



Image: CC0/Public Domain

The Midwest Shoots, Does it Score? A Regional Status Update

Greg Ehrendreich & Samarth
Medakkar, MEEA
Weston Berg, ACEEE
Tuesday, February 2, 2020



Presenters

MEEA



Greg
Ehrendreich
Sr. Analyst

MEEA



Samarth
Medakkar
*Policy
Associate*

ACEEE



Weston Berg
*Sr. Researcher,
State Policy*

2021
MIDWEST
ENERGY EFFICIENCY
SPOTLIGHT



#MEEASpotlight

Please note: several of the Spotlight slides have been updated from the versions originally presented on Feb. 2, 2021

TOP 5 ELECTRICITY SAVERS

based on % of retail sales



8.41 million

**MWh of Electricity Saved
(2019)**

TOP 5 NATURAL GAS SAVERS

based on % of retail sales

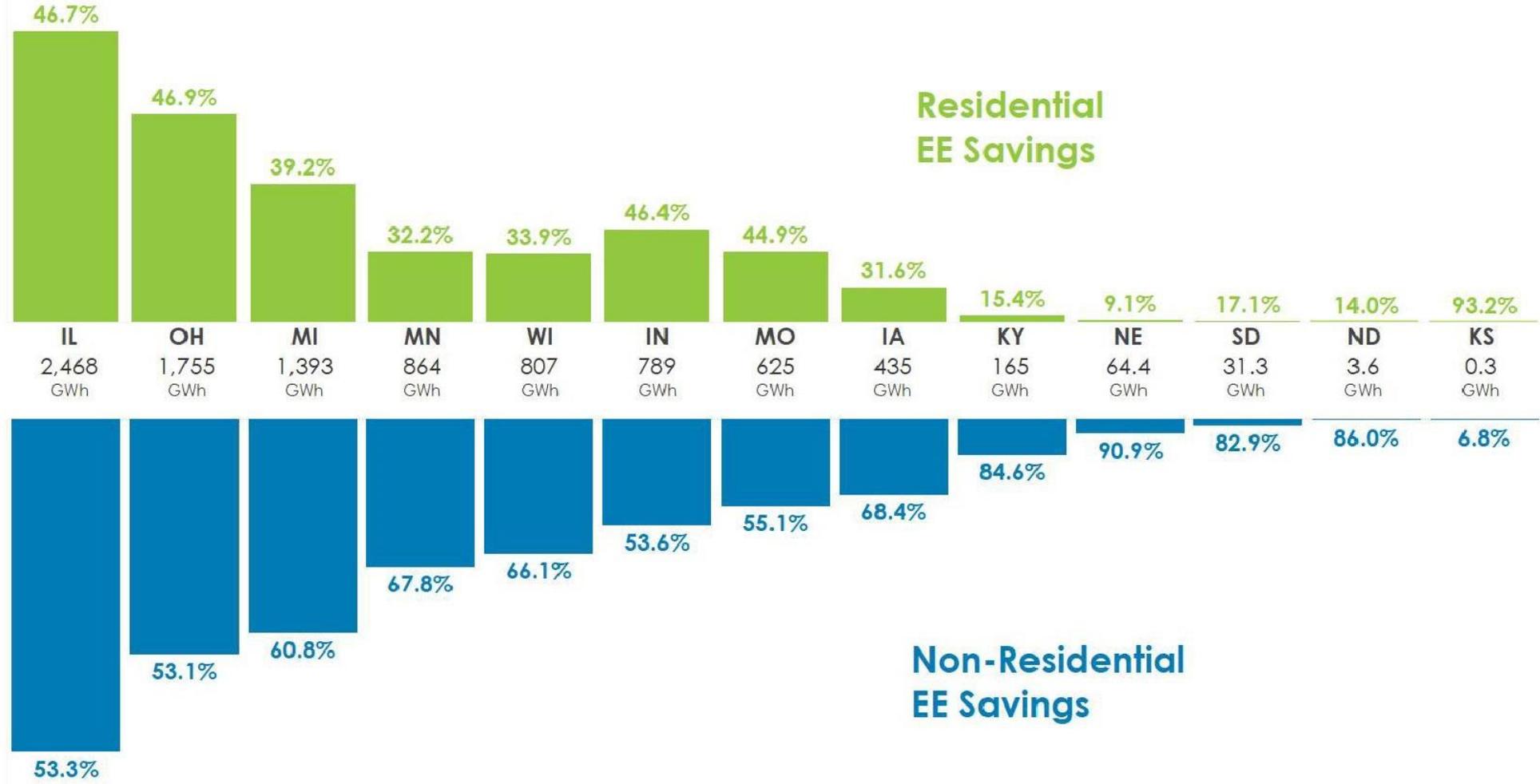


158 million

Therms of Natural Gas Saved
(2019)



