

May 2019

EISA Update & Impacts

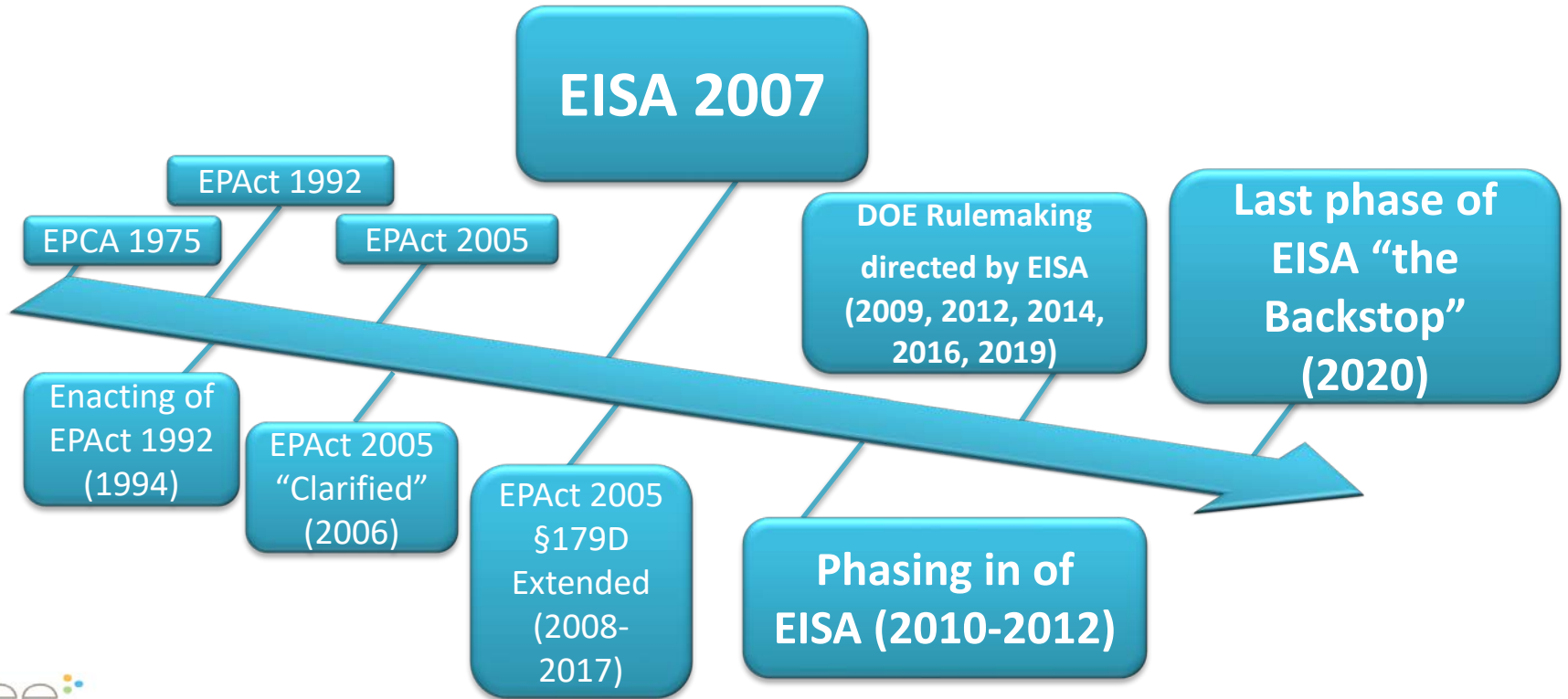
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Center for Energy & Environment (CEE)



Research & Development ❖ Programs ❖ Financing ❖ Education & Engagement ❖ Policy

Lighting Policy & Regulations



EISA 2007

Round 1:

Today's Bulbs	After the Standard	Standard Effective Date
100 watt	≤ 72 watts	January 1, 2012
75 watt	≤ 53 watts	January 1, 2013
60 watt	≤ 43 watts	January 1, 2014
40 watt	≤ 29 watts	January 1, 2014

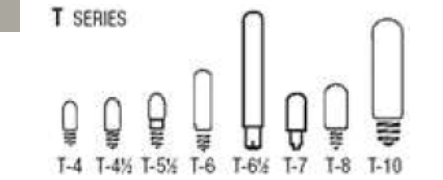
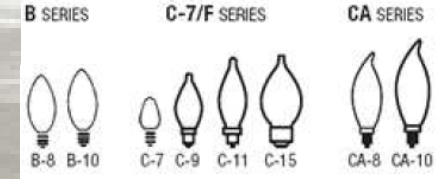
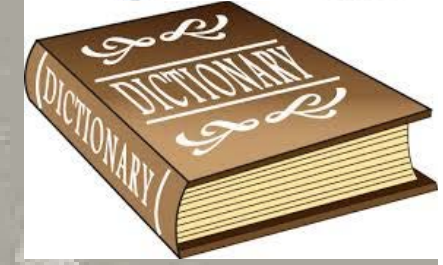
Round 2:

45 LPW minimum by 2020

They're still out there	EISA Pre-2020	EISA Post-2020
100w	72w	35.6w
75w	53w	24.4w
60w	43w	17.8w
40w	29w	10w

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

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 to 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

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 an 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

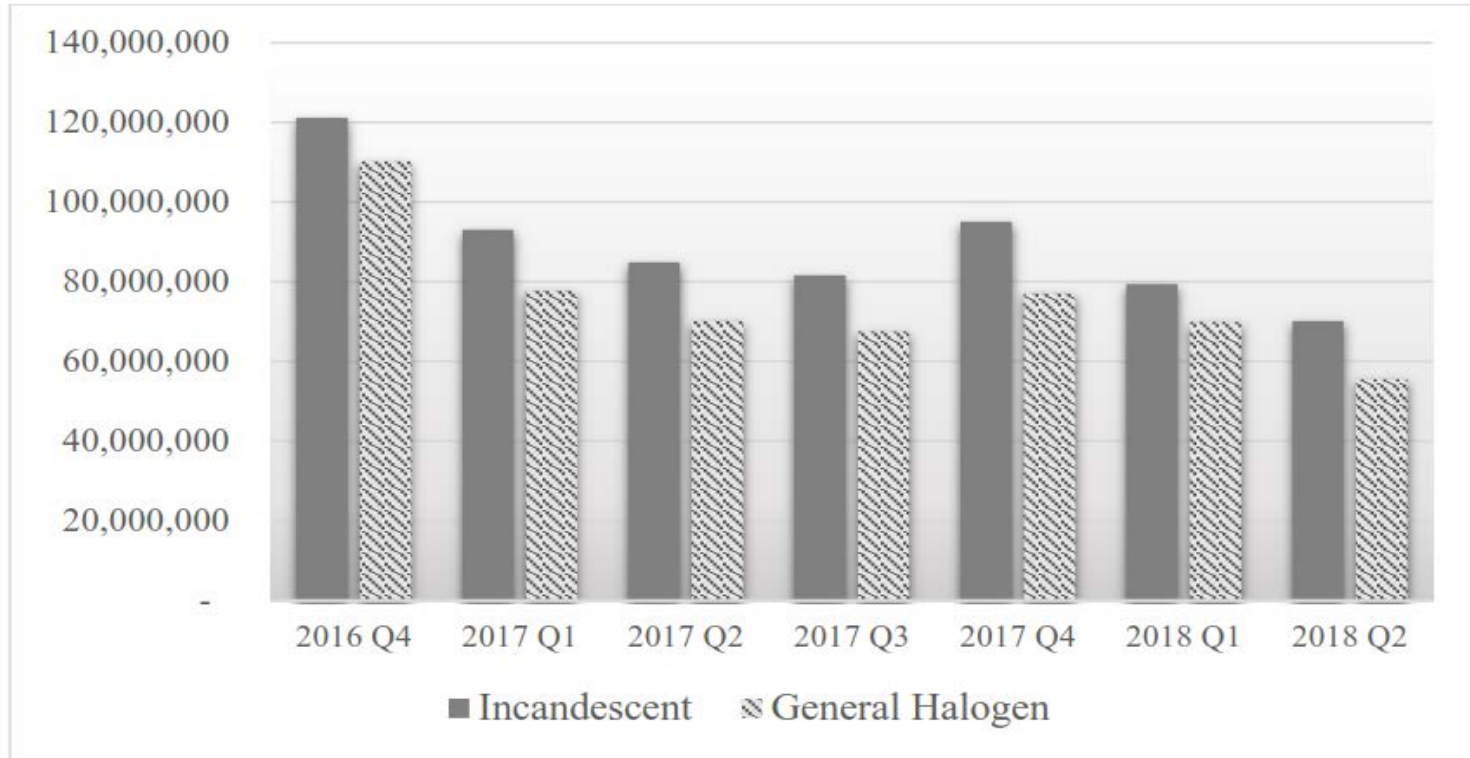
	2009 IECC	2012/15 IECC	2018 IECC
HE Lamps %	50%	75%	90%

Residential Efficacy Requirements

Source Type	Wattage	Luminous Efficacy	
LED	13 W	85 lm/W	Compliant
CLF	18 W	65 lm/W	
Halogen	53 W	20 lm/W	Not Compliant
Incandescent	75 W	15 lm/W	

