Bonneville POWER ADMINISTRATION

April 5, 2016

With data provided by

neea

RESIDENTIAL LIGHTING

MARKET UPDATE

ENERGY STAR 2.0, EISA 2020, AND NEW MARKET ACTORS

LIGHTING IS IMPORTANT

Lighting accounts for more than 1/3 of the region's residential energy and demand savings.

START WITH THE HOUSES…

Single Family	Manufactured	Multi-family
4,023,937 homes (74%)	543,730 homes (10%)	863,104 units (16%)

ADD THE LIGHTS…

Single Family

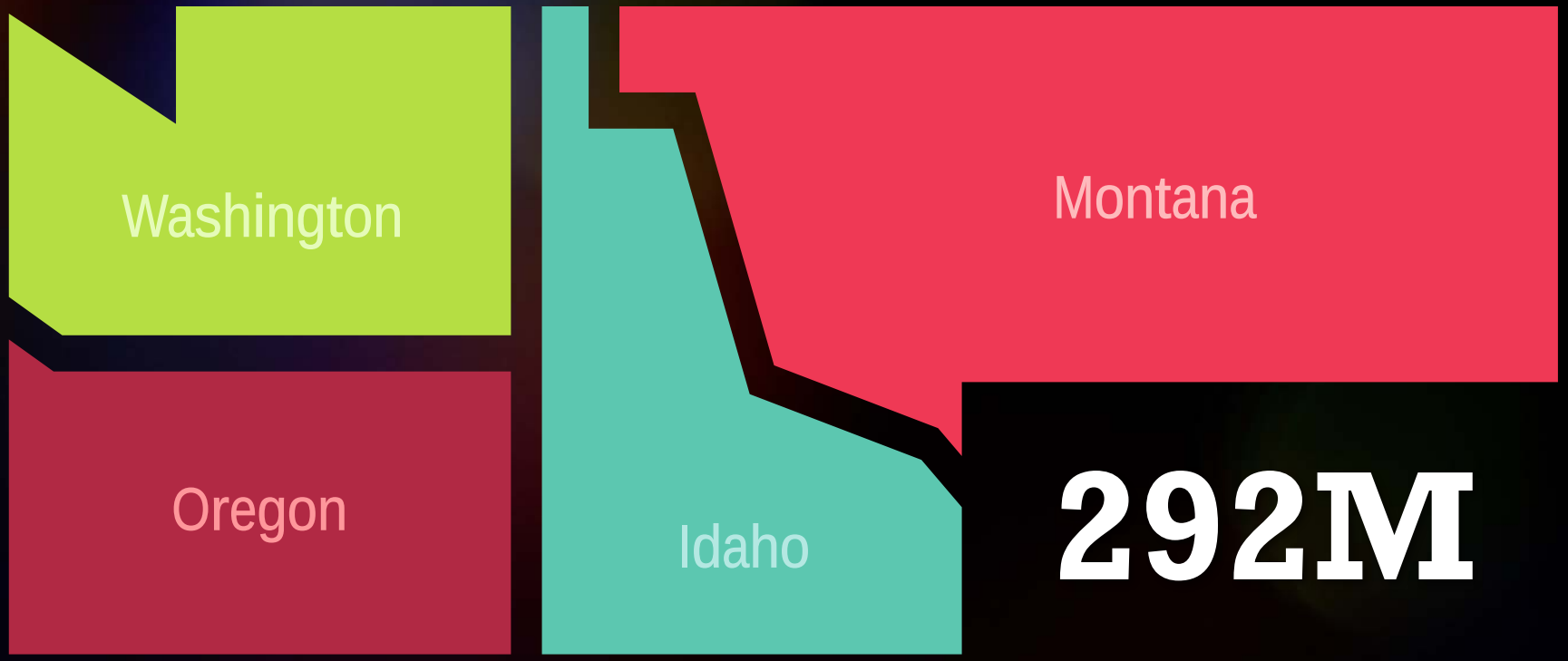
Average: 63 lamps
and 40 fixtures

Manufactured

Average: 35 lamps
and 21 fixtures

Multi-family

Average: 23 lamps
and 14 fixtures
(per unit)


Washington
Montana
Oregon
Idaho
292M

AND THE MARKET IS CHANGING (REALLY) FAST

Technology

Regulation

TO TRACK THE TOTAL MARKET

We track market trends

We analyze sales and shelf data

We conduct interviews

We model Momentum Savings

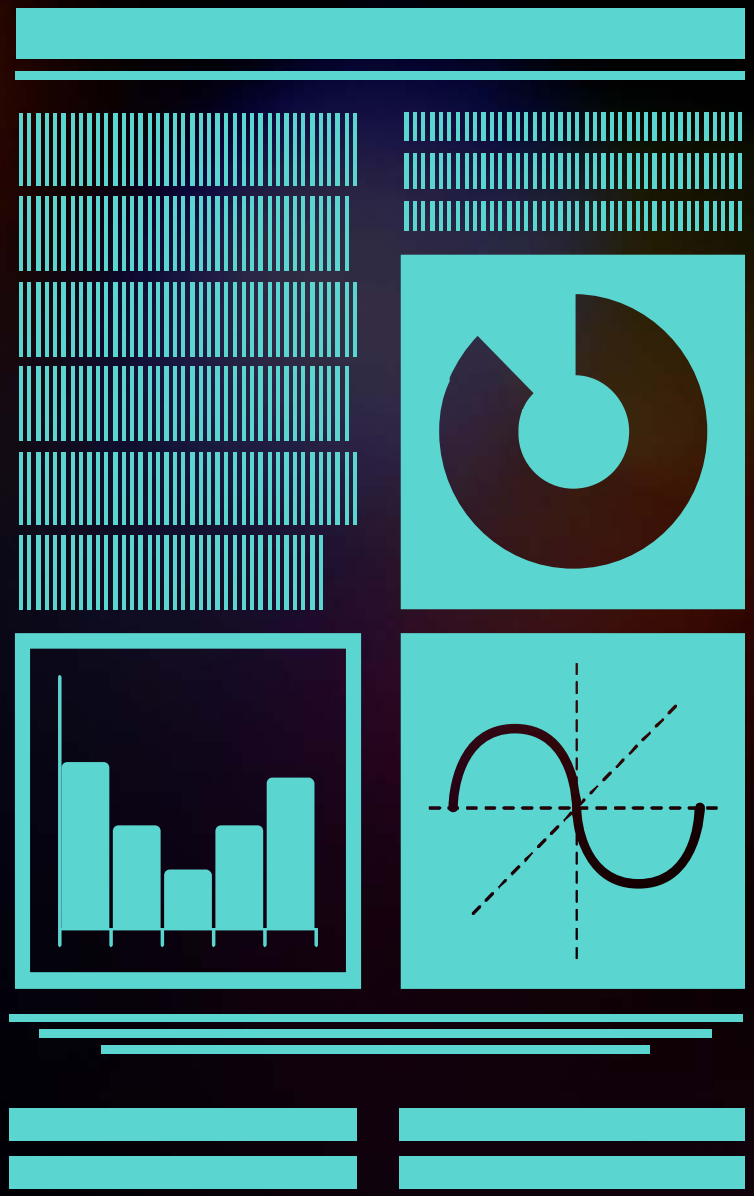
We’re going to talk about
SALES TRENDS
ENERGY STAR 2.0
SUPPLY CHAIN
EISA 2020

