



European Product Registry Database and the New Energy Label for Lighting

Michael Scholand, LC

Operating Agent Support, IEA 4E SSL Annex

7 October 2019, DTU Risø Campus, Roskilde, Denmark

Table of Contents

1

New Energy Label for Lighting

Introduction and Overview

New Policy Measure and Requirements

Important dates and timing

2

EPREL Database

Framework Directive Establishing EPREL

Specific Requirements for Lighting

Important Dates and Resources

Ecodesign and Energy Labelling Influence the Market for Products

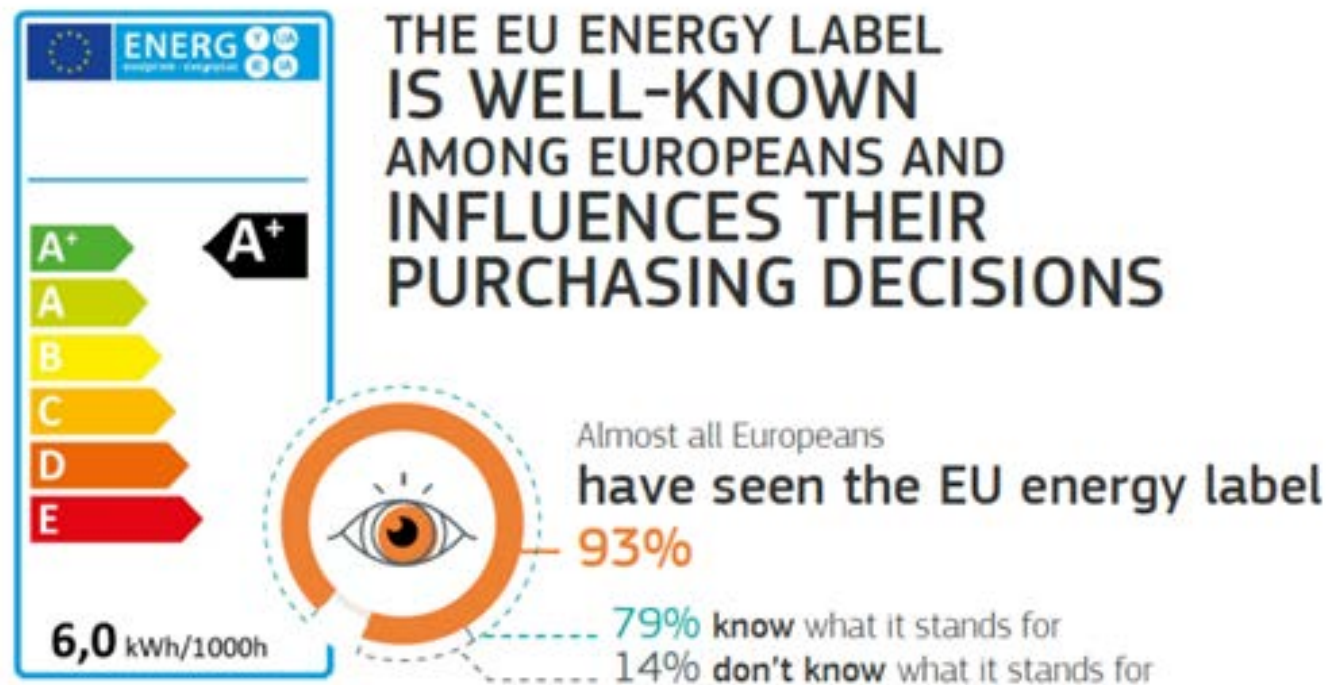
Ecodesign Directive

Energy Labelling Directive



- Both are framework directives, defining the rules for establishing product-specific mandatory requirements:
 - Ecodesign: set minimum product performance and quality
 - Energy Labelling: inform consumers, stimulate demand for efficiency
- The combined effect ensures a sustained market transformation

A Successful Policy Instrument for Engaging Consumers

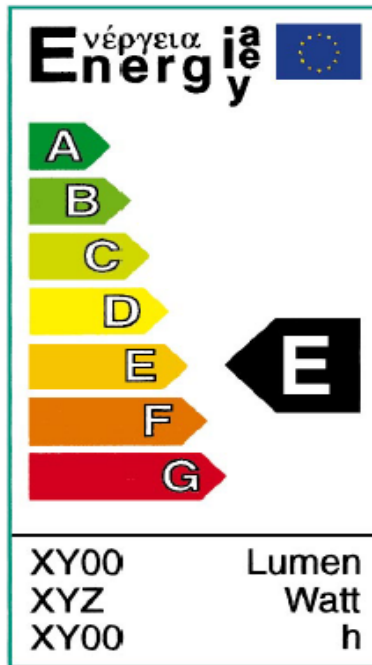


The label had an influence
in **79%**
of Europeans' purchase choices
when buying appliances

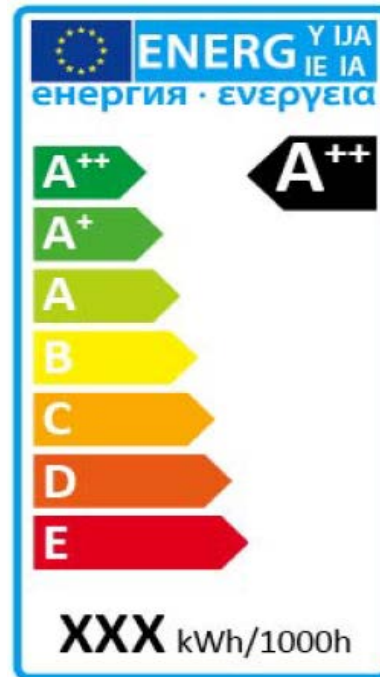


Energy Label for Lighting Products over the years

1998 – 2013
Original Label



2013 – 2021
Current Label



2021 – c. 2030
Future Label

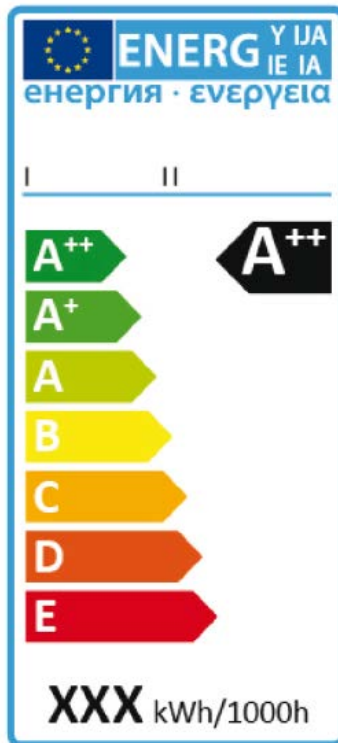


Current Energy Label for Lamps (ending Sept 2021)

COMMISSION DELEGATED REGULATION (EU) No 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of electrical lamps and luminaires.