EE BY SECTOR



Residential
EE Savings

Non-Residential
EE Savings

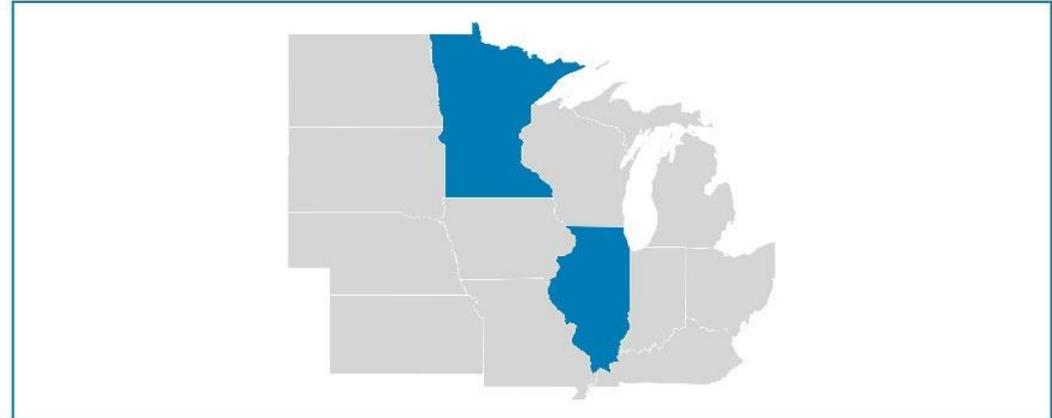


POLICIES & PRACTICES FOR LOW-INCOME EE

Require Low-Income EE



Low-Income EE Spending Requirement



Utility Collaboration on Low-Income EE Programs



Coordination with State Weatherization

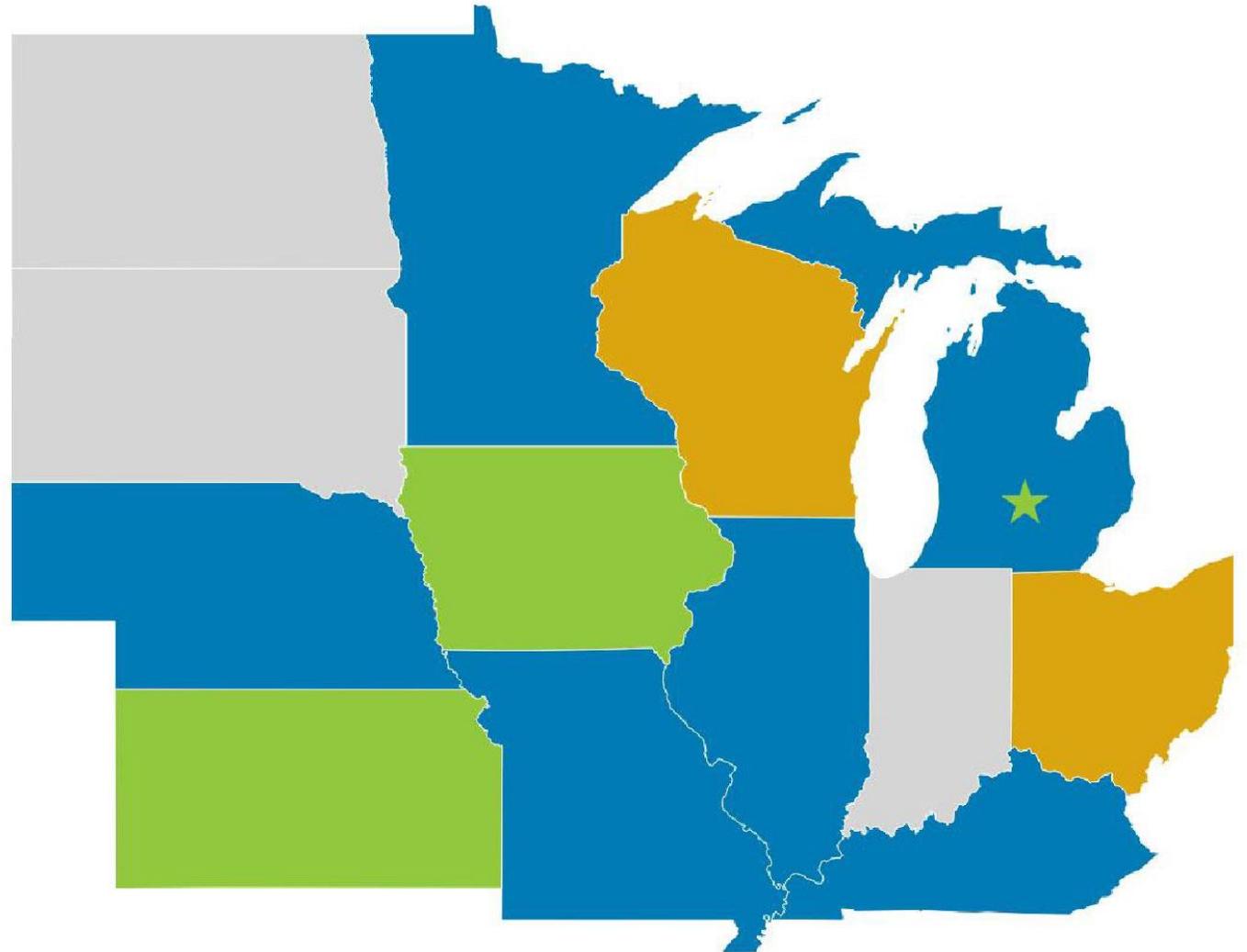




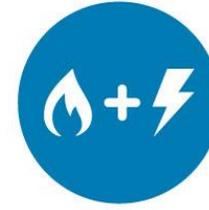
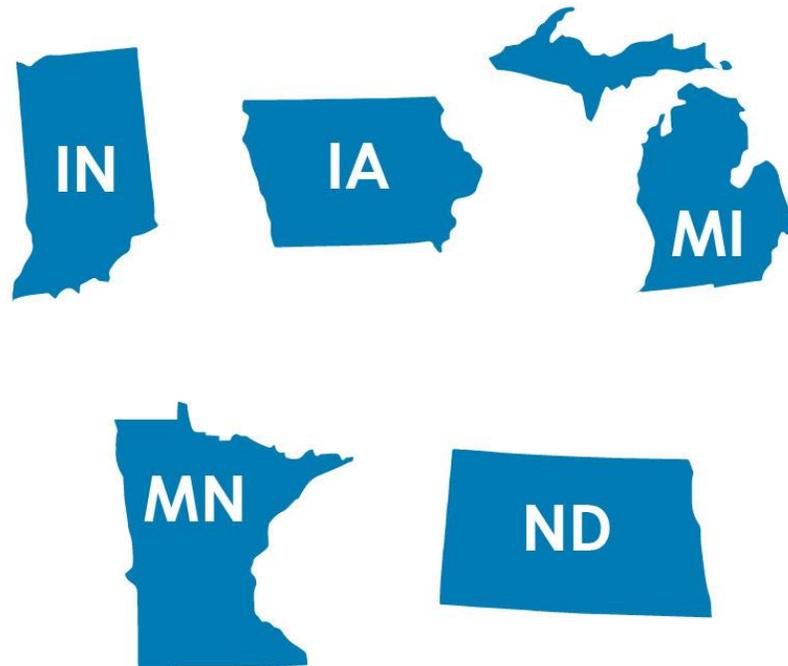
\$675 million

Total PACE Investment (2019)

-  PACE
-  On-bill
-  Both
-  None
-  Green Banks



MOST MWH GENERATED THROUGH CHP



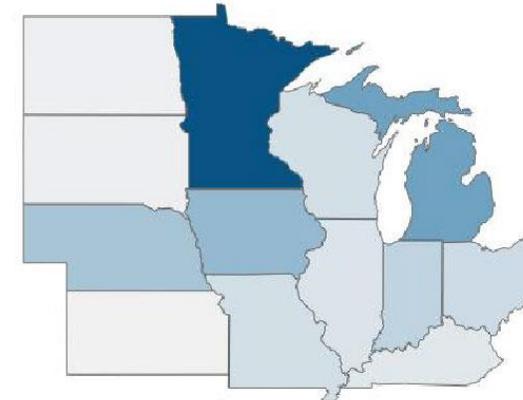
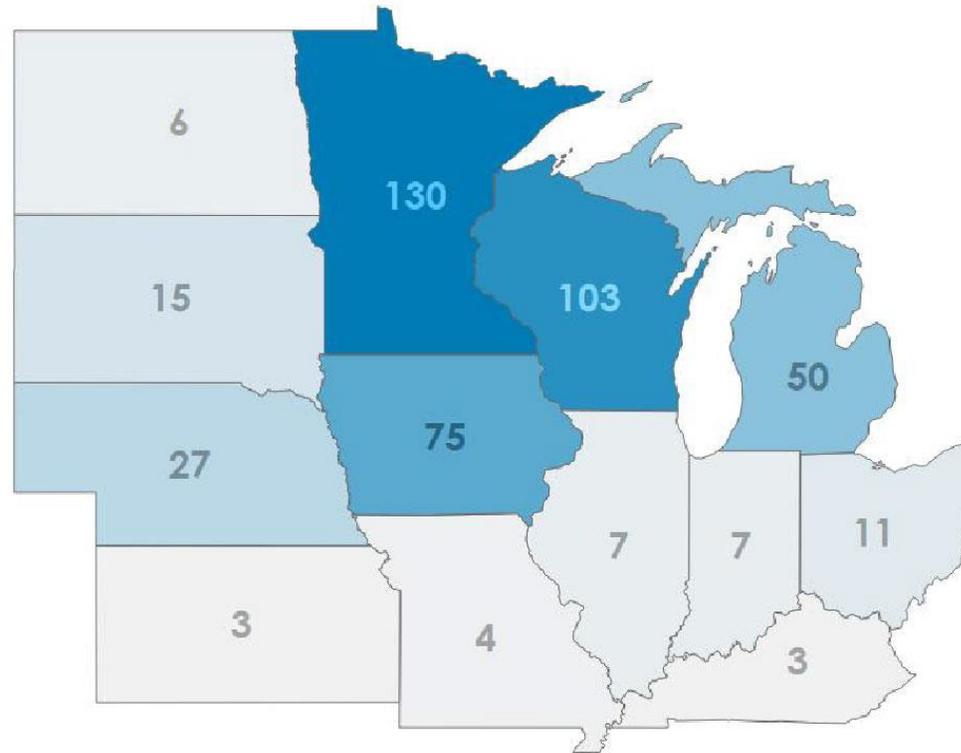
84,042,231

MWh Generated by
Combined Heat and Power
(2019)

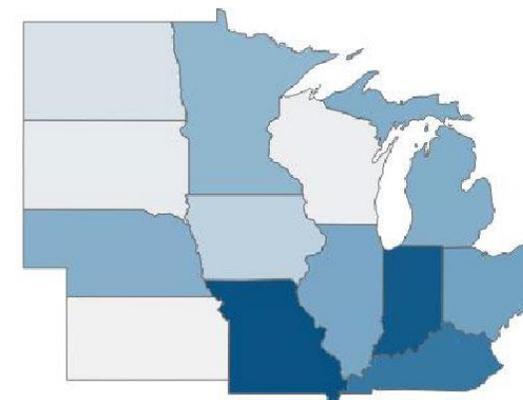


PUBLICLY-OWNED UTILITY HIGHLIGHTS

Number of Publicly Owned Utilities (POUs) with Reported Electricity Savings (2019)



