



ELCOMA – GLA Workshop New Delhi

9 October 2012

The European Situation

Aura Light • BLV • GE Lighting • NARVA • OSRAM GmbH • Philips • Havells Sylvania • Toshiba
VENTURE Lighting • Verbatim • Dr.Fischer Group • LightTech

European Lamp Companies Federation (ELC)

- 12 Member companies



MAURA™



NARVA



PHILIPS



SYLVANIA



TOSHIBA



The Case for Energy Efficiency in Europe

EU Climate Targets – 20/20/20

- cutting greenhouse gases by 20% (30% if international agreement is reached)
- reducing energy consumption by 20% through increased energy efficiency
- meeting 20% of our energy needs from renewable sources

The Case for Energy Efficiency in Europe

- Legislative Framework – „Energy Using Products Directive“
- Minimum performance standards for non-directional household lamps as well as for office and street lighting adopted on 18 March 2009
- Consequence: phase out of incandescent light bulbs started from 1 September 2009

Timeline

Date of phase out	Type of lamps
1 September 2009	clear lamps with more light than 80W GLS (ie 100W GLS and equivalent light output) + all non-clear lamps *
1 September 2010	clear lamps with more light than 60 W GLS (ie 75W GLS and equivalent light output)
1 September 2011	clear lamps with more light than 40 W GLS (ie 60W GLS and equivalent light output)
1 September 2012	all remaining clear lamps (ie 40W and 25W GLS and equivalent light output)



*Framework also applicable for Halogen lamps

Industry Position

- Keep alternatives in the market, measure will be revised in 2014
- Market Communication is key
- Confusion in consumer market, fostered by critical press coverage = EU wants to switch to CFLi exclusively

Replacement lamps for domestic use

Halogen (Clear)



CFLi Frosted



LED clear/ Frosted



Similar approach for office and street lighting - 2010

- Phasing out of T5/T8 with RA < 80
- Phasing out of T8 "halophosphate" lamps
- Phasing out of CFL 2-pin lamps (magnetic magnetic control gear operation)
- Obligation to provide technical information on websites and in documentation

Similar approach for office and street lighting - 2012

Fluorescent Lamps Regulations

Phasing out of T10 and
T12 lamps

High Pressure Lamps Regulations

- Phasing out of inefficient HS and HI lamps (E27, E40 and PGZ12 base)
- Phasing out of HPM lamps from 2015

Similar approach for office and street lighting - 2017

Fluorescent Lamps Regulations

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High Pressure Lamps Regulations

Phasing out of HI lamps
 $\leq 405\text{W}$ (E27, E40 and
PGZ12)



New Measure

New ECODESIGN measure to be adopted in second half 2012

COMMISSION REGULATION (EU) No .../.. of

implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for directional lamps, light emitting diode lamps and related equipment

Requirements

Application date	Maximum energy efficiency index (EEI)			
	Mains-voltage filament lamps	Other filament lamps	High-intensity discharge lamps	Other lamps
Stage 1	If $\Phi_{\text{use}} > 450 \text{ lm}$: 1.75	If $\Phi_{\text{use}} \leq 450 \text{ lm}$: 1.2 If $\Phi_{\text{use}} > 450 \text{ lm}$: 0.95	0.5	0.5
Stage 2	1.75	0.95	0.5	0.5
Stage 3	0.95	0.95	0.36	0.2

