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August 2, 2016

MEMORANDUM

TO: Council members

FROM: Charlie Grist, Manager, Conservation Resources

SUBJECT: Briefing on Energy Efficiency Momentum Savings

BACKGROUND:

Presenter: Carrie Cobb, Energy Efficiency Planning, Bonneville Power Administration

Summary: The Seventh Power Plan (and prior plans) include energy efficiency targets, but are agnostic as to how the savings are achieved. Most of the regional focus is on savings achieved through and funded by utility programs and NEEA initiatives. However, there can be significant energy efficiency that is achieved in addition to the utility-funded programs, but still included in the plan targets. For example, any codes and standards not accounted for in the Plan's load forecast help achieve regional energy efficiency goals. The associated savings not counted by the programs are collectively called "momentum" savings. This presentation will provide the definition of and context for of momentum savings.

Ms. Cobb will provide information that will lead to a solid understanding of momentum savings and how they are estimated.

Relevance: Early forecasts from BPA indicate that momentum savings are anticipated to comprise a significant portion of the Seventh Plan achievements. It is important to understand how these savings are calculated and to verify these savings are a real part of the regions' energy efficiency resource.

Workplan: A.1.1 Conservation

Background: The most recent Regional Conservation Report was presented to the Council in [November 2015](#). This report included savings all sources including momentum savings for the 2010-2014 period. Also, at the [July 2016](#) Council meeting, BPA showed significant expected achievements from momentum savings for the 2016-2021 period, especially in the later years of this action plan period.

More Info: Attached is a one-page handout prepared by BPA that provides a high-level overview of momentum savings.

BPA has a web site that includes presentations and information regarding momentum savings. The first item on the web page is a five-minute summary video that provides a good definition.

<https://www.bpa.gov/EE/Utility/research-archive/Pages/Momentum%20Savings.aspx>



momentum savings

What are Momentum Savings?

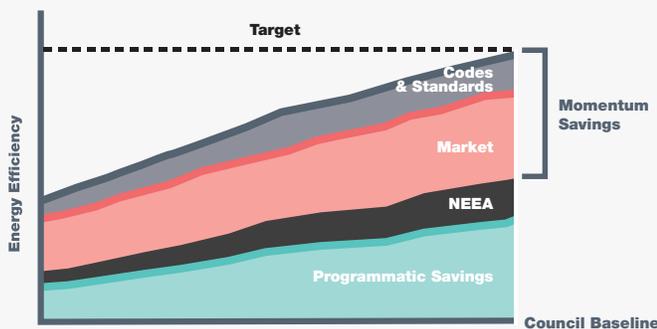
Momentum Savings are all energy savings above the Council plan baseline but not purchased by utilities' energy efficiency programs or NEEA investment.

Utility incentives help direct consumers towards more energy efficient products and services. Over time, those incentives have built momentum in market demand as well as created a more robust supply infrastructure, making energy efficient products and services easier to find and purchase.

Where do Momentum Savings come from?

Momentum Savings can be found in all the same places as their programmatic counterparts. Every day, at every level of the supply chain, energy savings are created when people choose more energy efficient options. Some of these have been incentivized by utility programs. Others may not be directly attributed to energy efficiency programs, but are often the long term result of successful efficiency programs and the efficiency infrastructure these programs have built.

We categorize Momentum Savings into two known forces. New codes and standards that go into effect after the Council baseline is set and shifts in market demand.



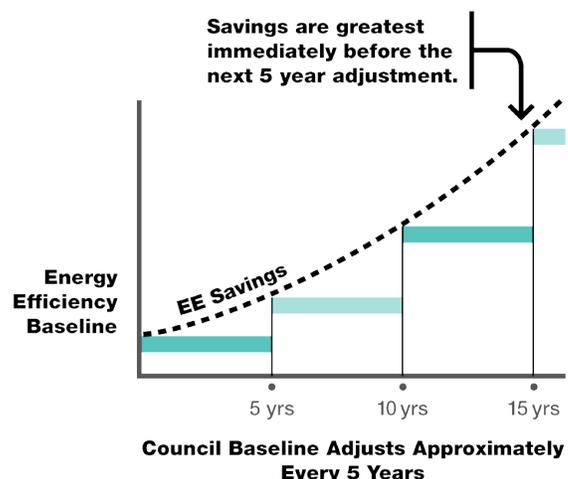
Visit our website
www.bpa.gov/goto/MomentumSavings
to learn more



The same light for less power

The Northwest Power and Conservation Council Baseline

The Council baseline is adjusted approximately every five years to provide a snapshot of the current level of energy efficiency in the market. As time goes on, energy savings grow as new products or services become available and the market shifts towards more energy efficient options. The baseline is then adjusted to reflect the growth in energy savings and the cycle begins anew as programs shift their focus to take on greater efficiency challenges over the next five years.



