



Importance of Product Labelling: Label types and characteristics

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Product Labelling

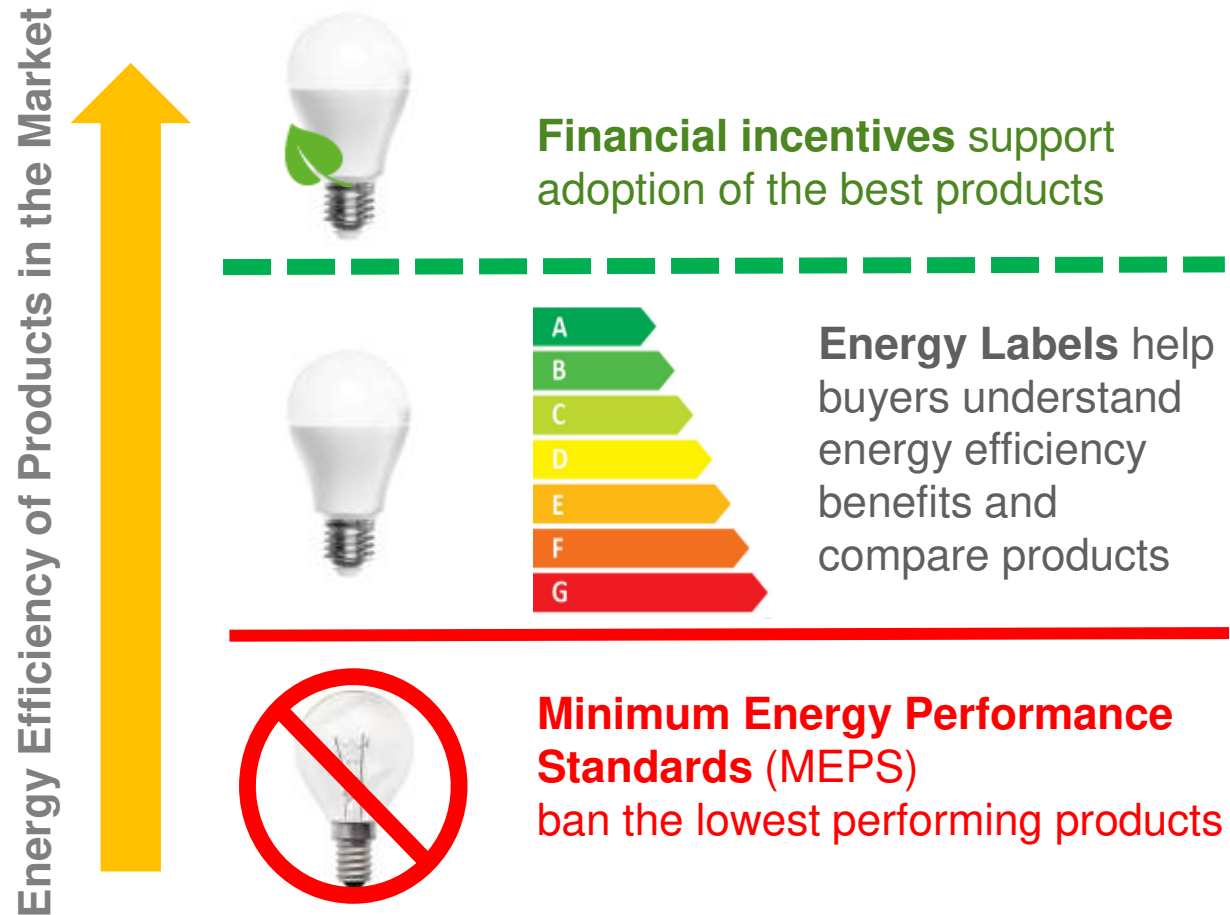
1. Purpose of Energy Labels
2. Types of Energy Labels
3. Design of Energy Labels
4. Relationship between Energy Labels & Energy Efficiency Standards



Purpose of Energy Labels

- Provide clear information on a product's energy performance
- When consumers are aware of the energy use of products at point of sale...
 - **Energy efficiency can influence consumer purchase decisions**
- If consumers can make a side-by-side assessment of similar products on the retail shelf
 - **Encourages manufacturers to produce more efficient products**
- **Market transformation: Energy labels provide “pull”, work in combination with the “push” of MEPS**

