Update on Ecodesign and Energy labelling

EUP Stakeholder meeting

11 November 2014
Contents

• Progress and updates on product regulations
• Development of the 2015-17 Ecodesign working plan
• Revision of the Energy Labelling Directive
• Progress on the Ecopliant project
• The Energy Technology List/ ECA scheme
• Update from the Waste and Resources Action Programme (WRAP)
• Question and Answer session
Standards and labels – Oct. 2014

- Circulators
- Electric motors
- Fans
- Domestic lighting
- Tertiary lighting
- Domestic refrigeration
- Domestic dishwashers
- Tumble driers
- Pumps
- LEDs and directional lighting
- Luminaires
- External power supplies
- Standby and off-mode losses
- Network standby

- Domestic washing machines
- Televisions
- Simple set top boxes
- Aircon & comfort fans
- Space Heaters
- Water heaters
- Computers
- Vacuum cleaners
- Ovens, hobs and cooker hoods
- Local space heaters
- Ventilation products
- Distribution transformers
- Professional refrigeration

Black = MEPS only ; Red = MEPS & label
Recent developments (1)

- **Transformers**
  - Ecodesign regulation voted on 13 December 2013
  - Regulation came into force on 10 June 2014
  - Standards take effect on 1 July 2015
  - Review 2017

- **Professional Wet**
  - Non-household washing machines, laundry dryers and dishwashers
  - Consultation forum 29 November 2013
  - Wide product group & lack of measurement standards
  - Commission to mandate ESO’s to develop harmonized measurement standards.
Recent developments (2)

- Professional refrigeration
  - Ecodesign regulation voted upon in April
    - Not yet published in OJEU
    - Standards take effect in July 2016
  - Label regulation yet to be published

- Ventilation
  - Ecodesign regulation (domestic and commercial) voted upon in December 2013
    - Not yet published in OJEU
    - Standards take effect in January 2016
  - Label regulation (domestic) yet to be published
Recent developments (3)

* Local Space heaters
  - Ecodesign regulation voted upon in October 2013
  - Not yet published in OJEU
  - Standards take effect in January 2018
  - Label regulation yet to be published
    - Expected to follow agreement on solid fuel local space heaters

* Solid fuel boilers
  - Ecodesign regulation voted upon in October 2014
    - Not yet published in OJEU
    - Standards take effect in July 2020
  - Label regulation yet to be published
  - Review in 2022 – except for looking at 3rd party verification (August 2018)
Recent developments (4)

- Solid fuel Local Space heaters
  - Ecodesign Regulation voted upon in October 2014
  - Not yet published in OJEU
  - Standards take effect in 2022
  - Expecting label to be published with Local Space heaters reg
  - Review in 2024 – except for looking at 3rd party verification (August 2018)
## Upcoming Implementation Dates

### Ecodesign (reg no)

- Motors (640/2009) 1 Jan 2015
- Circulators (641/2009) 1 Jan 2015
- Fans (327/2011) 1 Jan 2015
- Tumble driers (932/2012) 1 Nov 2015
- Pumps (547/2012) 1 Jan 2015
- Network standby (801/2013) 1 Jan 2015
- Cookers, hobs, hoods (66/2013) 20 Feb 2015
- Boilers/ space heaters (813/2013) 26 Sept 2015
- Water heaters (814/2013) 26 Sept 2015
- Transformers (548/2014) 1 July 2015

### Labelling (reg no)

- Cookers (65/2014) 1 Jan 2015 1 Apr 2015
- ‘Online labelling’ (514/2014) 1 Jan 2015
- Boilers/ space heaters (811/2013) 26 Sept 2015
- Water heaters (812/2013) 26 Sept 2015
Commission’s workplans to 2014

Still to come from existing plans

- Commercial refrigeration
- Warm air central heating products
- Professional ‘wet’
- Motors} – existing scope of
- Pumps} regulations extended
- Compressors
- Mains wiring
- Smart appliances
- UPS
- Reviews -‘cold’, ‘wet’, lighting, TVs

- Enterprises’ servers
- Steam boilers (<50MW)
- Positive displacement pumps
- Motors < 200W
- Heating controls
- Lighting controls
- Taps and showers
- Not expecting action on machines tools, thermal insulation, large industrial furnaces
Status/next steps