Table 1

Energy efficiency classes for lamps



Energy efficiency class	Energy efficiency index (EEI) for non-directional lamps	Energy efficiency index (EEI) for directional lamps
A++ (most efficient)	$EEI \leq 0,11$	$EEI \leq 0,13$
A+	$0,11 < EEI \leq 0,17$	$0,13 < EEI \leq 0,18$
A	$0,17 < EEI \leq 0,24$	$0,18 < EEI \leq 0,40$
B	$0,24 < EEI \leq 0,60$	$0,40 < EEI \leq 0,95$
C	$0,60 < EEI \leq 0,80$	$0,95 < EEI \leq 1,20$
D	$0,80 < EEI \leq 0,95$	$1,20 < EEI \leq 1,75$
E (least efficient)	$EEI > 0,95$	$EEI > 1,75$

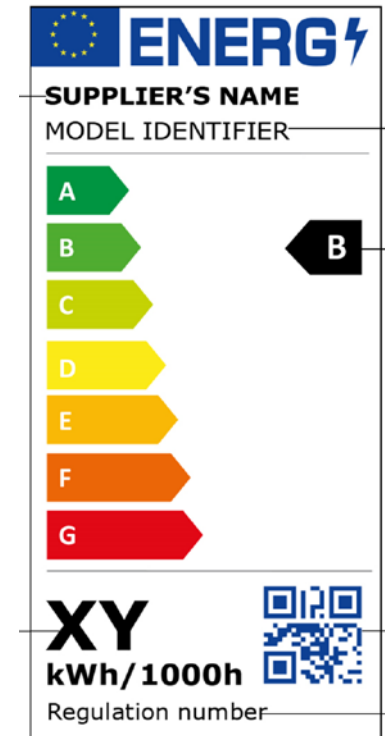
New Energy Label (starting Sept 2021) – Energy Classes

- Mainly an LED label, designed to last for about 10 years

Table 1

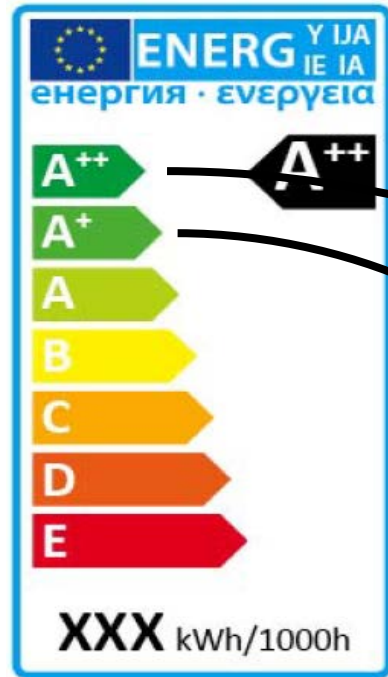
Energy efficiency class	Total mains efficacy η_{TM} (lm /W)
A	$210 \leq \eta_{TM}$
B	$185 \leq \eta_{TM} < 210$
C	$160 \leq \eta_{TM} < 185$
D	$135 \leq \eta_{TM} < 160$
E	$110 \leq \eta_{TM} < 135$
F	$85 \leq \eta_{TM} < 110$
G	$85 \leq \eta_{TM}$

- Classes have a 25 lm/W difference between them; all sources above 210 lm/W are class A, all sources below 85 lm/W are class G
- LED linear tube retrofit at 165 lm/W: C class
- Philips Dubai Lamp (A-type) at 200 lm/W: B class



Significant Rescaling of Lamps: A++ becomes E

2013 – 2021
Current Label



2021 – c. 2030
Future Label

Current A++ has EEI of 0.11 equates to 113 lm/W at 800 lm; new label class E is 110 to 135 lm/W


Current A+ has EEI of 0.17 equates to 73 lm/W at 800 lm; new label class G is less than 85 lm/W

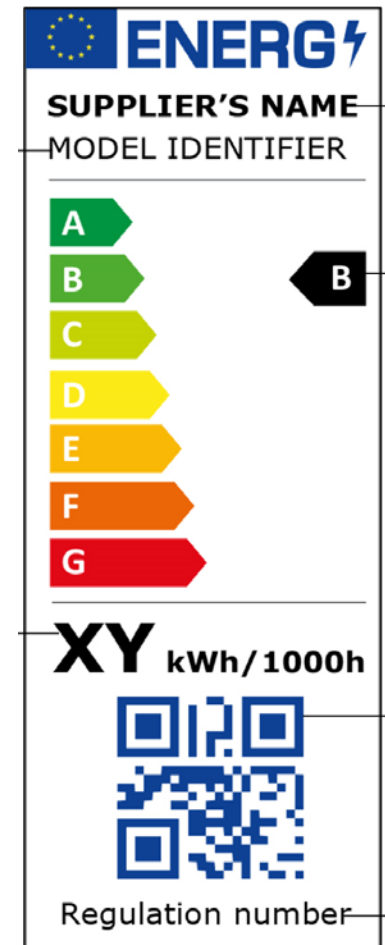
Scope of the New Energy Label

- All lighting technologies, including incandescent, halogen, fluorescent, HID, LED and OLED
- Light sources are always in the scope, even when they are parts of ‘containing products’, such as luminaires, mirrors, fridges or shelves
- Light source definition is the same as ecodesign, however fewer products are exempt from energy labelling
 - Ecodesign – careful to avoid the risk of unintentionally removing products from the market
 - Energy Label – useful information for consumers on the energy-efficiency of light sources, even with special characteristics
- Thus, there will be light sources which are exempt from ecodesign requirements but not from the energy labelling



