Consumer Light Bulb Changes:

Briefing and Resources for Media and Retailers

Introduction

- Briefing:
  - To schedule interviews, please contact DOE Public Affairs at 202-586-4940
- Terms:
  - Lumens: Commonly a measure of brightness (technically “luminous flux”)
  - CFL: Compact Fluorescent Lamp: The curly fluorescent bulbs
  - LED: Light Emitting Diode: more recently emerging technology, also called “solid state lighting” as it is light produced by a solid-state (chip) device
  - General Service Incandescent Lamp: The most common residential light bulb in use, with a medium screw base, and a lumen range of 310 to 2,600 lumens
  - Medium screw base: The most common light bulb base in use – found on most household lamps and fixtures
  - A-19 bulbs: The most common size of pear shaped bulb

Lighting Choices: Energy-Saving Incandescents

- Energy-Saving Incandescent light bulbs
  - Use about 25% less energy than traditional incandescents
  - Typically have the same life span as traditional incandescent bulbs, but there are models that can last up to three times longer
  - Are available in a wide range of shapes and colors, and can be used with dimmers
  - Also called “halogen” incandescents

These incandescent bulbs are presently available in retail outlets and meet the new standards that take effect from 2012-2014

Source: Department of Energy, Energy Savers Website – Lighting Choices, 2011, from www.energysavers.gov/lighting

Lighting Choices: CFLs

- ENERGY STAR-qualified CFLs use about 75% less energy and last ten times longer than comparable traditional incandescent bulbs
- CFL bulbs are available in a range of light colors, including warm (white to yellow) tones that were not available when CFLs were first introduced

These CFL bulbs are presently available in retail outlets and meet the new standards that take effect from 2012-2014

Source: Department of Energy, Energy Savers Website – Lighting Choices, 2011, from www.energysavers.gov/lighting

Lighting Choices: LEDs

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- ENERGY STAR-qualified LEDs use about 75 - 80% less energy and last about 25 times longer than the traditional incandescent bulbs they replace
- While LEDs are more expensive at this early stage, they still save money over the long term, because of their long life span and low cost to operate
- The dramatically lower energy use, means lower electricity bills every month
- As with other electronics, prices are expected to come down as more products enter the market and the technology begins to mature

These LED bulbs are presently available in retail outlets and meet the new standards that take effect from 2012-2014

Source: Department of Energy, Energy Savers Website – Lighting Choices, 2011, from www.energysavers.gov/lighting

Energy Standards

- Energy Efficiency Standards
  - As directed by law, DOE establishes energy efficiency or maximum allowable energy use standards for most major household appliances and certain commercial and industrial equipment
  - Standards were set initially by the National Appliance Energy Conservation Act of 1987 (NAECA 1987). The law has been amended several times, most recently by the Energy Independence and Security Act (EISA) 2007.
  - Products must meet the standards in order to be imported or manufactured in the US market

Energy Standards

- Energy Efficiency Standards (cont.)
  - The first standards went into effect in 1990
    - For example, the initial standards for refrigerator-freezers went into effect in 1990 and have been updated three times since then
  - Today's products are much more energy efficient
    - Today's refrigerator-freezers use about 1/3 the amount of energy than what was used by refrigerator-freezers before the first standards went into effect. They are also typically larger and have more features than the older models
    - Compared to refrigerators of the 1970s, today's refrigerators save the nation about $20 billion per year in energy costs, or $150 per year for the average American family

Background: EISA 2007

- The Energy Independence and Security Act (EISA) 2007
  - Bipartisan energy legislation, signed into law on Dec. 19, 2007 by President Bush
- Lighting efficiency standards in EISA 2007:
  - The first efficiency standards for common light bulbs (called “general service incandescent lamps”)
    - The law sets a performance standard of light output (lumens) for energy used (watts) – it does not ban any specific technologies
    - A number of light bulbs meet the standards, including:
      - Energy-saving incandescents, CFLs, and LEDs
    - Traditional incandescent 40, 60, 75, and 100 W bulbs are less efficient and will no longer meet these standards
      - Give off 90% heat and 10% light
    - Standards apply to manufacture or import (not retail sale)
    - National standards provide a consistent approach for manufacturers so that they don’t have to meet a patchwork of state standards
    - There are ***many exceptions***: 3-way bulbs, appliance bulbs, others