Stage 1: 1 September 2013

Stage 2: 1 September 2014

Stage 3: 1 September 2016

Situation today

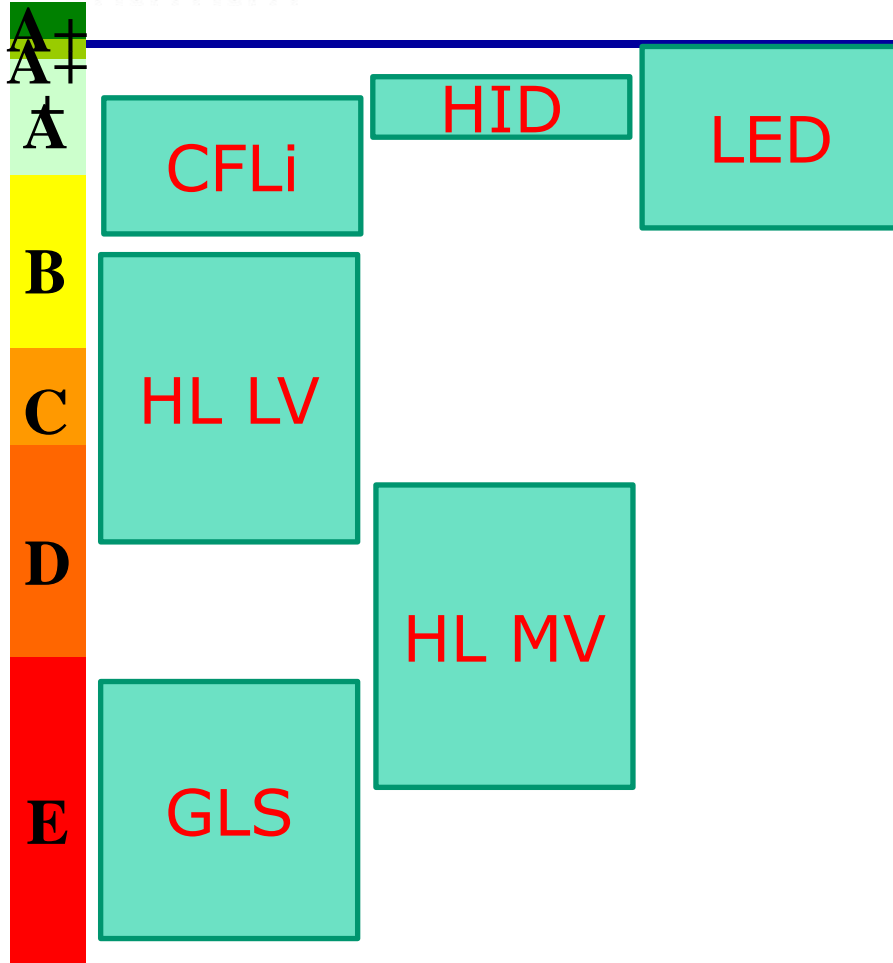


Table 2

Application date	Maximum energy efficiency index (EEI)			
	Mains-voltage filament lamps	Other filament lamps	High-intensity discharge lamps	Other lamps
Stage 1	If $\Phi_{\text{use}} > 450 \text{ lm}$: 1.75	If $\Phi_{\text{use}} \leq 450 \text{ lm}$: 1.2 If $\Phi_{\text{use}} > 450 \text{ lm}$: 0.95	0.5	0.5
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Situation Stage 1 and 2