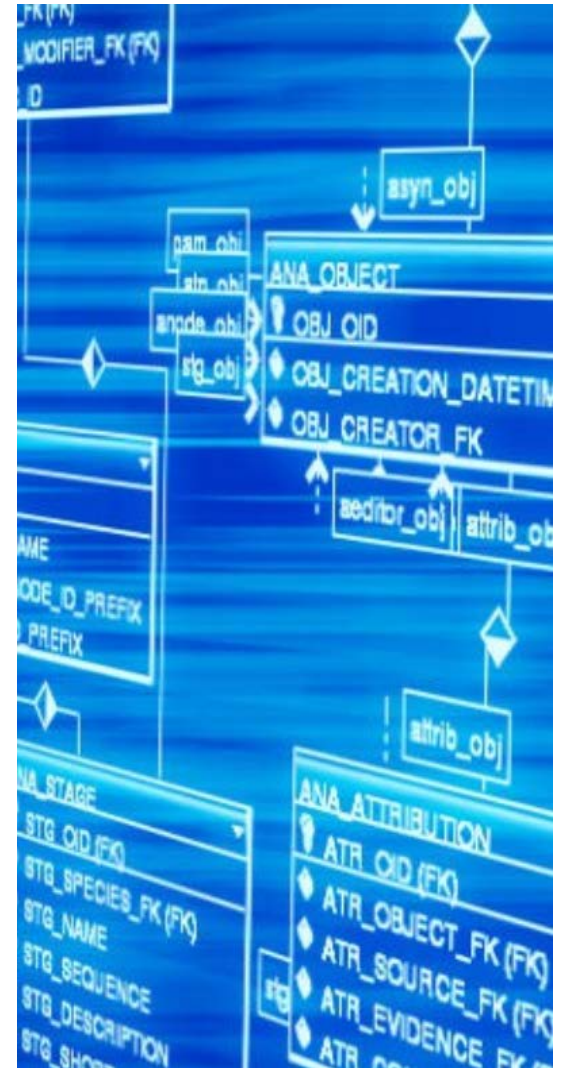
General principles of the New Energy Label

- Label follows the new framework Regulation [\(EU\) 2017/1369](#)
- Displayed on the packaging facing the buyer at the point of sale (visibility objective)
- Some light source packages are small – can have small label on the back of packaging with a coloured arrow and energy class on the front

- For a containing product (e.g. a luminaire) to avoid confusion a label is not required, but the packaging of the containing product must have text declaring the energy class of the light source
- Re-labelling of existing products is required only for those products which are unsold with dealers for more than 9 months after of application of the new measures (with a sticker)



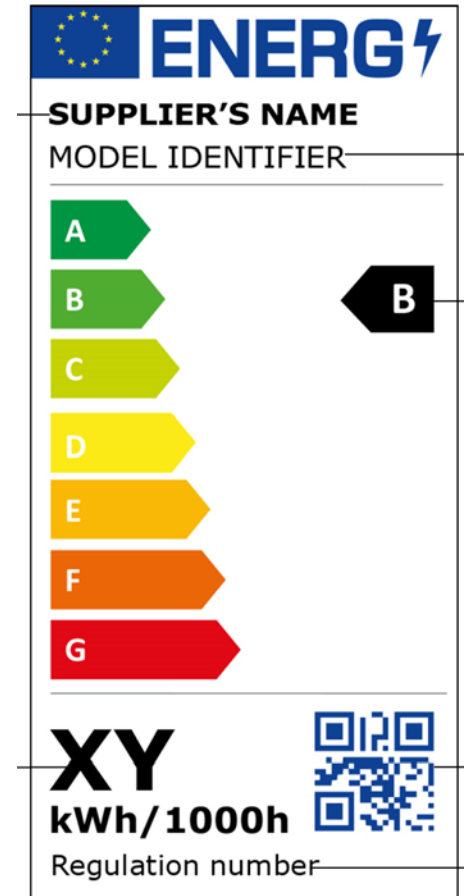
Data Entered into Product Database and Market Surveillance

- Data must be entered into EPREL pursuant to Regulation (EU) 2017/1369 (new Energy Labelling regulation)
- Parameters – energy label and useful information for end-users (e.g., P_{st}^{LM} and SVM values), and data for market surveillance authorities to verify compliance with ecodesign and energy labelling
- Market surveillance is aligned with Commission Regulation (EU) 2016/2282 (use of tolerances in verification procedures)
- Number of samples has been reduced
- Different tolerances for different parameters and depending on the sample size



Articles 8, 9 and 10 set out Timing of the New Energy Label Requirements*

- **OJEU + 20 Days (Nov 2019?)** – Entry into force
Articles 3(2) and 4(2) of Regulation (EU) No 874/2012 are repealed
(Removes requirement for EU luminaire label right away)
- **1 May 2021** – products entered into EPREL database
All products placed on the market must have Product Information (Annex V) and Technical Documentation (Annex VI) entered
- **1 Sept 2021** – 874/2012 Repealed & New Label on Boxes
Regulation (EU) No 874/2012 is repealed and New Label required
- **1 June 2022** – Stickers to Replace Old Labels
Products with the old label that are still on the market 9 months (Note: LightingEurope says the final version is 18 months) after application of the regulation must be replaced with a rescaled label (sticker)
- **Entry + 5 Years (Nov 2024?)** – Review the regulation
Article 8 - Review shall assess energy-efficiency classes and the possibility of circular economy requirements. Issue a revised proposal (if appropriate) to the Consultation Forum.



