

# Justice40 Executive Order Implementation

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Renewable Energy Markets Conference

# Implementing Justice40

40% of overall  
benefits

How do we  
measure and  
track the  
benefits of J40  
investments?

of certain  
Federal  
investments

How do we  
define J40  
investments?

must flow to  
disadvantaged  
communities

How do we  
define  
disadvantaged  
communities  
(DACs)?

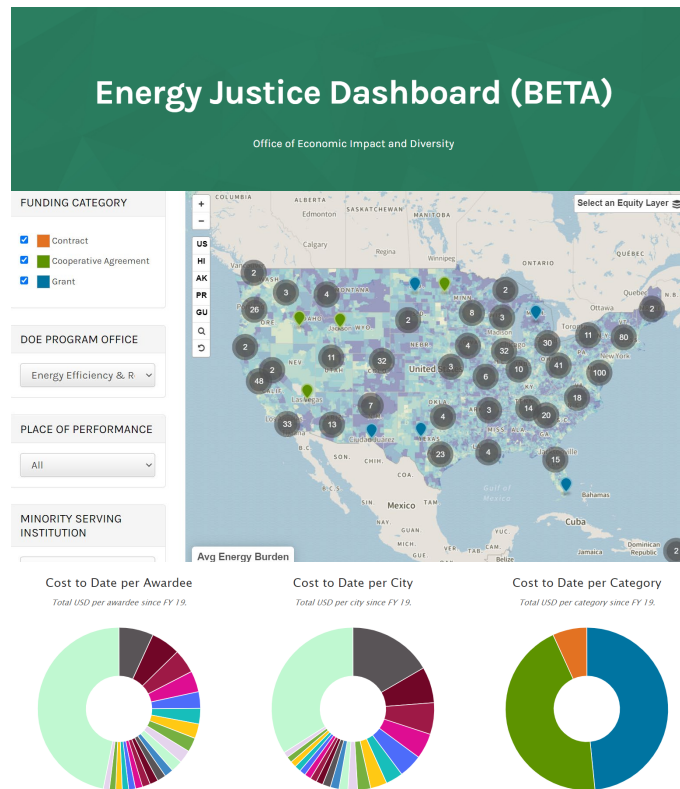
# Energy Justice Dashboard (BETA)

## Accountability & Transparency

## Energy Justice Dashboard (BETA)

A tool to measure and track DOE progress toward Justice40 and see investments in real time.

[www.energy.gov/diversity/energy-justice-dashboard-beta](http://www.energy.gov/diversity/energy-justice-dashboard-beta)



# Measuring Progress Towards Justice40 Priorities

Justice40 Policy Priorities	Metric	Measurement
Reducing energy burden	Reduction in energy costs due to technology adoption	Annual energy expenditures (\$'s) in DACs before and after program intervention
Reducing environmental burden	Reduction in local pollutant emissions	Measurement of local pollutant (NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>2.5</sub> ) in DACs before and after program intervention
Increase clean energy access	Increase access to clean energy serving DACs	% of local electricity generation mix from clean energy that serves DACs
Increase access to low-cost capital	Increase loans to MBEs/DBEs	Loan \$'s awarded to MBEs/DBEs / total \$'s of loans awarded
Increase enterprise creation	Increase contracts to MBEs/DBEs	# of contracts to MBEs/DBEs / total # of contracts
Increase clean energy jobs & training	Increase clean energy jobs in DACs	# of jobs created in DACs / total # of jobs created
Increase resilience	Increase community resilience	Energy storage deployed in DACs / total energy storage deployed
Increasing energy democracy	Increased stakeholder engagement	# of events with community groups in DACs / total # of events