- TVs and displays (monitors) – CF December
- Commercial Refrigeration, ISC Dec 2014
- Motors, ISC 1st quarter 2015
- Compressors, CF 3rd quarter 2015
- External Power supplies, RC (letter) Dec 2014
- Machine tools, Dec 2014 way forward to be confirmed
- Warm Air central heating products, ISC Dec 2014
- Furnaces, Dec 2014 way forward to be confirmed
- Lighting stage 6 delay, at ISC

CF = Consultation Forum
ISC = Commission’s internal inter-service consultation
RC = Regulatory Committee
Commission workplan 2015-17

- Commission is developing its plan for ecodesign and energy labelling for 2015-2017.
- Stakeholder meetings June & October. Consultation Forum – January?
- Progress on previous workplans has been slower than anticipated
  - Work still ongoing on 2009-11 plan and starting on 2012-14 plan
- We want to see a plan that
  - Clears the backlog of ‘new’ products
  - Assesses the remaining untapped potential for products already regulated against the potential for those not looked at yet, and works on those offering the best savings
- NB many products coming to review stage: it is likely that non-energy benefits such as materials impacts will be addressed, as well or, or even instead of, further energy benefits
- Work to date has focussed on energy-using products with little on energy-related products
Commission workplan 2015-17

Candidate products include

- Base stations
- Greenhouse covers
- Hand dryers
- Hot vending machines
- Mobile phones, smartphones
- Kettles
- Lifts
- Networking gateways
- Pressure washers
- Hair dryers
- PV inverters
- Refrigerated containers
- Signage displays
- Toasters

- Building automation control systems in non-residential buildings
Review of Labelling Directive

- Commission has been reviewing the labelling directive
- Our key objectives are to ensure that labelling helps consumers make informed choices and incentivises manufacturers to innovate
- The key issue is moving to longer term, sustainable labelling scale
  - At present scale can go to A+++ but some products already there
  - Other models considered include:
    - Continuous numeric scale 0-100%
    - A-G scale with periodic recalibrations
- We also want to clarify the rules around the use of running cost information, reflecting the John Lewis trial
- We expect firm proposals after the change of Commissioners (Q1 2015?)

**Background**
- 11 partners from 10 Member States, DECC & NMO for UK
- 3 year project (end April 2015)
- 7 work packages
- Funded by EASME & Partners

**Objectives**
- Establish ‘good’ practices for coordinated and resource efficient monitoring, verification and enforcement across Member States
- Increase knowledge amongst Market Surveillance Authorities
• Four MSA EEA-wide workshops held in May & June
• National workshops for MSAs start October [in 10 member states represented by project partners]
• DRAFT Best (‘good’) Practice guidance developed
• Pilot database testing by partners with full roll-out to MSAs later this year
• Currently in final product testing phase
• Final deliverables/outputs completed by April 2015
• Final stakeholder meetings and report launch in April 2015
International Activities (1)

- SEAD Global Efficiency Medal
  - Motors awards
    - Regional winners announced 7 October
    - No European entries
  - Lighting awards
    - Nomination period ended 31 October
      - Winners to be announced at the Clean Energy Ministerial, May 2015
    - Possible re-run for TVs in 2015
- SEAD Computer working group published report on test methodologies product definitions and specifications in May 2014.
International Activities (2)

- IEA 4E (Energy Efficient End-use Equipment)
  - IEA/4E publication ‘More Data Less Energy’
    - “The uptake of network-enabled devices – which being in “network standby” mode are “always on” – is projected to expand exponentially, possibly reaching 50 billion by 2020, rising towards 100 billion by 2030 and 500 billion over the following decades
    - “In 2013, the world’s networked devices consumed around 616 terawatt hours (TWh) of electricity, the majority of which was used in standby mode. Of that total, around 400 TWh – equivalent to the electricity consumed annually by the United Kingdom and Norway combined – was wasted because of inefficient technology”
  - Electronic Device and Networks Annex established
    - Energy efficiency implications of eg ‘smart’ appliances, Internet of Things
Ecodesign – ETL alignment

Current position

Paul Huggins, November 2014
ECAs support the move to a low carbon economy

- The aim of the ECA Scheme is to help bring about a low carbon economy and reduce UK CO₂ emissions by:
  - Influencing the design, availability, and uptake of the most energy-efficient equipment
  - Providing a principal procurement tool for customers, designers, specifiers and purchasers interested in energy-saving capital equipment

- Supported technologies
  - The ECA scheme supports existing energy efficient technologies that have NOT deeply penetrated the customer markets into which they are sold
ECA Scheme governance structure

ECA Scheme for energy saving technologies

- ECA Tax Breaks
- Energy Technology List
  - Claimed on tax return
  - Administered by HMRC

Part of the Climate Change Levy Package (est. £0.7bn p.a.)
Multiple policies impact on UK product sales
Together they influence markets.