Background: EISA 2007

- Lighting efficiency standards in EISA 2007 (cont.)
  - New Label:
    - The legislation also requires the Federal Trade Commission (FTC) to develop a new label, which is already appearing, and will be required on all retail packaging in January 2012
  - This presentation covers the changes / replacements for traditional incandescent bulbs
  - The law has other provisions, in other lighting categories (reflector lamps and metal halide lamp fixtures for example)

General Service Lamp Standard

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Excerpt from the law (EISA 2007):

"GENERAL SERVICE INCANDESCENT LAMPS

Rated Lumen Ranges	Maximum Rate Wattage	Minimum Rate Life-time	Effective Date
1490–2600	72	1,000 hrs	1/1/2012
1050–1489	53	1,000 hrs	1/1/2013
750–1049	43	1,000 hrs	1/1/2014
310–749	29	1,000 hrs	1/1/2014

Current Typical Incandescent Wattage
100
75
60
40

Typically requires ~25% less energy

Note: Reference only, not in the law.

10 **Reference**: EISA 2007, Public Law 110-140, Section 321(a)(3)

Lighting Choices

- Every bulb on this page meets the EISA 2007 standards that take effect from 2012-2014
- Upgrading 15 inefficient incandescent bulbs in your home could save you about $50 per year
- Save more by using the most efficient bulbs
- Nationally, this will save consumers ~$6 billion annually

Lumens: A new way to shop for light

We buy fruit by the pound, milk by the gallon,

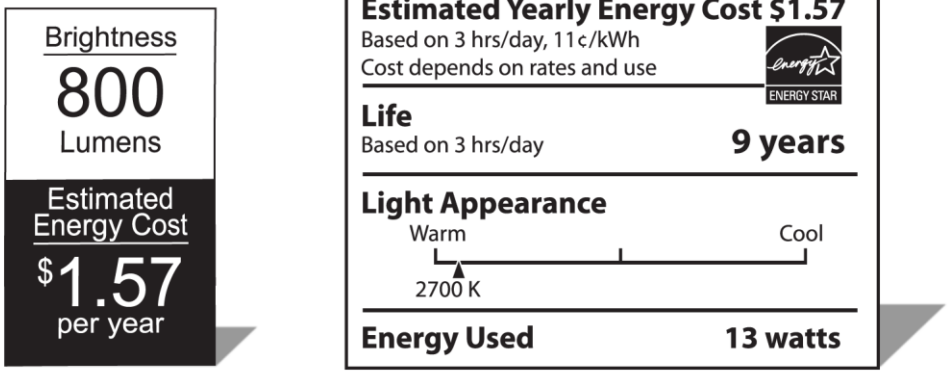
Why should light be any different?

For years, we have been buying light by the amount of energy consumed, *not* the amount of light we are getting.

Lumens changes that.

Federal Trade Commission Label

- Starting in January 2012, all bulbs will carry a new package label from the Federal Trade Commission (FTC)
- The label will help consumers compare the brightness and estimated energy costs of various types of light bulbs



