Energy Efficient Lighting

Part of
North Carolina Cooperative Extension
E-Conservation Home Energy Management Series

Looks complicated...

...but with a few tips, you can learn how to identify the correct bulb for each need in your house and you can save money!
### PHASE IN SCHEDULE

<table>
<thead>
<tr>
<th>Today's Bulbs</th>
<th>After the Standard</th>
<th>Standard Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 watt</td>
<td>≤ 72 watts</td>
<td>January 1, 2012</td>
</tr>
<tr>
<td>75 watt</td>
<td>≤ 53 watts</td>
<td>January 1, 2013</td>
</tr>
<tr>
<td>60 watt</td>
<td>≤ 48 watts</td>
<td>January 1, 2014</td>
</tr>
<tr>
<td>40 watt</td>
<td>≤ 29 Watts</td>
<td>January 1, 2014</td>
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</tbody>
</table>

What does all of this mean to ME?!

EISA IS CHANGING THE WAY WE SHOP FOR LIGHT BULBS
**LIGHTING TERMS**

- **Lumen**
  - The unit of measure describing the quantity of light emitted from a source of light, for example, a light bulb (lamp).

- **Watt**
  - A unit of power denoting the rate at which electricity is used.

Efficiency is measured by the number of lumens per watt a bulb provides

Lumens = Brightness
Watts = Energy

Lumens... the new way to shop for bulbs

http://energy.gov/public-services/homes/saving-electricity/lighting
**LIGHTING CHOICES: ENERGY SAVING INCANDESCENTS**

- Energy saving incandescent light bulbs
  - Use about 25% less energy than traditional incandescents
  - Similar life span, but may last up to 3 times longer
  - Available in wide range of shapes and colors
  - Can be used with dimmers
  - Also called “halogen” incandescents

**LIGHTING CHOICES: CFL’S**

ENERGY STAR-qualified CFL’s use about 75% less energy and last 10 times longer than comparable traditional incandescent bulbs

Available in range of colors including warm tones
LIGHTING CHOICES: LED

• ENERGY STAR qualified LEDs use 75-80% less energy and last 25 times longer than traditional incandescent bulbs
• More expensive, however cheaper to operate and last longer

You are bound to have questions....

http://energy.gov/energysaver/articles/frequently-asked-questions-lighting-choices-save-you-money

HOME ENERGY 101

The color wheel  
  – Basic “map” for color theory  
  – A circular arrangement of the spectrum

Warm colors feel “cozier” and welcoming

Cool colors evoke a more tranquil mood

Fluorescent light does not have to be “cold”

Remember Key Points:

• Shop for lumens, not for watts
• All lighting, including incandescent, will become more energy efficient
• Lighting efficiency standards will be phased in over time
• Color rendition is affected by lighting, and lighting comes in various temperatures/color
Resources

- Residential Lighting – Katherine Allen, University of Florida