Energy Equity Project

MWCOG - BEEAC
June 16th, 2022

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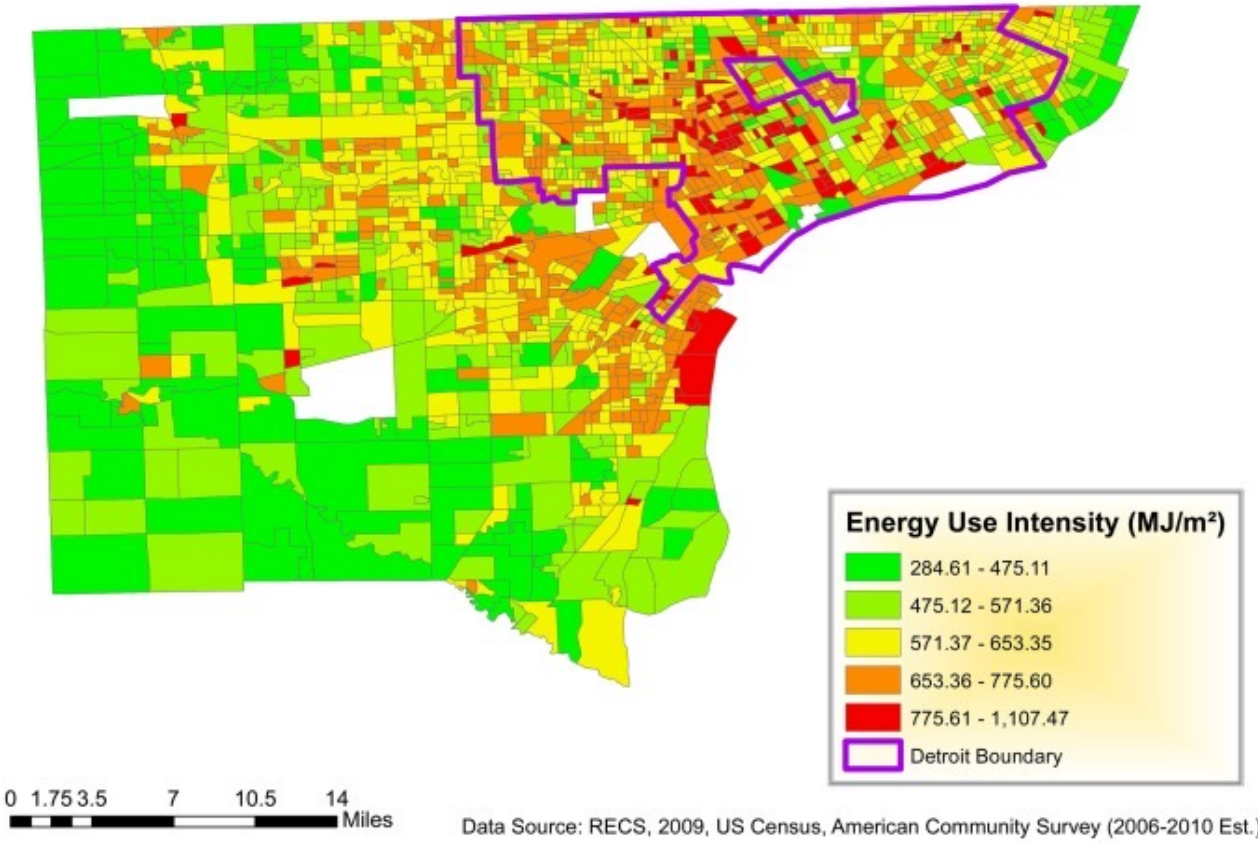
TOWARD A JUST ENERGY SYSTEM



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

Project Team

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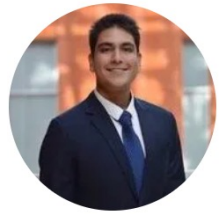

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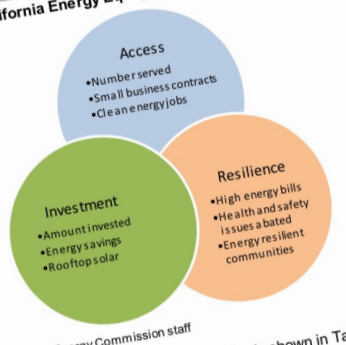
DEVELOPING AN ENERGY EQUITY FRAMEWORK

LANDSCAPE OF ENERGY EQUITY INDICATORS

California Energy Commission – Tracking Progress

Figure 1: California Energy Equity Objectives and Indicators



Source: Energy Commission staff

ther view of the objectives advanced by each indicator is shown in Table 2, which groups
ndicators by energy resource starting with a consumer's bill moving out to public health,
and innovation. Further information on clean energy transportation is under development
h the California Air Resources Board's (CARB) SB 350 *Low-Income Barriers Study, Part*
coming Barriers to Clean Transportation Access for Low-Income Residents Final.[4]

2: Clean Energy Equity Indicators Relationships to Energy Equity Objectives

	Access	Investment	Resilience
ty bills			✓
iency: savings, amount	✓	✓	
mber served		✓	✓
	✓	✓	✓
ty issues abated	✓	✓	✓
communities	✓	✓	✓
s	✓	✓	✓
ntracts	✓	✓	✓
novation	✓		
on staff			

dy, Part B. *Overcoming Barriers to Clean Transportation Access for Low-*
idance Document. California Air Resources Board. February 2018. Accessible
prog/transoptions/transoptions.htm.

Justice in 100 Metrics

Tools for Measuring Equity in 100% Renewable Energy Policy Implementation

By Talia Lanckton and Subin DeVar
January 2021

initiative for energy justice

initiative for energy justice

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Energy Justice Scorecard: California Enhanced Community Renewables Program

Scoring Key: 1 (No), 2 (A little bit), 3 (Somewhat), 4 (Mostly), 5 (Yes)

Question	Score	Explanation	Reference
(1) **Process**: Have marginalized communities participated meaningfully in the policymaking process with sufficient support?	2	*A little bit; more indirectly through a state-wide advocacy group than directly.*	*A record of all party comments can be found here.*[78]
(2) **Restoration**: Does the policy aim to remedy prior and present harms faced by communities negatively impacted by the energy system?	1	*A little bit theoretically, but not at all in practice. The policy was supposed to create projects in environmental justice communities, but implementation failed.*	
(3) **Decision-making**: Does the policy center the decision-making of marginalized communities?	2	*Mostly not/a little bit. There is no incentive for community governance, but there are community interest requirements.*	
(4) **Benefits**: Does the policy center economic, social, or health benefits for marginalized communities?	1	*No. The policy does not focus on economic, social, or health benefits for traditionally marginalized populations.*	
(5) **Access**: Does the policy make energy more accessible and affordable to marginalized communities?	1	*No. The ECR program is both hard to navigate and costs more than standard electricity rates. Therefore it fails to make energy more accessible or affordable.*	
Score	7/25		

Lifting the High Energy Burden in America's Largest Cities:
How Energy Efficiency Can Improve Low Income and Underserved Communities

Daniel Drehobl and Lauren Ross

ENERGY EFFICIENCY FOR ALL

ACEEE

EQUITY IN A CLEAN ENERGY ECONOMY

The Launch of the "Equity in a Clean Energy Economy Collaborative"

This new collaborative will include a wide range of stakeholders in order to give voice to many perspectives. An ongoing stream of research will facilitate discussion.

- ❑ Analytical framework and systemic considerations
- ❑ Voice-of-the-customer surveys and research
- ❑ Case studies of innovation and best practices
- ❑ New utility program designs
- ❑ Regulatory issues and considerations
- ❑ Meta-analysis of policy positions

3

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

< 8% | 8 to 16% | 16 to 24% | 24 to 32% | 32 to 40% | > 40% | No Data

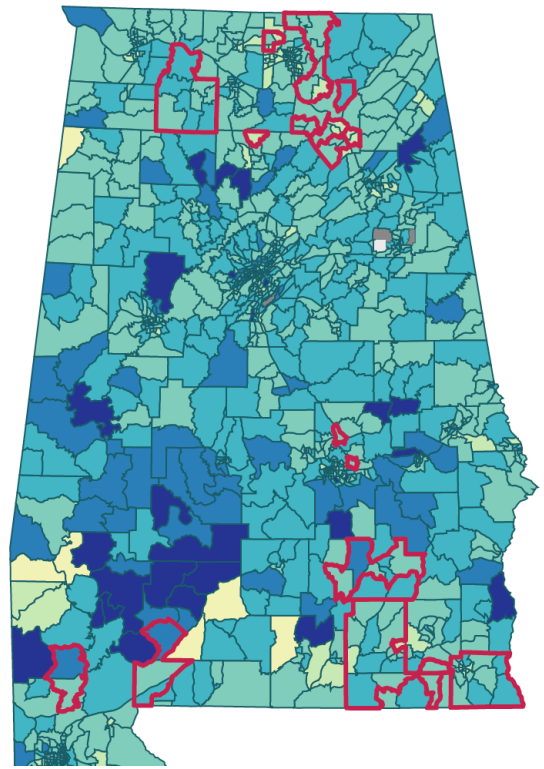
United States > Alabama > Census Tracts

(View Counties View Cities)

Avg. Energy Burden (% income) for Alabama: **23%**

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

* Tribal area borders may extend across multiple states.



EQUITY MEASUREMENT APPLICATIONS

- Utility investments – energy efficiency, solar, battery storage
- Low-income assistance programs
- Decarbonization planning
- Climate resilience
- Equity mandates
  - E.g. Justice40 – defining “disadvantaged communities” and clean energy “benefits”
- Infrastructure investments, affordable housing, COVID recovery, etc etc etc

VISION:

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.

THE FOUR PILLARS OF ENERGY JUSTICE

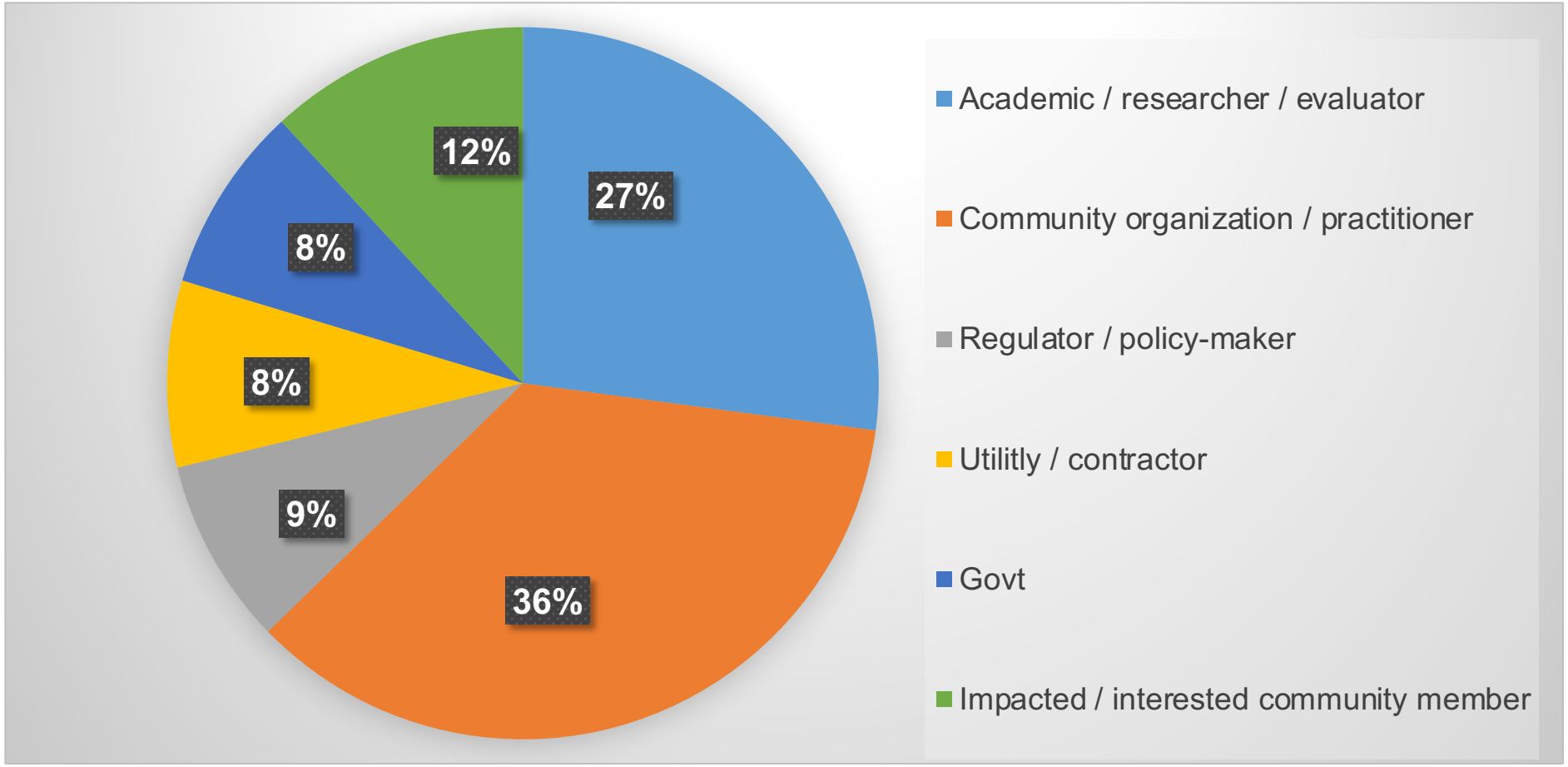
- Recognition – who is vulnerable, who is privileged, and how?
- Procedural – who is at the table and what voice and power do they have in influencing planning, decision-making, and implementation?
- Distributional – who bears the brunt of the burdens? who benefits and how?
- Restorative – how can we rectify past injustices caused by the energy system and prevent future harms?

EEP FRAMEWORK

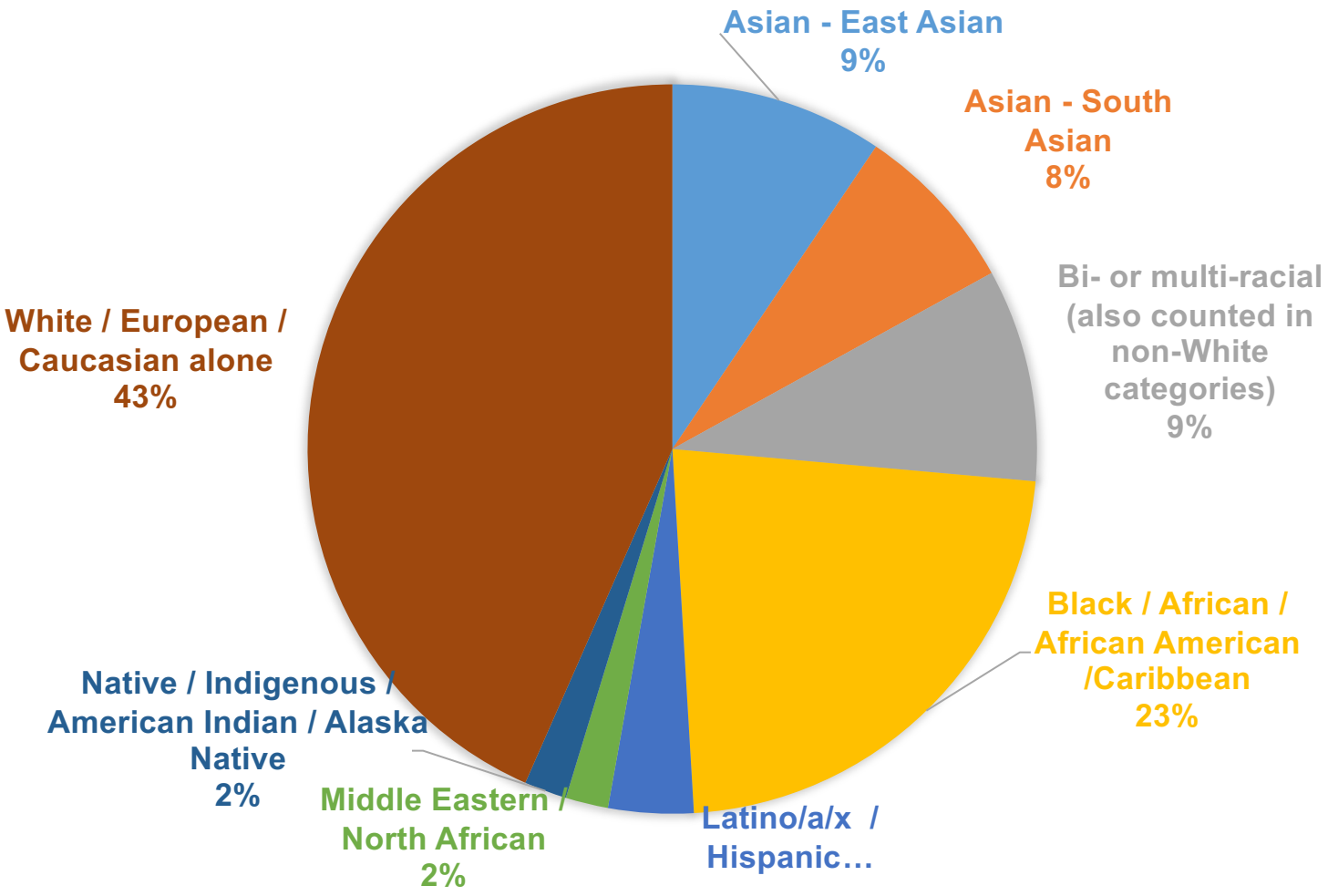
- 10 listening sessions, 400+ participants
- 50 workgroup members
- 12 sub-dimensions
- ~30 metrics