INSTALLED STOCK

Reflects Past Decisions

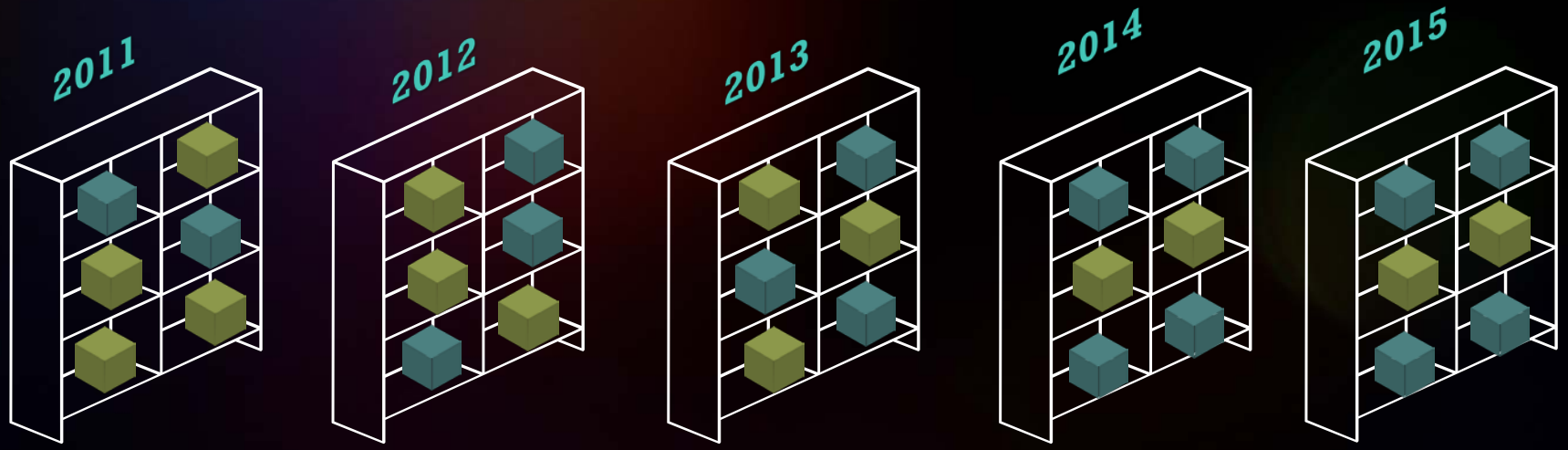
PRODUCT FLOW

Tells Today's Story

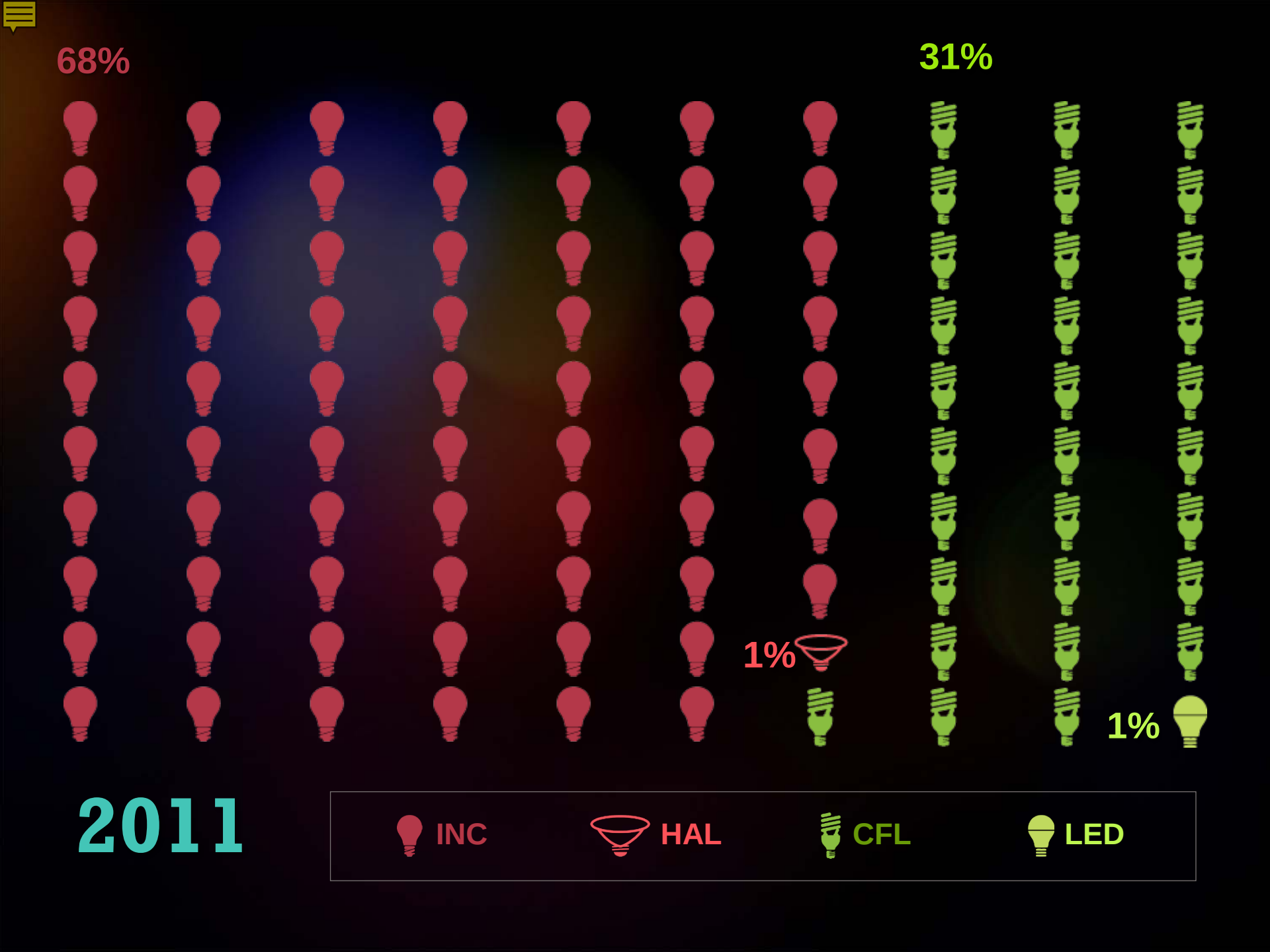


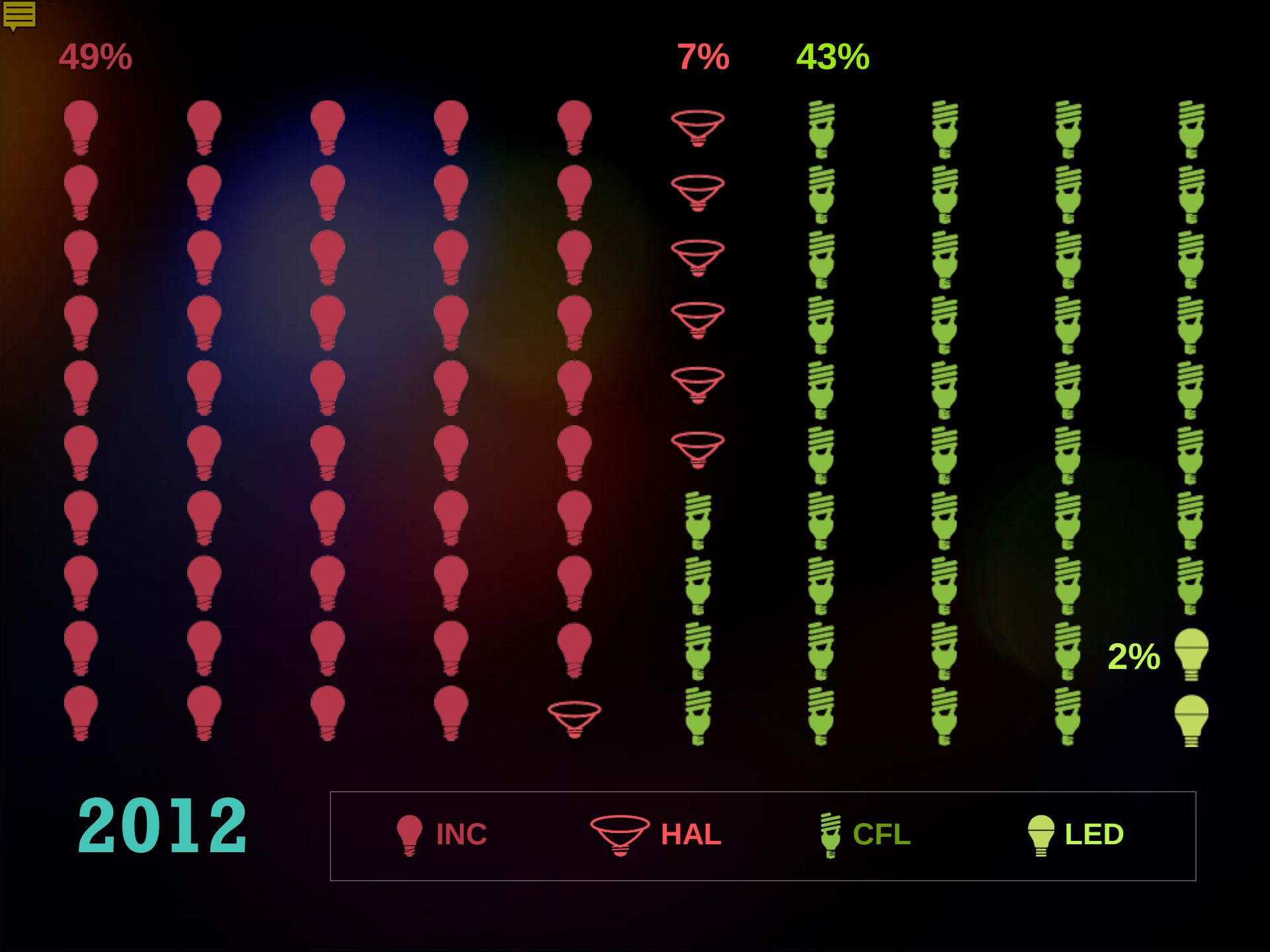
