

**Henry Lorenzen**  
Chair  
Oregon

**Bill Bradbury**  
Oregon

**Guy Norman**  
Washington

**Tom Karier**  
Washington



## Northwest **Power** and **Conservation** Council

**W. Bill Booth**  
Vice Chair  
Idaho

**James Yost**  
Idaho

**Jennifer Anders**  
Montana

**Tim Baker**  
Montana

January 4, 2017

### **MEMORANDUM**

**TO:** Council members

**FROM:** Ben Kujala

**SUBJECT:** Briefing on the current state of federal Energy Efficiency Standards  
as of the end of 2016

### **BACKGROUND:**

**Presenter:** Tom Eckman

**Summary:** Tom will review with the Council the current Energy Efficiency Standards in the pipeline at DOE and discuss the potential impacts of the change in leadership at DOE on future standards.

**Relevance:** Energy Efficiency Standards provided a significant amount of savings toward the Sixth Plan targets and are anticipated to provide additional savings in the Seventh Plan.

**Workplan:** A. Implement Seventh Power Plan and related Council priorities

**Background:** N/A

**More Info:** N/A

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January 5, 2017

### **Report from Tom Eckman, Senior Advisor and Consultant to the Council**

**SUBJECT:** Discussion of Current State of Federal Energy Efficiency Standards as of  
end of 2016

The pace of federal standards development during the Obama administration has been unprecedented. Since taking office in 2008, the Department of Energy (DOE) has updated or established 46 standards affecting the energy efficiency of appliances, equipment and lighting. Initially, this pace was driven by a lawsuit brought by parties over DOE's failure to comply with congressionally established standard revision schedules. Twenty-five of these 46 standards were required to be updated under a Court supervised schedule. Once DOE had satisfied the terms of the court settlement, the agency continue to update standards as an Obama administration priority and to fulfil a Congressional requirement that the department review and determine whether a standard updates is "technically feasible and economically justified" every six years.

The Council incorporated the impact of federal standards and state codes that were final as of the end of 2014 when it estimated the remaining potential for energy efficiency and develops the load forecast for the Seventh Power Plan. Standards adopted between the Sixth and Seventh Power Plans were estimated to reduce regional load growth by approximately 1400 average megawatts through 2030. Since the end of 2014 DOE has promulgated 21 new or revised standards. While a final estimate of the cumulative impact of these 21 standards has not yet been determined, it is anticipated that they will produce total between 1200 -1500 average megawatts of savings by 2035. This means they would capture between one-quarter and one-third of the Seventh Plan's 20 year conservation goal of 4300 average megawatts.

**More Info:** The following is an assessment of the current status of pending DOE appliance standards. The standards have been classified into four buckets, plus a special case for GSLs and manufactured housing. The four buckets are:

1. Rules finalized by the Obama administration, but not yet published in the Federal Register
2. Direct Final Rules (DFRs)
3. Rules unlikely to be finalized by the Obama administration
4. Prior rules still subject to the Congressional Review Act (CRA)

**Bucket #1:** Rules finalized by the Obama administration, but not yet published in the Federal Register. These standards have completed, signed and published on the DOE website. However, these standards are subject to a 45 day “error correction” period before they can be sent for publication in the Federal Register. Therefore, all but one of these standards (Ceiling fans) will likely end up in bucket #3.

- **Ceiling fans** - DOE published the final rule on its website 11/21 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Likely to be published in final form in Federal Register before January 20th.
- **Compressors** - DOE published the final rule on its website 12/5 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Can’t be published in final form in Federal Register before January 20th.
- **Uninterruptible power supplies** - DOE published the final rule on its website 12/28 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Can’t be published in final form in Federal Register before January 20th.
- **Portable ACs** - DOE published the final rule on its website 12/28 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Can’t be published in final form in Federal Register before January 20th.
- **Commercial boilers** - DOE published the final rule on its website 12/28 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Can’t be published in final form in Federal Register before January 20th.
- **Walk in coolers and freezers** - This standard was developed through negotiated rulemaking, so it has manufacturers support, i.e., it is consensus based, but DOE decided not to issue it as a DFR. DOE published the final rule on its website 12/28 where it must sit for 45 days subject to “error correction” before being published in the Federal Register. Can’t be published in final form in Federal Register before January 20th.

**Bucket #2.** Direct Final Rules (DFRs). DFRs are not subject to the error correction process, but they are subject to a 110 day period during which anybody can raise objections. The Secretary of Energy can decide to withdraw rules in response to objections, so it will be up to the Trump Administration’s Secretary of Energy (Rick Perry?) to make the final decision on these.

- **Central AC/HP** - DOE published this rule on 12/5
- **Dedicated pool pumps** - DOE published this rule on 12/28

**Bucket #3.** Rules unlikely to be finalized by the Obama administration

- Gas Furnaces
- Commercial water heaters
- Cooking products

**Bucket #4.** Prior rules still subject to the Congressional Review Act (CRA). Two standards issued last spring, and are still subject to the “60 legislative day” exposure to Congressional review. Reaching back that far for these minor rules seems unlikely, but there are other legislative proposals being discussed that could impact agency rules dating back to the beginning of 2016.

- Dehumidifier
- Battery chargers

## **General Service Lamps**

The GSL rule is has the largest electricity savings of all the rules. There are two parts to this rule – the “backstop” and “expanded definition”. Under EISA 2007 DOE must act to adopt the “backstop” minimum efficiency requirement of 45 lumens per watt unless Congress acts to amend EISA. DOE has also proposed to expand the definition of GSLs to include several lamp types that were exempted from the first phase of EISA. The most important of these is covering reflector lamps. DOE will have to publish this action as a final rule as well, probably before the end of the Obama administration. This rule is about definitions of coverage, rather than a standard level, but it is another regulation that would be subject to the CRA and any other constraints on new regulations established by the Trump administration and/or Congress.

## **Manufactured Housing**

Finally, the efficiency standards for manufactured housing are also in play at DOE (and 7 years late). They are not subject to the 45 day “error correction” period because they are not an “appliance standard.” OMB completed its review at the end of November and since then DOE and HUD have been attempting to reconcile their differences. If the two agencies can resolve any remaining issues DOE could have the final proposal published in the Federal Register by January 20<sup>th</sup>. If they do, these standards would still be subject to the CRA.

