Ecodesign compliance, conformity testing and market surveillance
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BUILDING PARTNERSHIPS FOR ENERGY SECURITY

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Agenda

• Conformity testing
• Verification procedures and tolerances
• Market surveillance
  – Requirements
  – Benefits
  – Barriers and opportunities
  – Cooperation
  – Results
• Summary
Verification procedure and tolerances

• Manufacturers responsible for tests
• Each regulation has an Annex stating the verification procedure and tolerances e.g.
  – Test one unit per model
  – Test documentation
  – Use measurement and calculation method from regulation
  – Apply stated tolerances
Extract of conformity checks related to Non-directional lamps (EC) 244/2009

<table>
<thead>
<tr>
<th>Measured parameter</th>
<th>Organisation (1)</th>
<th>Reference</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminous efficacy</td>
<td>Cenelec</td>
<td>EN 50285:1999</td>
<td>Energy efficiency of electric lamps for household use — Measurement methods</td>
</tr>
<tr>
<td>Lamp caps</td>
<td>Cenelec</td>
<td>EN 60061:1993 All amendments up to A40:2008</td>
<td>Lamp caps and holders together with gauges for the control of interchangeability and safety Part 1: Lamp caps</td>
</tr>
</tbody>
</table>

- No harmonised standards were developed specifically for the Ecodesign Regulation related to non-directional lamps.
- In lieu of this, existing European standards have been used (EN xxxxx:xxxx) in order for manufacturers to carry out conformity testing to obtain the CE mark.
Market surveillance requirements

Art 3.2 of the Ecodesign Directive requires Member States to designate market surveillance authorities to:

• Organise checks
• Manufacturer obligated to recall non-compliant products
• Require parties concerned to provide all necessary information
• Member States must keep the EC informed
Market surveillance benefits

• Consumers have greater confidence in the products sold in EU
• Products sold in EU market are legal
  – Compliance with relevant standards created by Standard bodies (i.e. CENELEC – Georgia has observer status);
• Around 100 full-time equivalent staff work on Ecodesign and energy labelling in the EU.
• Most active EU nations are Denmark, Sweden and the UK.
Barriers and opportunities

Barriers

• Different priorities (e.g. food and safety focus of some MSAs)
• Insufficient financial and human resources
• Insufficient accredited laboratories
• Complexity of legislation for individual product groups

Opportunities

• International exchange of information and experience
• Best practice guidance/templates
• Energy savings. If 10% of projected Ecodesign savings are lost through poor compliance, this would equate to 100TWh/yr by 2020, which would be valued at €14bn. Currently, around €7m is spent annually on MSA activities in the EU. Raising this level to ensure better compliance might prove a good investment.

Market surveillance cooperation

• Information sharing and coordination

• Ecopliant Project (2012-2015)
  – [www.ecopliant.eu](http://www.ecopliant.eu) shared best practice, trained MSA personnel
  – Created a database for ten MSAs to share plans, results and other information about market surveillance

• ADCO (Administrative Cooperation for Market Surveillance)
Ecodesign compliance & market surveillance – Good practice topics

- Organisation & strategy
- Market Surveillance Authority (MSA) recommendations
- National inspection programmes
- Coordination of inspection programmes
- Selecting products for inspection
- Identification of EEA wide product model numbers
- Document inspection approaches
- Compliance verification laboratory tests
- Third party funding of compliance testing
- Sharing inspection results across MSAs
- Enforcement
Market surveillance results: various products

Chart: Percentage of compliance of products tested by MSAs (ATLETE II, 2013, 1)
(chart taken over from original publication including the scale of bars):

- SWEDEN: 60%
- SPAIN: 50%
- DENMARK: 80%
- CZECH REPUBLIC: 100%
- BULGARIA: 70%
Some Competitors tend to offer a good lumen output at the cost of a poor life time, for the following reasons:

High lumen output is critical for a good Energy Label
Most competitors show good lumen but bad lifetimes

All label owner have to ensure EcoDesign compliance for their products (allowed tolerance +/- 10%)

Source: Lighting Europe, Ecopliant Training Workshop, 2014
Market Surveillance: Specialised testing equipment

- Lifetime testing
- Goniophotometer with a rotating mirror from Hopu Optics
- Required to determine if a light bulb is directional or non-directional
- Sphere photometer to test non-directional lights
MSA Document Inspection Testing

- Minimum content
  - Identity declaration
  - Rating plate
  - Test report
  - Calculations
  - Product information
  - Declaration of conformity

**LAMPS**

- Nominal wattage (W)
- Rated wattage (W)
- Measured wattage (W)
- Nominal luminous flux (lm)
- Rated luminous flux (lm)
- Measured luminous flux (lm)
- Rated luminous efficacy (lm/W)
- Measured colour rendering index; Ra
- Rated Lumen Maintenance Factor at 2000h, 4000h, 8000h and 16000h
- Measured Lumen Maintenance Factor at 2000h, 4000h, 8000h and 16000h
- Rated Survival Factor at 2000h, 4000h, 8000h and 16000h
- Measured Survival Factor at 2000h, 4000h, 8000h and 16000h
- Measured colour temperature; Tc (K)
Summary

- Effective enforcement is essential for the credibility of Ecodesign/labelling
- Benefits from transparency, sharing and co-operation between MSAs
- Penalties should be effective, proportionate and dissuasive
- The potential savings provide strong justification for scaling up activity
Thank you for listening
Any questions?

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