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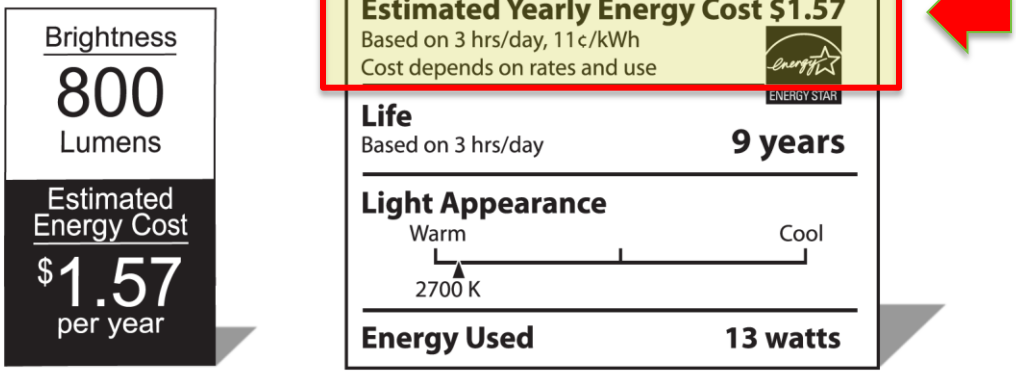

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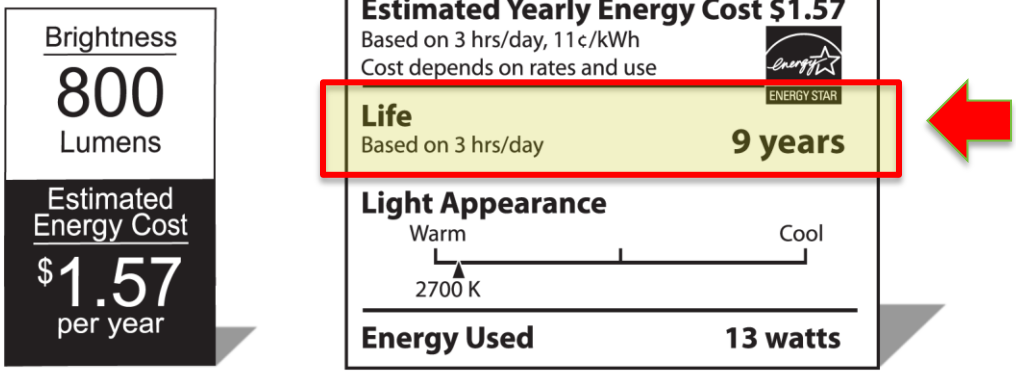

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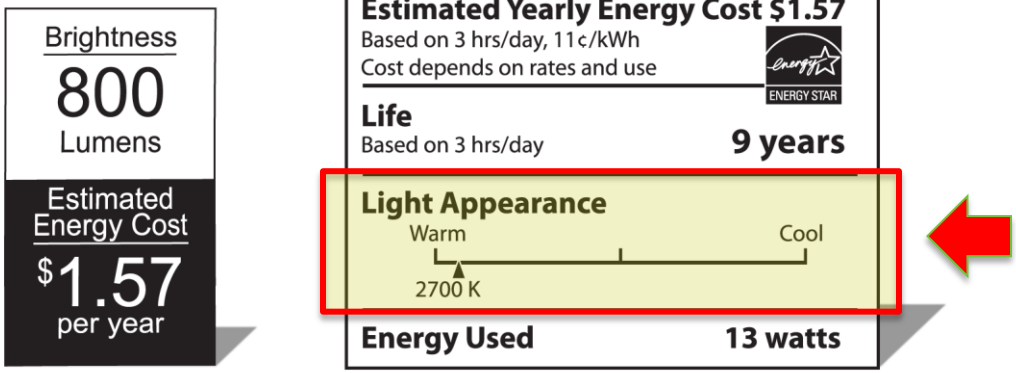