DIMENSION	INDEX	DESCRIPTION	SAMPLE METRICS
Recognition	*Historical*	Captures historic disinvestment, discrimination, disenfranchisement, and environmental justice burdens that continue to impact present circumstances.	- Proportionate disparities in historic program spending and savings by race, income - Historic presence of toxic facilities / superfund sites / cancer clusters - Anti-equity / anti-clean energy lobbying expenditures - Redlining and housing discrimination
	Identity	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	- Climate vulnerability score - Housing access / stress - Demographics - Pollution burden - Health measures (e.g. asthma rates) - Economic indicators (e.g. % HH below 50% AMI)
	Security	Captures data that indicate how continuously, safely, and reliably one has access to energy without interruption or compromising other basic needs or comfort.	- Power outage frequency and disparities - Shutoffs / shutoff policies - Arrearages - Energy as human right declarations
	Affordability	Considers rate structures, payment plans, financial assistance, household financial benefits from clean energy programs, and disparities in energy costs among different demographic groups.	- 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
Procedural	*Procedural*	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?	- Presence / extent of intervenor funding and resources - PUC commissioner selection process and representation - Mandatory equity training for PUC (and utility?) staff - Data disclosure requirements - Utility performance incentives and penalties tied to equity targets
	Access	How easy is it for people to learn about, qualify for, and enroll in programs?	- Multi-lingual ads, program materials, enrollment, and participation - Marketing representing and to BIPOC, frontline audiences - Disparities in participation rates - Financing availability and eligibility requirements - Access for renters - Auto- and co-enrollments, ease of enrollment
Distributive	*Household benefits*	Captures immediate financial and health benefits that participating households receive	- Proportion of high impact programs received by BIPOC, LI, frontline households - % BIPOC households achieving >25% energy savings - Reduction in unhealthy / unsafe housing conditions among BIPOC; improved indoor air quality - Reductions in negative health conditions among BIPOC
	Community benefits	Captures medium- and long-term community level or indirect benefits including health, wealth-building, jobs, and environment	- % of new jobs held by BIPOC, frontline, low-income - % of work for BIPOC-owned businesses; supportive policies - Wages and job quality for BIPOC, disparities - Reduction in heat islands, localized flooding - Improved outdoor air quality - Community health outcomes
Restorative	*Reparations & Accountability*	How do we liberate data and ensure transparency? How do we rectify and compensate for past harms and ensure they are not perpetuated in the future? How do we ensure that all dimensions of equity are considered holistically, with no dimensions ignored?	
	Power to the People	Who owns clean energy and receives the economic and environmental benefits? How do governance structures benefit or harm frontline communities? Who designs the systems? Who are the ultimate decision-makers?	
	Indigenous Sovereignty	How can a just transition promote visibility, healing, and a different relationship with energy? How are we connecting Indigenous justice and environmental justice and elevating the landback movement? How can clean energy & climate programs respect and honor Indigenous Sovereignty and traditional knowledge? How can we ensure that we are not perpetuating the language and practices of colonizers and move beyond a capitalist mindset? How do we measure/evaluate progress towards Indigenous Sovereignty in the realm of energy and climate?	
	Restoring Our Relations	How do are we protecting and restoring ecosystems holistically and not merely transferring impacts to far away sacrifice zones? How can we shift our language and cultural practices to recognize non-human kin? How do we recognize and uplift the right of other species and ecosystems to exist? How can we ensure a habitable planet for future generations?	

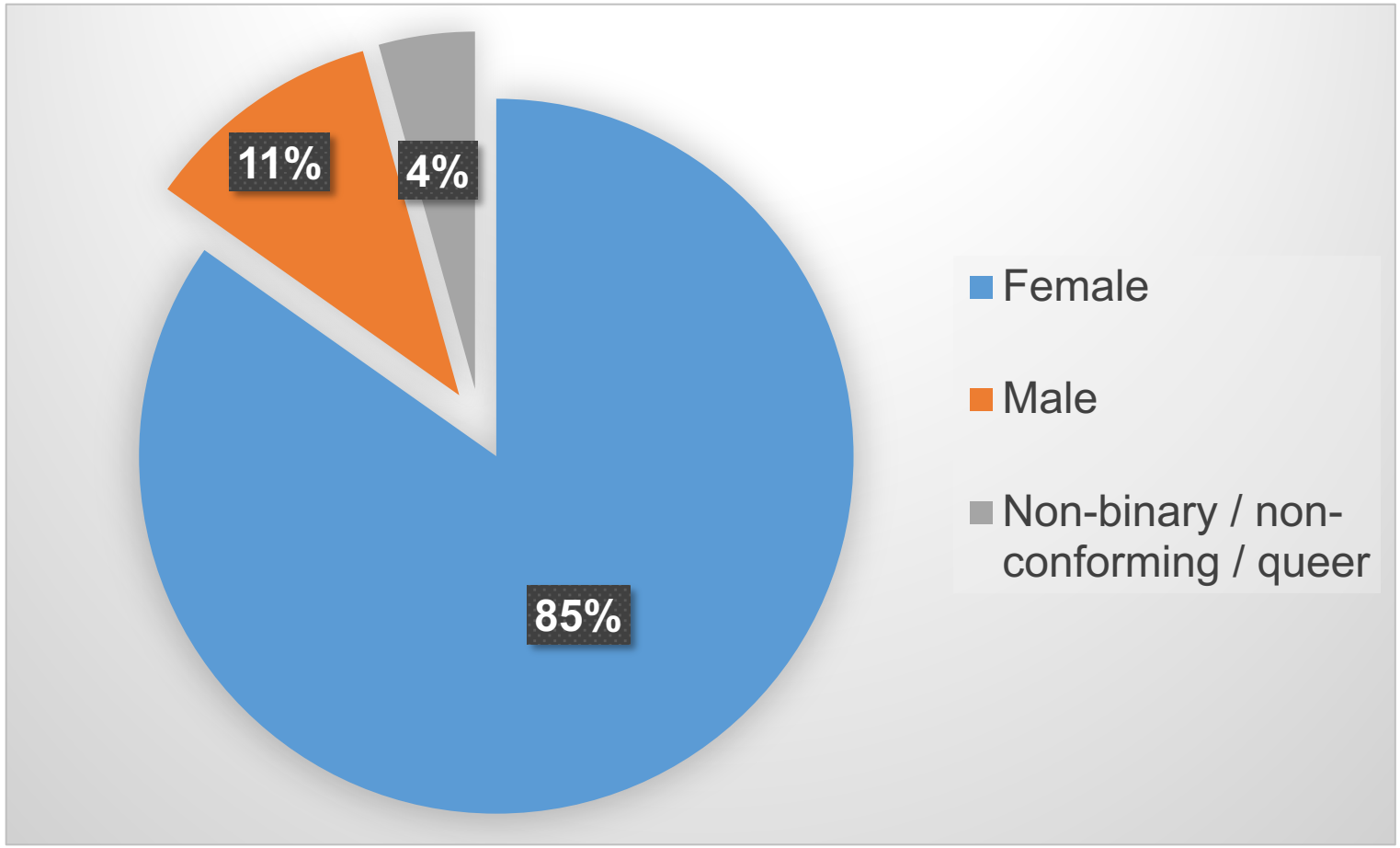
PROFESSIONAL IDENTITY



RACIAL IDENTITY



GENDER IDENTITY



CHARGE TO WORKGROUPS:

- **For your dimension of equity:**
  - What makes an equitable program? (e.g. guiding principles)
    - What elements can be quantified?
    - What elements should be narrative or qualitative?
    - What are best practices for achieving equity? These may be most likely to achieve equitable outcomes.

WHAT ARE OUR OVERARCHING GOALS AND PRINCIPLES?

What does restorative justice mean to you?

Advancing progressive taxation to pay for universal utility service

Allowing communities to define and design energy that meets their needs.

Accountability mechanisms to shift power from traditional brokers to communities

Baseline of restorative, distributive and procedural justice PLUS community control and ownership of the benefits of the new energy system. The latter is not restorative in the absence of the former.

Public and/or cooperative ownership of the grid itself

Bringing everyone back on to the utility system, forever

power to the people

Redistribution

"Energy democracy is the notion that communities should have a say and agency in shaping and participating in their energy future."

Move from survive to thrive

Providing power to people without homes

Ensuring everyone's future energy needs are met regardless of ability to pay

Those who have historically been most burdened or benefitted least, benefit the most

supporting the sovereignty of Indigenous people

going deeper than "acknowledgement" of ancestral lands - meaningful consultation with Tribes

Reparations and land back

Any injustice caused by the energy sector should be rectified and be part of preventive and forward-looking action.

The part that experienced harm should be rectified to its former position before the harm occurred.

Making amends for wrongdoings

Acknowledgment and recognition of harms and impacts from energy system operators, active learning, and substantial investments in redistribution to address disparities without capitalist

Acknowledging and redressing harm done

providing for healing from the trauma caused by racist and genocidal policies

Repairing Past Harm & Transforming Going Forward

Restoration of relationships to ourselves and nature

Building justice into the process of energy - siting, access, types of energy used, sustainability - in order to repair past harm and build an sustainable energy future

centering well-being

Repairing past harms and ensuring the simultaneous presence of multiple dimensions of energy justice today.

Establishing balance and right relations

Requiring financing from people who have profited off the past harms of the utility system

Investigating utility disconnections, repairing any harm from debt collection, eviction, and health impacts suffered from being disconnected from utilities

EEP - Restorative Working Group - Brainstorm

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Set background | Clear frame

Guiding questions

Reparation/ Accountability:

How can we create an equitable energy transition/system that is transparent and where accountability and reparations are

made to account for the past and ongoing social, economic, and environmental injustices faced by BIPOC, LI & FL communities?

Community Ownership

How can we decentralize the generation, distribution & transmission of energy and make sure to center the voices of previously excluded

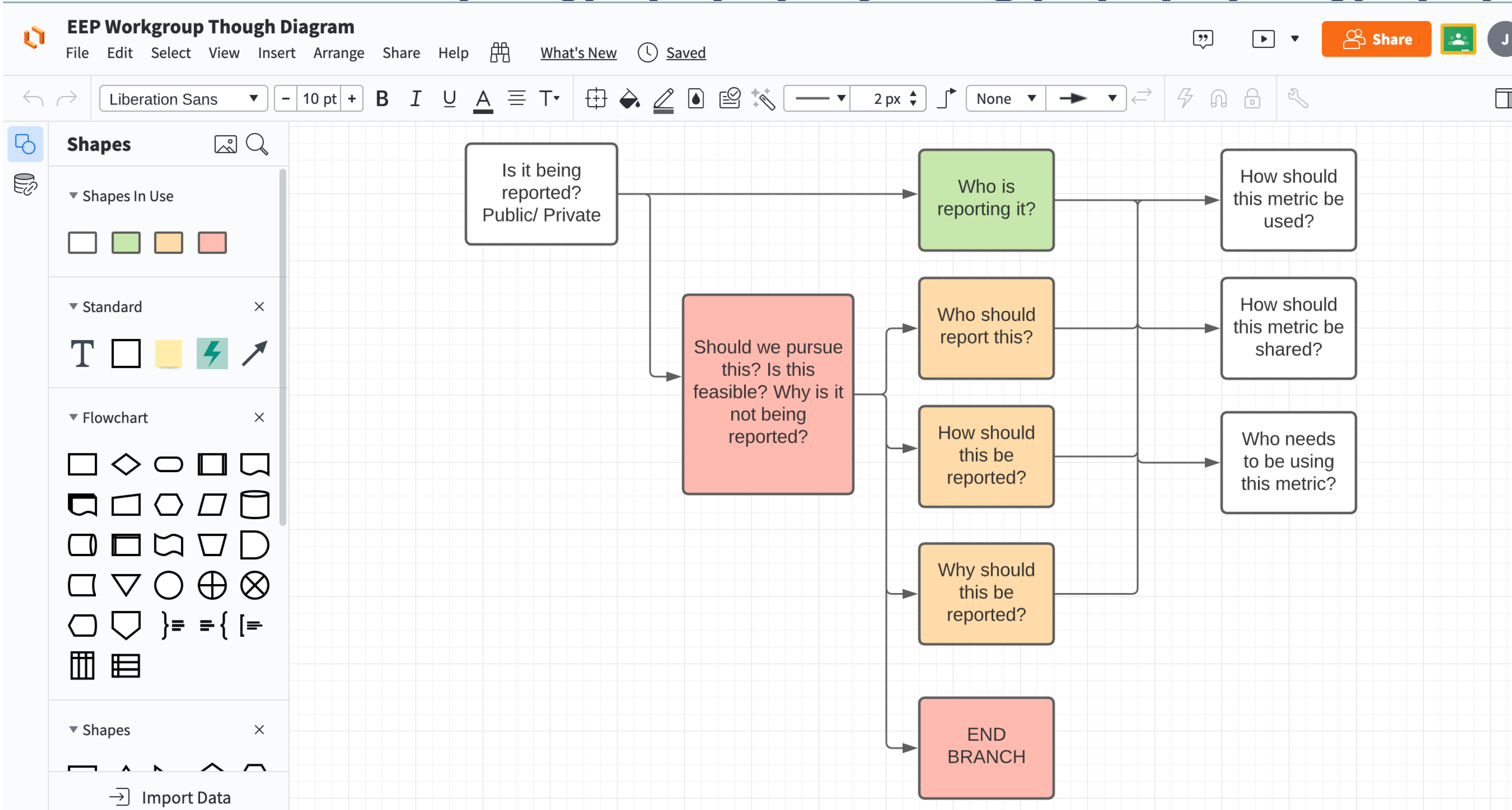
BIPOC, LI & FL communities in the decision-making process and as recipients of benefits

Indigenous Allyship

How can we actively work to dismantle the structures of colonialism in the energy system and build long-lasting and true partnerships with Indigenous communities and Nations?

WHAT ARE OUR OVERARCHING GOALS AND PRINCIPLES?

