

REGULATORY UPDATE: A TWENTY-FIVE
STATE REVIEW OF REGULATORY REGIMES
AND EFFECTIVE ENERGY-EFFICIENCY
PROGRAMS

AUGUST 17, 2018

RANDY GUNN
ROBERT NEUMANN
CHRISTY ZOOK
QI JIN

TABLE OF CONTENTS

- **Abstract**
- **Regulatory EE Goals Across Twenty-Five States**
- **State Legislative & Regulatory Detail - Measurement and Oversight Activity**
- **Data Analysis of EE Program Performance by State**
- **Conclusions and Recommendations**

ABSTRACT

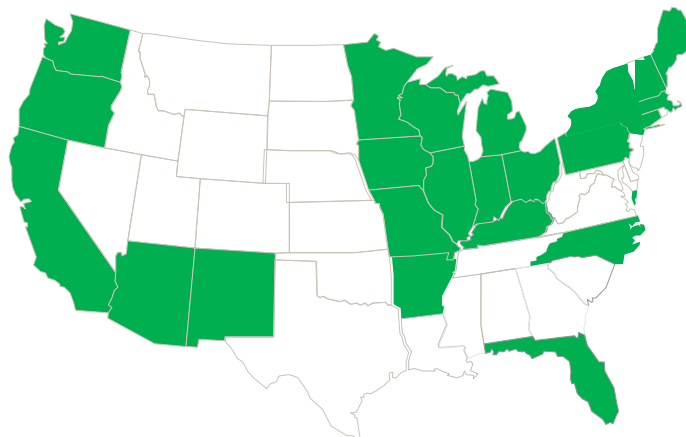
This paper looks at how the statutory and regulatory treatment of energy efficiency programs can influence the development of energy efficiency programs at the state level.

- U.S. regulatory regimes are confined to states or regions with differing approaches that provide us with a natural experiment.
- We compare statutory and regulatory regimes in twenty-five states to determine:
 - What can be learned by comparing the success of EE programs across these various experiments?
 - What does that tell us about the best way to encourage energy efficiency?

REVIEW OF TWENTY-FIVE STATES

The twenty-five states are: AR, AZ, CA, CT, FL, IA, IL, IN, KS, MA, MD, ME, MI, MN, MO, NC, NH, NY, OH, OR, NM, PA, VT, WA, WI.

- In 2012, the original nine states reviewed were IL, IA, IN, KS, MN, MO, OH, PA and WI
- In 2014, an additional six states were added: AZ, CA, MA, MI, NH and NY
- In 2016 we added AR, MD, NC, VT and WA
- In 2018 we added CT, FL, ME, OR and NM
- States were chosen based upon geographic diversity and the varied EE regulatory approaches they offer
- The variety of state-specific regulatory regimes across the states provides a natural EE experiment in the region