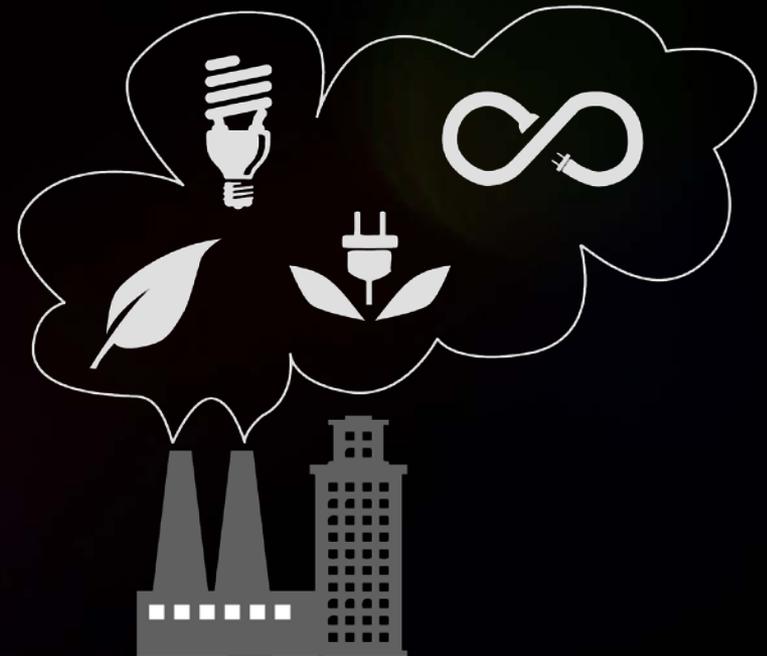
MOMENTUM SAVINGS

A STORY OF FAST MOVING MARKETS

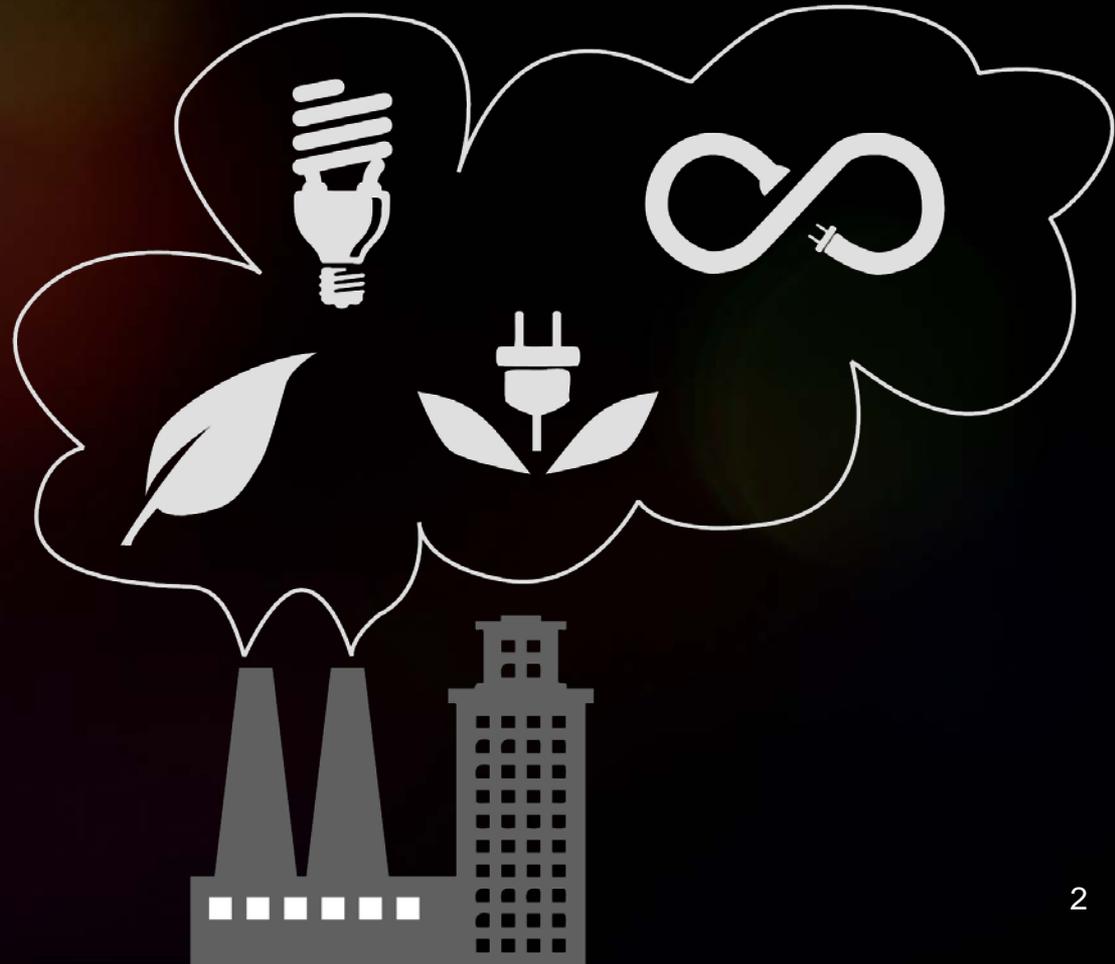
Bonneville
POWER ADMINISTRATION



Carrie Cobb
Market Research Lead

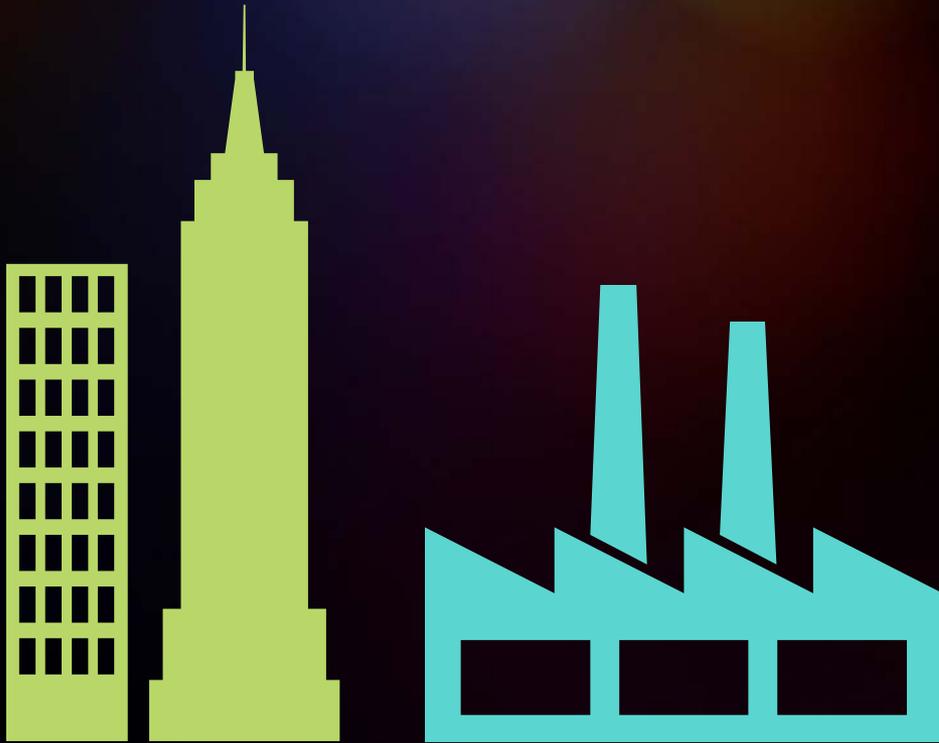


The Northwest is building an
EFFICIENCY
POWER
PLANT



A power plant that resides in millions of

HOMES AND BUSINESSES





PROGRAMS

MARKET INDUCED

MARKET TRANSFORMATION (NEEA)

