



RESIDENTIAL LIGHTING

# MARKET STUDY

TRENDS, SAVINGS,  
AND OPPORTUNITIES

Bonneville  
POWER ADMINISTRATION

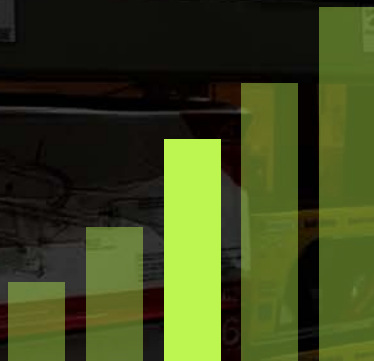


May 2017

With data  
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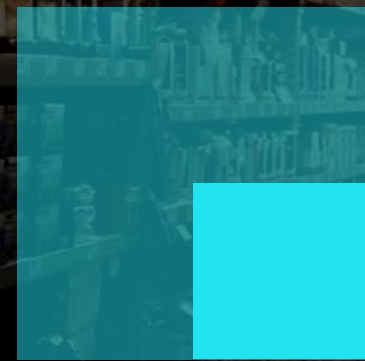
# LIGHTING IS ...



**3<sup>rd</sup> Largest  
Residential  
End-Use**



**6% of Total  
Regional  
Consumption**



**1/4+ of  
Residential  
Program Savings**



# AND CHANGING QUICKLY



**More abundant  
and cheaper LEDs**



**Federal  
regulations**

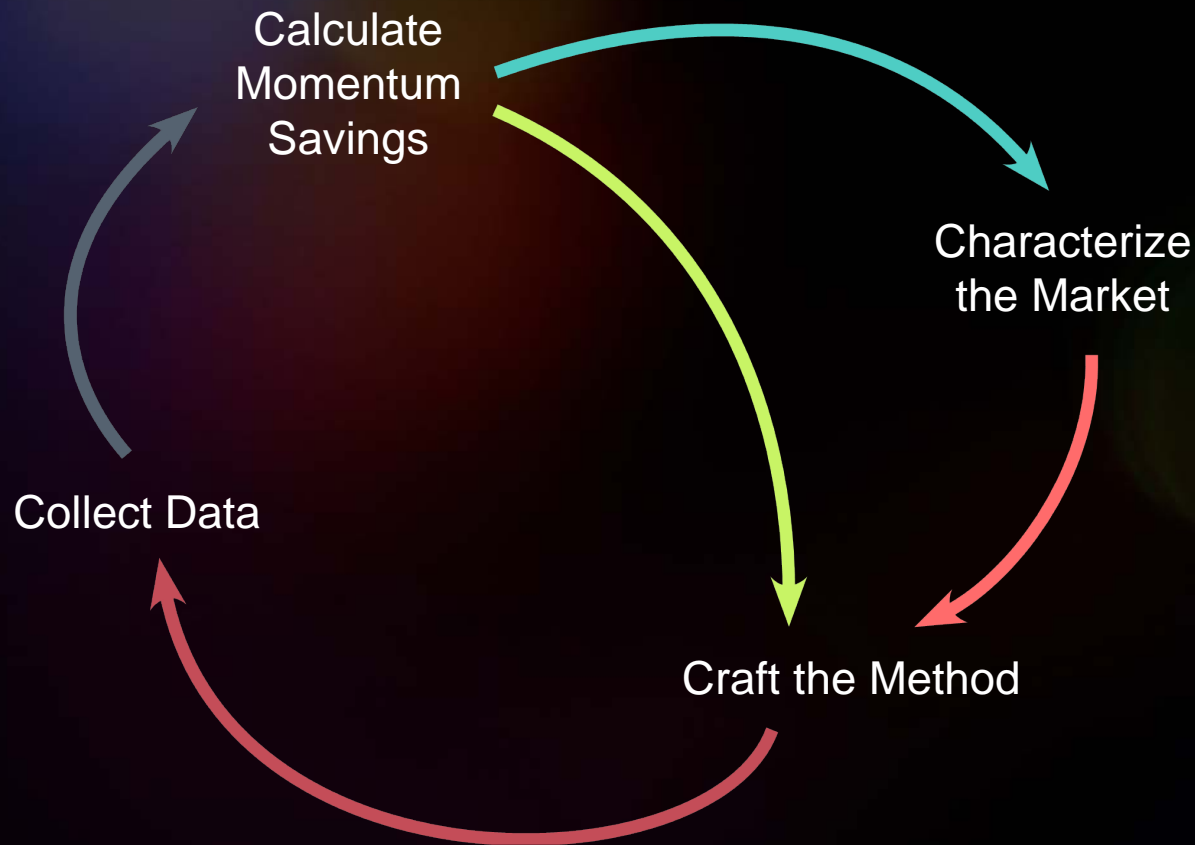


**New market actors  
and channels**



**Divestment  
in CFLs**

# WHY WE TRACK MARKETS



# HOW WE KEEP UP



**Literature Review**



**Interviews**



**Analysis**



**Modeling**

# LITERATURE REVIEW

**RBSA**

**Evaluations  
& Program  
Reports**

**Sixth &  
Seventh Plan**

**Local  
Program  
Data**

**Industry  
Research  
& Press  
Releases**

# INTERVIEWS

## ON THE PHONE

14 Lighting Showrooms  
10 RNC Builders  
3 Online Retailers

## AT ENERGY STAR PARTNER MEETING

10+ Retailers and  
Manufacturers

## AT LIGHTFAIR

20+ Lamp, Fixture, and  
Controls Manufacturers



# ANALYSIS



**NIELSEN  
SALES DATA**



**NEEA  
SHELF SURVEYS**



**ONLINE  
SALES DATA**





We used the

# **CHAIN LOGIC METHOD**

to develop representative  
market averages.