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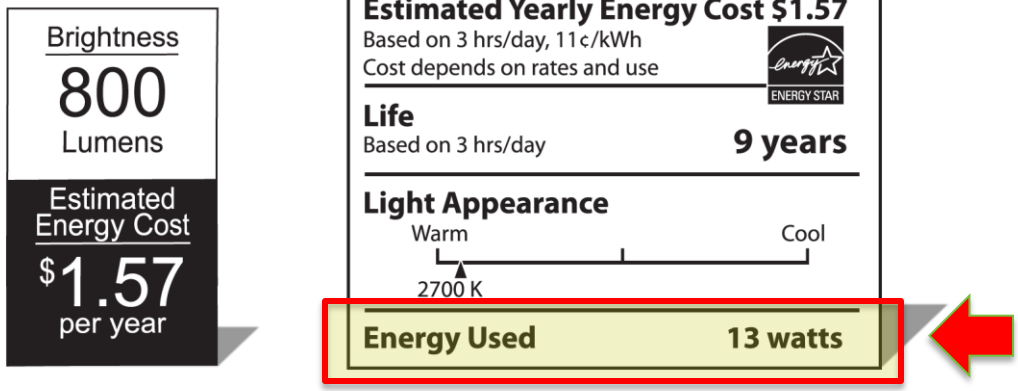
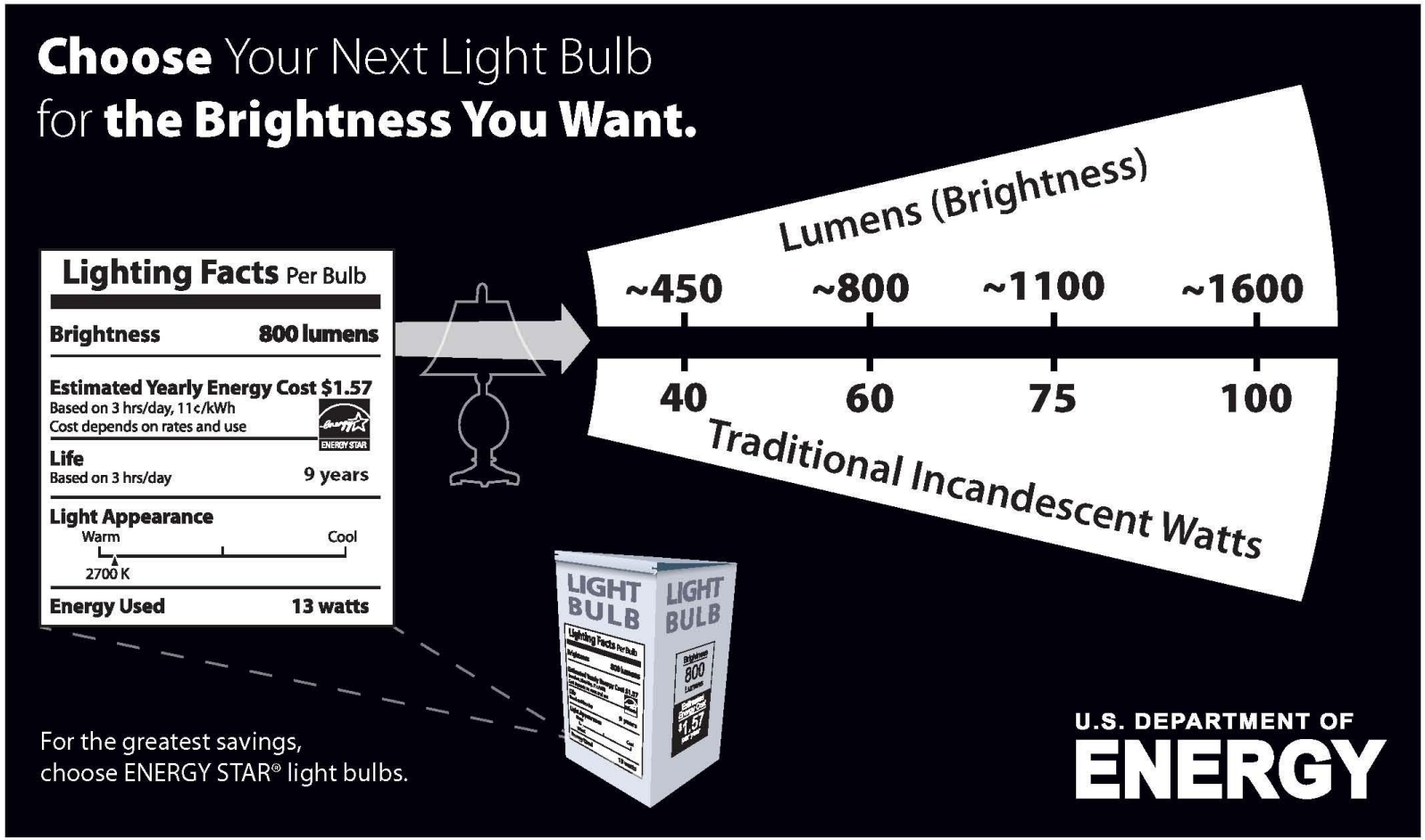