CODES AND STANDARDS

MOMENTUM SAVINGS CRITERIA



**Not directly paid for
by programs and not
included in NEEA's
net market effects**



Cost-effective



**Relative to a frozen
baseline**

INSTALLED STOCK

WHAT'S THERE NOW

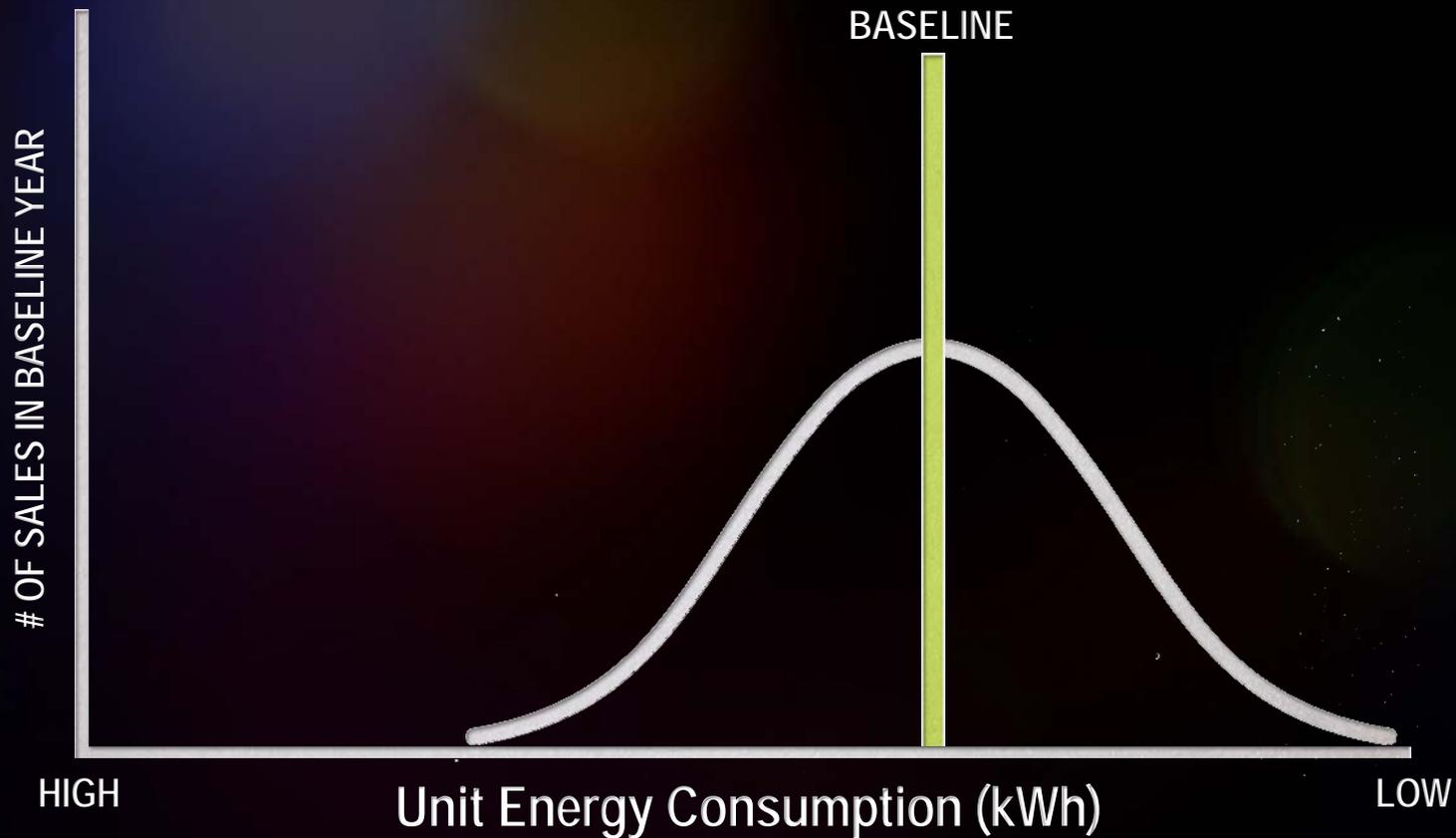


PRODUCT FLOW

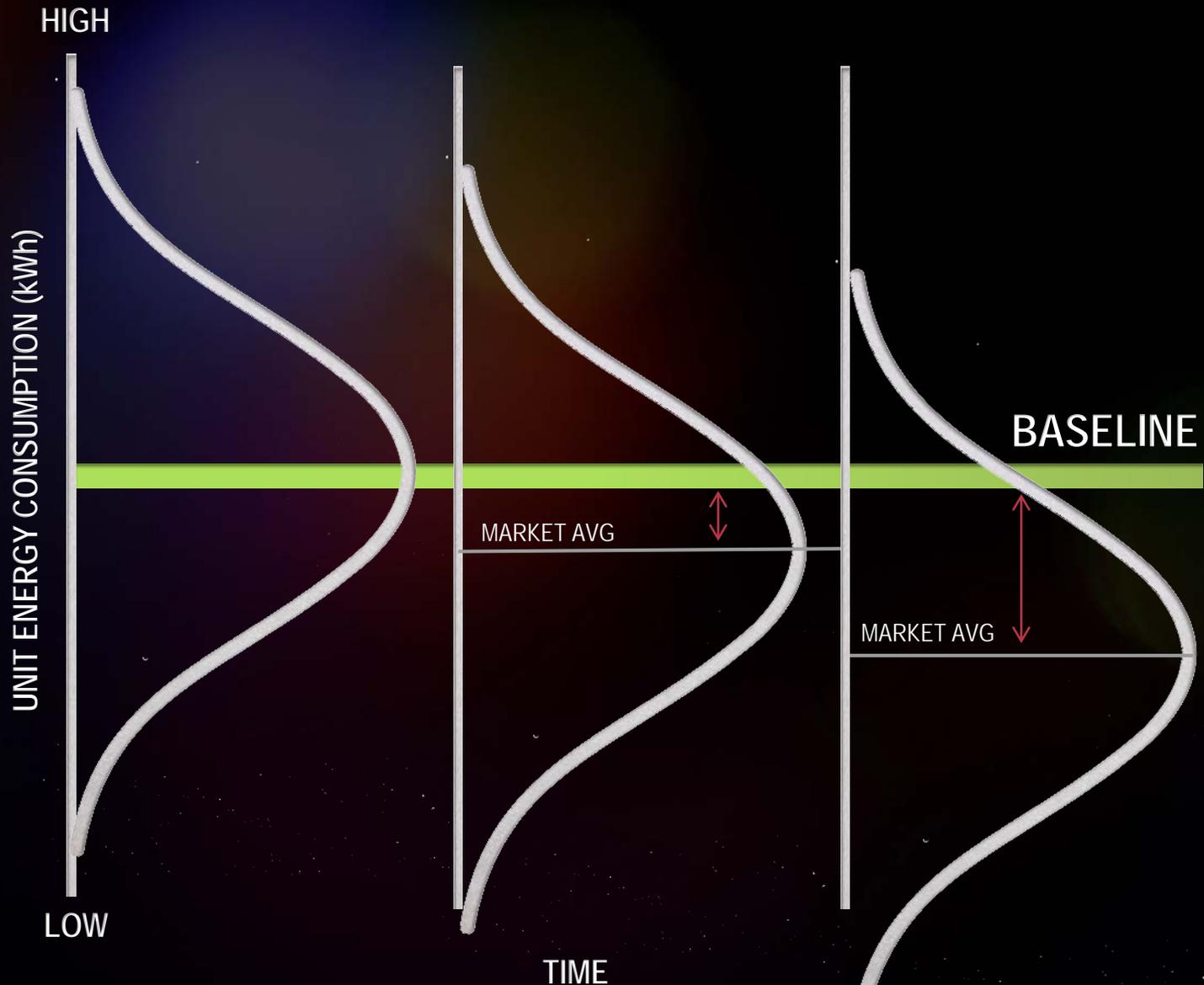
AND HOW THAT'S CHANGING



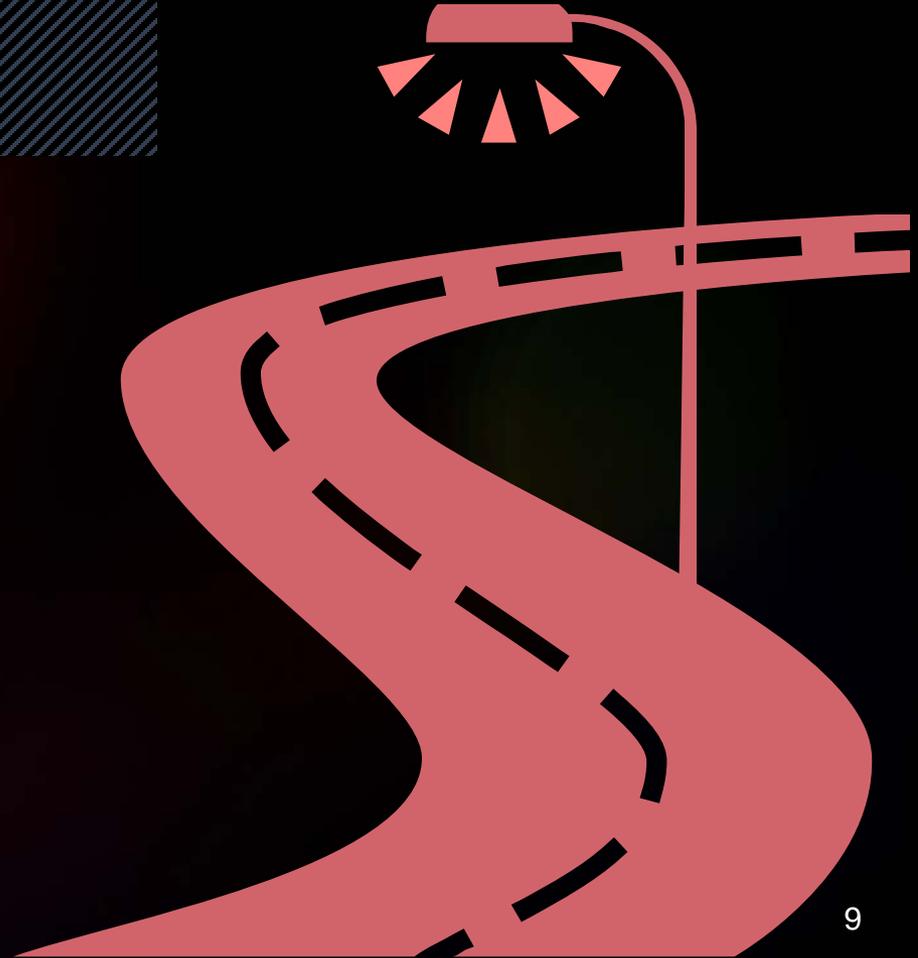
PRODUCT FLOW BASELINE



CHANGES OVER TIME



LIGHTING



DRIVERS FOR MARKET CHANGE

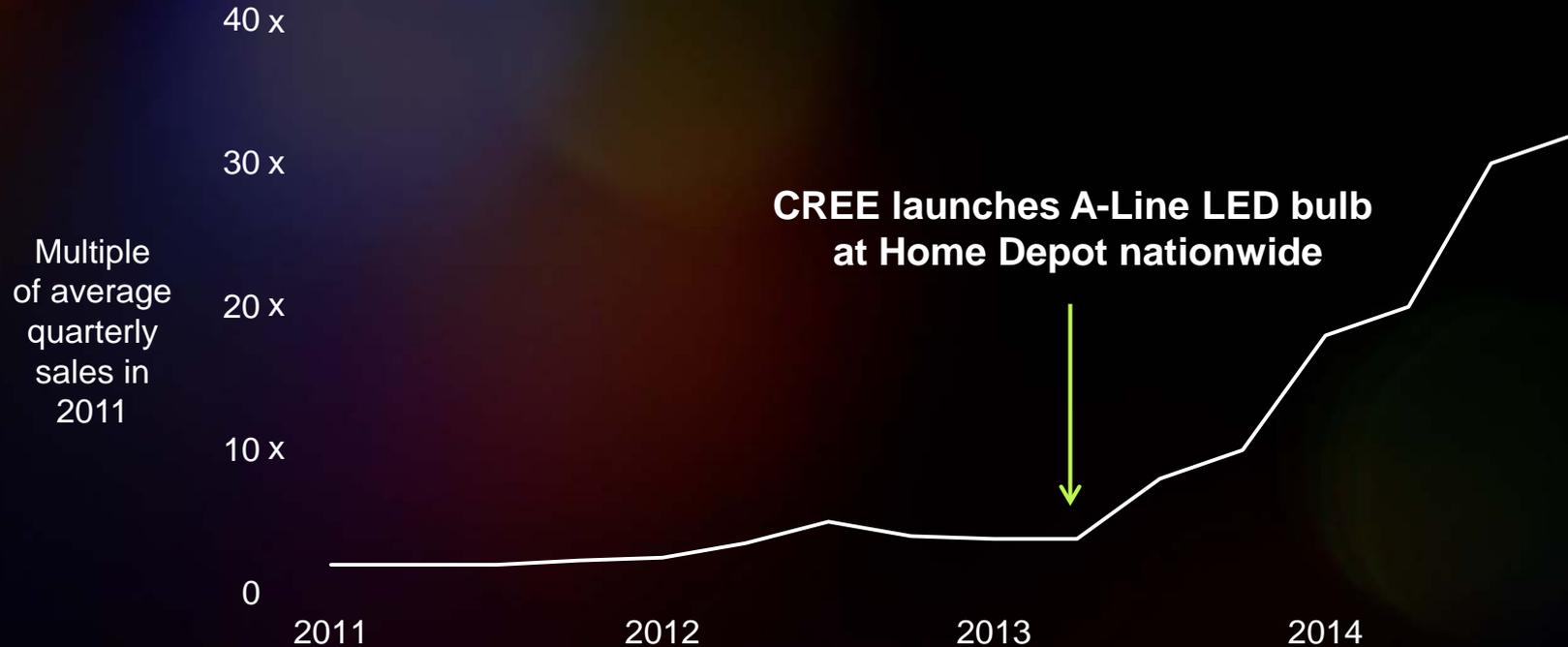