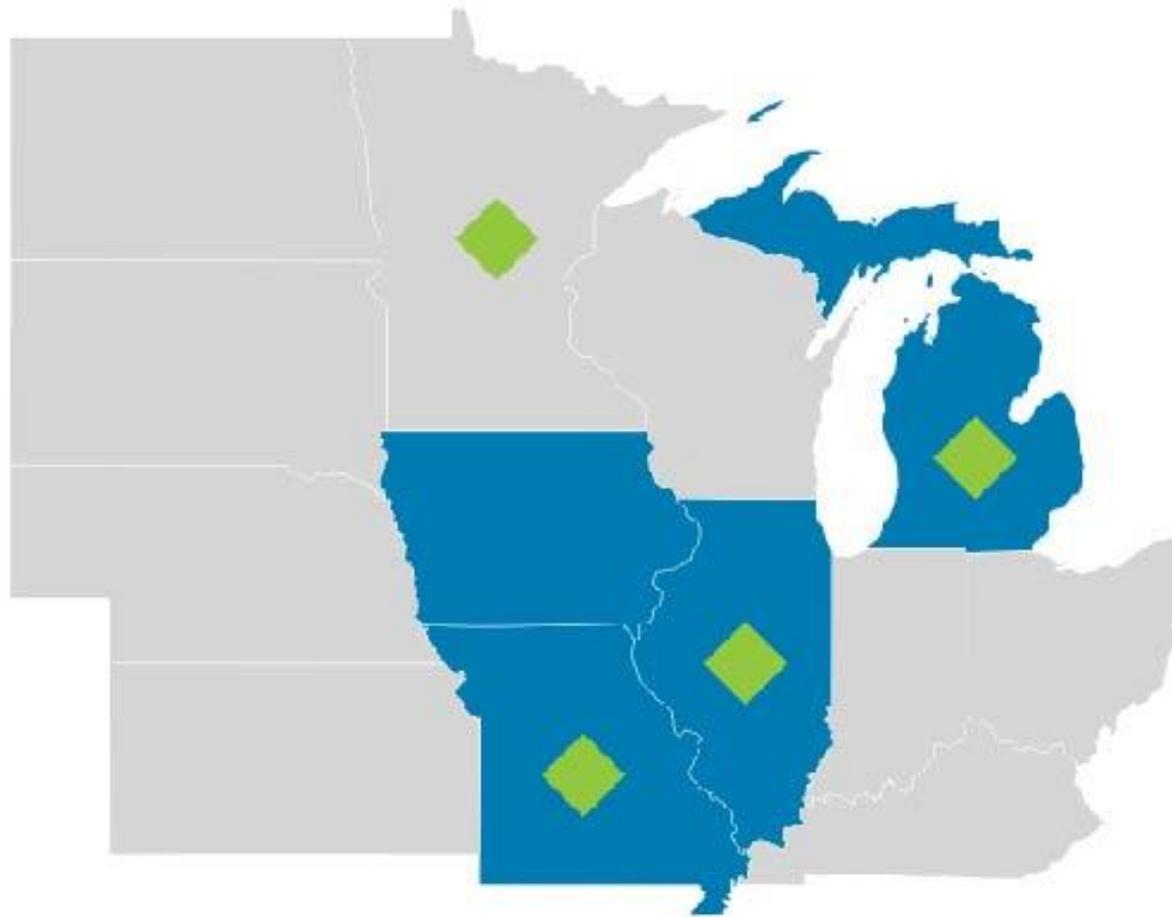
Total MWh Saved by POU's



Avg. MWh Saved per POU



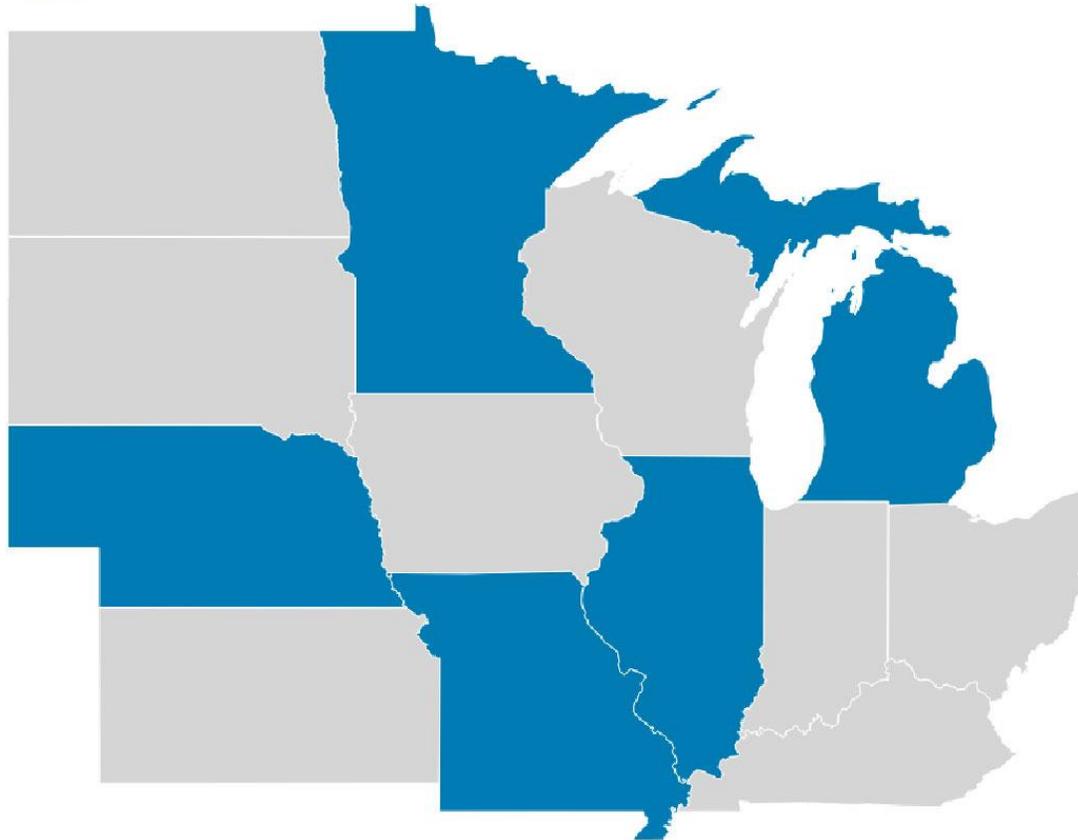
STATEWIDE POLICY COLLABORATIVES



-  States with statewide DSM collaboratives
-  States with low-income working groups
-  No statewide collaboratives



ENERGY CODE COMPLIANCE COLLABORATIVES



Special Honors

MOST ACTIVE

Missouri

The Ameren Missouri Energy Code Compliance Collaborative met multiple times to address key compliance challenges and identify new opportunities.

BEST FOLLOW THROUGH

Nebraska

After updating from the 2009 IECC to the unamended 2018 IECC last year, the Nebraska Department of Environment and Energy followed up with continued facilitation of the Nebraska Energy Code Compliance Collaborative, and increased awareness and improved compliance by hosting several trainings on the new code.

 Active collaborative



TOP SAVERS FROM ENERGY CODES



Special Honors

MOST FORWARD-THINKING STATE: **Minnesota**

Minnesota began developing a Codes & Standards Program Roadmap and conducted a Commercial Energy Baseline Study.

MOST IMPROVED JURISDICTION (ADOPTION):

St. Louis, Missouri

St. Louis, Missouri became the first city in the Midwest to adopt a Building Performance Standard.

MOST IMPROVED (COMPLIANCE): **Columbus, OH**

Columbus, Ohio updated their voluntary benchmarking ordinance to a mandatory ordinance.