# MODELING



**Every Lamp Sold  
(66 million)**



**Every Socket  
(300 million)**



**Every Home  
(5.6 million)**

# MODELING





# WHAT DID WE LEARN?

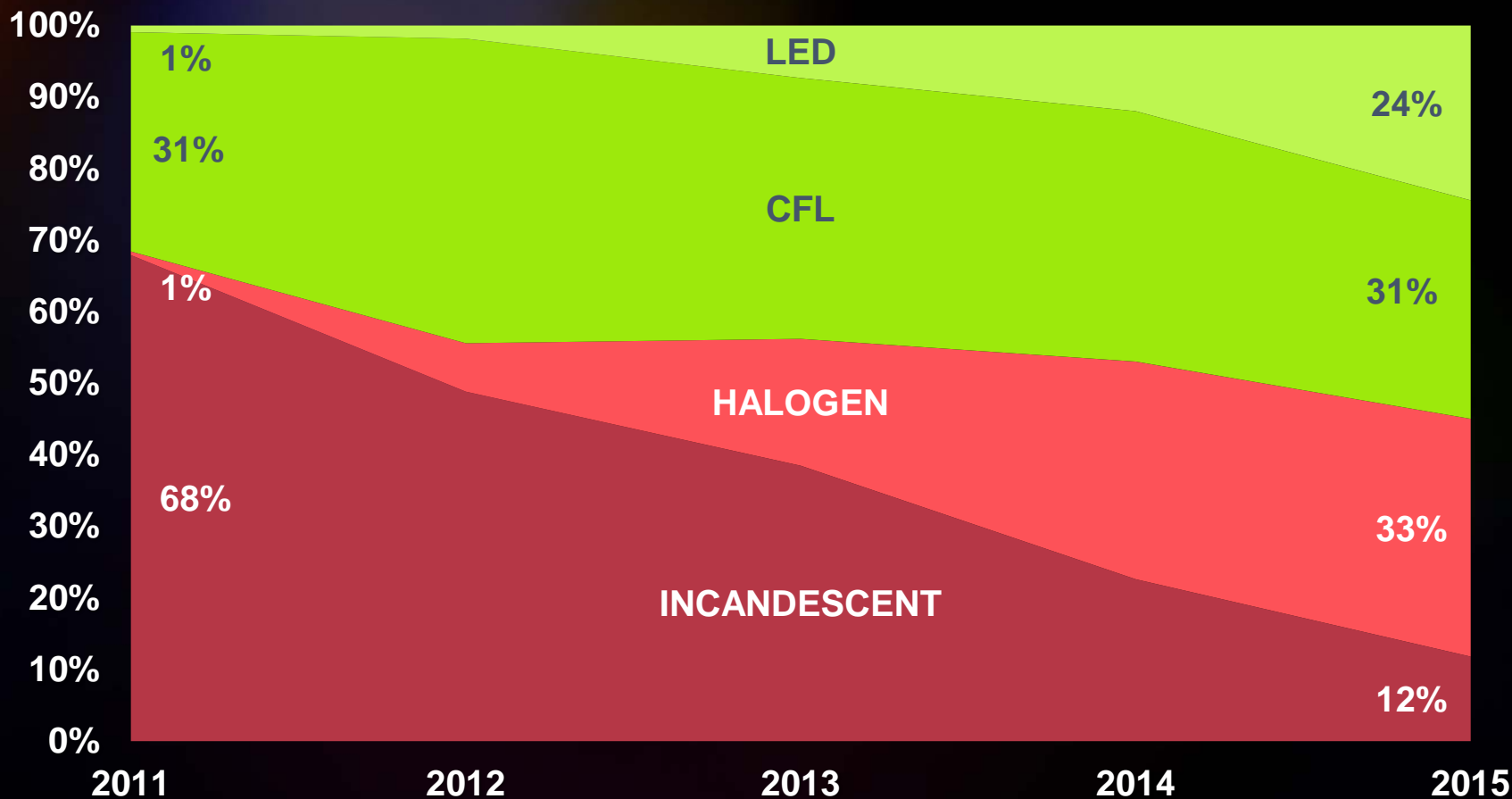
Energy Saving & Incandescent Light Bulbs