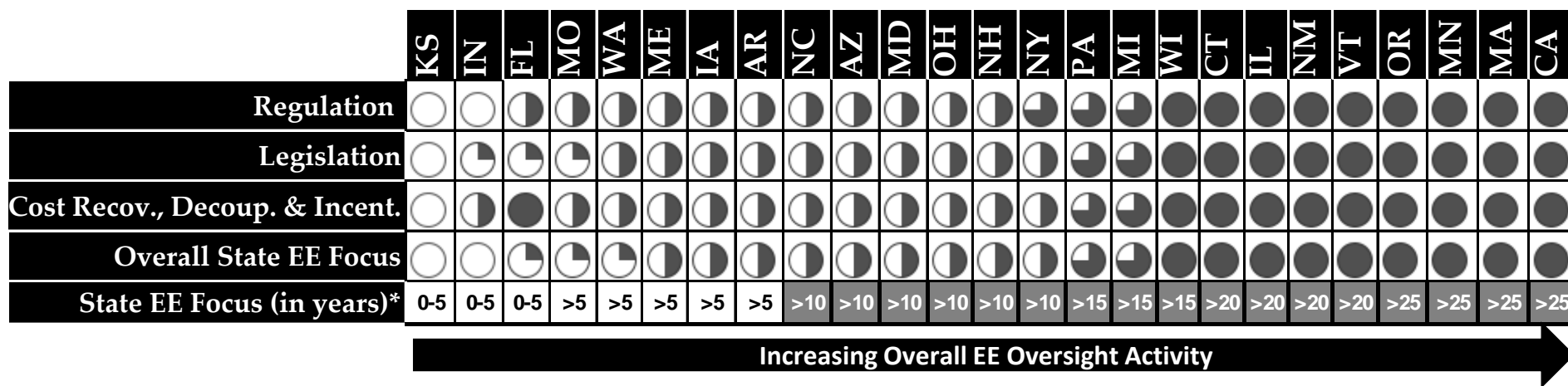


In order to understand the varied EE regulatory approaches, we reviewed a wide range of publicly available data, assessed various state and utility reports and spoke with experts.

- Features of regulatory and statutory provisions include:
 - State-level normalized energy savings goals and program costs
 - Program cost recovery provisions
 - Financial incentives and penalties
- **= Goals + Incentives:** In sum, EE goals and a variety of financial incentives can be set to actively pursue EE savings.

LEGISLATIVE AND REGULATORY DETAIL

Each state's mix of provisions can be summarized in high-level findings comparing "intensity" of effort in each category as follows:



Key:
No Activity
Light Activity
Moderate Activity
Strong Activity
Comprehensive Activity

* Years include predecessor state commission energy planning programs (e.g., early demand-side management planning)

LEGISLATIVE AND REGULATORY DETAIL - SUMMARY

There are varying degrees of Legislative and Regulatory oversight within all states – KS and IN have the least and CA and MA have the most oversight.

Most Oversight

CA, MA and MN are at the opposite end of the EE spectrum with EE goals established by the legislature and those laws are implemented by the commissions. **Minnesota** has cost recovery of programs, performance incentives in place and decoupling initiatives underway.

All States

All states have some level of legislative or regulatory activity, but there are varying degrees of EE regulatory and legislative initiatives underway.

Least Oversight

Kansas has no legislation and limited state commission initiated EE cases – EE programs are established by utilities with commission oversight – a cost recovery rider mechanism is used in Kansas.

LEGISLATIVE AND REGULATORY DETAIL - SUMMARY

The remaining states have varying levels and degrees of legislative and regulatory oversight.

Illinois

IL continues to improve in the standings in the past few years based upon new legislation (Future Energy Jobs Act) and overall EE statewide focus, stakeholder group focus and enabling commission action.

AR & MO

MO has statewide and utility goals, implemented through coordinated commission and state efforts, but state goals have not been in place for numerous years. **AR** is a leader in the Southeast and recently passed a 1.2% per year goal.

AZ, CT, MD, MI, NH, NY, OH, PA, VT, WA & WI

AZ, CT, MD, MI, NH, NY, OH, PA, VT, WA and WI are strong contenders given their enabling legislation, regulation and policy goals, which are set clearly so that utilities move toward and implement those goals.

IA, IN & OH

IN and OH have historically achieved EE savings based on statewide goals, but as of 2014, both states froze EE resource standards - however, utilities continue to implement programs with commission oversight. **IA** is in the process of rolling back it's programs, reducing requirements.

DATA ANALYSIS – DATA SOURCES

We gathered state utility EE savings, cost and baseline sales data from three key sources:

- 1) Utility and EE program data from utility EE reports submitted to state commissions.
 - 2) Data obtained from utilities through interviews and annual reports.
 - 3) Energy Information Administration (EIA) 861 data on baseline sales, revenues, and peak demands.
- To compare the performance of each state, we combined utility savings and cost data in their respective states to establish an estimate of the states' energy efficiency performance.
 - Where possible, we selected the largest utilities in each state to jointly account for at least 50% of the state's sales as reported in EIA 861.

We benchmarked seventy-four utilities across the twenty-five policy-diverse states using normalizing criteria.

