



## ERE Staff Subcommittee

*What's my line? —*

*New targets for equity and environmental justice  
in state commission roles and responsibilities*

Welcome everyone!  
The session will begin shortly.  
Please stand by.



ERE Staff Subcommittee, Sunday November 7, 2021

***What's my line? —***

***New targets for equity and environmental justice  
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Moderator: Hon. Katherine L. Peretick, Commissioner, Michigan Public Service Commission

Presenters: Marguerite Beringer, Research Consultant, E9 Insight

Justin Schott, Manager, Energy Equity Project, University of Michigan School  
for Environment and Sustainability, Urban Energy Justice Lab

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# Equity at the PUCs: E9 Insight Research on Pathways to Changing PUC Mandates

NARUC Annual Meeting 2021

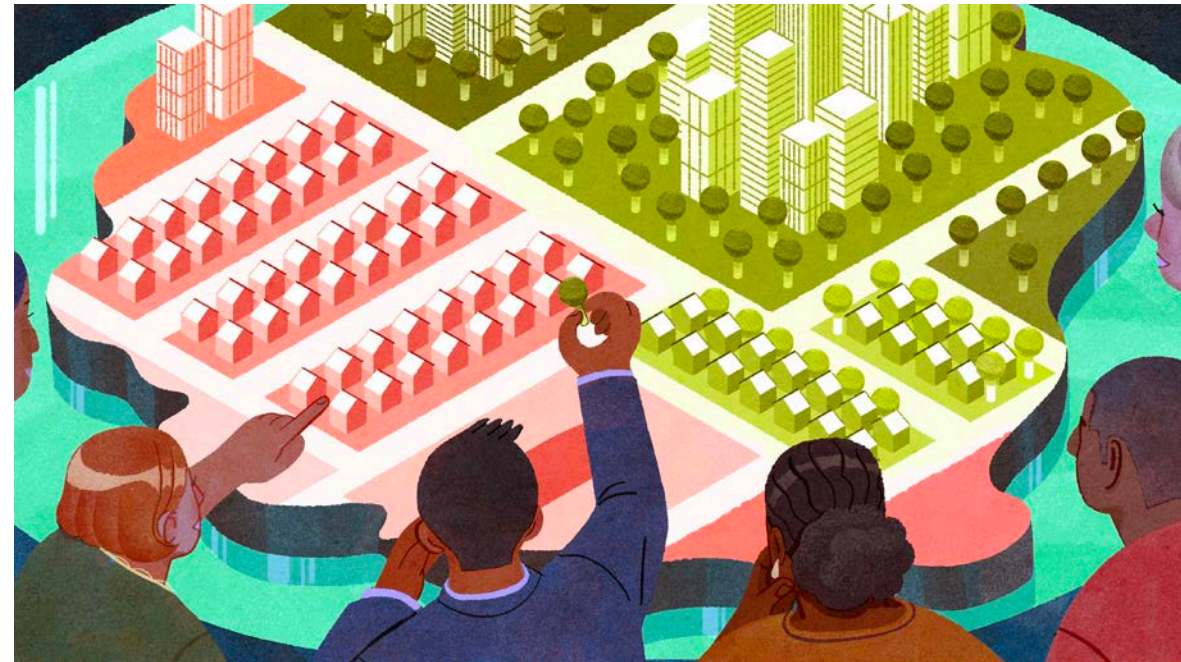
Staff Subcommittee on Energy Resources and the Environment

November 2021

*Research produced under contract with*

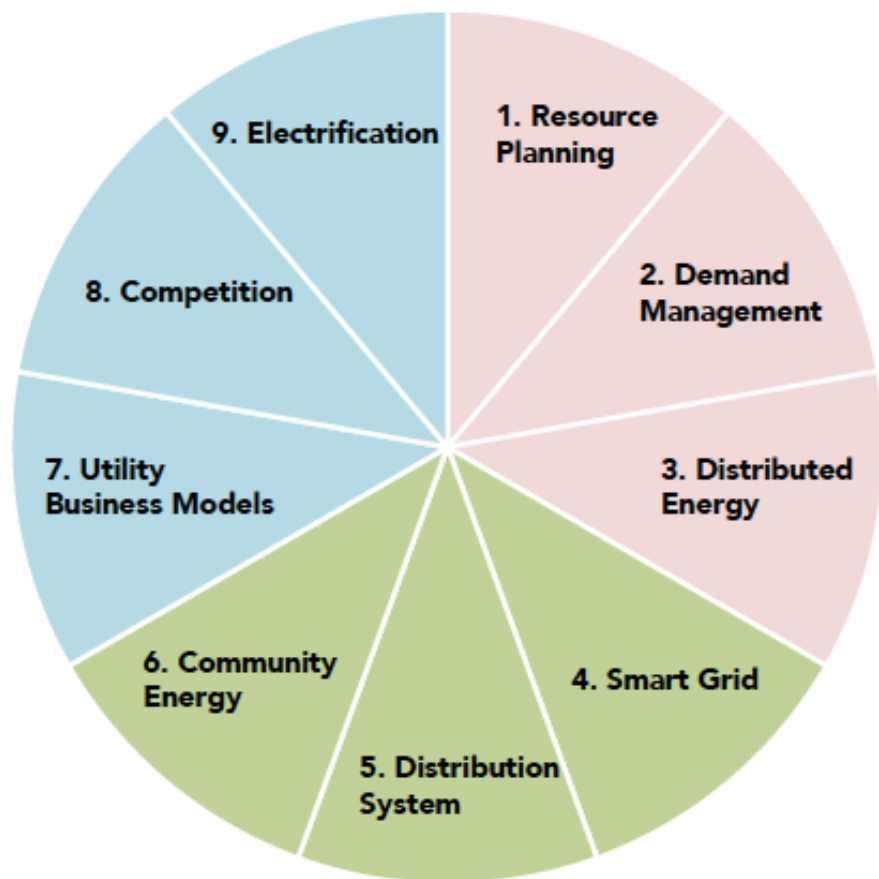


**IMT**  
INSTITUTE  
FOR MARKET  
TRANSFORMATION



*Image by Ericka Lugo*

# E9 Insight Overview



E9 Insight focuses on nine primary activity domains at state public utility commissions.

- E9 Insight is a boutique research and advisory firm focused on the regulatory and policy environment of the U.S. electric industry.
- Our mission is to help our clients find opportunities to transform the electric industry.
- Clients include Fortune 500, start-ups, government agencies, advocacy groups, etc.
- Docket database contains over 6,000 summarized dockets with key orders.
- Services consist of policy intelligence, analysis and diligence, and regulatory engagement.



# Energy Equity

*“If we are to accelerate our energy progress and enable our fellow Americans to fulfill their promise in every field, including energy, it is imperative that we redouble our efforts to include and expand the participation of underserved communities.” Former U.S. Secretary of Energy, Dan Brouillette, [DOE Equity in Energy Booklet](#)*



# Why think about Equity?

“Awareness of social inequity problems is growing in the United States and globally.” *EPRI’s April 2021 Equity and Environmental Justice Considerations for a Clean Energy Transition*

Inequities exist in the energy sector across many fields:

- Energy access
- Affordability
- Proximity to generation plants
- Disconnections
- Access to programs and equipment
- Access to clean energy
- Clean air and water
- Representation and access to regulatory processes

As utilities respond to the aging grid, extreme weather events, decarbonization targets, and other directives, inequities are likely to be exacerbated unless specific policies are enacted to protect under-represented communities.



# Equity across the industry

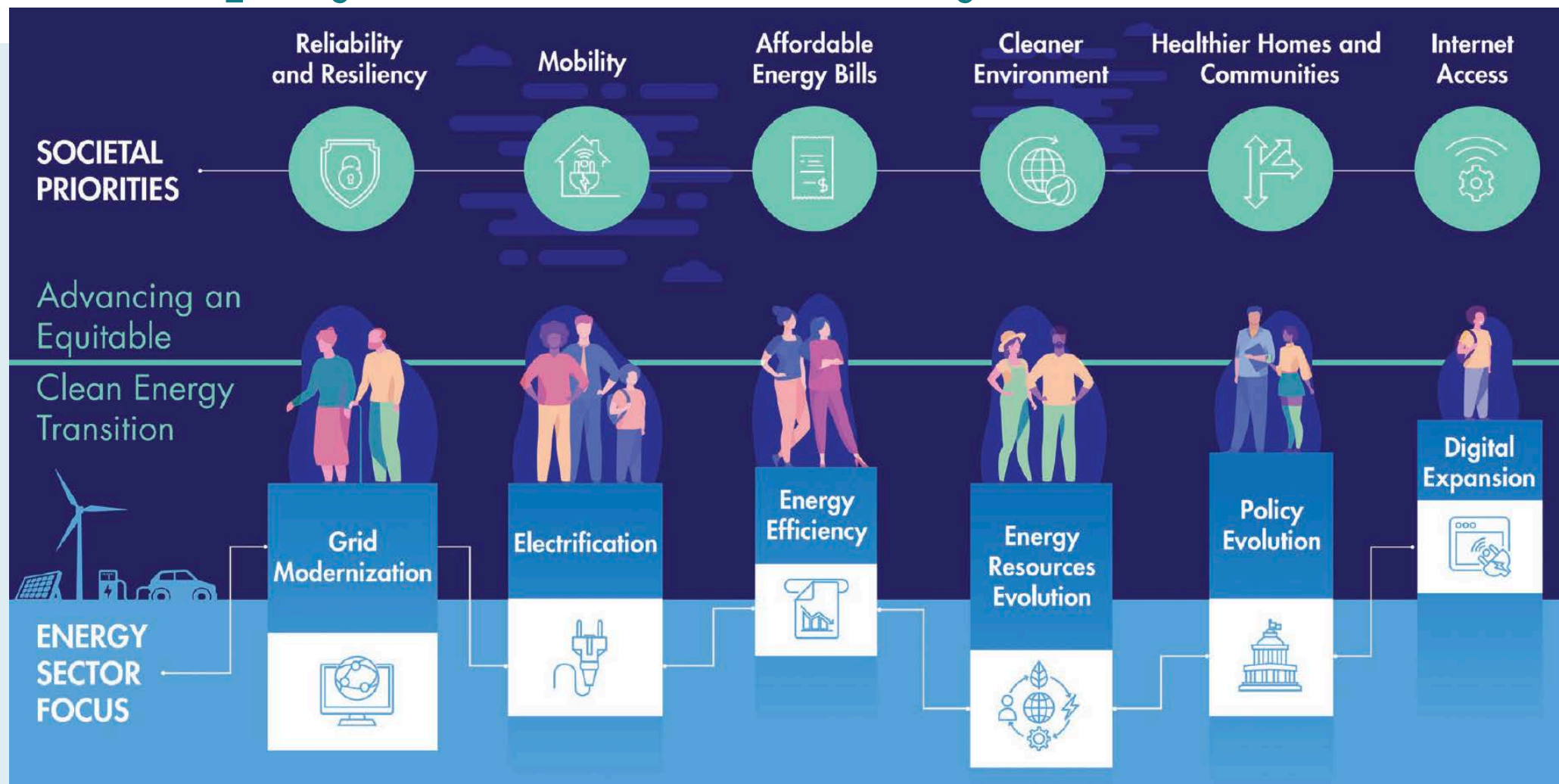


Image from EPRI's April 2021 [Equity and Environmental Justice Considerations for a Clean Energy Transition](#) report

# Research Overview



Through July 2021, E9 Insight and Yale Center for Business and Environment were contracted with the Institute for Market Technology (IMT) to conduct research on PUC mandates to consider equity and decarbonization issues. The project was scoped to identify the pathways to changing the PUC mandate, and to compare state policies, inter-agency coordination, etc. E9 looked at legislation, executive orders, and PUC dockets, while Yale analyzed statute.