In summary, by January 20<sup>th</sup> there could be many as 15 standards that the Trump administration and/or that Congress could delay or stop from going into effect. The outcome of most of these will be known by June of next year (assuming Congress meets 60 legislative days between January 20<sup>th</sup> and then) and they do not adopt one of the more sweeping proposals to revise how agency rulemakings are reviewed by Congress.

The Table 1 below shows the savings projected for the major rules “in play.” The second shows what was on the rulemaking schedule for 2016 & 2017.

Table 1- Current Status of Major DOE Standards

Product	Potential Savings (Quads)	Negotiated Consensus Std.	Status
General Service Lamps	3.9		At DOE
Dedicated Pool Pumps	3.8	Yes	Final 12/28/16
Gas Furnaces	2.9		At DOE
Central AC and Heat Pumps	2.8	Yes	Final 12/05/16
Commercial Water Heaters	1.8		At DOE
Uninterruptible Power Supplies	1.2		Final 12/28/16
Walk-In Coolers and Freezers	0.9	Yes	Final 12/28/16
Ceiling Fans	0.8		Final 11/21
Cooking Products	0.8		At DOE
Portable AC	0.5		Final 12/28/16
Commercial Boilers	0.4		Final 12/28/16
Compressors	0.2		Final 12/05/16
Manufactured Housing	??	Yes	at DOE/HUD

Table 2 – Current Rulemaking Schedule for 2016 – 2017

<b>Rulemakings in Process at DOE</b>	<b>Status/Schedule</b>
Residential Water Heaters	Proposed Rule due in 2016 (Late)
Commercial and Industrial Fans	Proposed Rule due in 2016 (Late)
External Power Supplies	Proposed Rule due in 2016 (Late)
Pool Heaters	Proposed Rule due in 2016 (Late)
Clothes Dryers	Proposed Rule due in 2017
Circulating Pumps	Consensus reached, proposed rule due end of 2017
Refrigerators and Freezers (Residential)	Proposed Rule due in 2017
Fluorescent Lamp Ballast	Proposed Rule due in 2017
Distribution Transformers	Framework Document due in 2017
Small Motors	Request of Information issued

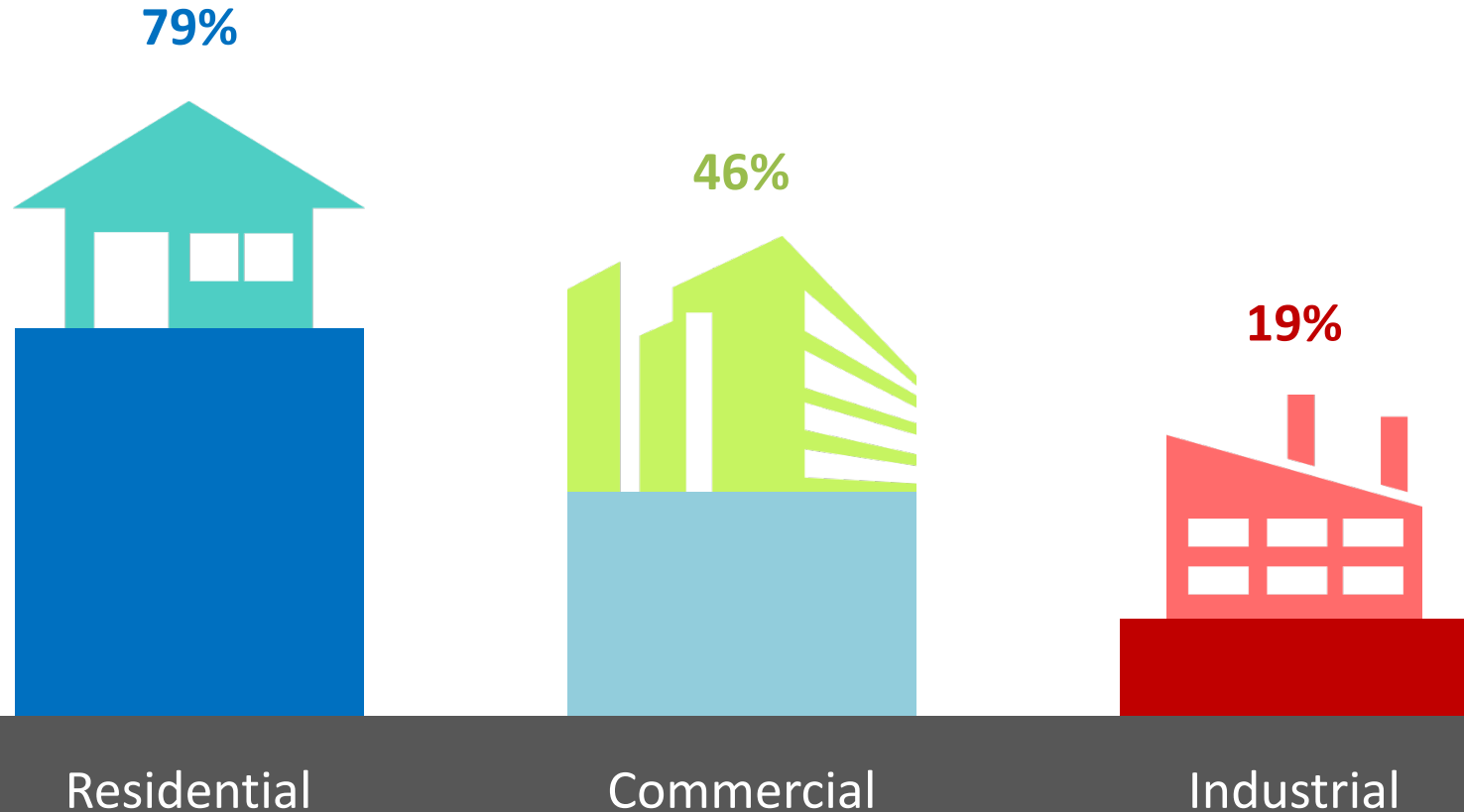
# Discussion of Current State of Federal Energy Efficiency Standards as of End of 2016