Save Live

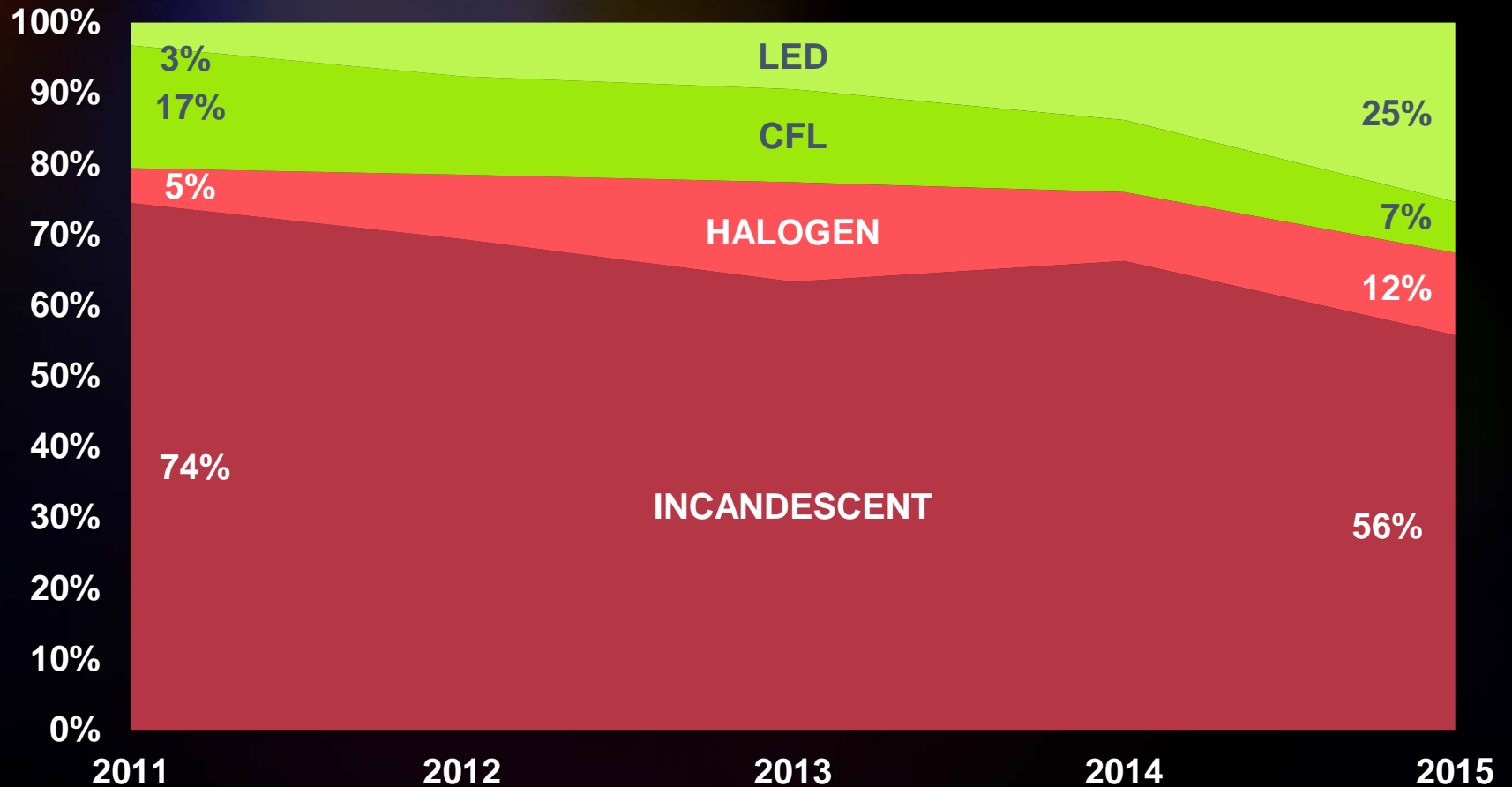




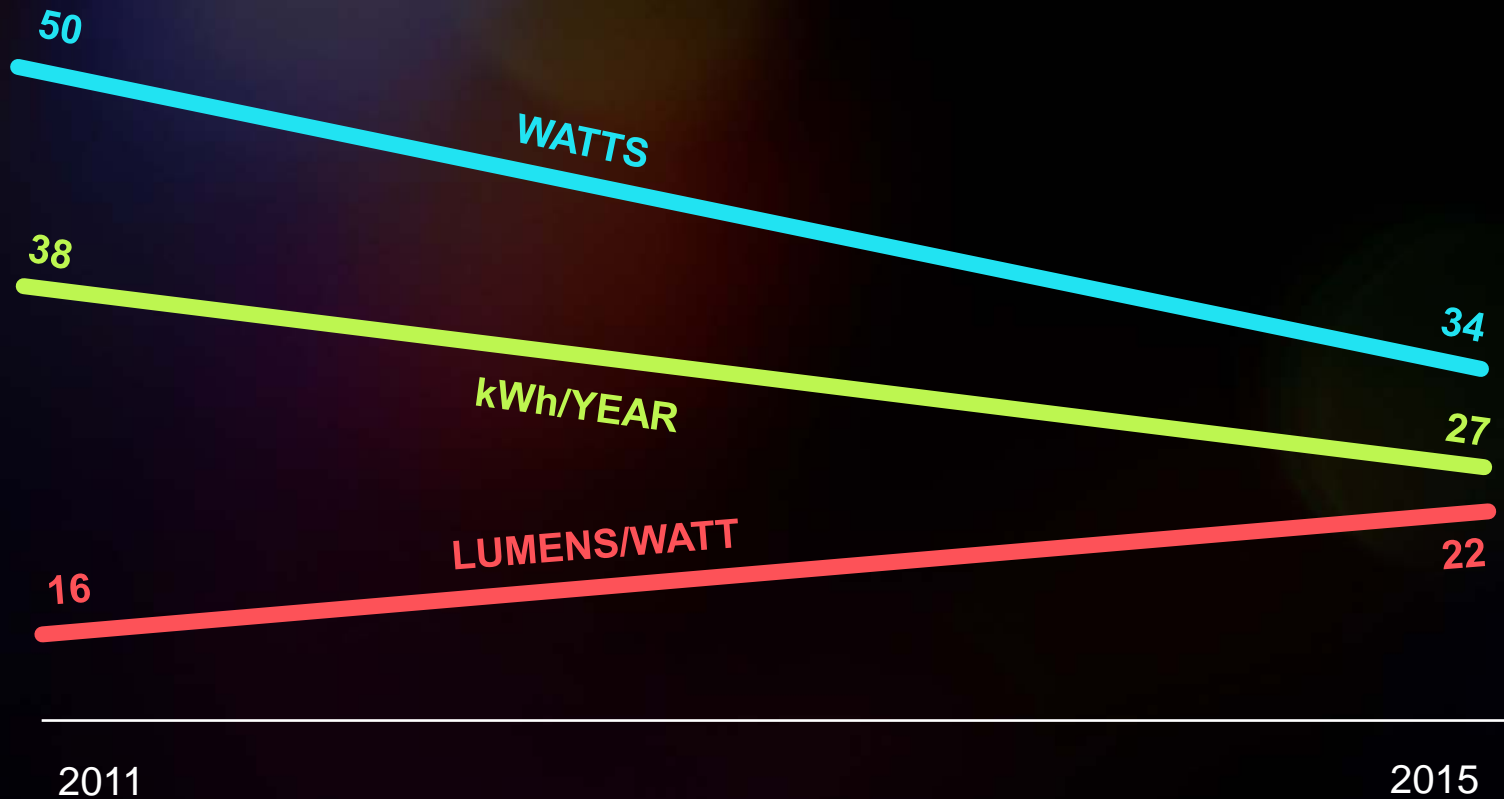
# GENERAL SERVICE LAMPS



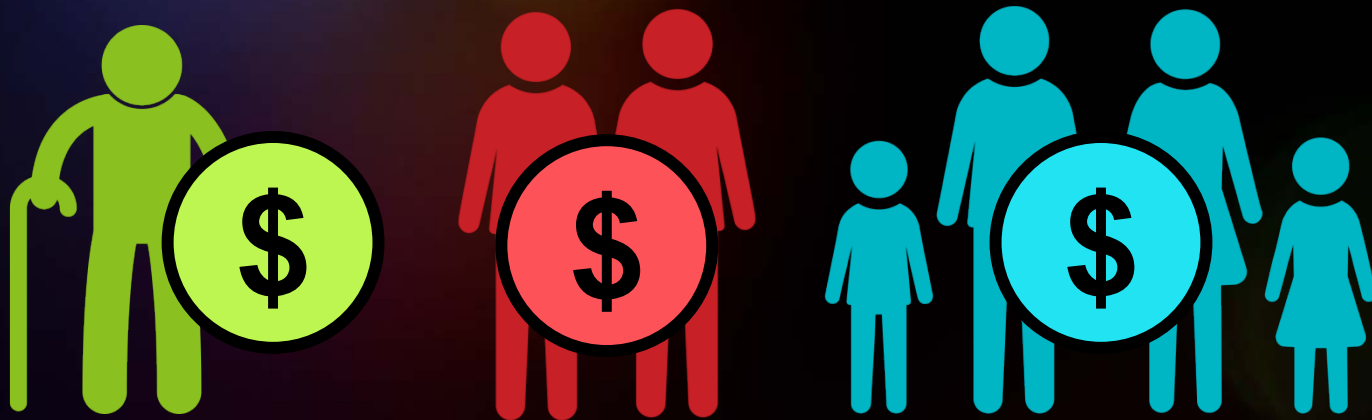
# SPECIALTY LAMPS



# LESS ANNUAL CONSUMPTION



# MEANINGFUL DIFFERENCE

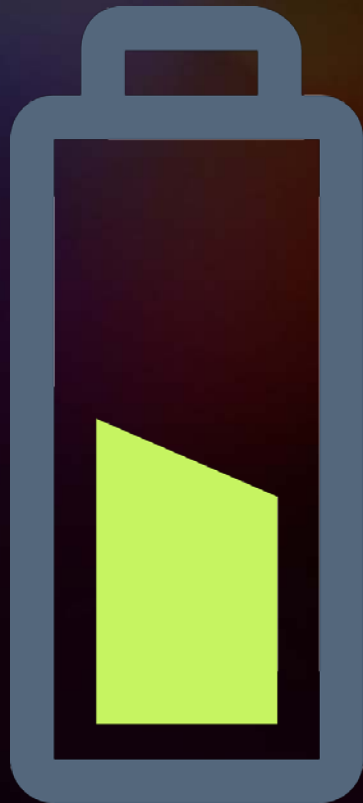


**\$52 Annual Savings per Customer**



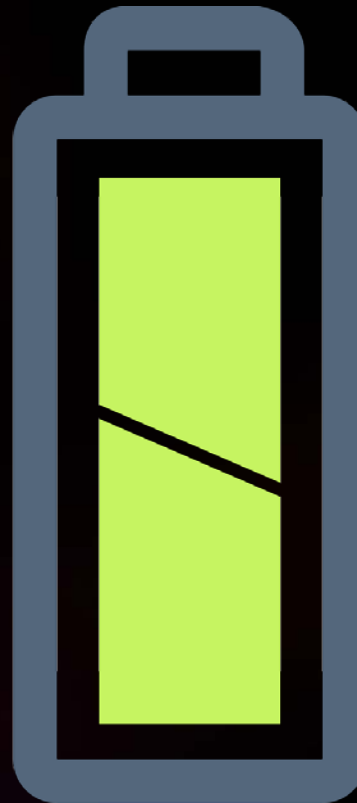
# THE AVERAGE LAMP ALSO LASTS **TWICE** AS LONG

4.4 Years