NIELSEN SALES DATA

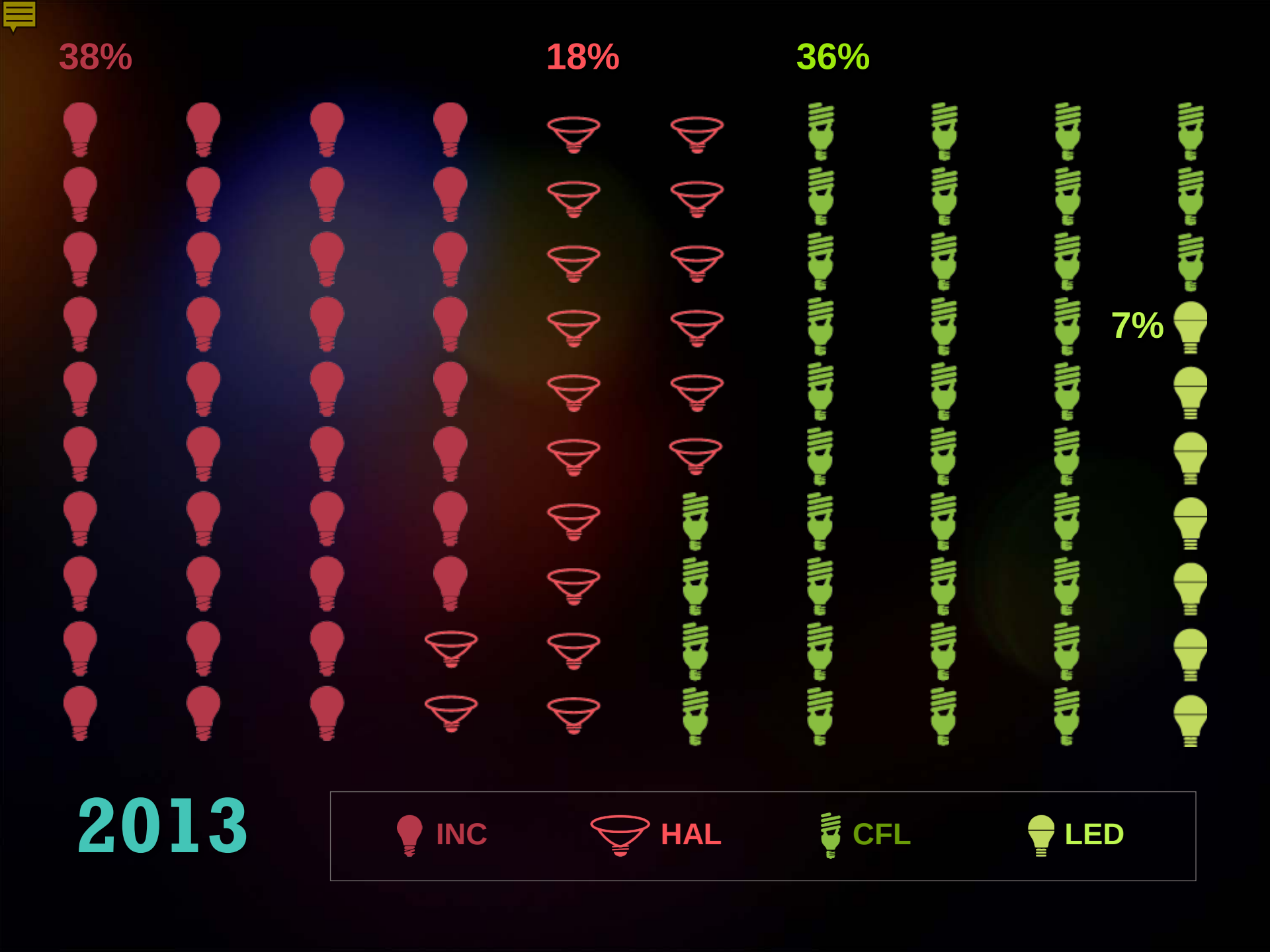
NEEA's RETAIL SHELF SURVEYS

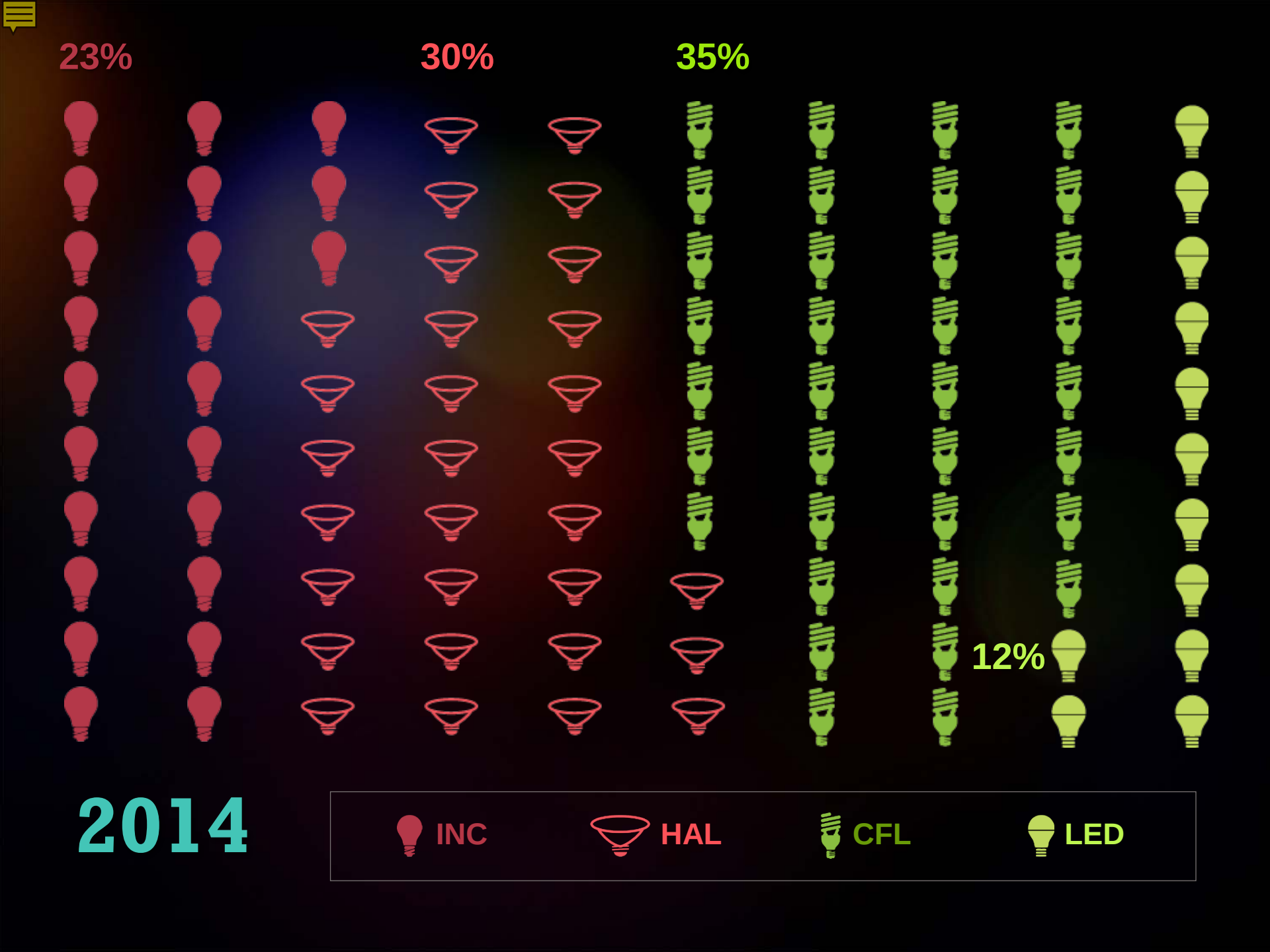


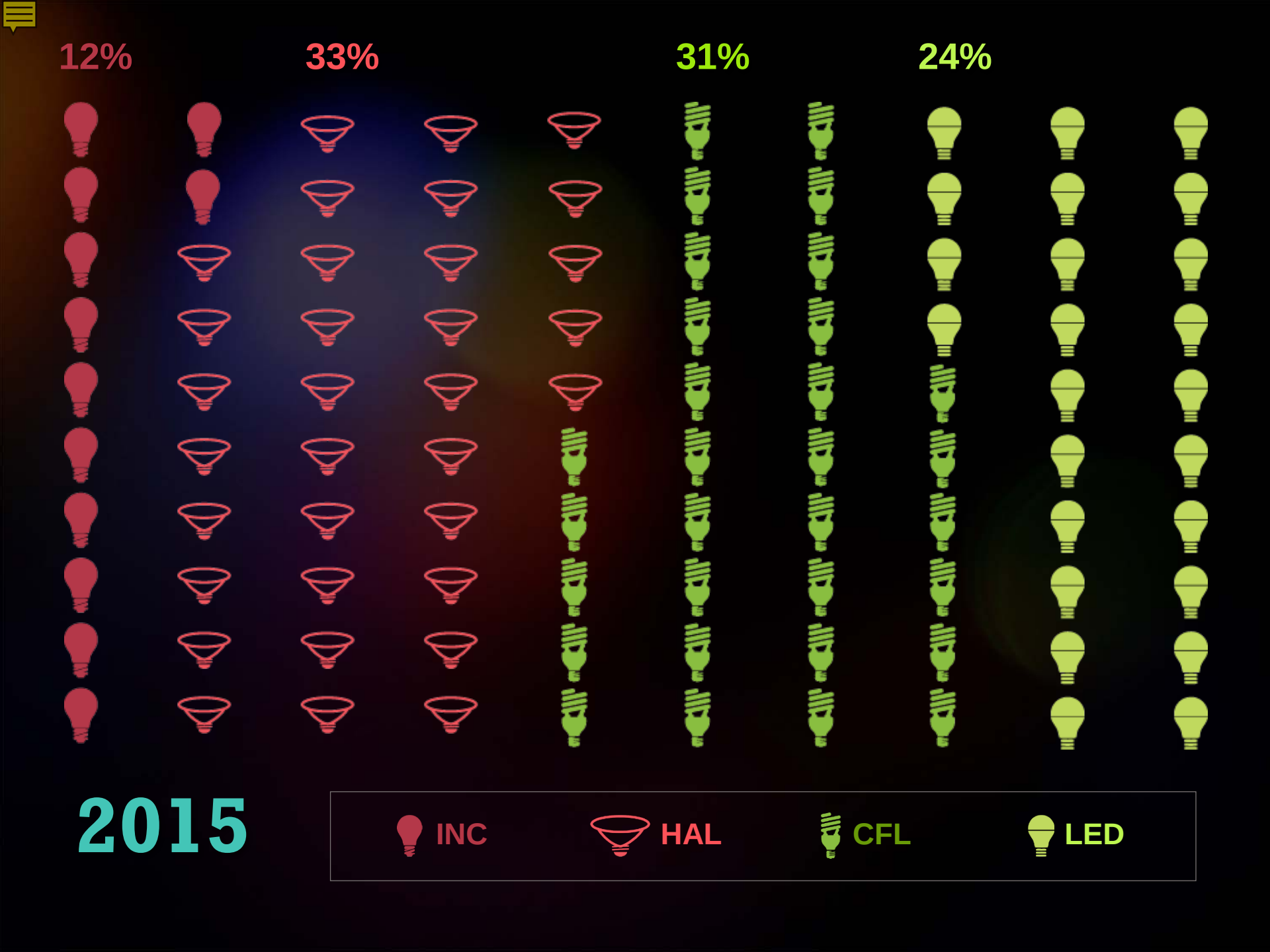
What do the
DATA TELL US?