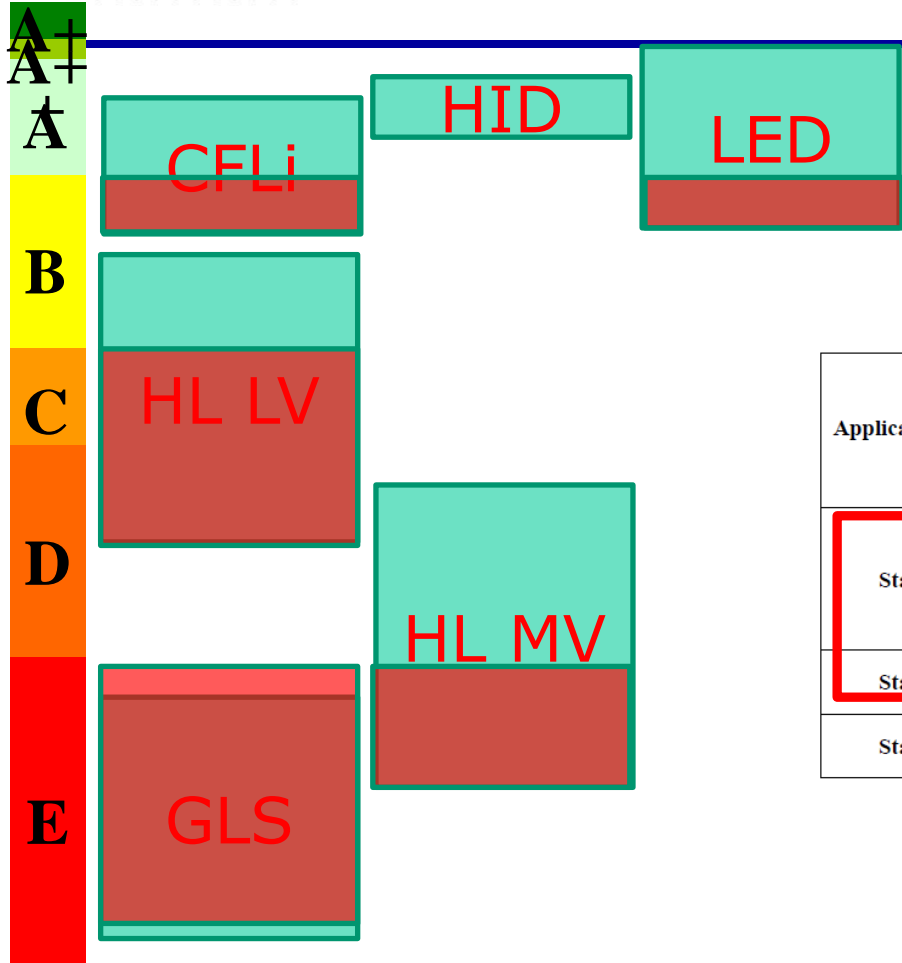


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Situation Stage 3

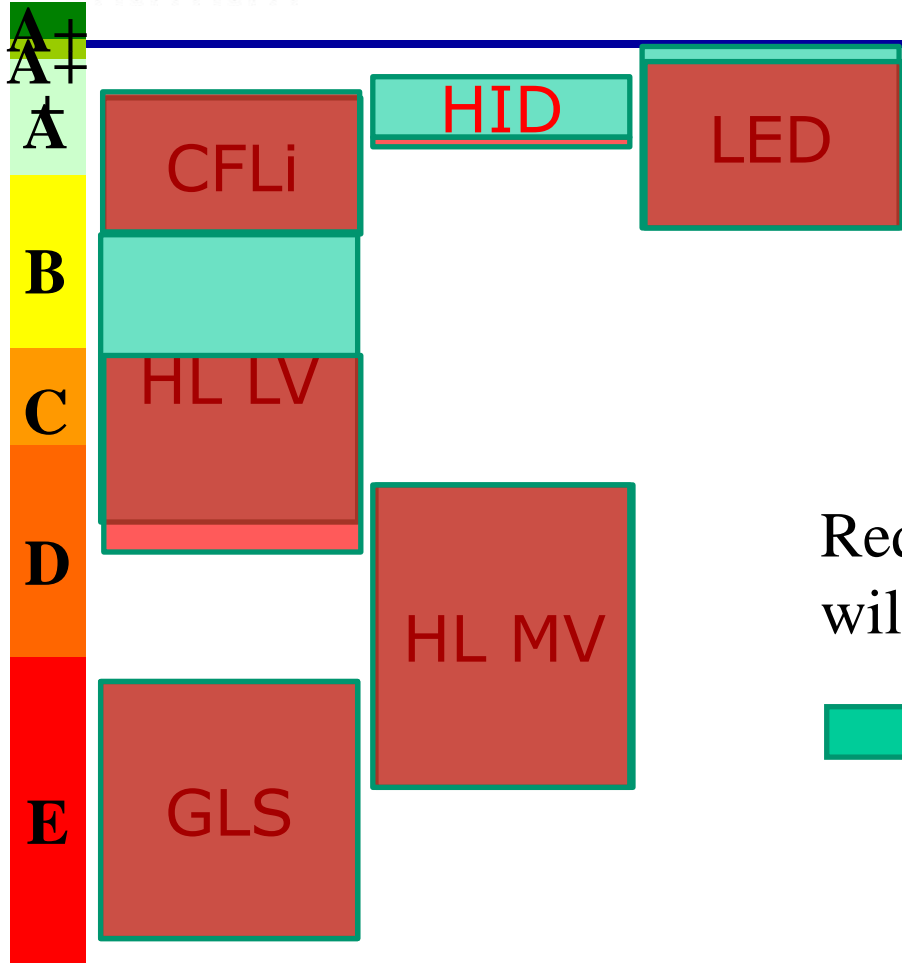


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Requirements for stage 3 (2016) will be subject to Revision in 2015



no automatic phase out of halogen technology

LED Performance Standards

- Addressed by ECODESIGN Regulation on directional lamps and LED
- Voted by EU Member States on 23 July 2012
- Currently in scrutiny with European Parliament until 23 November 2012

LED Ecodesign Requirements

Functionality parameter	Requirement as from stage 1, except where indicated otherwise
Lamp survival factor at 6000h	From stage 2: ≥ 0.90
Lumen Maintenance at 6000h	From stage 2: ≥ 0.80
Number of switching cycles before failure	≥ 15000 if rated lamp life ≥ 30000 h otherwise: \geq half the rated lamp life expressed in hours
Starting time	< 0.5 s
Lamp warm-up time to 95% Φ	< 2 s
Premature failure rate	$\leq 5.0\%$ at 1000h
Colour rendering (Ra)	≥ 80 ≥ 65 if the lamp is intended for outdoor or industrial applications in accordance with point 3.1.3(m) of this Annex
Colour consistency	Correlated colour temperature (CCT) spread within a six-step MacAdam ellipse or less.
Lamp power factor (PF)	$P \leq 2$ W : no requirement 2 W $< P \leq 5$ W : PF > 0.4 5 W $< P \leq 25$ W : PF > 0.5 $P > 25$ W : PF > 0.9

Disposal of FL lamps

■ Legal framework:

- Directive 2002/96/EC of the European Parliament and of the Council of 27th January 2003 on waste electrical and electronic equipment (WEEE), as amended
 - WEEE Directive recast: Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)
- ## ■ Scope: FL lamps fall within the scope of the Directive (as well as all lamps, with the exception of incandescent lamps)

Disposal of FL lamps

■ Roles and responsibilities:

- Producers have responsibility for the EEE placed on the market and must ensure that it is disposed of in an environmentally sound way when it reaches end of life.
- The Directive establishes the principle of collection schemes so that consumers can return used lamp free of charge:
 - Lamp producers have given birth to a number of lamps collection schemes in the various European Member States
 - The schemes act on behalf of producers for the collection & recycling of lamps
 - Schemes are vetted by public authorities and have to report to them

Disposal of FL lamps

■ Collection targets:

■ Currently:

- 4Kg/per inhabitant, which a number of European countries have comfortably exceeded.

■ New WEEE Directive :

- From 2016 of 45% of electronic equipment sold,
- From 2019, a target of 65% of equipment sold, or 85% of electronic waste generated.
- From 2018, the directive will include all categories of electronic waste, subject to an impact assessment.