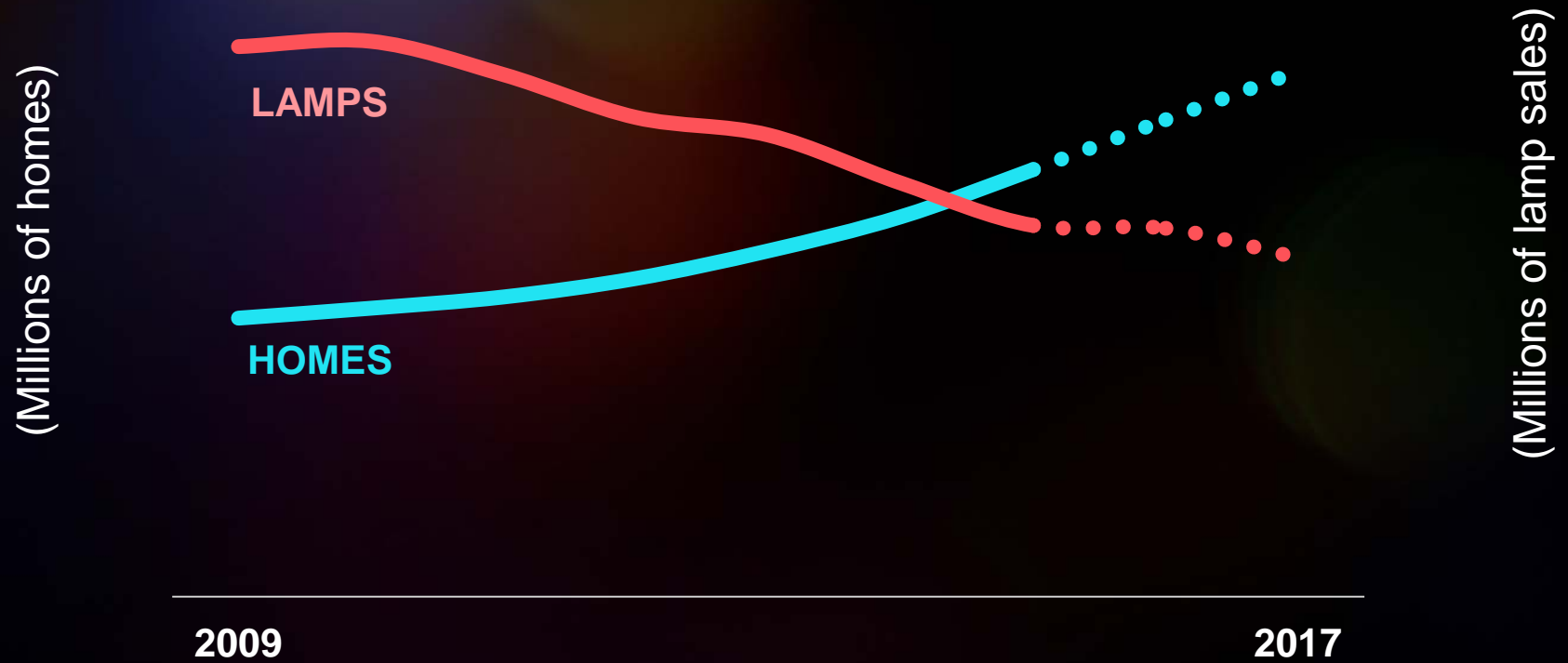
2011

8.3 Years



2015

# LONGER LIFE = FEWER SALES

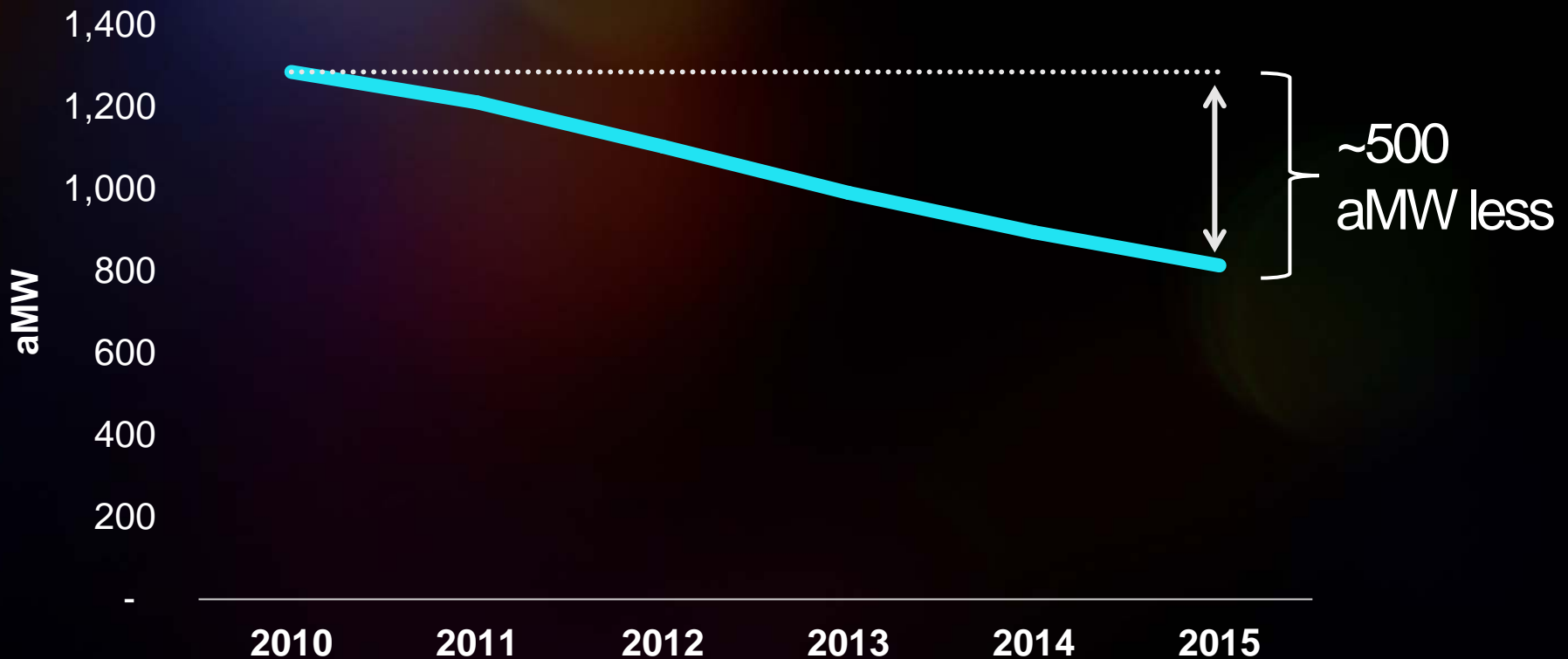




# TOTAL MARKET SAVINGS



# Total residential lighting energy consumption has fallen by over a third.





# THAT'S THE EQUIVALENT OF...



**330,000 HOMES**

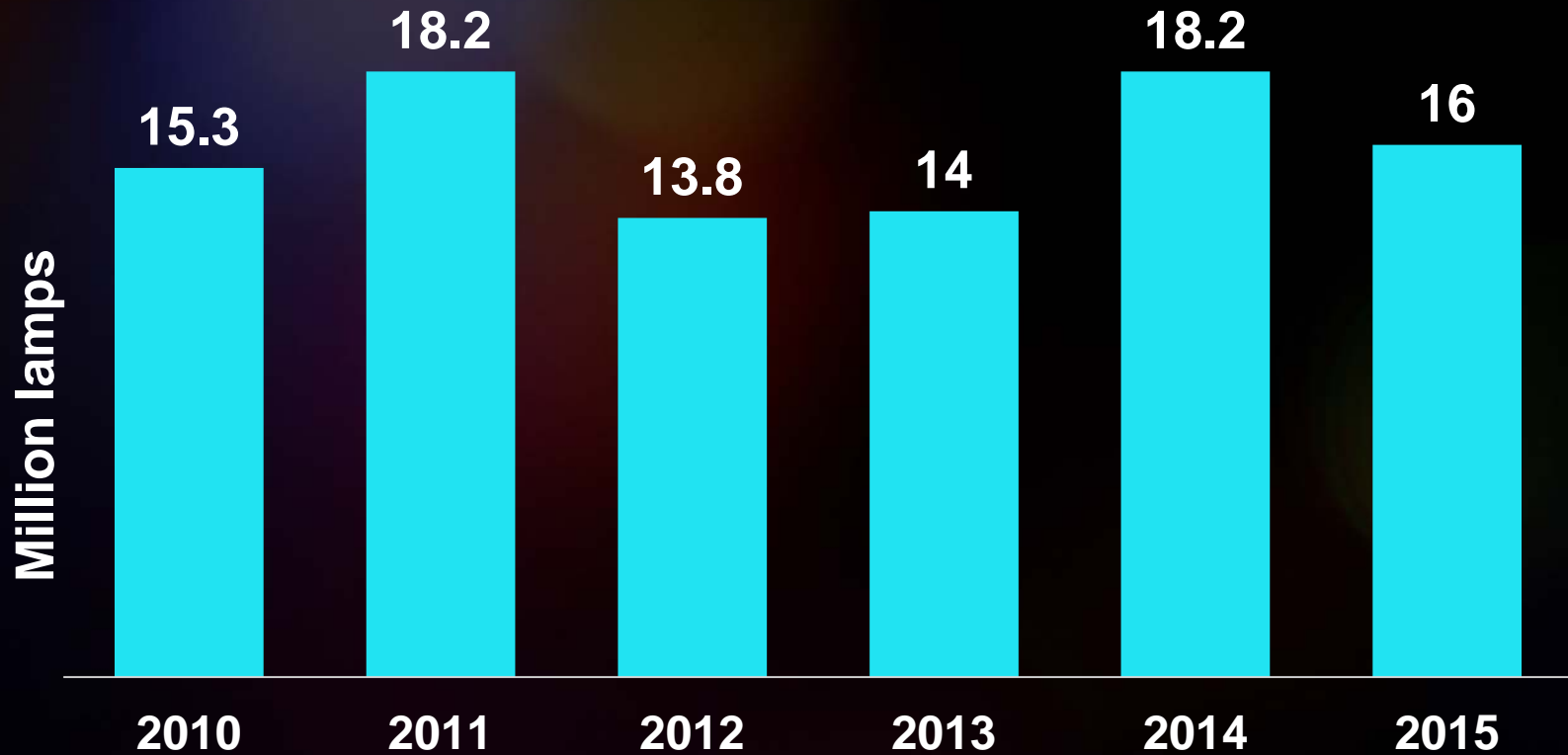


**EVERY DRYER  
IN THE NW**