The research demonstrated more equity-related activity than anticipated; nearly 100 reports, orders, bills, and utility filings were identified.

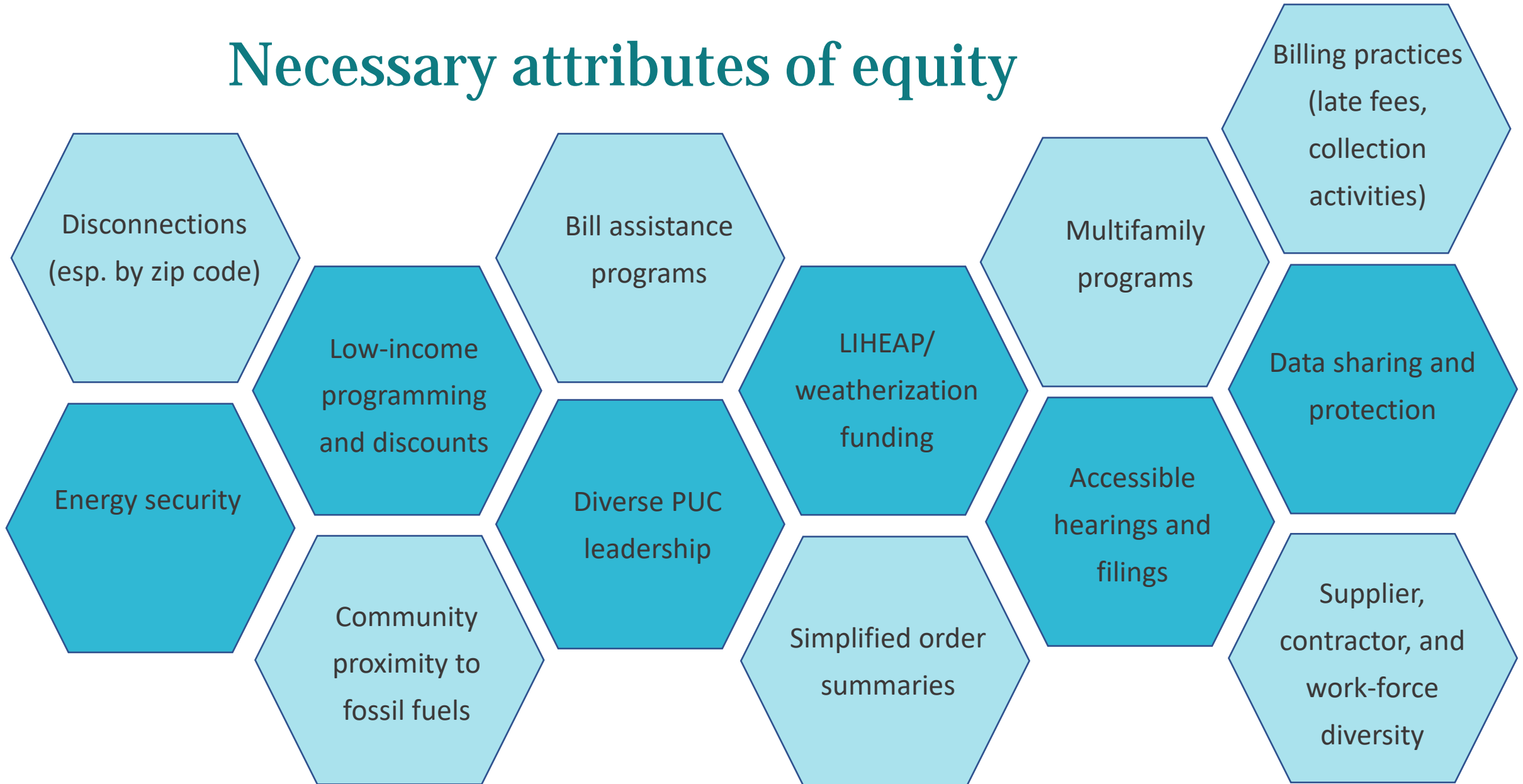
**Please note that low-income programming is still a necessary part of any equity framework.**



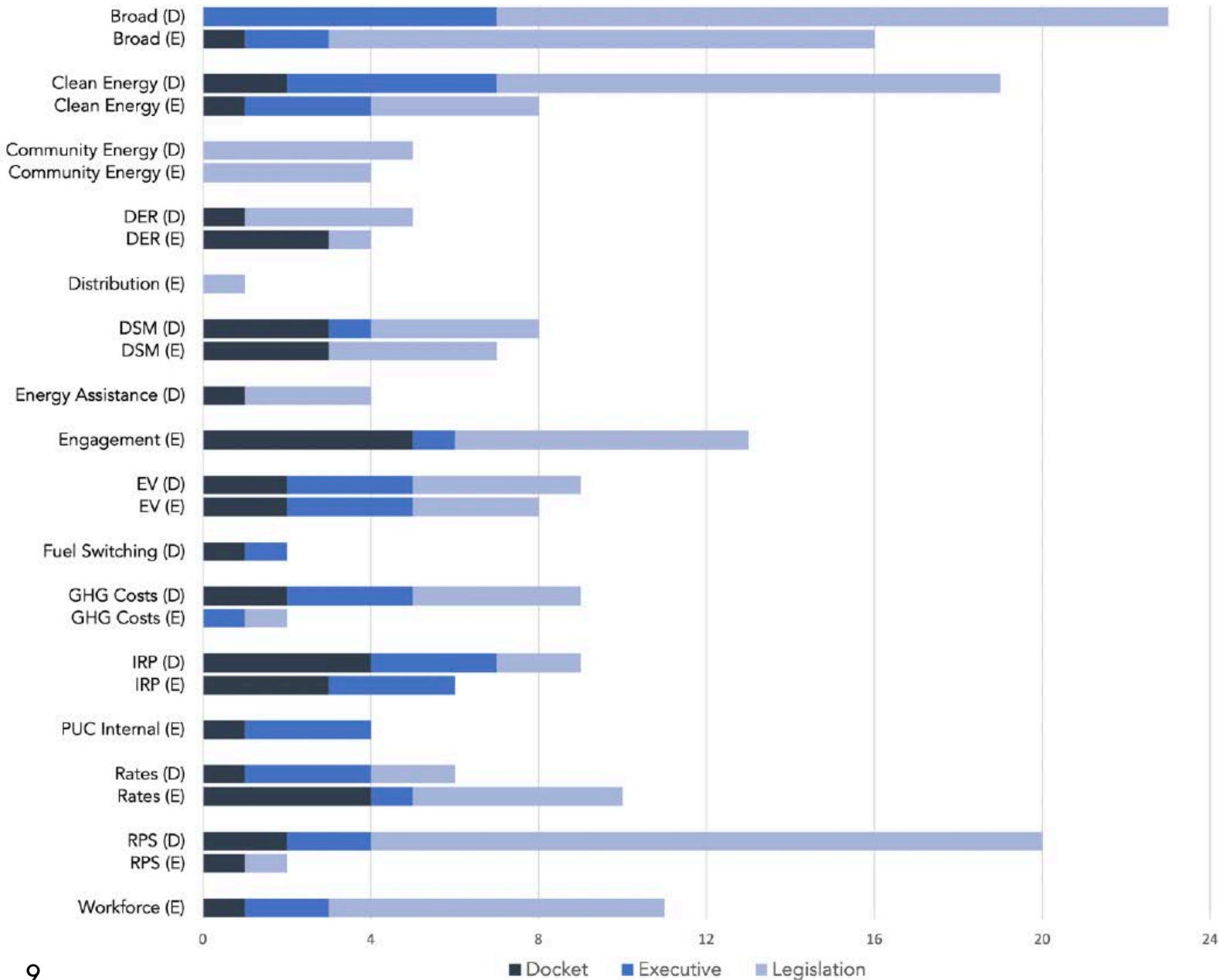
# Lessons, definitions and scope

- Advisory Group members convened by IMT drew attention to important, necessary considerations when discussing “equity” at the PUC. Equity is intersectional and influenced by many factors (i.e. disconnections, billing practices; see next slide).
- E9 Insight’s research does not claim to evaluate these factors. Instead, the report identified cross-sectional, “modern” programs that focus on equity, environmental justice, disadvantaged communities, etc. **The advisory group suggests that without analysis of affordability issues, these programs do not tell the whole story.**
- Importantly, mandates that do not address affordability and energy access issues (PIPP, late fees, disconnections, LIHEAP, etc.) will not achieve equity.
- “Equity without affordability is not equity.”
- Greenwashing or whitewashing “equity” requirements is a dangerous and likely outcome.
- ***Therefore, there is more research to be done, both by consultants and PUC staff.***

# Necessary attributes of equity



Pathways for Changing the PUC Mandate: Decarbonization (D) and Equity (E)