Technology



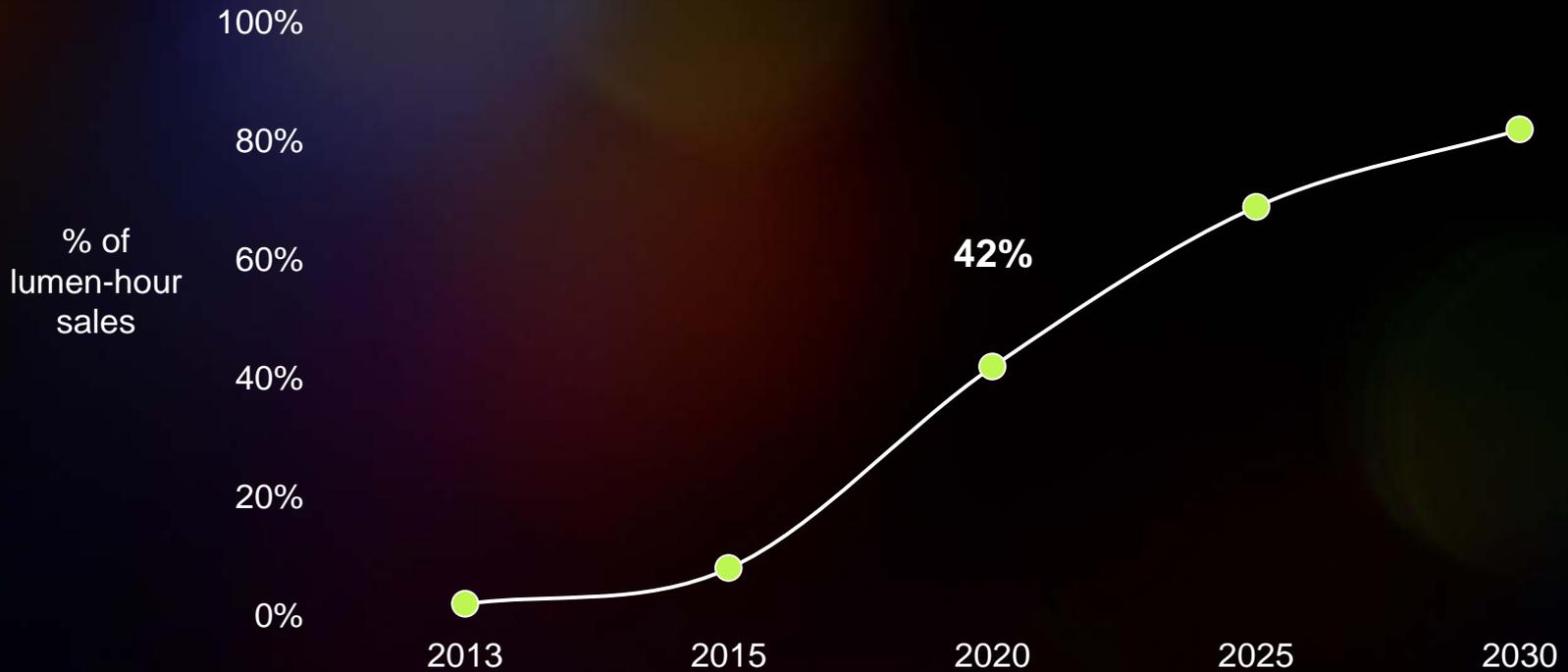
Regulation

GROWTH IN NATIONAL LED SALES



FUTURE LED MARKET SHARE

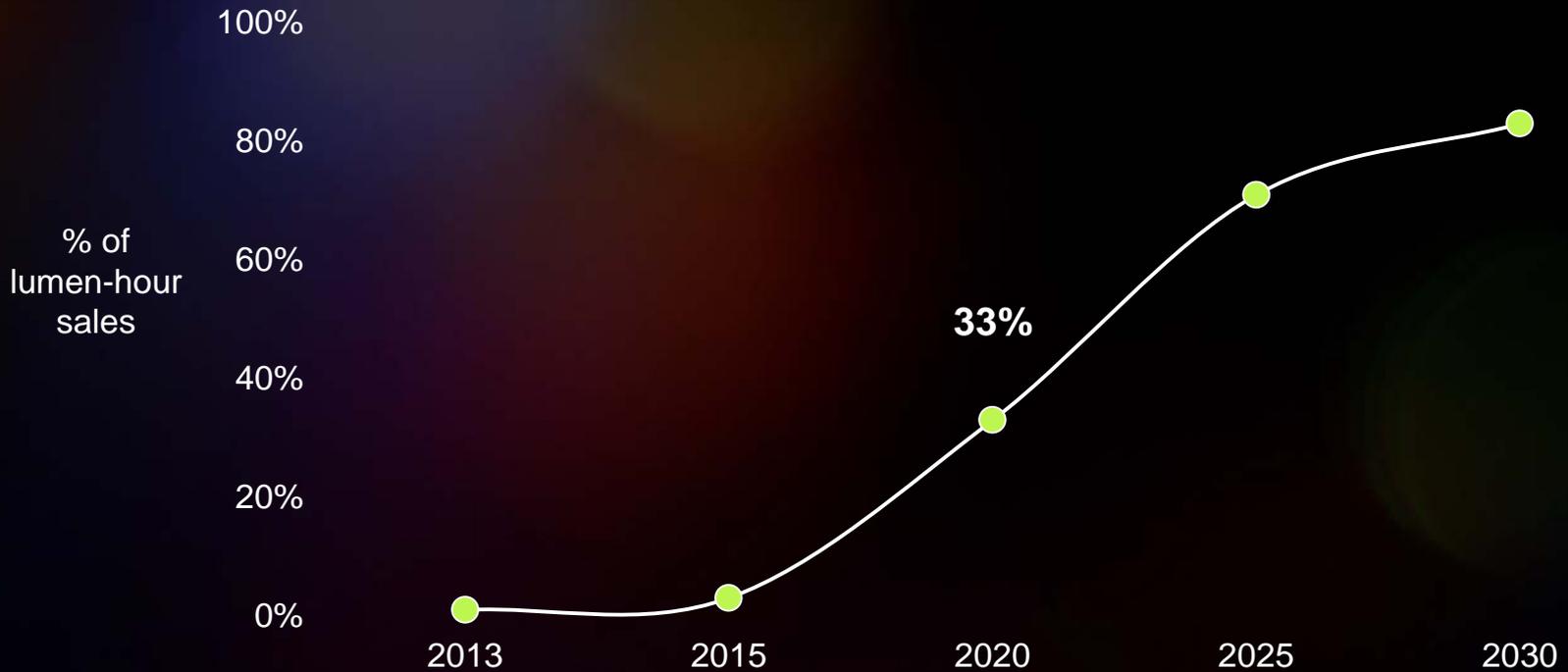
COMMERCIAL SPACE



U.S. DOE 2014

FUTURE LED MARKET SHARE

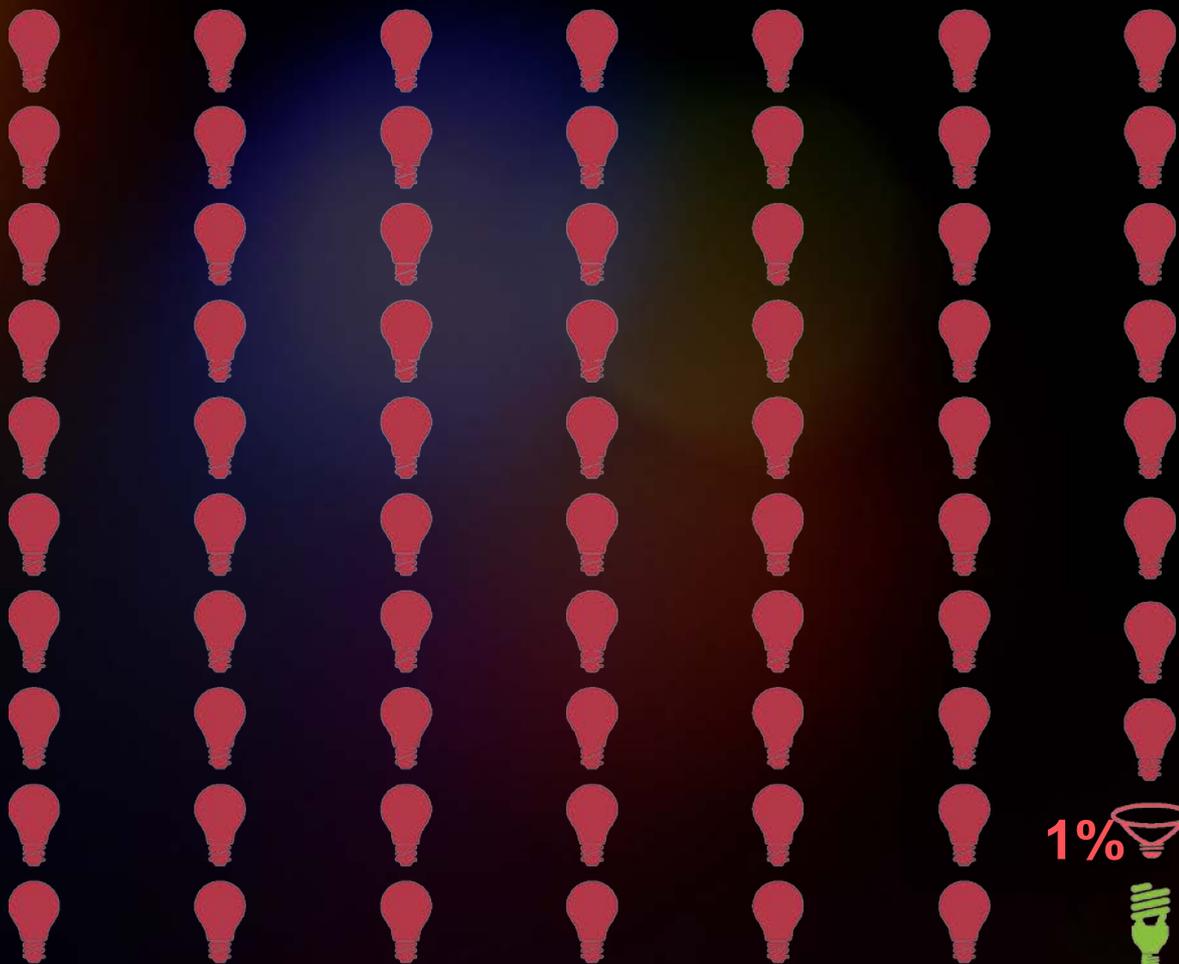
RESIDENTIAL SPACE



U.S. DOE 2014



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2011

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49%



7%



43%



2%



2012

 INC

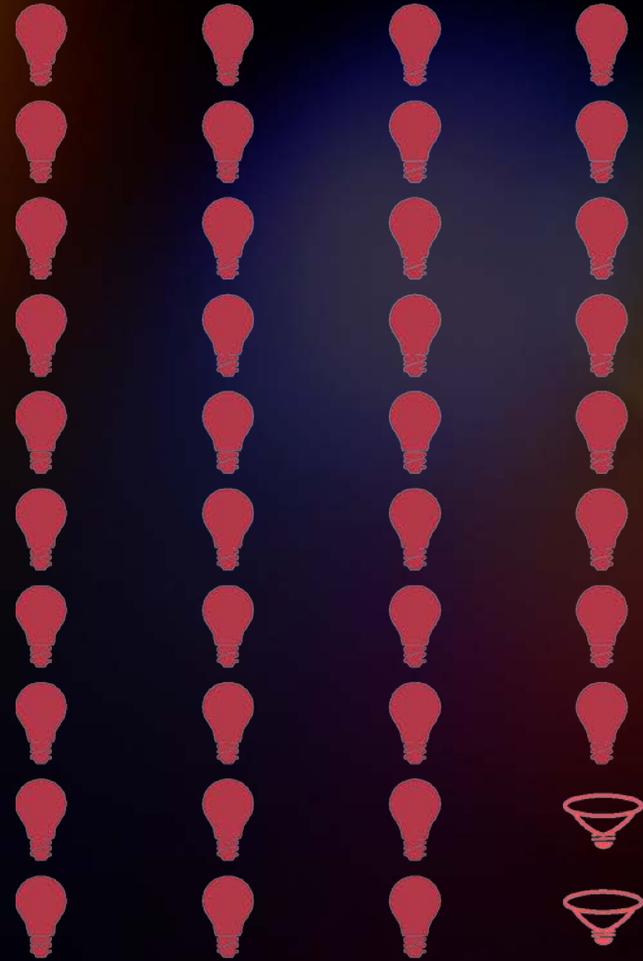
