



MEEA Testimony to the Indiana 21st Century Energy Task Force

Greg Ehrendreich



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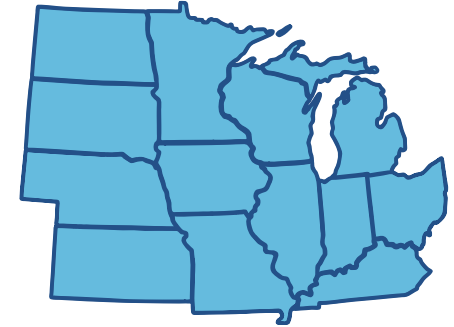
Greg Ehrendreich

Sr. Analyst

Midwest Energy Efficiency Alliance

MEEA

At MEEA, we leverage our unique position as the **Midwest's trusted resource on energy efficiency policy and programs** to help identify, understand, and implement cost-effective strategies that provide economic and environmental benefits.



MEEA is a non-profit membership organization with 160+ members, including:



Electric &
gas utilities



State & local
governments



Academic &
Research institutions

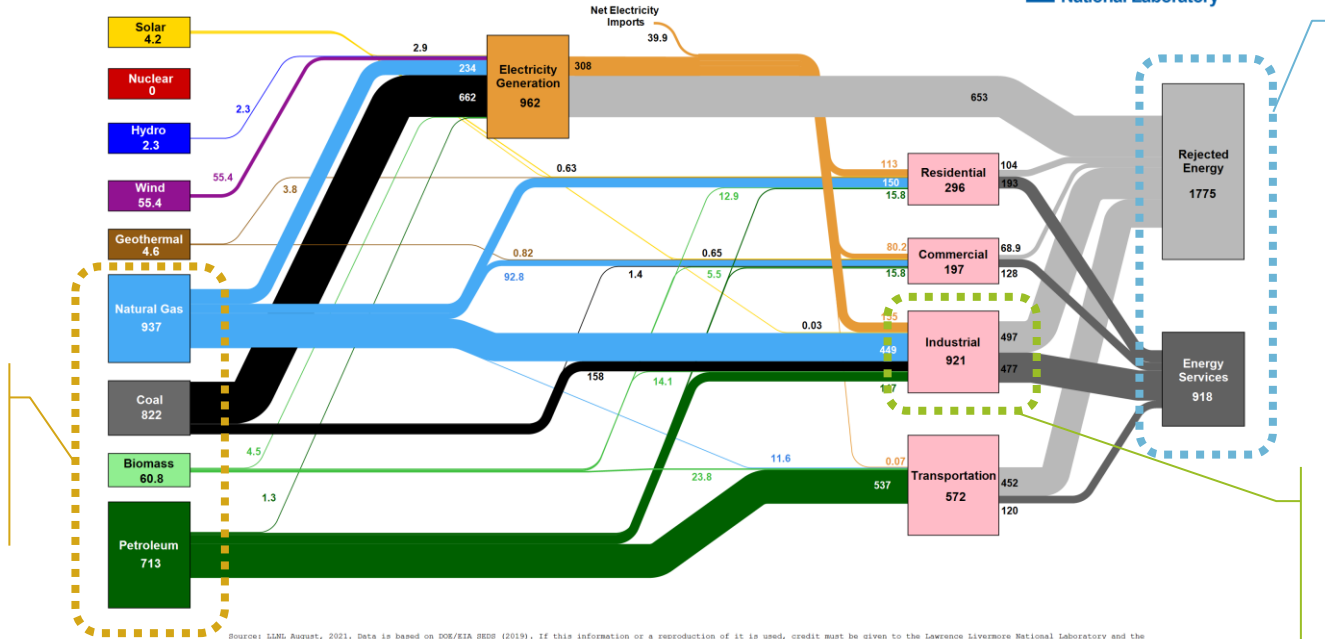


Energy service
companies &
contractors

Rationale: Indiana Energy Flows

Why it is important to increase efficiency

Indiana Energy Consumption in 2019: 2693 Trillion BTU



97% of energy used in Indiana comes from combustion sources

66% of energy used in Indiana is waste

53% of Indiana's industrial energy use is waste

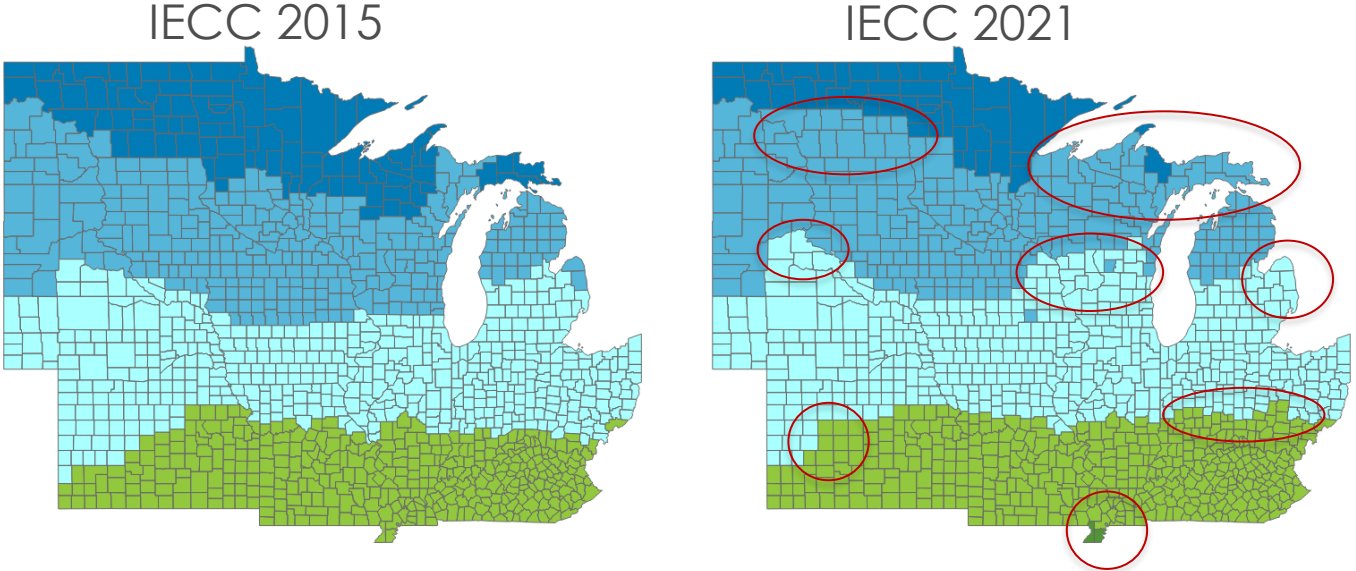