**Tom Eckman**  
**January 2017**

# Why Federal Efficiency Standards Are Valuable

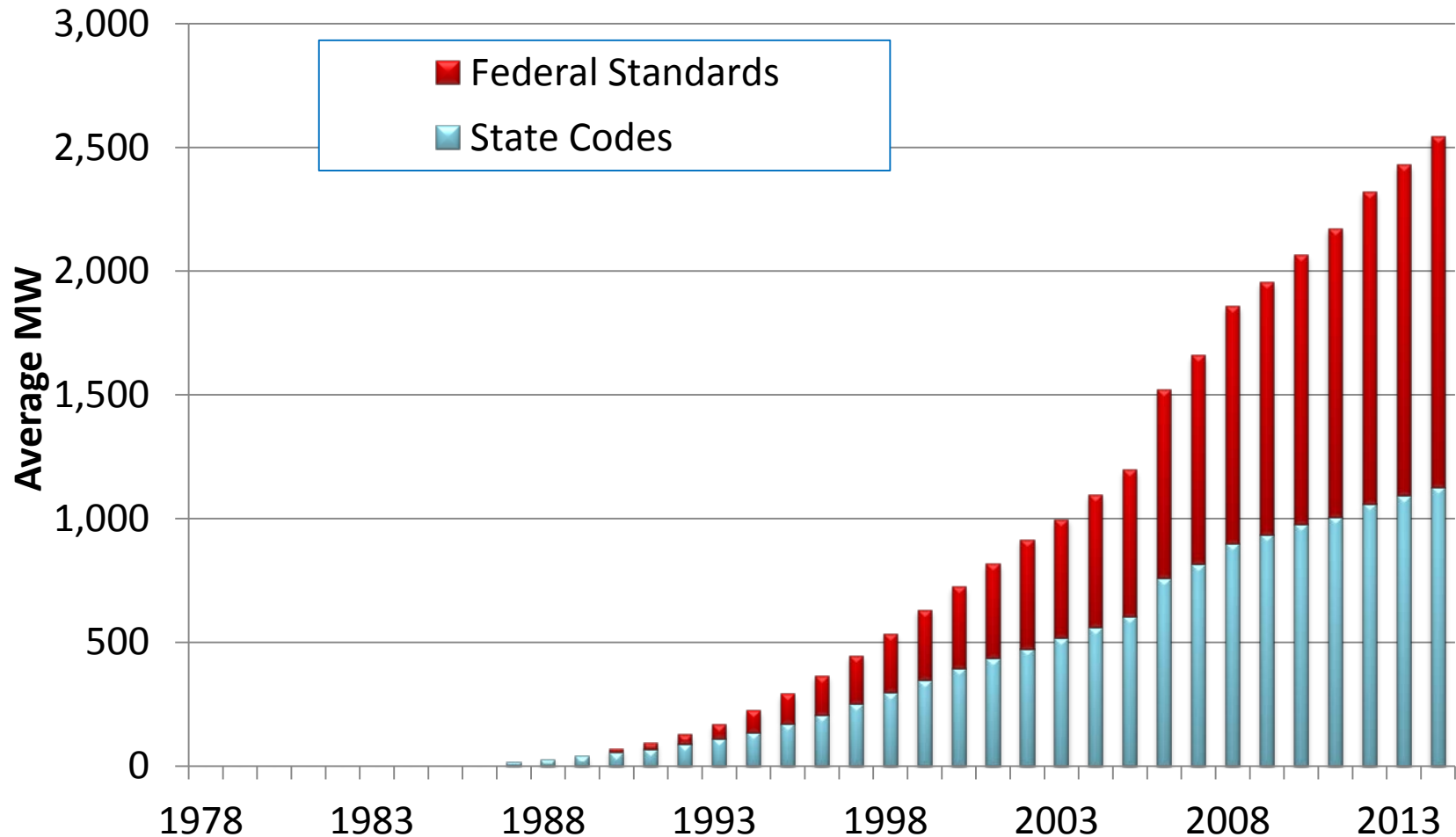
- ***Lower Cost*** -- Standards produce savings at lower “total cost” because they avoid program administrative costs.
- ***Larger Savings*** -- Standards effect the entire market while programs effect only a portion of the market resulting in greater total savings for comparable improvements in efficiency
- ***Greater Equity*** -- The “compliance cost” of meeting a standard is borne by the consumers who benefit from the increased efficiency.