LUMENS: THE NEW WAY TO SHOP FOR LIGHT



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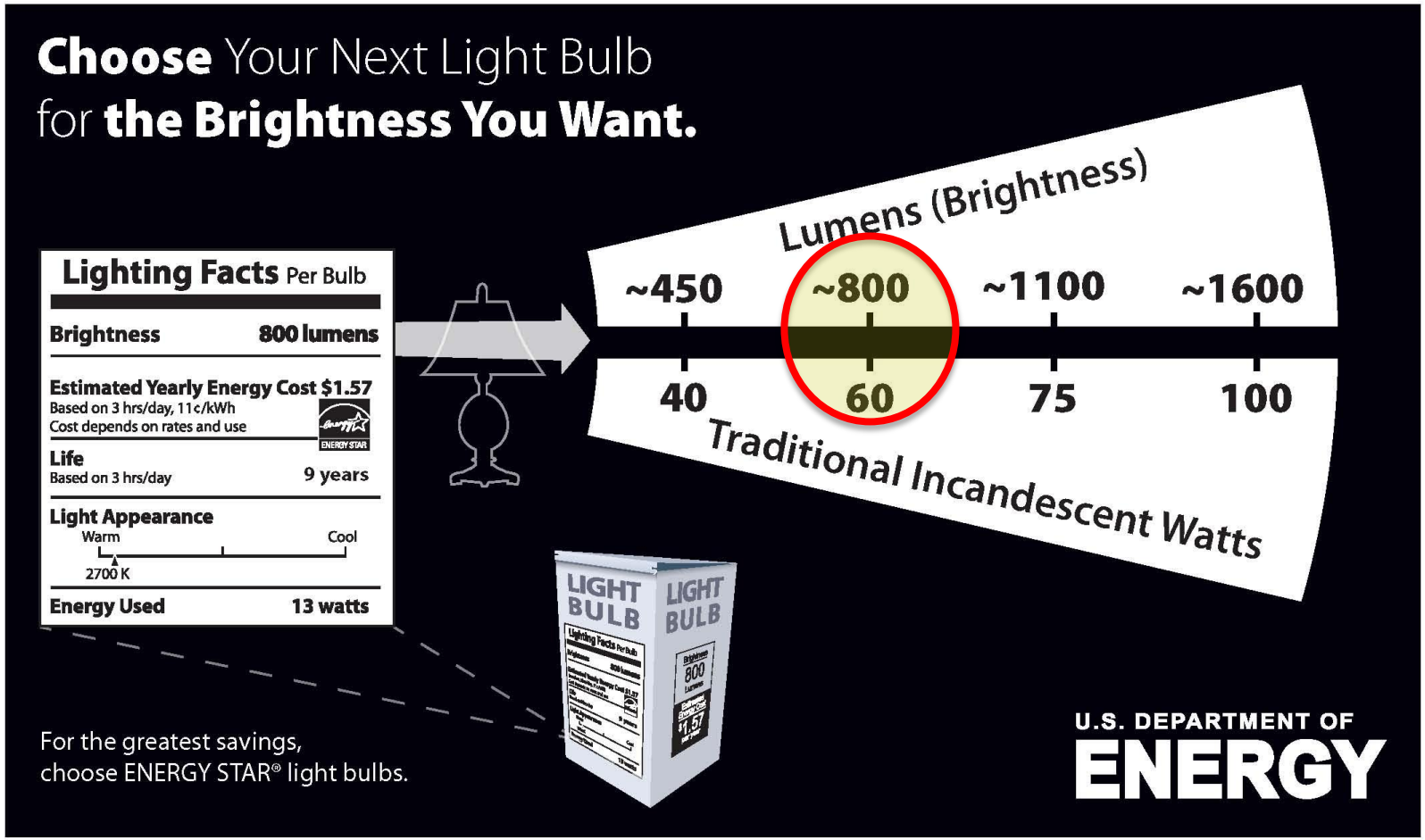