 HAL

 CFL

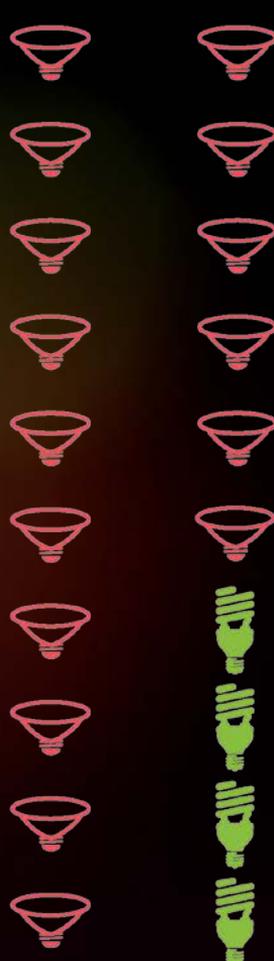
 LED



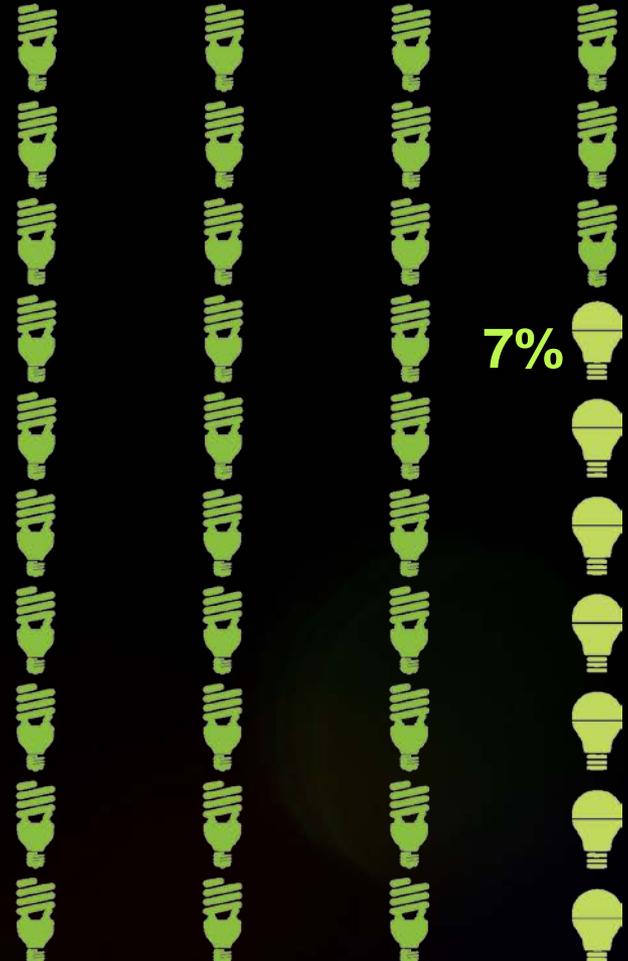
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36%



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2013

 INC

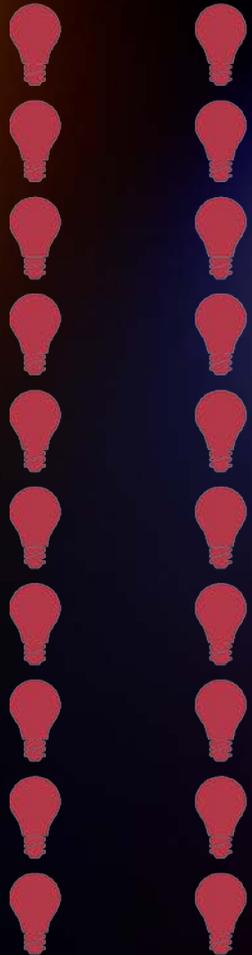
 HAL

 CFL

 LED



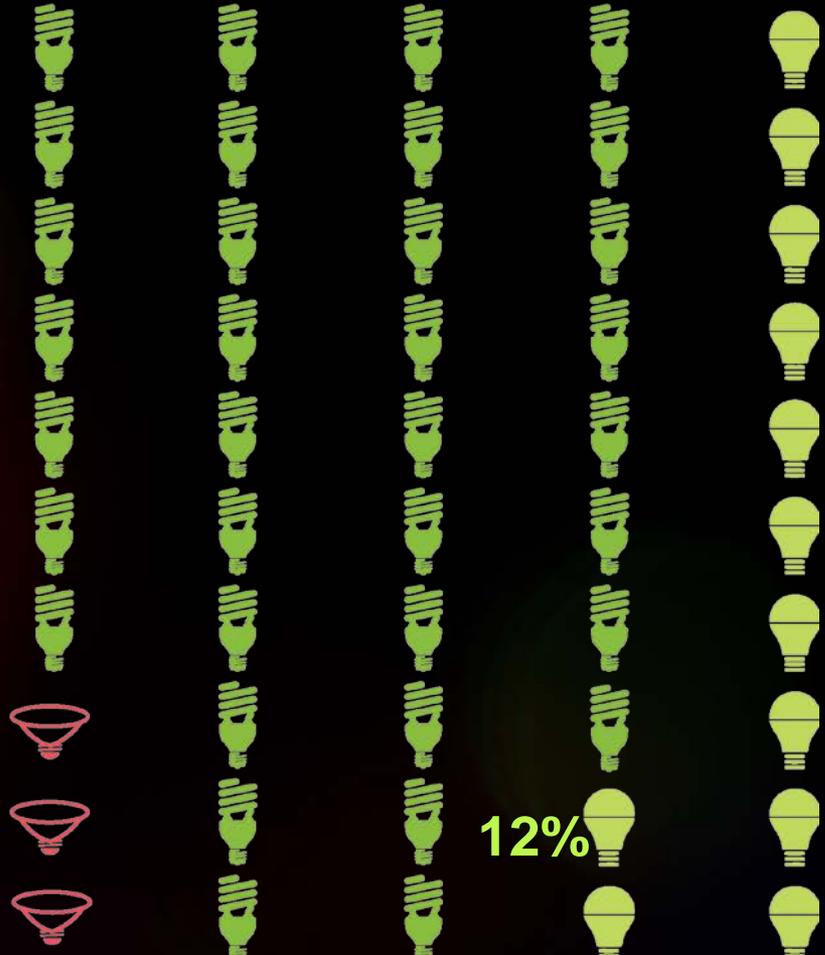
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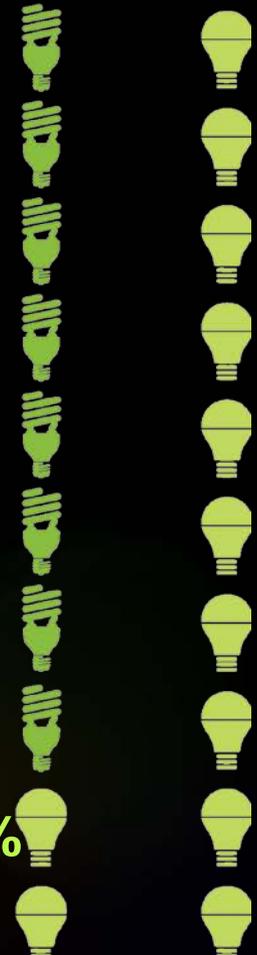
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12%