Source: LLNL August, 2021. Data is based on DOE/EIA BEHS (2019). If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. Distributed electricity represents only retail electricity sales and does not include self-generation. EIA reports consumption of renewable resources (i.e., hydro, wind, geothermal and solar) for electricity in BTU-equivalent values by assuming a typical fossil fuel plant heat rate. The efficiency of electricity production is calculated as the total retail electricity delivered divided by the primary energy input into electricity generation. End use efficiency is estimated as 0.65% for the residential sector, 0.65% for the commercial sector, 0.49% for the industrial sector, and 0.21% for the transportation sector. Totals may not equal sum of components due to independent rounding. LLNL-RT-410527

Source: LLNL



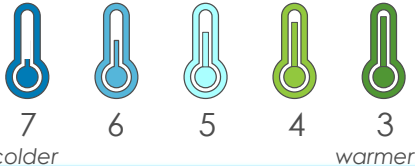
Rationale: Shifting Climate

The Midwest is getting warmer



176
Midwest
counties
shifted to
warmer
climate
zones

Climate
Zones



Source: MEEA Analysis

Missed Opportunities

Impacts of large customer opt-out & repeal of EE standard on Indiana residents & businesses



2021 Synapse Energy Economics study, commissioned by MEEA

Examined actual or proposed policy changes in 6 states

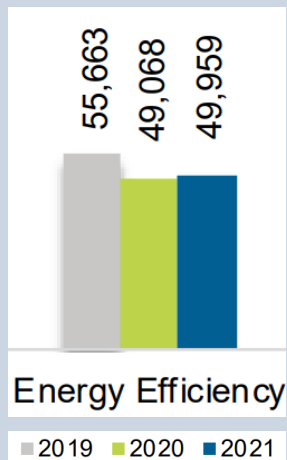
Used benefit-cost analysis, emission, health & econometric modeling to estimate impacts