- Everyone has continuous access to energy, i.e. no shutoffs
- Everyone lives in a healthy, safe, and comfortable home
- No one spends more than 6% of their income on energy bills
- Those who are most impacted have the most powerful voice in decision-making and receive a share of benefits needed to remedy historical disparities within a decade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What's New
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10 pt
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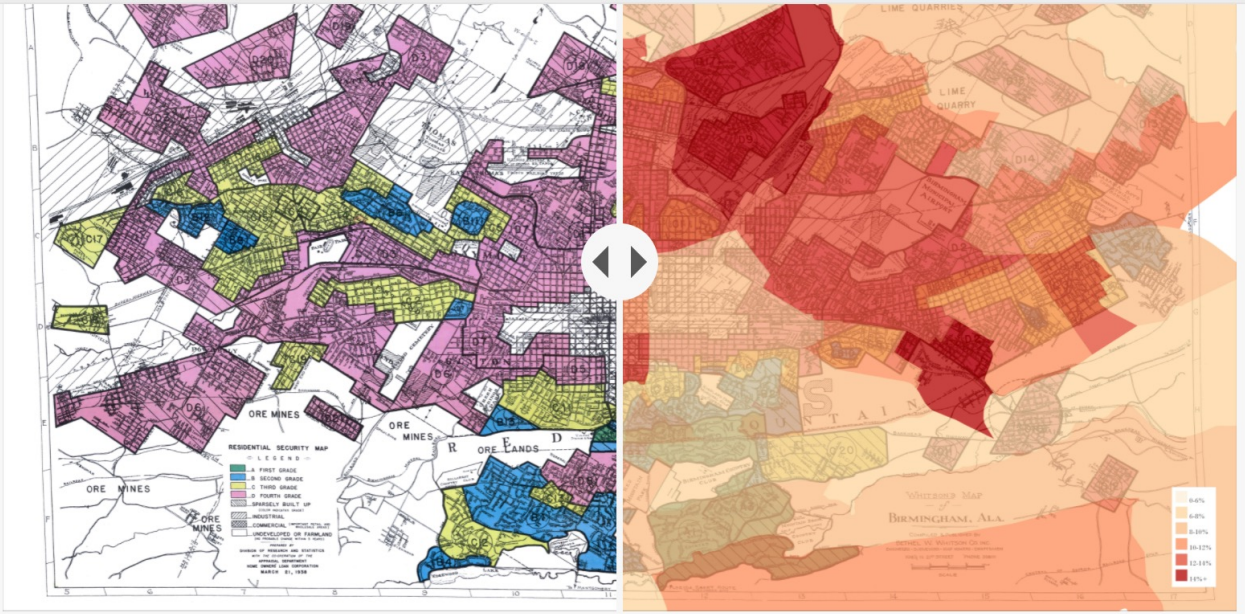
None
Shapes
Shapes In Use
Standard
Flowchart
Shapes
Import Data
Is it being reported? Public/ Private
Who is reporting it?
How should this metric be used?
Who should report this?
How should this metric be shared?
Should we pursue this? Is this feasible? Why is it not being reported?
How should this be reported?
Who needs to be using this metric?
Why should this be reported?
END BRANCH

HOW ARE WE REPRESENTING COMMUNITY NARRATIVES?

GUIDANCE ON INTEGRATING QUALITATIVE INFORMATION



Home Owners' Loan Corporation (HOLC) Redlining Maps vs. Current Energy Burden

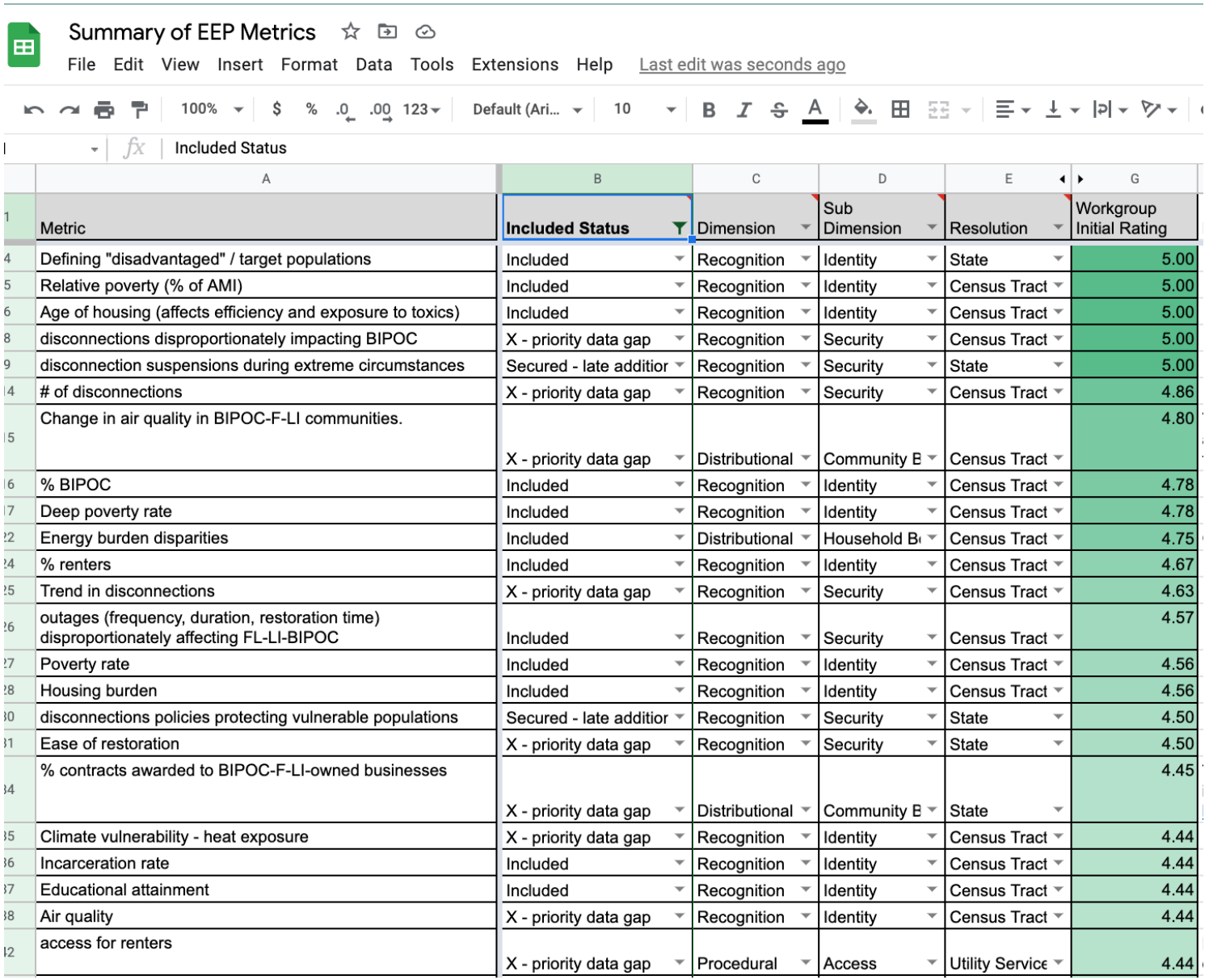
Birmingham, Alabama (above) and Dallas, Texas (below)

The solutions for addressing energy insecurity are complex. Accurately identifying the groups most vulnerable to energy insecurities is essential to creating meaningful and effective policy to address the cascading effects of energy insecurity. The **built environment** team at SEEA is actively researching and analyzing metrics to identify energy insecure households and how policy and programs can best support affected communities in the Southeast.

Questions? Contact built environment project managers **Maggie Kelley** or **Will Bryan**.

148 potential metrics assessed:

- 29 included
- 16 priority data gaps
- 8 desired rating scales
- 27 best practices
- 68 nixed



Summary of EEP Metrics

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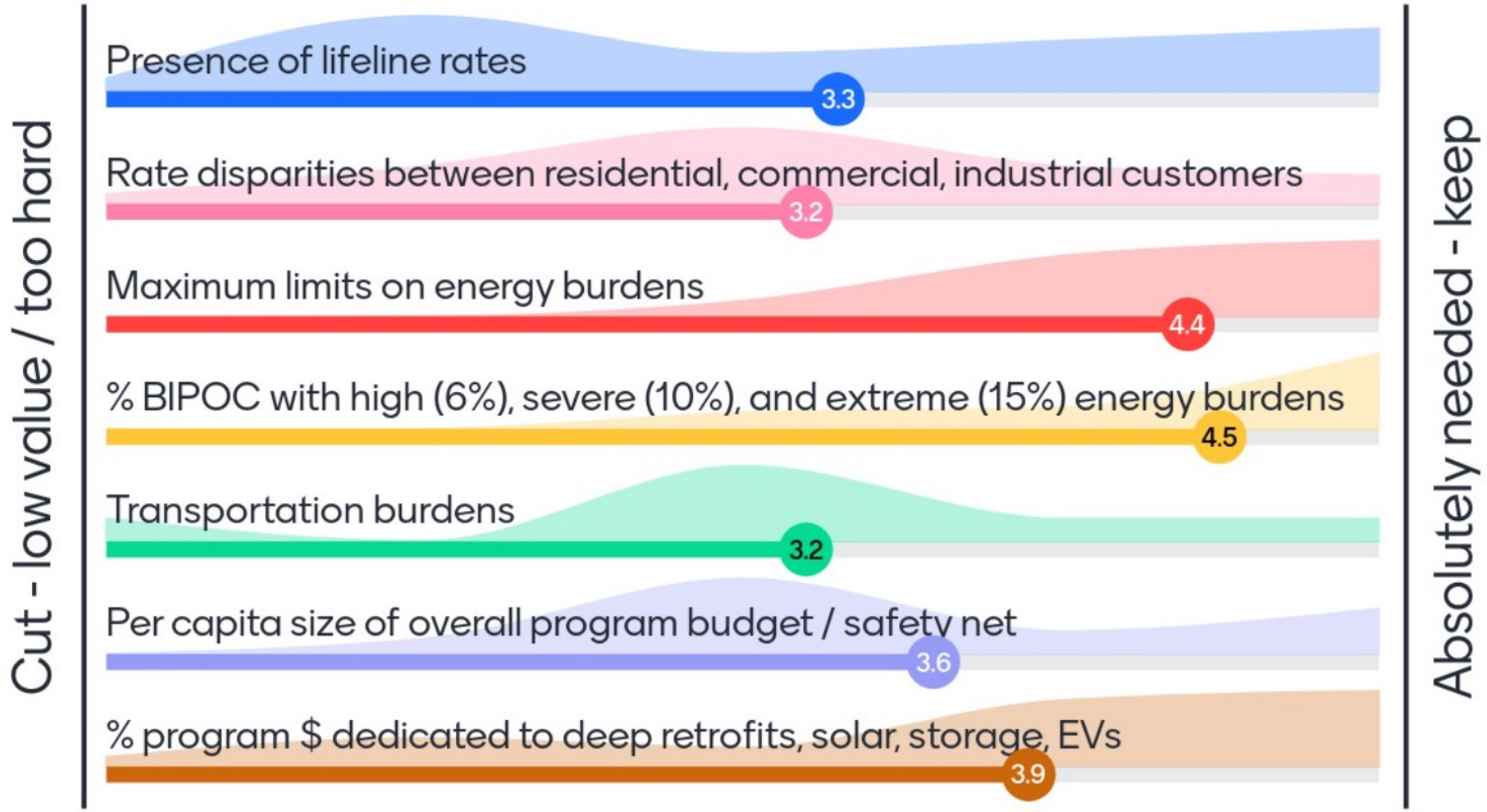
Included Status

	A	B	C	D	E	G
1	Metric	Included Status	Dimension	Sub Dimension	Resolution	Workgroup Initial Rating
4	Defining "disadvantaged" / target populations	Included	Recognition	Identity	State	5.00
5	Relative poverty (% of AMI)	Included	Recognition	Identity	Census Tract	5.00
6	Age of housing (affects efficiency and exposure to toxics)	Included	Recognition	Identity	Census Tract	5.00
8	disconnections disproportionately impacting BIPOC	X - priority data gap	Recognition	Security	Census Tract	5.00
9	disconnection suspensions during extreme circumstances	Secured - late additior	Recognition	Security	State	5.00
14	# of disconnections	X - priority data gap	Recognition	Security	Census Tract	4.86
15	Change in air quality in BIPOC-F-LI communities.	X - priority data gap	Distributional	Community E	Census Tract	4.80
16	% BIPOC	Included	Recognition	Identity	Census Tract	4.78
17	Deep poverty rate	Included	Recognition	Identity	Census Tract	4.78
22	Energy burden disparities	Included	Distributional	Household B	Census Tract	4.75
24	% renters	Included	Recognition	Identity	Census Tract	4.67
25	Trend in disconnections	X - priority data gap	Recognition	Security	Census Tract	4.63
26	outages (frequency, duration, restoration time) disproportionately affecting FL-LI-BIPOC	Included	Recognition	Security	Census Tract	4.57
27	Poverty rate	Included	Recognition	Identity	Census Tract	4.56
28	Housing burden	Included	Recognition	Identity	Census Tract	4.56
30	disconnections policies protecting vulnerable populations	Secured - late additior	Recognition	Security	State	4.50
31	Ease of restoration	X - priority data gap	Recognition	Security	State	4.50
34	% contracts awarded to BIPOC-F-LI-owned businesses	X - priority data gap	Distributional	Community E	State	4.45
35	Climate vulnerability - heat exposure	X - priority data gap	Recognition	Identity	Census Tract	4.44
36	Incarceration rate	Included	Recognition	Identity	Census Tract	4.44
37	Educational attainment	Included	Recognition	Identity	Census Tract	4.44
38	Air quality	X - priority data gap	Recognition	Identity	Census Tract	4.44
42	access for renters	X - priority data gap	Procedural	Access	Utility Service	4.44

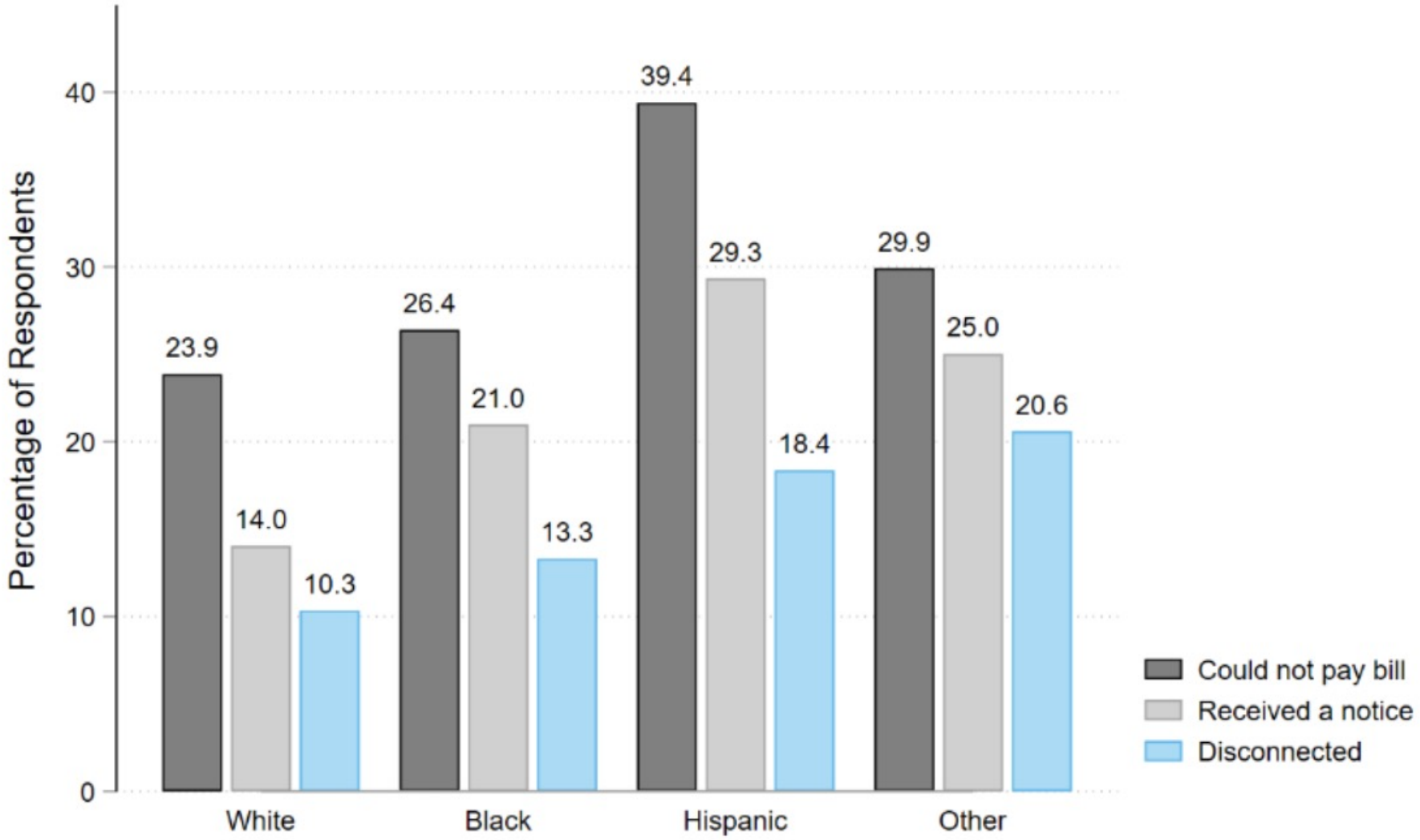
How essential are these metrics for the energy affordability index?



