



Northeast Energy Efficiency Partnerships

“Specialty” Products Deep Dive

2016 Northeast Residential Lighting
Workshop

Tuesday, September 20th

11:30am-12:15pm

Speakers

- Background and Directional
 - Claire Miziolek, NEEP
- Fixtures and Decorative
 - Gillian Saidman, L'image

Background

Marcia, Marcia, Marcia!

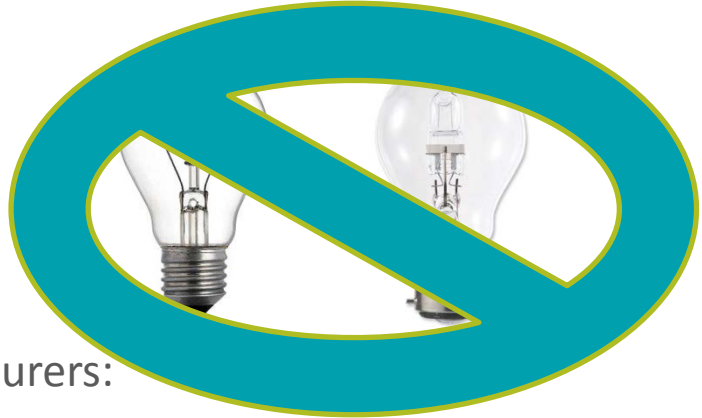


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EISA 2020: Anticipated Impacts on A Bulbs

As proposed, legal in Jan 1, 2020
In stores:



For manufacturers:



Once legacy products sell through, this is what can be expected for each wattage equivalent (at current efficacies):

- 40W
- 60W
- 75W
- 100W
- 125W
- 150W+



EISA's Expected Expansion

- Proposed coverage extends beyond A-bulbs for any “uncovered” “General Service Lamp”
- Likely subject to standard:
 - 3-ways (subject to backstop)
 - Globes <5 inches in diameter (subject to backstop)
 - Higher wattage decorative (>40W)
 - MR16s
 - All of above with any base



With A-Bulbs Forced to Transition...

- What products may still be viable for efficiency programs?
- “Specialty” to the (limited) rescue!



Charting the New (Old) Frontier?



LIGHTING 
for
tomorrow

Specialty Products Deep Dive

Gillian Saidman

Director Utility Rebate and Government Programs

Sep 2016

WHO WE ARE

Founded in 1997, L'Image Home Products designs, develops & manufactures a wide range of electrical products. Our product portfolio includes light bulbs with latest LED technology, indoor & outdoor lighting fixtures, LED under-cabinet fixtures, single use and rechargeable batteries as well as power electricals. At L'Image, we differentiate our product lines through innovation offering a compelling value to the marketplace under trusted brands.

We are the licensee of the Sunbeam brand for all our product categories in the USA, Canada, UK and of the *Polaroid* brand for light bulbs, lighting fixtures and rope lights in USA, Canada, Spain and Russia as well as batteries in Russia. We also market our products under our own Enviro-Bulb, Home Luminaire, Home Luminaire Outdoor & L'Image Home brands in addition to private label brands for a number of major retailers throughout North America & Europe.

Core Competencies: Light Bulbs, Batteries, Indoor & Outdoor Lighting Fixtures, Innovative LED novelty products

Our Brands:

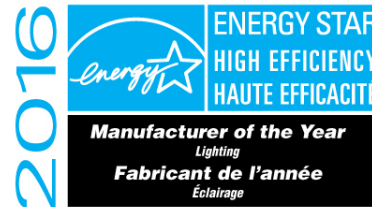


Under License:



Our commitment to develop and distribute energy-efficient lighting products was recognized by Natural Resources Canada with the Energy Star® 2016 Manufacturer of the Year award in Lighting. Full press release can be viewed here:

<http://www.wireservice.ca/index.php?module=News&func=display&sid=19036>





**GLOBAL LIGHTING
CHALLENGE**

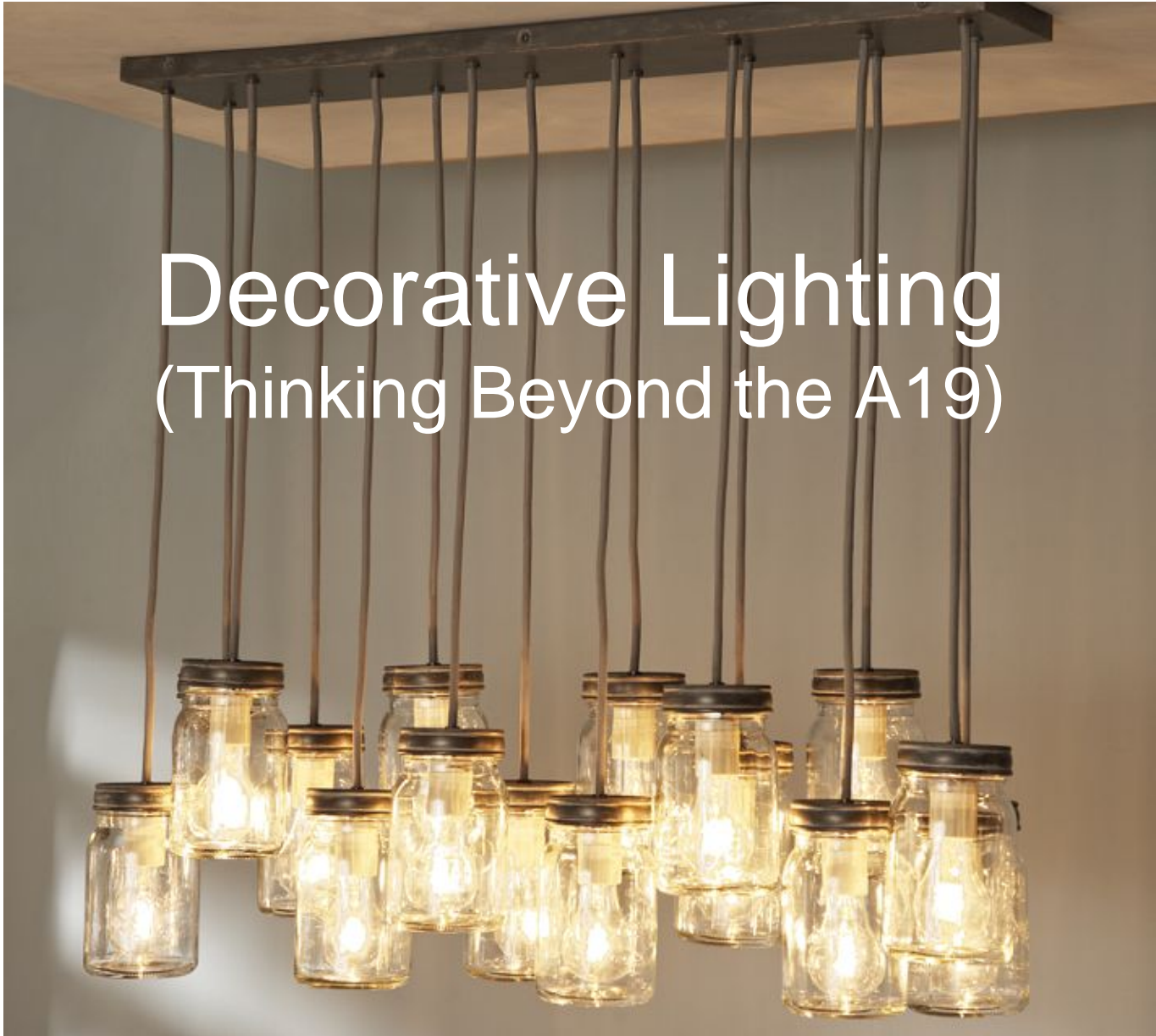
A Clean Energy Ministerial Campaign

We recently joined the Global Lighting Challenge. With this challenge, L'Image Home Products commits to develop and bring high-efficiency, high-quality and affordable LED lighting products to consumers via collaboration with some of the largest global retailers spreading the message of value and energy efficiency. L'Image Home Products distribution of such LED lighting products reaching households via these retail channels is expected to reach 100 million by 2020.

For more information on this challenge, please visit

<http://www.globallightingchallenge.org/>

Decorative Lighting (Thinking Beyond the A19)



THAT COUNTER CULTURE BISTRO FEELING

Call it Steampunk, retro, vintage, Edison

Steampunk began as a counter culture to technology. The first steampunk convention took place in 2006: and the word was actually added to The Oxford English Dictionary in 2010

http://www.huffingtonpost.co.uk/william-higham/steampunk-what-the-hell-is-it_b_1015192.html

It is EVERYWHERE



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Steampunk Industrial Lighting

The best of vintage, recycled and unique artistic lighting creations.