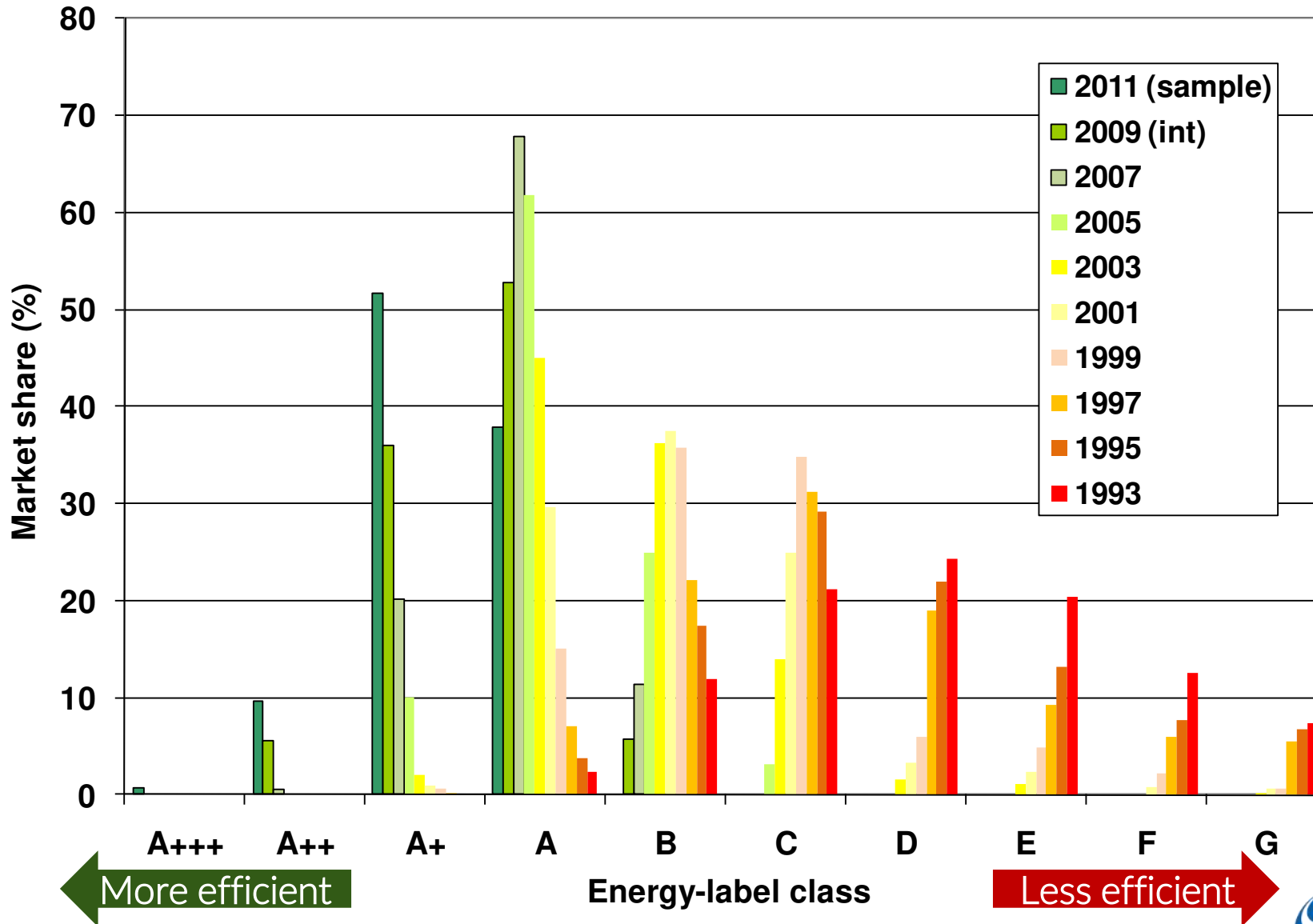
Tools to transition a market

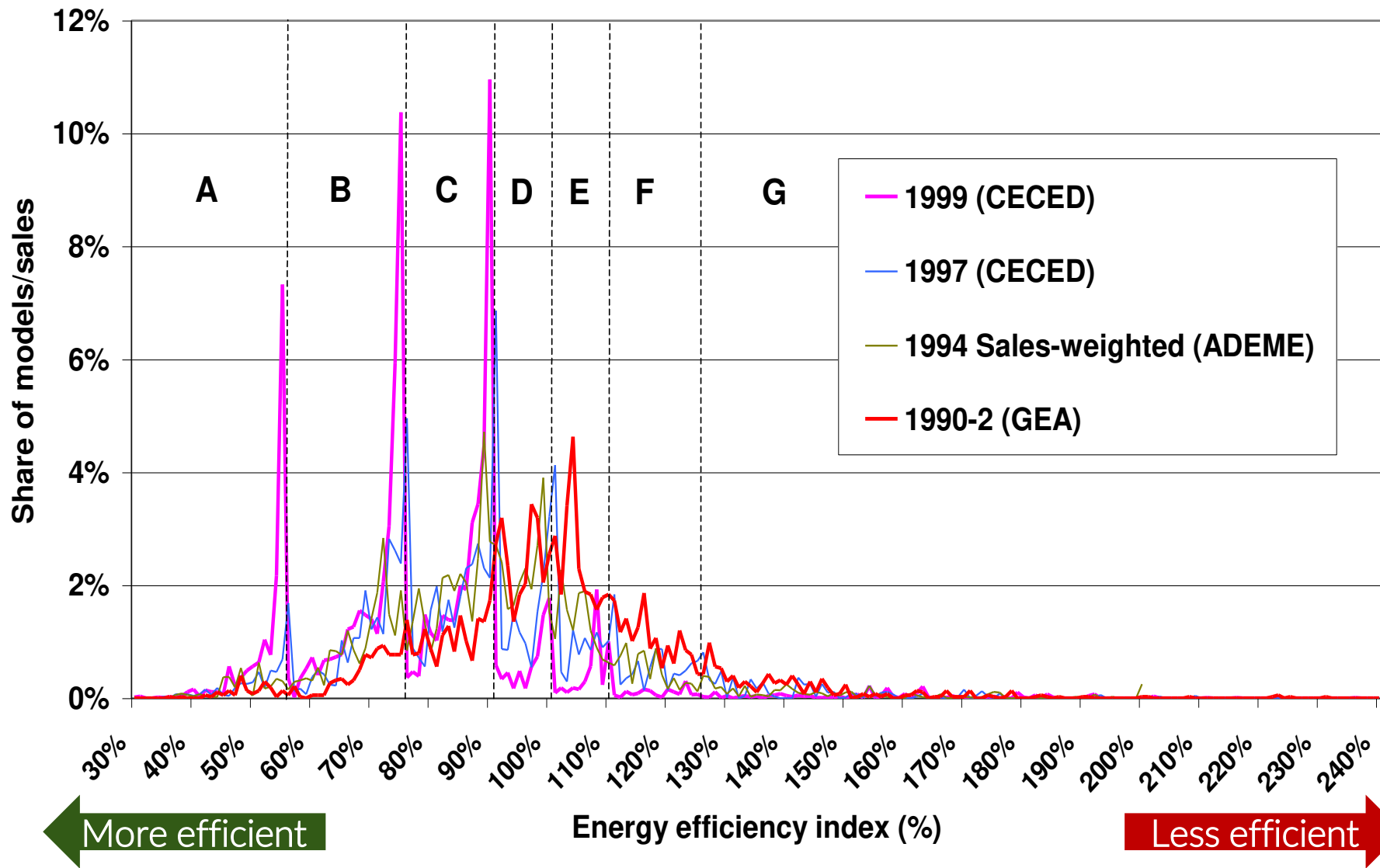


Monitor what enters market,

Test to **Verify** compliance,

Enforce rules





Types of Energy Labels

There are 4 main types of Energy Labels:

1. Informational label
2. Comparative (categorical) label
3. Comparative (continuous) label
4. Endorsement label

Types of Energy Labels

Informational

- Can be mandatory or voluntary
- ✓ Provides data on product performance or attributes (e.g. lumens, CCT)
- Doesn't attempt to scale or rank
- × *harder for consumer to compare products*
- × *less effective at transforming market (than comparative labels)*