# SHARE OF BUILDING ENERGY USE SUBJECT TO STANDARDS



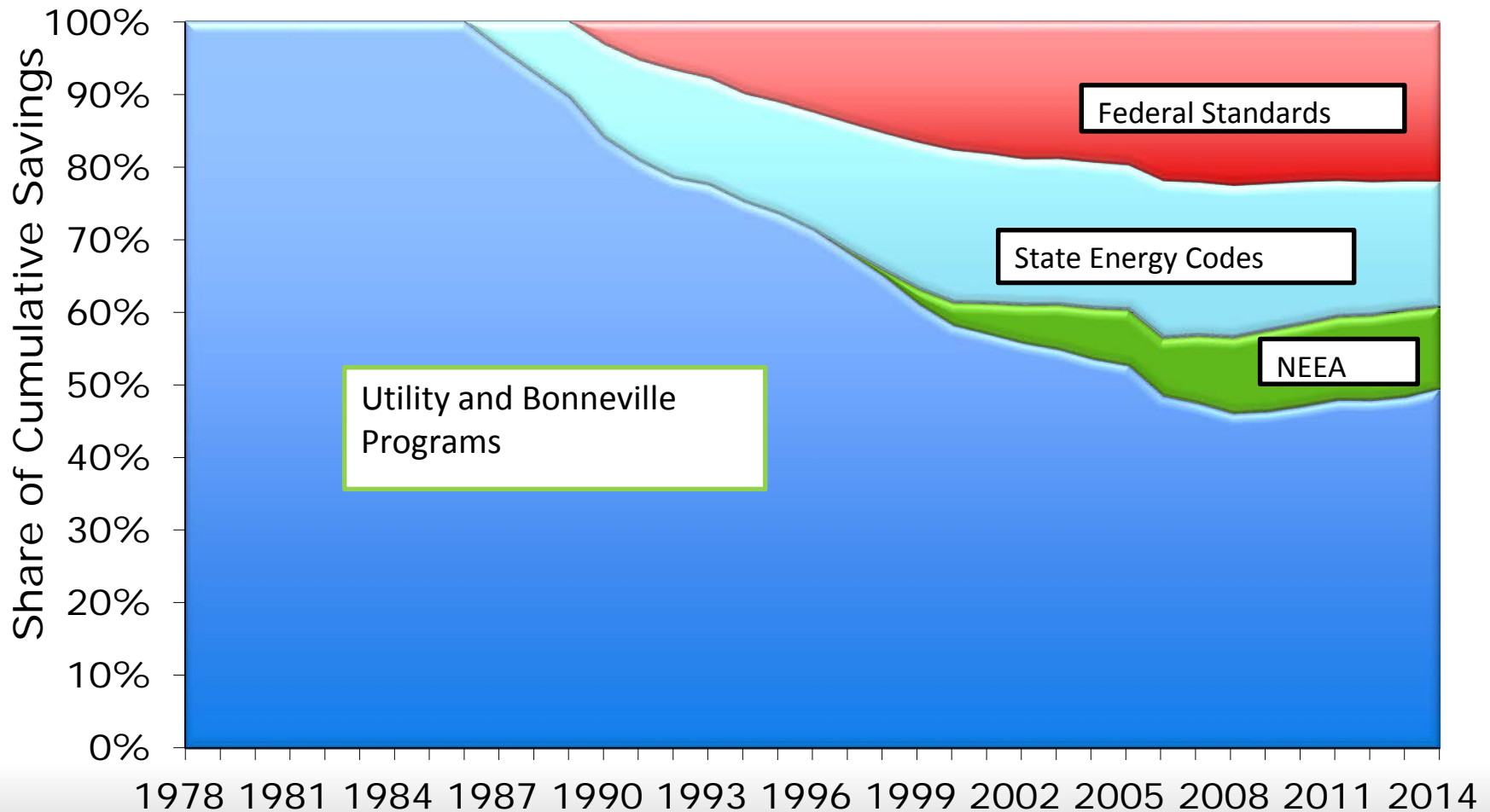


# State Energy Codes and Federal Standards Reduced 2014 Regional Retail Sales by Over 2500 MWa\*

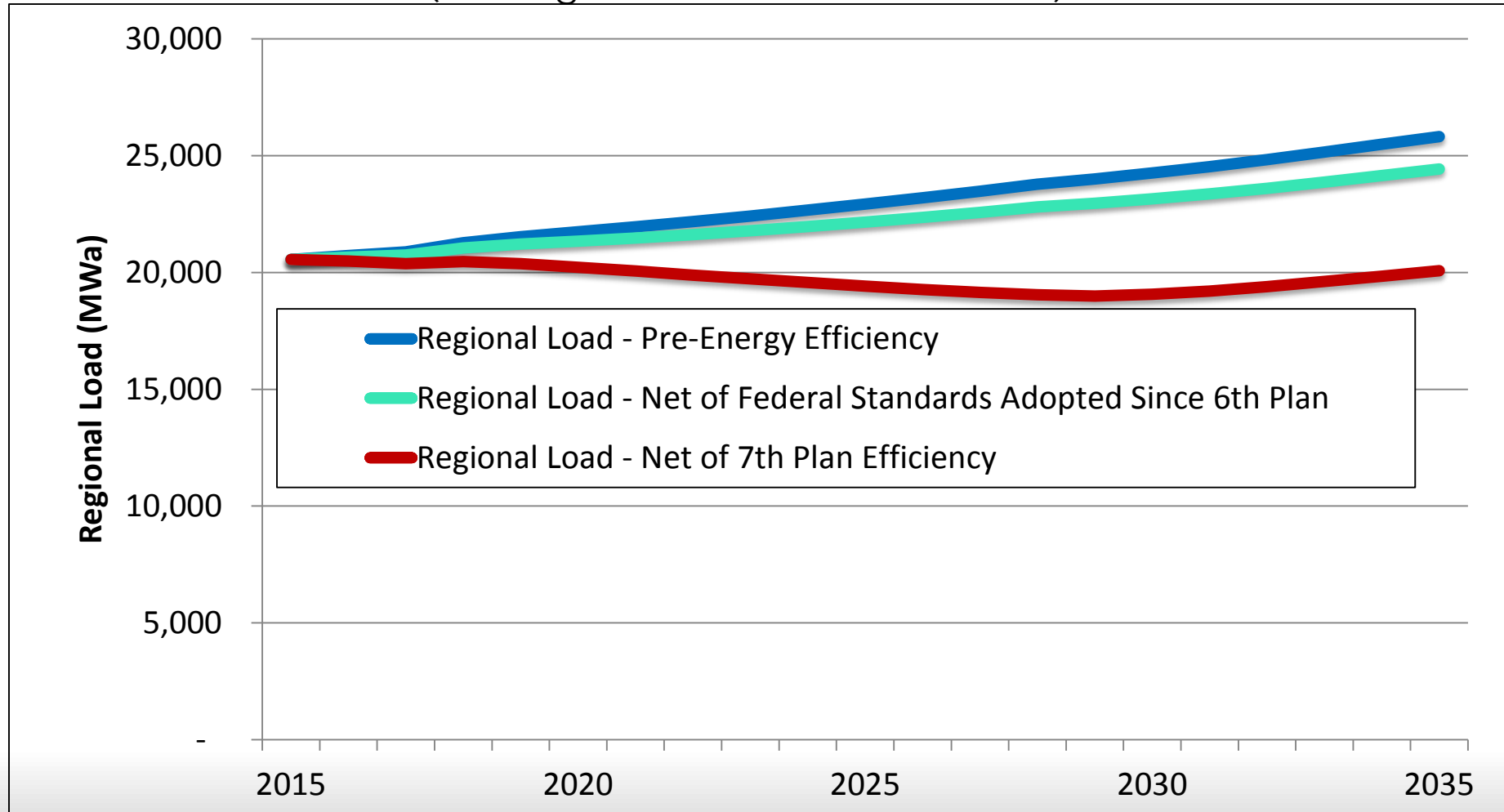


\*Reflects Only Codes and Standards Adopted Prior to Sixth Plan