638 Pins 481 Followers

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Steampunk Lamp



Machine Age



Steampunk



Table Lamps



Gauges



Industrial Lamps



Industrial



Lamps



Floor Lamps



Vintage Industrial



Steampunk Dome Globe light in burnished metal for the Observatory
More



Machine Age Lamp Company #427



© Andy Hortnik

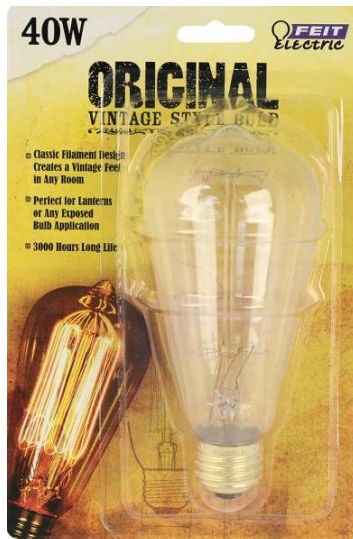
Old school technology, old school efficiency

Incandescent bulbs around 2200 K for that soft warm light, lasting 3000 hours

60 watt bulbs are 250-350 lumens costing \$10.00, and 4 to 6 lumens per watt.

40 watt bulbs are around 200 lumens, costing \$8.00, and 4 to 6 lumens per watt

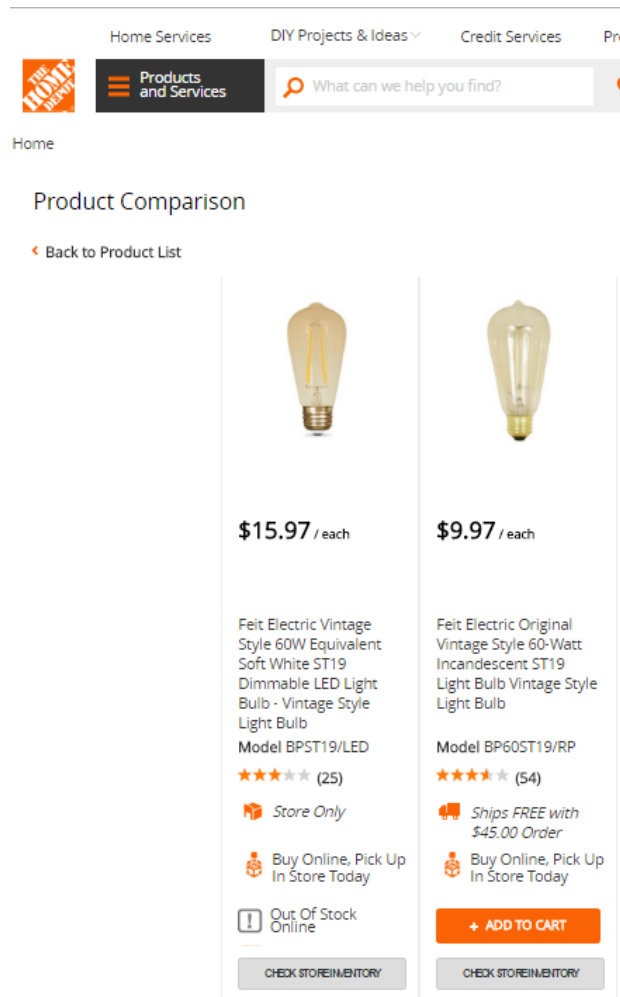
25 watt candelabras are => 100 lumens, costing \$2.00-\$5.00, and > 4 lumens per watt



Consider how many of these bulbs are needed to light a room



Manufacturers are starting to see this trend as a growth opportunity, but like all other early Incandescent to LED, there is a **cost** to jumping in on this trend



The screenshot shows a product comparison page on the L'Image website. At the top, there are navigation links for 'Home Services', 'DIY Projects & Ideas', 'Credit Services', and 'Pro'. Below this is a search bar with the text 'What can we help you find?'. The main heading is 'Product Comparison', with a link to 'Back to Product List'. Two light bulbs are compared side-by-side. The left bulb is a 'Feit Electric Vintage Style 60W Equivalent Soft White ST19 Dimmable LED Light Bulb - Vintage Style Light Bulb' (Model BPST19/LED) priced at \$15.97 each. It has a 5-star rating from 25 reviews and is marked as 'Store Only' and 'Out Of Stock Online'. The right bulb is a 'Feit Electric Original Vintage Style 60-Watt Incandescent ST19 Light Bulb Vintage Style Light Bulb' (Model BP60ST19/RP) priced at \$9.97 each. It has a 4.5-star rating from 54 reviews and is marked as 'Ships FREE with \$45.00 Order' and 'Buy Online, Pick Up In Store Today'. Both products have a 'CHECK STORE INVENTORY' button at the bottom.



Early LED models were not Energy Star.

