MEEA
MIDWEST ENERGY EFFICIENCY ALLIANCE

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2021 Midwest Energy Efficiency Spotlight
Data Notes

This document provides information about and links to the sources that MEEA used to develop the 2021 Midwest Energy Efficiency Spotlight. If you have any questions about data or methodology, comments or suggestions on improving slides for next year's Spotlight, or any additional metrics or data sources to suggest, you can contact Greg Ehrendreich, Sr. Analyst and lead for Spotlight development at gehrendreich@mwalliance.org. We welcome your feedback.

Slide 2: MWh of Electricity Saved

These savings figures come from MEEA's energy efficiency tracking database, which tracks portfolio-level savings and spending from the region's utilities. The data comes mostly from utility plans & reports filed with their public service commissions. This is supplemented with energy efficiency data from the US Energy Information Administration (Form EIA-861), personal communication with utilities and regulatory staff, and assorted other secondary sources such as commission summaries, stakeholder presentations, etc. The total retail sales data used to calculate the top savers for percent of sales also come from Form-861 data.

- Form EIA-861 data: https://www.eia.gov/electricity/data/eia861/

Slide 3: Therms of Natural Gas Saved

As with the electricity slide, the primary source was MEEA's EE tracking database. Unlike EIA-861 on the electric side, there is no national-level tracking of natural gas EE. The data for retail sales of natural gas for the top savers block comes from Form EIA-176 reporting on final disposition of natural gas.

- Form EIA-176 data (via the Natural Gas Annual Respondent Query System): https://www.eia.gov/naturalgas/ngqs/#?year1=2016&year2=2019&company=Name

Slide 4: EE by Sector

This slide uses the EIA-861 energy efficiency data again. Because most utility reporting to their commissions is split between two sectors, residential and non-residential, we combined the annual incremental savings from the Commercial and Industrial segments of the EIA-861 data to make one non-residential metric.

- Form EIA-861 data: https://www.eia.gov/electricity/data/eia861/

Slide 5: Policies and Practices for Low-Income EE

This slide draws on the American Council for an Energy Efficient Economy (ACEEE) state policy database, supplemented with MEEA's research and understanding of the practices in our region.

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- ACEEE State and Local Policy Database, Guidelines for Low-Income Energy Efficiency Programs: https://database.aceee.org/state/guidelines-low-income-programs

Slide 6: Energy Efficiency Financing

Note: this slide has been revised from the version shown in the Feb 2, 2021 webinar, and these notes are updated to reflect that revision.

The data on PACE financing availability and investment in MEEA's region comes from PACENation, an organization that tracks PACE around the country. The on-bill financing information comes from MEEA's own tracking of financing options in the region. Data on green bank financing comes from the American Green Bank Consortium

- PACENation: https://pacenation.org/pace-programs/ & https://pacenation.org/pace-market-data/
- MEEA EE Financing factsheet: http://www.mwalliance.org/sites/default/files/meea-research/on-bill-fact-sheet-11.5.18.pdf
- AGBC Annual Industry Report: https://greenbankconsortium.org/annual-industry-report

Slide 7: MWh Generated via Combined Heat and Power

The CHP generation data for MEEA's states comes from EIA Form EIA-923, specifically data from Schedules 3A & 5A which provide generation data. We totaled the annual net generation for all generation plants noted as CHP.

- Form EIA-923 data: https://www.eia.gov/electricity/data/eia923/

Slide 8: Publicly Owned Utility Highlights

Note: this slide has been revised from the version shown in the Feb 2, 2021 webinar, and these notes are updated to reflect that revision.

Utility Counts. The utility count data used in this slide comes from MEEA's annual EE tracking of regulatory filings & reports, supplemented with utility reporting on Form EIA-861. In some cases POUs report EE savings to their regulator that do not get reported on Form 861, and in other cases POUs that are not regulated on EE do not have any reporting to a state regulator. Merging these two data sources and syncing up the unique utility names gives us a more accurate count of the number of POUs doing EE in the region. There is some variations in how co-ops & munis report EE on EIA-861, so in some cases the raw data represents multiple small utilities reporting in aggregate via a larger entity (e.g. a generation & transmission co-op that provides EE to its members and reports the EE data) while in other cases it is individual utilities reporting (e.g. individual municipalities that are members of a municipal power association but report EE data separately). The majority of POUs in Wisconsin participate in Focus on Energy and that program's aggregated POU and IOU data is reported singly to EIA. We merged in the participating utilities list from Focus on Energy to complete the count for WI POUs.