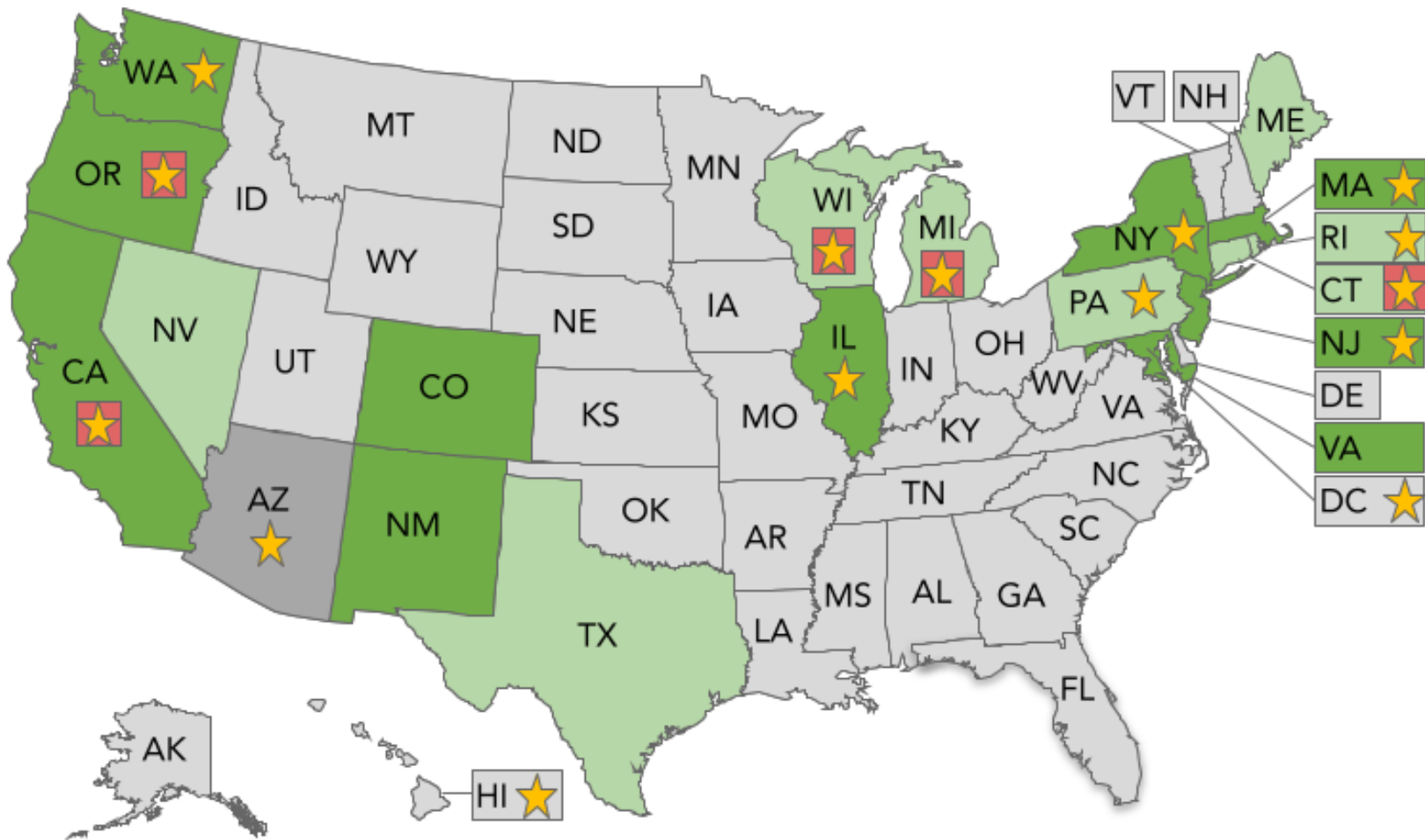
# Equity Applications






E9 Insight categorized equity and decarbonization mandates by the program or process impacted.

IMT's Advisory Group brought special attention to "Engagement" activities that make dockets or hearings more accessible and "PUC Internal" efforts, which include diversity and inclusion plans.



## Equity Activities and Requirements at U.S. Public Utility Commissions



-  Codified requirements to consider equity broadly
-  Codified requirements to support equity via specific programs
-  Pending requirements to consider equity
-  Internal PUC efforts to address equity
-  PUC order or initiative supported equity without explicit statute

# E9 Insight research links

See links to the research memo and appendices at <https://e9radar.link/equity> , including [Appendix C: Activity Report](#) (with specific dockets, orders, and other links)

Research completed for IMT was concluded in July 2021. Therefore, more recent activities are not included, but the map on the previous page includes legislation from Illinois and North Carolina. Equity-specific dockets that were initiated by the PUC or that changed the PUC mandate were pulled into a docket index report for your convenience:

Equity and Equity-Adjacent Dockets: <https://e9radar.link/equitydockets>





IMT is not alone. In the last two years, these organizations have launched national research projects or initiatives related to energy equity:



# Examples of National Equity Research/Initiatives

- ACEEE's [Leading With Equity initiative](#) incorporates an [equity](#) lens into numerous “score cards” (clean energy, energy burden, transportation electrification)
- CNEE's [Energy Communities in Transition](#) initiative provides resources and support
- E4TheFuture promotes clean, efficient energy [and prioritizes equity](#) in its work
- The Energy Democracy Project produced a [People's History of Utilities](#) and the [Utility Justice Playbook](#).
- The [Energy Equity Project](#) is developing a standardized framework for energy equity measurement
- EPRI's [Equity and Environmental Justice Considerations for a Clean Energy Transition](#) paper
- IMT's Incorporating [Energy Equity into Energy Benchmarking](#) report
- The [Initiative for Energy Justice](#) provides resources and leadership development to policymakers and advocates
- Institute of Electrical and Electronics Engineers' [Electricity Tariff Design via Lens of Energy Justice](#) report
- NARUC's “Innovation Webinar” on [Enabling Robust Stakeholder Engagement at Public Utility Commissions](#) and [Gender Equity](#) initiative
- NRDC has produced multiple articles, including [Eight ways Biden's Plan Could Build Equity in Our Infrastructure](#)
- Pacific Northwest National Laboratory is hosting an [Energy Equity](#) project
- RAP and Synapse Economics' [Sources of Inequities and Policy Solutions for Improving Community Health and Wellbeing](#) review equitable solutions
- RMI's [Just Energy Transition Spotlight](#) and [PUC Modernization Issue Briefs](#) focus on equity part of PUC modernization
- Sierra Club's approach to [100% renewable energy policies](#) includes equity and justice
- U.S. Department of Energy's [Equity in Energy™](#) initiative



# When reading any publications, please consider...

- Who wrote the research, and what biases, privilege, and assumptions did they bring to the paper?
- Does the publication talk about the need to eliminate late fees, deposits and other punitive credit and collection activities?
- Do they advocate for the establishment of Percentage of Income Payment Plan programs and Arrearage Management Programs?
- Do they reference the need for discount rates for financially struggling customers?
- Do they recommend that states enact strong serious medical/medical certificate protections to ensure that people with medical conditions are not cut off from essential utility service because of inability to pay?
- Do they advocate for increased funding for LIHEAP and the funding of summer cooling LIHEAP programs from Congress?
- Do they address disconnection rates and policies?
- Are affordability and energy security metrics discussed and centered in the work?
- Were local or impacted communities consulted in the publication process? At what phase were they brought in for feedback?

# Thank you for your time and attention.

Please reach out with any questions, curiosities, or suggestions about this research to:

Marguerite Behringer

[marguerite@e9insight.com](mailto:marguerite@e9insight.com)

To learn more about E9 Insight or to work with us, please reach out to:

[inquiries@e9insight.com](mailto:inquiries@e9insight.com)

[www.e9insight.com](http://www.e9insight.com)

*... Or come see Marguerite or Cameron Brooks in between sessions. Bourbon, anyone...?*



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# ***Energy Equity Project***

*Justin Schott, Project Manager*

[jbschott@umich.edu](mailto:jbschott@umich.edu)

[www.energyequityproject.com](http://www.energyequityproject.com)



**SCHOOL FOR  
ENVIRONMENT AND SUSTAINABILITY**  
UNIVERSITY OF MICHIGAN



# Toward A Just Energy System



**Kyle Whyte**  
Principal Investigator



**Tony Reames**  
Project Director  
[Bio](#)



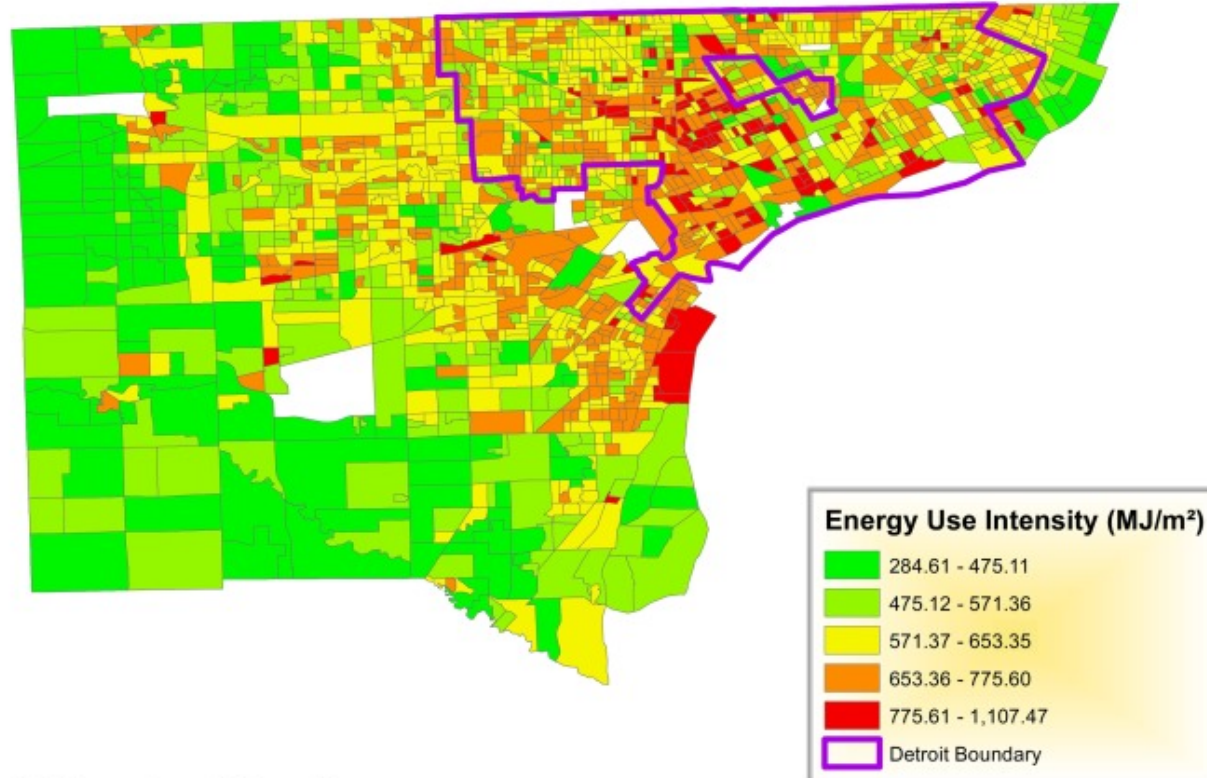
**Justin Schott**  
Project Manager  
[Bio](#)



**Toyosi Dickson**  
Research Assistant  
[Bio](#)



**Rahul Agrawal**  
**Bejarano**  
Research Assistant  
[Bio](#)



0 1.75 3.5 7 10.5 14 Miles

Data Source: RECS, 2009, US Census, American Community Survey (2006-2010 Est.)