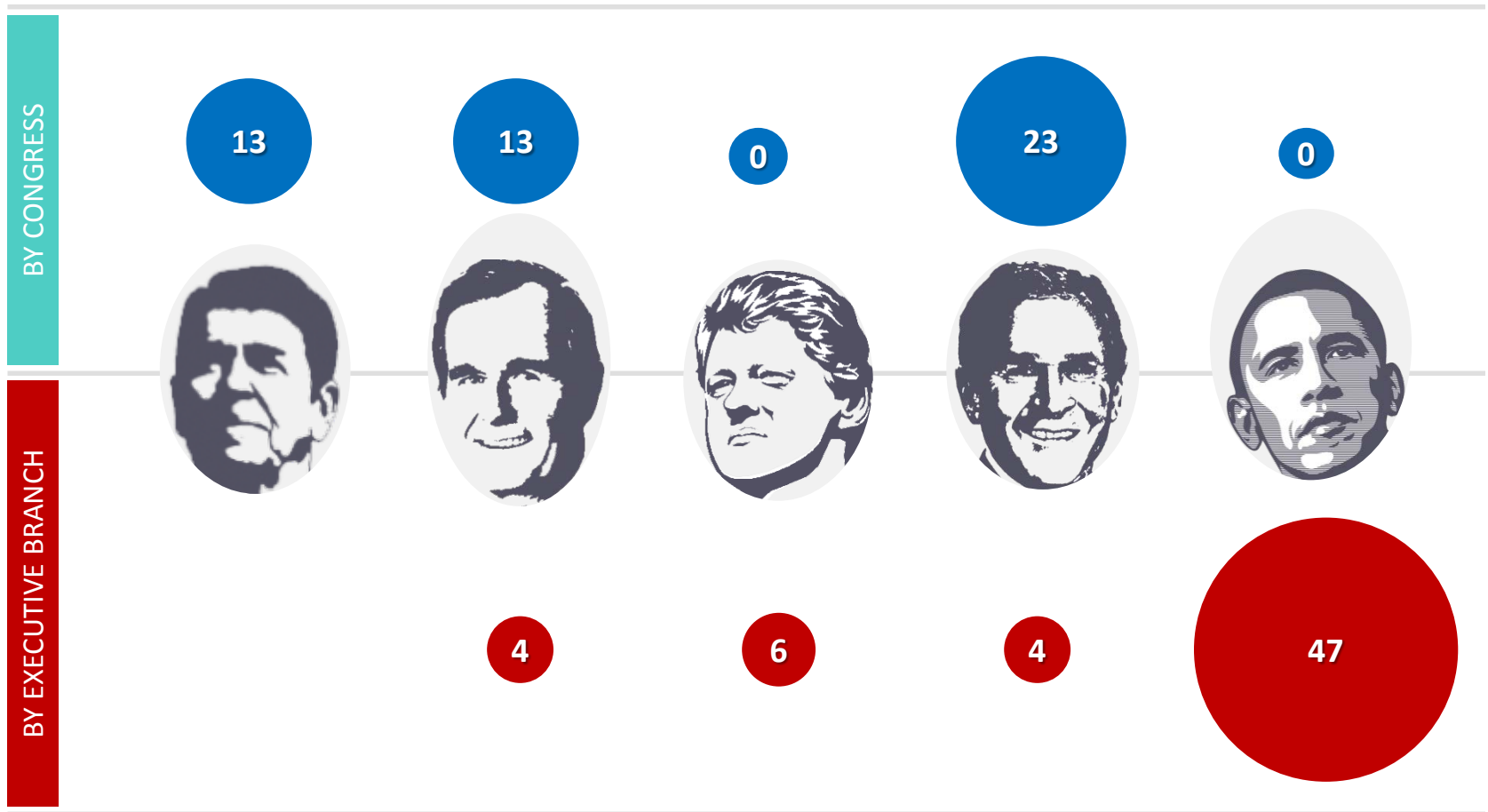
# Federal Standards Generated Over 20% of Cumulative Regional Conservation Savings



Standards adopted between 6th and 7th Plan are  
forecast to reduce annual average regional growth by  
0.3%/year Through 2035  
(Average Loads Over 800 Futures)

