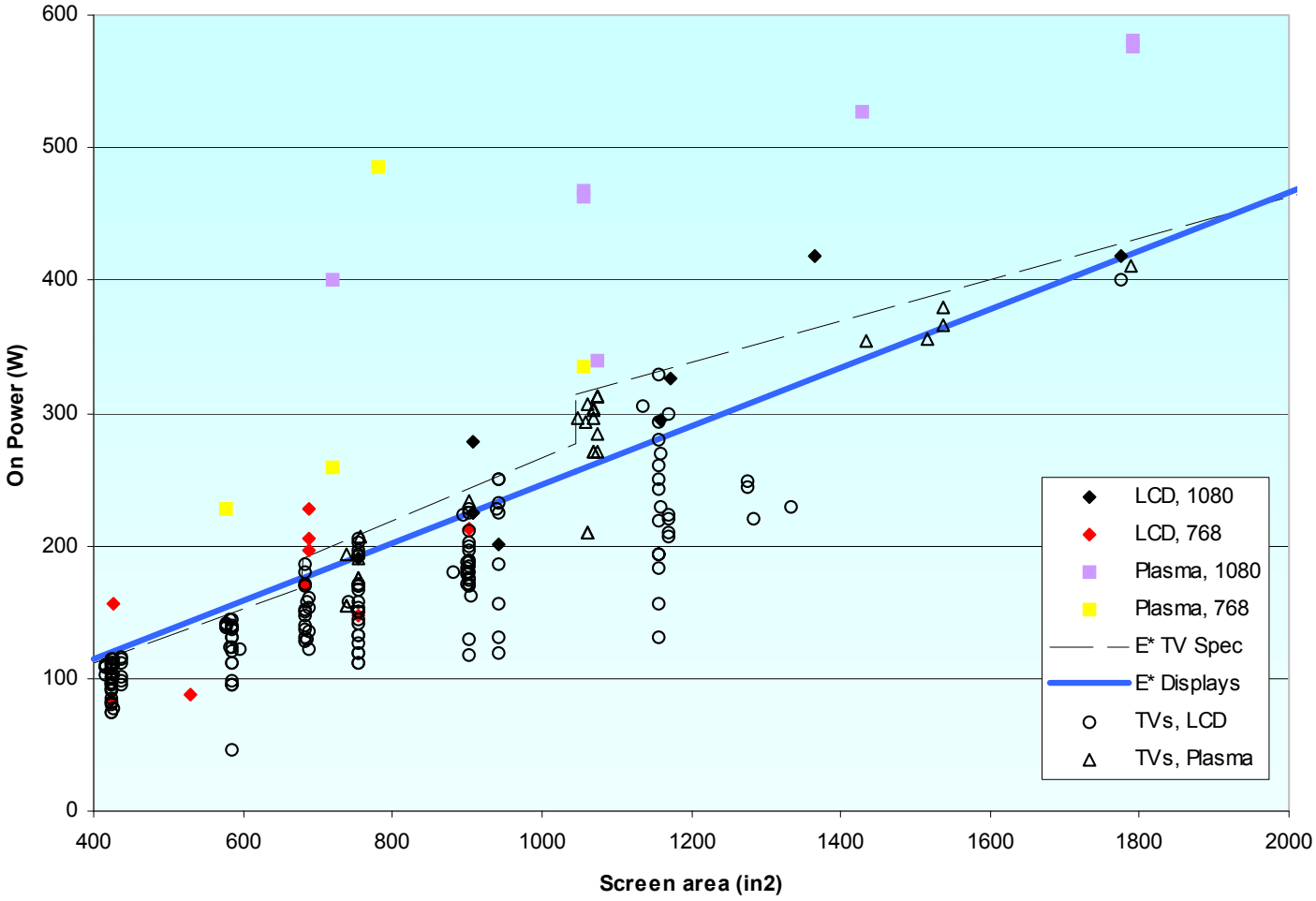
Sleep and Off Mode Requirements

- EPA is considering modifying Sleep and Off Mode requirements as follows:
  - Sleep ≤ 2 W
  - Off ≤ 1 W
  - Consistent with displays under 30”
- Rationale
  - New test data show that 17 out of the 22 models (78%) where Sleep Mode power consumption was reported would meet a 2 W requirement.
  - 21 out of the 32 models (66%) reported would meet a 1 W Off Mode requirement
  - Consistent with EU standards for Standby and Off

ENERGY STAR Qualified TVs Today



“All” Displays Today



A Quick Specification Requirement Comparison

Screen Area (in2)	TV (W)	Display (W)
400	112	114
679	168	175
680	190	176
1044	278	256
1045	314	256
2000	463	466

Next Steps

- Obtain usage data or usage estimates from industry to help build savings estimates
- Obtain additional product data in time for consideration pursuant to the Final Version 5.0 Displays specification March 30 distribution date
- Distribute clarification memo for new Sleep and Off Mode requirements for displays ≥ 30”
- Distribute new proposed luminance reporting requirements based on the UK Market Transformation Program
- Respond to stakeholder inquiry regarding testing displays ≥ 30” using HDMI vs. non-HDMI inputs

Proposed Timeline for Version 5.0 Specification Completion

- **March 30, 2009:** Final Version 5.0 Displays specification for all products distributed to industry
- **October 30, 2009:** Version 5.0 Tier 1 takes effect

Outstanding questions?

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Thank you

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