## Project Team

## Advisory Team



**Marti Frank**  
Efficiency for Everyone  
[Bio](#)



**Jamal Lewis**  
Green & Healthy  
Homes Initiative  
[Bio](#)



**Carlos Martin**  
Urban Institute  
[Bio](#)



**Elizabeth Palchak**  
University of Vermont  
[Bio](#)



**Emily Levin**  
VEIC  
[Bio](#)

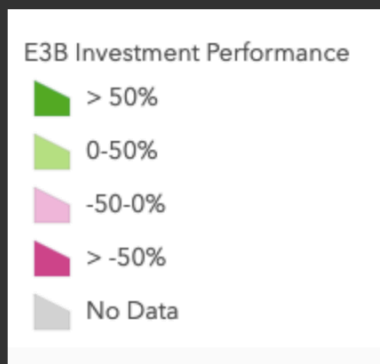


**Michael Colgrove**  
Energy Trust of Oregon  
[Bio](#)



The E3B Investment Performance Map illustrates utilities' performance relative to their E3B investment target. Selecting a utility activates a pop-up presenting additional energy efficiency investment metrics.

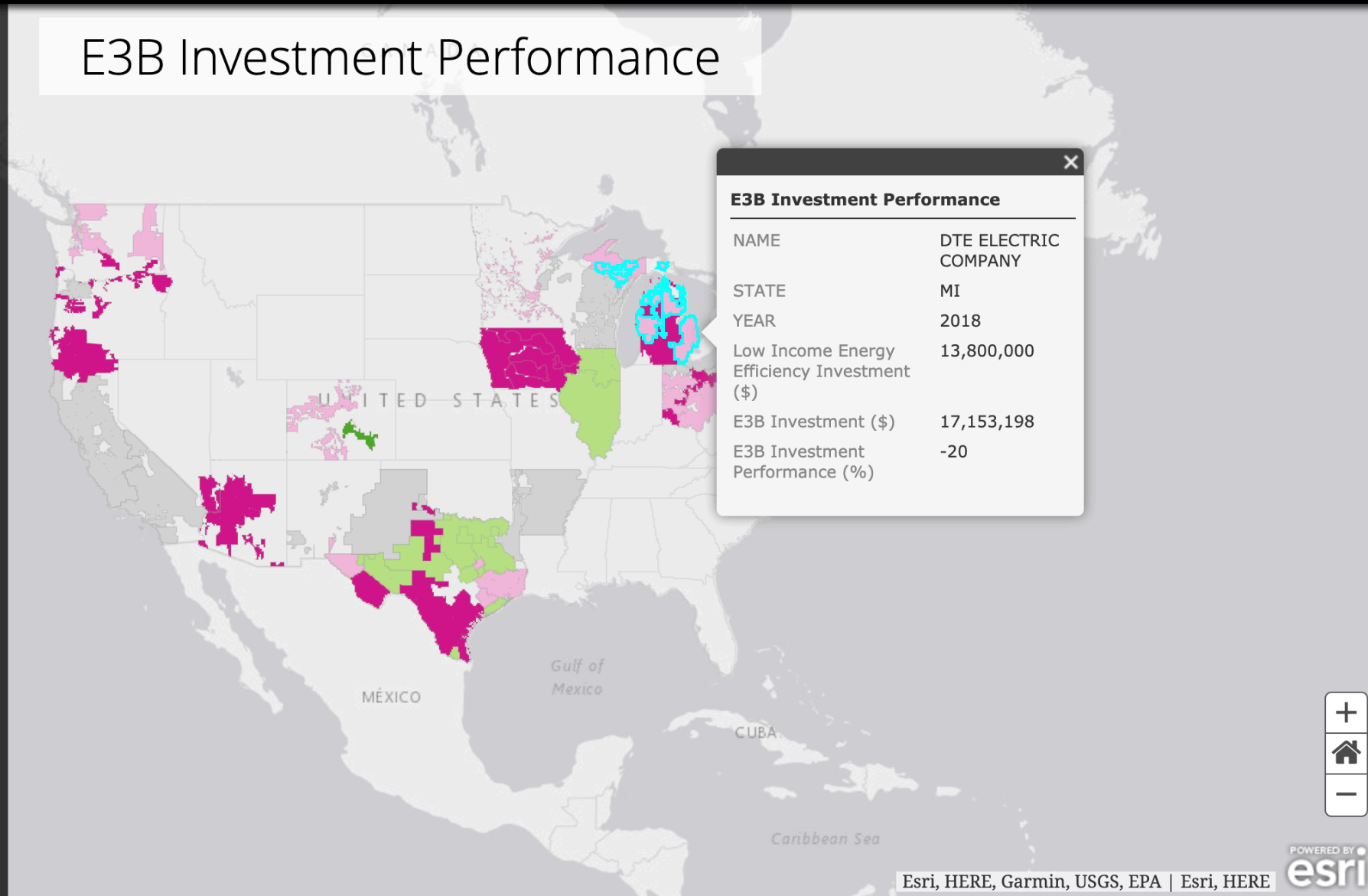
## E3B Investment Performance Legend



Where 0% represents equitable investment  
Green represents overperformance  
Red represents underperformance

Of the 74 studied utilities, 16 invest in low-income energy efficiency programs at an above-equitable rate. 33 utilities invest in low-income programs at a below-equitable rate, and 25 utilities did not provide data.

## E3B Investment Performance



# Vision:

- 1. The presence of an equity measurement framework for clean energy programs will improve outcomes for BIPOC, lower-income and frontline environmental justice communities.** These communities have historically borne the brunt of environmental harms without partaking in the benefits of more efficient, less polluting, and more affordable forms of energy.
- 2. The framework will be universally applicable--to any program, any utility, and any municipality.**
- 3. The framework will use a standard *process* to assess four forms of equity: i) Recognition, ii) Procedural, iii) Distributive, iv) Restorative**

# Timeline

**2018**

## **Building Momentum**

*40+ allies meet at the equity track in ACEEE's Summer Session. Seeds for the Energy Equity Project are planted.*

**2019**

## **Conceptual Development**

*With funding from Energy Trust of OR, core team of Urban Institute, Green & Healthy Homes, VEIC, draft work plan and white papers.*

**2020**

## **Funding Secured**

*Urban Energy Justice Lab at U of M's School of Environment and Sustainability becomes home of EEP. Energy & Joyce Foundation provide funding through 2021.*

**2021**

## **Public Launch**

*Kick-off and extensive listening sessions for community groups, regulators, practitioners, utilities. Work groups prioritize energy equity metrics.*

**2022+**

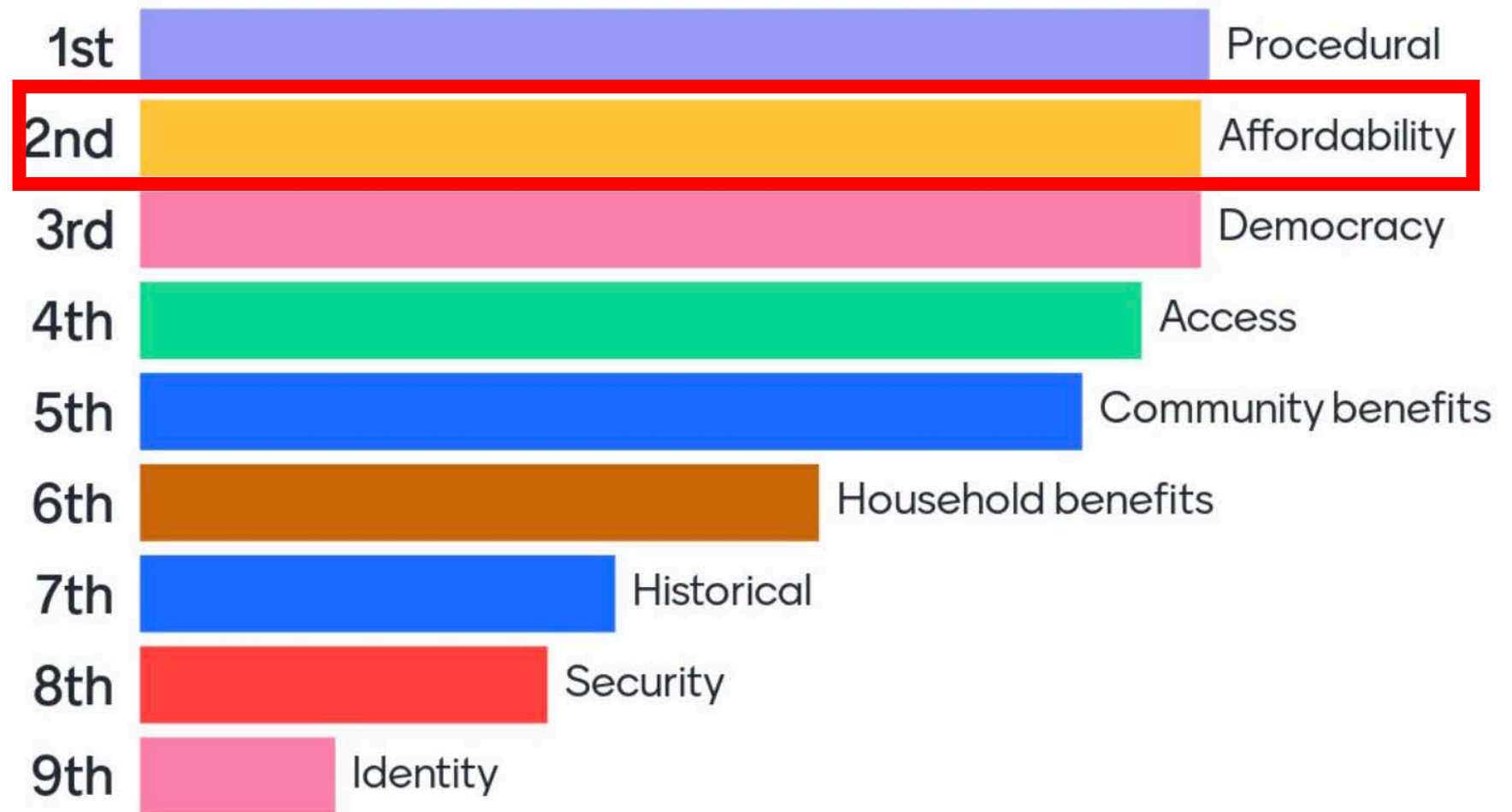
## **Beta Framework**

*Version 1.0 of the energy equity framework goes live. EEP provides implementation support to beta testers and identifies improvements.*