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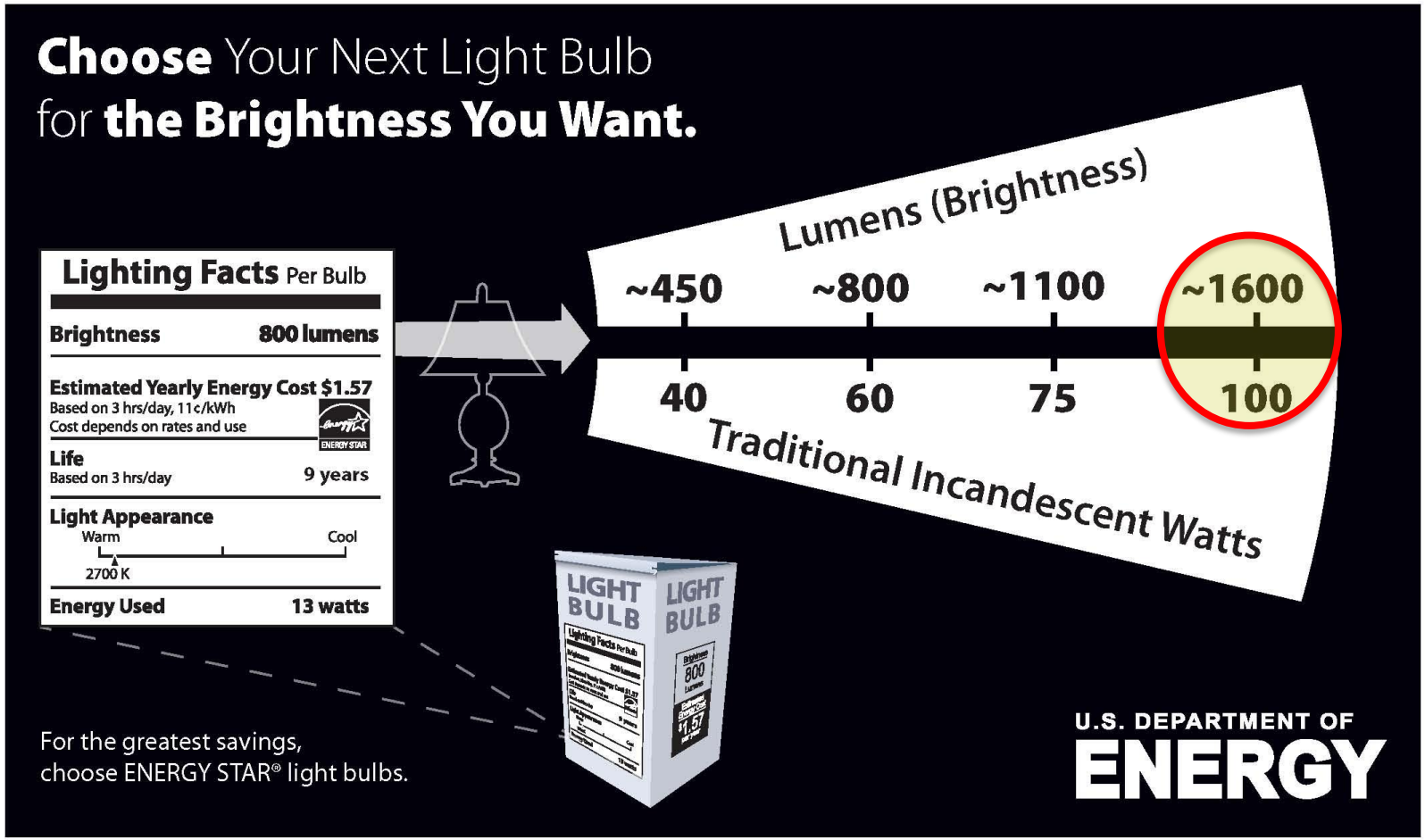
Understanding Lumens