QR code

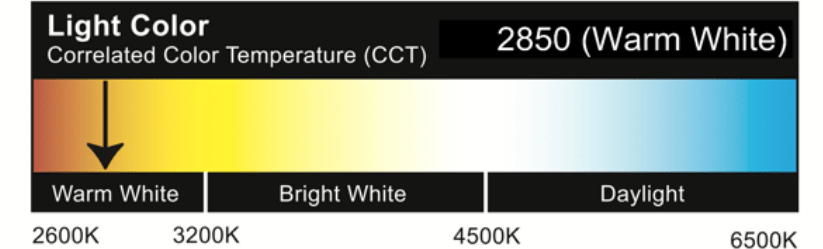


Lighting Facts™

LED Product

Light Output (Lumens)	300
Watts	6
Lumens per Watt (Efficacy)	50

Color Accuracy	92
Color Rendering Index (CRI)	



Visit www.lighting-facts.com for the *Label Reference Guide*.

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting*.

Model# MR16

Types of Energy Labels

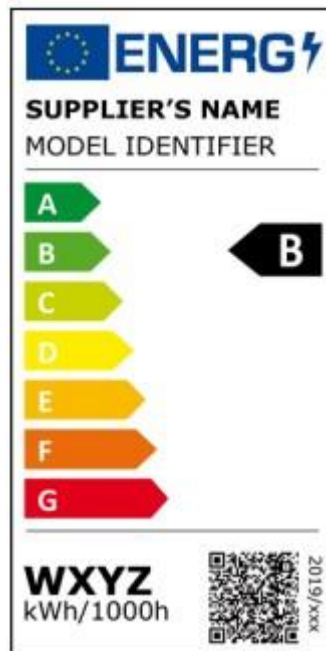
Comparative

- Mandatory
- Shows the energy performance of a product using an intuitive and simple scale
- ✓ **Allows consumers to easily compare product performance**
- Scale can be categorical or continuous

Types of Energy Labels

Comparative – categorical

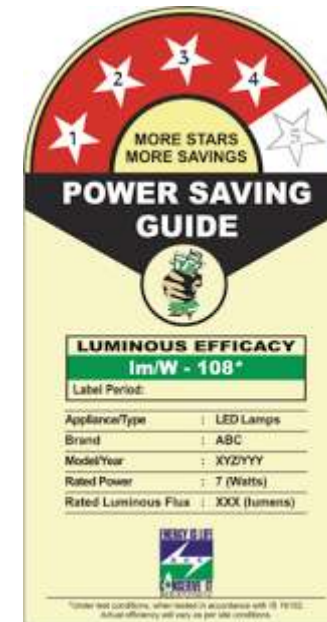
- Scale for comparing between products on energy (or other) performance uses a discrete set of **categories** → *for example, using letters, numbers or stars*



EU



CHINA



INDIA



Types of Energy Labels

Comparative – continuous

- Scale for comparing products is **continuous** (sliding scale) → *for example, cost of use per year, or relative energy saving of appliance*



MEXICO

Types of Energy Labels



Design Lights Consortium

Endorsement label:

- Voluntary program
- Label signifies that a product has met or exceeded a specified set of criteria, High Energy Performance Standard (HEPS level)
- Simple logo, no further information is associated with the label
- ✓ **Useful for qualification for rebates, tax incentives, and preferential public procurement programmes**
- × *Relies on prior knowledge of program, needs to be heavily promoted to consumers*