68%
31%
1%
1%
2011
INC
HAL
CFL
LED

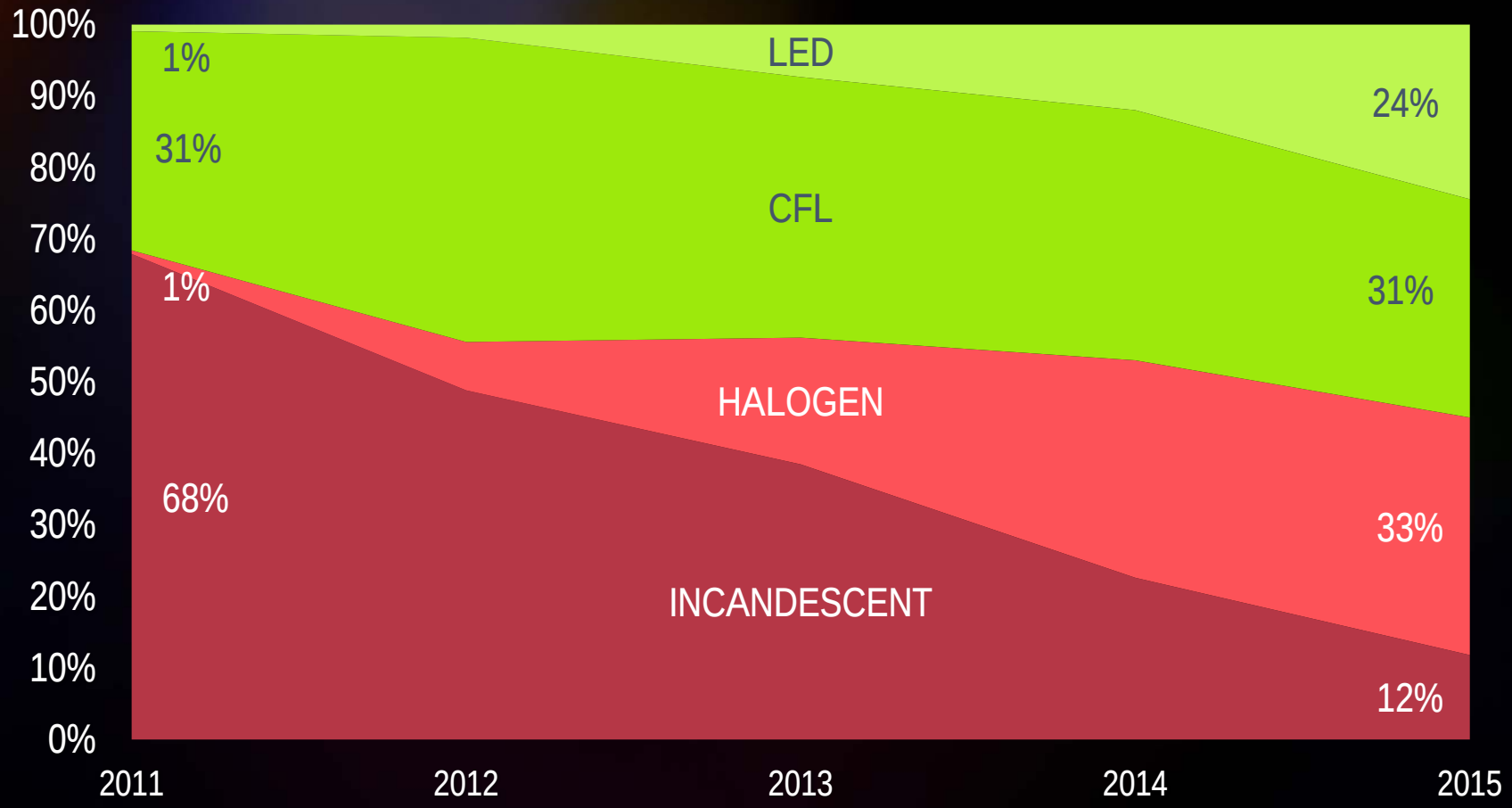

49%
7%
43%
2%
2012
INC
HAL
CFL
LED


38%
18%
36%
7%
2013
INC
HAL
CFL
LED

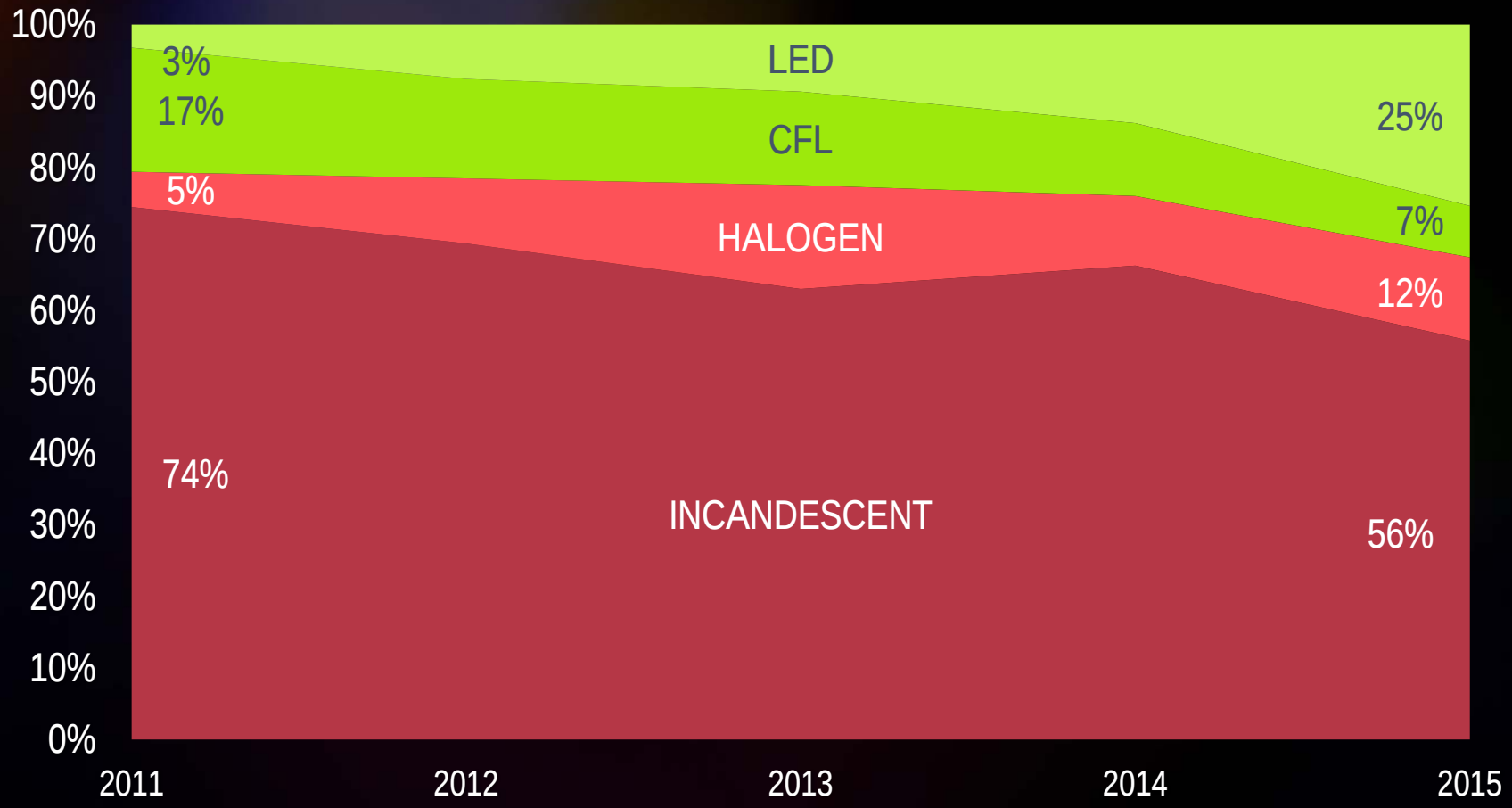

23%
30%
35%
12%
2014
INC
HAL
CFL
LED


12%
33%
31%
24%
2015
INC
HAL
CFL
LED

GENERAL SERVICE LAMPS

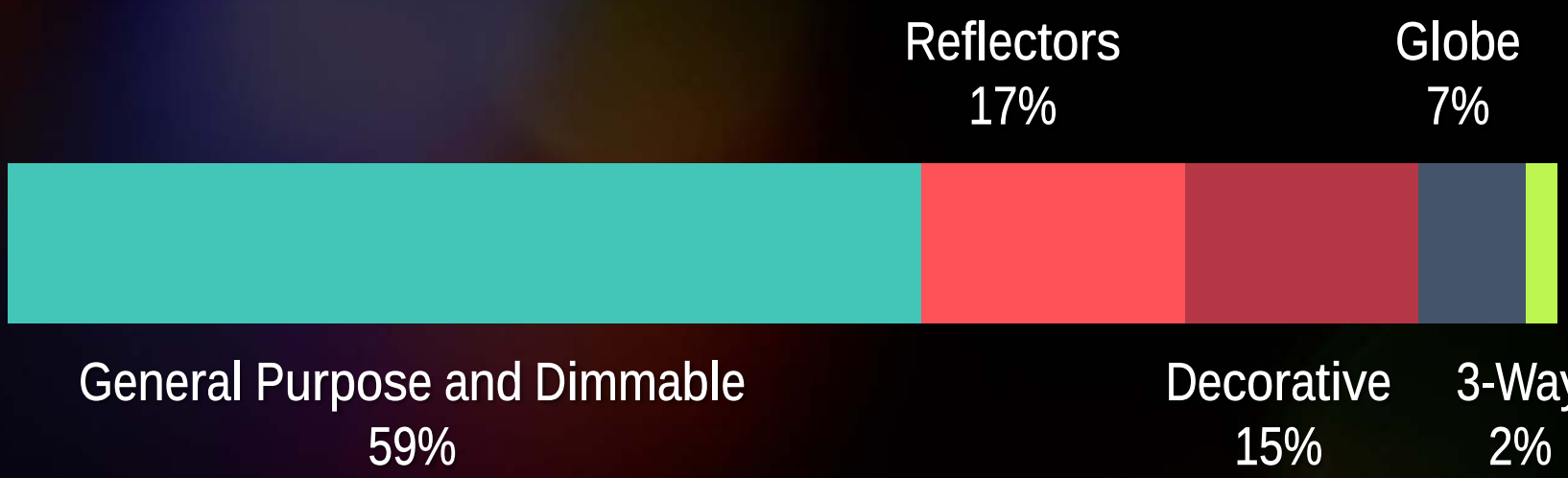


SPECIALTY LAMPS

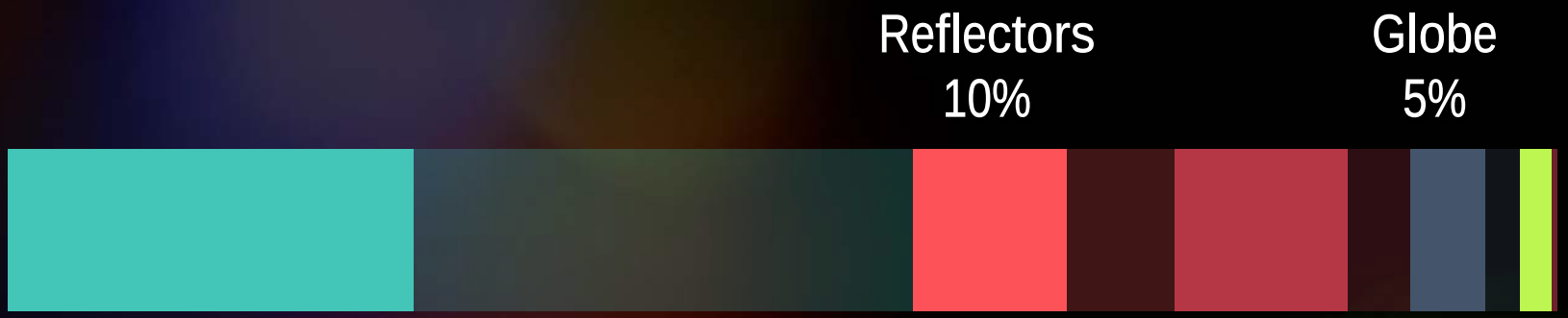


Where are the

REMAINING OPPORTUNITIES?



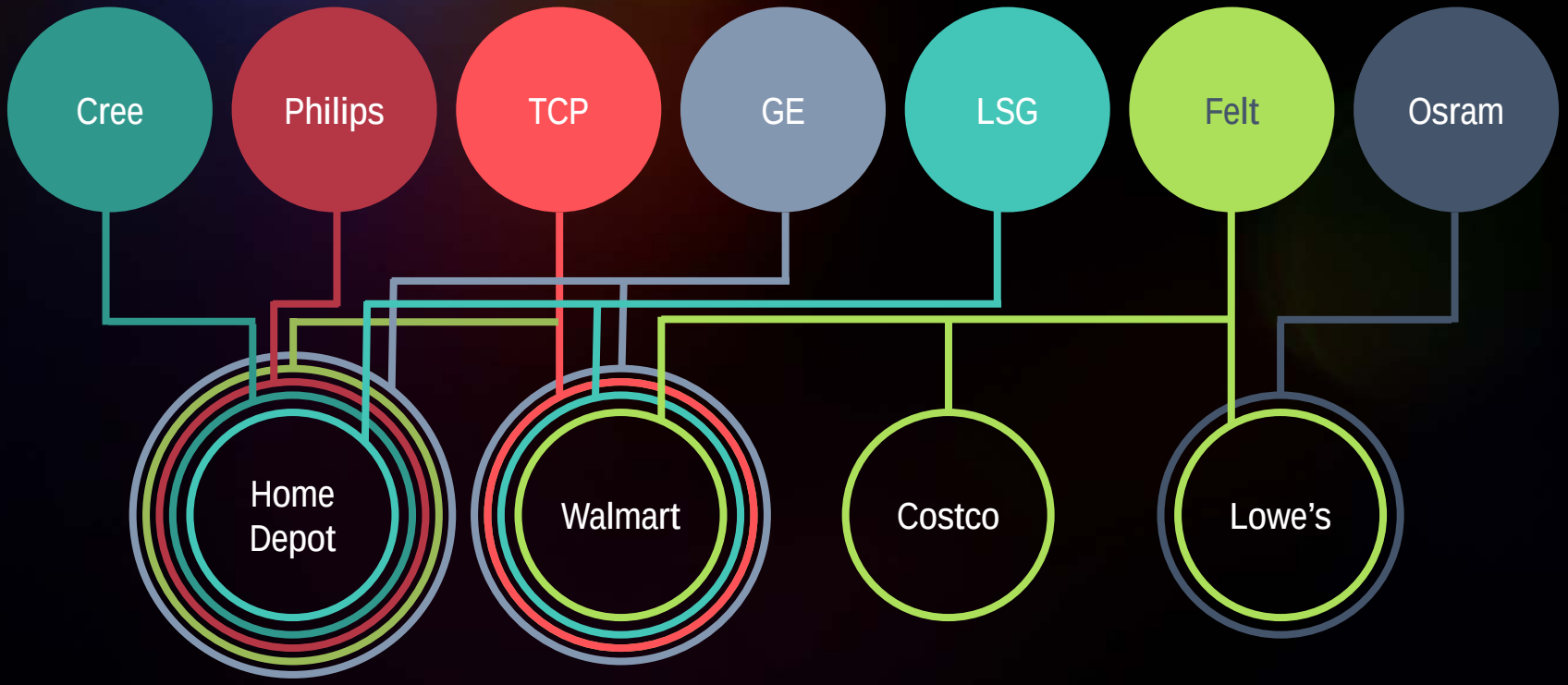
Source: Unit sales by application. Weighted analysis of NEEA shelf-stocking and Nielsen sales data; 2015



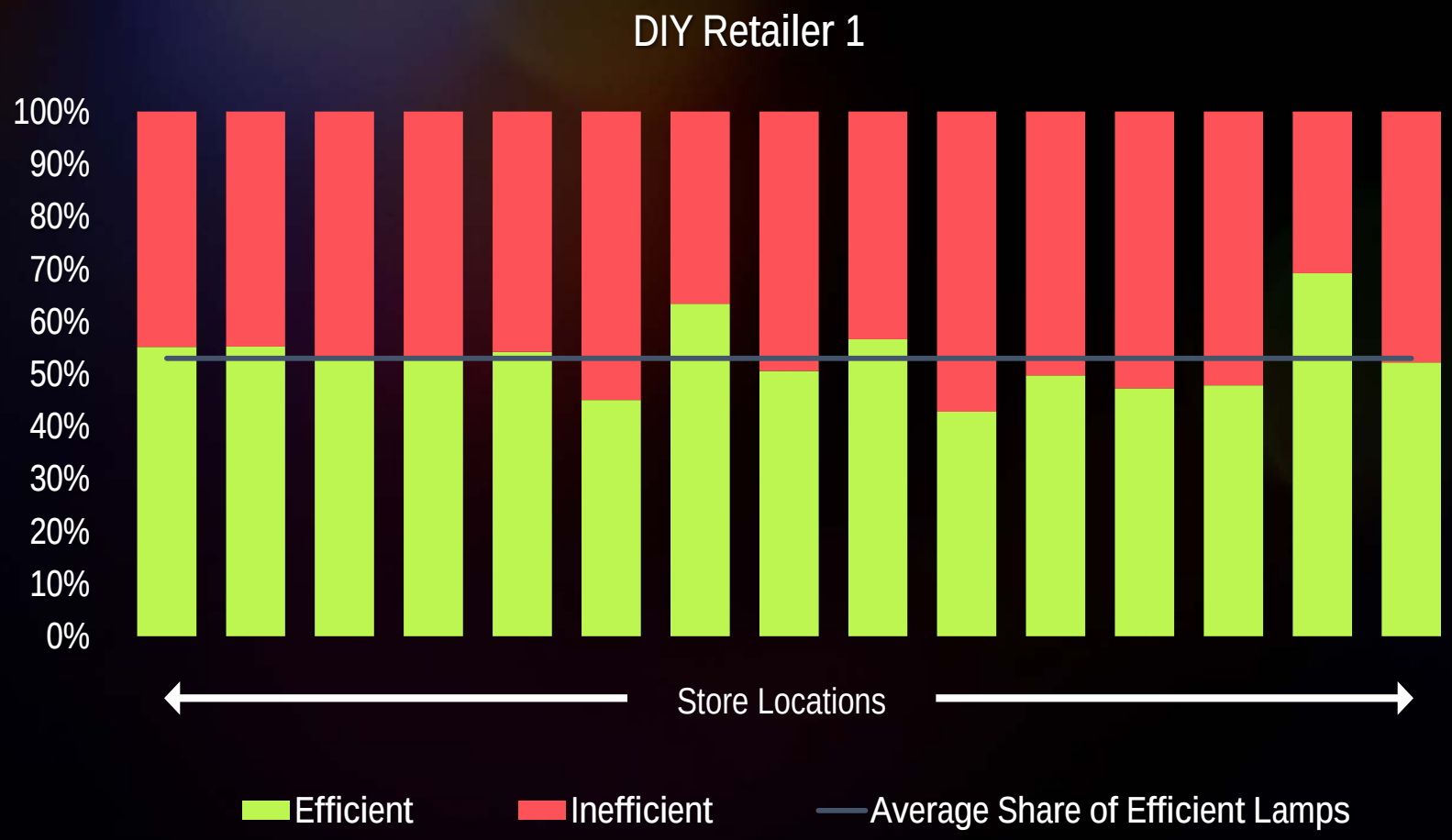
Source: Unit sales by application. Weighted analysis of NEEA shelf-stocking and Nielsen sales data; 2015

BIG-BOX IS BIG LIGHTING.