EEP POTENTIAL METRICS & BEST PRACTICES CATALOGUE

Dimension	Total # Proposed Metrics	Included	Priority Data Gap	Desire to Create Rating	Shift to Best Practice	Limited Coverage or Unreliable Data	No Potential, Not Requested, Abandoned
Recognition	55	26	10	0	9	4	6
Procedural	40	0	1	8	10	5	16
Distributional	47	3	5	0	6	8	25
Restorative	6	0	0	0	2	4	0
TOTALS	148	29	16	8	27	21	47

Energy Insecurity by Race Last Three Months (November 2021 - January 2022)



ENERGY JUSTICE LAB
INDIANA UNIVERSITY

Rate of Disconnects Relative to Eligible Disconnects

Month	2010	2011	2012	2013	2014	2015	2016	2017	2018
January	37%	19%	15%	31%	33%	35%	52%	51%	52%
February	36%	21%	19%	37%	37%	41%	47%	51%	49%
March	18%	22%	20%	31%	37%	39%	54%	61%	56%
April	18%	22%	19%	35%	46%	45%	58%	51%	53%
May	22%	21%	20%	42%	60%	56%	60%	60%	62%
June	26%	21%	17%	39%	51%	52%	68%	65%	59%
July	27%	20%	14%	38%	45%	56%	59%	54%	41%
August	29%	25%	12%	39%	45%	39%	55%	56%	53%
September	23%	20%	14%	30%	25%	37%	52%	52%	N/A
October	23%	20%	17%	30%	37%	41%	43%	45%	N/A
November	18%	14%	19%	27%	26%	34%	42%	45%	N/A
December	12%	7%	15%	19%	22%	32%	33%	21%	N/A
Total	22%	19%	17%	32%	36%	41%	51%	50%	53%

Disconnection rates based on SCE's Data Response to ALJ Ruling, Tables II-1 and II-2

Related Publications

Electric utility disconnection policy and vulnerable populations

Utility disconnection policies vary greatly by state. These variations are often based on medical needs, time of year, temperature thresholds, and more. Even small variations can produce significant differences in protection levels.

46

STATES OFFER PROTECTIONS FOR MEDICAL CONDITIONS

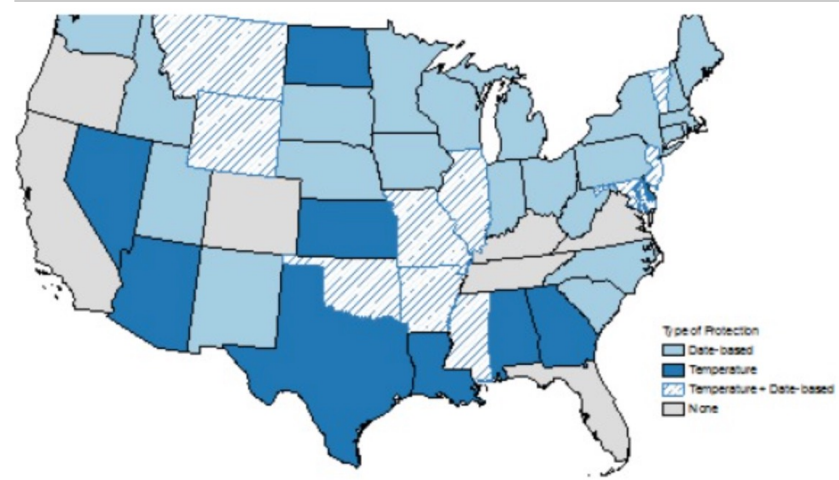
19

STATES HAVE TEMPERATURE-BASED DISCONNECTION PROTECTIONS

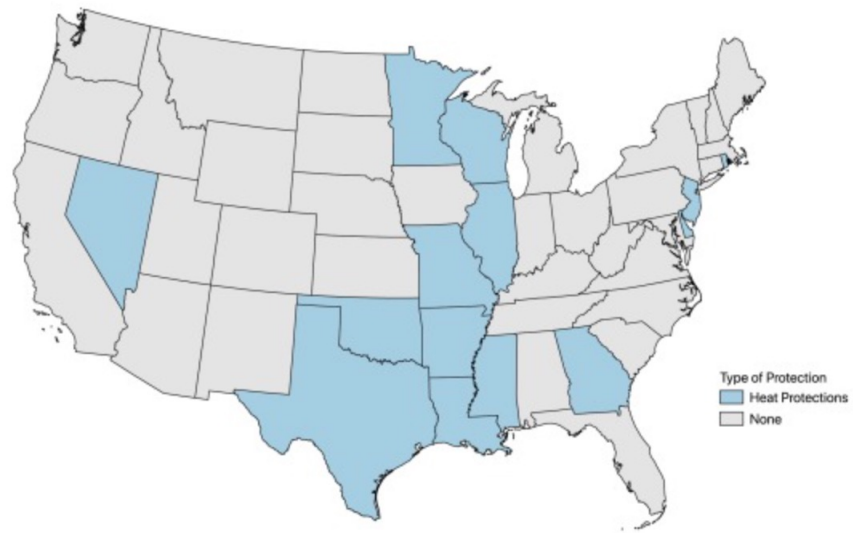
"Electric utility disconnection policy and vulnerable populations," (M. Flaherty, S. Carley, D. Konisky), *The Electricity Journal* Volume 33 10, (December 2020)

Table 1. Summary Counts of Types of State Disconnection Policies.

Type of protection	Total number
Cold protection	42
Temperature-based	19
Date-based	33
Heat protection	14
Temperature or heat-index based	14
Date-based	0
Protection for medical conditions	46
Notification requirement	51
Written notice	27
Attempted phone or in-person	36

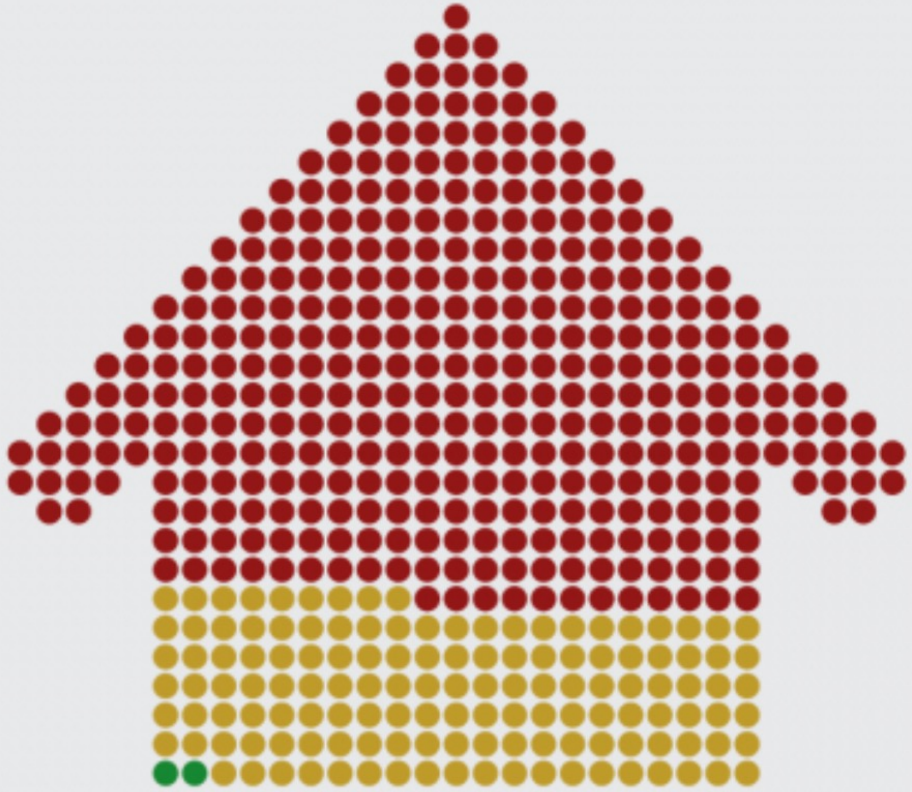


Panel A. Cold Weather Protections



Panel B. Hot Weather Protections

At the current rate, it would take 291 years to weatherize all eligible homes in Minnesota.



- 498,000 households were eligible for energy assistance in 2017
- 133,000 of those households received energy assistance
- 1,700 of those households received weatherization assistance

1. In 2017, 498,000 Minnesota households were eligible for energy assistance.
2. Of those, only 133,000 households received support paying their energy bills through the program.
3. 1,700 households received weatherization assistance to make their homes more energy efficient, comfortable, and safe.
4. At this rate, it would take 291 years to weatherize all eligible homes in Minnesota. That's far too long, and we can do better.

WEATHERIZATION FACTS

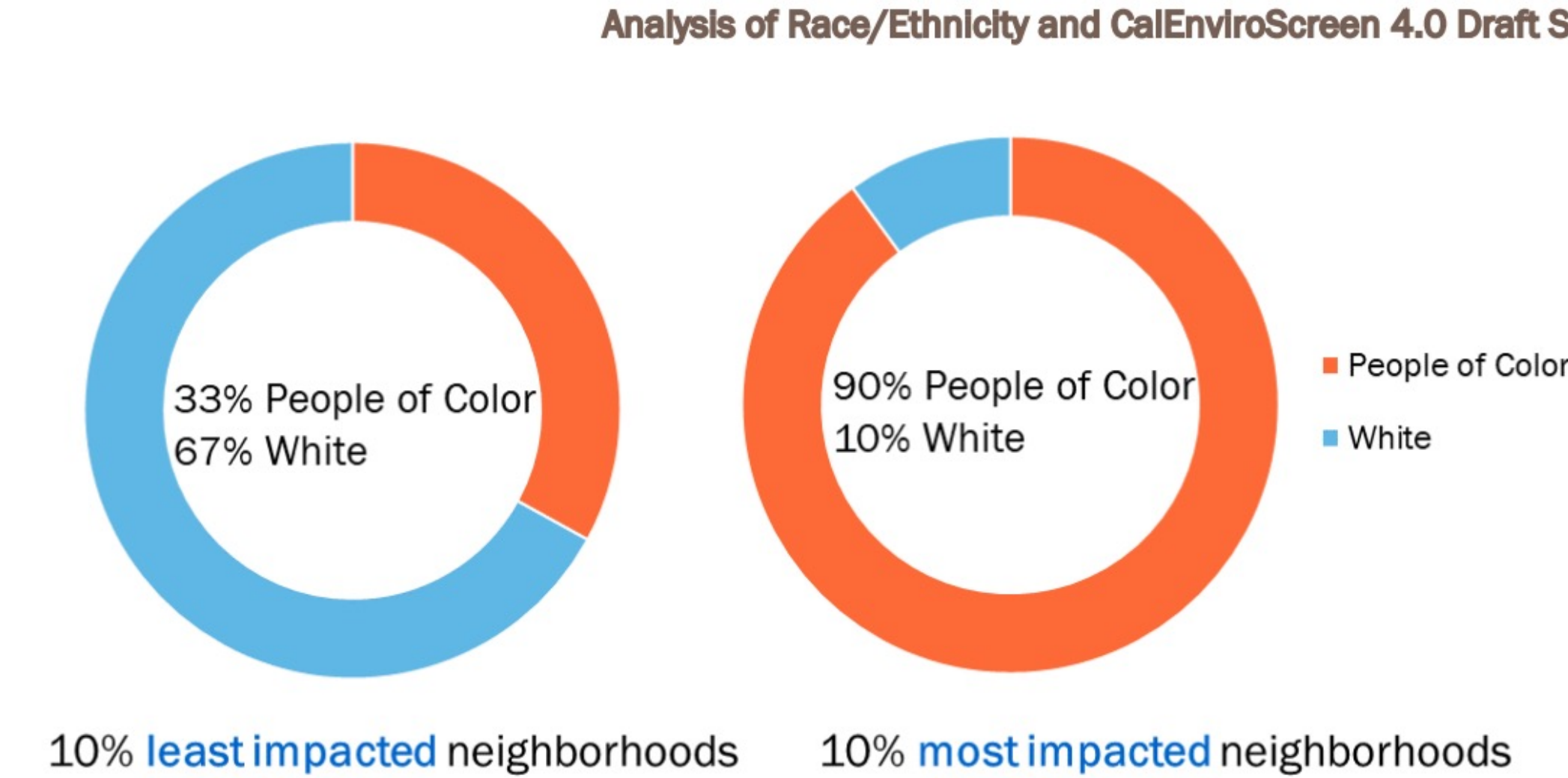
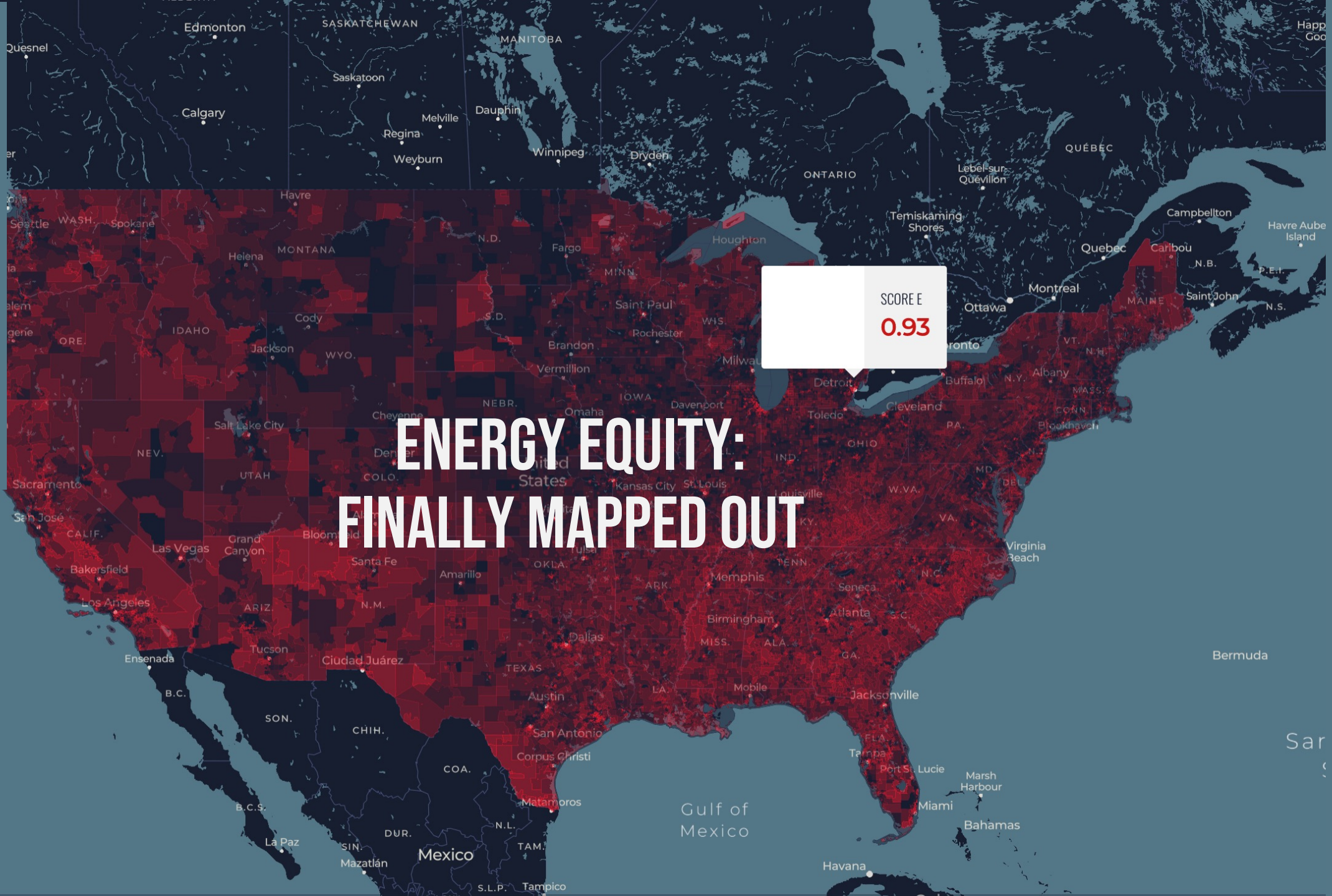