China



Germany



India



UK



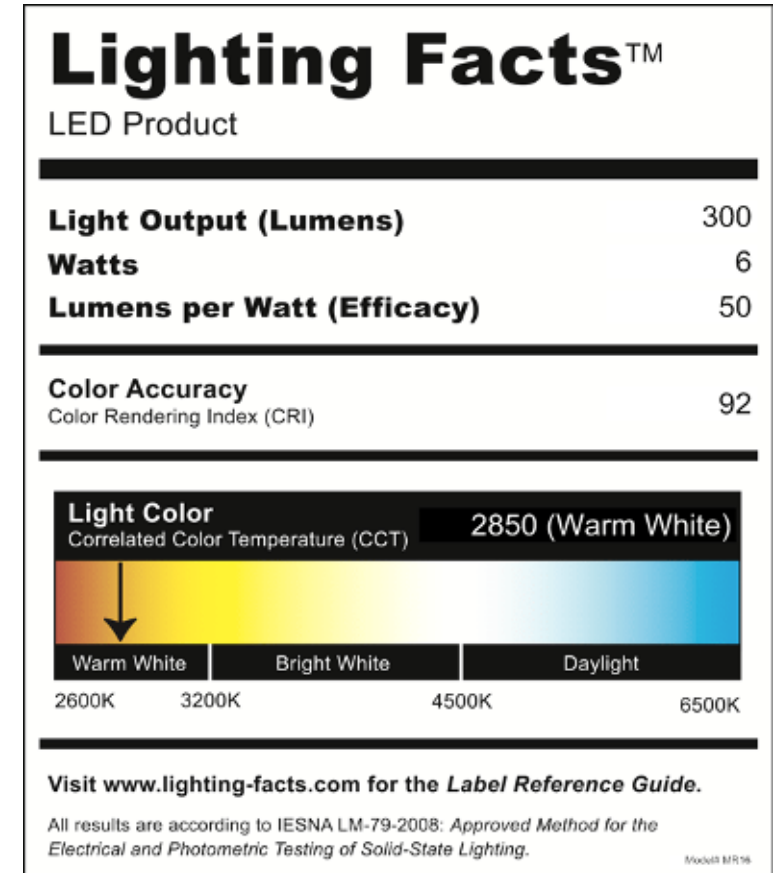
USA



Summary – types of labels

Informational labelling format

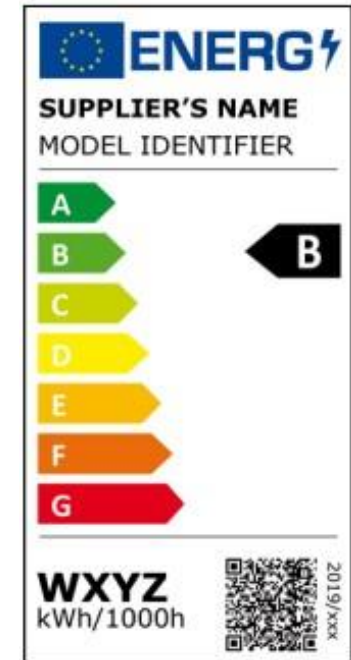
- ✓ Provides critical information to assist users in selection. e.g. efficacy, colour temperature, CRI, appropriate location, dimmability, etc
- ✓ No need for updating on a regular basis as only performance information provided
- ✓ Can serve to educate and inform on various performance & quality metrics
- ✗ Require consumer awareness & training to understand/appreciation how to use the information
- ✗ Design of label requires careful consideration for content & presentation



Summary – types of labels

Categorical labelling format

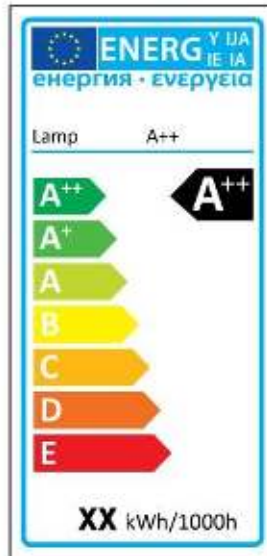
- ✓ Easy for consumers to make choice
- ✓ Can be used to assign a MEPS level
- ✓ Provide a useful framework for implementing rebates, tax incentives, or preferential public procurement programmes
- ✓ Most effective as a mandatory program (otherwise only high performing products will use the label, thus negating a voluntary program's value)
- ✗ Development of categories requires careful consideration for the life of the scale
 - The ratings process for categorical labels needs to be updated on a regular basis
 - Updates to category requirements may lead to products with older scales still on the market (another option is to extend the number of levels)



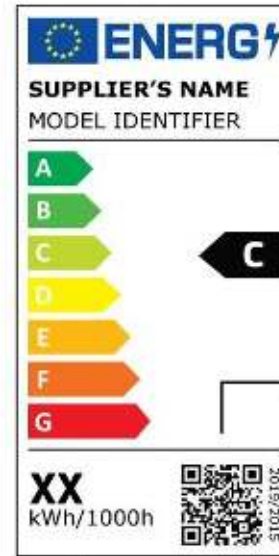
Consider expansion and review of categorical scales

How to recognise a rescaled lighting product ?