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POU Electricity Savings. This data blends MEEA's tracking data with savings utilities reported on Form EIA-861. To filter to just the POU savings, we aggregated data from two files within the EIA-861 dataset – the energy efficiency file which contains the electricity savings & spending and the utility data file which identifies the ownership of the utilities. For utilities with data in both MEEA's tracking and EIA-861, the blended data represents the median between the values (because regulatory figures and EIA figures do not always match). Because we could not readily disaggregate the POU portion of Focus on Energy data for WI, the WI data is undercounting the total. We hope to devise a methodology to rectify that in future Spotlight editions.

- Focus on Energy Participating Utilities: https://www.focusonenergy.com/about/participating-utilities
- Form EIA-861 data: https://www.eia.gov/electricity/data/eia861/

Slide 9: Statewide Policy Collaboratives

The information on this slide comes from MEEA's tracking of state energy efficiency policies and participation in these collaboratives and workgroups. Most of the working groups are organized through the state public service commission, while in Minnesota the working group process is stakeholder-driven.

Slide 10: Energy Code Compliance Collaboratives

This information comes from MEEA's internal tracking of Statewide Energy Code Compliance Collaboratives in the Midwest. MEEA is also heavily involved with all these collaboratives. Information about these collaboratives can be found in their respective state energy code pages on our website.

- MEEA's Building Energy Code page: http://www.mwalliance.org/initiatives/policy/building-energy-codes

Slide 11: Top Savers from Energy Codes

The top 5 energy code savers by state come from analysis MEEA conducted to determine the cumulative total energy impact from updated energy codes in the Midwest from 2009 to 2018. MEEA then took the total cumulative energy savings per state for residential and commercial energy codes over this time period and divided those savings by the total amount of new residential units (MMBTU/Unit) and new commercial square footage (Kbtu/sq. ft) per state. This enabled us to adjust for total new construction by state and create an equal comparison of energy savings attributed to improved energy codes by state. To calculate the total new residential units, we used data from the US Census Residential Building Permits Survey and to calculate the total new commercial square footage built we used data from the Commercial Construction Market. The model was updated for 2019 and again for 2020 to include new data and savings.

- Building Energy Code Impacts in the Midwest: http://www.mwalliance.org/sites/default/files/meea-research/impact_of_ec_in_mw_2009-2018.pdf?current=/taxonomy/term/11
- US Census Residential Building Permits Survey: https://www.census.gov/construction/bps/
- Commercial Construction Market (CMD) Data: https://www.cmdgroup.com/

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Slide 12: Energy Efficiency Jobs

The data on energy efficiency jobs in the Midwest states comes from E4TheFuture's *Energy Efficiency Jobs in America (2020)* report, which shows EE jobs at the national, state, metro area and congressional district. We also drew on a series of monthly memos, commissioned jointly by E4TheFuture, E2 and ACORE, that show the month-to-month job losses and gains for clean energy overall and EE specifically during the COVID-19 pandemic.

- E4 the Future, Energy Efficiency Jobs in America: https://e4thefuture.org/energy-efficiency-jobs-are-best-bet-for-recovery-in-2021-report-reveals/
- E4 & E2 Clean Energy & Energy Efficiency job losses memos
  - https://e4thefuture.org/clean-energy-job-losses-in-may-2020-bring-total-to-620500/
  - https://e4thefuture.org/clean-energy-jobs-june-2020-update/
  - https://e4thefuture.org/clean-energy-jobs-july-2020-analysis-shows-stalled-recovery/
  - https://e4thefuture.org/clean-energy-jobs-august-2020-brings-anemic-growth-worrisome-trend/
  - https://e4thefuture.org/clean-energy-jobs-minuscule-growth-in-september-2020/
  - https://e4thefuture.org/clean-energy-jobs-october-2020-analysis-reveals-sectors-lagging-rebound/
  - https://e4thefuture.org/clean-energy-jobs-november-2020-analysis-shows-meager-growth/
  - https://e4thefuture.org/clean-energy-jobs-december-2020-analysis/

Slide 13: Manufacturers of Energy Efficient Products

The data we used for this map comes from a combination of multiple sources. First is our own CRM database, which includes the manufacturers who we have contact with – members, subscribers, event participants and such. Another major source is the ENERGY STAR Partners List which identifies the product brand owners and manufacturers that provide ENERGY STAR products. Other locations come from membership lists from product manufacturing associations – such as NAIMA and PIMA that represent different types of insulation manufacturers.

