



## **Local Energy Efficiency Partnerships**

Saturday, December 10, 2016  
West Virginia University College of Law  
Morgantown, WV

# Outline

- Background: What is EEWV?
- Why Energy Efficiency?
- Existing Energy Efficiency (EE) programs in West Virginia
- What EE programs should be adopted
- How that will happen

# About EEWV

- Our mission is to promote energy efficiency among residents, local governments, public schools, businesses, and industrial users in West Virginia and to create a strong statewide coalition in support of pro-energy efficiency programs.



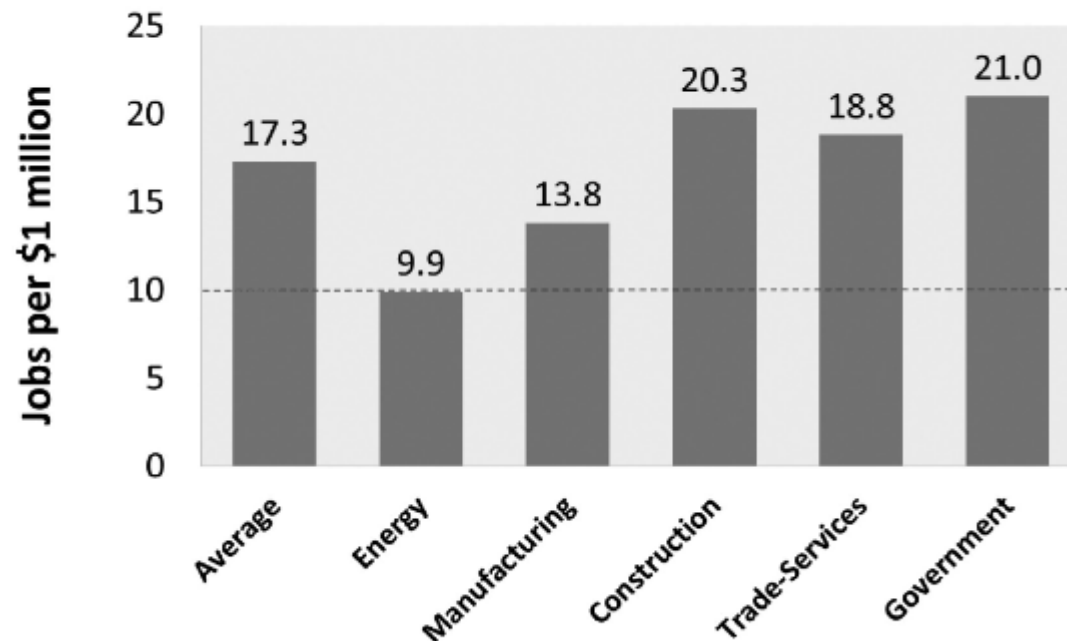
# Need for energy efficiency in WV

- Reduce greenhouse gas emissions and air pollution
- Protect residents and businesses against rising electric rates
- Create space for advancing other clean energy goals
- “Non-energy benefits”
- **Create jobs**

# Why Energy Efficiency?

## JOBS: “The economy, stupid”

*Figure 1. Jobs per Million Dollars of Revenue by Key Sectors of the US Economy*



*Source: MIG 2011 and ACEEE 2011*

# How will we get there?

- PSC interventions
- Legislation
- Assistance from the businesses that stand to benefit
- Community engagement