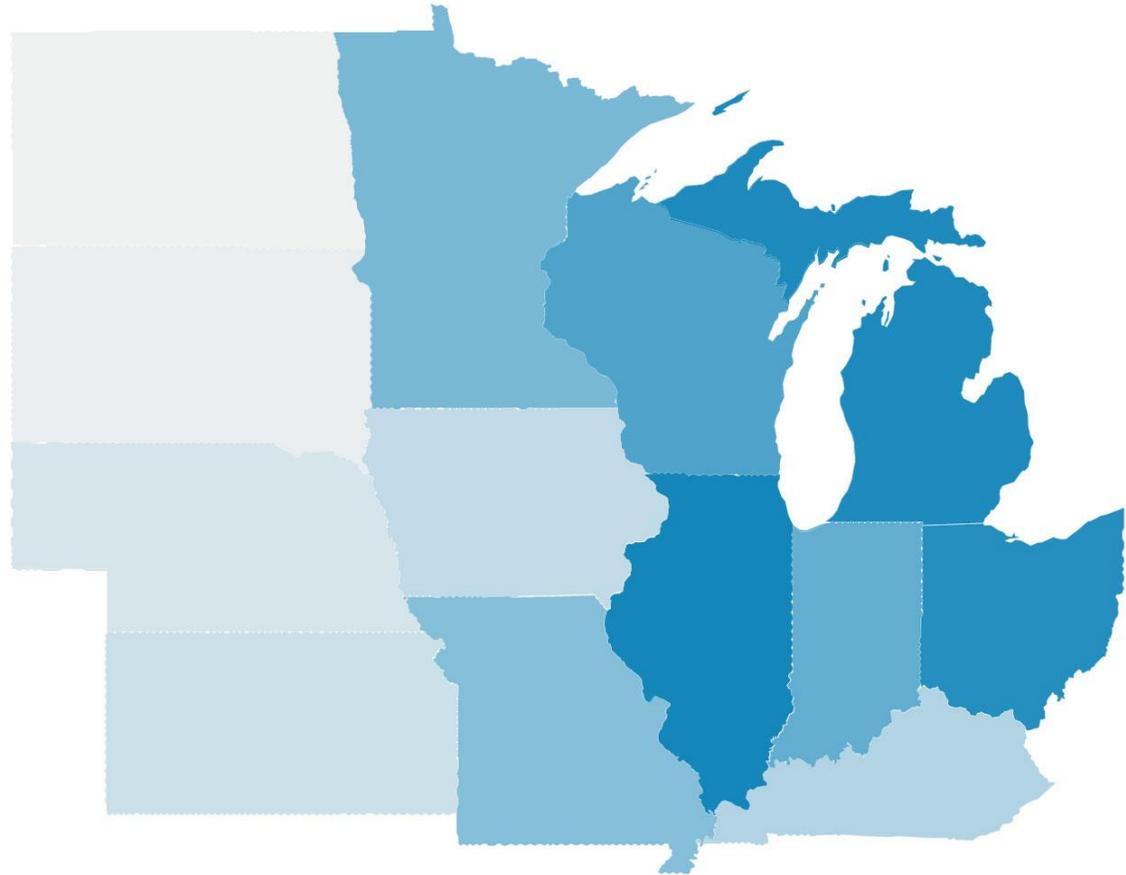


489,803

Energy Efficiency Jobs
(as of December 2020)

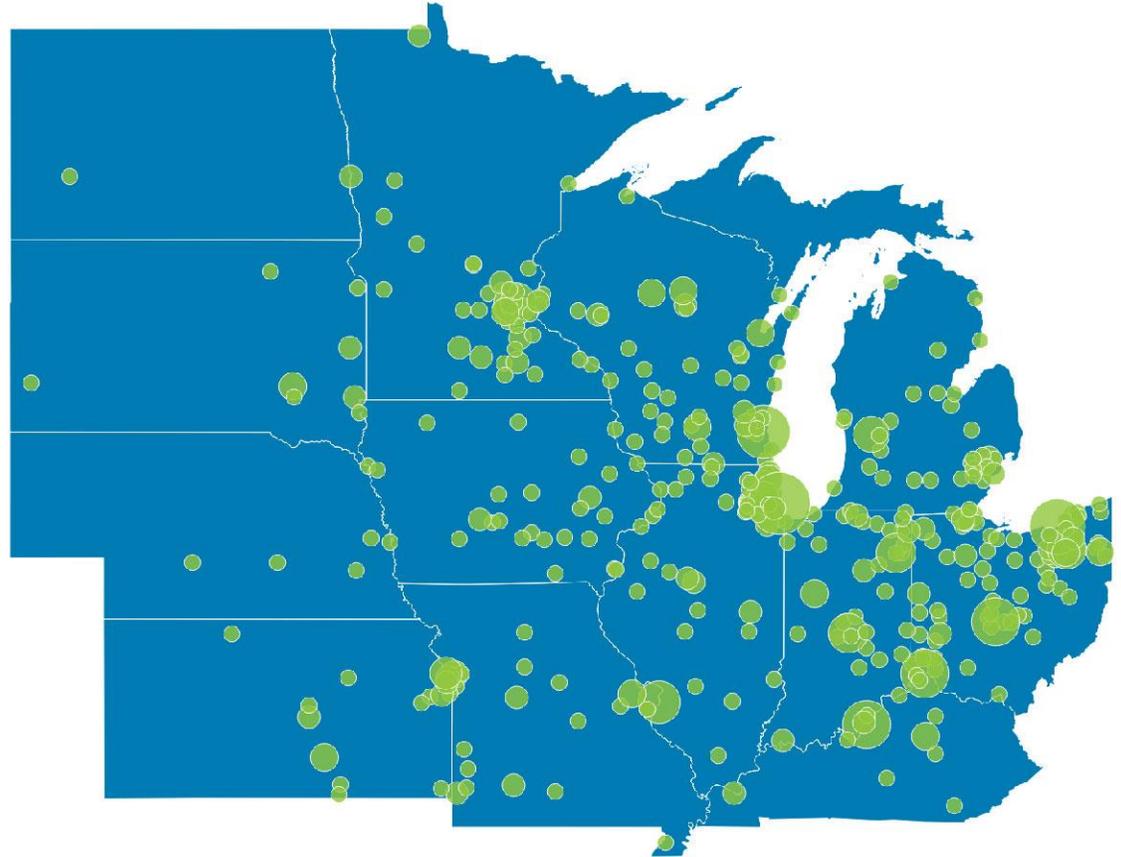
5,000

100,000





Manufacturers of Energy Efficient Products





STATES WITH MOST BOC GRADS

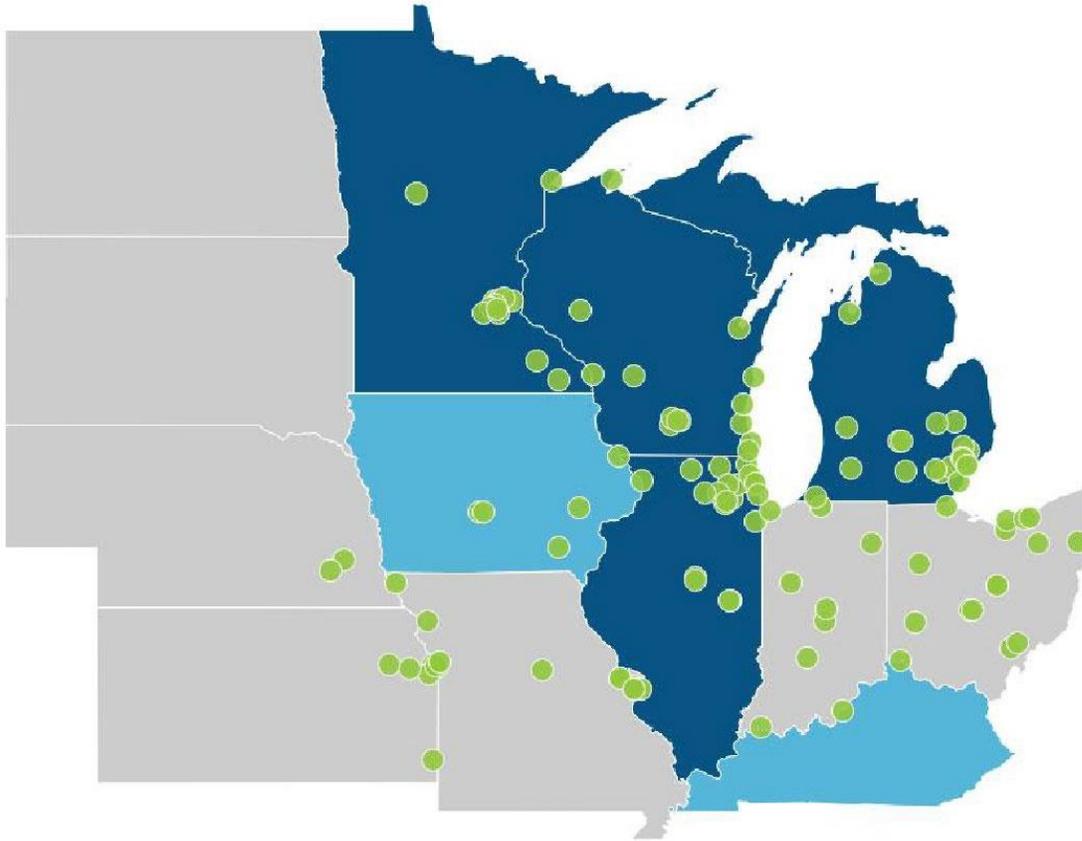


6,532

**Building Operator Certification
Graduates
(cumulative since 2003)**



DECARBONIZATION GOALS



State Climate Action Plan &
Decarbonization Goal

State Climate Action Plan

No state climate or decarbonization goals

● Local climate goals

THE END

THANKS FOR VISITING



#MEEASpotlight



The 2020 State Energy Efficiency Scorecard – A Midwest Perspective

Weston Berg

Senior Researcher, State Policy

February 2, 2021



ABOUT US

- Nonprofit research organization
- Founded in 1980
- Mission: Advance energy efficiency policies, programs, technologies, investments, & behaviors