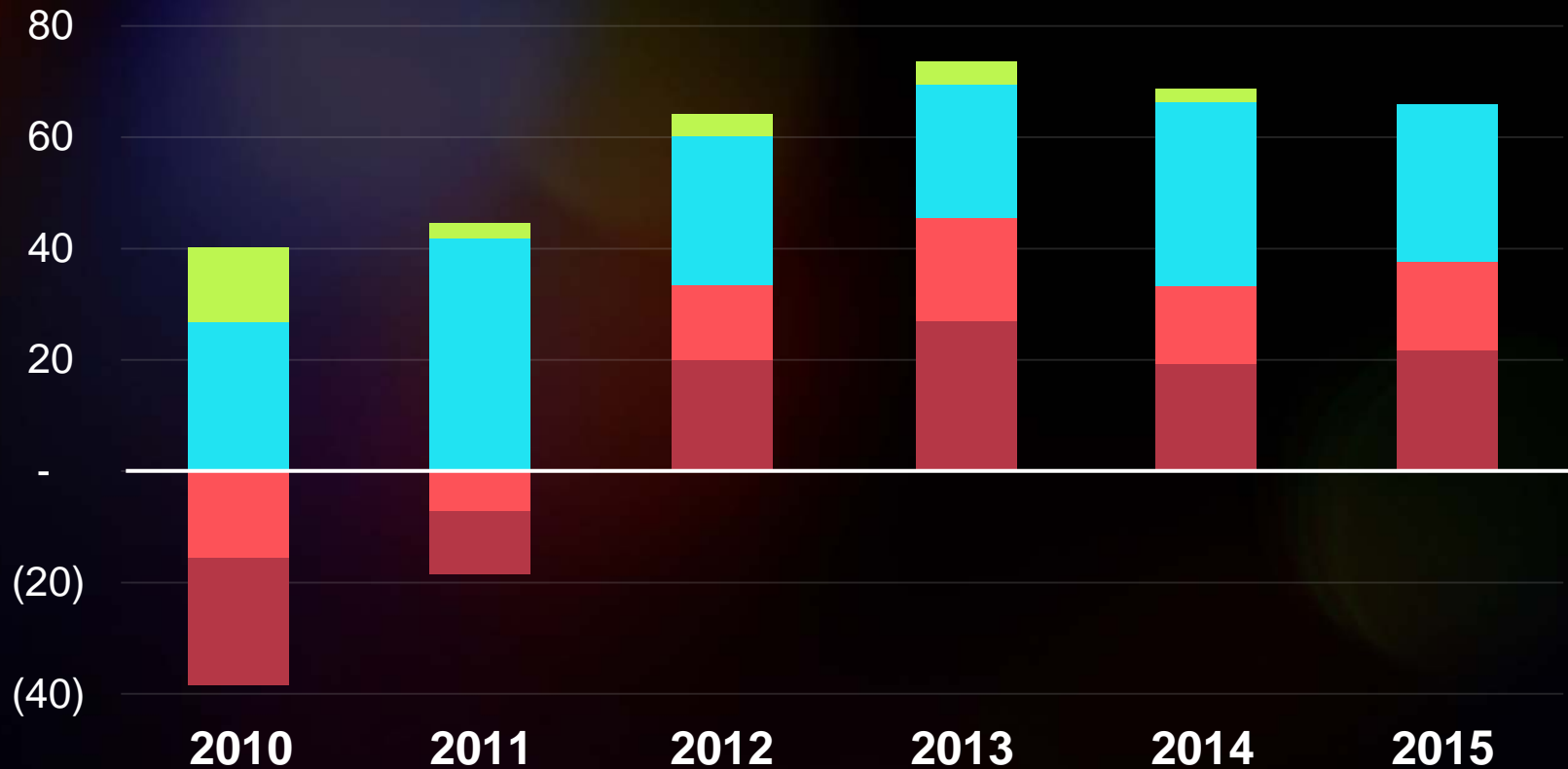


**THE HUNGRY  
HORSE DAM**

# PROGRAM ACTIVITY



# MOMENTUM SAVINGS



Utility Program Savings

NEEA Savings

BPA Momentum Savings

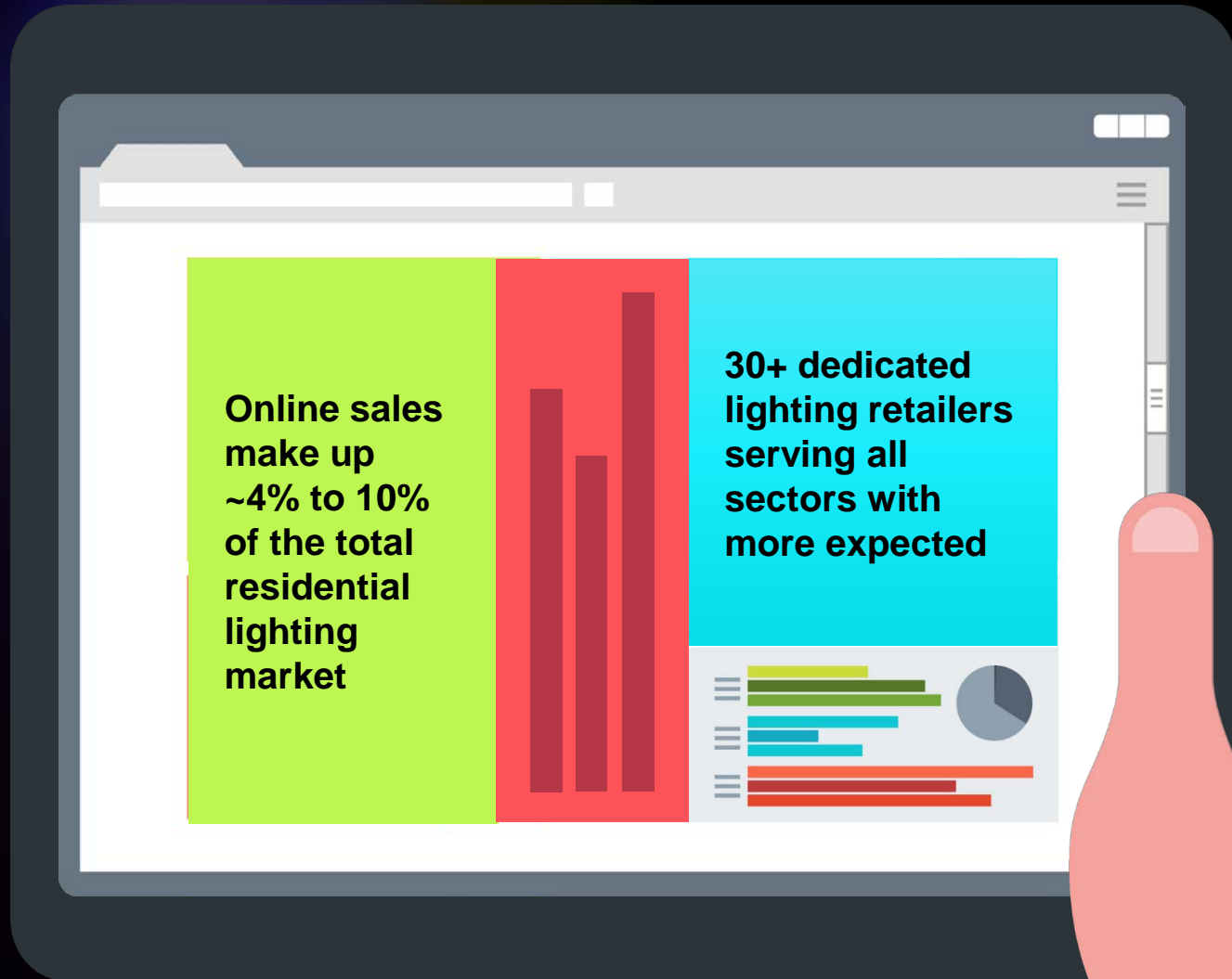
Non-BPA Momentum Savings



# ONLINE RETAILERS



# RAPID GROWTH



# SELL FEWER ENERGY STAR LAMPS



# OPPORTUNITIES TO REACH **RURAL** CUSTOMERS





# LIGHTING SHOWROOMS





**RESIDENTIAL**

