In Collaboration with:

TV: DRAFT FOR A MEPS REGULATION

ECREEE / GIZ

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OVERVIEW OF THE MARKET

Based on available data and regional comparison:

- Over 2,4 million TVs of all types sold per year (6 M by 2030) and currently over 12 M installed
- Estimated total annual electricity consumption of 3,48 TWh in 2019.

Note: These are estimated based on available data (national survey not yet completed).

OVERVIEW OF THE MARKET

- Global trends tend towards flat screens with LED and OLED technologies, which are more efficient.
- But, the trend is also towards larger screens and lower prices.
- The industry is also pushing additional features (4k, smart features, 3D, etc.) to increase per unit pricing.
- Some additional features can increase average energy consumption significantly (4k, “theatre” modes, HDR, etc.).

TEST PROCEDURES AND STANDARDS

Electricity consumption of TVs is mostly measured in accordance with IEC62087. However:

- The proliferation of features have made it difficult to have agreement on the standard definition for the specific energy consumption per unit.
- It is also challenging to define a test procedure to measure unit-specific energy consumption in a comparable and reproducible way.

➢ *Many MEPS are lagging in TV features and energy impacts.*

OVERVIEW MEPS IN THE WORLD

Key international MEPS, labeling and regulations for TVs include:

- ENERGYSTAR: version 8.0 is the most recent (March 2019)
- EU: EcoDesign EC 642/2009 (currently under revision, draft commented E/2018)
- China GB-24850: Last revised in 2013.
- India BEE Star Rating: Last revised in 2016.

DRAFT MEPS: APPROACH

- Possibly consider Energy Star as basis to draft an ECOWAS regulation

  On Mode power requirements:

  The maximum on mode power in watts for a TV of any size:

  $$P_{ON\_MAX} = 78.5 \times \tanh [0.0005 \times (A - 140) + 0.038] + 14$$

  Where:

  - P_{ON_MAX} is the maximum allowable On Mode Power consumption in watts;
  - A is the viewable screen area of the display in square centimeters;
  - *tanh* is the hyperbolic tangent function.

DRAFT MEPS: APPROACH

Other requirements:

- UHD or high resolution TVs are allowed an UHD adjustment factor.
- Standby-Passive Mode power requirements of less than or equal to 0.5 W.
- Luminance:

Luminance in the Brightest Selectable Preset Picture Setting	Luminance in the Default Picture Setting
<350 cd/m2	≥65% the luminance in the Brightest Selectable Preset Picture Setting
≥350cd/m2	≥228 cd/m2

- TVs with Standby-Active Mode shall automatically return to the as-tested Standby-Passive Mode power requirements following any maintenance or update operation within a period less than or equal to 15 minutes.

Thank You

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