Seven stupid EU rules for axe

THE Great Repeal Bill will axe a string of unnecessary EU regulations imposed on Britain.

VACUUM CLEANERS: Motors above 1,600 watts are forbidden in the EU.

IMMIGRATION: Free movement rules force Britain to admit citizens from 27 EU states.

VAT ON FUEL: The EU insists 15 percent is slapped on bills, so our government can’t give consumers a tax break.

FISHING: EU fleets get equal access to waters within 12 nautical miles of the coast and there are quotas on stocks.

LIGHTBULBS: British homes and businesses are forced to use dimmer energy-saving bulbs instead of the brighter incandescent type.

WELFARE: EU citizens over here can get UK child benefit, even if their children live in another country.

WORKING TIME: Employees are limited to 48 hours a week so Brits can’t earn more overtime.
Cosy Cambridge

Low Energy Lighting
Efficient, controllable, useful, beautiful

Tom Bragg
Halogen spotlights to be phased out across Europe

New European ruling bans any new orders on GU10 spotlights and PAR30 floodlights, which can waste up to 10 times more energy than LEDs.

Shops can’t re-order from 1st Sept 2016

Directional halogen bulbs already in stores can still be sold but no new retailer orders will be possible.
Av UK Household Electricity use

without space heating
Choosing Efficient Light Bulbs

In nearly all cases LEDs are now best:

Bulb fittings

Bayonet
- B22
- B15

Screw
- E14
- E27

Other
- GU10
- MR16
Bulb Shapes

- Traditional
- Spiral
- Candle
- Golf
- Downlight
- Globe
- Stick
- Spot

Directional
Beam Angle

DownLight

Wide Beam Angle

120°

Spotlight

Narrow Beam Angle

30°
# How Bright?

<table>
<thead>
<tr>
<th>Power consumption</th>
<th>Watts</th>
<th>Brightness</th>
<th>Lumens, lm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incandescent</td>
<td></td>
<td>CFL</td>
<td>LED</td>
</tr>
<tr>
<td>40</td>
<td>11</td>
<td>4.5</td>
<td>450</td>
</tr>
<tr>
<td>60</td>
<td>14</td>
<td>8</td>
<td>800</td>
</tr>
<tr>
<td>100</td>
<td>26</td>
<td>16</td>
<td>1,600</td>
</tr>
</tbody>
</table>

Good LEDs have efficiency of > 100 lumens/Watt
## Colour Temperature

<table>
<thead>
<tr>
<th></th>
<th>Kelvin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cool White LED</td>
<td>4000 K</td>
</tr>
<tr>
<td>Warm White LED,</td>
<td>3000 K</td>
</tr>
<tr>
<td>Halogen</td>
<td></td>
</tr>
<tr>
<td>Extra warm White LED</td>
<td>2700 K</td>
</tr>
</tbody>
</table>
eg:

**Power Consumption**

**Efficiency** = \[
\frac{450 \text{ lm}}{4 \text{ W}} = 112 \text{ lm/W}
\]

> 100 is good

**Brightness**

**Colour Temperature**

Base: large screw
Controlling your lights

• Turn lights out when leaving a room
• How many lights are on? All needed?
• Convenient light switches: top & bottom of stairs, each end of hallway, each door to a room
• Sensor and timer on external lights?
• Appropriate lighting: low back ground light while watching TV, concentrated light for reading – a range of lights with convenient switches
• Dimmers?
There’s lots more...

Good luck
Tom Bragg
tom@cambridge carbon footprint.org