# CONNECTING WITH STAKEHOLDERS

EVENT	DATE	REGISTERED	ATTENDED
Kickoff #1	6/9/21	210	130
Kickoff #2	6/17/21	165	85
Listening #1 - Practitioners #1	6/23/21	39	27
Listening #2 - Community #1	7/14/21	40	13
Listening #3 - Utility	8/4/21	67	36
Listening #4 - Regulator	8/11/21	50	25
Listening #5 - Philanthropy	8/18/21	26	9
Listening #6 - Community #2	8/19/21	36	17
Listening #7 - Practitioners #2	8/25/21	66	26
<b>9 EVENTS</b>	<b>11 WEEKS</b>	<b>699</b>	<b>368</b>

# Which indices would you like to explore in depth?



# ENERGY AFFORDABILITY INDEX

## Summary:

How affordable is energy and how does it vary by household characteristics?

## Sample metrics:

- Presence of progressive / lifeline rate structures
- Maximum limits on energy burdens
- Rate disparities between residential, commercial, industrial
- Size of overall safety net (per capita)
- % of safety net spent on longterm affordability, vs bill assistance
- Transportation costs

# Low-Income Energy Affordability Data (LEAD) Tool

Data (housing only) comes from the U.S. Census Bureau's American Community Survey 2018 Public Use Microdata Samples.

## Avg. Energy Burden (% income) for Census Tracts in Alabama

Avg. Energy Burden (% income)

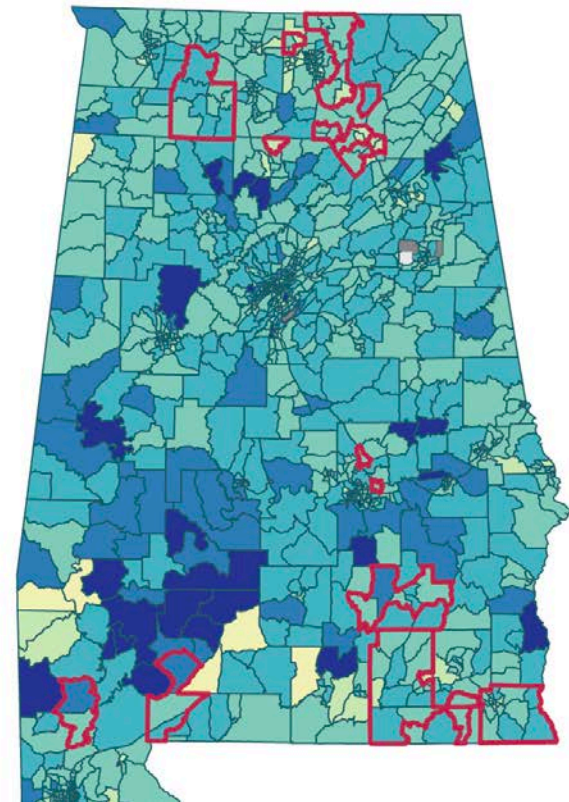
Avg. Annual Energy Cost (\$)

Housing Counts



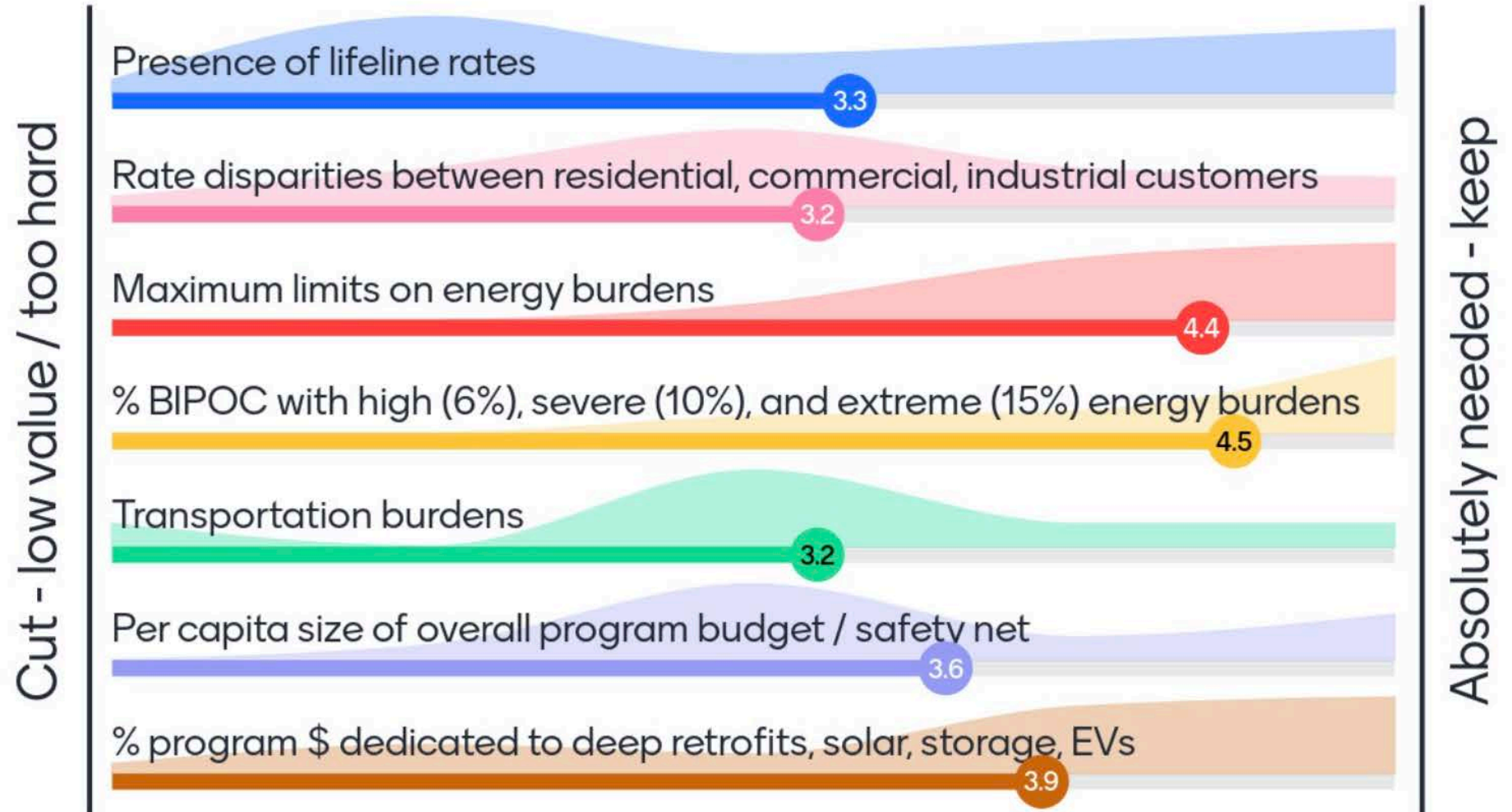
Show borders: **Tribal Areas\*** Counties None

\* Tribal area borders may extend across multiple states.





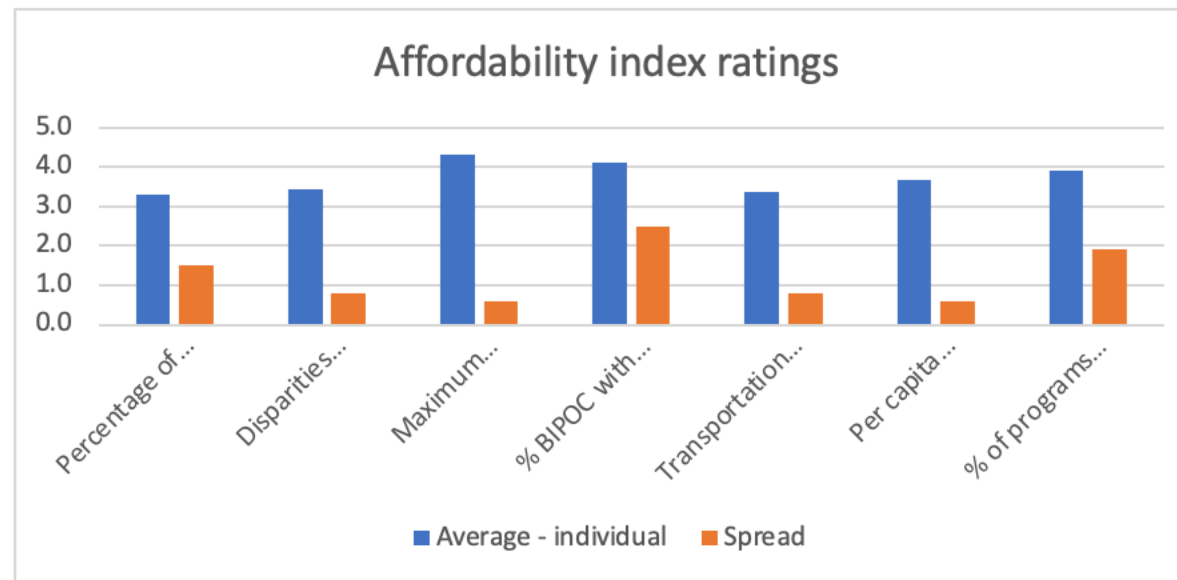
# How essential are these metrics for the energy affordability index?