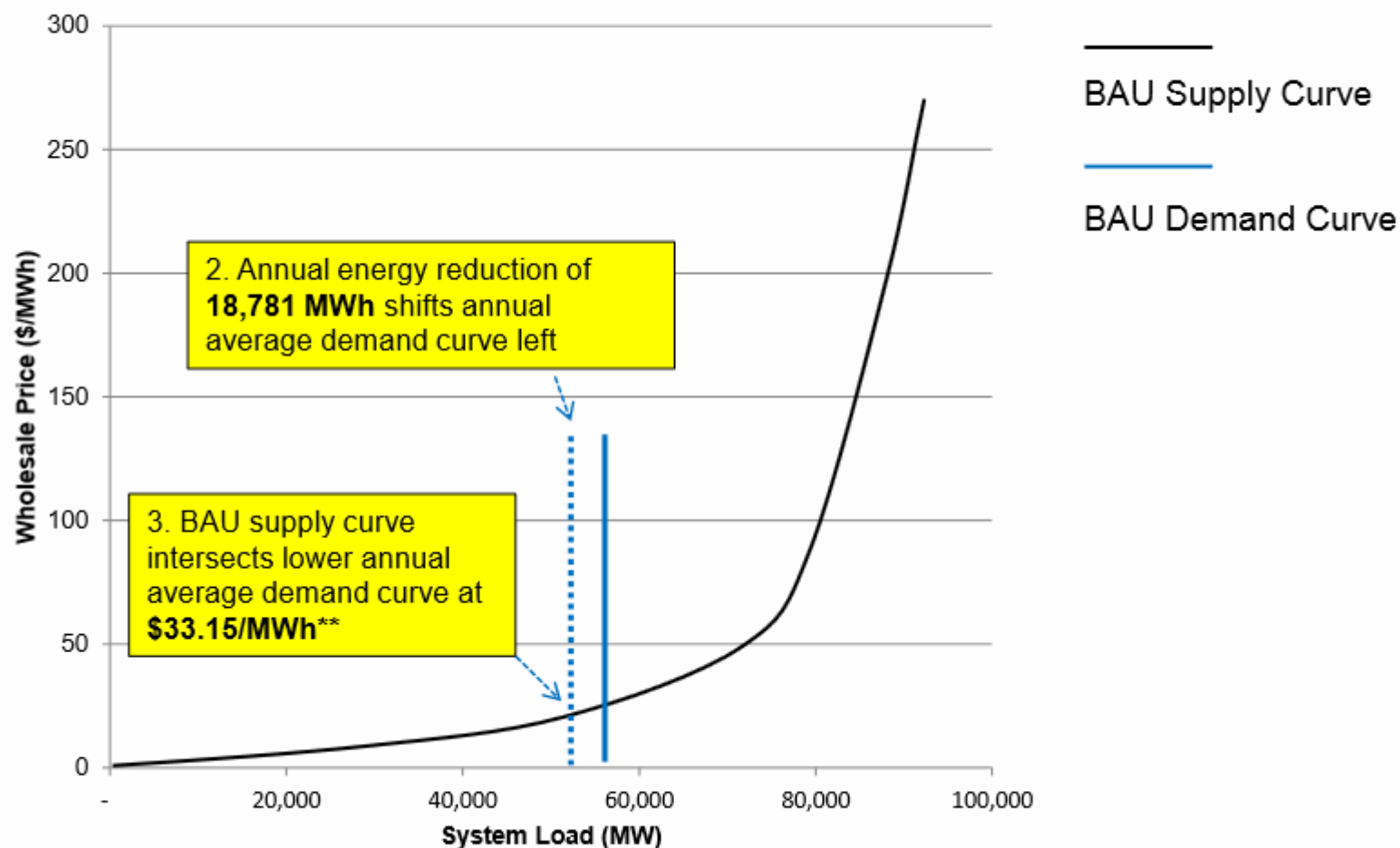
# Synapse Report on price suppression

## EXAMPLE of Study Results

	<b>Savings 2010-2020 (Million \$2012)</b>
<b>Program participants – savings from lower energy use</b>	<b>\$3,370</b>
<b>All OH ratepayers – savings from lower prices for wholesale capacity and energy (Price Mitigation)</b>	<b>\$2,200</b>
<b>Gross Savings</b>	<b>\$5,570</b>
<b>Utility Program Administration Costs</b>	<b>(\$2,800)</b>
<b>Net Savings</b>	<b>\$2,770</b>

# Synapse Report on price suppression

## Step 2 – Lower Energy; BAU Supply; Lower Price



\*\*annual load weighted effect from regression fitted to hourly loads and prices