**NON-RESIDENTIAL**

**LIGHTING SHOWROOMS  
SERVE BOTH SECTORS**



# FIXTURES AND SPECIALTY LAMPS





# **NEW CONSTRUCTION**



# HOW DO BUILDERS CHOOSE THEIR LIGHTING?



**COST**



**CODE**



**AESTHETICS**



**SUSTAINABILITY  
PRACTICES**



**Electrician**

**Builder**

**WHO  
DETERMINES  
SPECS?**

**Showroom**



**WHAT'S  
NEXT?**

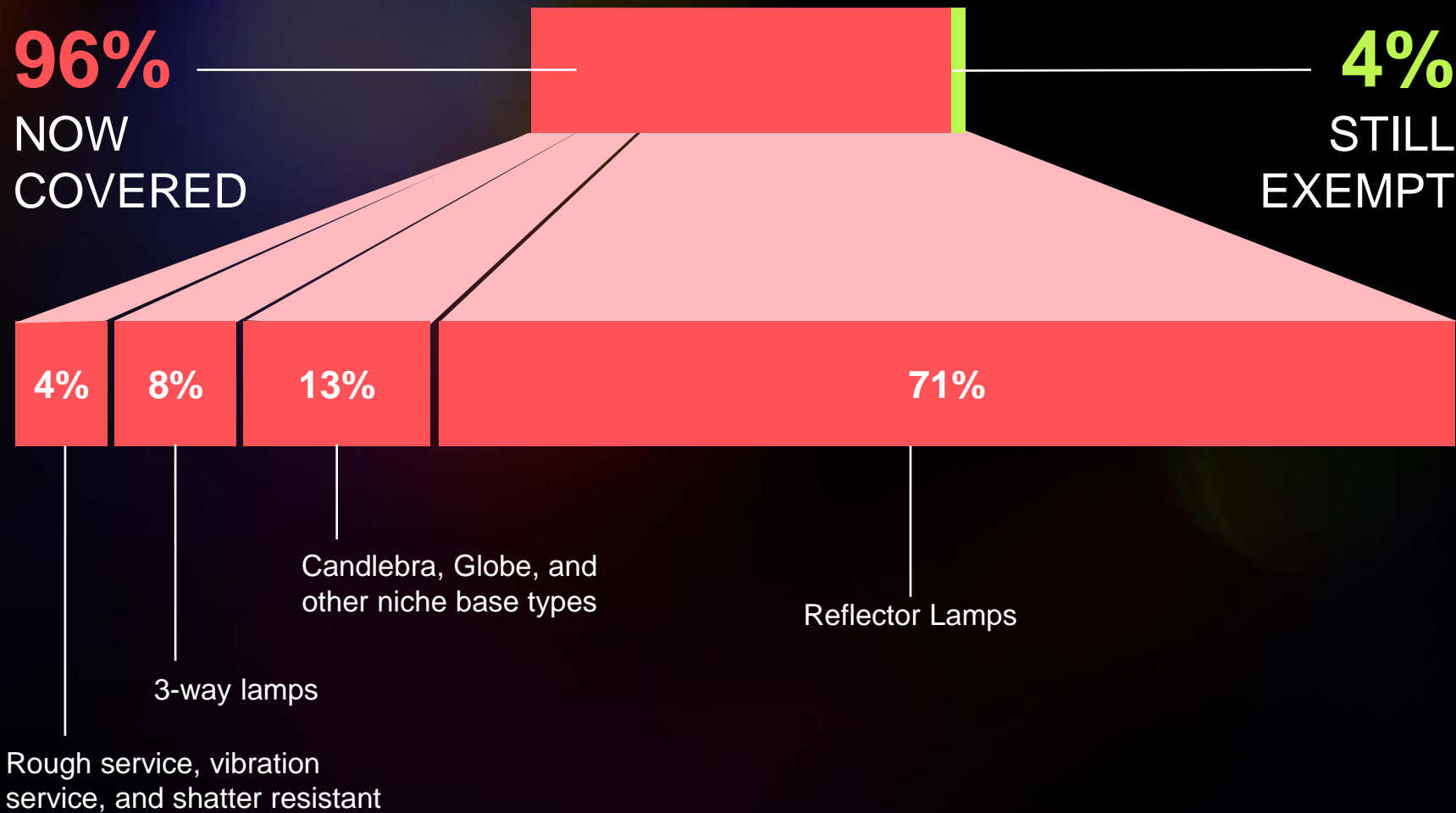