## 4 AFFORDABILITY INDEX – BY THE NUMBERS

Session	# of Raters
Community	7
Practitioner	26
Utility	11*
Regulator	
Philanthropy	

\* Utility stakeholders only rated PIPPs, severe burdens, and deep savings.



Metric	Average - individual	Average - session	Low - session	High - session	Spread
Percentage of income payment plans (PIPP)	3.4	3.6	3.0	4.5	1.5
Disparities between customer classes	3.4	3.6	3.2	4.0	0.8
Maximum energy burdens	4.3	4.1	3.8	4.4	0.6
% BIPOC with severe burdens	3.9	3.9	2.5	4.8	2.3
Transportation burdens	3.4	3.6	3.2	4.0	0.8
Per capita energy program budget	3.6	3.5	3.4	3.6	0.2
% of programs dedicated to deep energy savings	3.7	3.8	3.0	4.4	1.4

### HIGHLIGHTS:

Despite being an imperfect measure, energy burdens are still the most preferred metric for representing affordability. A subset of this concern was the percentage of BIPOC households with high (>6% income), severe (>10%), or extreme burdens (>15%), which had lower ratings among utility stakeholders but was near the top among practitioners (4.5) and substantially higher among grassroots community stakeholders (4.8).

There was considerable vocal and chat support for percentage of income payment plans (PIPP), although this is not well reflected in the scores and may represent either a minority opinion or greater familiarity with these metrics.

### THEMES:

Electrification: Some efforts to reduce emissions, particularly electrification, would raise energy costs without significant changes to program design or additional supports. Any increase in cost from decarbonization is strongly opposed by many affordability advocates. Another feedback loop of concern is that as more people stop using natural gas or the electric grid, those that are not able to switch to electricity or distributed sources will be forced to pay a higher share of maintaining the fossil fuel infrastructure. People in cities like Detroit have experienced sharp increases in their water bills, as the systems were originally built for much larger populations but white flight resulted in many paying lower rates in the suburbs. At a minimum, ensuring that costs do not increase, either immediately or from rate increases down the line, should be the baseline for any new clean energy programs.

### QUOTES:

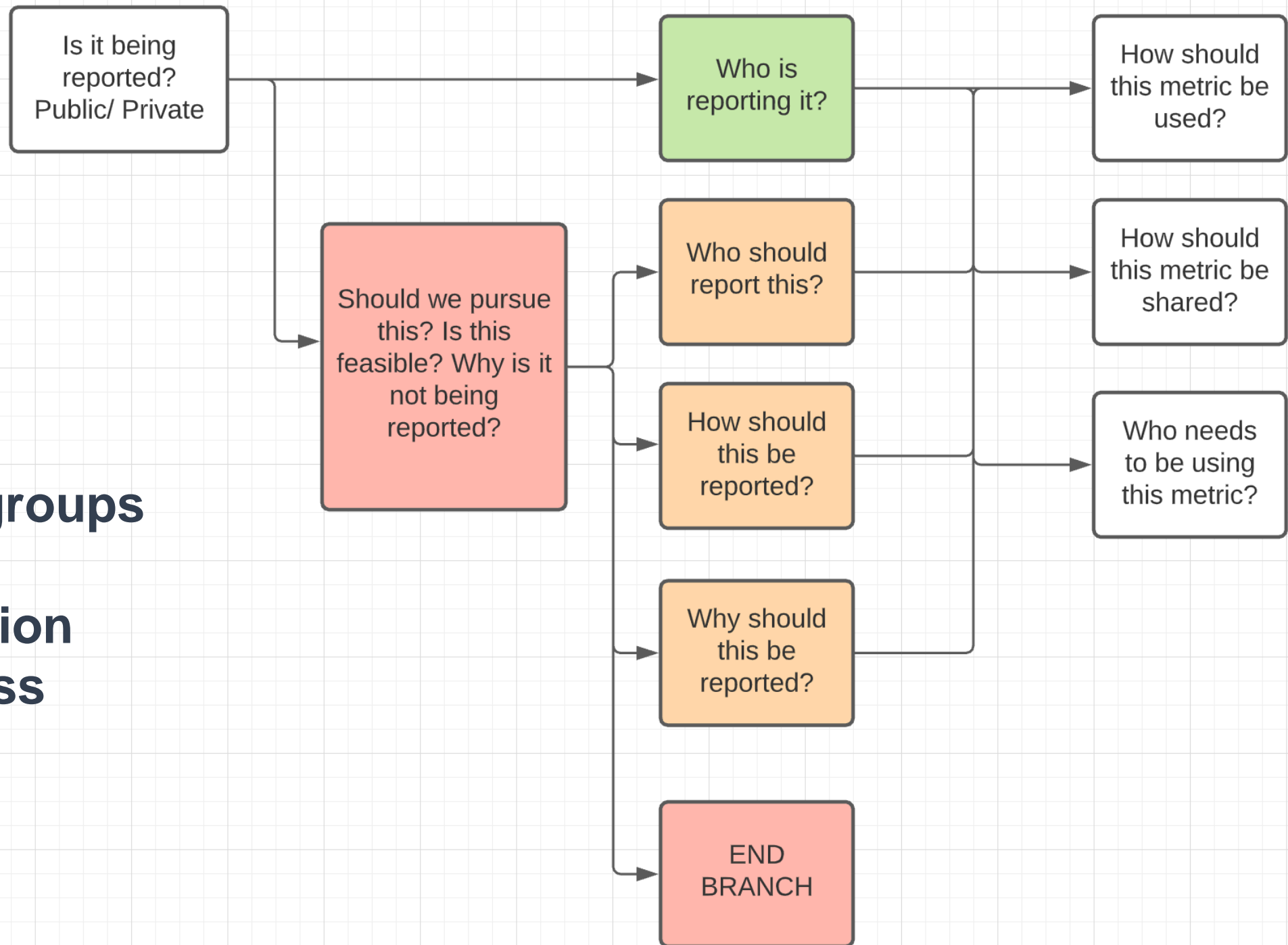
“I would examine RESIDENTIAL RATE DESIGN, too. For example, large customer charges are regressive and diminish value of energy efficiency investments. Perhaps also look at late fees and deposit requirements -- other punitive policy data.”

“On “% program \$ dedicated to deep retrofits, I’d specifically want to see that with a racial/ethnic/income overlay. As we’ve discussed a bit already, \$ may exist but folks may not be able to take advantage of it”

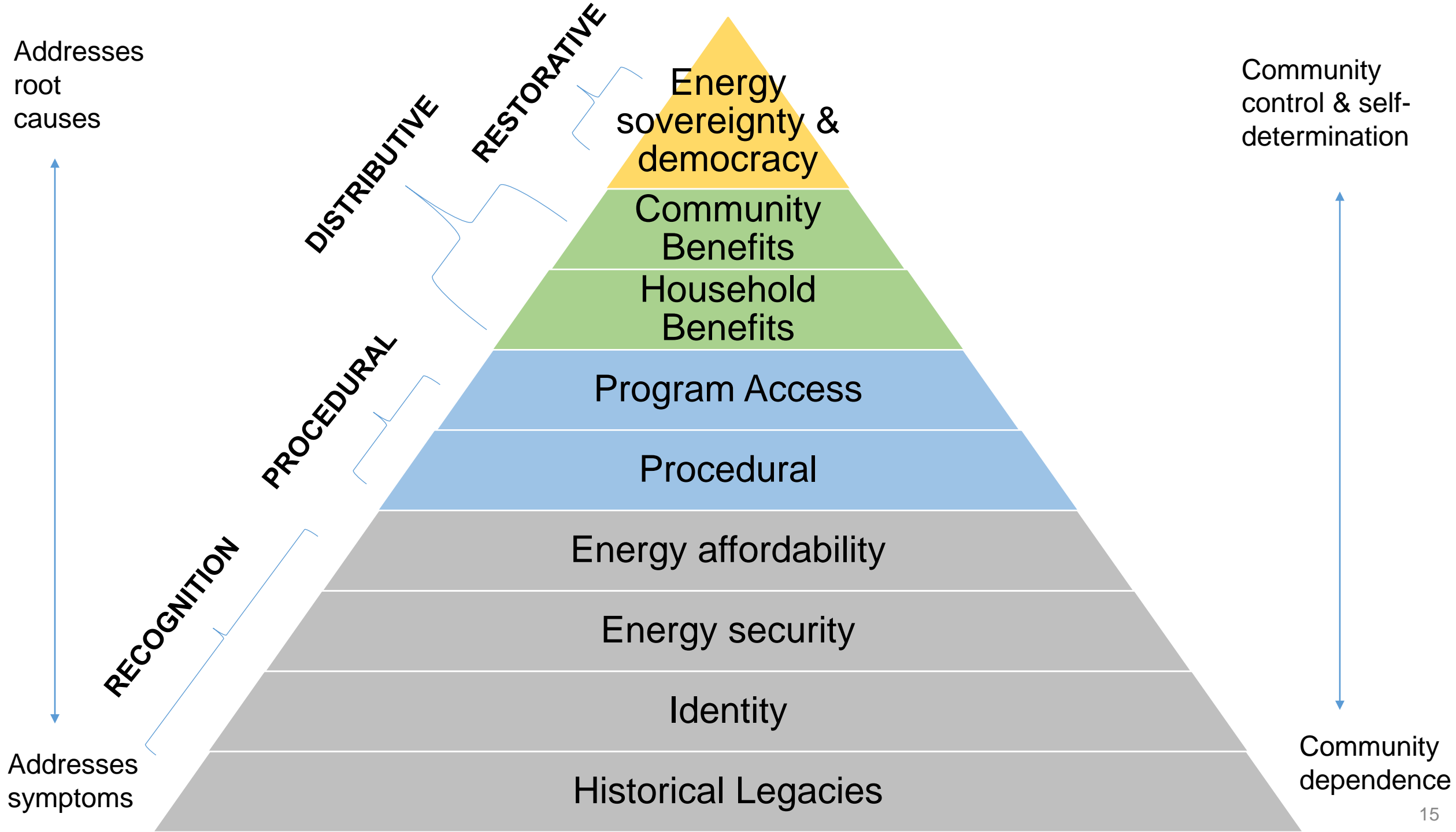
“Instead of per capita program budget for safety net, why not focus a metric on the recipients? e.g. % of energy costs covered by avg. safety net recipient.”