Figure 2. Race in the Least and Most Impacted Census Tracts by Draft CalEnviroScreen 4.0 Decile.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ENERGY EQUITY:
FINALLY MAPPED OUT
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MANITOBA
Saskatoon
Calgary
Regina
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Weyburn
Winnipeg
Dryden
ONTARIO
QUÉBEC
Lebel-sur-Quévillon
Temiskaming Shores
Campbellton
Havre Aube Island
Quebec
Caribou
N.B.
P.E.I.
Montreal
Ottawa
Saint John
N.S.
MAINE
Houghton
Fargo
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MONTANA
Heiena
MINN.
Saint Paul
S.D.
WIS.
Rochester
Brandon
Vermillion
IDAHO
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MASS.
CONN
Toledo
Cleveland
PA.
Omaha
Davenport
IOWA
NEBR.
Cheyenne
Salt Lake City
NEV.
UTAH
COLO.
OHIO
IND.
W.VA.
MD.
DEL.
VA.
Kansas City
St. Louis
Louisville
KY.
Sacramento
San José
CALIF.
Las Vegas
Grand Canyon
Bakersfield
Santa Fe
Amarillo
OKLA.
Tulsa
TENN.
Memphis
ARK.
N.C.
Virginia Beach
Seneca
Los Angeles
ARIZ.
N.M.
Birmingham
Atlanta
S.C.
Dallas
MISS.
ALA.
GA.
Tucson
Ciudad Juárez
TEXAS
Ensenada
B.C.
Austin
LA.
Mobile
Jacksonville
SON.
CHIH.
San Antonio
Corpus Christi
FLA.
Tampa
Port St. Lucie
Marsh Harbour
COA.
Matamoros
Miami
B.C.S.
Gulf of Mexico
Bahamas
DUR.
N.L.
La Paz
SIN.
Mexico
TAM.
Mazatlán
Havana
S.L.P.
Tampico
Bermuda

LINKING RECOGNITION & DISTRIBUTIONAL JUSTICE:

JUSTICE40 (AND SIMILAR) INITIATIVES

THE NEW SCHOOL

Tishman Environment and Design Center

EJ Community Definitions Chart_April2021

File Edit View Insert Format Data Tools Extensions Help

100% View only

A1 State

	A	B	C	D	E
1	**State**	**Policy**	**Definitional Term**	**Definition Type**	**Policy Type**
2	**ENACTED LEGISLATION**				
3	CA	CA Legislation, SB 535 (2012); AB 1550 (2016)	Disadvantaged community	Threshold: Highest scoring census tracts for cumulative impacts scores = top 25% of census tracts	Redistributive (targets investment of cap and trade funds and enforcement)
4	CT	CT Dep of Energy & Env. Protection (DEEP), HB7008, EJ Law (2020)	EJ community	Threshold: Census block group with at least 30% or more of the population living below 200% FPL or distressed municipalities	Protective (file public participation plan)
5	MA	Climate Law, Bill S.9 (2021)	EJ population	Threshold AND Community ID: AMHHI <65% of state median HH income; >40% minorities; >25% lack English proficiency; may designate geographic portion as an EJ population upon the petition of at least 10 residents	Protective
6	MA	MA EEA Agency EJ Policy (2017)	EJ population	Threshold: AMHHI <65% of state median HH income; >25% minorities; >25% lack English proficiency	Protective, consultations, studies
7	NJ	EJ Law S232 (2020)	Overburdened community	Threshold: >35% low-income households; >40% minority or tribal community; >40% limited English proficiency	Protective, redistributive, permitting decisions
8	WA	The Healthy Environment for All (HEAL) Act, E2SSB 5141	Overburdened community; Highly impacted community	Threshold: Overburdened community where vulnerable populations face combined, multiple environmental harms and health impacts; Highly impacted communities designated by the department of health based on cumulative impact analyses or a community fully or partially on "Indian country"	Protective, enhanced participation, reviews, public health interventions
9	NY	Power NY Act (2011)	EJ area	Threshold: >23.59% low-income or > 51.1% minority in an urban area and 33.8%* in a rural area	Protective, permitting review enhanced
10	VA	VA EJ Act, (2020)	EJ community; Fenceline community	Threshold: Any low-income community or community of color with %> than statewide average; "Fenceline community" area that contains all or part of a low-income or community of color and presents an increased health risk to its residents due to its proximity to a major source of pollution	Protective, reduce adverse impacts in decision making

DEFINING DISADVANTAGED COMMUNITIES IN NY

1 Environmental Burdens and Climate Change Risks: Draft Indicators (20)

Potential Pollution Exposures

- Vehicle traffic density
- Diesel truck and bus traffic
- Particulate Matter (PM2.5)
- Benzene concentration
- Wastewater discharge

Land use and facilities associated with historical discrimination or disinvestment

- Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)
- Regulated Management Plan (chemical) sites
- Major oil storage facilities (incl. airports)
- Power generation facilities
- Active landfills
- Municipal waste combustors
- Scrap metal processors
- Industrial/manufacturing/mining land use (zoning)
- Housing vacancy rate

Potential Climate Change Risks

- Extreme heat projections (>90° days in 2050)
- Flooding in coastal and tidally influenced areas (projected)
- Flooding in inland areas (projected)
- Low vegetative cover
- Agricultural land
- Driving time to hospitals or urgent/critical care

DEFINING DISADVANTAGED COMMUNITIES IN NY

1 Population Characteristics and Health Vulnerabilities: Draft Indicators (25)

Income, Education & Employment	Race, Ethnicity & Language	Health Impacts & Sensitivities	Housing, Energy, Communications
• Pct <80% Area Median Income	• Pct Latino/a or Hispanic	• Asthma ED visits	• Pct Renter-Occupied Homes
• Pct <100% of Federal Poverty Line	• Pct Black or African American	• COPD ED visits	• Housing cost burden (rental costs)
• Pct without Bachelor's Degree	• Pct Asian	• Heart attack (MI) hospitalization	• Energy Poverty / Cost Burden
• Unemployment rate	• Pct Native American or Indigenous	• Premature Deaths	• Manufactured homes
• Pct Single-parent households	• Limited English Proficiency	• Low Birthweight	• Homes built before 1960
	• Historical redlining score	• Pct without Health Insurance	• Pct without Internet (home or cellular)
		• Pct with Disabilities	
		• Pct Adults age 65+	
Within this factor, both income metrics have 2x weight	Within this factor, Pct Latino/a and Pct Black have 2x weight		

DEFINING DISADVANTAGED COMMUNITIES IN NY

Region	% Designated DAC
New York City	45%
Long Island	12%
Mid-Hudson	45%
Western NY	32%
Finger Lakes	35%
Capital Region	22%
Central NY	36%
Southern Tier	18%
Mohawk Valley	19%
North Country	15%
Total	**35%**

About 45% of NYC are designated a Geographic DAC.

In rural regions, a smaller share of tracts are designated.

On average (and overall), 35% of tracts are designated

Climate and Economic Justice Screening Tool BETA

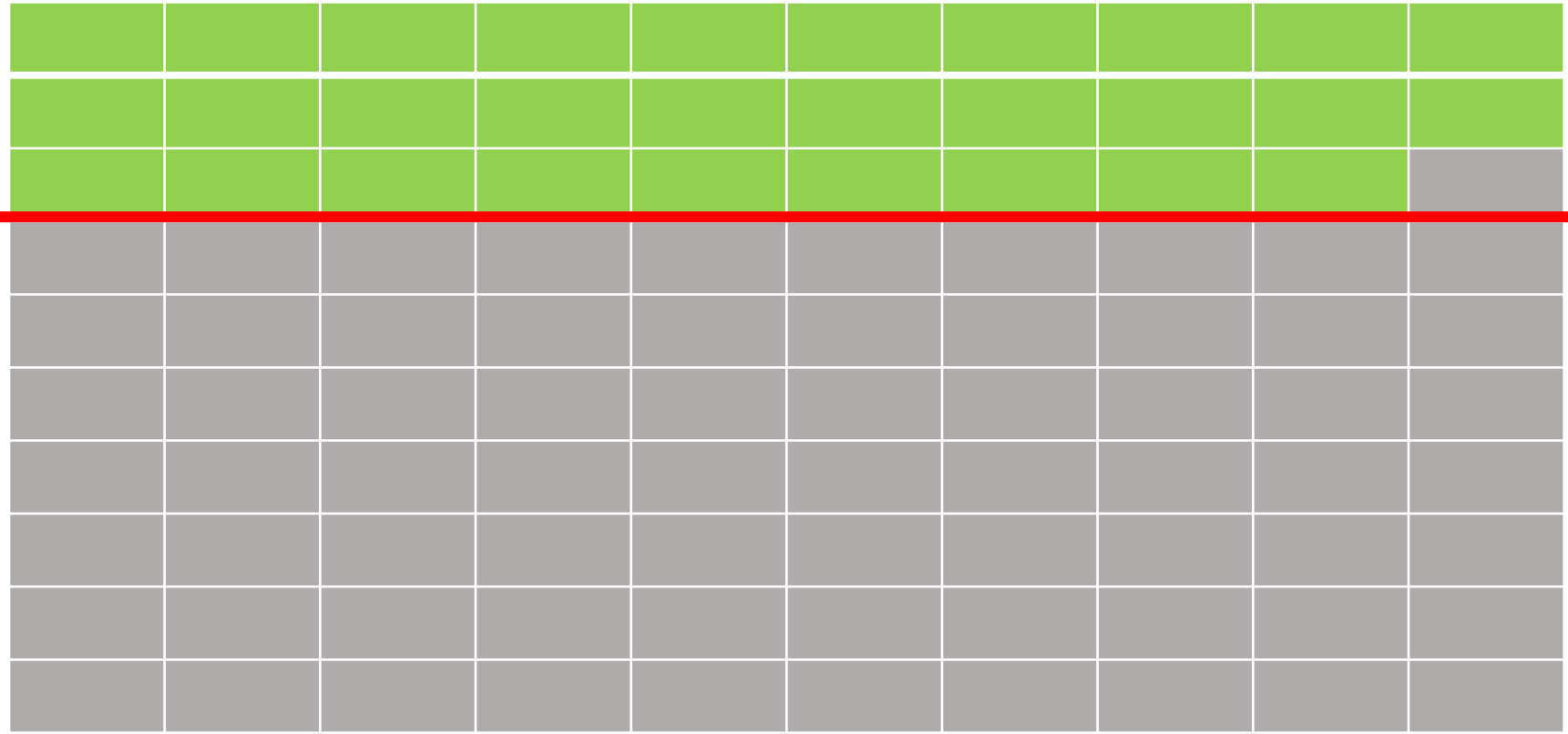
The Justice40 Initiative

The tool will provide important information for the Justice40 Initiative. The goal of the Justice40 Initiative is to provide 40 percent of the overall benefits of certain Federal investments in seven key areas to disadvantaged communities. These seven key areas are: climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, the remediation and reduction of legacy pollution, and the development of critical clean water infrastructure.

Read more about the Justice40 Initiative in President Biden's Executive Order 14008 on *Tackling the Climate Crisis at Home and Abroad*.

Traditional Justice40 Application

29% of population received 40% of benefits



71% of the population receives 60% of benefits

WHAT DOES DISTRIBUTIONAL JUSTICE LOOK LIKE?

2006-2014;
~18B in federal tax credits

How much was received by:

Richest 10% ??

Bottom 60% ??

WHAT DOES DISTRIBUTIONAL JUSTICE LOOK LIKE?

2006-2014;
~18B in federal tax credits

How much was received by:

Richest 10% ??
$10.8B

Bottom 60% ??
$1.8B
36X less

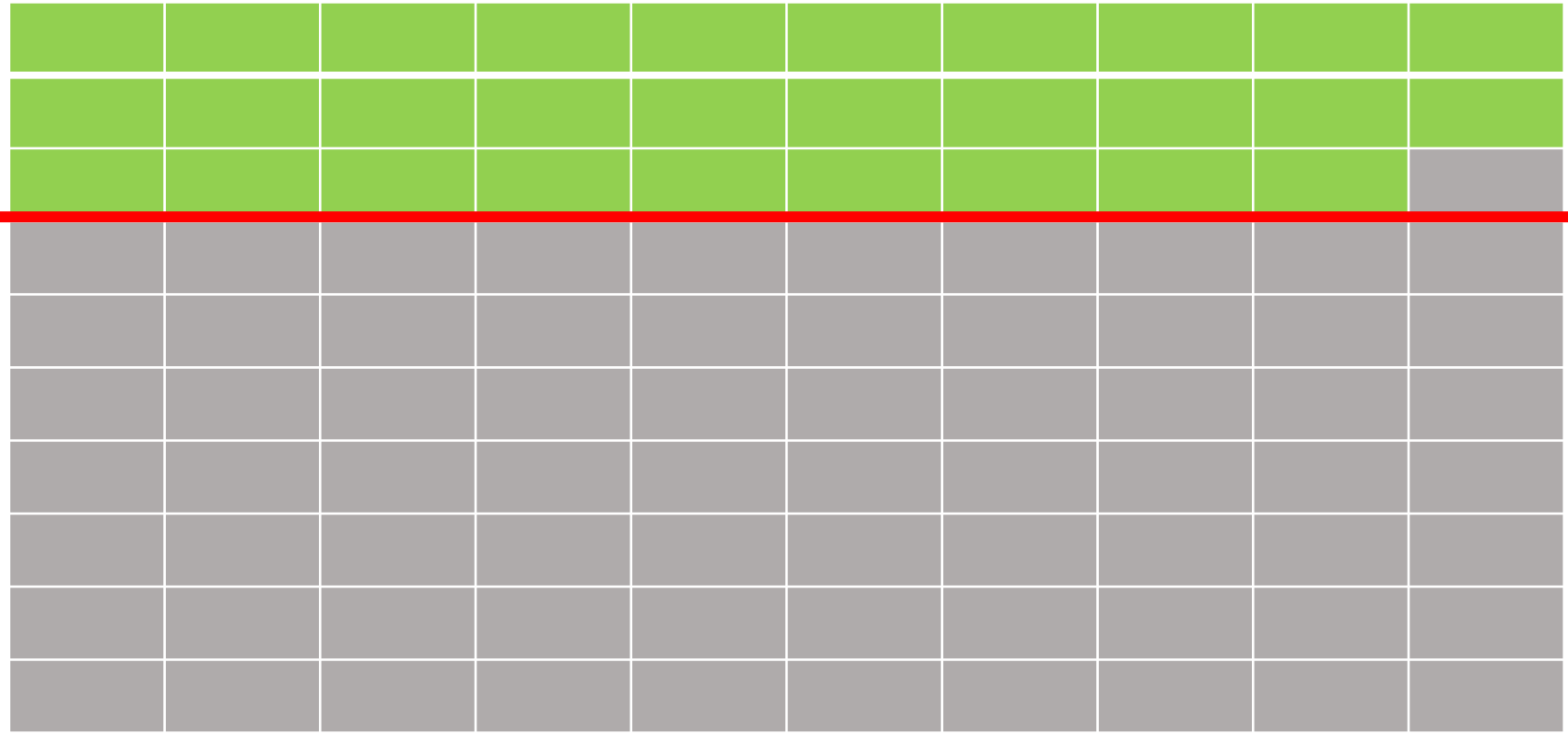
WHAT DOES DISTRIBUTIONAL JUSTICE LOOK LIKE?

Median income of households installing solar is $113,000.

>90% of federal tax credits for electric vehicles are received by households that earn > $200,000.