For Indiana analysis, looked at EERS repeal & opt-out since 2014

Results for Indiana

- \$73 MILLION** Lost net benefits
- \$195 MILLION** Additional costs from carbon emissions
- \$2 - 6 MILLION** Health damage costs
- \$14 MILLION** Net income loss **260** Jobs lost
- \$21 MILLION** Lost net benefits for non-participants

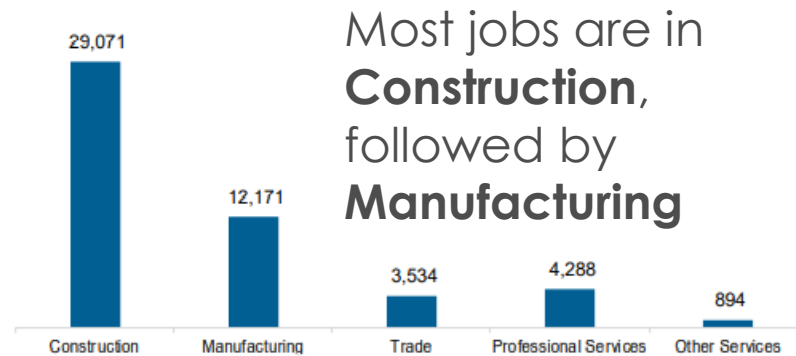
Opportunities: Energy Efficiency Creates Jobs



← Almost as many EE jobs in Indiana as generation, fuels, T&D and storage combined

- Projected 12-mo growth: 2.4%

Energy Efficiency Employment by Industry Sector



- 71% small businesses with less than 20 employees
- 12% veterans in the workforce

Sources: [USEER 2022 State Report](#), [Clean Jobs Midwest](#)

Recommended Policies

Policies that could advance EE opportunities in Indiana

Revise the
Industrial Opt-
Out

Statewide
mechanisms for
performance &
lost revenue

Prioritize
disadvantaged
communities

Open up to EE
innovation

Updated
statewide TRM

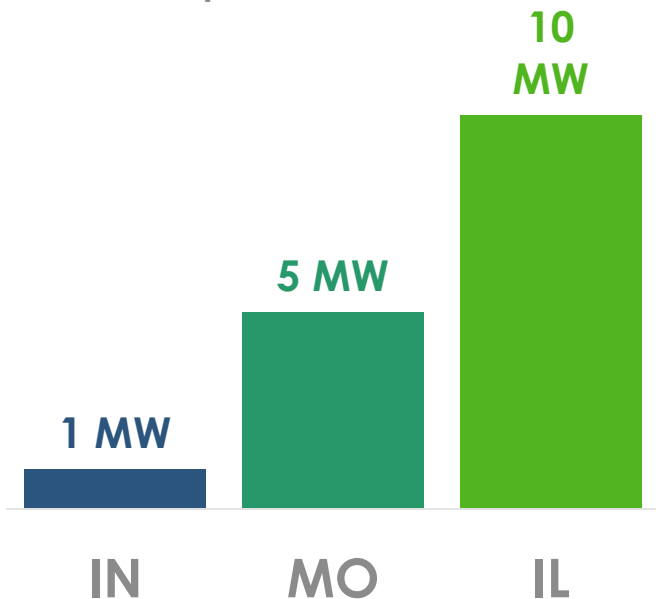
Modernize cost-
effectiveness
practices

Establish a
statewide EE
collaborative

Revise the Industrial Opt-Out

Recommendations: Raise the Threshold; Require Savings Plans

Opt Out Threshold



IN:

- 1 MW single site

MO:

- **5 MW single site** –or– aggregate 2.5 MW in service territory & has an energy program that can demonstrate savings equal to expected from utility program

IL:

- **10 MW single site** highest 30-minute (ComEd) or 15-minute (Ameren) demand & files an energy audit & energy savings plan with opt-out notification form