State Scorecard goals

1. Provide an annual benchmark of state energy efficiency policies and progress
2. Offer a comparative tool to direct states toward efficiency policies, best practices, and case studies from high-ranking states and regional neighbors



Photo credit: Idaho Office of Energy and Mineral Resources

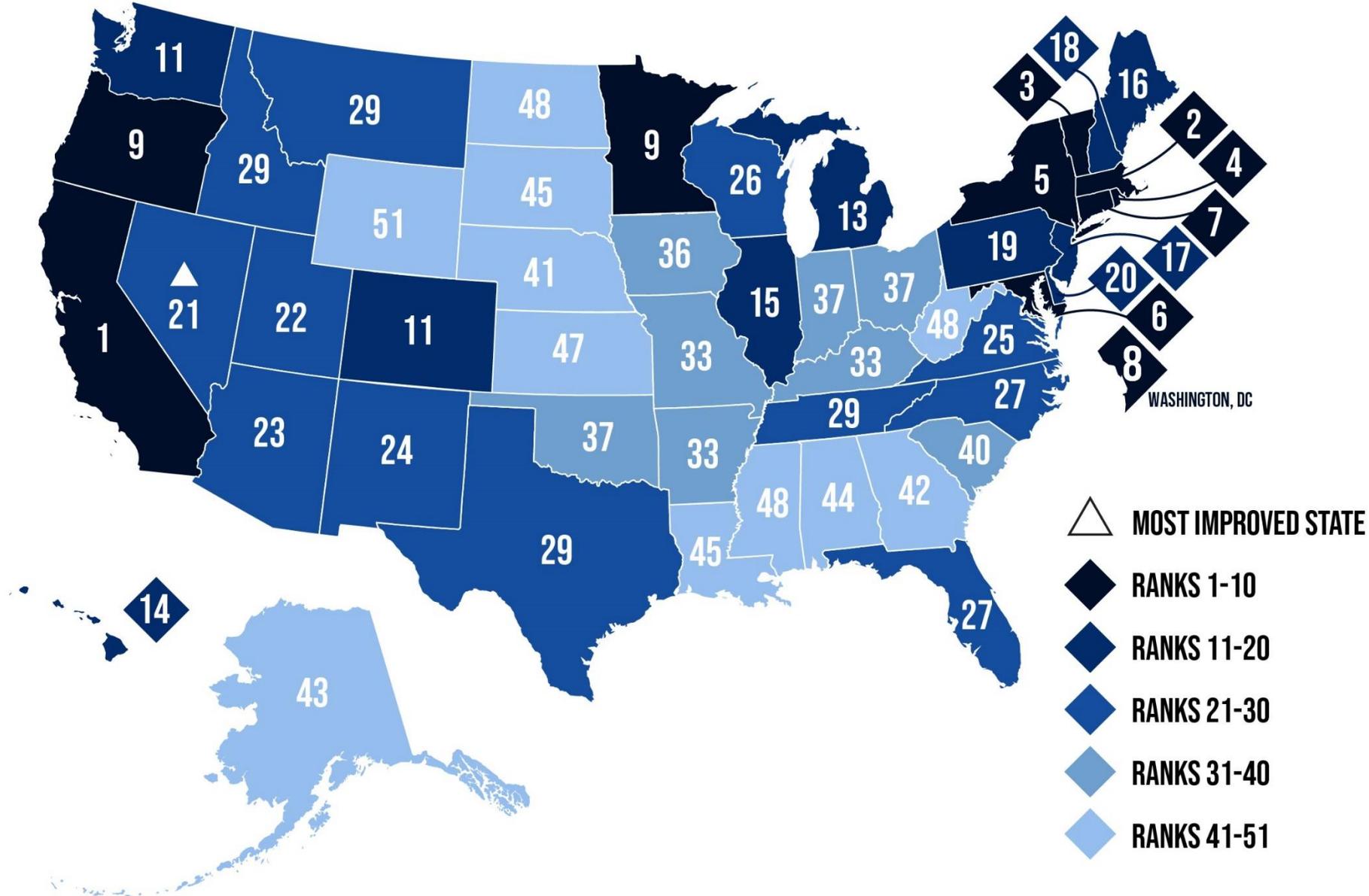


Photo credit: MA Department of Energy Resources

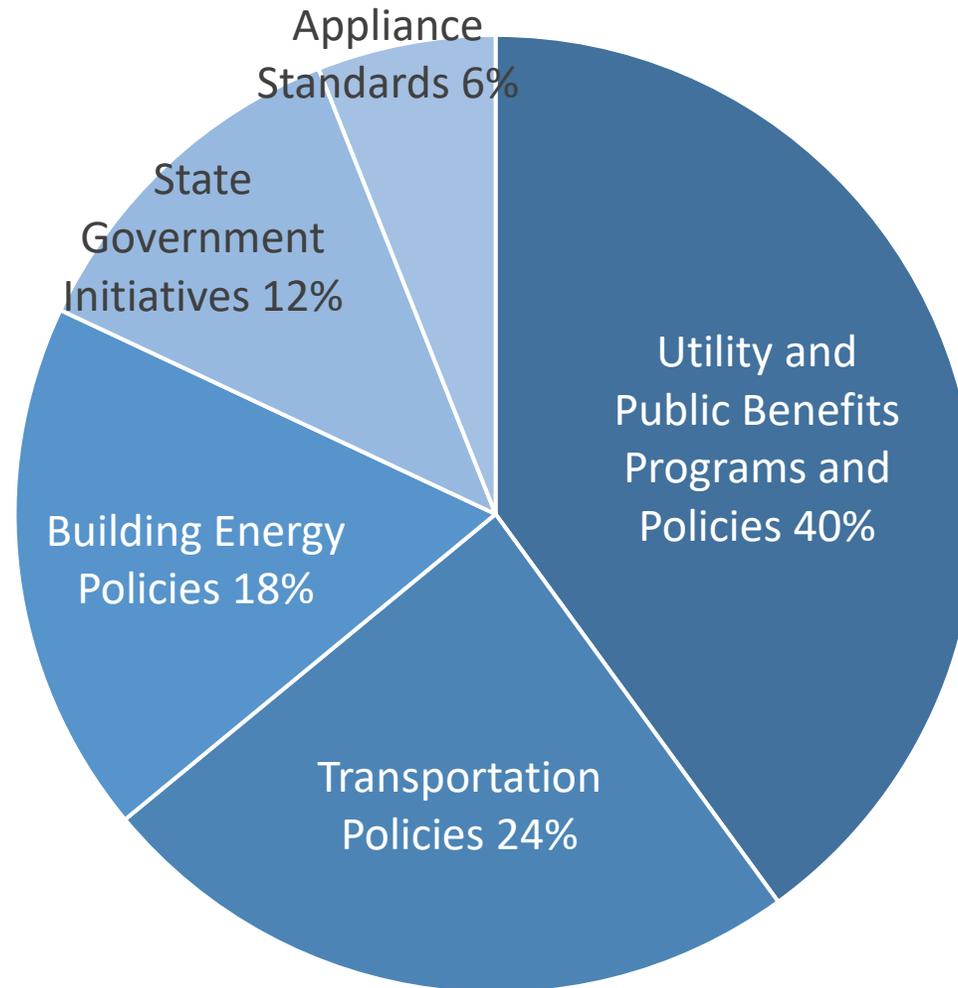