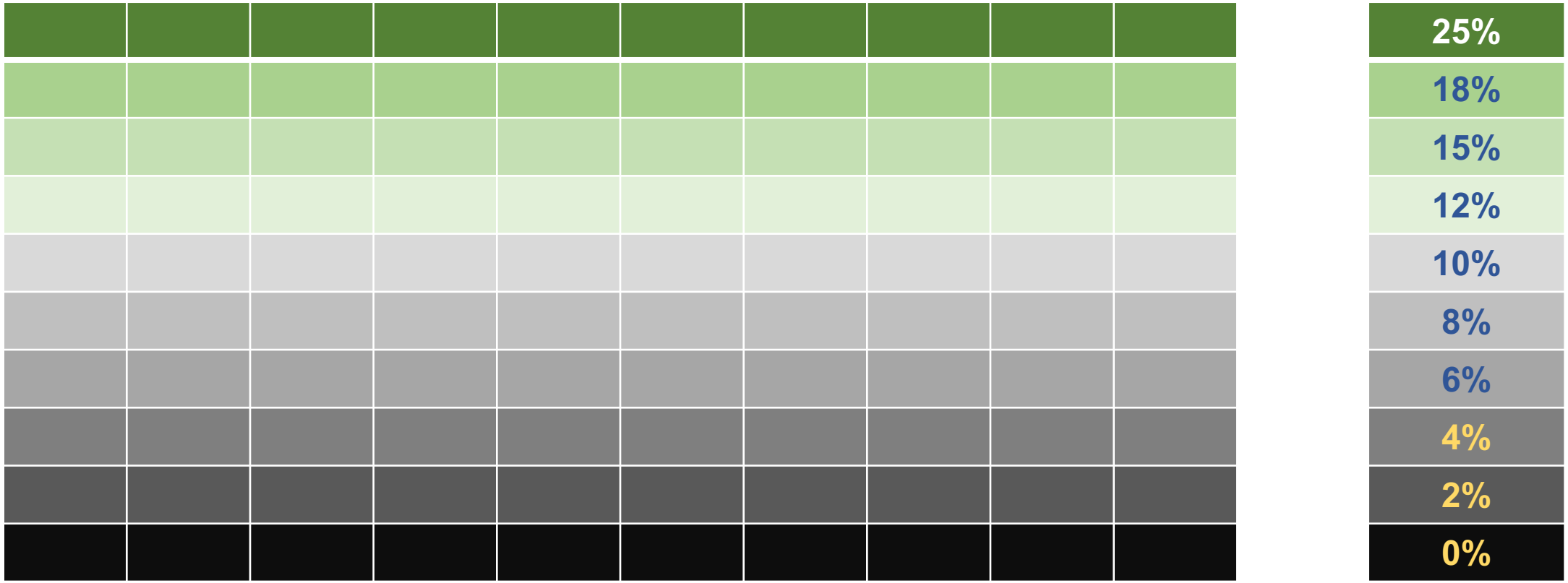
Traditional Justice40 Application

29% of population received 40% of benefits



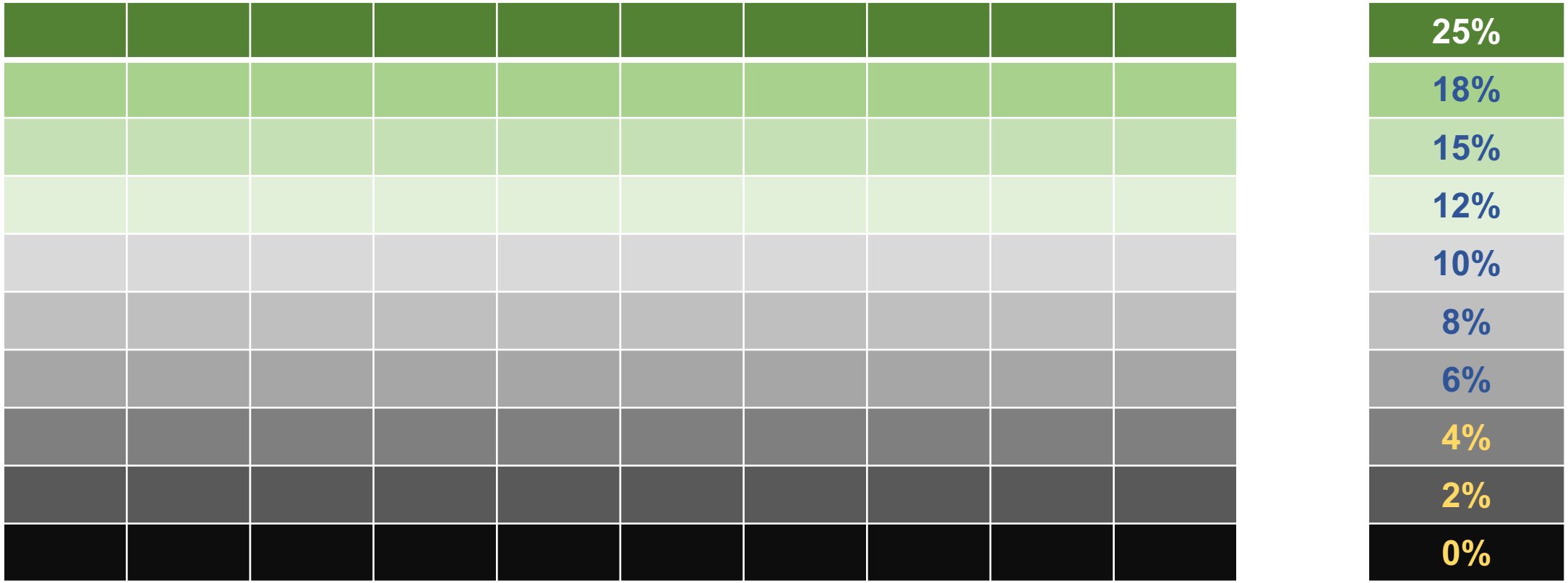
71% of the population receives 60% of benefits

Progressive Justice~~40~~70 Application



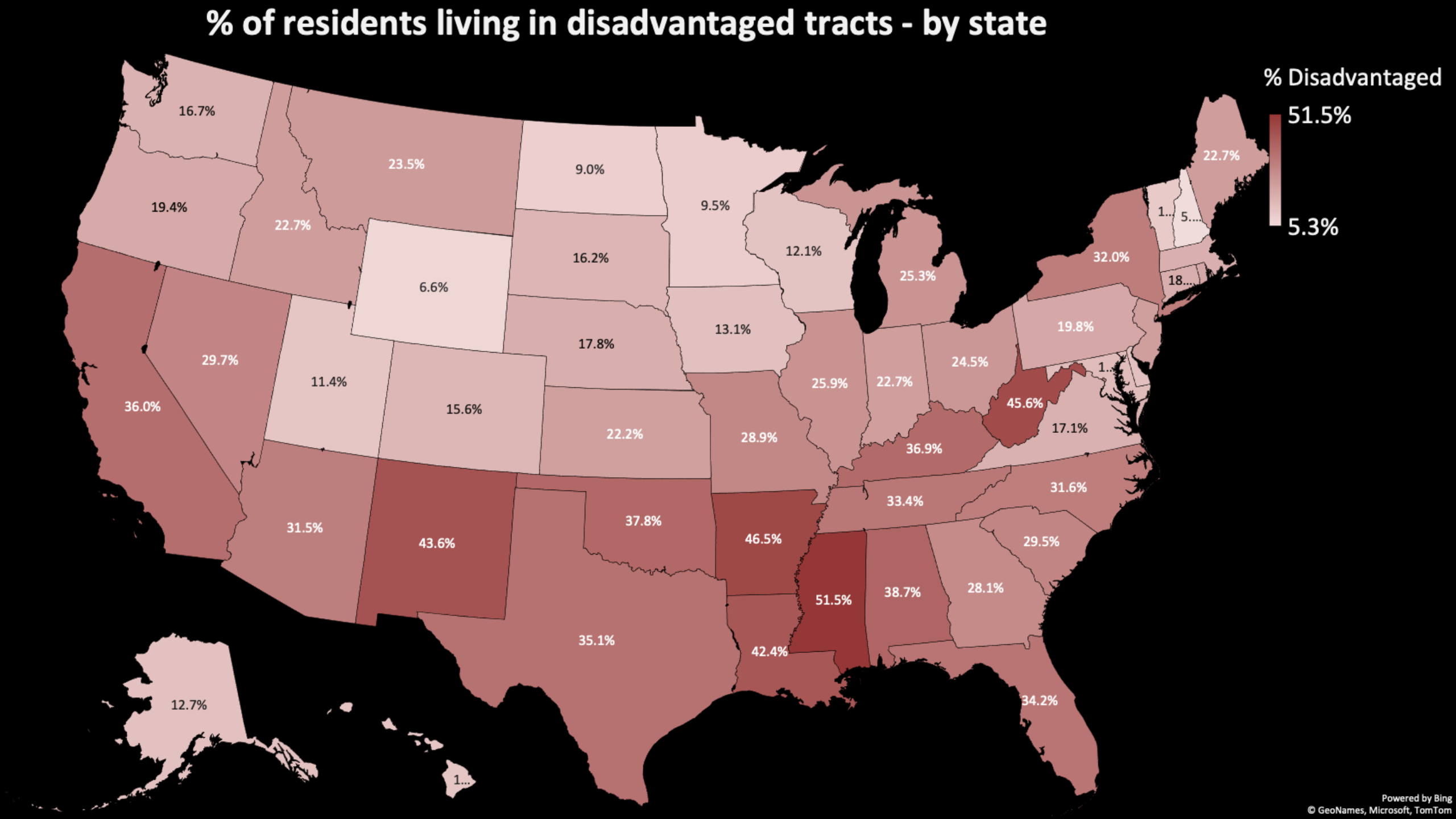
Progressive Justice~~40~~70 Application

- Benefits assigned by decile; from 0 to 2.5x
- Still takes 5.1 years for bottom 60% to catch richest 10% in federal tax credits
- 29.7 years to eliminate historical disparity across all deciles



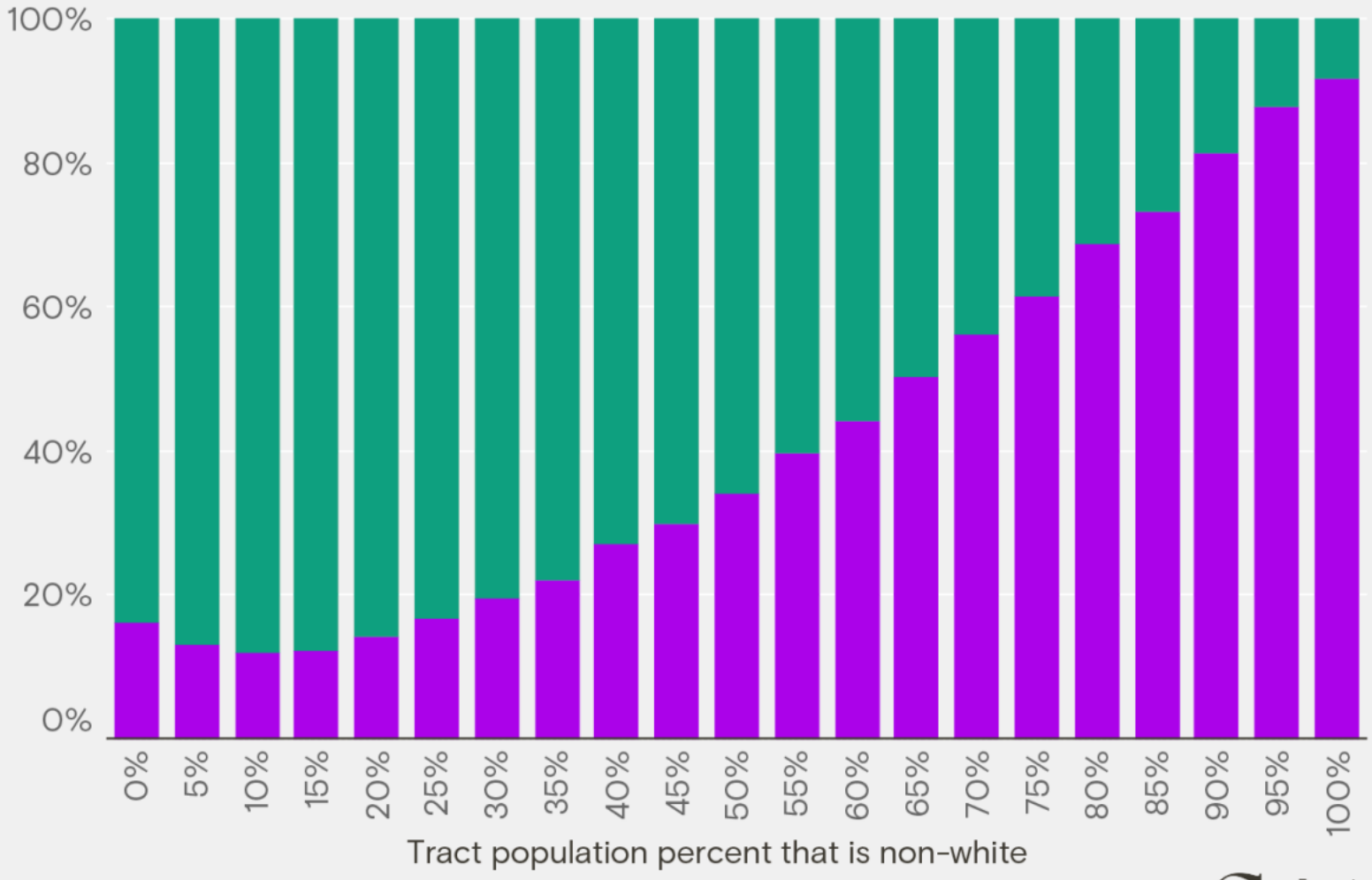
EQUITABLE DISTRIBUTION OF INVESTMENTS

Disadvantage by decile (higher percentile = greater disadvantage)	Proportional but not equitable (30% benefits go to 30% most disadvantaged)	Emerging (50% of benefits to top 30%)	Strong (70% of benefit to top 30%)	Exemplary program - corrects for past inequities (90% of benefits to top 30%)
90-100%	10.00%	22.50%	30.00%	40.00%
80-89%	10.00%	17.50%	22.50%	30.00%
70-79%	10.00%	10.00%	17.50%	20.00%
60-69%	10.00%	9.00%	10.00%	10.00%
50-59%	10.00%	8.00%	8.00%	0.00%
40-49%	10.00%	8.00%	6.00%	0.00%
30-39%	10.00%	7.00%	4.00%	0.00%
20-29%	10.00%	7.00%	2.00%	0.00%
10-19%	10.00%	6.00%	0.00%	0.00%
0-9%	10.00%	5.00%	0.00%	0.00%
TOTALS	**100.00%**	**100.00%**	**100.00%**	**100.00%**
TOP 30%	**30.00%**	**50.00%**	**70.00%**	**90.00%**


% of residents living in disadvantaged tracts - by state
% Disadvantaged
51.5%
5.3%
16.7%
19.4%
23.5%
22.7%
6.6%
9.0%
16.2%
17.8%
9.5%
13.1%
12.1%
25.3%
32.0%
22.7%
1...
5....
18....
19.8%
1...
29.7%
36.0%
11.4%
15.6%
22.2%
28.9%
25.9%
22.7%
24.5%
45.6%
17.1%
36.9%
31.6%
33.4%
31.5%
43.6%
37.8%
46.5%
51.5%
38.7%
29.5%
28.1%
35.1%
42.4%
34.2%
12.7%
1...
Powered by Bing
© GeoNames, Microsoft, TomTom

Demographic distribution

Percent of census tracts identified as **disadvantaged** and **not disadvantaged** by the White House screening tool