The normalizing criteria are 2016 data on:

- Verified gross electric energy savings at the meter as a percentage of baseline electric sales, and
- Program costs per first year kWh saved for the 2016 program year. *All \$/kWh are first year.*
- Key points:
 - ❑ Gross savings were noted when not available or verified
 - ❑ Also, savings reported at the generator are adjusted for a line-loss factor to approximate “at the meter” savings
 - ❑ Program costs analyzed include the sum of the total direct and indirect utility costs for the year – direct costs are the costs for implementation of EE programs and indirect costs are the administrative costs, incentive costs and EM&V costs (*if applicable, since not every utility conducts EM&V*)

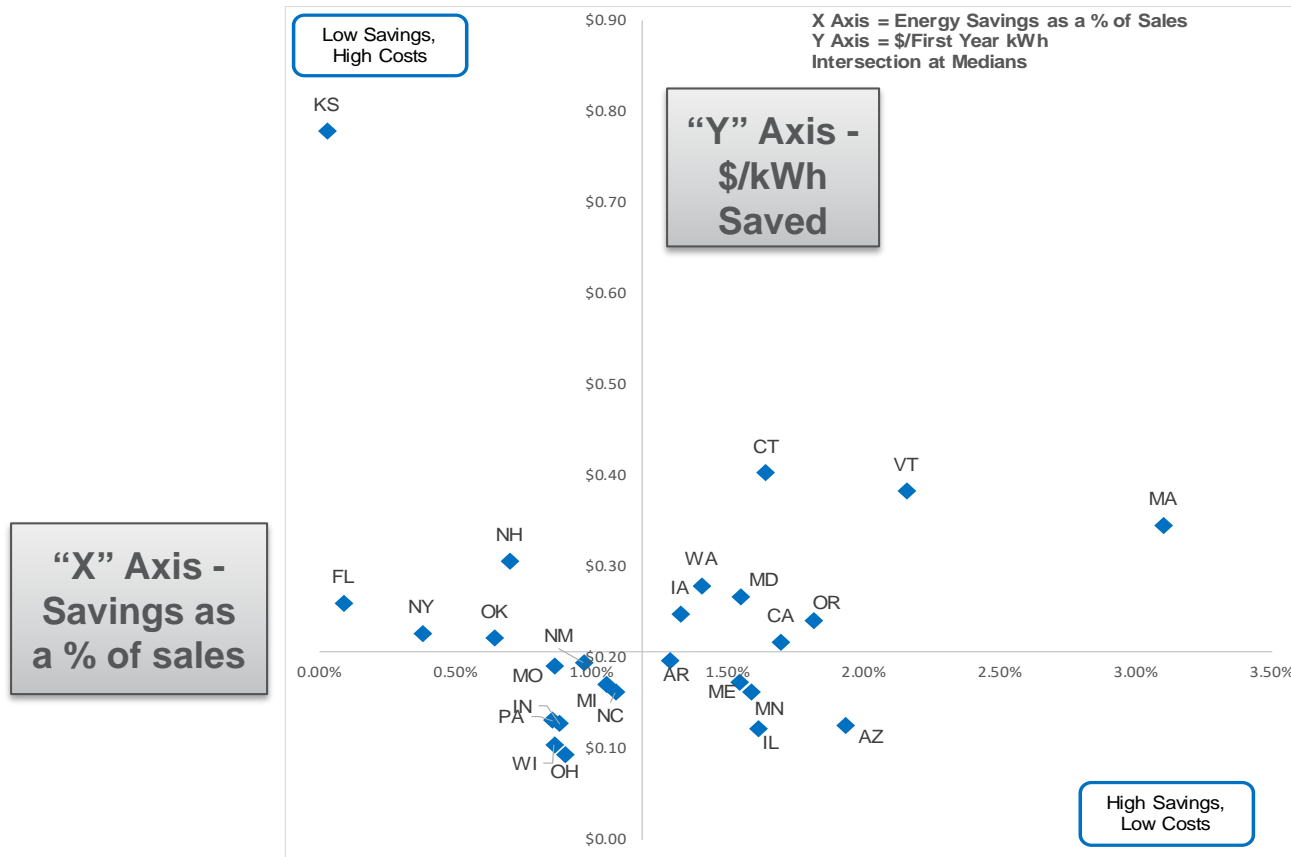
DATA METHODOLOGY – 74 UTILITIES

Table outlines states, utilities and the sources of data:

State	Benchmarking Data Source	Total GWh Savings	Program Spending \$M	Total GWh Sales	Total GWh Savings / Sales	\$/kWh	Utility % of State Sales in EIA 861
AR	Annual Report 2015	316	\$62.2	24,530	1.29%	\$0.20	53%
AZ	Annual Report 2016	714	\$89.8	36,917	1.93%	\$0.13	47%
CA	Annual Report 2016, EIA 861	3,752	\$812.4	221,188	1.70%	\$0.22	86%
CT	NEEP-REED Database 2016	438	\$176.5	26,726	1.64%	\$0.40	93%
FL	Annual Report 2016	130	\$33.7	148,131	0.09%	\$0.26	63%
IA	Annual Report 2016	482	\$119.2	36,330	1.33%	\$0.25	75%
IL	Annual Report 2016	2,010	\$245.6	124,738	1.61%	\$0.12	89%
IN	Annual Report 2016, EIA 861	516	\$65.6	58,529	0.88%	\$0.13	56%
KS	EIA 861	1	\$0.5	2,343	0.03%	\$0.78	6%
MA	NEEP-REED Database 2016	1,389	\$479.1	44,781	3.10%	\$0.34	84%
MD	NEEP-REED Database 2016	911	\$243.0	58,836	1.55%	\$0.27	97%
ME	NEEP-REED Database 2016	177	\$30.5	11,449	1.54%	\$0.17	100%
MI	Annual Report 2016	906	\$154.4	85,887	1.06%	\$0.17	82%
MN	Annual Report 2016	609	\$98.9	38,454	1.58%	\$0.16	58%
MO	Annual Report 2016	356	\$67.9	41,286	0.86%	\$0.19	53%
NC	Annual Report 2016, EIA 861	1,036	\$167.7	95,310	1.09%	\$0.16	71%
NH	NEEP-REED Database 2016	70	\$21.3	9,966	0.70%	\$0.31	91%
NM	Annual Report 2016, EIA 861	138	\$26.8	14,231	0.97%	\$0.19	62%
NY	NEEP-REED Database 2016, EIA 861	541	\$122.4	143,321	0.38%	\$0.23	99%
OH	Annual Report 2016	1,005	\$93.2	111,363	0.90%	\$0.09	74%
OK	Annual Report 2016	274	\$60.6	42,479	0.64%	\$0.22	69%
OR	Annual Report 2016	583	\$140.3	32,105	1.81%	\$0.24	68%
PA	Annual Report 2016	1,188	\$155.5	138,699	0.86%	\$0.13	96%
VT	NEEP-REED Database 2016	112	\$42.7	5,176	2.16%	\$0.38	94%
WA	Annual Report 2015 and 2016, EIA 861	735	\$204.9	52,245	1.41%	\$0.28	59%
WI	Annual Report 2016	602	\$62.6	69,736	0.86%	\$0.10	100%