Sunbeam®



TRULOOK™
LED Filament



- Suitable for general purpose and decorative lighting applications
- Medium and candelabra base for direct incandescent or halogen replacement
- Form factor similar to the original incandescent
- Reduces energy consumption by up to 93%
- Instant full brightness and dimmable
- Lead and mercury free

- **OVER 100 LUMENS/ WATT!!**

Food for thought; These can be used in a home setting or in trendy bistro

This trend and technology mash up is new and there is a lot of room for growth and product improvement

- When lit, look more like the incandescent
- Economies of scale and price reduction
- Expanded list of Energy Star options for this category since style is such a factor
- Options for color temperature to give different effects

Directional

- Over 1200 on ENERGY STAR 2.0 list, including:

- BR30
- BR36
- BR40
- MR16
- PAR16
- PAR20
- PAR30
- PAR30L
- PAR30S
- PAR38
- R14
- R20

- All LED
- Efficacies top 100lm/w



Directional Standards

- Incandescent Reflector Lamp (IRL) standard applies to these products
- Essentially sets a halogen lamp as baseline (19lpw)
- Will not be subject to be revisited until approx 2023
 - In 2015, DOE determined more stringent standards would not be economically justified
 - Things in the LED world have changed a lot since 2015...
- Leaves years of potential halogen directional products sold

Directional Opportunities

- Well suited for LED
- Current cost of LED more expensive than Halogen (wide range)
- Relatively high portion of lamps in homes
- Bundled offering to replace multiple bulbs in track lighting, consistent look and CCT a necessity



Fixtures: Plugged in, turned on and solid (state)

Gillian Saidman

Director Utility Rebate and Government Programs

Sep 2016

SSL: Solid State Lighting

Solid state refers to any technology with no moving parts. Solid State Lighting products do not have removable light bulbs, and the light source is part of the fixture.

SSL fixtures last between 25,000 to 40,000 hours.

Their designs can be very innovative and streamlined as they don't need to accommodate bulbs.

When the light source dies, there is no replacing the LEDs, and the fixture needs to be replaced.



Energy Star Fixtures with replaceable bulbs

Prior to the advancements with LED technology, there was GU24 based bulbs. These were the only type of bulb that could be used with Energy Star fixtures. The bulbs would last 10,000 hours (CFL), were replaceable but a specialty item and pricier than medium based Energy Star bulbs. With the Luminaires 2.0 Spec, the base of the replaceable bulb was no longer limited to GU24.

The 2.0 luminaires spec also introduced the “Bulb in a Box” concept, where the product testing occurs mainly on the bulb, speeding up tremendously the certification process. This spec also allowed for chandelier and other specialty and decorative bulbs to be used in fixtures.

There are a few advantages of the replaceable bulb fixtures.

1. The fixture isn't locked into the technology of today, and the bulbs can be upgraded.
2. The fixture doesn't need to be replaced as the light sources die.



Hardwired – the “set it and forget it” of fixtures

Hardwired products are generally savings for the lifetime of the product. If the bulbs can be replaced, this can be infinite. If it is solid state, 25,000-40,000 hours

They are more complex for the consumer to decide to buy as they require more work to install and are a commitment for as long as they decide to leave the fixture in place.

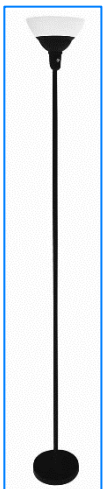
Examples of typical hardwired fixtures are outdoor, track lighting, flush mounts, recessed lighting, chandeliers, pendant lights, bathroom vanity, wall sconces, etc.



Portable- plug it in, plug it in

Portable lighting has the same lifetime (generally) as the solid state and replacement bulb hardwired. The product categories for portable are desk lamps, table lamps, torchieres and retrofit recessed.

For the consumers, portable is very easy to install and can be an impulse buy, depending on the application. These products are ideal for multifamily where cutting holes in the walls and ceiling can be tricky or discouraged.



Portable vs. Hardwired- each has a place.

Hardwired is more work to install but once that socket has been converted to Energy Star, be it with replicable GU24 or SSL, it has been converted for the lifetime of the product.

Hardwired fixtures stay in a home if it is sold.

Portables can sometimes be considered iffy since they can be moved if a resident moves out.

Hardwired products are used more commonly for hallways, kitchens, stair cases, bathrooms, outdoor and dining rooms.

Bedrooms can be a combination of hardwired (ceiling light) and portable (task and general purpose)

Many homes in New England have an architectural style that does not inherently have wiring in the salon, bedrooms, or living rooms. These rooms are typically lit by portable lighting.

For program evaluation, there is much debate on portables, some see it as adding to plug load.

The counter argument for task lighting is that an Energy Star task is still consuming around 5 watts, vs. 60 watt incandescent traditional lamp.

Discussion

- What else do we need to move these from “specialty” to the mainstream?
- Shifting focus towards residential-esque commercial applications?
 - Restaurants
 - Hotels
- Ish impacts for specialty?