OH:

- **4.5 GWh** annual usage at a single site or classified as a mercantile customer (7 GWh across sites or part of a national account)

Statewide mechanisms for performance & lost revenue

Ease the regulatory burden & decrease the need for litigation

- Currently each utility may propose/negotiate their own **performance incentive & lost revenue recovery** mechanisms and levels
- Statewide standardization simplifies regulation, creates certainty, promotes fairness, and prevents perception of gaming the system
- Performance incentives can be used to **promote goals besides just energy savings**
 - Performance-based KPIs can include other metrics related to policy priorities and program administration targets

Examples of EE Performance Indicators

- Net Benefits (\$)
- Annual Energy Savings (MWh)
- Lifetime Energy Savings (MWh)
- Summer Peak Demand Savings (MW)
- Winter Peak Demand Savings (MW)
- GHG Reduction (tons CO₂e)
- Administrative Efficiency (% admin cost reduction)
- Benefit Cost Ratio (minimum ratio of benefits to costs)
- Residential sector participation (spending, customer counts)
- Low-Income sector participation (spending, customer counts)
- Small Business customer participation (spending, customer counts)
- Geographic equity (distribution of projects throughout territory)
- Service quality

Prioritize disadvantaged communities

Ease the energy burden for vulnerable customers through EE

Illinois CEJA (P.A. 102-0662) (220 ILCS 5/8-103B(c))

- Minimum annual LI EE spending
- 80% of LI budget to whole building weatherization
- “One stop shop” coordination with other LI energy assistance
- Up to 15% of funds may be used to repair buildings to make them ready for weatherization
- Statewide stakeholder leadership committee

MN ECO (2020 HF 164) (MN Stat 216B.2403 Subd. 5)

- Minimum annual LI EE spending
- Up to 15% of funds may be used to repair buildings to make them ready for weatherization

Who Needs Energy Help?

- Low-income
- Fixed-income seniors
- Rural

Open Indiana to EE innovation

Allow utilities to implement a broader range of programs to increase EE and meet other energy policy goals

Market transformation

Electrification of customer end-uses

Natural gas alternatives

Building energy code compliance

Innovation: Market transformation

Overcoming market barriers for adoption of efficient products

Energy efficiency programs increase the rate of adoption and the total market penetration of efficient products

This has already happened for **some product areas** like appliances & light bulbs, but the need is far from over

Current MT efforts nationally include

- heat pumps & high-efficiency HVAC
- hot water heaters
- lighting controls
- building energy code compliance
- thin triple paned windows

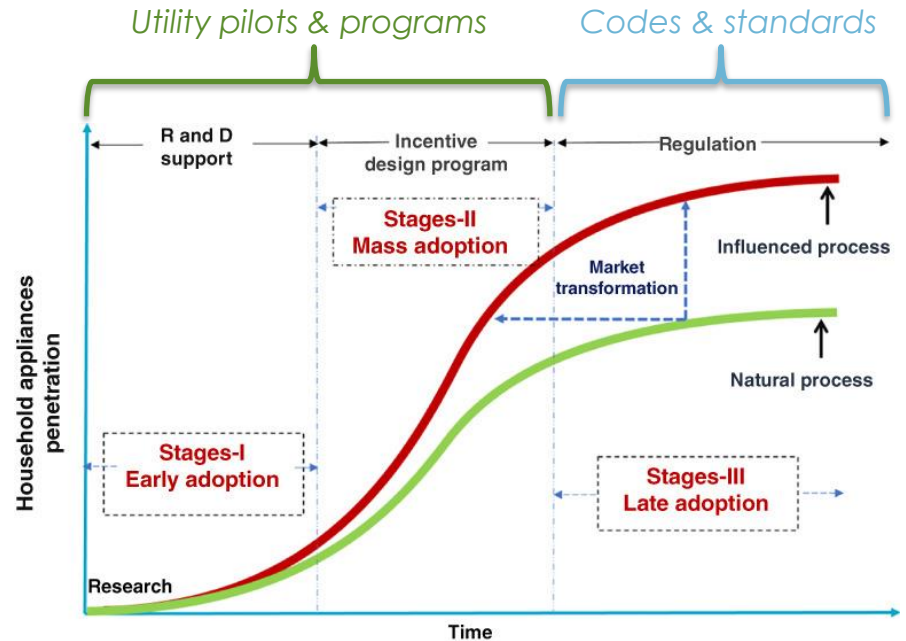


Image source: Singh 2019 <https://doi.org/10.1002/wene.330>

Innovation: Electrification of customer end-uses

Reduce total energy use & GHG emissions through fuel savings

Illinois CEJA (P.A. 102-0662)