Photo credit: West Virginia Office of Energy

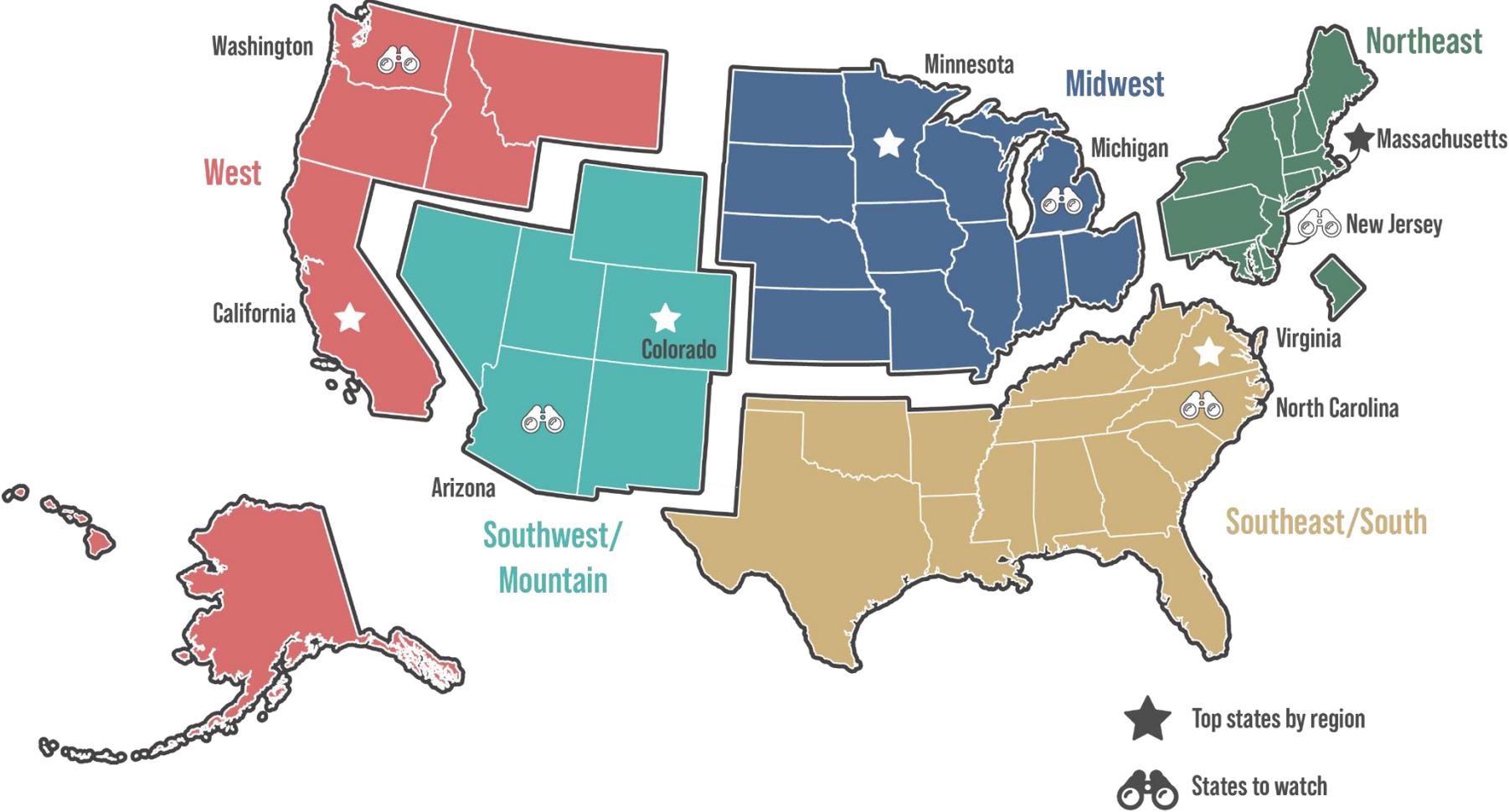
THE 2020 STATE ENERGY EFFICIENCY SCORECARD



Policy Categories & Point Distribution

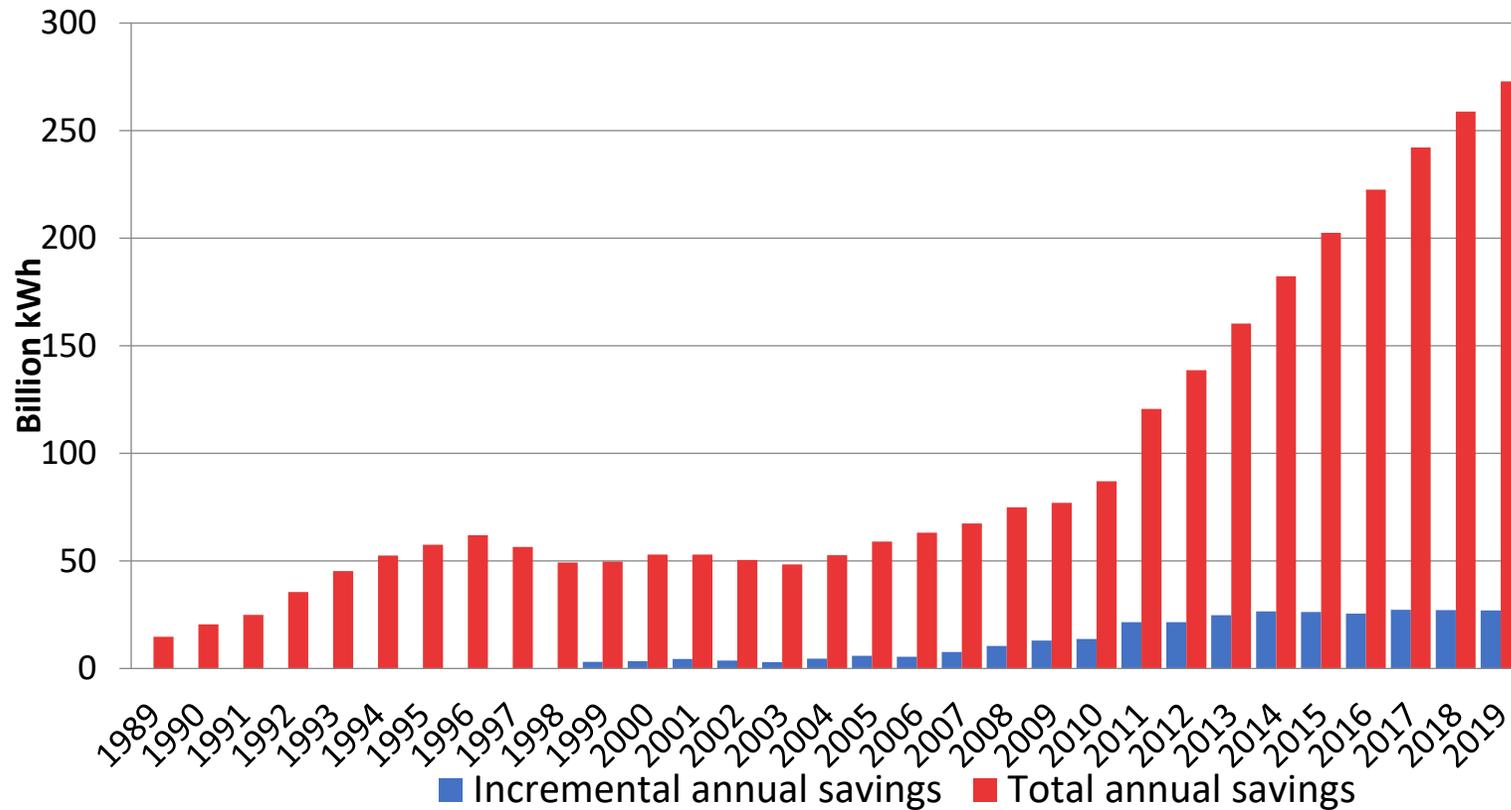


Regional leaders



Key Findings – Utility Savings

- COVID slowed policy progress on multiple fronts with heavy job losses in EE, however important work continued in multiple states to advance efficiency as part of clean energy plans and economic recovery