# Non-energy benefits



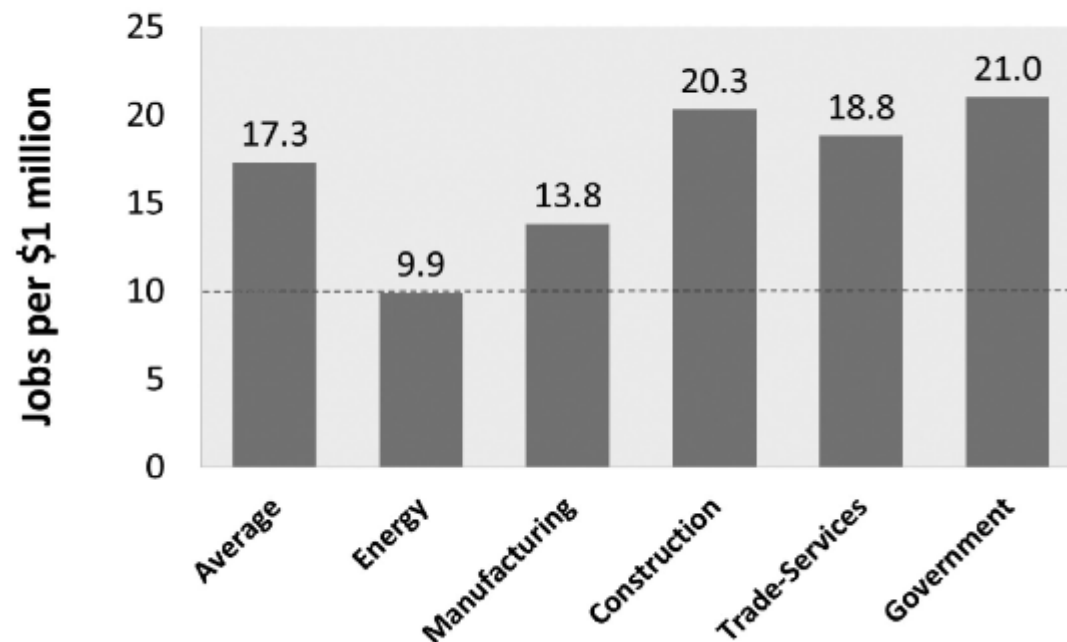
# Non-energy benefits

- Higher satisfaction from tenants / ability to pay/stay in a rented space
  - Lower maintenance
  - Better lighting
  - More comfortable
  - Aesthetically better
- Worker productivity increases by 6-16%
- Health benefits (less mold, extreme temps, etc.)

# Non-energy benefits

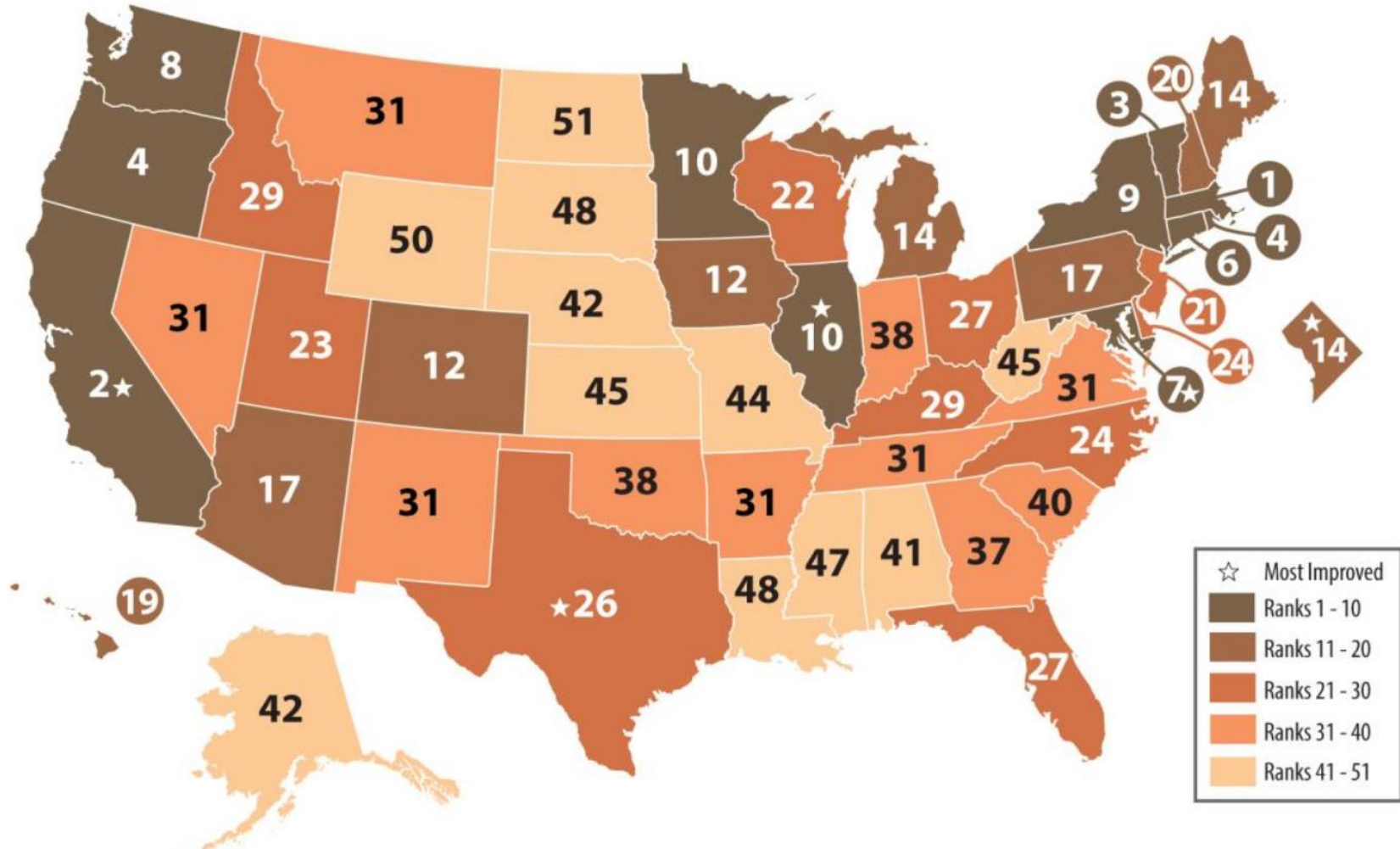
## JOBS: “The economy, stupid”