- **Electrification** (220 ILCS 5/8-103B(b-27))
 - Electric utilities may offer electrification if total Btus are reduced
 - Allowed for 5% of savings requirement (ramp up to 15%)
 - 25% of savings must come from low-income households
- **Other fuel savings** (220 ILCS 5/8-103B(b-25))
 - For non-joint programs, electric utilities can claim the Btu equivalent electric savings from gas or other fuel savings, up to 10% of the utility's annual savings target

MN ECO (2020 HF 164) (MN Stat 216B.2403 Subd. 8)

- Allows **Efficient Fuel Switching** improvements that reduce total source energy use; can switch gas or other fuels to electricity & switch other fuels to retail natural gas
- Must reduce lifetime GHG emissions to count toward EE goals

Innovation: Natural gas alternatives

Natural gas utilities need opportunities to transform their business as part of the new energy economy

Minnesota Natural Gas Innovation Act (NGIA) ([2021 MN Stat 216B.2427](#))

- Allows gas utilities to meet state GHG reduction and energy goals with **biogas, renewable gas, power-to-hydrogen, power-to-ammonia, carbon capture, strategic electrification, district energy** and **energy efficiency**
- Utilities may file 5-year Innovation Plans
- Sets limits on customer costs
- Requires a cost-benefit accounting framework that compares *all of these program types* consistently ([2021 MN Stat. 216B.2428](#))

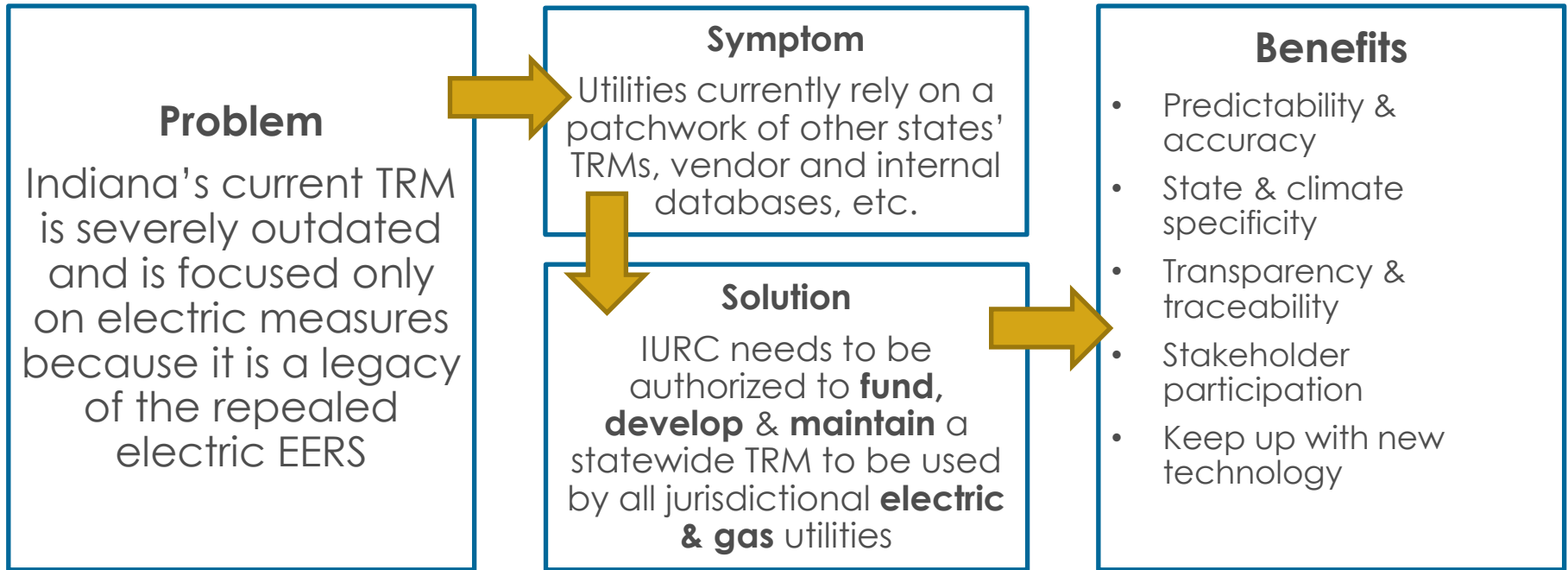
Innovation: Building Energy Code Compliance