“problem with all energy burden metrics: energy is a housing cost - unless its transportation. the federal standard is 33% is the right

# EEP Workgroups Metric Selection Process



# Deliverables





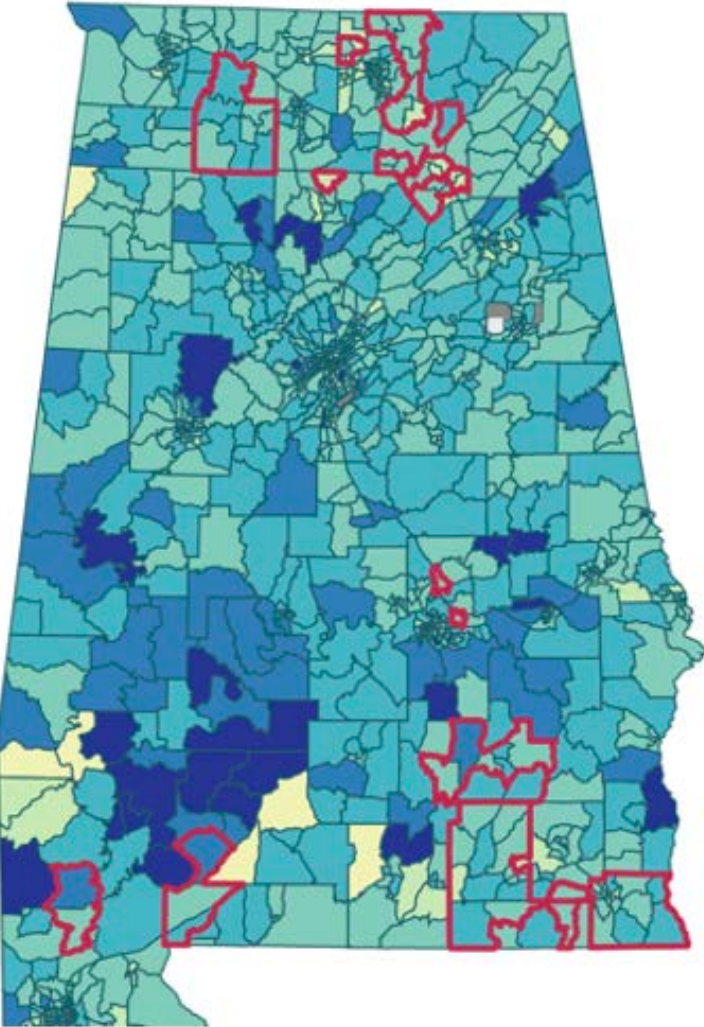
EQUITY DIMENSION	INDEX	DESCRIPTION	SAMPLE METRICS
Recognition	<b>Historical</b>	Captures historic disinvestment, discrimination, disenfranchisement, and environmental justice burdens that continue to impact present circumstances.	<ul style="list-style-type: none"> <li>- Proportionate disparities in historic program spending and savings by race, income</li> <li>- Historic presence of toxic facilities / superfund sites / cancer clusters</li> <li>- Anti-equity / anti-clean energy lobbying expenditures</li> <li>- Redlining and housing discrimination</li> </ul>
	<b>Identity</b>	Captures demographic, social-economic, and geographic variables that are closely correlated with energy and climate vulnerability and disproportionately high burdens and low benefits from the energy system	<ul style="list-style-type: none"> <li>- Climate vulnerability score</li> <li>- Housing access / stress</li> <li>- Demographics</li> <li>- Pollution burden</li> <li>- Health measures (e.g. asthma rates)</li> <li>- Economic indicators (e.g. % HH below 50% AMI)</li> </ul>
	<b>Security</b>	Captures data that indicate how continuously, safely, and reliably one has access to energy without interruption or compromising other basic needs or comfort.	<ul style="list-style-type: none"> <li>- Power outage frequency and disparities</li> <li>- Shutoffs / shutoff policies</li> <li>- Arrearages</li> <li>- Energy as human right declarations</li> </ul>
	<b>Affordability</b>	Considers rate structures, payment plans, financial assistance, household financial benefits from clean energy programs, and disparities in energy costs among different demographic groups.	<ul style="list-style-type: none"> <li>- Presence of progressive / lifeline rate structures</li> <li>- Maximum limits on energy burdens</li> <li>- Rate disparities between residential, commercial, industrial</li> <li>- Size of overall safety net (per capita)</li> <li>- % of safety net spent on longterm affordability, vs bill assistance</li> </ul>



EQUITY DIMENSION	INDEX	DESCRIPTION	SAMPLE METRICS
Procedural	<b>Procedural</b>	To what extent are BIPOC, frontline, and low-income residents able to engage in PUC cases, decarbonization planning, and have a meaningful voice in how plan and policies are created and designed. To what extent are they the architects of their energy future?	<ul style="list-style-type: none"> <li>- Presence / extent of intervenor funding and resources</li> <li>- PUC commissioner selection process and representation</li> <li>- Mandatory equity training for PUC (and utility?) staff</li> <li>- Data disclosure requirements</li> <li>- Utility performance incentives and penalties tied to equity targets</li> </ul>
	<b>Access</b>	How easy is it for people to learn about, qualify for, and enroll in programs?	<ul style="list-style-type: none"> <li>- Multi-lingual ads, program materials, enrollment, and participation</li> <li>- Marketing representing and to BIPOC, frontline audiences</li> <li>- Disparities in participation rates</li> <li>- Financing availability and eligibility requirements</li> <li>- Access for renters</li> <li>- Auto- and co-enrollments, ease of enrollment</li> </ul>

EQUITY DIMENSION	INDEX	DESCRIPTION	SAMPLE METRICS
Distributive	<b>Household benefits</b>	Captures immediate financial and health benefits that participating households receive	<ul style="list-style-type: none"> <li>- Proportion of high impact programs received by BIPOC, LI, frontline households</li> <li>- % BIPOC households achieving &gt;25% energy savings</li> <li>- Reduction in unhealthy / unsafe housing conditions among BIPOC; improved indoor air quality</li> <li>- Reductions in negative health conditions among BIPOC</li> </ul>
	<b>Community benefits</b>	Captures medium- and long-term community level or indirect benefits including health, wealth-building, jobs, and environment	<ul style="list-style-type: none"> <li>- % of new jobs held by BIPOC, frontline, low-income</li> <li>- % of work for BIPOC-owned businesses; supportive policies</li> <li>- Wages and job quality for BIPOC, disparities</li> <li>- Reduction in heat islands, localized flooding</li> <li>- Improved outdoor air quality</li> <li>- Community health outcomes</li> </ul>
Restorative	<b>Democracy</b>	Who owns clean energy? Who designs the systems? Who are the ultimate decision-makers?	<ul style="list-style-type: none"> <li>- Reparations</li> <li>- Favorable policies and incentives for net metering / community solar / community choice aggregation</li> <li>- % BIPOC ownership of solar, storage, EVs</li> <li>- % microgrid and resilience investments in BIPOC, LI, frontline communities</li> <li>- Business incentives and supports for BIPOC and frontline communities</li> </ul>

# Sample Equity Report



Level of Analysis: State  
Comparison National

Weighted Composite: 51.87

INDEX	WEIGHT	2022 SCORE	CHANGE	NATL AVG	VS NATL
1 Historical	8%	45	0	37	8
2 Demographics	10%	38	-2	52	-14
3 Security	10%	81	11	69	12
4 Affordability	15%	33	-4	41	-8
5 Access	8%	66	5	57	9
6 Procedural	12%	85	24	44	41
7 Household	15%	70	16	63	7
8 Community	12%	32	3	56	-24
9 Democracy	10%	16	1	23	-7
TOTALS	100%	51.8	6	49.1	2.7

INDEX DETAIL: ACCESS

Level of Analysis: State  
Comparison National

Weighted Composite: 65.58

INDEX	WEIGHT	2022 SCORE	CHANGE	NATL AVG	VS NATL
1 Easy of qualifying	8%	84	0	79	5
2 Effective marketing to BIPOC HH	12%	54	-2	64	-10
3 Access in multiple languages	12%	68	11	72	-4
4 Multiple enrollments in all eligible	8%	84	-4	69	15
5 Auto-enrollment notification	8%	89	5	44	45
6 Access for renters	20%	51	24	45	6
7 Caps on participation	5%	70	16	63	7
8 Financing availability & support	15%	72	3	55	17
9 Financing Access	12%	49	1	37	12
TOTALS	100%	69.0	6	58.7	10.3

# Meeting stakeholder needs

Can you help  
us define  
disadvantaged  
communities?

How are other states  
developing  
procedures for  
integrating equity in  
utility clean energy  
programs?

*How can we  
measure  
procedural  
equity?*

What are the equity  
implications of  
electrification?





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***Julie Michals, Director of Clean Energy Valuation, E4theFuture***

# Accounting for Energy Equity in Benefit-Cost Analysis of DER Investments

Julie Michals – E4TheFuture

**NARUC ERE Staff Subcommittee Meeting**  
**Nov 7, 2021**

## About NESP

**The National Energy Screening Project (NESP)** is a stakeholder organization that is open to all organizations and individuals with an interest in working collaboratively to improve cost-effectiveness screening practices for energy efficiency (EE) and other distributed energy resources (DERs).

**Products** include:

- NSPM for EE (2017)
- NSPM for DERs (2020)
- Database of Screening Practices (DSP)

NESP work is managed by E4TheFuture, with coordinated state outreach via key partners.

NESP work is funded by E4TheFuture and in part by US DOE.

<https://nationalenergyscreeningproject.org/>



# NSPM BCA Principles

1. Recognize that DERs can provide energy/power system needs and should be compared with other energy resources and treated consistently for BCA.
2. Align primary test with jurisdiction's applicable policy goals.
3. Ensure symmetry across costs and benefits.
4. Account for all relevant, material impacts (based on applicable policies), even if hard to quantify.
5. Conduct a forward-looking, long-term analysis that captures incremental impacts of DER investments.
6. Avoid double-counting through clearly defined impacts.
7. Ensure transparency in presenting the benefit-cost analysis and results.
8. Conduct BCA separate from Rate Impact Analyses because they answer different questions.