*Figure 1. Jobs per Million Dollars of Revenue by Key Sectors of the US Economy*



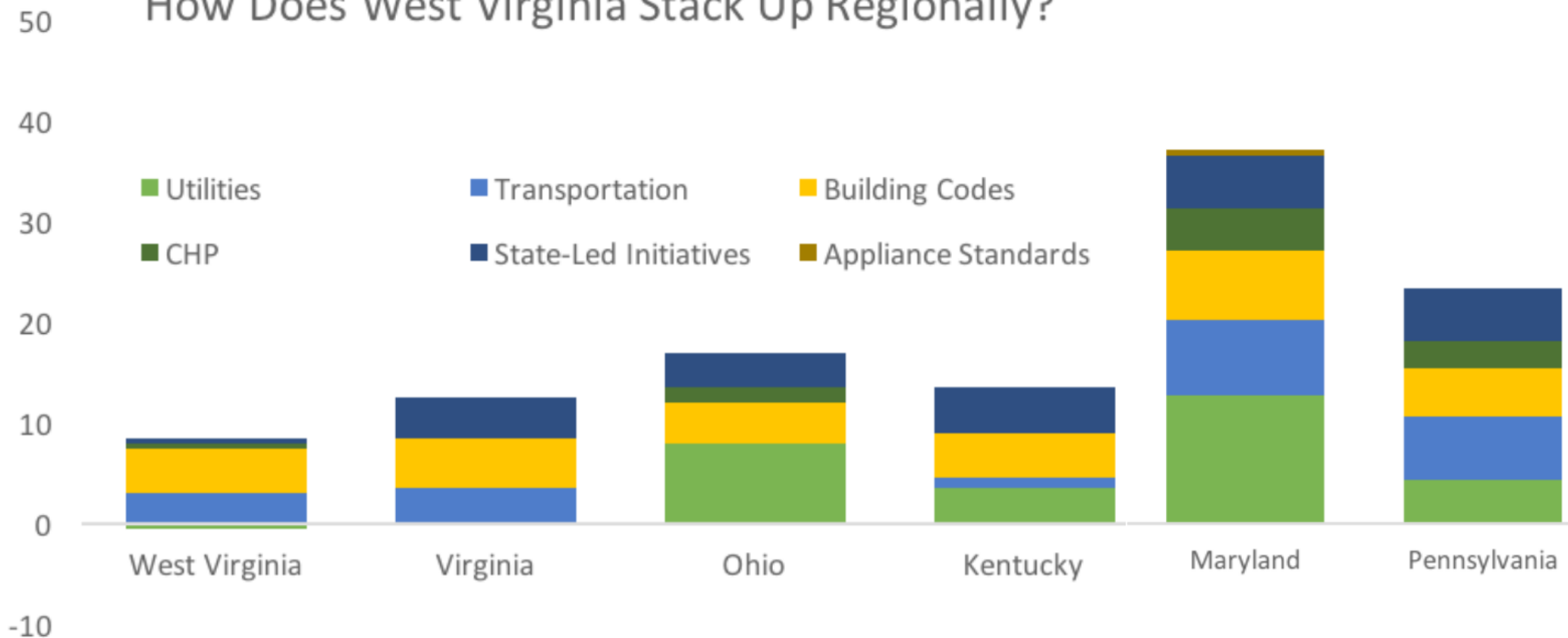
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# How does WV compare to other states?