The state & utilities can become partners in advancing the building stock

Circuit Rider Program	Provides pro-active one-on-one education and resources to improve compliance	IA, MO & NE
In-Person Training	Provides overview and topic-based trainings and resources, particularly focusing on code changes and compliance challenges; can include trade certifications	IA, MO & NE
Online Training	Provides overview and topic-based training and resources, as well as deep-dive videos, in both live and asynchronous formats	MO & NE
State Funded Training	Provided when new code is adopted	IL & MI
Utility Funded Training	Ameren Missouri & Xcel Energy have had programs; DTE and Consumers Energy are piloting a program	MI, MN & MO
Field Studies	Field studies observe typical construction practices relative to the energy code. The collected data identifies measures needing additional support and helps to inform the training program.	IL, KY, MI, MN, MO & NE
Market Transformation	A Market Transformation (MT) program strategically intervenes in a market to create lasting change from the accelerated adoption of energy efficient products, services and practices. This is currently being explored in Illinois.	IL

Updated statewide TRM

Everybody works from the same playbook



Modernize CET: Energy Efficiency & DERs Share the Same Broad Range of Impacts

Applies to

- Energy Efficiency
- Demand Response
- Distributed Generation
- Distributed Storage
- Electrification
- Combinations of DERs
- Non-Wires Solutions

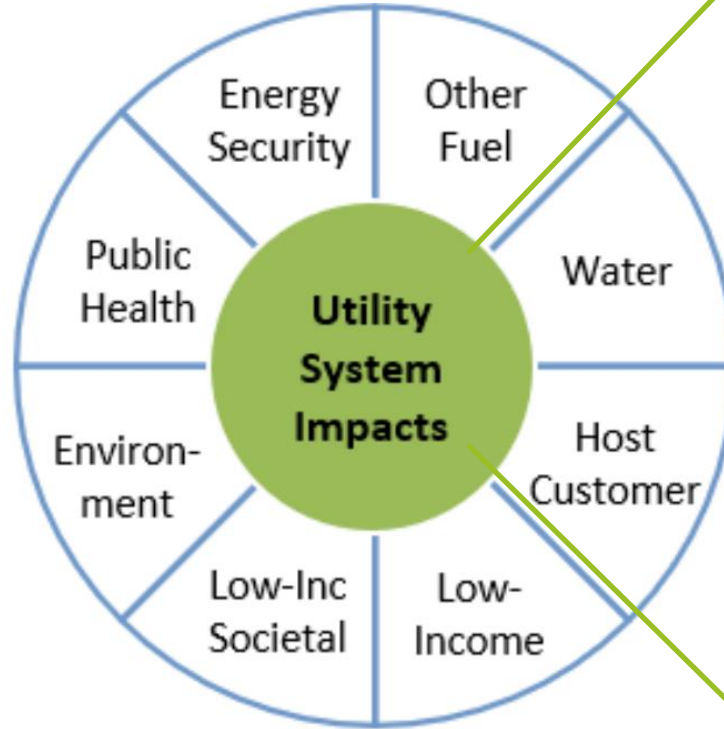


Image Source: [NSPM for DERs](#)