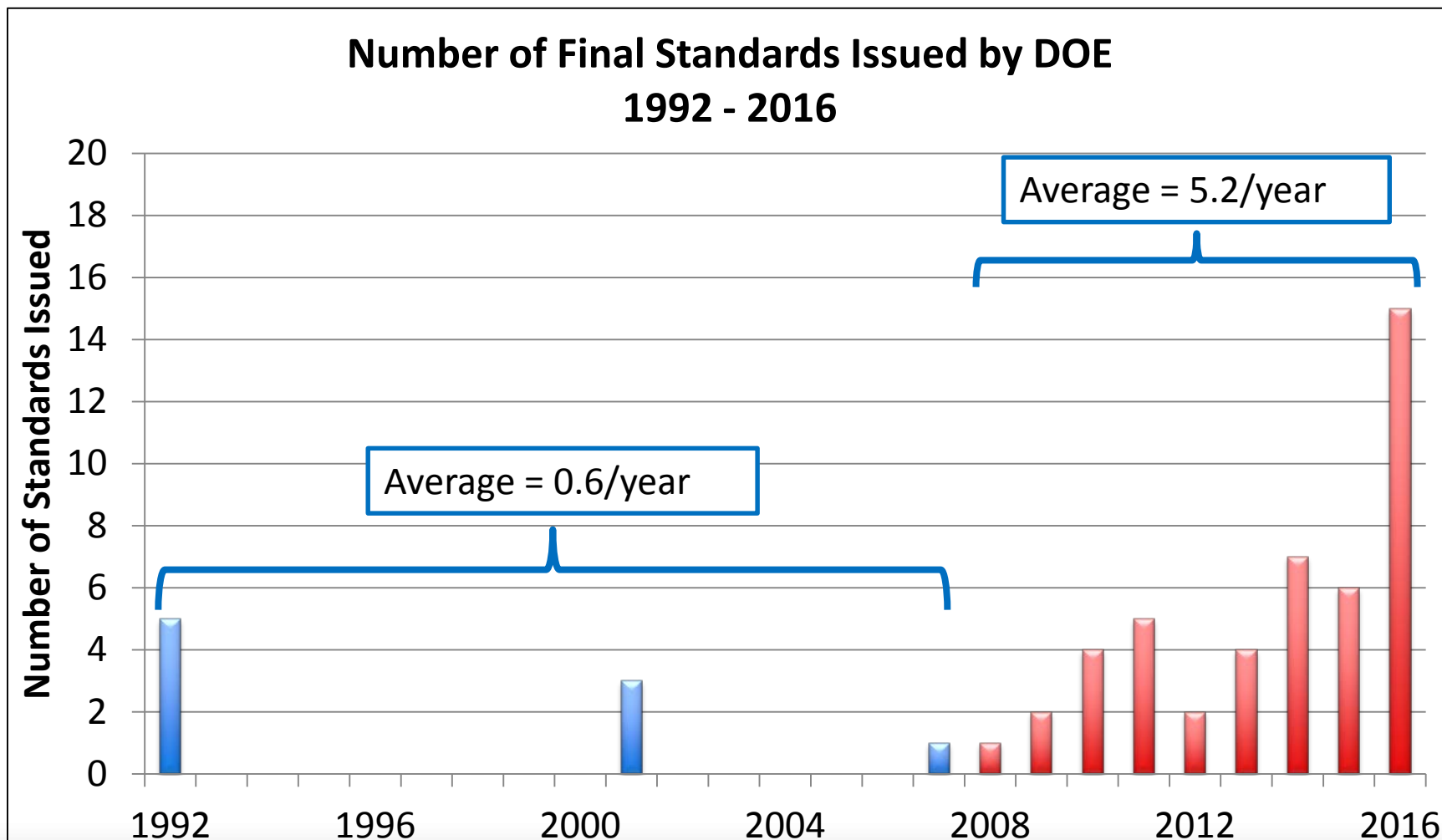


# Standards adopted by administration



\*As of January 3, 2017  
Source: ASAP/ACEEE

# The Pace of DOE Appliance Standards Updates Is Unprecedented\*

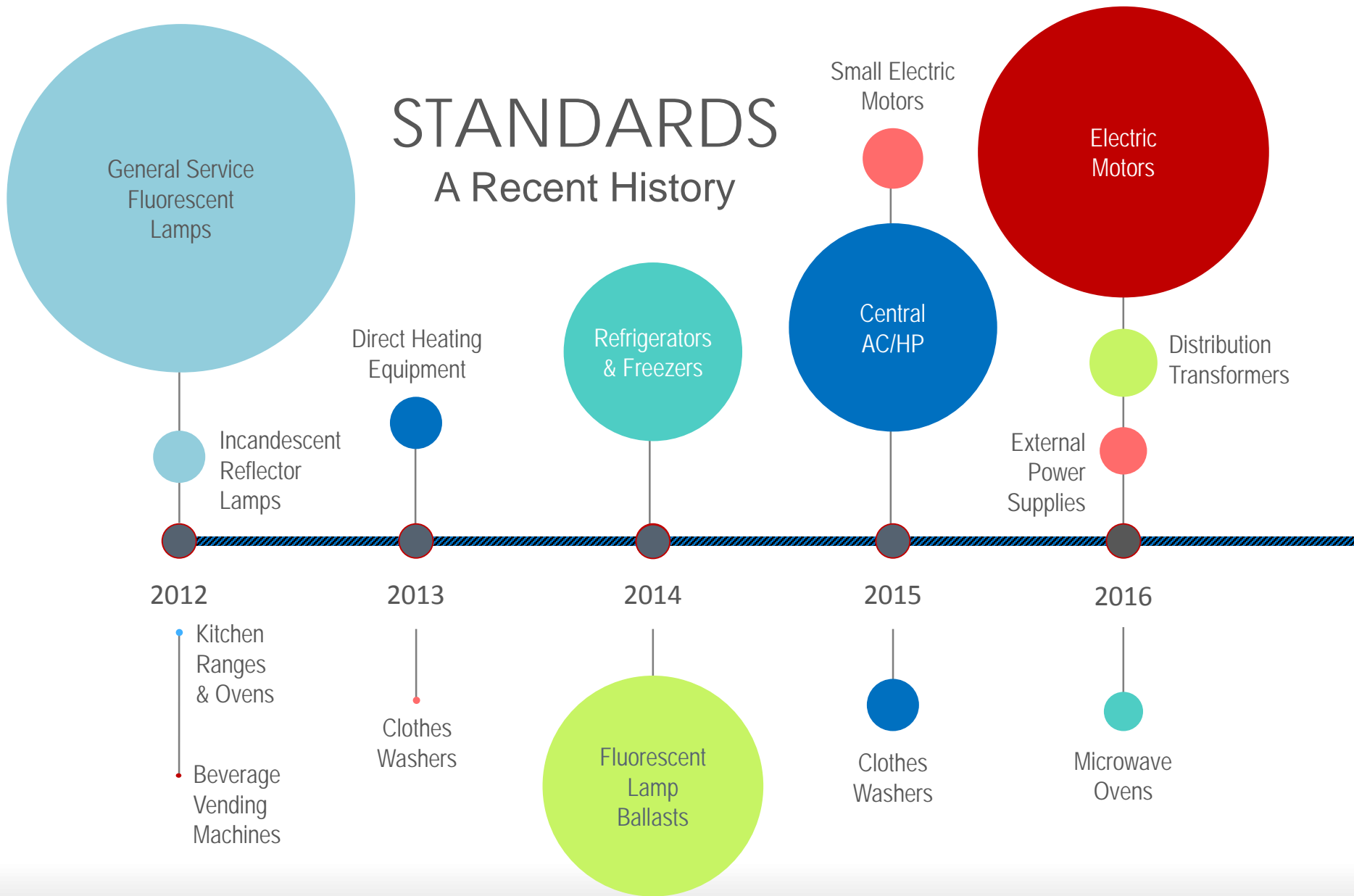


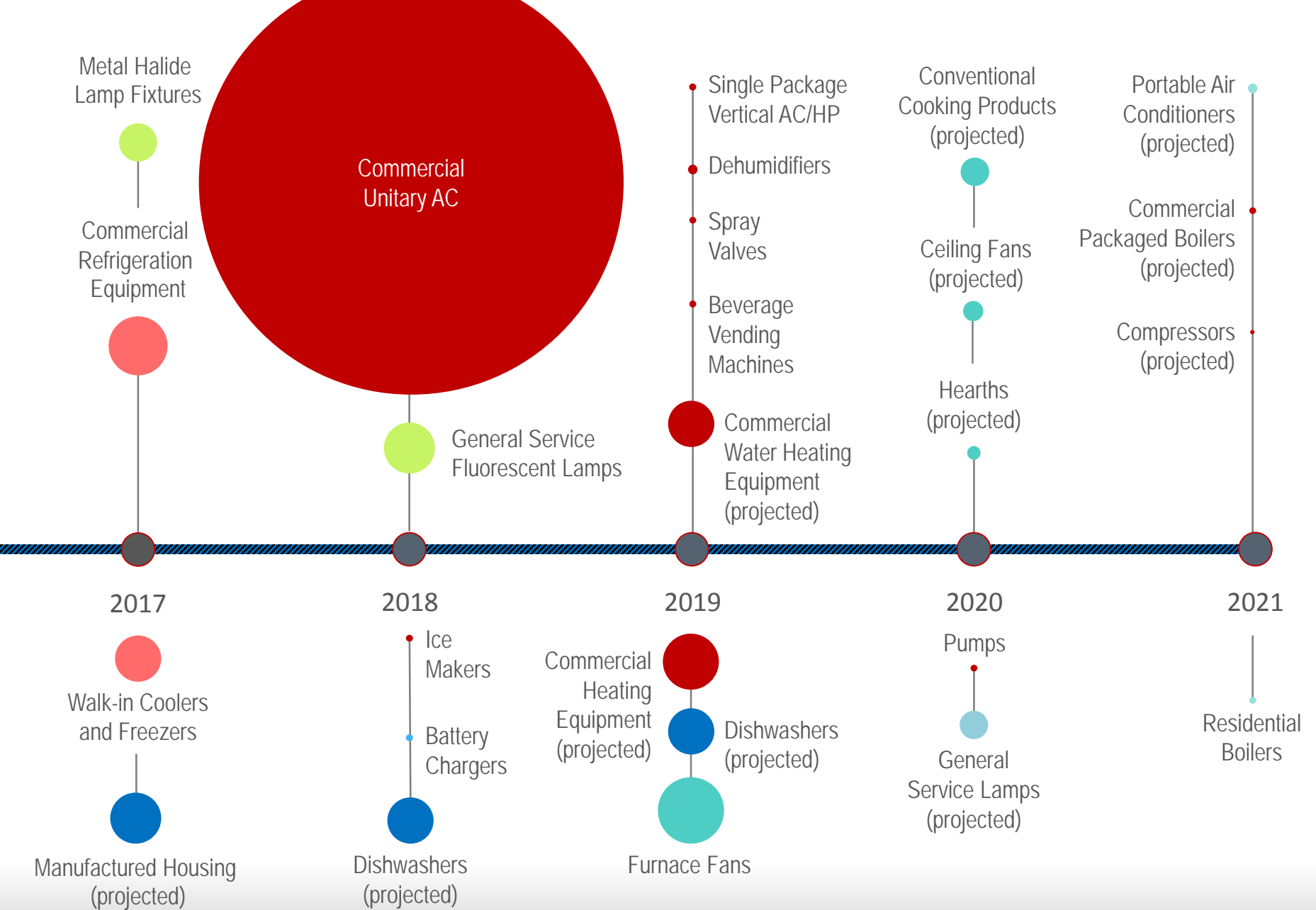
\*As of January 3, 2017 Source: ASAP/ACEEE and US DOE