* Note: These are the new requirements relating to the new energy label, however suppliers have obligations under the existing labelling regulation, which includes data entry into the EPREL database (see Slide 18)

Download and Read the 2 Energy Labelling Delegated Regulation Files

The two energy labelling files:

- [Click here](#) for: COMMISSION DELEGATED REGULATION (EU) .../... of XXX supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of light sources and repealing Commission Delegated Regulation (EU) No 874/2012
- [Click here](#) for: ANNEXES to the Commission Delegated Regulation supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of light sources and repealing Commission Delegated Regulation (EU) No 874/2012

OR, wait a few weeks and get the OJEU (final) versions.

According to [this Oct 1 press release](#), the regulations will be published in the OJEU “in the coming weeks”.

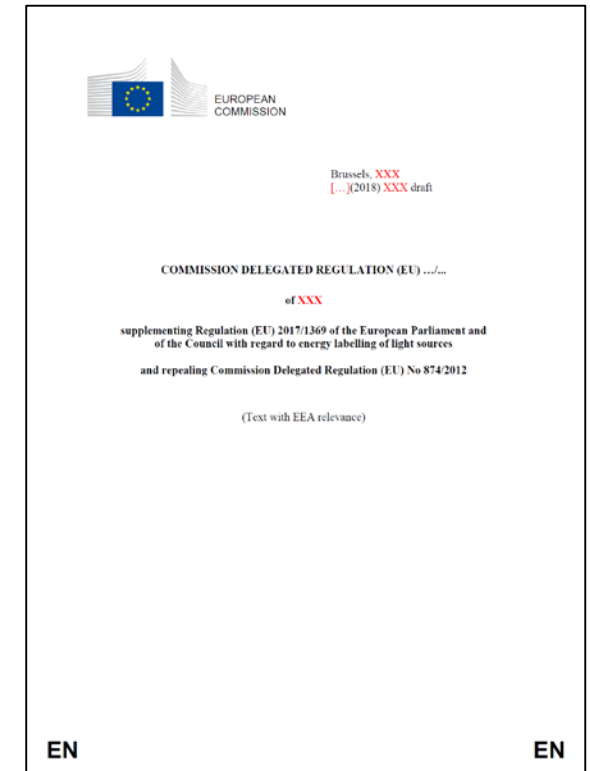


Table of Contents

1

New Energy Label for Lighting

Introduction and Overview

New Policy Measure and Requirements

Important dates and timing

2

EPREL Database

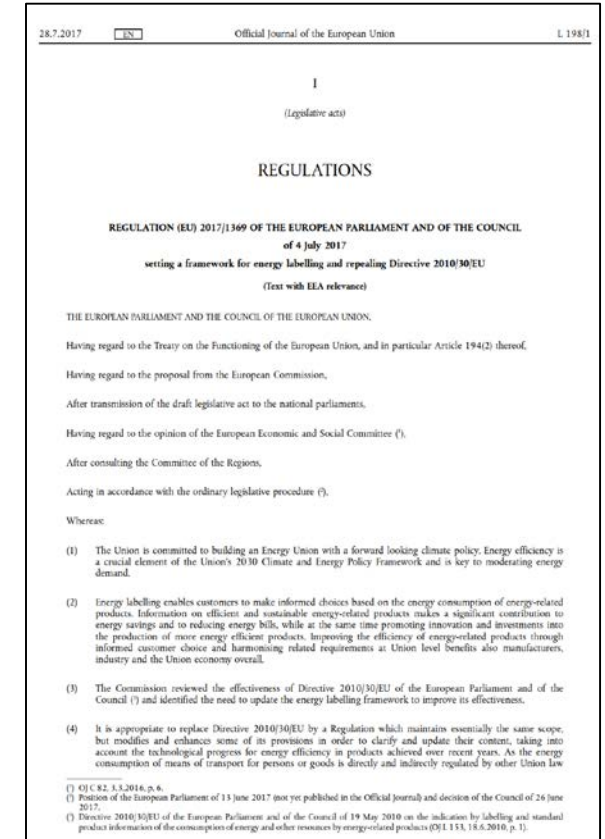
Framework Directive Establishing EPREL

Specific Requirements for Lighting

Important Dates and Resources

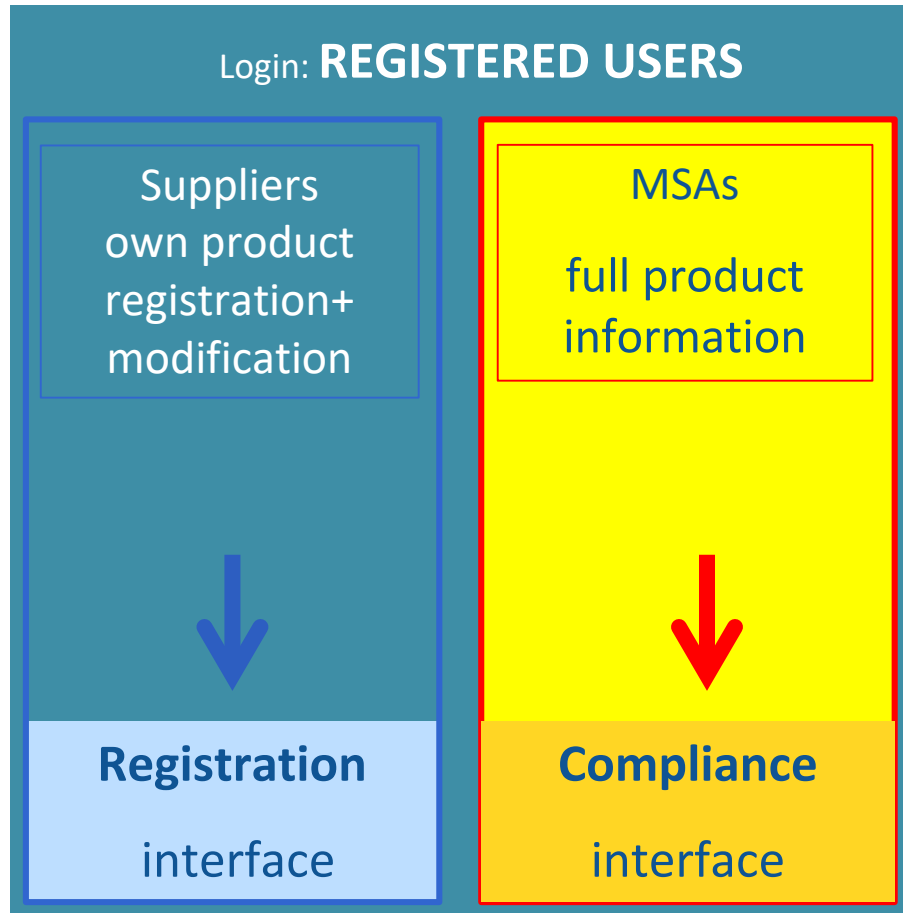
Product Database was established under EU 2017/1369