Utility System Impacts

- **Generation**
 - Avoided generation
 - Avoided capacity
 - Regulatory compliance
 - Market price effects
 - Ancillary services
- **Transmission**
 - Avoided capacity
 - Transmission system losses
- **Distribution**
 - Avoided capacity
 - Distribution system losses
 - Distribution O&M
 - Distribution voltage
- **General**
 - Customer financial incentives
 - Program administration
 - Credit & collection
 - Risk, reliability & resilience
 - Utility performance incentives

Modernize CET: Cost-effectiveness tests include different non-utility impacts

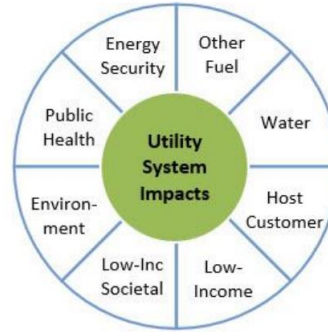
Tests differ based on what impacts they include.

Jurisdictions can design their own *Jurisdiction Specific Test* to measure the impacts that are relevant to their specific policy goals

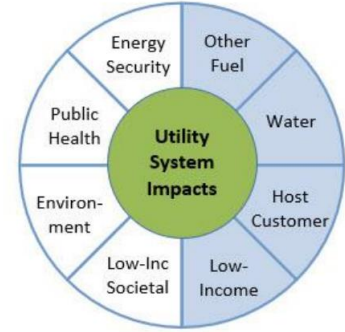
The same test should be used for EE & all DERs

The **National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources (NSPM for DERs)** is the guide to developing CE testing

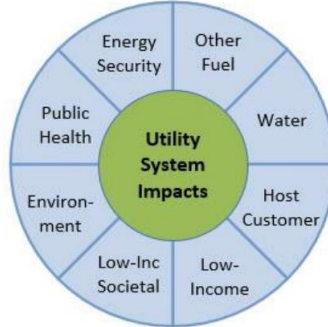
JST 1 = UTC/PAC Test



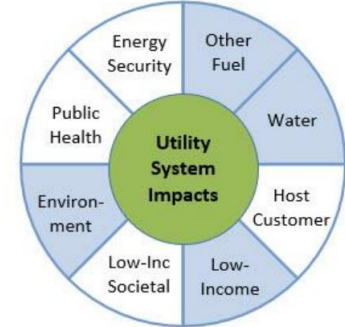
JST 2 = TRC Test



JST 3 = SCT



JST 4 ≠ traditional CE test *



Full range of utility system impacts included

Non-utility system impacts included

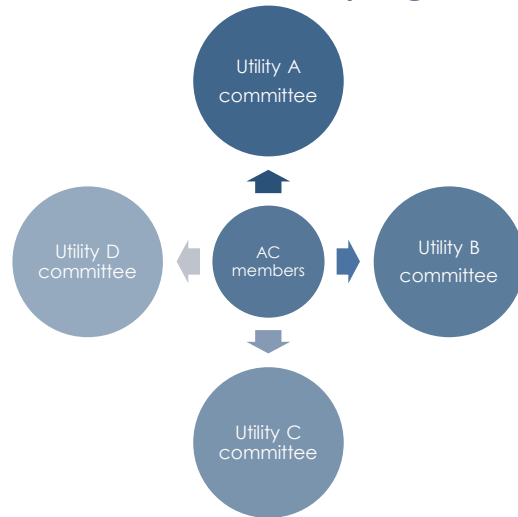
Non-utility system impacts not included

Establish a statewide EE collaborative

Bringing all the parties to the same table to cooperate

Utility Advisory Committees

(e.g., IN, OH)



- Individual deal making
- Closed meetings & lack of transparency
- Inconsistency between utilities

Statewide EE Collaborative

(e.g., IL, MN, MI, MO)

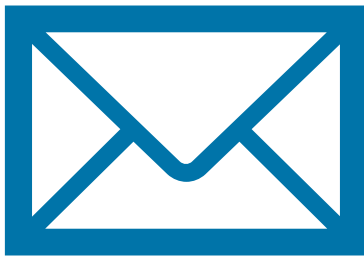


- Cooperative decision making
- Open meetings & increased transparency
- Resolve issues before filings
- Consistency in plans & reporting
- Trust building

Contact Information



www.mwalliance.org



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



312.784.7273