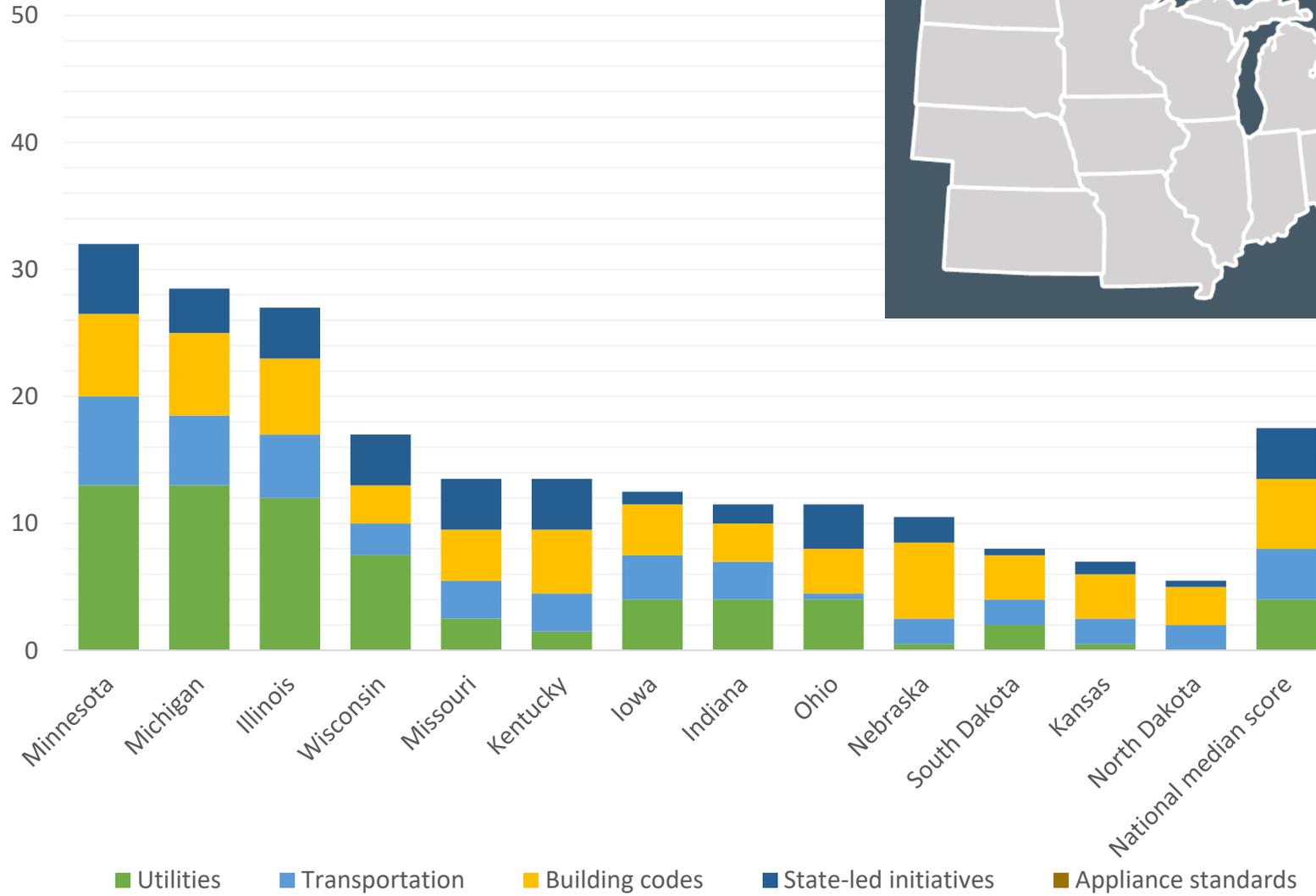
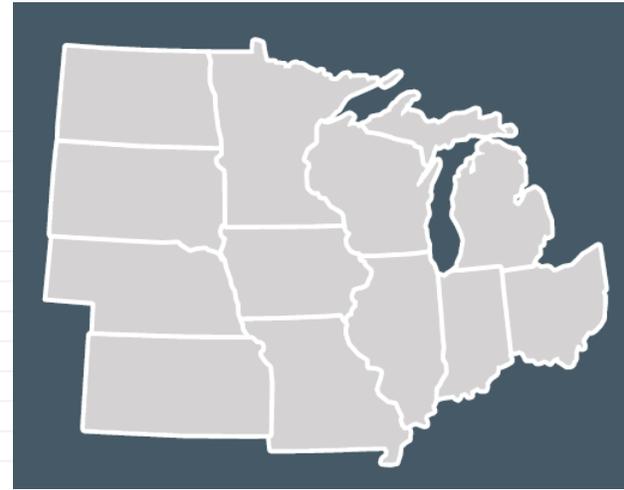


- 2019 State Spending on Energy Efficiency: \$8.4 billion
- 2019 State Electric Savings: 26.9 million MWh

Key Findings

- **Momentous year for buildings sector efficiency**
 - Close to a dozen states moving to adopt the 2018 International Energy Conservation Code (IECC)
 - Release of the 2021 IECC, including a 10% improvement in efficiency over previous codes
- **More states to join California with moves to adopt low- and zero-emission vehicle rules**
 - WA becomes 12th state to implement CA's ZEV program
 - Rulemakings ongoing to adopt CA emissions programs in MN, NM, and NV
 - 14 states and DC have adopted CA's LEV standard

Midwest



Midwest state rankings

National rank	Region rank	State	Utility and public benefits programs & policies (20 pts.)	Transportation policies (12 pts.)	Building energy efficiency policies (9 pts.)	State gov't initiatives (6 pts.)	Appliance efficiency standards (3 pts.)	TOTAL SCORE (50 pts.)	Change in national rank from 2019	Change in score from 2019
Midwest										
9	1	Minnesota	13	7	6.5	5.5	0	32	-1	-0.5
13	2	Michigan	13	5.5	6.5	3.5	0	28.5	0	0
15	3	Illinois	12	5	6	4	0	27	-4	-2
26	4	Wisconsin	7.5	2.5	3	4	0	17	-1	1
33	5	Missouri	2.5	3	4	4	0	13.5	-3	-1
36	6	Iowa	4	3.5	4	1	0	12.5	-13	-6
37	7	Indiana	4	3	3	1.5	0	11.5	3	1
37	7	Ohio	4	0.5	3.5	3.5	0	11.5	-4	-2.5
41	9	Nebraska	0.5	2	6	2	0	10.5	2	1
45	10	South Dakota	2	2	3.5	0.5	0	8	1	1
47	11	Kansas	0.5	2	3.5	1	0	7	-1	0
48	12	North Dakota	0	2	3	0.5	0	5.5	2	0.5

Utilities & public benefit programs

State achievements

- Minnesota
 - IOUs file savings goals of 2.5% of sales or above for 2021-2023
- Michigan
 - Consumers & DTE both targeting annual savings of 2% in recent IRPs
 - Executive Directive on Climate (economy-wide net-zero by 2050)

States falling behind

- **Iowa:** from 23rd to 36th place due to EE spending caps under SF 2311 and SF 638
- **Ohio:** from 33rd to 37th due to HB 6, prohibiting approval of EE cost recovery mechanism and terminating programs

Opportunities

- Reaching large industrial customers (5 states with opt-outs)
- Strategic electrification & supportive fuel-switching policies
- Natural gas efficiency programs

Midwest electricity savings

Rank	State	2019 net incremental savings* (MWh)	% of retail sales	Score (7 pts.)
6	Illinois	2,061,135	1.44%	5
7	Michigan	1,474,105	1.41%	4.5
12	Minnesota	729,734	1.06%	3.5
18	Ohio	1,447,594	0.95%	3
23	Iowa	360,095	0.70%	2
26	Wisconsin	455,118	0.64%	2
27	Missouri	515,242	0.63%	2
29	Indiana	650,482	0.62%	2
35	Nebraska	74,428	0.24%	0.5
36	South Dakota	30,359	0.24%	0.5
48	North Dakota	3,002	0.01%	0
51	Kansas	265	0.00%	0

US Total	26,925,246	0.70%
Median	277,469	0.64%
Midwest median		0.63%
Northeast median		1.22%
South median		0.17%
Southwest median		0.69%
West median		0.98%

Midwest natural gas savings

Rank	State	2019 net incremental savings (MMTherms)	% of 2018 retail sales	% of retail sales
5	Michigan	57.32	1.09%	2.5
6	Minnesota	28.33	1.08%	2.5
10	Wisconsin	18.29	0.72%	1.5
11	Illinois	43.30	0.61%	1.5
20	Iowa	4.78	0.36%	0.5
24	Indiana	7.19	0.30%	0.5
31	South Dakota	0.23	0.08%	-
34	Kansas	-	-	-
34	Missouri	-	-	-
34	Nebraska	-	-	-
34	North Dakota	-	-	-
34	Ohio	-	-	-

US Total	409.0	0.46%
Median	1.11	0.24%
Midwest median		0.19%
Northeast median		0.57%
South median		0.00%
Southwest median		0.34%
West median		0.09%

Buildings policies

Recent state code updates

- **Minnesota:** 2018 IECC (commercial construction)
- **Indiana:** 2018 IECC (however w/ weakening amendments)
- Other 2018 IECC adoptions: **Nebraska, Illinois, Ohio** (residential)
- **St. Louis** – 1st midwest city to set a Building Energy Performance Standard!