- Regulation [\(EU\) 2017/1369](#) of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU
- Article 12(b) - the purpose of product database:
 - to support market surveillance authorities in carrying out their tasks under this Regulation and the relevant delegated acts, including enforcement thereof;
 - to provide the public with information about products placed on the market and their energy labels, and product information sheets;
 - to provide the Commission with up-to-date energy efficiency information for products for reviewing energy labels;

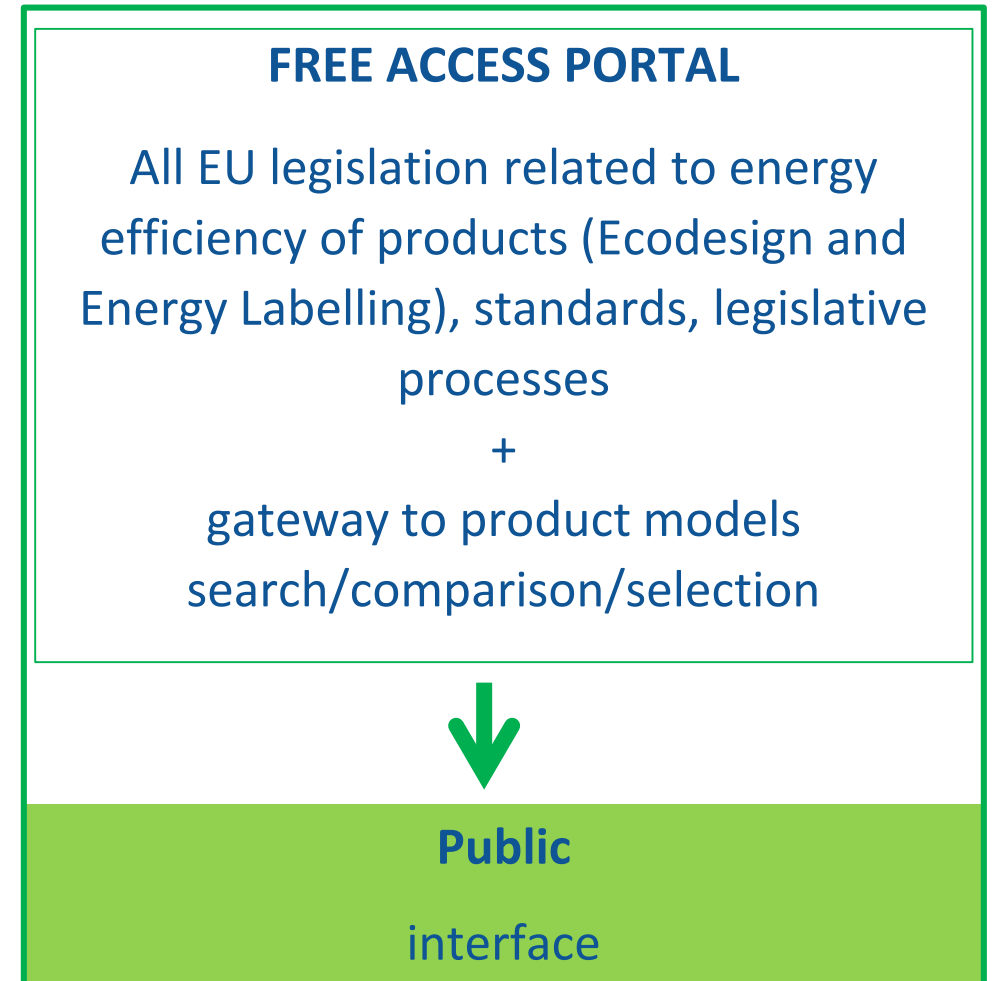


European Product Registry for Energy Labelling (EPREL) Database

COMPLIANCE PART

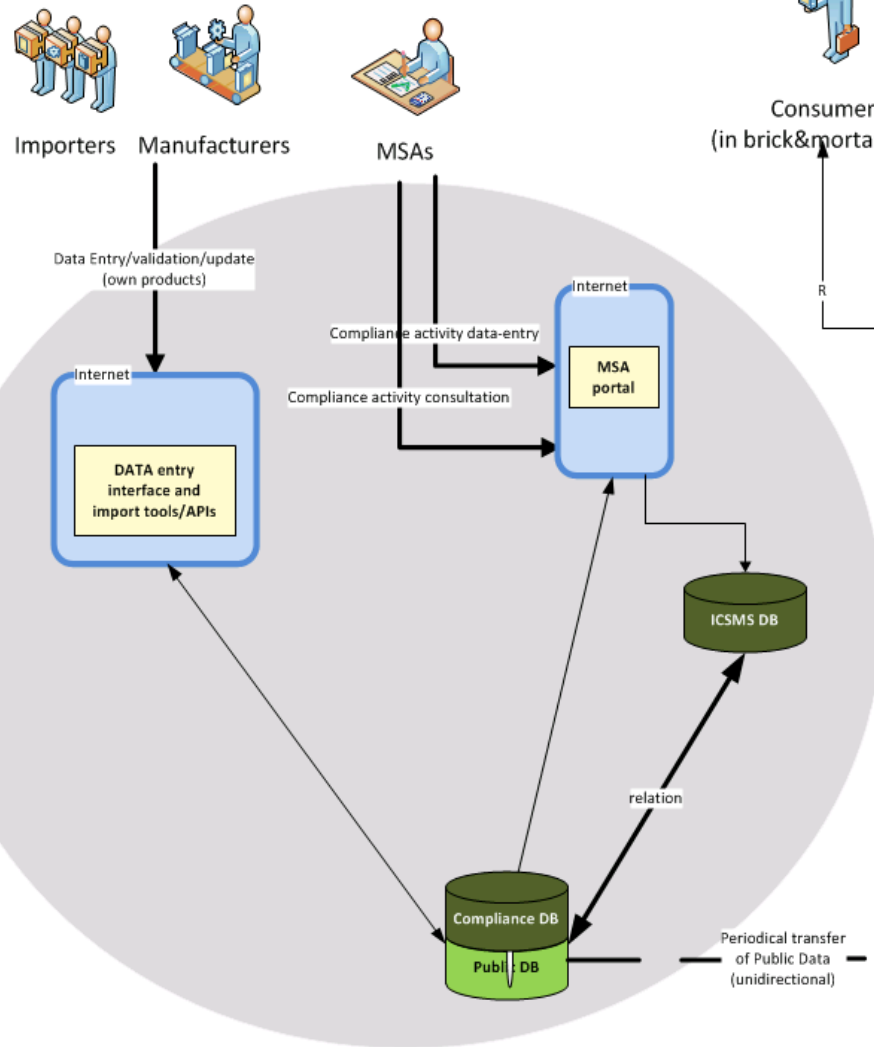


PUBLIC PART

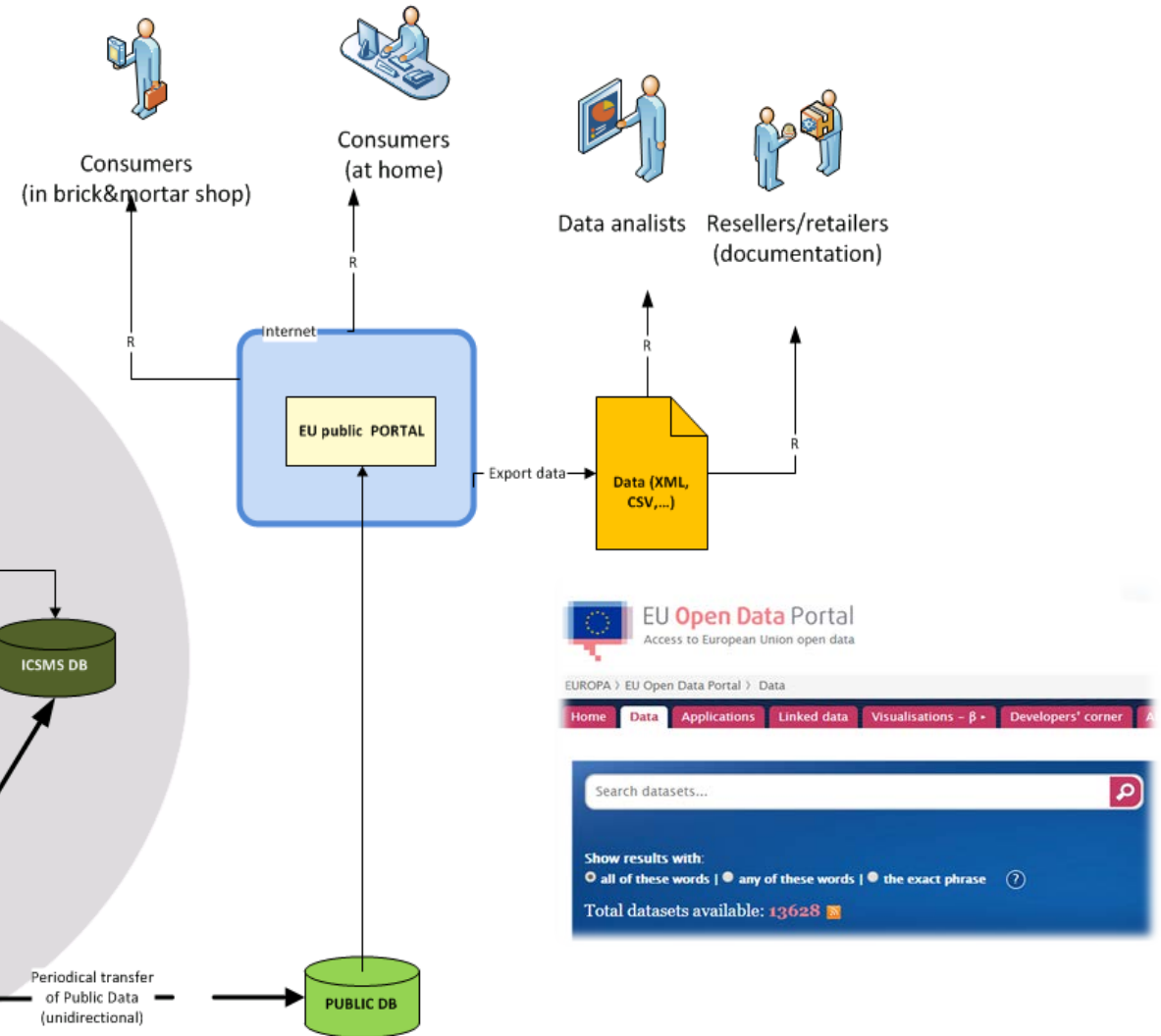


European Product Registry for Energy Labelling (EPREL) Database

COMPLIANCE PART



PUBLIC PART



Existing EPREL Obligations for Lighting Suppliers – Registering Models

Two key dates to remember:

- **1 January 2019** - all lighting products in the scope of the current Energy Labelling Regulation for lighting products (EU No 874/2012) must be registered in EPREL before they are placed on the European market.
- **By end of June 2019** – all labelled lighting products placed on the market since 1 August 2017 must be entered into EPREL
- LightingEurope has guidelines and information templates on the products affected and the parameters that need to be reported
- For more information, [click to read this article](#)

LightingEurope publishes Guidelines on the Energy Labelling database (EPREL)

To help companies efficiently comply with their new reporting obligations on EPREL, LightingEurope has published guidelines and information templates for its members that provide details on the products affected and the parameters that need to be reported.