## NESP Goals on Energy Equity

- 1) Provide guidance to regulators and key stakeholders on where and how energy equity 'fits' into benefit-cost analysis (BCA) and rate impact analyses relative to other energy equity metrics.
- 2) Build understanding and consistent application across jurisdictions; and
- 3) Coordinate with other key national initiatives, and as informed by state efforts and developments.

# Accounting for Energy Equity in BCAs

## Energy Equity Metrics:

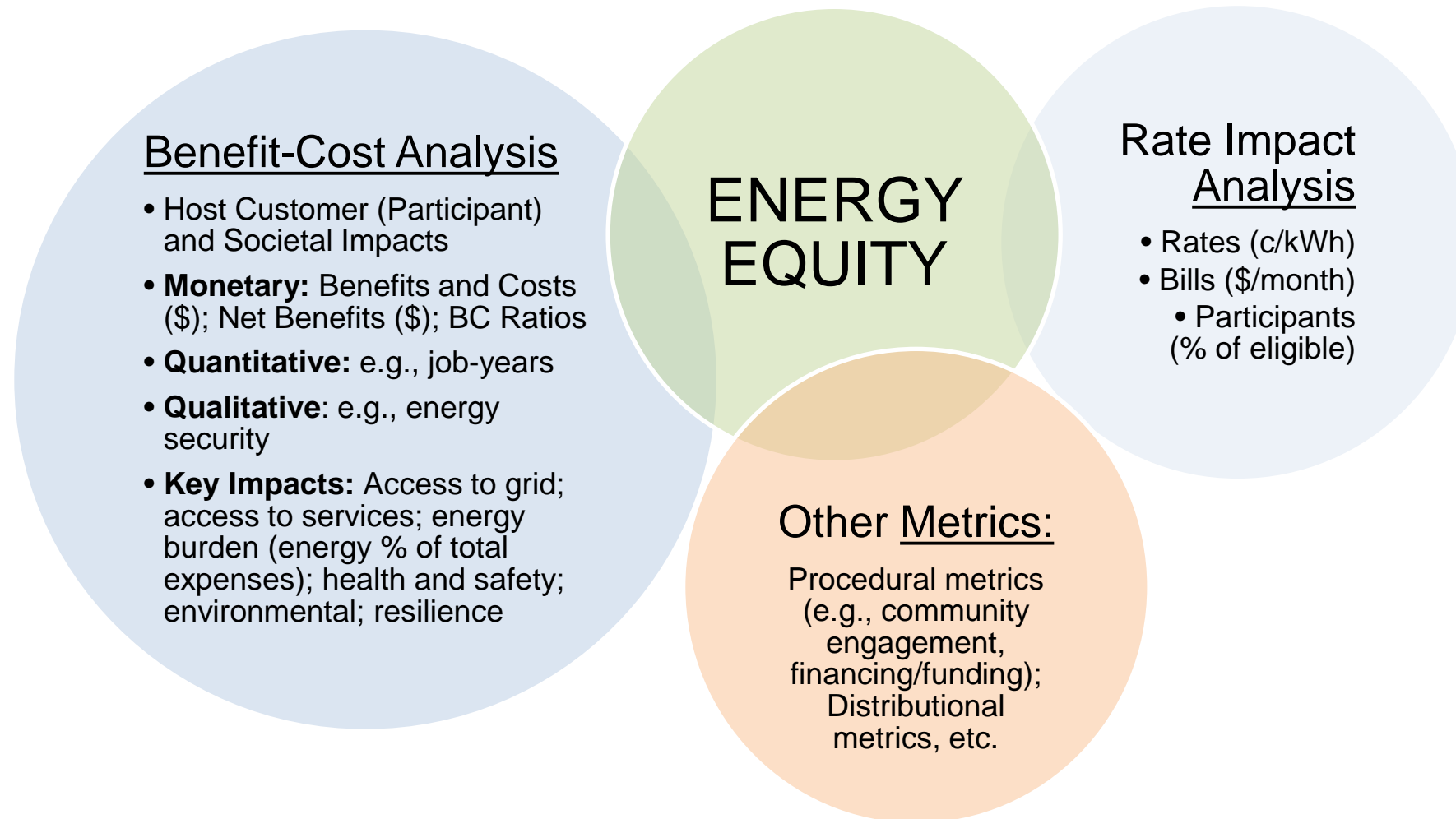
- Converge with rate and bill analysis;
- Converge with benefit-cost analysis; and
- Are addressed by **many other metrics outside of above analyses**

## Key Questions/Considerations:

- *How should equity considerations be used to make decisions about utility DER and other resource investments?*
  - Importance of not over-relying on BCA and rate impact analyses, or 'cherry picking' metrics (NARUC CPI)
- *How can double-counting be avoided?*
- *What level of level of guidance would be most helpful to commissions?*

## How we are thinking about this....

*Energy equity* analysis addresses equity in all aspects of the energy system, including its benefits, burdens, costs, and participation.



# Host Customer Impacts

*Energy equity touches many of these impacts, but to what extent and how do we measure?*

Host Customer Impact	Description
<b>Host portion of DER costs</b>	Costs incurred to install and operate DERs
<b>Interconnection fees</b>	Costs paid by host customer to interconnect DERs to the grid
<b>Risk</b>	Uncertainty including price volatility, power quality, outages, and operational risk related to failure of installed DER equipment and user error; this type of risk can depend on the type of DER
<b>Reliability</b>	The ability to prevent or reduce the duration of host customer outages
<b>Resilience</b>	The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions
<b>Tax incentives</b>	Federal, state, and local tax incentives provided to host customers to defray the costs of some DERs
<b>Non-energy Impacts (NEIs)</b>	Benefits and costs of DERs that are separate from energy-related impacts

## Host Customer Non-Energy Impacts (NEIs)

Host Customer NEI	Description
<b>Transaction costs</b>	Costs incurred to adopt DERs, beyond those related to installing or operating the DER itself (e.g., application fees, customer time spent researching DERs, paperwork, etc.)
<b>Asset value</b>	Changes in the value of a home or business as a result of the DER (e.g., increased building value, improved equipment value, extended equipment life)
<b>Productivity</b>	Changes in a customer's productivity (e.g., in labor costs, operational flexibility, O&M costs, reduced waste streams, reduced spoilage)
<b>Economic well-being</b>	Economic impacts beyond bill savings (e.g., reduced complaints about bills, reduced terminations and reconnections, reduced foreclosures—especially for low-income customers)
<b>Comfort</b>	Changes in comfort level (e.g., thermal, noise, and lighting impacts)
<b>Health &amp; safety</b>	Changes in customer health or safety (e.g., fewer sick days from work, reduced medical costs, improved indoor air quality, reduced deaths)
<b>Empowerment &amp; control</b>	Satisfaction of being able to control one's energy consumption and energy bill
<b>Satisfaction &amp; pride</b>	Satisfaction of helping to reduce environmental impacts (e.g., key reason why residential customers install rooftop PV)
<b>Power/ Quality</b>	Refers to the ability of electrical equipment to consume the energy being supplied to it e.g., improved electrical harmonics, power factor, voltage instability and efficiency of equipment.
<b>DER Integration</b>	The ability to add current and future DERs to the existing electric energy grid.
<b>Reduced Utility Bills</b>	Only relevant if using a <i>Participant Cost Test</i>

# Societal Impacts

*Energy equity touches all of these impacts, but to what extent and how do we measure?*

Type	Societal Impact	Description
Societal	Resilience	Resilience impacts beyond those experienced by utilities or host customers (e.g., loss of critical services, loss of assets, business interruption costs, impact on GDP)
	GHG Emissions	GHG emissions created by fossil-fueled energy resources
	Other Environmental	Other air emissions, solid waste, land, water, and other environmental impacts
	Economic and Jobs	Incremental economic development and job impacts
	Public Health	Health impacts, medical costs, and productivity affected by health
	Low Income/Vulnerable Populations: Society	Poverty alleviation, environmental justice, reduced home foreclosures, etc.
	Energy Security	Energy imports and energy independence

## Quantifying Energy Equity Impacts in BCA

- Many states use alternative BCA thresholds (i.e.,  $< 1.0$ ) that allow for funding low-income EE programs that are not cost-effective:
  - Does not include equity considerations nor an assessment of whether the equity benefits are worth the additional equity costs
- Equity impacts can be hard to quantify, but value is not zero:
  - NSPM principles: alignment with goals, symmetry in treatment of benefits and costs, consistency across BCA for DERs
  - Short-term/immediate methods: proxy values (% adders) or qualitative assessments
  - Forthcoming NESP guidance (Q1 2022):
    - **Methods, Tools, and Resources** – *A Handbook for Quantifying Distributed Energy Resources Impacts for Benefit-Cost Analysis*



## NESP Coordination with Other Initiatives to Help Standardized Energy Equity Metrics

- Biden-Harris Administration **Justice40 Initiative**
  - [US DOE Office of Economic Impact and Diversity](#)
- [Energy Equity Project \(EEP\)](#)
- [ACEEE Leading with Equity Initiative](#)
- [Equity in Clean Energy Economy \(ECEE\) Collaborative](#)
- [Initiative for Energy Justice](#)
- NARUC CPI – whitepapers and roundtables
- And Others

For more information:

**NSPM for DERs and supporting resources:**

<http://www.nationalenergyscreeningproject.org/>

**Stay informed with the [NESP Quarterly](#) Newsletter**

**Questions?**

Julie Michals, Director of Valuation – E4TheFuture

[jmichals@e4thefuture.org](mailto:jmichals@e4thefuture.org)



# ***New targets for equity and environmental justice in state commission roles and responsibilities***

## **Questions and answers and discussion**

Moderator: Hon. Katherine L. Peretick, Commissioner, Michigan Public Service Commission

Presenters: Marguerite Beringer, Research Consultant, E9 Insight

Justin Schott, Manager, Energy Equity Project, University of Michigan School  
for Environment and Sustainability, Urban Energy Justice Lab

Julie Michals, Director of Clean Energy Valuation, E4theFuture



*Thank you for attending!*

*3:45 to 4:00 p.m. break*

*Next sessions run from 4:00 to 5:00 p.m.*

*Welcome reception from 5:00 to 6:30 p.m.*