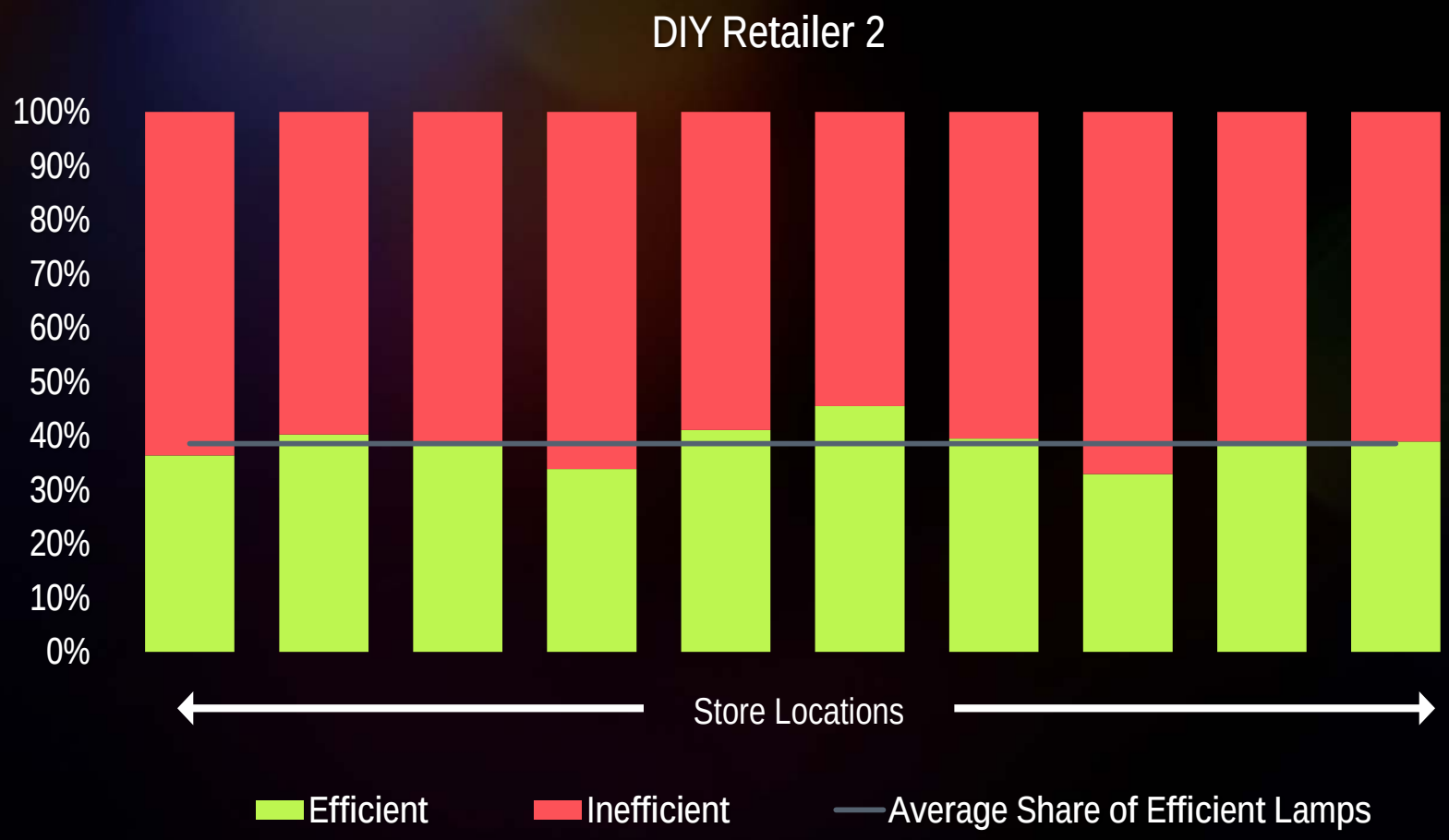
FOUR RETAILERS DOMINATE RESIDENTIAL LIGHTING



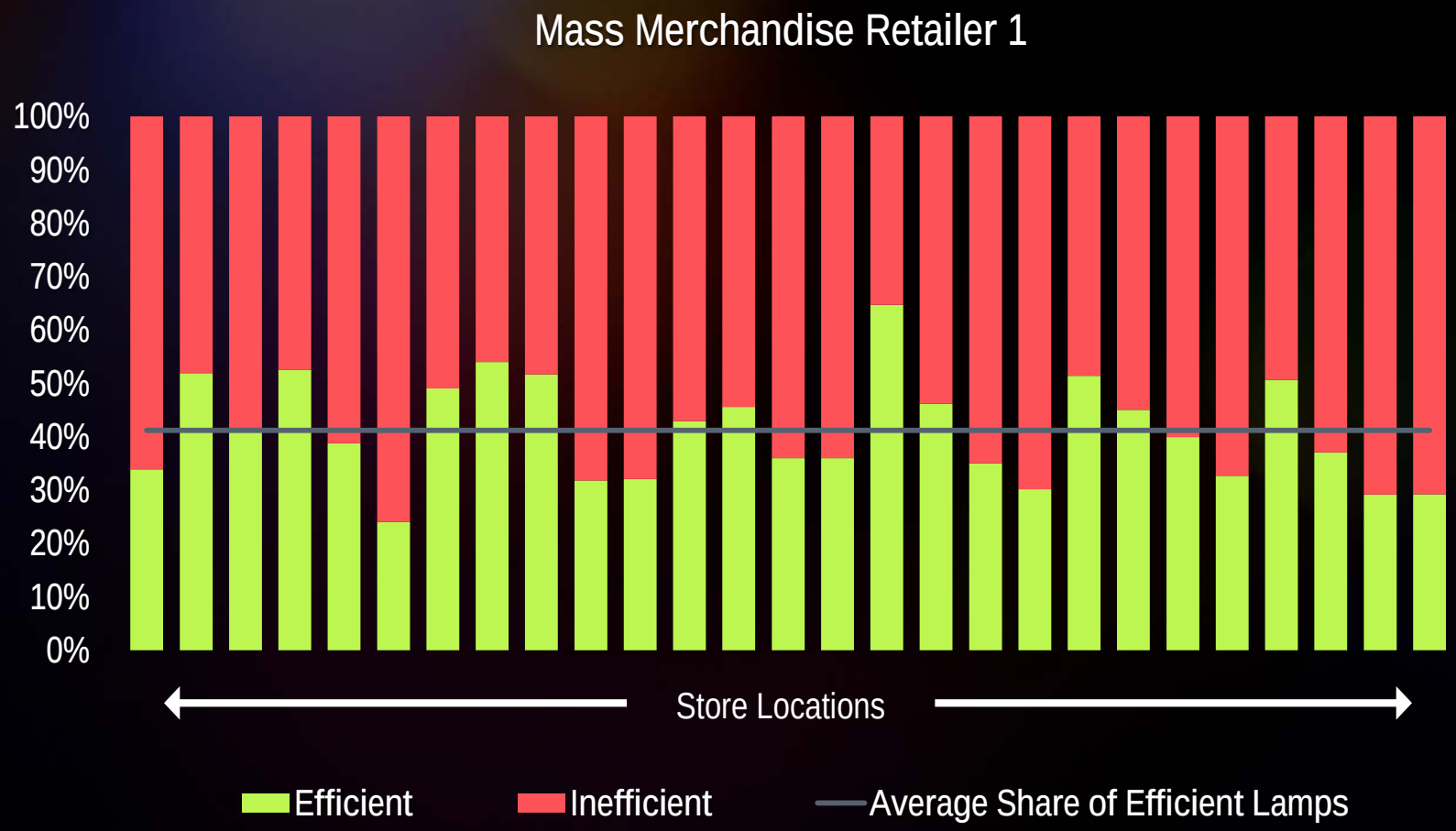
SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION



SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION



SHARE OF EFFICIENT LAMPS STOCKED BY STORE LOCATION



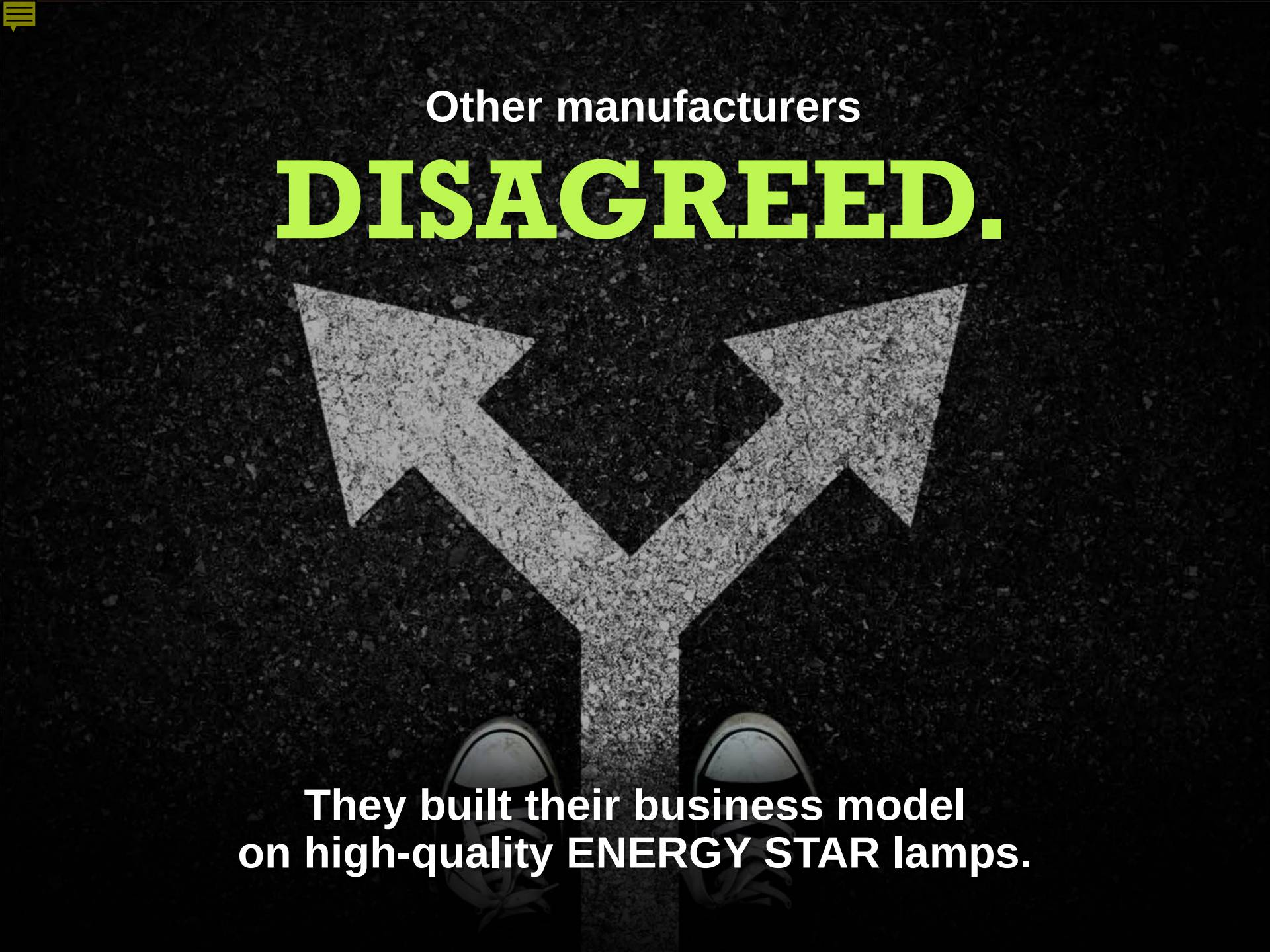
What's going on with

ENERGY STAR 2.0?