Opportunities

- 2009 IECC states: WI, KY
- Measuring code compliance
- Benchmarking/transparency
- Code collaboratives

State	Compliance study (1 pt.)	Stakeholder group (0.5 pts.)	Utility involvement (0.5 pts.)	Total score (2 pts.)
Illinois	•	•	•	2
Michigan	•	•	•	2
Minnesota	•	•	•	2
Missouri	•	•	•	2
Nebraska	•	•	•	2
Kentucky	•	•		1.5
Kansas		•		0.5
Indiana				0
Iowa				0
Ohio				0

Buildings policies

New metric: Zero Energy Buildings

- ZEB: energy-efficient building that produces an amount of onsite energy equal to or exceeding the energy it buys from utilities + energy losses from generation & transmission
- For U.S. to dramatically reduce GHG, will need to build new homes and buildings to minimize energy use and emissions, which means zero-energy, or near-zero-energy construction.
- Top-performers: Vermont, Oregon, Hawaii, California



State Government-led Initiatives

State achievements

- LBE Sustainability Goals
 - **Michigan:** EO 2020-182/2020-10 (MI Healthy Climate Plan)
 - **Minnesota:** EO 19-27
- Benchmarking
 - **MN:** >7,500 public buildings tracked
- Active PACE programs in 8 states

Lead-by-example policies

State	Building efficiency requirements	Benchmarking requirements	Efficient fleets	ESPC policy and programs	Score (2 pts.)
Illinois	•	•	•	•	2
Minnesota	•	•	•	•	2
Kentucky	•	•		•	1.5
Missouri	•		•	•	1.5
Wisconsin	•		•	•	1.5
Kansas	•			•	1
Michigan		•		•	1
Ohio		•		•	1

Opportunities

- State fleet efficiency
 - Missouri State Fleet Efficiency & Alternative Fuels Program
- Aligning efficiency policies to support state clean energy goals
 - Tracking avoided GHG from EE programs
 - Inclusion of avoided carbon benefits in C/E tests
- Reaching underserved markets
 - Programs for rural communities
 - Coordinate assistance for low-income households

Transportation

State	GHG tailpipe emissions standards & ZEV program (1.5 pts.)	EVs per 100k people (1 pt.)	EV fees (1 pt.)	EVSE (1 pt.)	High-efficiency consumer incentives (0.5 pts.)	VMT target (1 pt.)	Avg % change in VMT per capita (1 pt.)	Transp. & land-use planning integration (1 pt.)	Complete streets (0.5 pt.)	Transit funding (1 pt.)	Dedicated transit revenue stream statutes (0.5 pts.)	Freight system goals (1 pt.)	Equitable access (1 pt.)	Score (12 pts.)
Minnesota	0.5	1	1	0	0	1	0.5	0	0.5	0.5	0.5	0.5	1	7
Michigan	0	1	1	0	0	0	0	1	0.5	0.5	0.5	0.5	0.5	5.5
Illinois	0	1	0	0	0	0	0	1	0.5	1	0.5	0.5	0.5	5
Iowa	0	0.5	1	0	0	0	0	1	0	0	0.5	0.5	0	3.5
Indiana	0	1	0	0	0	0	0	0	0.5	0	0.5	0.5	0.5	3
Kentucky	0	0.5	1	0	0	0	0	0	0	0	0	0.5	1	3
Missouri	0	1	0	0	0	0	0	0	0.5	0	0	0.5	1	3

State achievements

- **Minnesota**
 - MN Clean Car Rules pending
- **Accelerating EV Adoption**
 - New Michigan Office of Future Mobility & Electrification
 - Michigan-to-Montana Alternative Fuel Corridor
 - MO/KS: Every Clean Charge Network
 - Midwest Memorandum of Cooperation - multi-state EV charging network by 2022

Opportunities

- Adoption of clean car / ZEV standards
- Offer High-Efficiency Vehicle, ZEV incentives
- Adopt VMT targets
- Smart growth & strategies integrating transportation & land use

Transportation

New Metric: EV and Charging Infrastructure Deployment

- New 1-point metric based on DOE Alternative Fuels Data Center figures
 - non-brand-specific L2 and DCFC chargers with CHAdeMO, CCS, or J1772 compatibility
- Policies to remove barriers to EV adoption
 - Goals & progress benchmarking for EV infrastructure
 - State/utility incentives for EVs & infrastructure
 - EV planning to ensure that benefits of transportation electrification are distributed equitably
 - Volkswagen Fund allocation for electrification initiatives

Rank	State	Number of public EV charging stations	2019 population	Stations per 100,000 people
1	Vermont	217	623,989	34.78
2	District of Columbia	147	705,749	20.83
3	Hawaii	273	1,415,872	19.28
4	California	6,177	39,512,223	15.63
5	Colorado	899	5,758,736	15.61
18	Kansas	200	2,913,314	6.87
20	Missouri	410	6,137,428	6.68
26	Minnesota	321	5,639,632	5.69
29	Illinois	612	12,671,821	4.83
31	Nebraska	89	1,934,408	4.60
32	Iowa	138	3,155,070	4.37
33	Ohio	511	11,689,100	4.37
37	Michigan	411	9,986,857	4.12
38	Wisconsin	222	5,822,434	3.81
39	North Dakota	29	762,062	3.81
44	Kentucky	138	4,467,673	3.09
45	South Dakota	27	884,659	3.05
47	Indiana	190	6,732,219	2.82

Webinar Announcement

2021 State Transportation Electrification Scorecard

Date and time: Wednesday, February 3, 11:00 AM - 12:00 PM ET



Strategies for Improving Efficiency

Put in place, and adequately fund, an energy efficiency resource standard or similar energy savings target.

Leading State Examples: AR, CO, MA, MI, MN, NJ, NY, VA

Adopt updated, more stringent building energy codes, improve code compliance, and enable the involvement of efficiency program administrators in code support.

Leading State Examples: CA, IL, MD, NE, NM, DC, WA

Adopt stringent tailpipe emissions standards for cars and trucks, and set quantitative targets for reducing vehicle miles traveled.

Leading State Examples: CA, CO, MA, NY, OR

Ensure energy efficiency and clean energy investments and opportunities are inclusive and that benefits accrue to all customers, especially households overburdened by energy costs.

Leading State Example: CA, NJ, OR, PA, TN, WA

Q&A



Resources

- *2020 State Energy Efficiency Scorecard*, state score sheets (<http://aceee.org/state-policy/scorecard>)
- State and Local Policy Database (<http://database.aceee.org/>)



Thank you!

MEEA's Policy Team

Director



Nick Dreher

[ndreher@
mwalliance.org](mailto:ndreher@mwalliance.org)

Policy Manager



Reine
Rambert

[r Rambert@
mwalliance.org](mailto:r Rambert@mwalliance.org)

Sr. Analyst



Greg
Ehrendreich

[gehrendreich@
mwalliance.org](mailto:gehrendreich@mwalliance.org)

Sr. Policy Associate



Maddie
Wazowicz

[mwazowicz@
mwalliance.org](mailto:mwazowicz@mwalliance.org)

Policy Associate



Samarth
Medakkar

[smedakkar@
mwalliance.org](mailto:smedakkar@mwalliance.org)

SAVE THE DATE

2021
MIDWEST
ENERGY
SOLUTIONS
CONFERENCE

VIRTUAL EXPERIENCE | February 16-19

Presented by



Q&A

How can I
ask a
question?



- A. Type it in the question chat box**
- B. Raise your hand to be unmuted to ask aloud**

- We answer all the questions that we have in the available time
- If we can't get to your question, we can follow up by email