Since 1st January 2019, all lighting products in the scope of the Energy Labelling Regulation for lighting products (EC Reg. 874/2012) must be registered in EPREL before they are placed on the European market. A next milestone is approaching quickly: by end of June 2019, EPREL must also include information on all labelled products that were placed on the EU market since 1st August 2017.

Lighting companies introduce a vast number of products onto the EU market every year and the challenge to satisfy this legal requirement in only a few months is extraordinary. "The LightingEurope guidelines set out our understanding of how the EPREL rules apply to lighting products. They provide our members all the information they need to register a product, from the specific legislative requirements for lighting products to the technical ICT issues they must deal with when they are in front of their PC uploading content onto EPREL," says Ourania Georgoutsakou, Secretary General of LightingEurope.

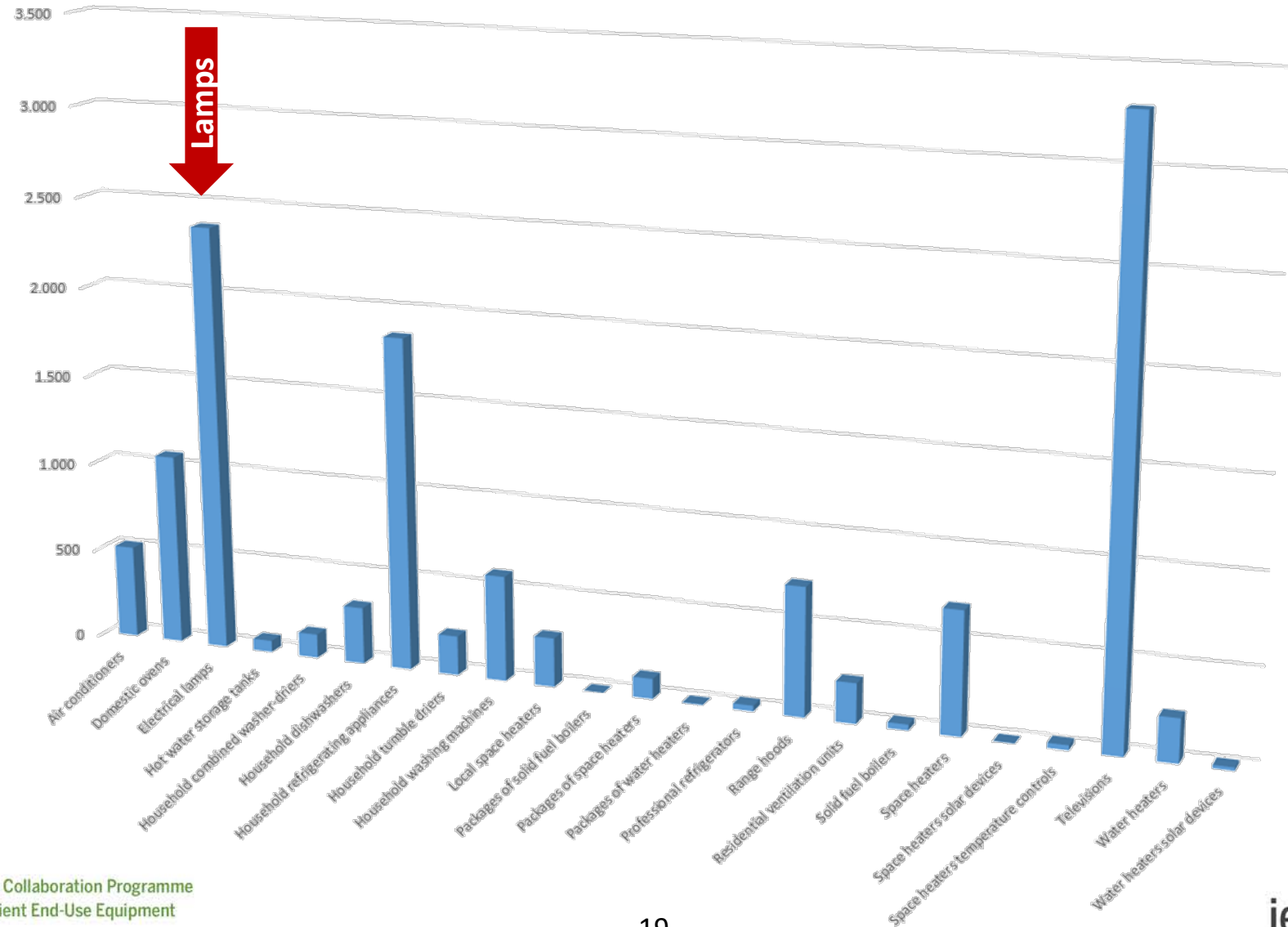
LightingEurope and member experts have been liaising with the European Commission during the set-up of the database features. Due to this advocacy work, the luminaire label is not in scope of EPREL, timelines have been reviewed to provide more time for companies and some technical elements of the database have been modified to allow the correct registration of all lamps in the scope of the Energy Labelling Regulation for lighting products.

"Members can count on a living document that will be regularly updated with our experts' refined interpretation of the legal requirements and with information on the latest features made available by the Commission, with whom we regularly communicate to share our requests and receive updates," concludes Ourania Georgoutsakou.

The guidelines on EPREL are directly available to LightingEurope's corporate members and national lighting association members. Lighting companies can contact their national lighting association for details – [click here to view our members](#).

European Product Registry for Energy Labelling (EPREL) Database

PRODUCT REGISTRATION DATABASE: registrations 22 March 2019



EPREL Workspace – [click here](#)

European Product Registry for Energy Labelling Workspace

Created by Miguel SIMOES, last modified by Rui Alexandre SIMAO PEREIRA on Sep 25, 2019



A

REGULATION (EU) 2017/1369 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2017

B

setting a framework for energy labelling and repealing Directive 2010/30/EU (Text with EEA relevance)" requires the European Commission (EC) to establish a product database where all new products (including second hand imported products), covered by a delegated act (Energy Labelling regulation) have to be registered before they are placed on the EU market for the first time.