Some manufacturers thought the
original ES2.0 specification was
TOO STRINGENT
AND OUT OF STEP
with current consumer
preferences and awareness

Other manufacturers

DISAGREED.

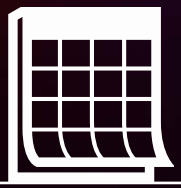


They built their business model
on high-quality ENERGY STAR lamps.

VERDICT: COMPROMISE

MORE LEDs WILL QUALIFY

Less stringent
dimmability testing



~~25,000 hours~~
15,000 hours

THE
SUPPLY
CHAIN
IS CHANGING.

Major Manufacturers		GE, Osram Sylvania, CREE, Philips
Contract Manufacturers		MLS, San'an Opto
Small & Mid-sized Manufacturers		MaxLite, TCP, Lighting Science Group
Traditional Retailers		Home Depot, Lowe's, Walmart, Costco ACE Hardware, Fred Meyer
Online Retailers		1000bulbs.com, LampsPlus.com, LightingDirect.com

THE PLAYERS

THEN.

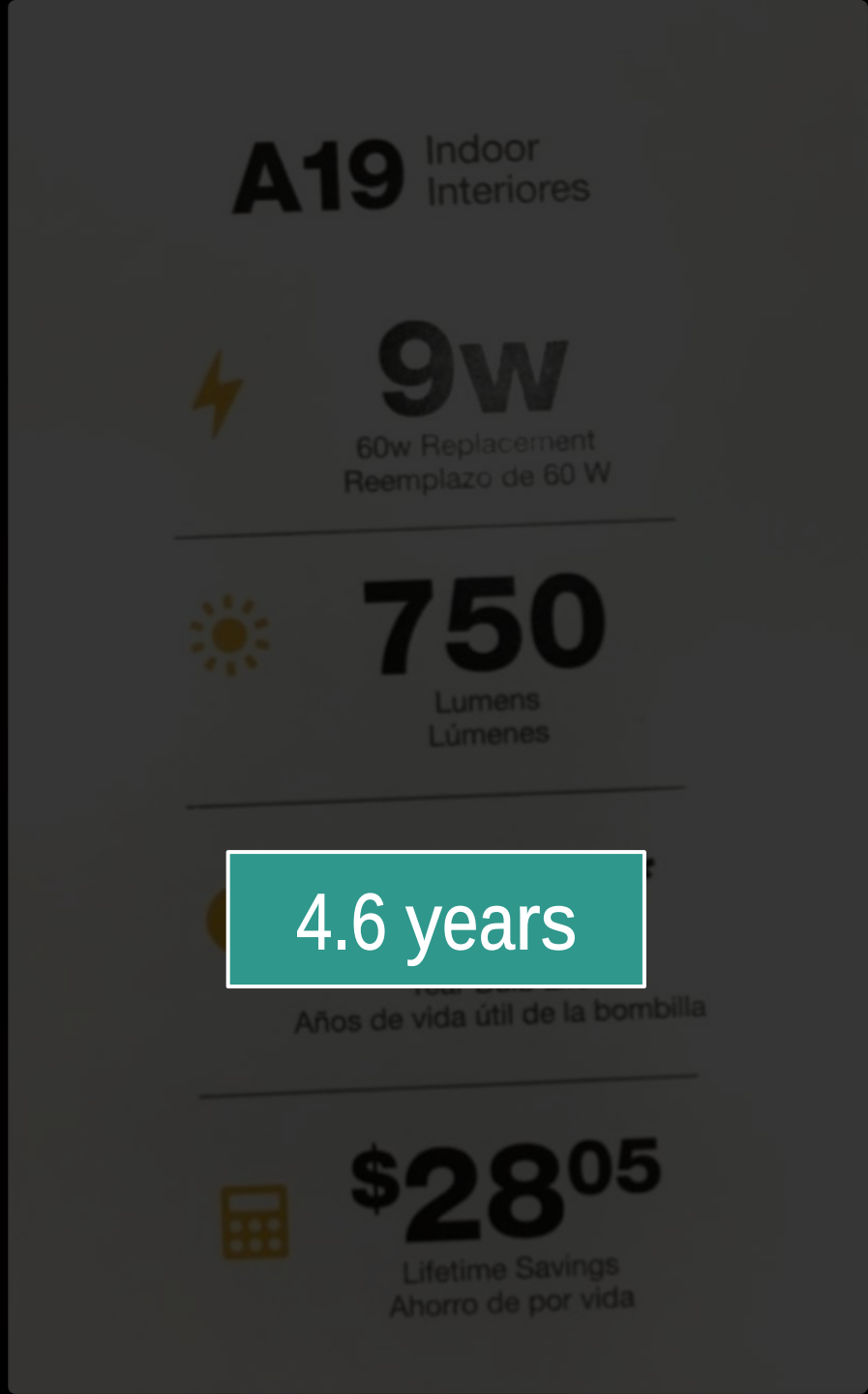
NOW.

LESS OF THESE

22.8 years

10 years

MORE OF THESE



WHAT'S THE IMPACT?

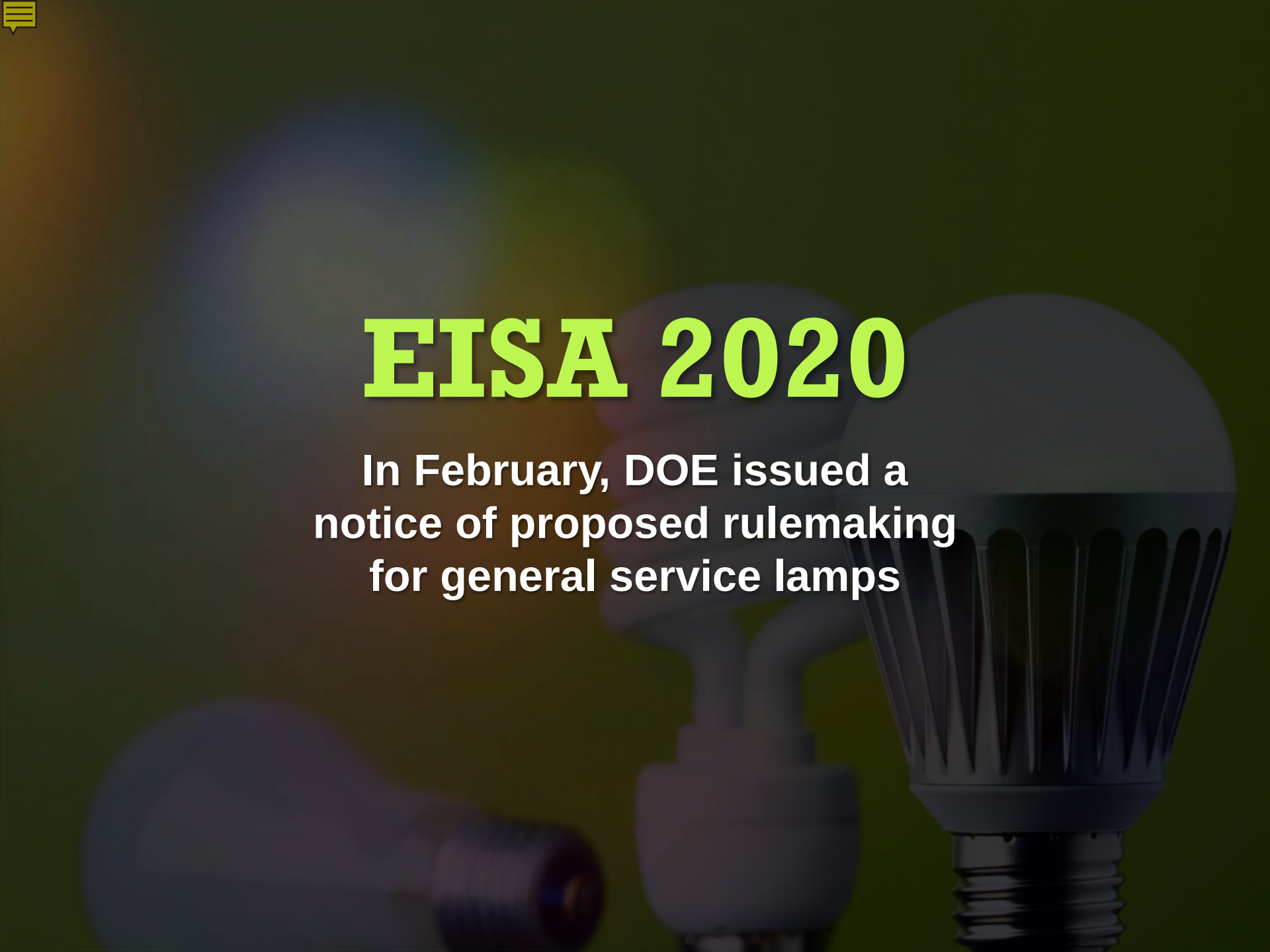
Type of LED	Efficient	Dimmable	Longer Lifetime
ENERGY STAR	YES	YES	YES
NON-ENERGY STAR	YES	NO	NO

RETAILERS ARE PHASING OUT CFLs
With cheaper, more popular LEDs, why sell CFLs?

OK,
WHAT'S NEXT?

EISA 2020

In February, DOE issued a notice of proposed rulemaking for general service lamps

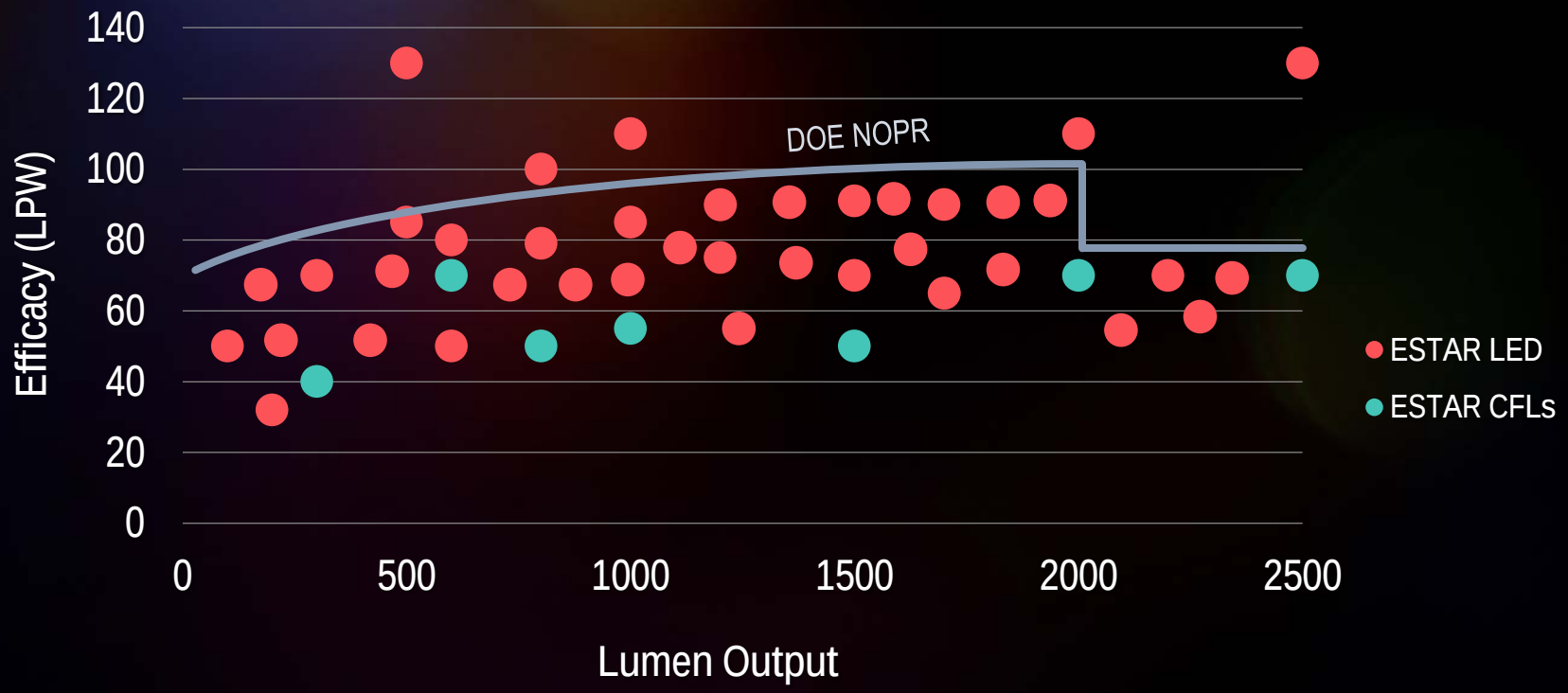


Proposes a minimum efficacy
of 70 lumens/watt, which

ONLY SOME LEDs

can currently meet.