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How Does West Virginia Stack Up Regionally?



# Savings as a % of 2014 retail sales

Table 13. 2014 net incremental electricity savings by state

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Rhode Island	268,468	3.51%	6
Massachusetts	1,339,026	2.50%	6
Vermont	102,770	1.85%	5.5
California †	4,082,256	1.58%	4.5
Arizona	1,190,123	1.57%	4.5
Hawaii	144,240	1.53%	4.5
Michigan	1,386,912	1.35%	4
Connecticut	387,863	1.32%	3.5
Maryland	792,354	1.29%	3.5
Oregon	595,548	1.27%	3.5
Minnesota †	824,756	1.22%	3.5
Maine	145,413	1.21%	3.5
Iowa	550,035	1.17%	3.5
Illinois	1,513,045	1.08%	3
Ohio*	1,565,049	1.05%	3
Washington †	946,565	1.02%	3
New York	1,338,551	0.92%	2.5
Colorado <sup>1</sup>	472,000	0.88%	2.5
Wisconsin	527,283	0.76%	2
Indiana <sup>2</sup>	768,927	0.74%	2
Utah	213,468	0.71%	2
Idaho	159,310	0.81%	2
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South Carolina	435,399	0.53%	1.5
Arkansas	249,303	0.53%	1.5
Missouri †	431,218	0.52%	1.5
Kentucky	286,272	0.37%	1
Oklahoma	180,032	0.30%	0.5
Tennessee	292,100	0.30%	0.5
Georgia	316,394	0.23%	0.5
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South Dakota	26,056	0.21%	0.5
Texas <sup>3</sup>	728,047	0.19%	0.5
Wyoming*	29,571	0.17%	0.5
Mississippi	75,815	0.15%	0
Florida <sup>4</sup>	329,000	0.15%	0
Alabama	56,045	0.06%	0
Delaware †	4,415	0.04%	0
Alaska*	2,138	0.03%	0
Virginia*	26,233	0.02%	0
Louisiana <sup>5</sup>	19,215	0.02%	0
North Dakota*	2,567	0.02%	0
Kansas*	2,224	0.01%	0
Guam	0	0.00%	0
Puerto Rico	0	0.00%	0
Virgin Islands	0	0.00%	0
<b>US total</b>	<b>25,734,569</b>	<b>0.69%</b>	
<b>Median</b>	<b>258,886</b>	<b>0.56%</b>	

Top ten: **1.27% to 3.51%**  
(RI, MA, VT, CA, AZ, HI, MI, CT, MD, OR)

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FirstEnergy: **0.12%**  
(Mon Power & Potomac Edison)

