EISA Update & Impacts

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Lighting Policy & Regulations


EPAct 1992

EPCA 1975

EPA Act 2005


Phasing in of EISA (2010-2012)

Last phase of EISA “the Backstop” (2020)

Timeline: Jamie Fitzke, EISA and Federal Regulatory Impacts to Lighting
EISA 2007

Round 1:

DOE was given flexibility in round 2, higher efficiency standards could be enacted on EISA specified lamps…but for appropriations

Round 2:

<table>
<thead>
<tr>
<th>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>≤ 43 watts</td>
<td>January 1, 2014</td>
</tr>
<tr>
<td>40 watt</td>
<td>≤ 29 watts</td>
<td>January 1, 2014</td>
</tr>
</tbody>
</table>

45 LPW minimum by 2020

<table>
<thead>
<tr>
<th>They're still out there</th>
<th>EISA Pre-2020</th>
<th>EISA Post-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>100w</td>
<td>72w</td>
<td>35.6w</td>
</tr>
<tr>
<td>75w</td>
<td>53w</td>
<td>24.4w</td>
</tr>
<tr>
<td>60w</td>
<td>43w</td>
<td>17.8w</td>
</tr>
<tr>
<td>40w</td>
<td>29w</td>
<td>10w</td>
</tr>
</tbody>
</table>
Would a lamp by any other name…
The Last 2+ Years: Litigation, Settlement, & Back to Intent

- **January 2017** – DOE Publishes Final Rules
- **March 2017** - NEMA Formally Requests Rulemaking for GSLs & asks federal appeals court to review
- **July 2017** – DOE & NEMA Settlement:
  - **August 2017** DOE issues NODA requesting market data for GSLs (standards & definition for GSIL could be amended)
  - DOE issue final rules regarding statutory backstops applicable to vibration and rough service lamps (released in December 2017)
- **2018** – Is this thing on? 😐
- **February 2019** – DOE issues NOPR to Withdraw Def. Established
EISA to Date (Back to Intent, Litigation, Settlement or Repeat?)

• February 6th, DOE NOPR announced:
  • Propose withdrawing definitions established in two final rules (January 19, 2017), maintain the existing regulatory definitions of GSL and GSIL
    • A-lamps: EISA
    • Reflector Halogens: DOE
    • Floods/Decorative/Specialty: None
• February 28th, DOE Public Meeting
  • Docket number EERE--2018-BT-STD-0010
  • 60 days for comments – Extended to May 3, 2019
• DOE specifically requests comment from retailers
• Step 1: Definition of GSLs and GSILs
  • Ruling could be as early as Summer 2019
• Step 2: Amend GSILs standards?
Program impacts

Residential
- Largest impact
- Great concern to multi-measure programs that rely on lighting to be cost-effective or pass C/B test
- 80% of lighting program impacted by EISA
- 60% reduction of GWH savings

Commercial / Industrial
- Impact, though not as great due diversity of lighting products in commercial programs
  - Decrease in lighting C/B tests, as GSLs are low cost and high savings
  - Multi-measure programs
- Mid-stream programs particularly affected
- 30% of program impacted by EISA
- 20% reduction of GWH savings

Represents over 20% loss in DSM portfolio savings
### Residential Efficacy Requirements

**HIGH EFFICACY LAMPS** (2018 IECC Definition)
Compact fluorescent lamps, light-emitting diode (LED) lamps, T-8 or smaller diameter linear fluorescent lamps, or other lamps with a efficacy of not less than the following:

1. 60 lm/W for lamps over 40 watts
2. 50 lm/W for lamps over 15 to 40 watts
3. 40 lm/W for lamps 15 watts or less

<table>
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<tr>
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<th>2012/15 IECC</th>
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<tbody>
<tr>
<td>HE Lamps %</td>
<td>50%</td>
<td>75%</td>
<td>90%</td>
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</table>
# Residential Efficacy Requirements

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Wattage</th>
<th>Luminous Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED</td>
<td>13 W</td>
<td>85 lm/W</td>
</tr>
<tr>
<td>CLF</td>
<td>18 W</td>
<td>65 lm/W</td>
</tr>
<tr>
<td>Halogen</td>
<td>53 W</td>
<td>20 lm/W</td>
</tr>
<tr>
<td>Incandescent</td>
<td>75 W</td>
<td>15 lm/W</td>
</tr>
</tbody>
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## Compatibility
- **Compliant**: LED and CLF
- **Not Compliant**: Halogen and Incandescent

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2016-2018 Quarterly Shipments of Incandescent and Halogen lamps

Residential Lighting Requirements

2019 JA8 Lamps & Luminaires

The luminous efficacy of the light source is required to be equal to or greater than the highest of:

1. Title 20 requirements for the lamp type,

2. Federal appliance efficiency standard for the lamp type, or

3. 45 lumens per Watt

Source: energycodeace.com
Residential Kentucky Compliance Study

- Phase I: 31% Compliance
- August 2015
- 2009 IECC

Source: https://www.energycodes.gov/sites/default/files/documents/Kentucky_Residential_Field_Study.pdf
Left Behind in the Transition

- Low-income
  - Should be exception
- Rental Housing
- Multi-measure programs
- Non-energy conscious
  - People spend less than a minute looking at their energy bills, how much time do they spend on a lamp?
- The ‘Use until it breaks’
- Two of the most difficult
  - ‘I tried and I hated it’
  - ‘You can’t make me, I’ve stockpiled’
THANK you!

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