MOST ENERGY STAR LAMPS WON'T QUALIFY



HOWEVER….

Manufacturers still do not consider EISA 2020 to be set in stone

U.S. job loss – four halogen plants

45 LUMEN/WATT BACKSTOP

Even if it does not pass as proposed, EISA requirements will increase

WHAT HAPPENS NEXT?

DOE seeks public comment

DOE issues Final Rule

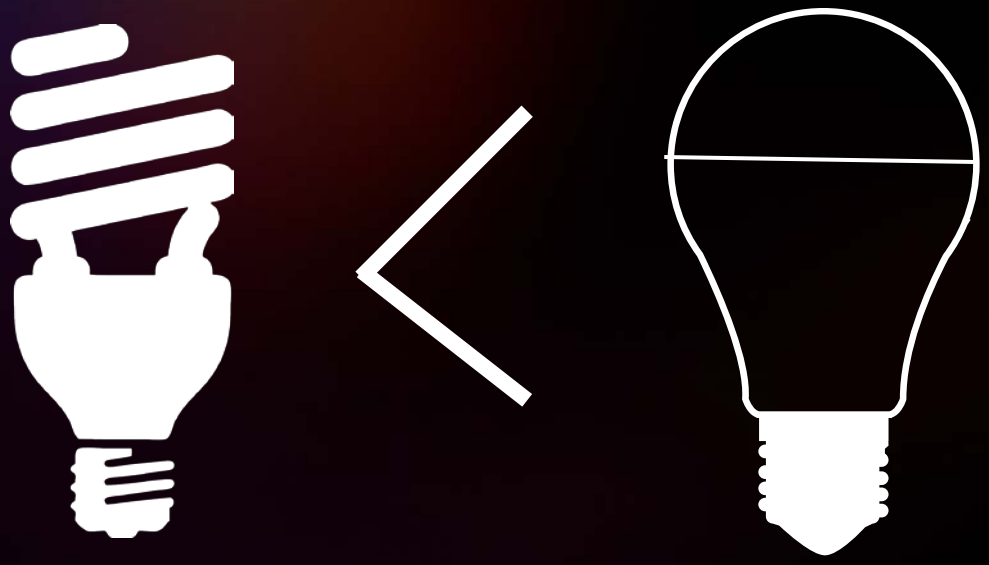
Covered lamps to comply 3 years after Final Rule issued

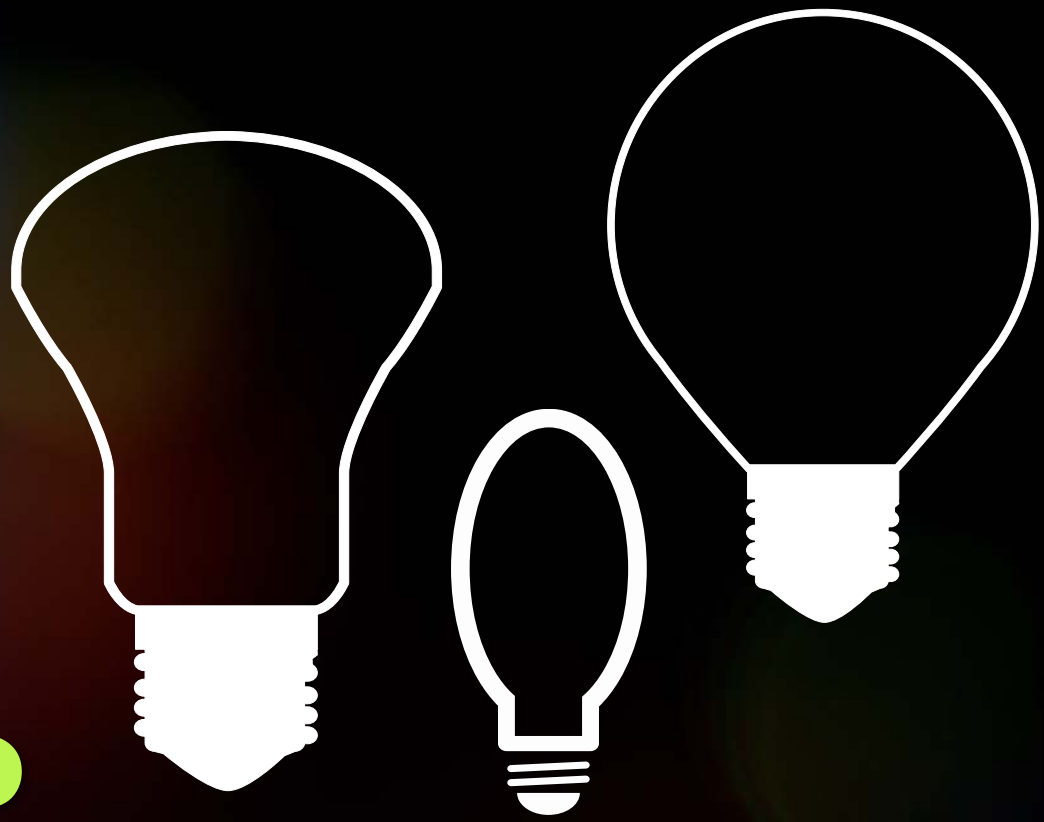
RECAP

Sales data help programs watch a changing market.

RECAP

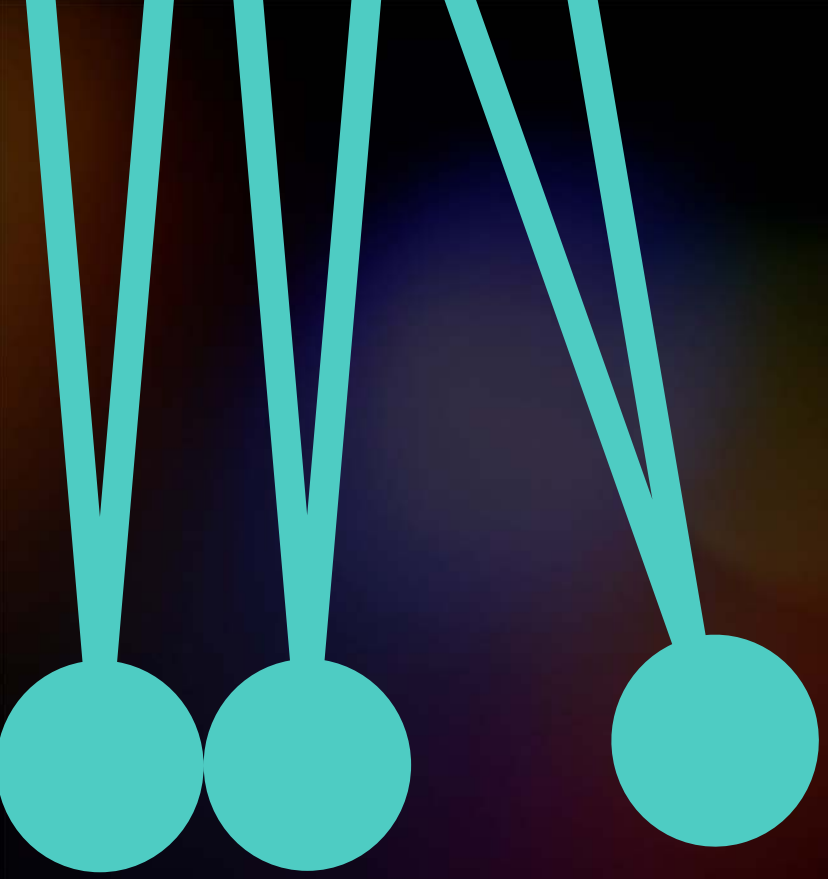
Halogens have assumed much of the incandescent market share;
LEDs have done the same for CFL.





RECAP

Specialty lamps present different opportunities



RECAP

Supply chain shifts have impacted market offerings and program dynamics

RECAP

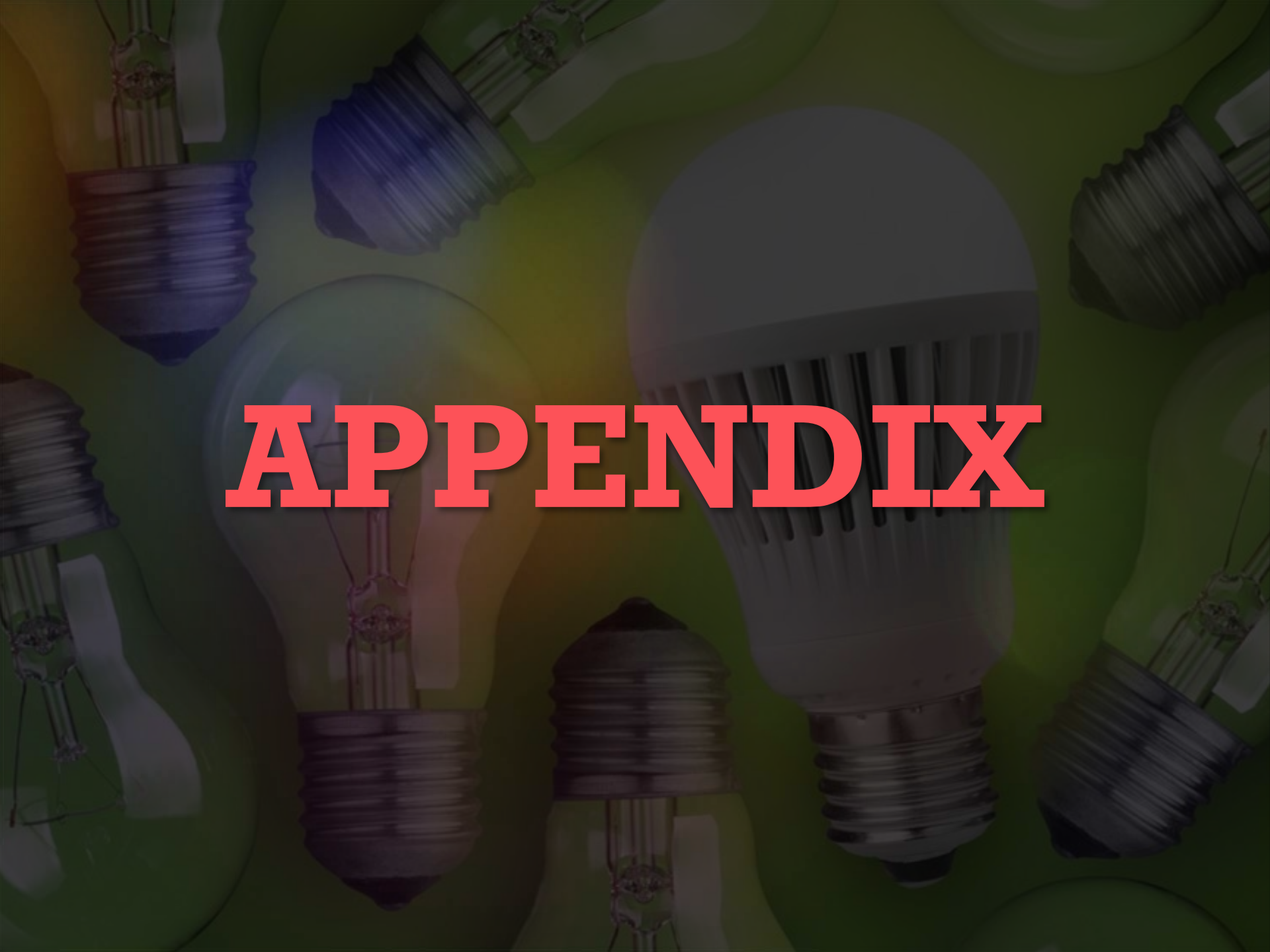
EISA 2020 may transform the market, but uncertainty exists