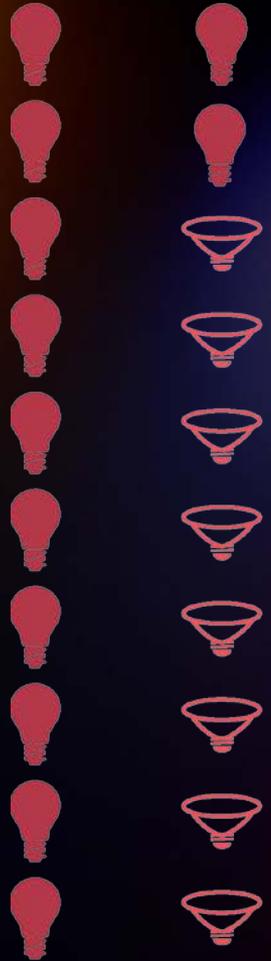


2014





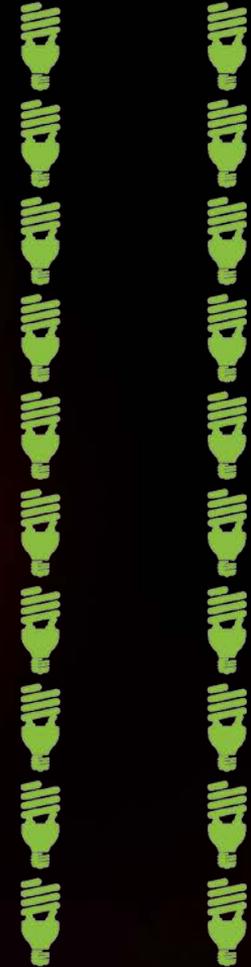
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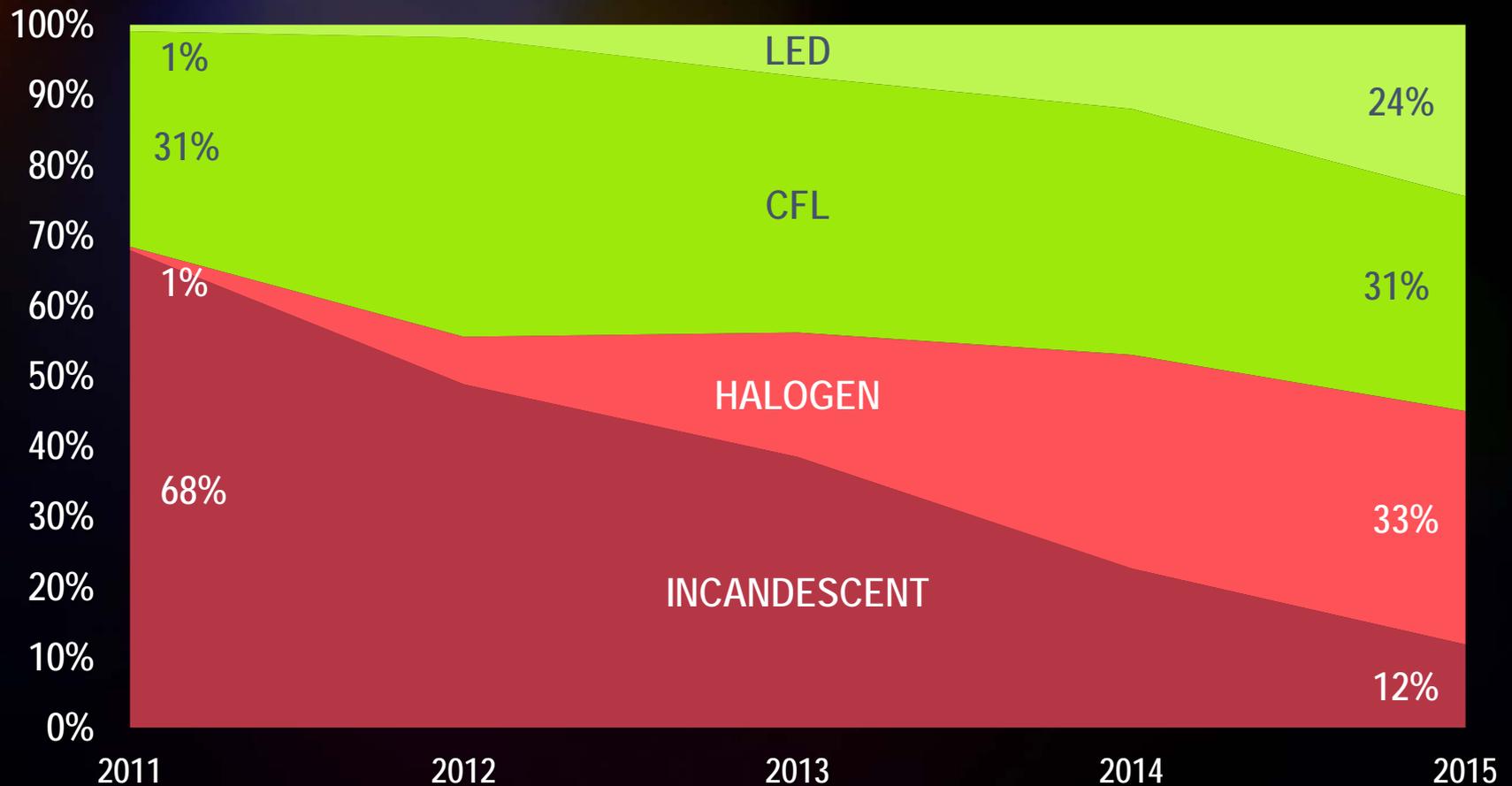
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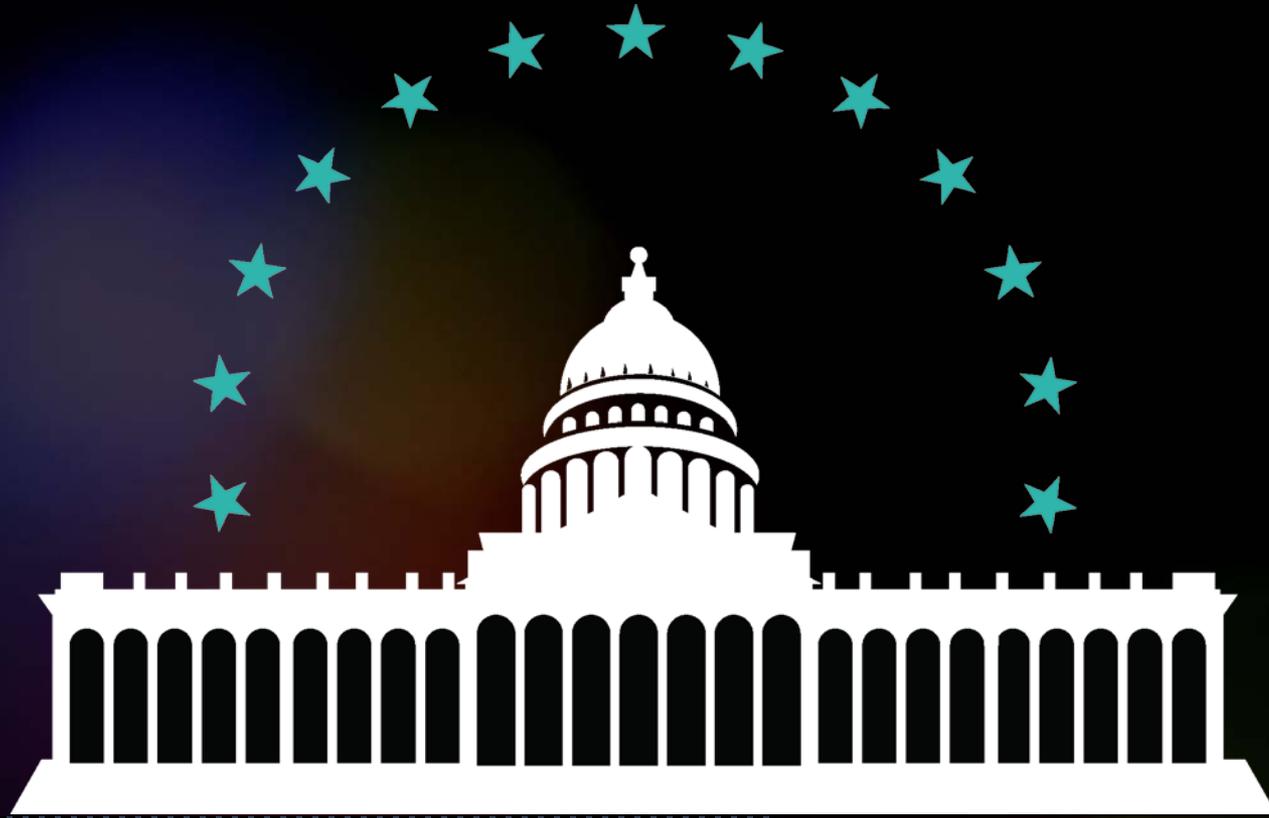


2015

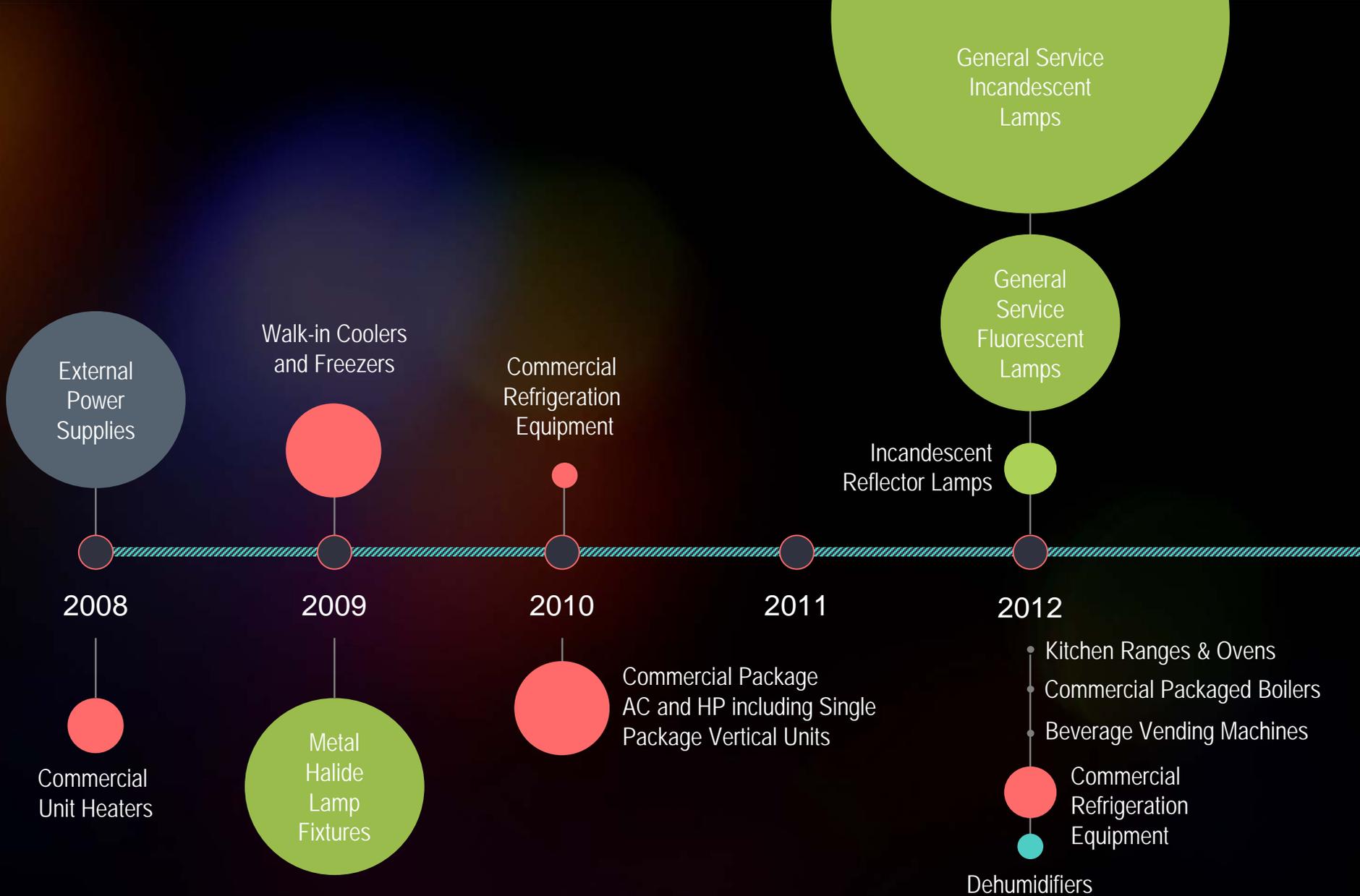
 INC	 HAL	 CFL	 LED
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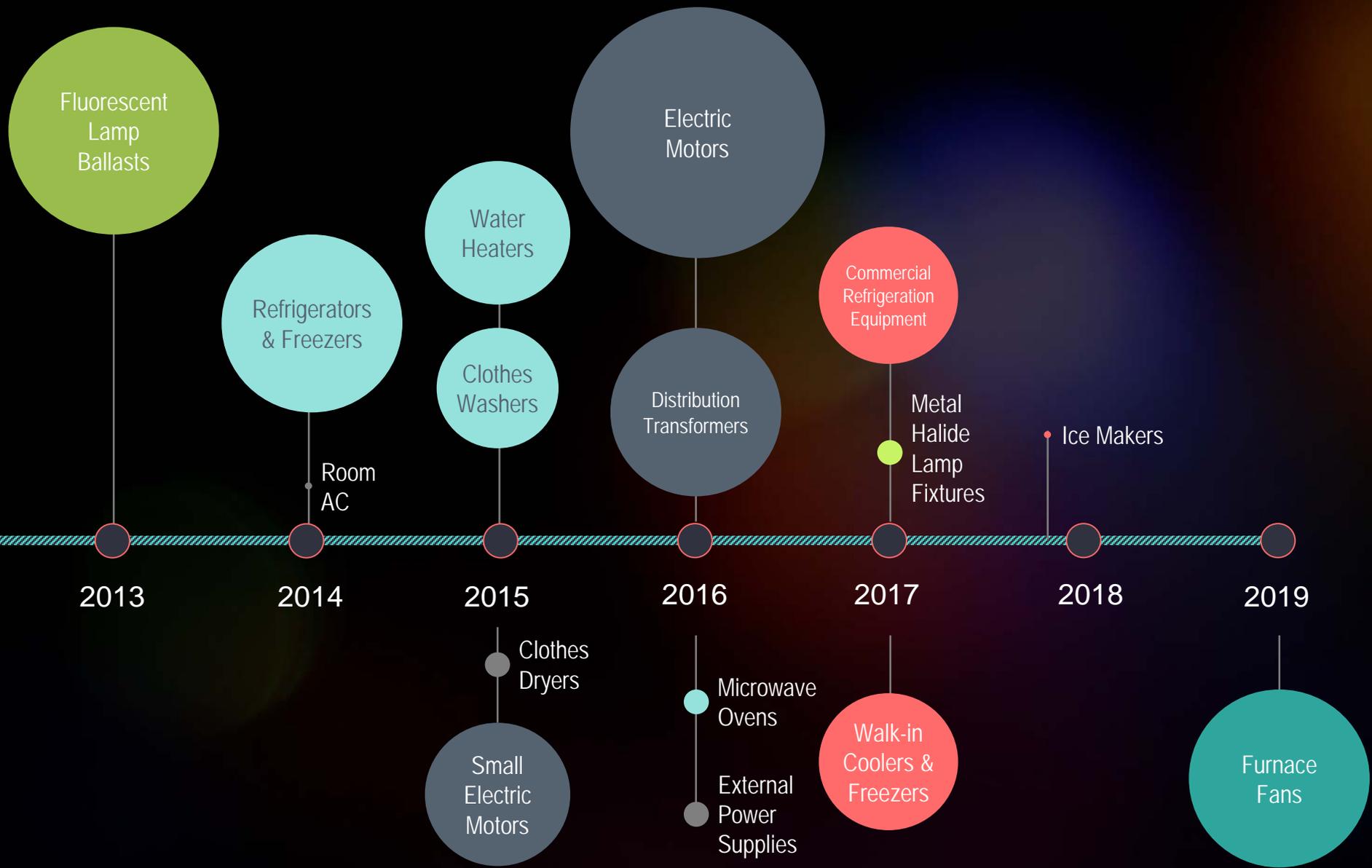
GENERAL SERVICE LAMPS