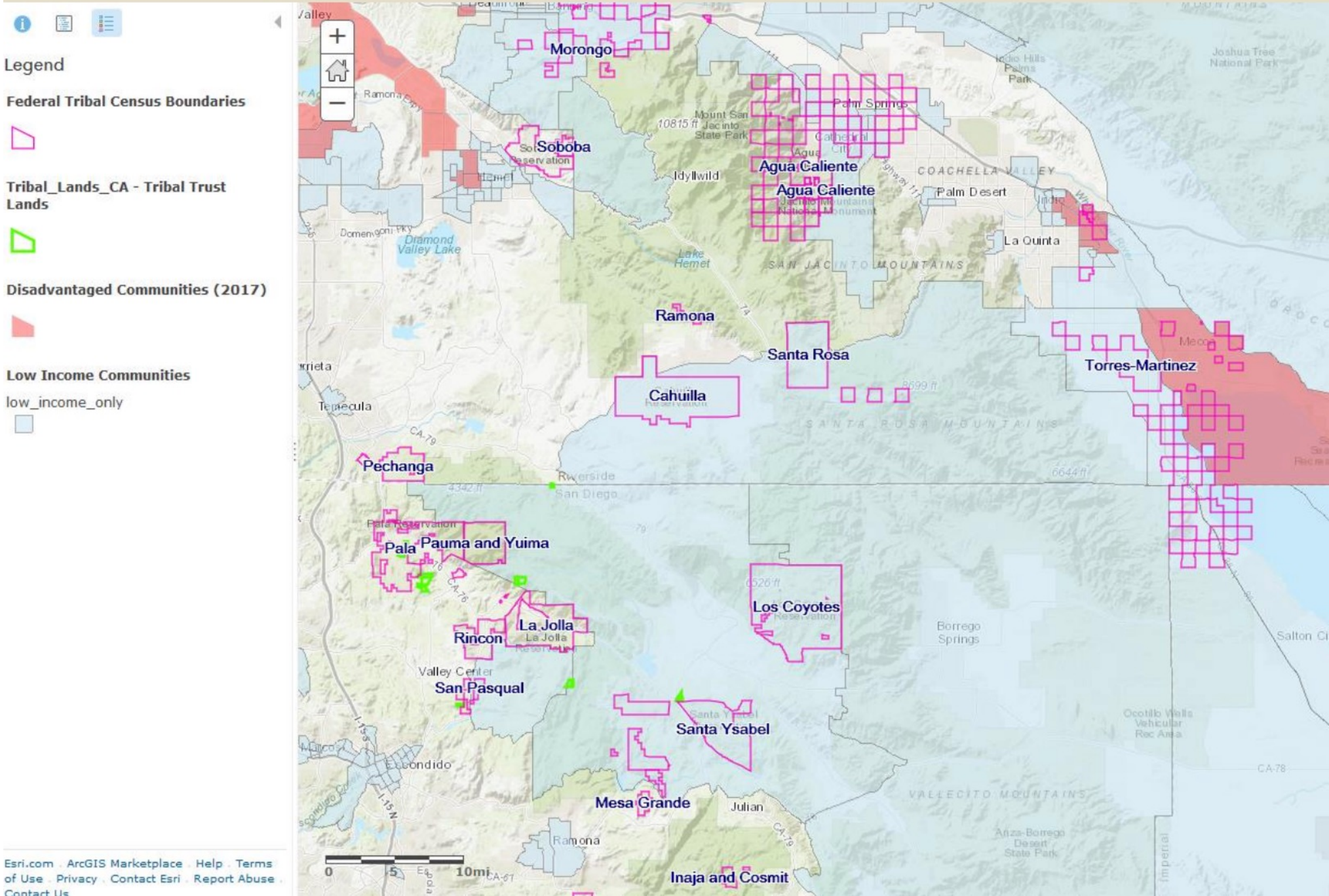
Data source: CEJST / ACS

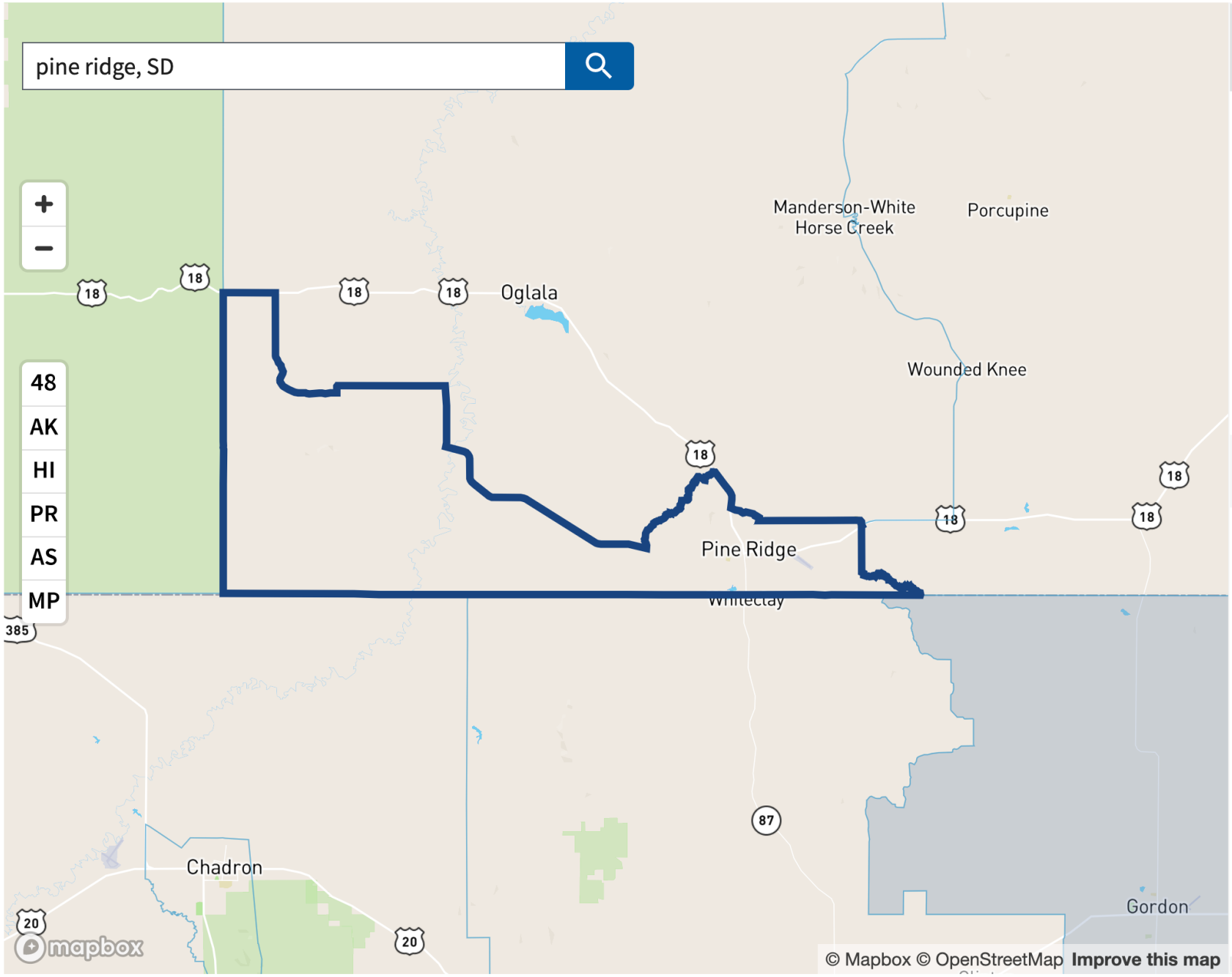
Grist

Grist / Clayton Aldern

GAPS IN TRIBAL DATA RESULT IN EXCLUSION

Map of Disadvantaged Communities, Low-Income Communities & Tribal Boundaries





Clean energy and energy efficiency

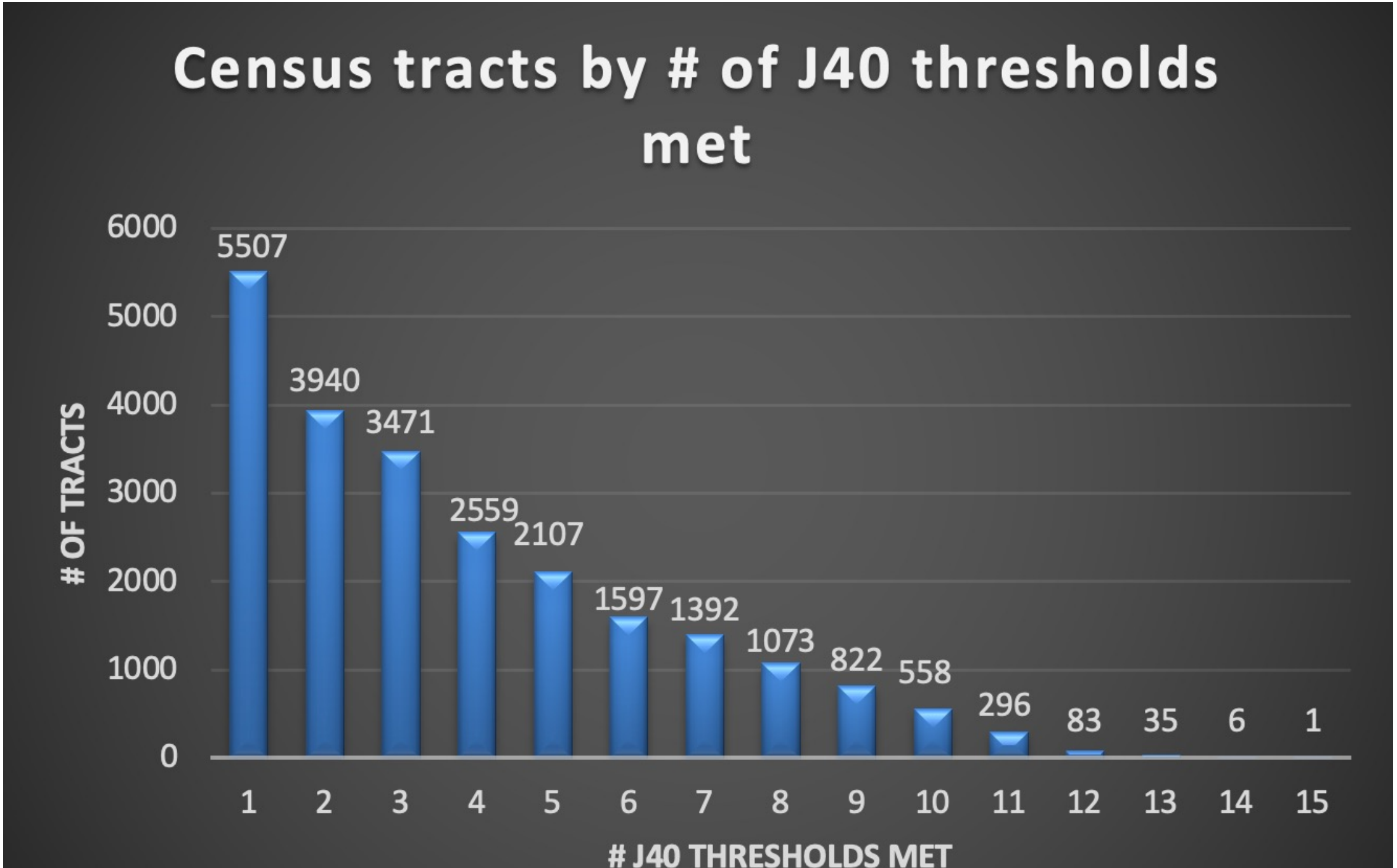
At or above at least one threshold?	**No**
Energy burden Average annual energy costs divided by household income	data is not available
PM2.5 in the air Fine inhalable particles, 2.5 micrometers or smaller	data is not available

AND

At or above both associated thresholds?	**No**
Low income Household income is less than or equal to twice the federal poverty level	data is not available
Higher education non-enrollment Percent of the census tract's population 15 or older not enrolled in college, university, or graduate school	data is not available

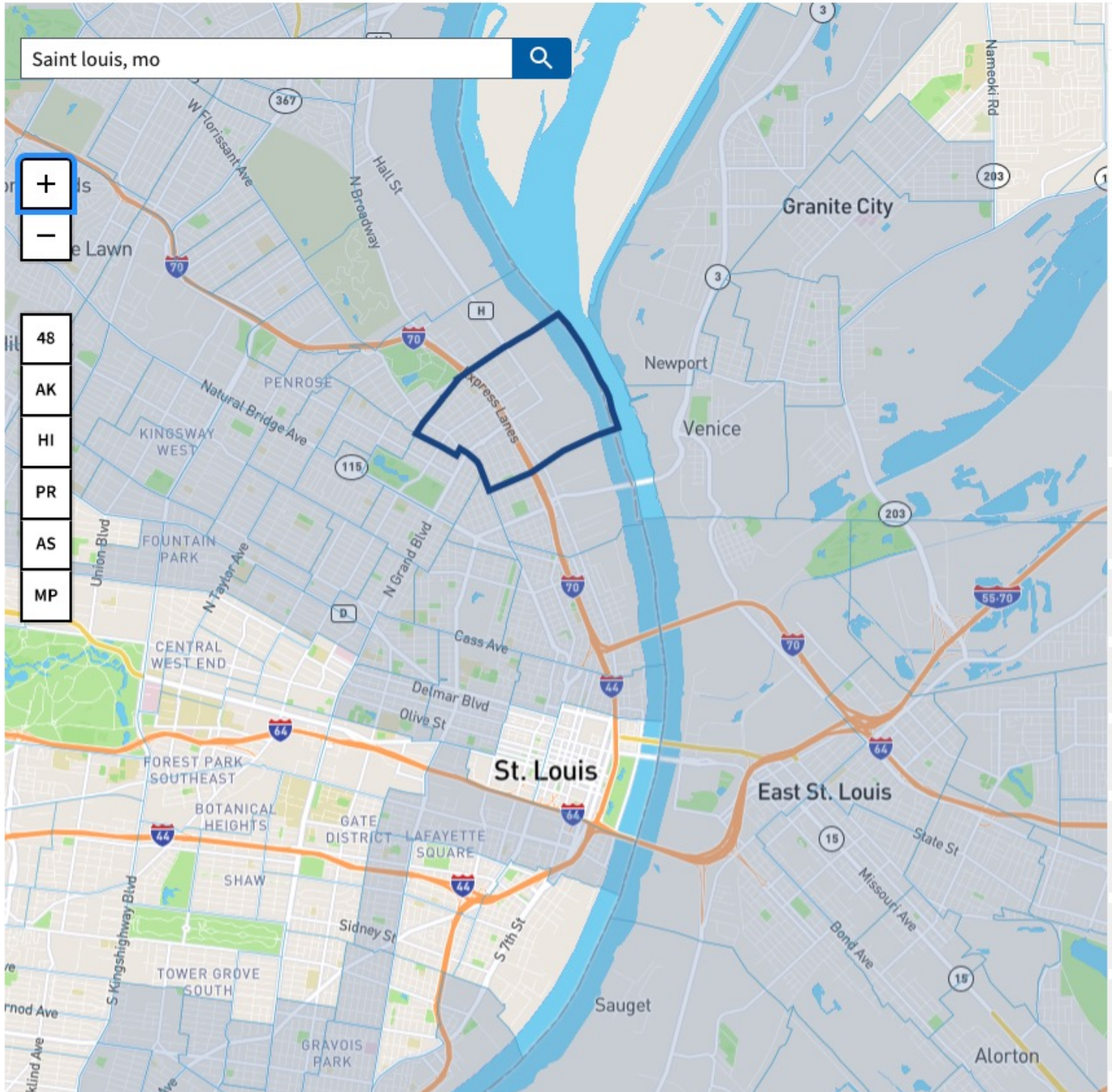
Download the current list of communities and datasets used (ZIP file will contain one .xlsx and one .csv, with a size of 52MB unzipped). Last updated: 04/06/22.

Help improve the site & data


Census tracts by # of J40 thresholds met
OF TRACTS
6000
5000
4000
3000
2000
1000
0
5507
3940
3471
2559
2107
1597
1392
1073
822
558
296
83
35
6
1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
J40 THRESHOLDS MET

Maximum# thresholds = 15

Census Tract 29510109700, St. Louis, MO



Methodology version 0.1

Census tract: 29510109700
County: St. Louis city
State: Missouri
Population: 2,142

Identified as disadvantaged?