- ENERGY STAR Partners List: https://www.energystar.gov/partner_resources/partner_list

Slide 14: Building Operator Certification Graduates

This data comes from MEEA's internal tracking for the Building Operator Certification (BOC) program, which we have been implementing for our region since 2003.

- Building Operator Certification: http://www.boccentral.org

Slide 15: Decarbonization Goals

The state-level information on this slide comes from our own research into state energy plans in our region. It is summarized below. The municipal data is aggregated from three lists of cities that have made climate pledges – Climate Mayors, Zero Energy Project, and the Center for Climate and Energy Solutions.

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Lists of municipalities with climate goals

- Climate Mayors: https://climatemayors.org/member-cities/
- ZEP: https://zeroenergyproject.org/all-cities-with-climate-action-plans/
- C2ES: https://www.c2es.org/document/mayors-leading-the-way-on-climate-2020/

State Climate Action Plans

State	Climate/Clean Energy Plan	Status	Initiated By	Agency	Notes	Link
IL	Yes	Issued in 2007	Governor		Executive Order 2006	
IA	Yes	Issued in 2008	Legislature	IA DNR	Climate Change Advisory Council, created by SF 485 (2007); CCAC discontinued by SF 2088 (2010)	https://www.iowadnr.gov/conservation/climate-change
IN	No	N/A	N/A	N/A		
KS	No	N/A	N/A	N/A		
KY	Yes	Issued in 2011	Governor			https://www.c2es.org/site/assets/uploads/2018/11/KY_2011_Action_Plan.pdf
MI	Yes	Issued 2008; Updating	Governor		Executive Order 2007-47	https://www.c2es.org/site/assets/uploads/2018/11/MI_2009_Action_Plan.pdf https://www.michigan.gov/whitmer/0,9309,7-387-90499_90704-540278--,00.html
MN	Yes	Issued in 2015; Updating	Governor		Executive Order 19-37	https://mn.gov/governor/assets/2019_12_2_EO_19-37_Climate_tcm1055-412094.pdf https://www.c2es.org/site/assets/uploads/2018/11/MN_2015_Action_Plan.pdf
MO	No	N/A	N/A	N/A		
NE	No	N/A	N/A	N/A		
ND	No	N/A	N/A	N/A		
OH	No	N/A	N/A	N/A		
SD	No	N/A	N/A	N/A		
WI	Yes	Issued 2008; Updating	Governor		Executive Order 52	https://evers.wi.gov/documents/eo/eo052-climatechange.pdf

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State Decarbonization Goals

State	Decarb Goal	Goal	Initiated By	Authority	Paris Accord (USCA)	Notes	Link
IL	Yes	At least 26-28% by 2025 (USCA)	Governor	US EPA	Yes	Exec Order 2019-06	https://www2.illinois.gov/Pages/government/execorders/2019_6.aspx
IA	No	N/A	N/A	N/A	No		
IN	No	N/A	N/A	N/A	No		
KS	No	N/A	N/A	N/A	No		
KY	No	N/A	N/A	N/A	No		
MI	Yes	28% by 2025 (USCA); CO2 neutral by 2050	Governor	MI EGLE	Yes	Exec Directive 2020-10 & Exec Order 2020-182. Directive joins US Climate Alliance (USCA) (28% reduction from 2005 levels by 2025). 2020-182 orders Economy Wide CO2 neutrality by 2050.	https://www.michigan.gov/whitmer/0,9309,7-387-90499_90704-540278--,00.html https://www.michigan.gov/whitmer/0,9309,7-387-90499_90705-540277--,00.html
MN	Yes	30% by 2025; at least 80% by 2050	Legislature	Governor's Climate Change Subcabinet	Yes	Next Generation Act (2007). EO 10-37 establishes CC Subcabinet to achieve at least 80% reduction in 2005 GHG levels by 2050.	https://mn.gov/governor/assets/2019_12_2_EO_19-37_Climate_tcm1055-412094.pdf https://www.revisor.mn.gov/bills/text.php?number=SF145&version=2&session=ls85&session_year=2007&session_number=0
MO	No	N/A	N/A	N/A	No		
NE	No	N/A	N/A	N/A	No		
ND	No	N/A	N/A	N/A	No		
OH	No	N/A	N/A	N/A	No		
SD	No	N/A	N/A	N/A	No		
WI	Yes	28% by 2025 (USCA); 100% carbon-free electricity	Governor	Office of Sustainability and Clean Energy	Yes	Exec Order #38 (2019)	https://evers.wi.gov/Documents/EO%20038%20Clean%20Energy.pdf