# EISA 2020...MAYBE

45 LUMENS PER WATT



# EXPANDED SCOPE





# KEY TAKEAWAYS



Consumers are buying  
**MORE EFFICIENT LAMPS.**



**2011**

**2015**



Total residential lighting  
**ENERGY  
CONSUMPTION  
HAS FALLEN**

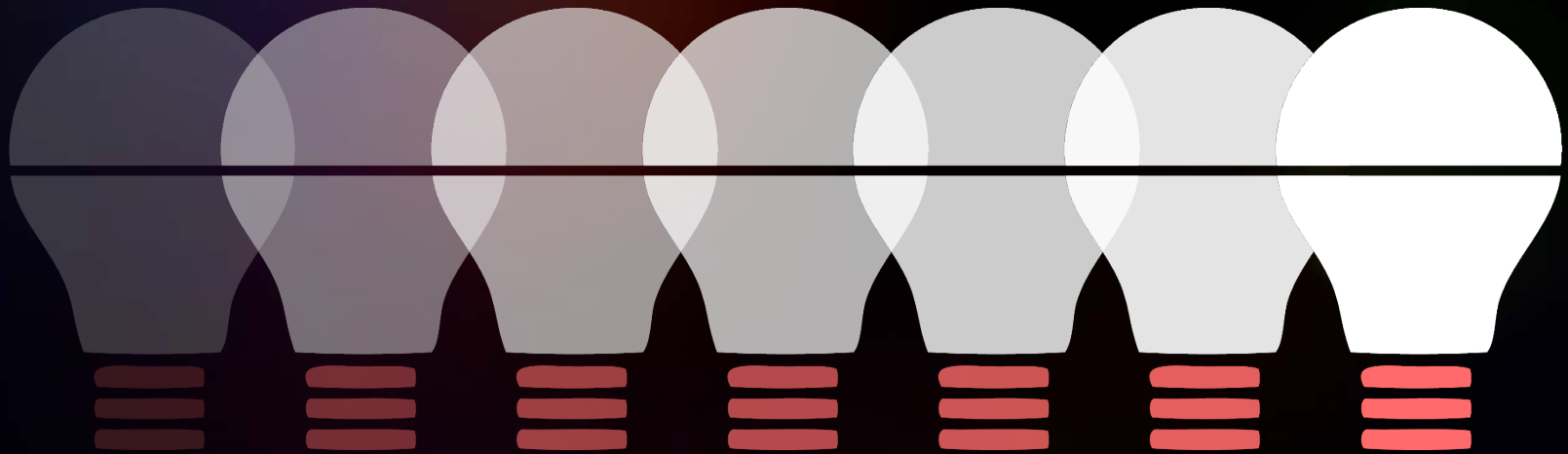
by more than a third.





EISA 2020, if it stands, will drive even

**greater efficiency gains.**





The lighting model we developed is a  
**resource for the region.**



**PROGRAM  
PLANNING**



**MEASURE  
UPDATES**



**POWER  
PLANNING**





# **BETTER DATA = BETTER MODELS.**

**Update model with...**

**NEEA's  
2016-17  
RBSA**

**NEEA's  
ongoing  
retail shelf-  
stocking**

**Market  
share  
reflecting  
emerging  
channels**

# COMMENTS OR QUESTIONS?

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With data  
provided by

