TV: DRAFT FOR A MEPS REGULATION
ECREEE / GIZ

Normand Michaud (Econoler), Dakar, 22 May 2019
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.).
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.
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:

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

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:

<table>
<thead>
<tr>
<th>Luminance in the Brightest Selectable Preset Picture Setting</th>
<th>Luminance in the Default Picture Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;350 cd/m²</td>
<td>≥65% the luminance in the Brightest Selectable Preset Picture Setting</td>
</tr>
<tr>
<td>≥350 cd/m²</td>
<td>≥228 cd/m²</td>
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</tbody>
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- 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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