APPLIANCE STANDARDS







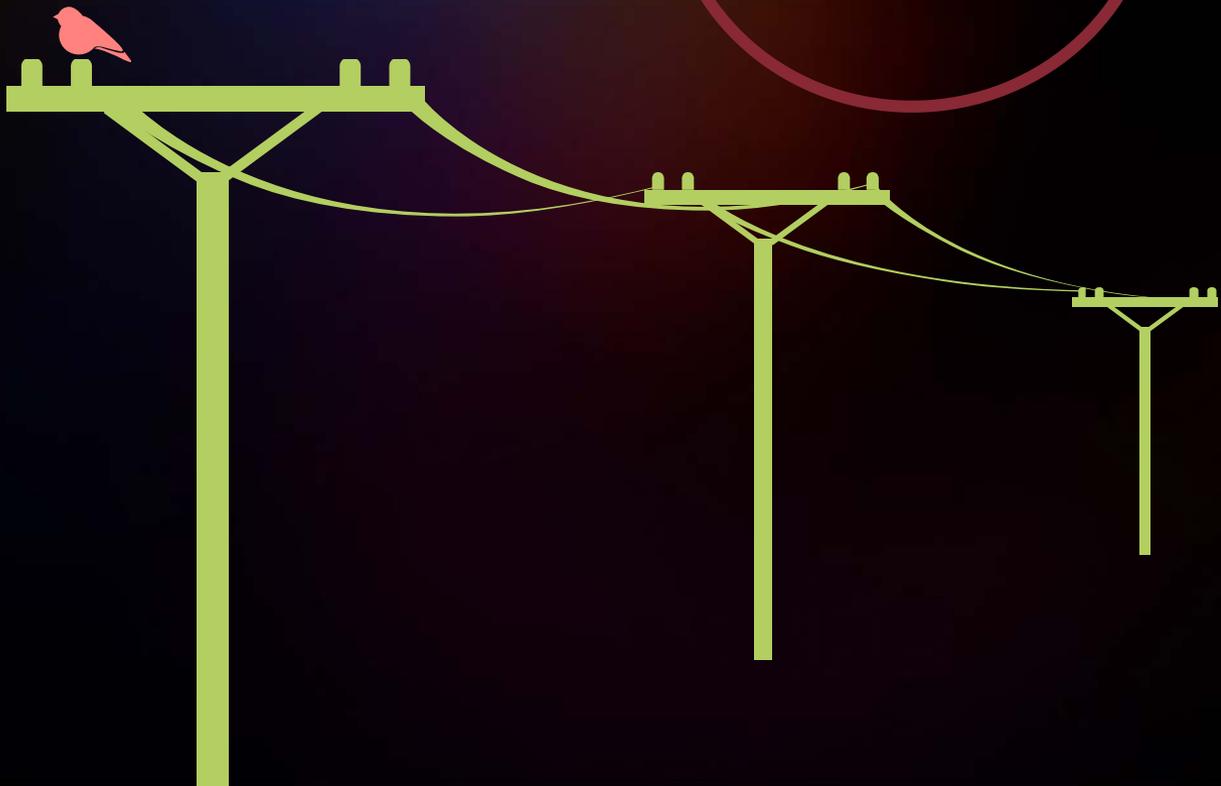
45 STANDARDS

1,476 aMW

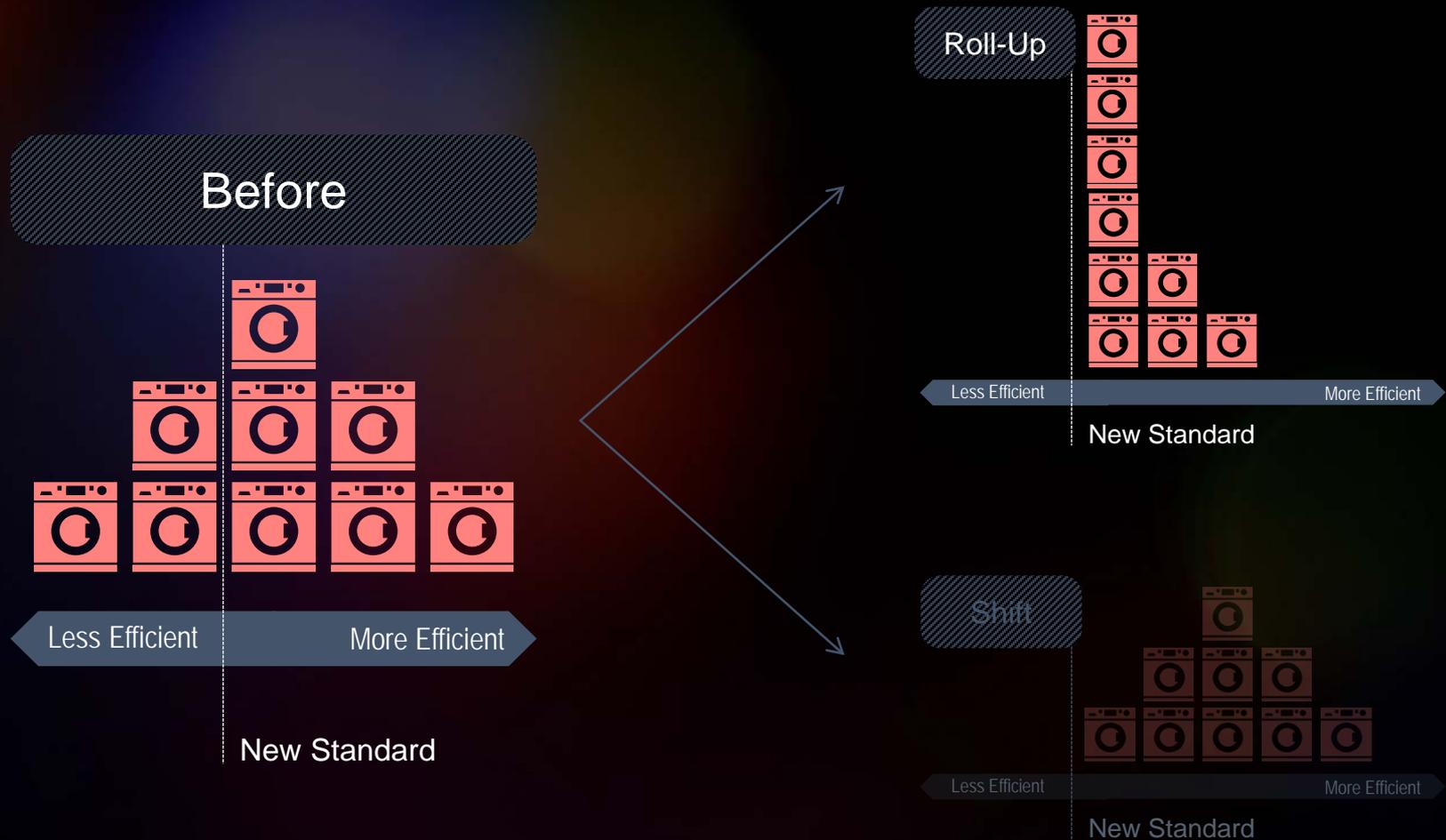
(2010-2034)