Carrie Cobb

clcobb@bpa.gov

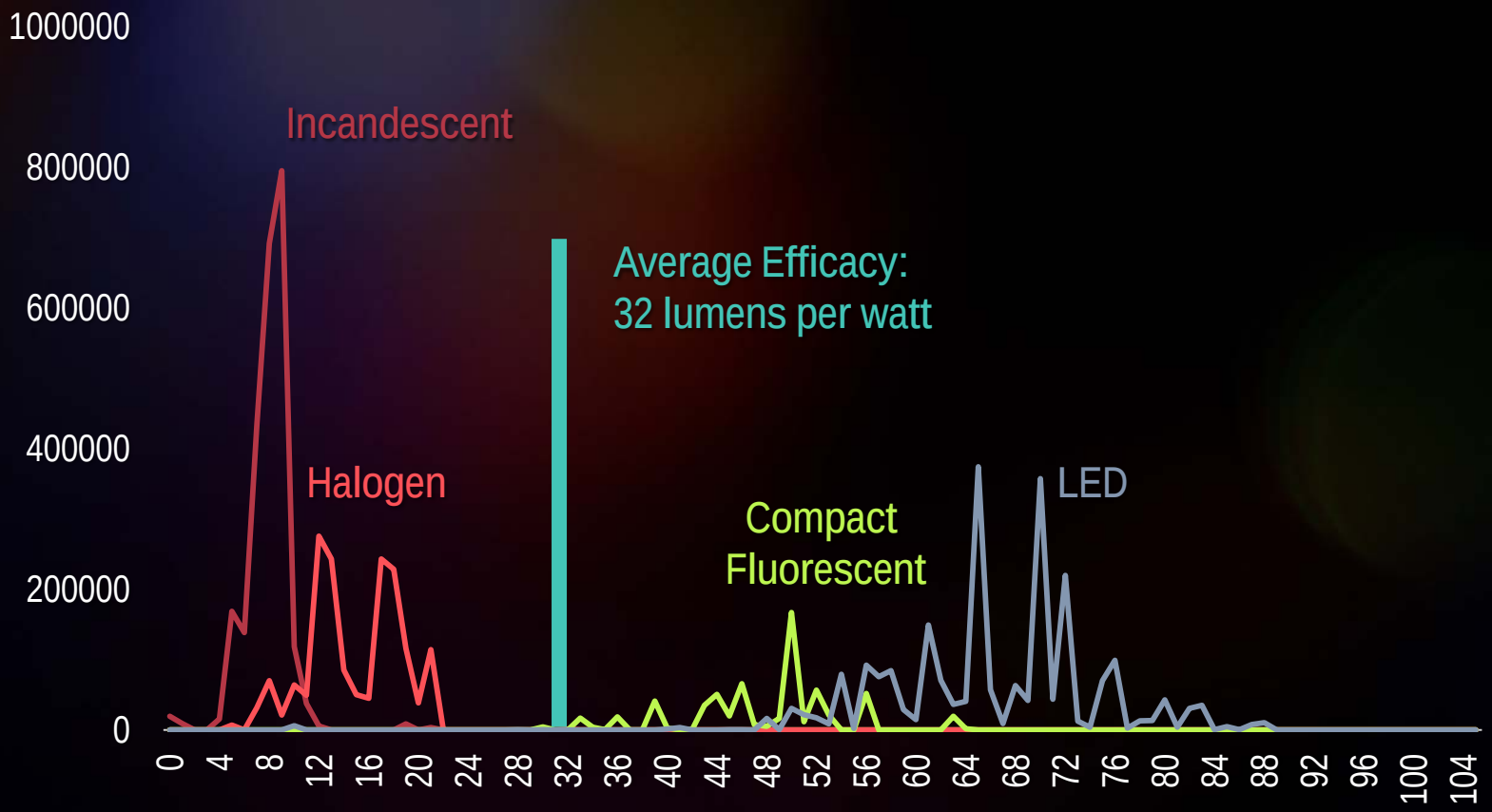
503.230.4985

CONTACT INFO


APPENDIX

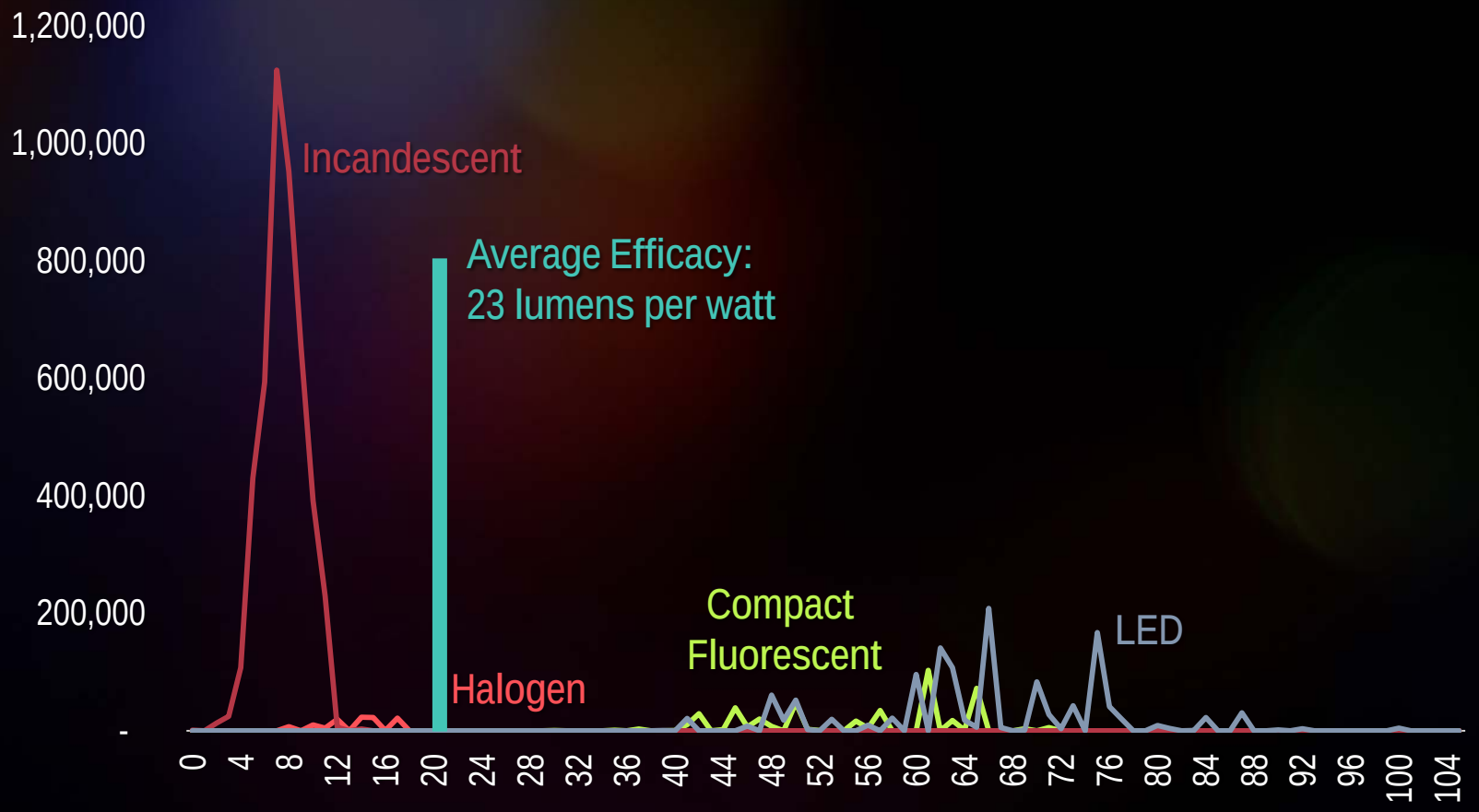
THANK YOU

REFLECTORS (17%)



Source: Unit sales by technology and application. Analysis of NEEA shelf-stocking and Nielsen sales data; 2015

DECORATIVE AND MINI BASE (15%)



Source: Unit sales by technology and application. Analysis of NEEA shelf-stocking and Nielsen sales data; 2015

What is the state of
RESIDENTIAL
LIGHTING?

HOW BIG

is the regional market?

900 MILLION LAMPS

Estimated 2014 National Shipments

4.2 PERCENT

PNW as % of National Population

92 PERCENT

Retail Lamps Purchased by Residential Customers

34.4 MILLION LAMPS

Top down estimate of 2014 PNW residential lamp market

Source: Cadeo analysis of NEMA shipments. Population statistics taken from US Census Bureau

HOW BIG

is the regional market?

15.7 MILLION LAMPS

2014 Nielsen Sales Data for PNW

23.5 PERCENT

% of Total PNW Sales Captured by Nielsen

92 PERCENT

Retail Lamps Purchased by Residential Customers

61.3 MILLION LAMPS

Bottom-up Estimate of 2014 PNW residential lamp market

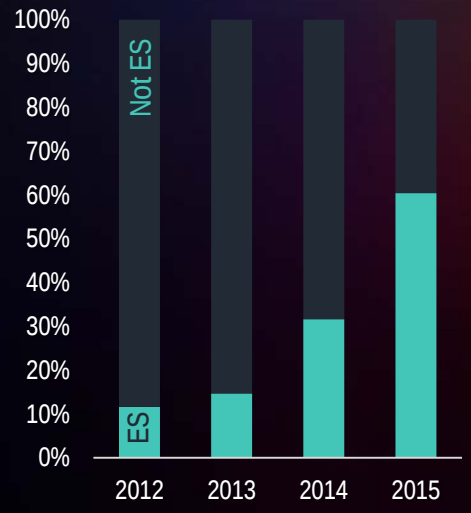
Source: Cadeo analysis of NEMA shipments, Nielsen sales data.

But what's on the
SHELVES?

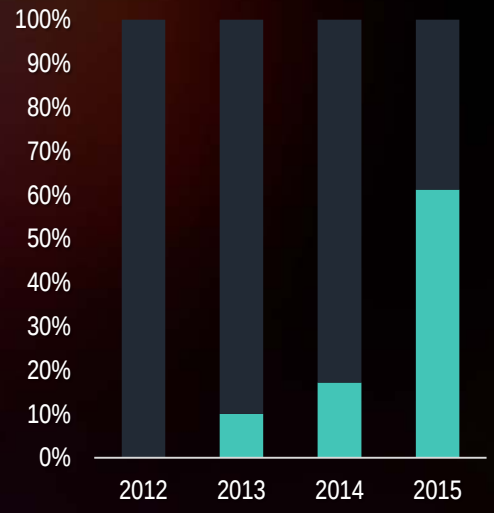
EFFICIENCY MIX

(ENERGY STAR v. NON-ENERGY STAR)

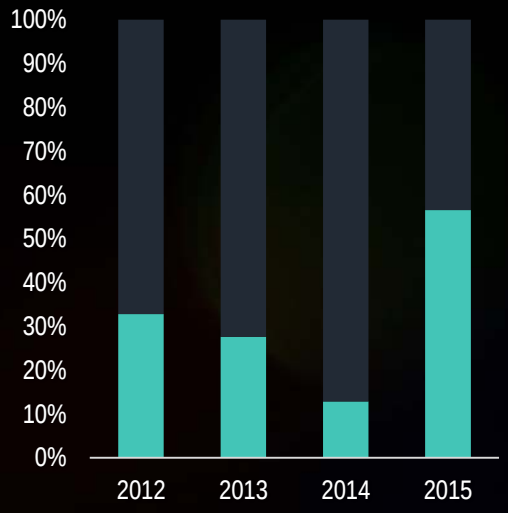
DIY Retailer 2



Mass Merchandise Retailer 1



DIY Retailer 1



% General Purpose ENERGY STAR LEDs