<table>
<thead>
<tr>
<th>Product policy</th>
<th>Impact</th>
<th>Intervention</th>
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<tbody>
<tr>
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<td>• Minimum standards</td>
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<td>EcoDesign</td>
<td>CUT OUT</td>
<td>• Pricing and trading</td>
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<td></td>
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<td>• Business Support</td>
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<td>• Labelling (Ecolabel, CE)</td>
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<td>• Procurement advise</td>
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<td>• Education</td>
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<td>• Voluntary agreements</td>
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<td>• Labelling</td>
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<td></td>
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<td>• Fiscal incentives</td>
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<tr>
<td>Building Regulations</td>
<td>DRIVE</td>
<td>• Fund demonstrators</td>
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<td></td>
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<td>ENCOURAGE purchase of the most sustainable products</td>
</tr>
<tr>
<td>CATAPULT</td>
<td>DEVELOPMENT</td>
<td>DEVELOPMENT of new, more sustainable products</td>
</tr>
</tbody>
</table>
EcoDesign has a very wide remit applying to all types of energy using products (EuP).
ETL overlaps with Ecodesign across a number of categories.

- The diagram illustrates the scope of the directive and the energy used in each area in TWH across the EU.
ETL categories where EcoDesign regulations have already been implemented
ETL criteria are being aligned with EcoDesign approaches

› **Motors**
  › Under EcoDesign, from 1 January 2015, line start motors with a rated output between 7.5 – 375kW must be IE3, or a minimum of IE2 if fitted with a variable speed drive.
  › ETL updated thresholds in August 2014, to require AC induction motors (7.5 – 375kW) to have efficiencies equivalent to IE4

› **Air source split and multi-split heat pumps**
  › EcoDesign regulations for heat pumps with cooling capacity $\leq 12kW$ came into force in Jan 2013. These imposed minimum seasonal efficiency requirements.
  › ETL updated thresholds in Aug 2013, to be based on SCOP and align to top performing products in the market

› **Lighting**
  › ETL thresholds increased to exceed EcoDesign and Building Regulations

› **Boilers and water heaters**
  › EcoDesign seasonal efficiency requirements from Sept 2015. ETL coverage to be reviewed next round to investigate alignment
ETL products which are to be covered by EcoDesign, but where Industry Consultation is ongoing
We will accommodate appropriate changes to ETL criteria

- **Lot 15 Solid Fuel Small Combustion Installations**
  - Biomass Boilers and Room heaters

- **Lot 20 Local Room Heating Systems**
  - Boilers: Burners with Controls
  - Heat Pump Driven Air Curtains
  - Radiant Heating Equipment

- **Lot 21 Central Heating Products**
  - Warm Air Heating Equipment

- **ENTR Lot 6 Air-Con & Ventilation Systems**
  - Heat Pumps: Air Source Gas Driven Split & Multi Split
  - Heat Pumps: Air Source Split & Multi-Split (>12kW)
  - Heat Pumps: Water Source Split & Multi-Split
  - Refrigeration: Evaporative Condensers
  - Refrigeration: Forced Air Pre-Coolers
ETL products which are to be covered by EcoDesign, but where Industry Consultation is ongoing (cont.)
We will accommodate appropriate changes to ETL criteria

› **ENTR Lot 1 Refrigeration and Freezing Equipment**
  › Refrigeration: Air-Cooled Condensing Units
  › Refrigeration: Professional refrigerated storage systems
  › Refrigeration: Package Chillers

› **Lot 12 Commercial Refrigerators & Freezers**
  › Refrigeration: Covers for Display Cabinets
  › Refrigeration: Refrigerated Display Cabinets
Further areas where the EcoDesign process is at an early stage (prep study/working document) which may be relevant to the ETL in future ETL watching brief

- **Second working plan – priority list**
  - Boilers: Local Rapid Steam Generators and Steam Boilers
  - Boilers: Optimising Controls for Wet Heating Systems, Retrofit Burner Control Systems

- **Second working plan – conditional list**
  - HVAC Controls
  - Lighting Controls

- **Lot 27 Uninterruptable Power Supplies**
  - Uninterruptable Power Supplies

- **Lot 30 Motors outside Lot 11**
  - Motors: Permanent Magnet Synchronous Motors