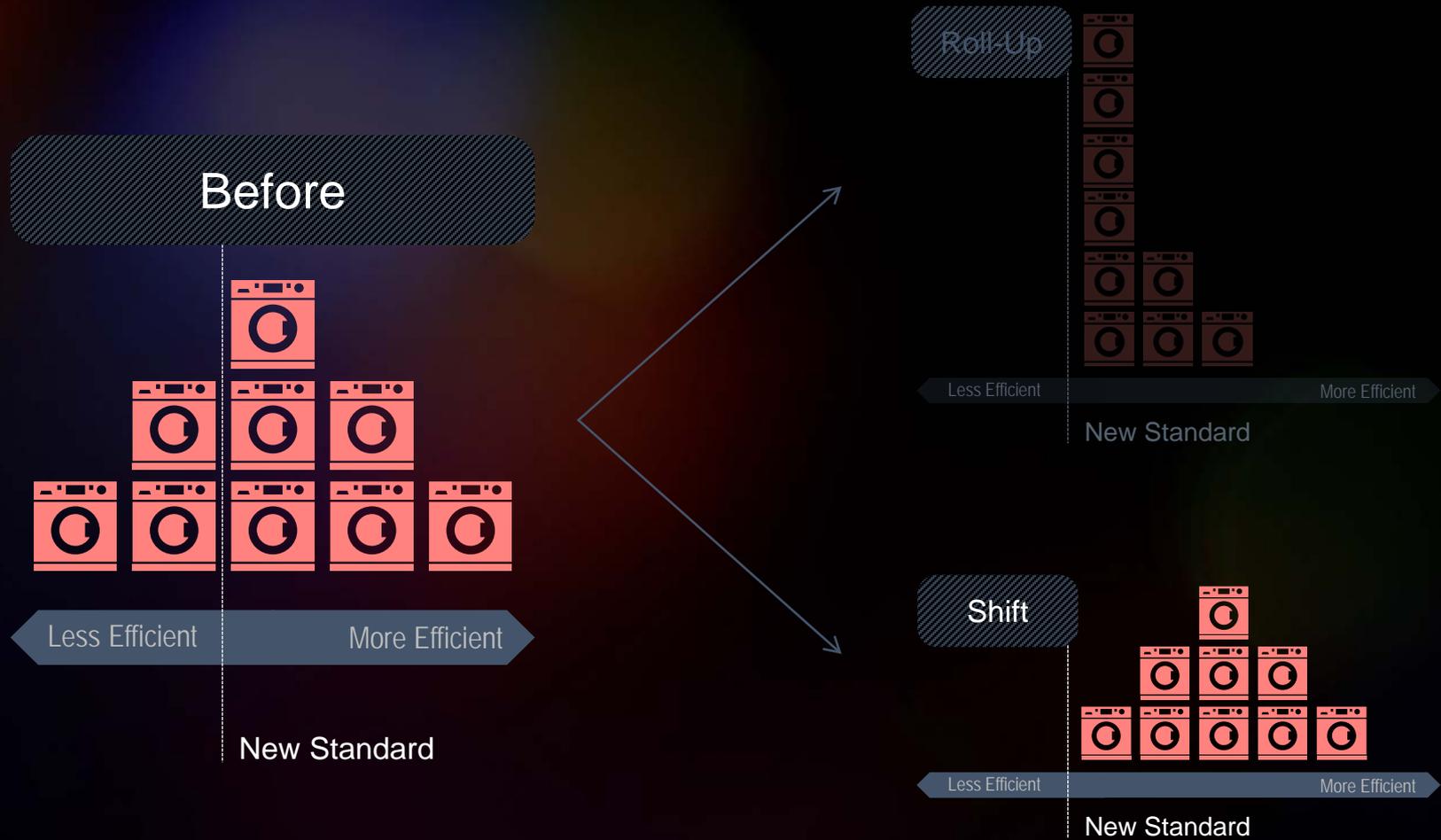
1 million homes



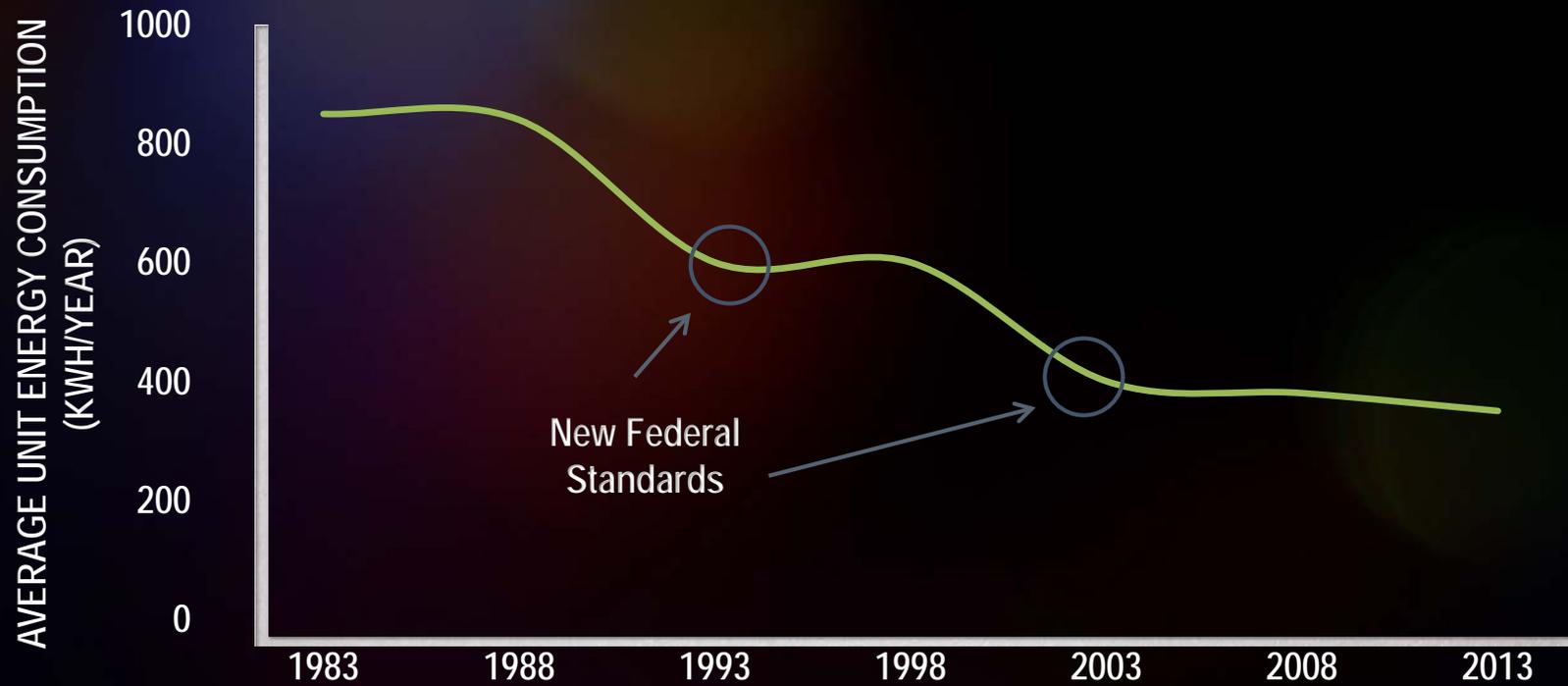
Efficiency Mix Impacts



Efficiency Mix Impacts



Clothes Washer Market





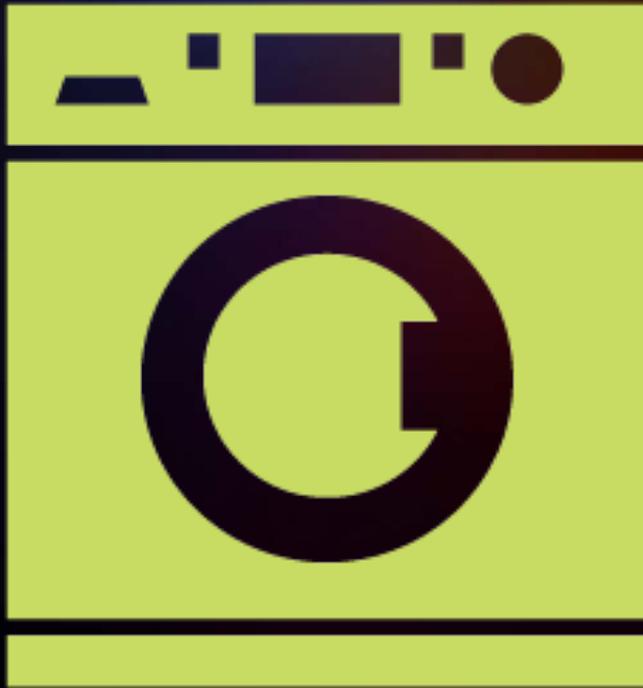
ACCURACY



Supporting

REGIONAL TECHNICAL FORUM

Baselines



CHANGED
SAVINGS

40%



FOCUS

RESOURCES

AND SAY NO TO SOME THINGS



IDENTIFY PROGRAM

OPPORTUNITIES