DATA AND BENCHMARKING

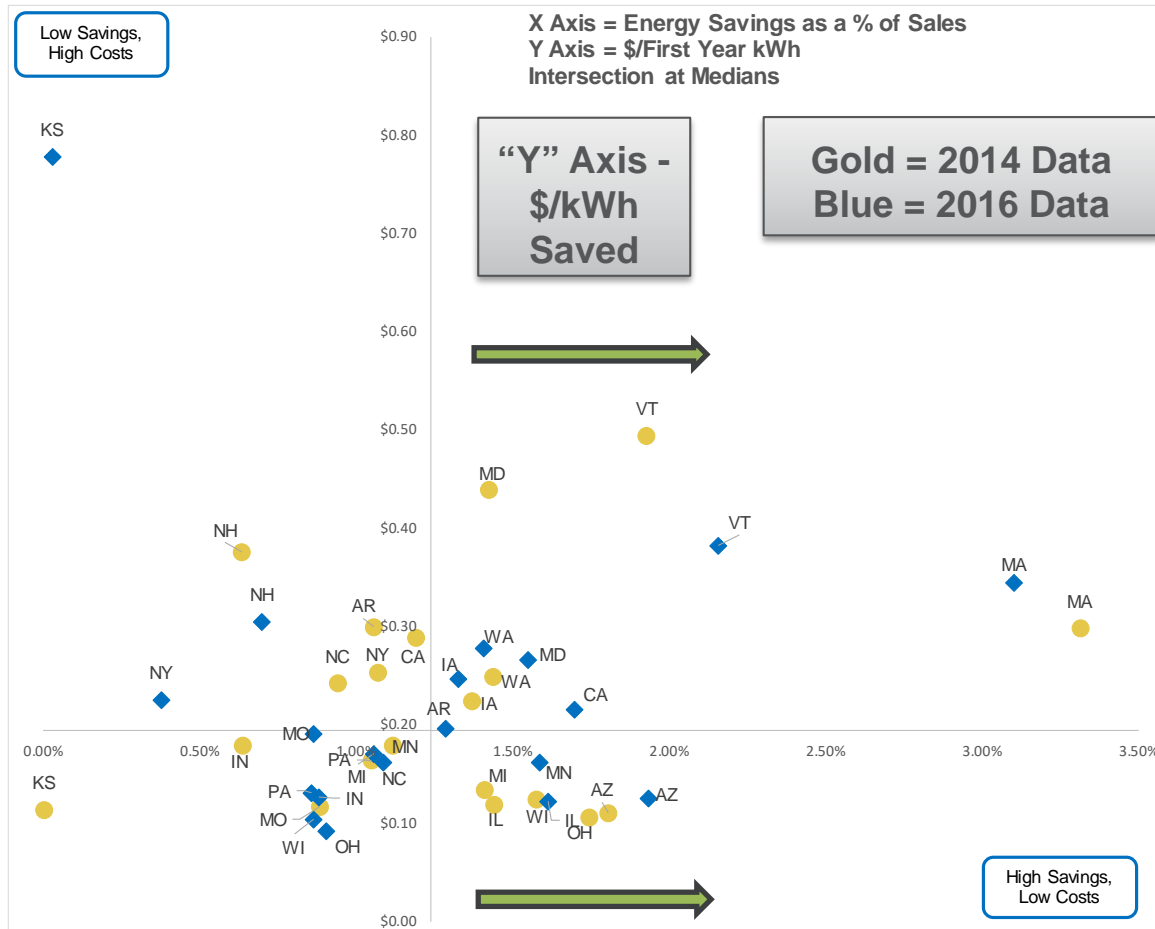
We set the data target values of 1.2% of total savings based on sales and costs of \$0.21/kWh (these are the median values).



Savings as a Percent of Sales vs. \$/kWh by State. Source: 2015/2016 annual reports, EIA 861, NEEP-REED

DATA AND BENCHMARKING

2014 cf. 2016 Savings as a Percent of Sales vs. \$/kWh by State:



Comparison of 2016 Data to 2014 Data. Source: 2016 and 2014 annual reports, EIA 861, NEEP-REED

CONCLUSIONS AND RECOMMENDATIONS

Benchmarking reveals that states with targets set by legislatures and enabled by commissions appear to have made more progress than states without such detailed structures.

- The analysis shows that costs have decreased in 9 states, leveled out in in 3 states and increased in only 2 states.
- Energy savings and cost data show that energy savings continue to improve over time - presumably based on program improvements, market knowledge and customer engagement. This is true across a range of states and across different program and portfolio structures.
- States with targets set by a legislature and enabled by a state commission have made more progress than states where there has been limited action EE initiatives.
- The energy efficiency savings and cost data appear to show that varying levels of energy savings are being achieved by a variety of states and program administrators (*regardless of the legislative or policy action*).

CONCLUSIONS AND RECOMMENDATIONS

States that achieve relatively high levels of energy savings appear to share a number of similar EE-related regulations, policies and practices that have been in place for several years.

- States with greater energy savings tend to:
 - Specify energy efficiency goals that utilities or agencies must meet - this is true even with varying approaches to policy
 - Most of these states specify penalties for not meeting the energy savings goals.
- Penalties are in place, but few have been assessed since states are mostly meeting goals.
- States with more recent legislation and regulatory activity appear able to catch-up relatively quickly.
- Improved savings tend to be the result, albeit with different savings and costs levels when states focus on EE structure and policy.

CONTACTS

RANDY GUNN

Managing Director

(312) 583.5714

Randy.Gunn@Navigant.com

ROB NEUMANN

Associate Director

(312) 583.2176

Rob.Neumann@Navigant.com

CHRISTINE ZOOK

Senior Consultant

(312) 583.4179

Christine.Zook@Navigant.com

QI JIN

Senior Consultant

(303) 728.2509

Qi.Jin@Navigant.com