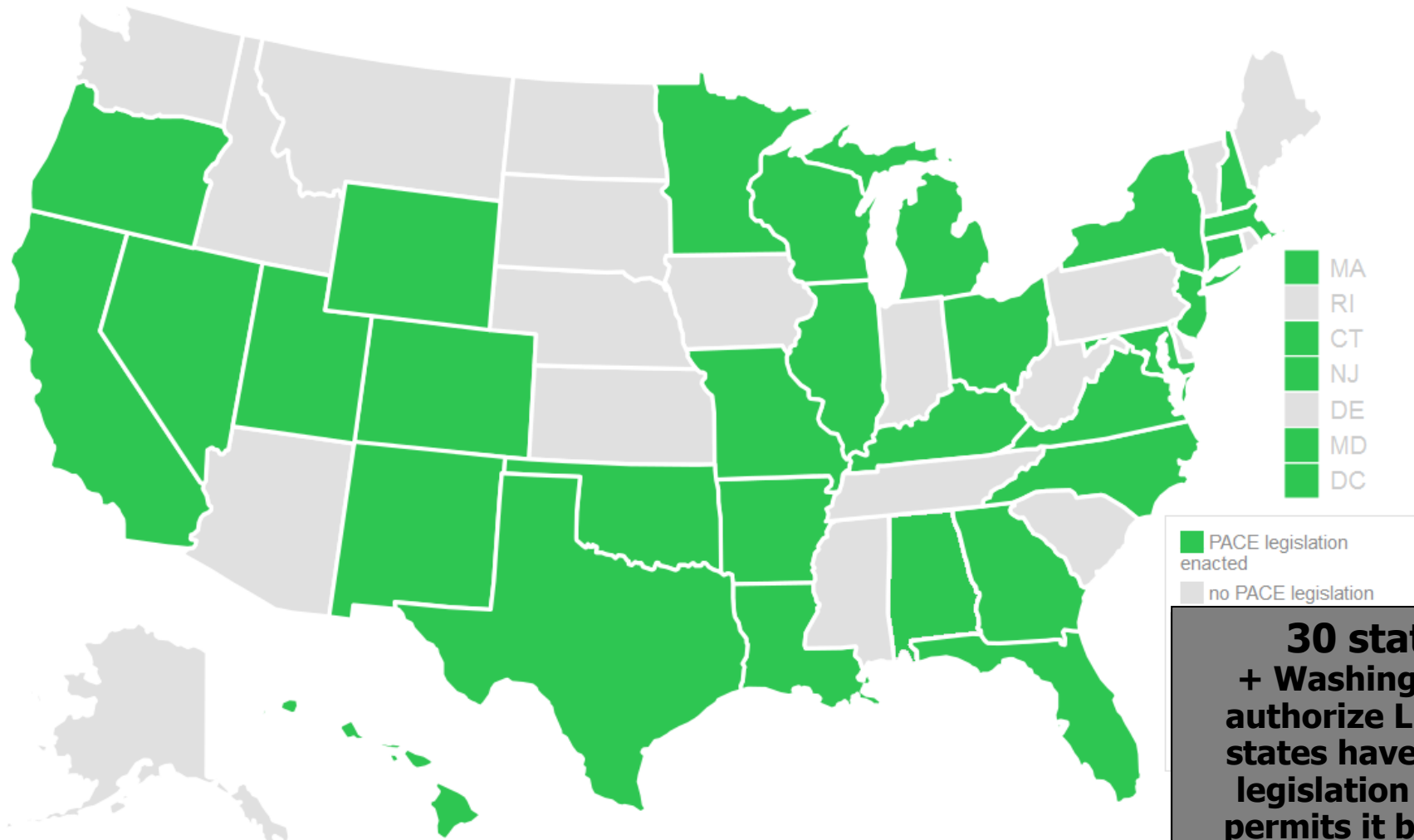
# WV Utility Efficiency Programs

	<u>FirstEnergy</u>	<u>AEP</u>
Energy Assessments	all residential (starting 2017)	all residential
Lighting rebates	Commercial, retail (2017)	retail, commercial, etc.
Other rebates	appliances (starting 2017)	HVAC, recycling fridges, custom C&I, C&I equipment rebates
Peak Reduction	none	\$40/year for a/c

# Local Energy and Efficiency Partnerships (LEEP)

(a/k/a “property-assessed clean energy”)

# The Local Energy Efficiency Partnership Act (“LEEP Act”)



**30 states,  
+ Washington DC,  
authorize LEEP (29  
states have passed  
legislation and HI  
permits it based on  
existing law).**

ENERGY EFFICIENT WEST VIRGINIA

# LEEP: Local Energy & Efficiency Partnerships – what are they??

Funding mechanism for businesses to make energy efficiency upgrades using private capital

Loan value  $\leq$  savings from upgrades

Payback period  $\leq$  20 years

Payments are made on the property tax ticket

If the business sells the building, the loan stays with the building, not the former owner.

The loans are “senior” to other liens on the property, unless the mortgagee says “no.”

# LEEP: Local Energy & Efficiency Partnerships – Key components

State legislation needed to authorize municipalities

Opt-in program for municipalities

Application for businesses within municipalities that opt in

Municipalities should/can reject applications that do not meet certain criteria, including:

- Financial security of the borrower

- Investment-grade energy audit

- Ratio of the cost of upgrades to building value

# LEEP: Local Energy & Efficiency Partnerships – Where we are in WV

2015 and 2016 legislation cosponsored by Rs and Ds:

Republican cosponsors:

Dels. Hanshaw, Ambler, Ashley, Canterbury, Cooper, D. Evans, and Walters;  
Sens. Walters and Blair

Democratic cosponsors:

Dels. Fleischauer, Guthrie, Manchin, and Skinner;  
Sens. Miller, Snyder, and Woelfel



# LEEP: Local Energy & Efficiency Partnerships – Where we are in WV

Groups consulted for current version of the legislation:

Sierra Club, Mountain View Solar, WV-SUN, WV Environmental Council



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Sierra Club, Mountain View Solar, WV-SUN, WV Environmental Council

WV Association of Counties, WV Municipal League, WV Bankers Association, WV Association of Community Bankers, WV Sheriff's Association, FirstEnergy, AEP

# Questions?

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