# STANDARDS

## A Recent History

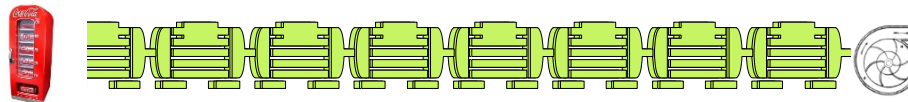




# 21 New Standards Since January 2015\*



**9 Consumer Products**



**10 Commercial/Industrial Equipment**

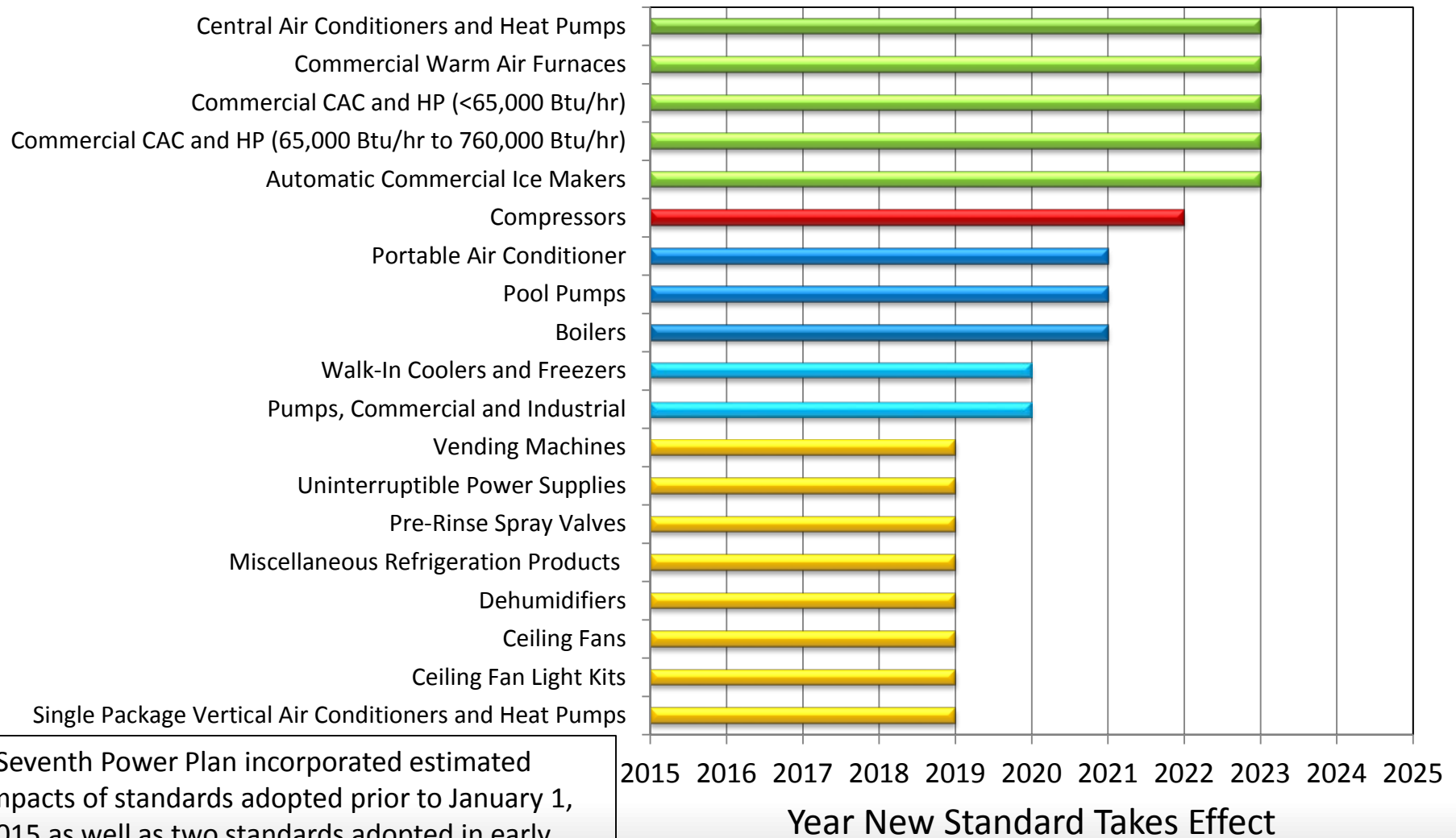


**3 Lighting**

\*Seventh Power Plan incorporated estimated impacts of standards adopted prior to January 1, 2015 and two standards adopted in early 2015