- **Lot 31 Compressors**
  - Compressed Air Equipment
ETL research reviews are currently underway in the following areas:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Observations/Issues</th>
<th>Synergies/overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting – High efficiency lighting units and White LED lighting units</td>
<td>Significant market growth for LEDs. HELUs still as effective for some situations. Building regulations and EcoDesign have increased standards - further ETL threshold tightening required.</td>
<td>Thresholds available under EcoDesign and Building Regs.</td>
</tr>
<tr>
<td>Motors – induction motors and permanent magnet motors</td>
<td>Planning alignment with developing standards, mandated by EcoDesign for “line start” and “converter driven” motors. Increases to thresholds for converter driven motors and small induction motors will be needed.</td>
<td>MEPS under EcoDesign from Jan 2015 and 2017 for line start motors.</td>
</tr>
<tr>
<td>Refrigeration – RDCs and Doors/blinds/curtains</td>
<td>Tightening of efficiency criteria needed – will need to align with new EER calculation methodology in due course.</td>
<td>Eco Design and Ecolabelling requirements planned.</td>
</tr>
<tr>
<td>Air to Water Heat Pumps</td>
<td>Plan to change to a seasonal performance measure based on BS EN 14825 in preparation for EcoDesign and Eco labelling regulation implementation.</td>
<td>Eco Design in Sept 2015.</td>
</tr>
<tr>
<td>Biomass boilers</td>
<td>Research underway will consider impact of forthcoming EcoDesign requirements.</td>
<td>Eco Design requirements planned.</td>
</tr>
<tr>
<td>Close control air conditioning</td>
<td>May propose update to threshold and test conditions.</td>
<td>n/a at present.</td>
</tr>
<tr>
<td>Heat pump driven air curtains</td>
<td>Reviewing thresholds and considering representative testing.</td>
<td>n/a at present.</td>
</tr>
<tr>
<td>Cellar cooling</td>
<td>Reviewing thresholds and improved technology options.</td>
<td>n/a at present.</td>
</tr>
</tbody>
</table>
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Switched on to value: delivering business benefits through sustainability

Gerrard Fisher
WRAP
Leading action across the product lifecycle: eSAP

- Design
- Make
- Sell
- Use
- Re-use
- Collect
- Recycle
- Returns
- Repair
- Re-sell

Extending product durability
Minimising product returns
Understanding and influencing consumer behaviour on product choice and repair
Implementing profitable, resilient and resource efficient business models
Gaining greater value from re-use, repair and recycling
Switched on to value: appliances

80% of householders want longer guarantees included

Evidence of consumers shopping around for the best guarantee

Products that don’t meet durability expectations:

www.wrap.org.uk/content/switched-value
Return rates
Product returns cost UK retailers and brands up to £400 million every year.

Better supplier relationships
Save time and resources by avoiding testing and negotiations with suppliers when products fail.
Why improve durability?

Brand loyalty
Build customer loyalty through improved product reputation

Happy customer
80% of customers want guarantees of 2 years or longer on major appliances
WRAP has created simple buying guidance for specifiers of own-brand electrical goods.

Addresses critical components known to affect reliability & durability.

Project contractors:

www.wrap.org.uk/betterappliances
Trading & reusing consumer electronics

£3bn of electronic & electrical equipment in UK households that could be traded in.

2 out of 3 householders say they’re willing to trade in products with the right retailer.

£800m GDP benefit to UK economy from developing trade-in models on TVs alone.

Returns value to customers, generates value for businesses, promotes reuse.

www.wrap.org.uk/content/switched-value
Ecodesign requires whole lifecycle thinking

Using mercury fluorescent backlights in LCD displays increases the hazard for collection and treatment operators.

www.digitaleurope.org/Services/MecuryFreelogo.aspx
Anticipated future issues: whole system approach to ecodesign

Customers may not hand in products for recycling to benefit the environment but they will be interested in options that protect their personal data.

HDD → SSD

Image with kind permission from http://draalin.com/

http://www.adisa.org.uk/
The REBus Project

Goal: deliver more profitable, resource efficient and resilient business models

- Expert guidance
- Reduces risk of changing model
- Presents bespoke commercial case
- Evaluate pilots, case studies
- Publish ‘how to’ toolkit

In numbers:
- 30 pilots
- 3.5 years
- €3.1m
Our stage gate support towards circular business
Partners already involved

Projects are progressing to trial and scale-up stages now.
Thank you

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