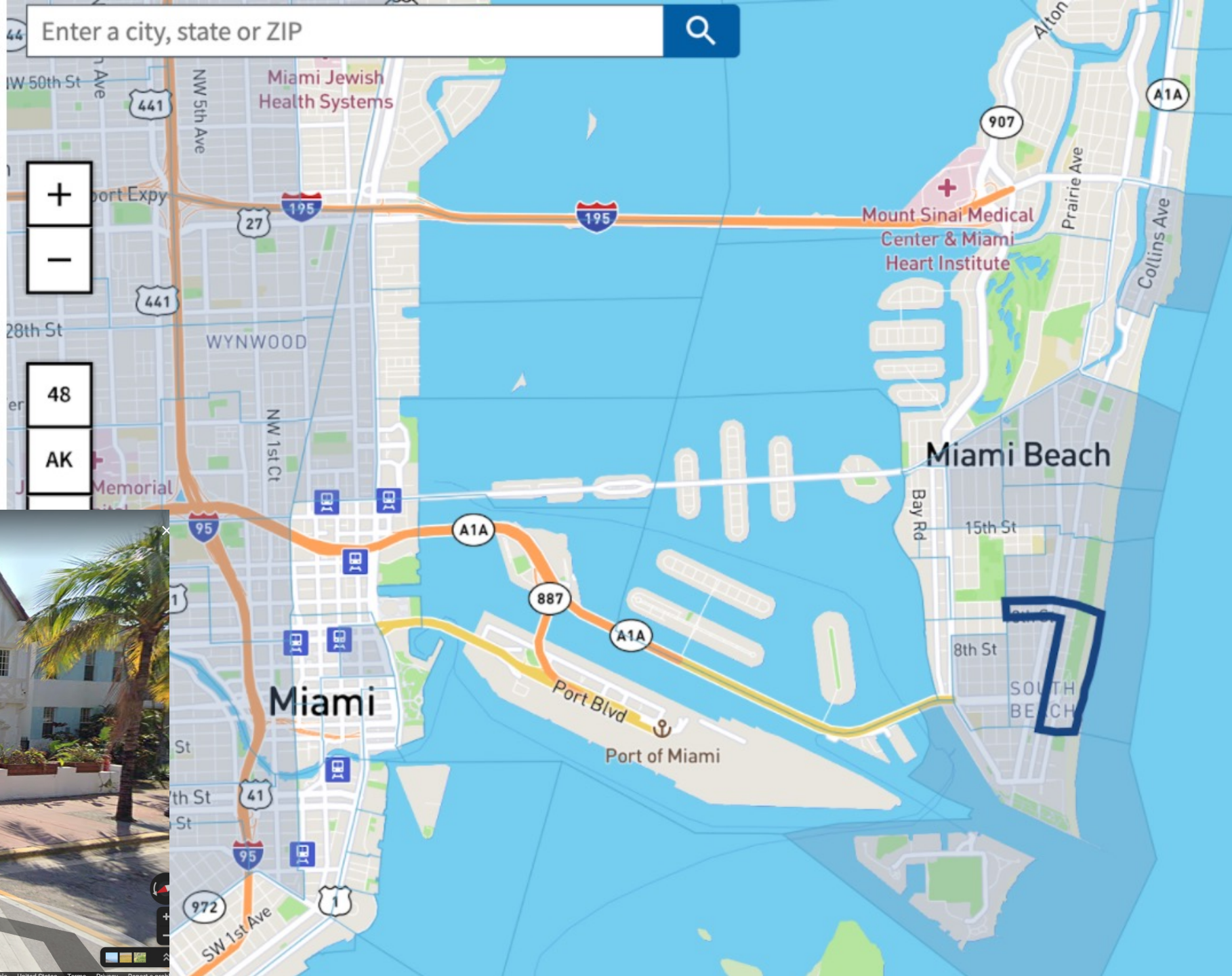
YES

15 of 21 thresholds exceeded

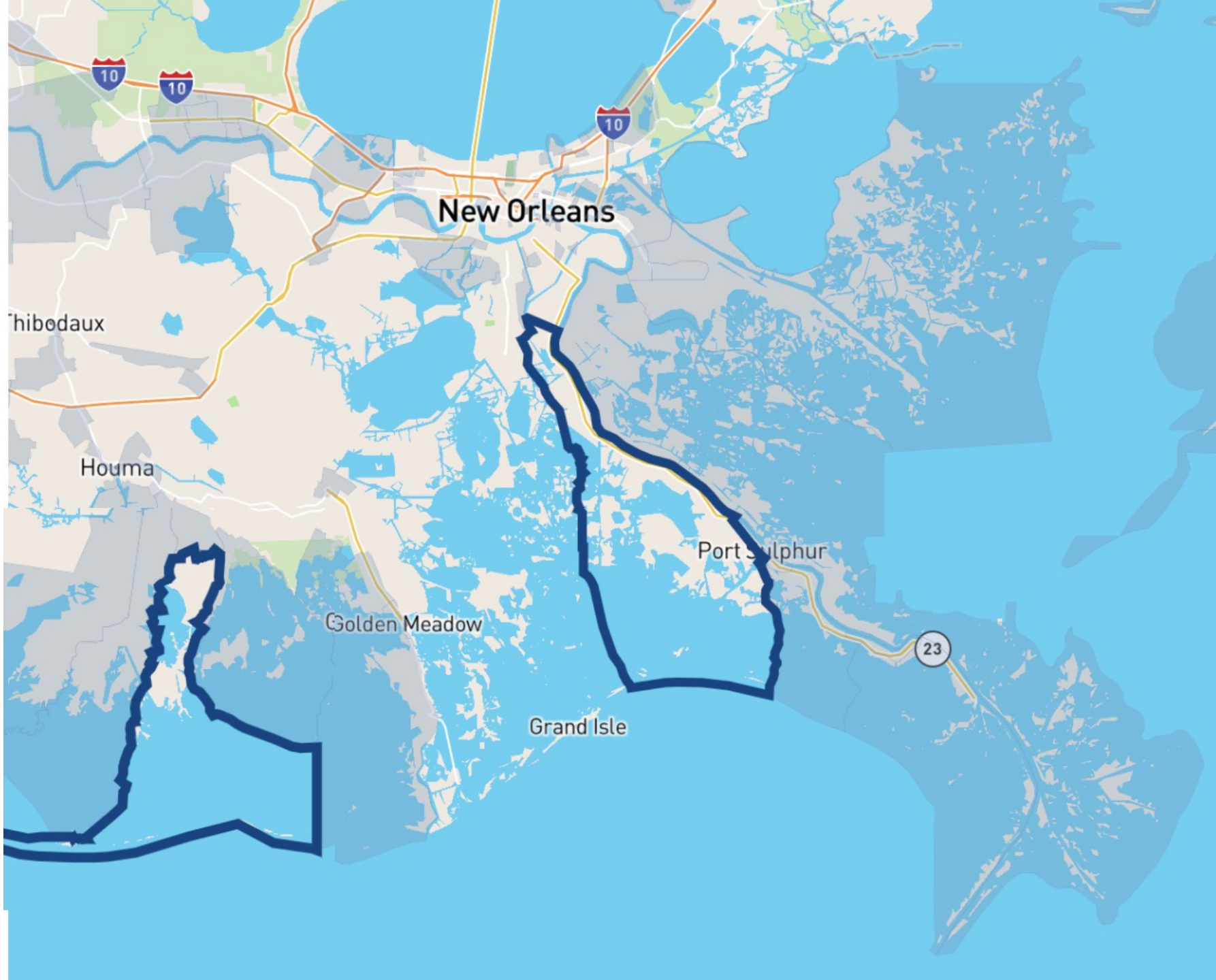
Send feedback

- **Climate change**
- **Clean energy and energy efficiency**
- **Clean transportation**
- **Sustainable housing**
- **Legacy pollution**
- **Clean water and waste infrastructure**
- **Health burdens**
- **Workforce development**

THE NEED FOR GROUNDTRUTHING



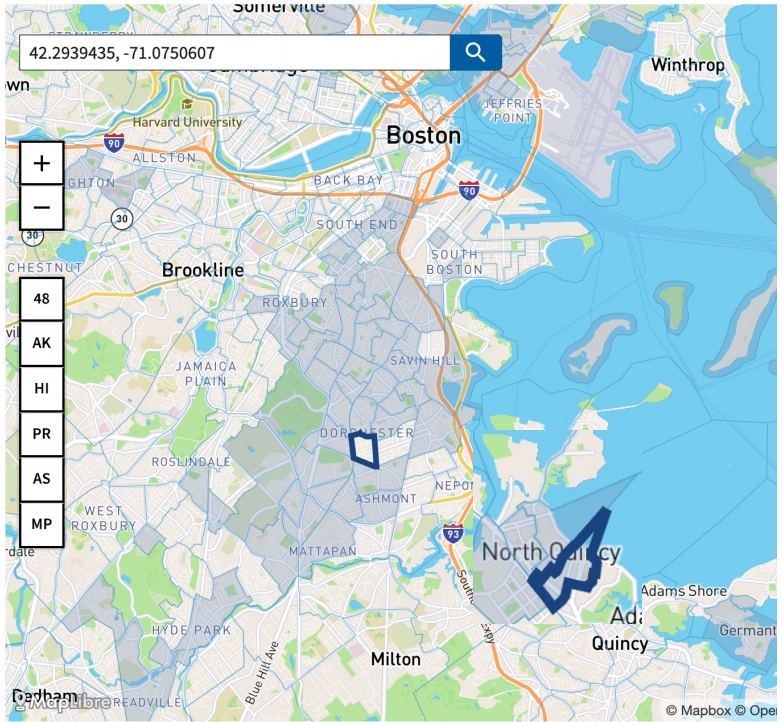
THE DANGER OF BINARY THRESHOLDS



HOW WELL CAN WE DISTINGUISH BETWEEN TRACTS?

Dorcester = 65% Black, 22% Latinx, 5% white
= NOT disadvantaged

North Quincy = 41% Asian, 50% white
= IS disadvantaged

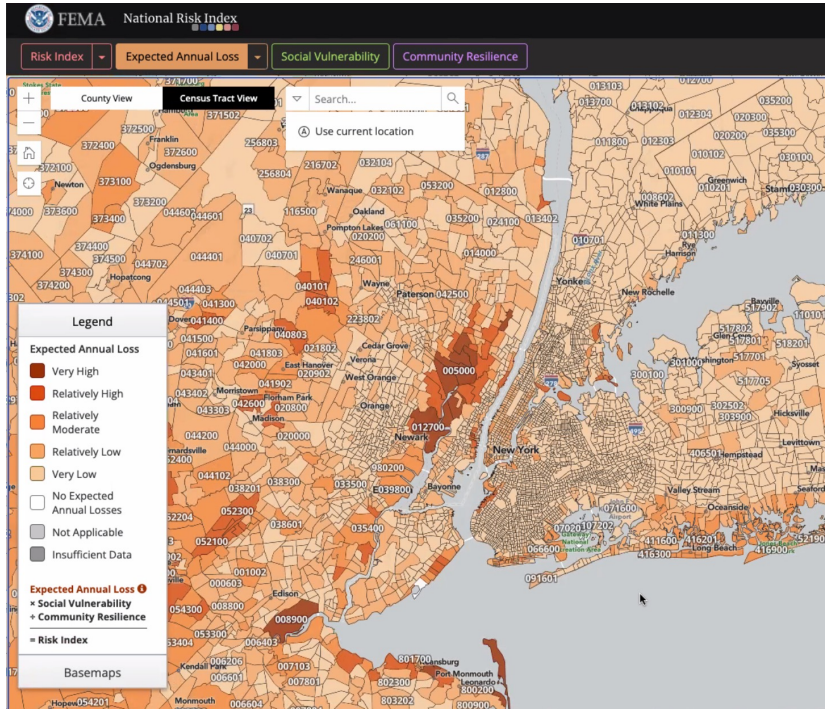


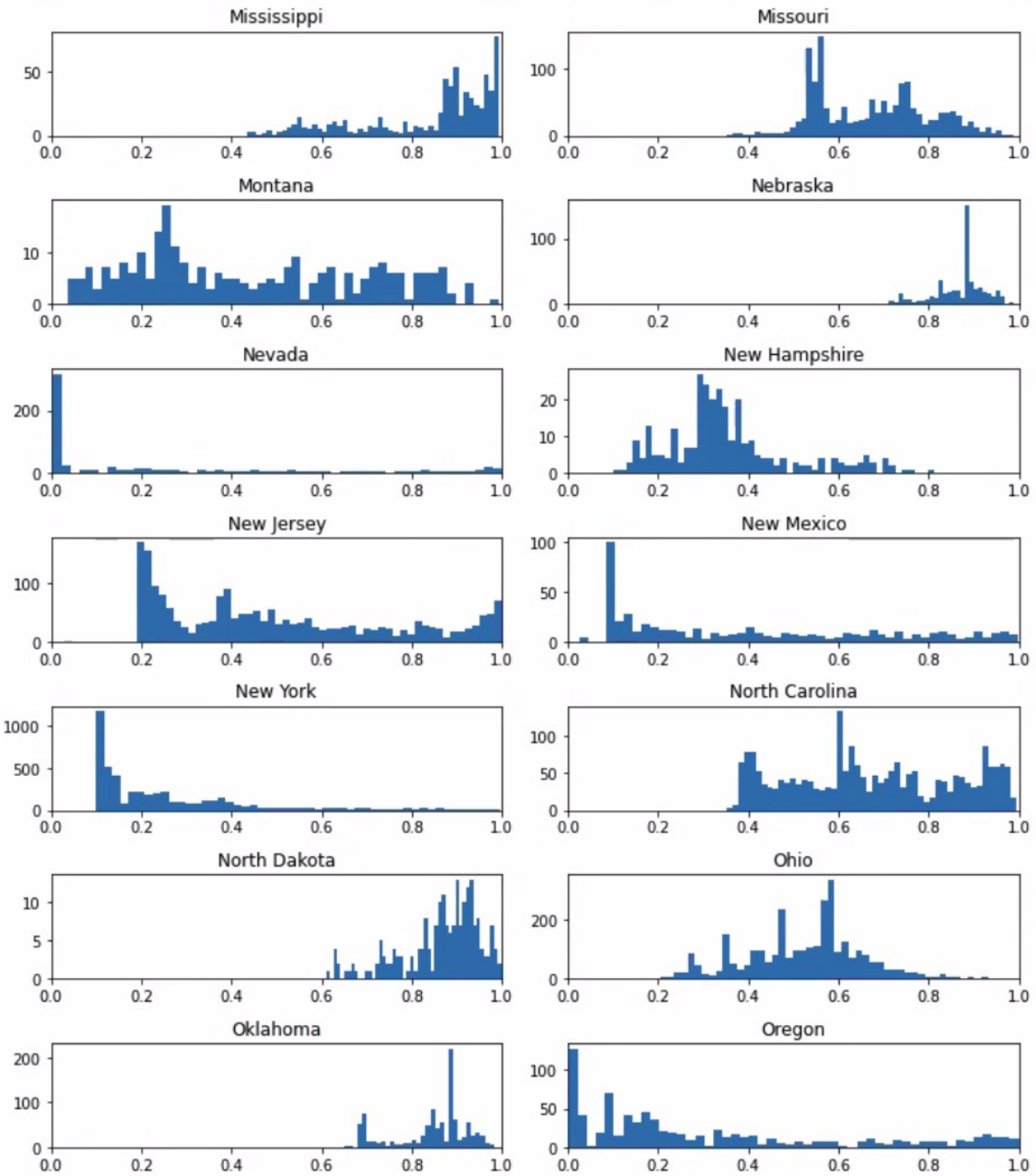
DORCESTER | NORTH QUINCY

	25025092300	25021417601
Indicator	**Percentile**	**Percentile**
Low-income	59	48
Higher ed enrollment	5	16
Expected agricultural loss rate	*0*	0
Expected building loss rate	12	42
Expected population loss rate	10	75
Energy burden	86	59
PM 2.5 exposure	13	11
Diesel particulate matter	75	67
Traffic proximity	41	74
Housing burden	**91**	76
Lead paint	88	85
Hazardous waste facilities	84	81
Superfund sites	49	56
Proximity to RMP sites	40	36
Wastewater discharge	2	53
Asthma	97	52
Diabetes	75	34
Heart disease	37	41
Life expectancy	19	60
Linguisitic isolation	87	94
Unemployment	75	68
Below 100% federal poverty	59	67
Low HS attainment	19	20

EYE-TESTING

E.g. expected Building Loss Histograms





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 do we know about who is taking advantage of electric vehicle incentives?

QUESTIONS & DISCUSSION