Current energy label



New energy label



The rescaled energy efficiency class for this light source, an A++ in the previous label

The QR code gives access to more information on the model

The energy consumption of this product is calculated with refined methods

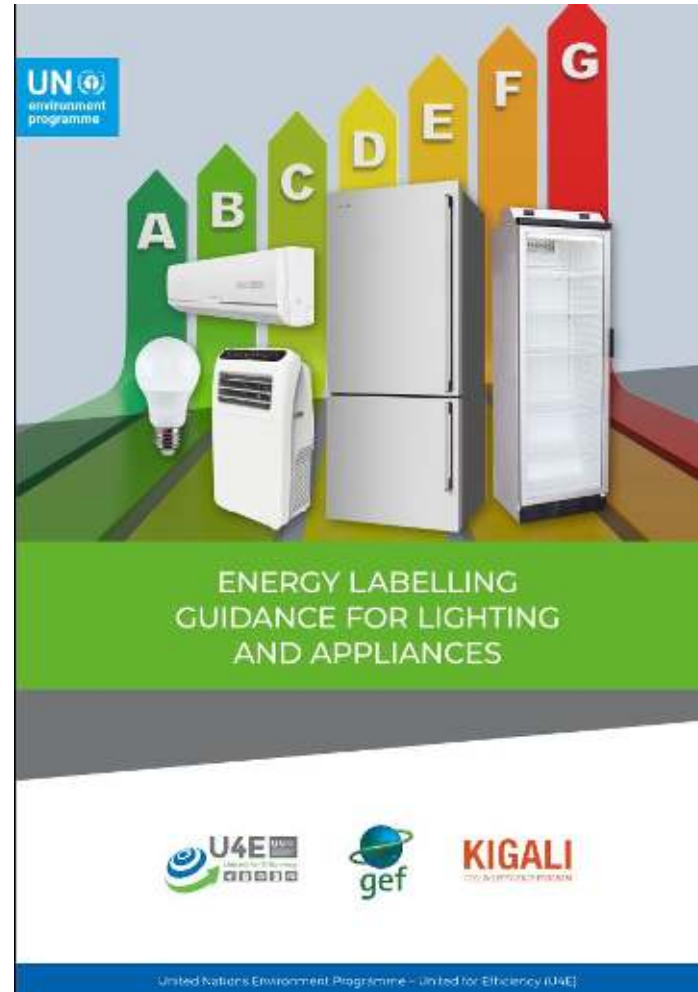
Label design

- Establish technical definitions:
 - How is energy performance defined & measured (*what is the principal indicator?*)
 - What scale should be used, and at what thresholds?
 - How to establish conformity?
- How **effective** will it be:
 - Is it understandable to the audience?
 - Does it motivate consumer demand for energy efficient products?
 - Can suppliers comply with it?

Label design – First Steps

- **Consumer research:**
 - Determine the design that will have the greatest impact for the local culture
- **Market research:**
 - Establish key market measures, like: MEPS, “Best Available Technology” (BAT), and technology progress over time
 - Use these to set performance thresholds that are suitable for current market and will give room to expand over time.
 - *Response of suppliers is important → so alignment with other markets can be very important to success by building a large enough market size for suppliers to fully engage*
- **Alignment** – important for performance measures, categories and thresholds – *not important for visual design elements like graphic design, colour, layout*

U4E guide on designing energy labels has further detail on best practice for label design



<https://united4efficiency.org/resources/energy-labelling-guidance-for-lighting-and-appliances/>

Label design

- Define
 - Test methods
 - Product categories
 - Energy efficiency metrics & thresholds
- Determine principal indicator → Energy efficiency or cost?
 - Must be clear and easy to compare, (for example: consumers may confuse “cost of use per year” with “cost savings per year”)
- Choose and design energy performance scale
- Select graphics and colour
 - for example, if categorical: stars, letters or numbers?
- Any other label elements
 - Other languages, supporting information, QR code

Key Principles for labelling

- The indicator of the products' energy efficiency must be easy for consumers to identify, understand and remember
- The thresholds should challenge the market and complement MEPS (where appropriate) – and **consider regional alignments**
- Industry must have knowledge of (and confidence in) the requirements for labelling

Relationship between Labels & Energy Efficiency Standards

Basic Philosophies

1. A regulated market entry level (minimum allowable performance) is typically supported by mandatory programs for MEPS and possibly a comparative label
2. Participation in schemes for the promotion of higher performance products is voluntary and typically supported by programs for Higher Energy Performance Schemes (HEPS) and an endorsement label

Questions



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