LUMENS: THE NEW WAY TO SHOP FOR LIGHT



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EnergySavers.gov/Lighting: Information for Media

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- energysavers.gov/lighting
  - information on lighting choices, lumens, and EISA 2007 standards, as well as FAQs and resources for media

EnergySavers.gov/Lighting: Information for Media

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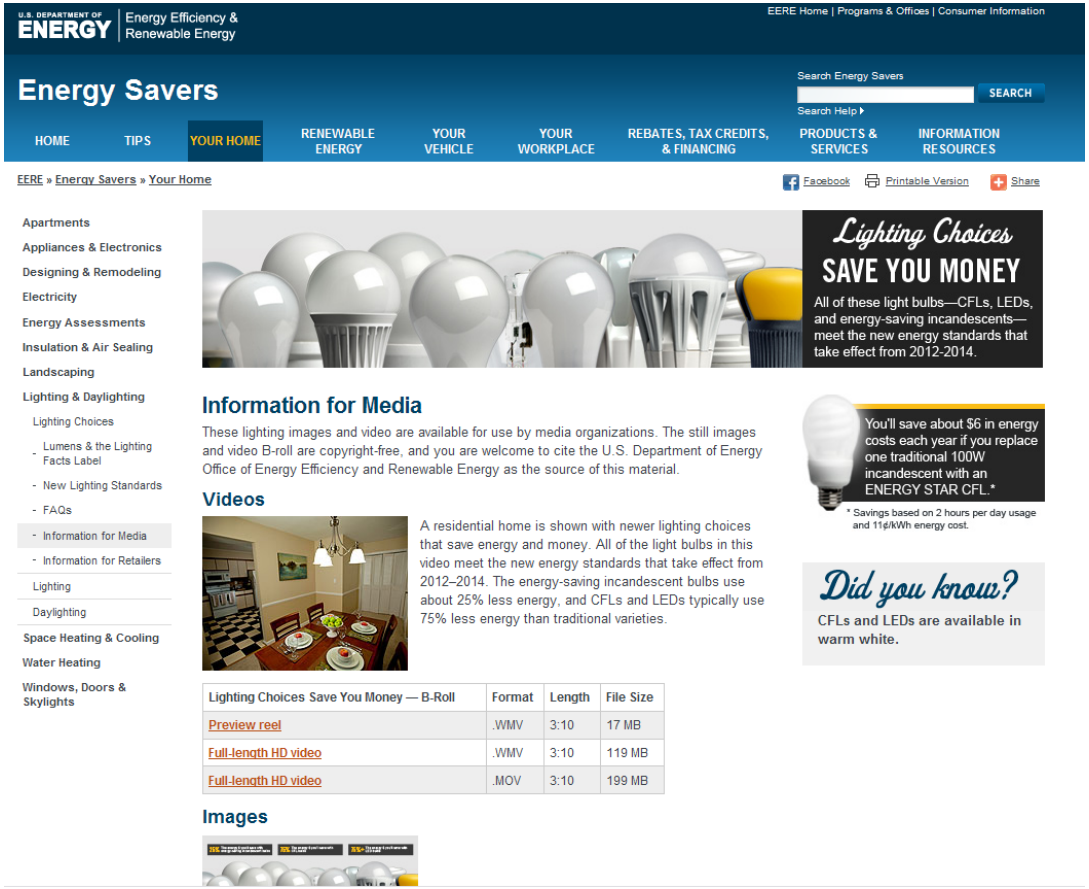
- Information for Media:
  - B-roll shows different light bulbs in common residential fixtures
  - High resolution images of energy-saving lighting choices
  - FAQs to help address consumer questions