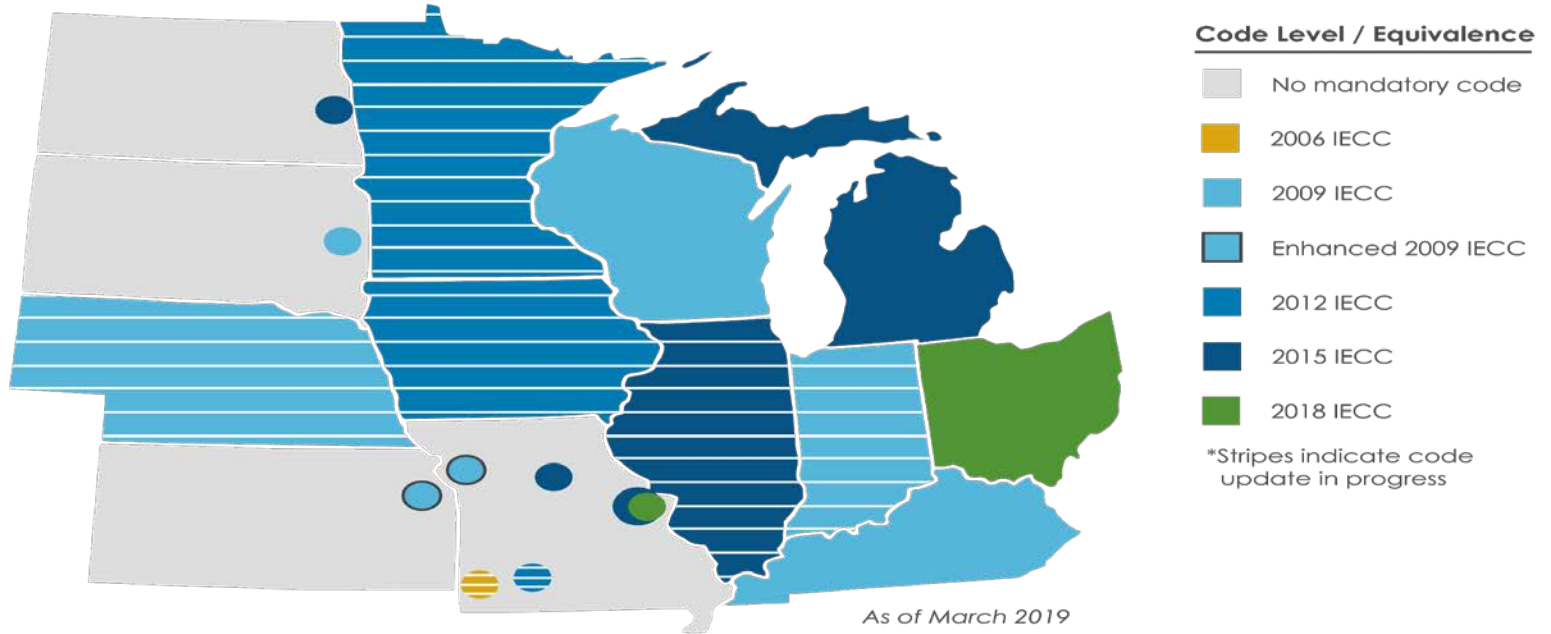
	2009 IECC	2012/15 IECC	2018 IECC
HE Lamps %	50%	75%	90%

2016-2018 Quarterly Shipments of Incandescent and Halogen lamps



Energy Code Adoption

Residential



California

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

Lighting Efficacy Compliance

Residential Kentucky Compliance Study

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

3.1.1.6 Lighting

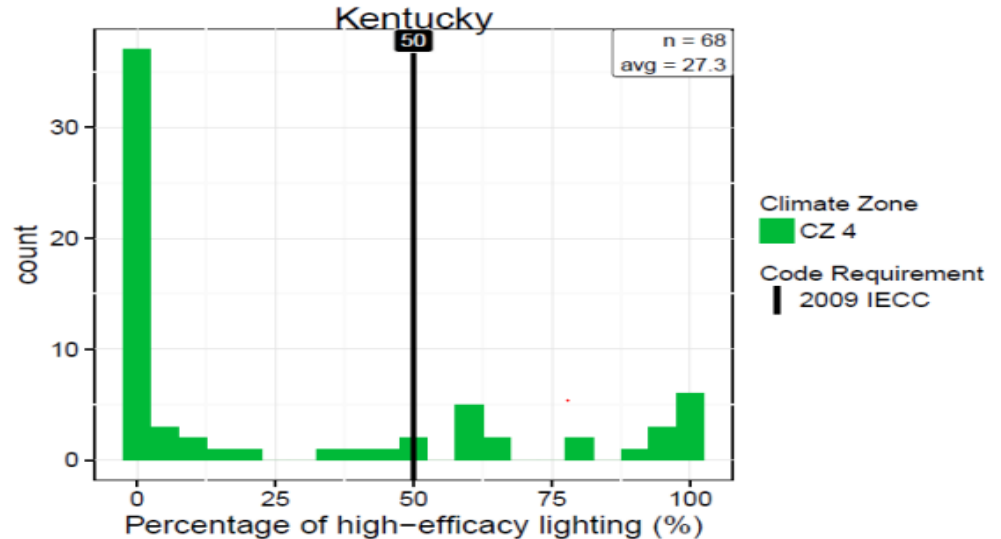


Figure 3.8. High-efficacy Lighting Percentage

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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