Evaluation of Physical TV Testing D3.3

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Project Aims and Objectives

The project aims at providing a fully-fledged and detailed methodological guidance to allow EU Member States and MSAs to face the new legislative and market challenges for TV sets in an effective and cost-efficient way. The project has the objectives of:

• Analysing the implication of the new Energy Labelling and Ecodesign Directive on the market surveillance activities by carrying out ad-hoc surveys

• Assessing the compliance of TV sets in the framework of the new Energy Labelling and Ecodesign regulations, through verification procedures.

• Improving the know-how and testing capability of laboratories with regard to the new and complex measurement method for measuring energy efficiency of TVs.

• Evaluating the outcomes of the product tests carried out and proposing corrective approaches to manufacturers and retailers.
Method
Method (1/6)

- Objective to test 201 TV units against the technical and information requirements of the EL & ED regs.
- Testing performed by the consortium partners: VDE, ipi and Re/genT
- Measurements made in line with IEC 62087 & EN 50564
- To provide clarity to the market, and to consult on process with the MSAs, it was necessary to set out and declare how the Consortium interpreted specific requirements – Testing Interpretation document
Method (2/6)

• A TV market analysis was conducted to prepare a product selection methodology; once finalised, these model lists were published online for all 4 batches.

• As part of the selection process, the Consortium distinguished between A and non-A brands. A brands were defined as: LG, Panasonic, Philips, Samsung, Sony, TCL, Thomson and Toshiba.

• The testing was divided into 4 batches: the first batch contained 60 units, the second 40, third 62 and the fourth 10 units. The remaining units were allocated for step 2 testing.
Method (3/6)

- The first batch constituted 57 LCD TVs and 3 plasmas, with a split of 36 A and 24 non-A brands.
- The screen sizes of the 60 models were split evenly between 4 size groups: <32”, 32”, 33-42”, >42”. These were the most commonly bought TVs between 2012-14, as a consequence models <16” and >55” were excluded.
- The Consortium were keen to take an intelligence led approach to model selection from batch to batch.
- The results of the first batch of testing were used to inform the model selection and targeting approach for batches 2 and 3.
Method (4/6)

- There was greater targeting of non-A brand TVs in batches 2 and 3 as they were found to have a higher instance of failures in batch 1.
- The proportion of A-brand to non-A brand TVs evolved:

<table>
<thead>
<tr>
<th>Batch</th>
<th>Quantity</th>
<th>A brand</th>
<th>Non-A brand</th>
<th>% non-A brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>36</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>12</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>62</td>
<td>27</td>
<td>35</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>172</td>
<td>77</td>
<td>95</td>
<td>55</td>
</tr>
</tbody>
</table>
Method (5/6)

- The selection approach for batch 3 also incorporated the following aspects:
  - As a minimum, TVs could not be selected if they were placed on the market before May 2014
  - TV brands not already included in batches 1 & 2 were prioritised
  - Display technologies such as OLED, full/edge LED backlight, multiple tuners, 3D were included
  - Models with high EEC declarations were targeted A++/A+
  - Those models sold in more than one country were prioritised in order to expand the reach and impact of the project
Brands that failed the technical ecodesign requirements (batch 1-3) and where remedy actions were carried out form the 4th batch of models tested by ComplianTV:

10 TV models:
- 2 A-brands and 8 non-A brands
- 60% of the models are with high efficiency declaration (A+)
Results – Technical Requirements
Overall – Technical Pass/Fail (%)

Technical ecodesign requirements
Batch 1, 2, 3 & 4

- Compliant: 86%
- Non-compliant: 8%
- No result: 6%

Sample size = 172

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### Classification of Failure Type

<table>
<thead>
<tr>
<th>Category</th>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>148</td>
<td>14</td>
</tr>
<tr>
<td>On-mode power consumption</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Standby/Off-mode power consumption</td>
<td>161</td>
<td>1</td>
</tr>
<tr>
<td>Automatic power down</td>
<td>149</td>
<td>13</td>
</tr>
<tr>
<td>Peak luminance ratio</td>
<td>157</td>
<td>5</td>
</tr>
<tr>
<td>Home-mode</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency Label</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

Sample size = **162**. There were 10 products which could not be assessed for step 2 testing.
Failure split by brand classification

Physical Testing Compliance by Brand

Compliant 92%
Non-compliant 8%
A-Brand 0%
non-A Brand 8%

Sample size = 162.