EnergySavers.gov/Lighting FAQs

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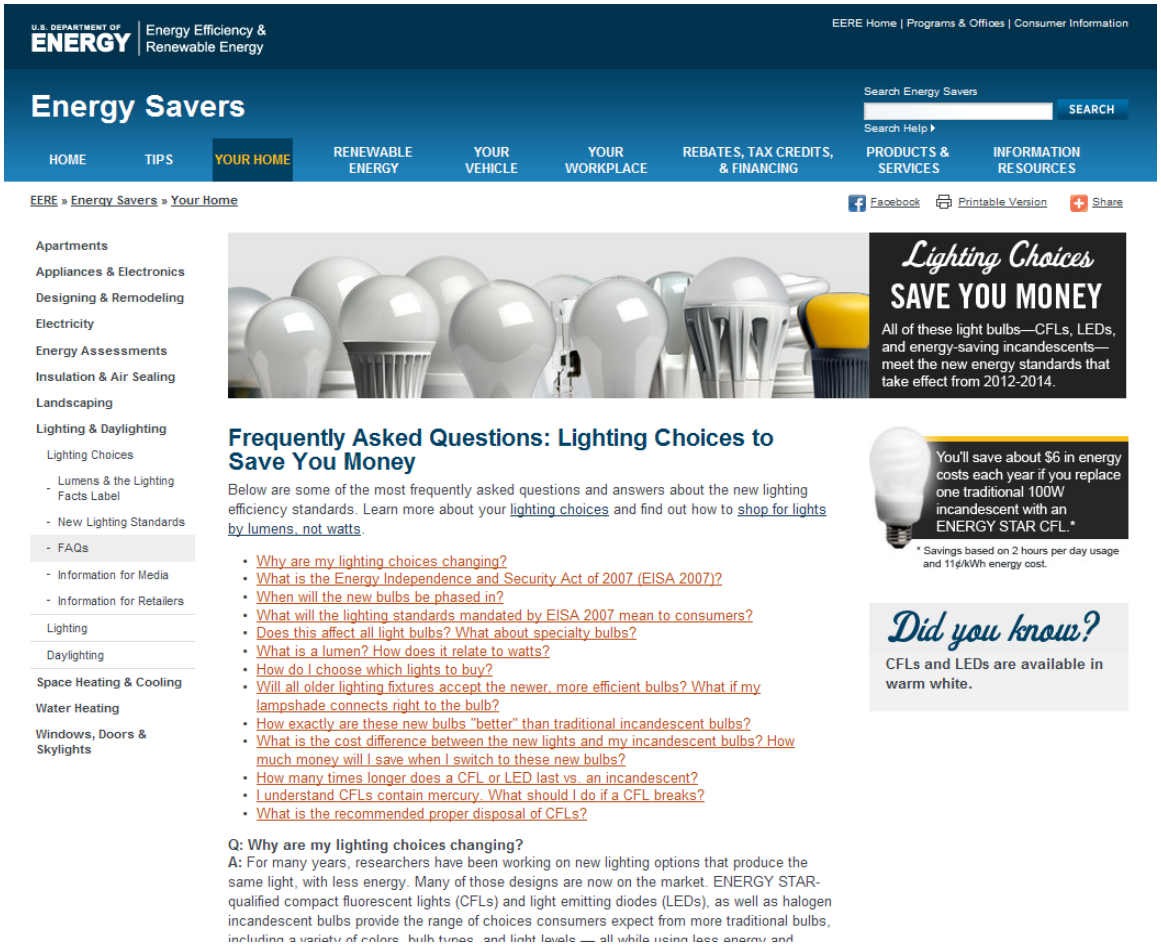
- Frequently Asked Questions address topics such as lighting choices, EISA 2007 standards, lumens, and mercury



Questions and Answers

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For interviews or follow-up questions:

U.S. Department of Energy Public Affairs
202-586-4940