C

This product database requested by the mentioned Regulation will be implemented by the European Product Registry for Energy Labelling (EPREL) project of the EC.

D

EPREL system will be divided in two parts:

E

A Compliance Site: website or portal that will be hosted at EC and will have a secure database for all the energy efficient products introduced by Suppliers. It will be the access point for publishing and accessing public and compliance data by Suppliers, Market Surveillance Authorities (MSA) and EC officials.

F

A Public Site: will be the website or portal where all the citizens, resellers and researchers will be able to consult all the products. They will all access via internet public website accessing a public database hosted at EC premises which will be updated on a regular basis with public data from the Compliance Site database.

G

This is the the Workspace to discuss topics (technical/business) about the EPREL project.

ENERGIA · ЕНЕРГИЯ · ΕΝΕΡΓΕΙΑ · ENERGIJA · ENERGY · ENERGIE · ENERGI

New Lighting Energy Labelling Regulation – Supplier Obligations

Article 3

Obligations of suppliers

1. Suppliers of light sources shall ensure that:
 - (a) each light source which is placed on the market as an independent product (i.e. not in a containing product) and in a packaging containing information to be visibly displayed to potential buyers prior to their purchase, is supplied with a printed label in the format as set out in Annex III;
 - (b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database established by Regulation (EU) 2017/1369;
 - (c) if requested by the dealer, the product information sheet shall be made available in printed form;
 - (d) the content of the technical documentation uploaded into the product database is in accordance with Annex VI;
 - (e) any visual advertisement for a specific model of light source including on the

Slide 21

Slide 22

Article 3(1)(b) – Annex V information entered into EPREL Database

ANNEX V Product information

1. Product information sheet

1.1. The information in the product information sheet of a light source referred to in Article 3.1(b), including when the light source is a part in a containing product, shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark, address, contact details and other legal identification of the supplier;
- (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific light source model from other models with the same trade mark or supplier's name;
- (c) the energy label according to Annex III in electronic format;
- (d) the energy efficiency class according to Annex II;
- (e) the energy consumption expressed in kWh of electricity consumption per 1000 h of light source on-mode operation;
- (f) the lighting technology used, i.e. HL, LFL T5 HE, LFL T5 HO, CFLni, other FL, HPS, MH, other HID, LED, OLED, mixed, other;
- (g) if the light source is non-directional (NDLS) or directional (DLS) in the sense of this Regulation;
- (h) if the light source is a mains light source (MLS) or a non-mains light source (NMLS) in the sense of this Regulation;
- (i) if the light source is a connected light source (CLS) in the sense of this Regulation;
- (j) if the light source is a colour-tuneable light source (CTLS) in the sense of this Regulation;
- (k) if the light source has a second envelope, a non-clear envelope and/or an anti-glare shield in the sense of this Regulation;

....and it
continues to
letter (cc)



Article 3(1)(d) – Annex VI information entered into EPREL Database

ANNEX VI

Technical documentation

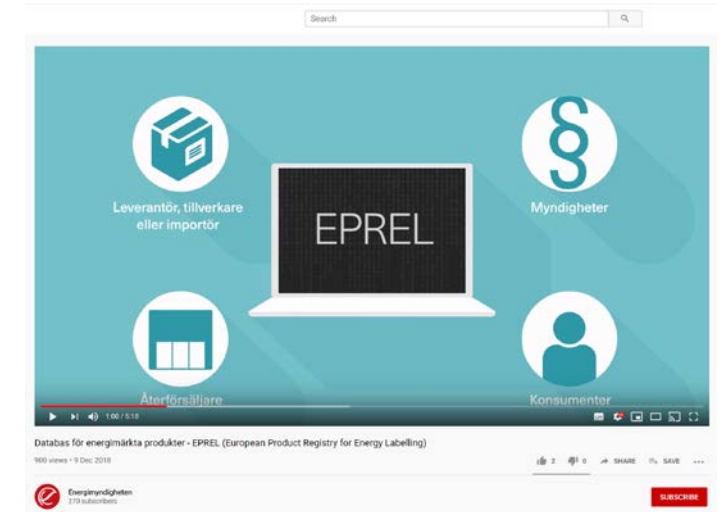
1. The technical documentation referred to in Article 3.1(d) shall include:
 - (a) the name and address of the supplier;
 - (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific light source model from other models with the same trade mark or supplier's name;
 - (c) the model identifier of all equivalent models already placed on the market;
 - (d) identification and signature of the person empowered to bind the supplier;
 - (e) technical parameters for measurements, including the declared values, as follows:
 - (1) useful luminous flux (Φ_{use}) in lm;
 - (2) colour rendering index (CRI);
 - (3) on-mode power (P_{on}) in W;
 - (4) beam angle in degrees for directional light sources (DLS);
 - (5) correlated colour temperature (CCT) in K for FL and HID light sources;
 - (6) 'standby power (P_{sb}) in W, including when it is zero;
 - (7) networked standby power (P_{net}) in W for connected light sources (CLS);
 - (8) displacement factor ($\cos \phi_1$) for LED and OLED mains light sources;
 - (9) colour consistency in MacAdam ellipse steps for LED and OLED light sources;
 - (10) flicker metric (P_{stLM}) for LED and OLED light sources;
 - (11) stroboscopic effect metric (SVM) for LED and OLED light sources;

....and it
continues to
letter (k)



Additional resources to be aware of on EPREL database

- [European Commission website](#) on the EPREL database
- European Commission [EPREL Guidelines](#) page
- Swedish Energy Agency YouTube video [click here](#)
- [Lighting Europe Guidelines](#) - guidelines and information templates for members that provide details on the products affected and the parameters that need to be reported





Thank you for your attention.

Any questions?

<https://ssl.iea-4e.org/>
SSL.Annex@gmail.com