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Failure split by price segment

Non-compliance by price segment (%)

- <400: 85%
- 400-600: 7%
- 600-1000: 8%

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Compliance split by price segment

- <400: 25%
- 400-600: 21%
- 600-1000: 25%
- >1000: 29%
Results
– Information Requirements

Compliant TV

Compliance of TVs and Monitors with Energy Label and Ecodesign Requirements

Co-funded by the Intelligent Energy Europe Programme of the European Union
Overall Pass/Fail (%) – Energy Labelling

Information requirements: Energy labelling
Batch 1, 2, 3 & 4

- Compliant: 33%
- Non-compliant: 32%
- Not assessed: 35%

An example of an information requirement under the TV energy labelling regulation would be the need for a product fiche available...
Overall Pass/Fail (%) – Ecodesign

Information requirements: Ecodesign
Batch 1, 2, 3 & 4

- Compliant: 31%
- Non-compliant: 62%
- Not assessed: 7%

An example of an information requirement under the TV ecodesign regulation would be the publically available information on websites.
Overall Pass/Fail (%) – Energy Label Format

Energy label format requirements
Batch 1, 2, 3 & 4

- Compliant: 72%
- Non-compliant: 28%

An example of a format failure is the label being produced in an incorrect format e.g. size, shape, colour.
Classification of Failure Type

Publicly available information
Batch 1, 2, 3 & 4
- Compliant: 106
- Non-compliant: 12
- Not assessed: 54

Product fiche
Batch 1, 2, 3 & 4
- Compliant: 57
- Non-compliant: 60
- Not assessed: 55

Energy label format
Batch 1, 2, 3 & 4
- Compliant: 49
- Non-compliant: 123

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Commentary
Step 1: all 172 TVs

- **32** Suspicious cases
  - Discussion with manufacturers
    - **10** accept
    - **17** challenge
      - **5** Test results revised
        - **7** TVs found
          - **14** Not compliant
          - **8** compliant
          - **10** No results
        - **9** Not found on market
          - **10** open
          - **4** 3 5 9 1
Commentary

- There were 10 models that failed step 1 testing which could not go forward to step 2;
- In 9 of the 10 cases a further 3 models could not be sourced from the market (despite best endeavours).
- In one case, 3 further units were sourced, but arrived already open (suspected of having been re-sold)
- Of the 7 models that went to step 2 testing, 4 continued to be non-compliant and 3 cases became compliant.
- Nearly a third of the suspicious cases after step 1 testing were accepted by manufacturers, negating the cost for step 2 testing
Dissemination
Dissemination

• The dissemination of the results is many and varied
• All the MSAs have been written to with the results
• Each National Partner in the project will also either hold or speak at relevant, national events
• Further examples of dissemination are included in the proceeding slides, for example:
  – The database on the project’s website www.complianTV.eu
  – On display at the ECEEE Summer Study in June 2015
  – During the project’s final event in September
### Product Database

<table>
<thead>
<tr>
<th>No.</th>
<th>Brand name</th>
<th>Product</th>
<th>Countries where model is/was available on the market</th>
<th>Energy Efficiency Class (declared/measured)</th>
<th>Overall compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finlux</td>
<td>32F7020-T</td>
<td>UK</td>
<td>A</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Grundig</td>
<td>22 VLE 8220 BG</td>
<td>DE</td>
<td>B</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Hannspree</td>
<td>AD40UMBB / HSG1241</td>
<td>UK</td>
<td>A</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>LG</td>
<td>47LM760S-ZB</td>
<td>ES</td>
<td>A+</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>LG</td>
<td>32LS5600-ZC</td>
<td>UK</td>
<td>A</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>Median</td>
<td>P14090 / MD21168</td>
<td>ES</td>
<td>A</td>
<td>x</td>
</tr>
<tr>
<td>7</td>
<td>Odys</td>
<td>Base 24 / X800004</td>
<td>ES</td>
<td>A</td>
<td>No result</td>
</tr>
<tr>
<td>8</td>
<td>Panasonic</td>
<td>TX-L47E5B</td>
<td>UK</td>
<td>A+</td>
<td>✓</td>
</tr>
<tr>
<td>9</td>
<td>Philips</td>
<td>42PDL6907K/12</td>
<td>DE</td>
<td>A</td>
<td>✓</td>
</tr>
<tr>
<td>10</td>
<td>Samsung</td>
<td>UE32F6400AW</td>
<td>ES</td>
<td>B</td>
<td>✓</td>
</tr>
</tbody>
</table>
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Compliant TV

Compliance of TVs with Energy Label and Ecodesign Requirements

Tested: 162 TVs  Inspected: 100 Physical Shops, twice
Results: 2013 to 2015. For more information visit www.compliantv.eu

- On-mode Power Consumption
- Standby/Off-mode Power Consumption
- Home Mode
- Energy Efficiency Class
- Peak Luminance Ratio
- Automatic Power Down
- Energy Label Format
- Product Fiche
- Publicly Available Information
COMPLIANTV

Compliance of TVs with Energy Label and Ecodesign Requirements

Final project event

3. September 2015 | Brussels, Rue de la Science, 14 B-1040, DigitalEurope

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Compliant TV

Remedy Actions

Compliance of TVs and Monitors with Energy Label and Ecodesign Requirements

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Remedy Action (1/2)

- All technical and information requirement non-compliances have been followed up with manufacturers and suppliers according to the remedy action procedure.
- Remedy actions have either been:
  - Proposed by the manufacturer/supplier, reviewed by the Remedy Action Board, and either accepted or refined and then implemented; or
  - In the case of no response, been forwarded directly for action to the relevant MSA.
Remedy Action (2/2)

- Remedy actions resulting from technical fails have been subject to inclusion within a batch 4 of testing – in order to verify the correct implementation of the action
- All the results of the remedy action procedure are published on the product database on the ComplianTV website
Thank you for your attention.

Contact and more information:

ComplianTV project
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