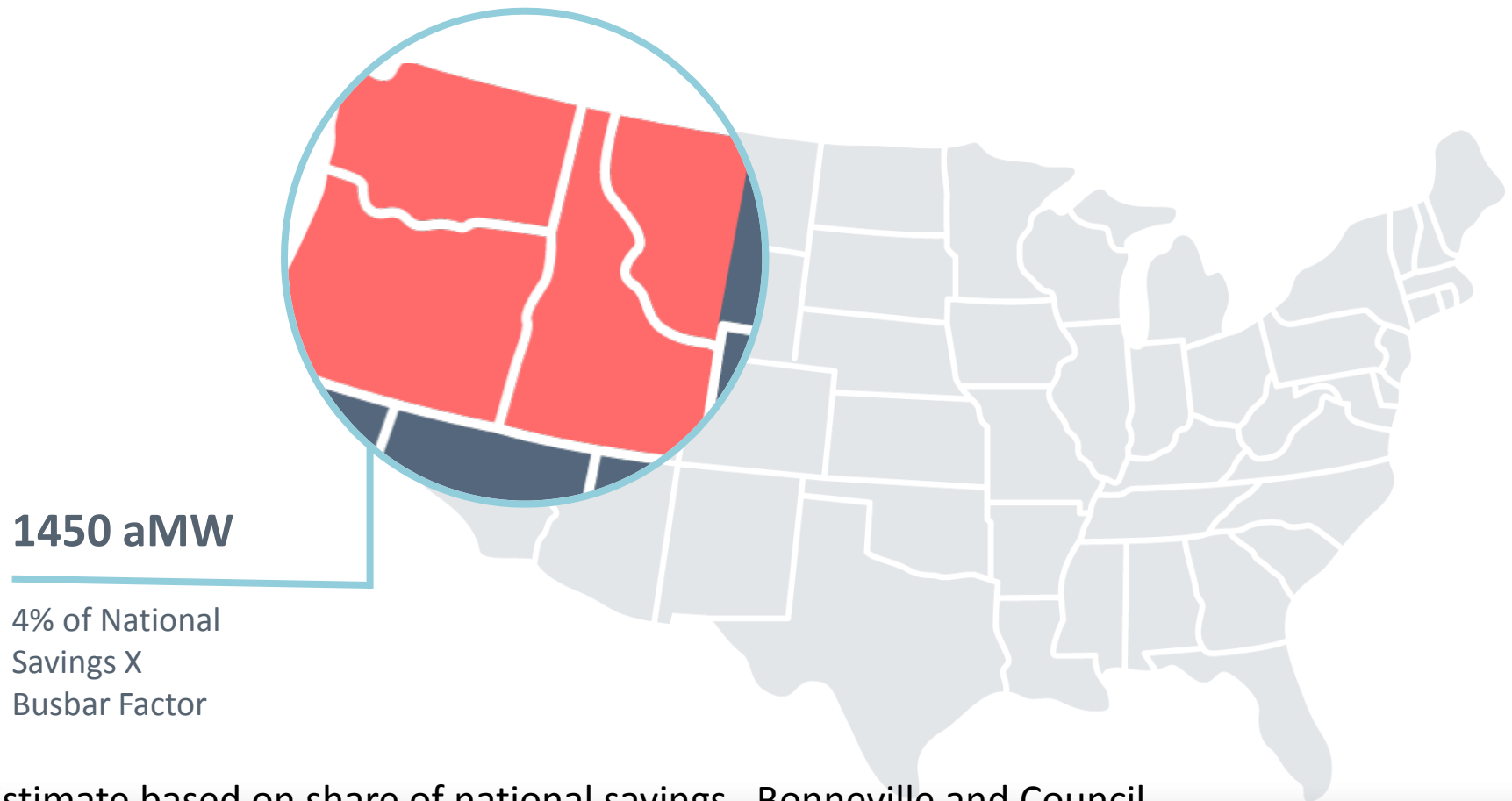


# 19 New Federal Efficiency Standards Issued Since 2015 Will Help Achieve the 7<sup>th</sup> Plan's Energy Efficiency Goals\*



\*Seventh Power Plan incorporated estimated impacts of standards adopted prior to January 1, 2015 as well as two standards adopted in early 2015

# Impact on PNW – Estimated 1450 aMW\*



Estimate based on share of national savings, Bonneville and Council staff conducting more detailed analysis.



7P Baseline

6P Baseline

116  
MWa

1295 MWa

2010

2015

2020

2025

2030

2035

7P Baseline

1450 MWa

6P Baseline

116  
MWa

1295 MWa

2010

2015

2020

2025

2030

2035

# Implications

- Load forecast should reflect impact of standards (i.e., they should be lower, particularly over the long term)
  - Since standards impact all units, load reductions are larger than they would have been with EE programs (unless they achieved 100% market penetration)
- Remaining energy efficiency potential assessment should reflect new baselines
  - So, unless technology improves, remaining potential will be lower
- Efficiency programs should adjust their focus to measures less impacted by federal standards and to new technology
  - Residential and Commercial lighting efficiency upgrade programs will greatly diminish in importance

# But Wait – This Might NOT HAPPEN

- All new regulations are subject to Congressional Review Act
  - 15 of the 21 standards adopted since 2015 may be subject to Congressional review and reversal
- Legislative proposals in House
  - Midnight Rules Act would let Congress invalidate rules in bulk that were enacted in the final year of a presidential term
  - Regulations from the Executive in Need of Scrutiny (REINS Act)
    - Would require that before any new major regulation could take effect, the House and Senate would have to pass a resolution of approval
    - Passed on largely party-line votes in the 114th, 113th and 112th congressional sessions, but died in the Senate



# PLEASE STAND BY