# Identifying DOE Covered Programs

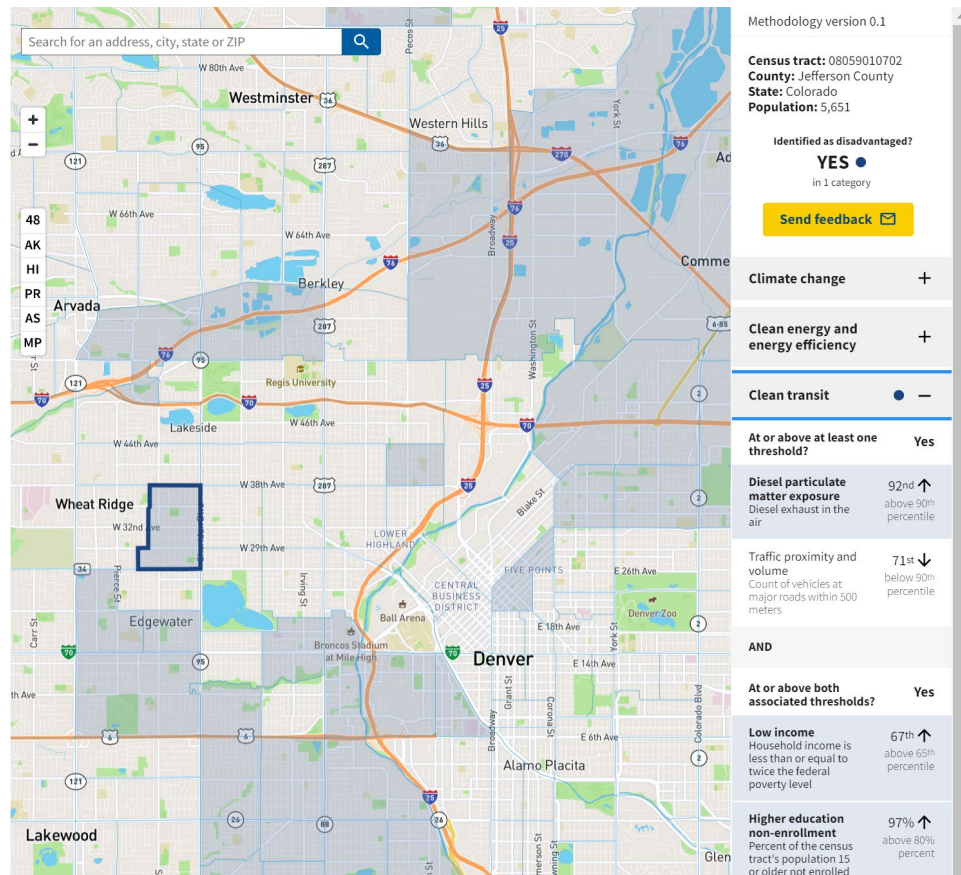
- Department of Energy has 140+ Justice40 covered programs
- “Programs” include broad programs such as the Solar Energy Technologies Office as well as specific new initiatives like the Communities Local Energy Action Program (Communities LEAP), which provides assistance to 24 disadvantaged communities.
- Requirements: meaningfully involve community stakeholders and report data on the benefits directed to disadvantaged communities.

# IRA Provisions Addressing Energy Equity or Justice

- Grant funding examples
  - At least 60% of a \$27B Greenhouse Gas reduction Fund will focus on disadvantaged communities
  - \$1B for energy efficiency, water efficiency or climate resilience of affordable housing; \$9B for LMI households to increase their efficiency
- Tax credit examples
  - 10% bonus for projects built in legacy energy communities
  - 10% bonus ITC for projects in a low-income community or on Indian Land; 20% bonus for projects on low-income buildings or providing benefits to low-income households (Limited to 1.8-GW per year)

# Climate & Economic Justice Screening Tool (Beta)

- Maps disadvantaged communities under the Justice40 Initiative using census tracts, which are the smallest geographic unit for which publicly-available and nationally-consistent datasets can be consistently displayed on the tool.
  - Under the current formula, a census tract will be identified as disadvantaged in one or more categories of criteria:
    - **IF** the census tract is above the threshold for one or more environmental or climate indicators
    - **AND** the census tract is above the threshold for the socioeconomic indicators
- <https://screeningtool.geoplatform.gov/>





# Applied Research: Energy Justice in Solar Projects

- How to incorporate energy justice into utility-scale PV projects
  - Public sector activities
  - Private sector activities

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Incorporating energy justice into utility-scale photovoltaic deployment: A policy framework

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**ABSTRACT**

Utility-scale photovoltaic (PV) installations made up 77 GW (62) of installed capacity in the United States, as of the end of 2021 [1,2]. This will grow to more than 500 GW by 2050 under a mid-case projection or more than 800 GW if solar costs decline more rapidly [3]. While utility-scale PV is projected to grow rapidly, to date, unlike energy efficiency or distributed PV, utility-scale PV has not been used to provide substantial financial benefits to underserved communities, either through ownership, financing of assets, or direct electricity bill reduction.

We assess two mechanisms through which utility-scale PV could benefit underserved communities. We find that while a framework for direct electricity bill reduction can be meaningful to customers, this mechanism falls short of providing restorative justice via wealth creation for minority-owned businesses. In contrast, we find that a framework for procurement of utility-scale PV by public and private entities from PV projects that are financed, owned, and/or developed by minority-owned businesses can provide this restorative justice benefit, and thereby facilitate an equitable energy transition. We conclude with concrete recommendations for new policies and programs to ensure that the benefits of utility-scale PV systems are distributed to underserved communities.

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**Introduction**

Utility-scale photovoltaic (PV) installations made up 77 GW (62) of installed capacity in the United States, as of the end of 2021 [1,2]. This will grow to more than 500 GW by 2050 under a moderate cost decline projection, or more than 800 GW if solar costs decline more rapidly [3]. Utility-scale PV projects interact with communities in many ways, including project siting, and the provision of direct electricity bill-reduction benefits. Because of these direct effects, the growth in utility-scale PV provides an opportunity to address energy justice.

Research on the distribution of benefits from other types of solar deployment has focused primarily on distributed PV and community solar [4,5,6]. Across the distributed PV and community solar domains, researchers have identified inequities in terms of solar access. For example, in the distributed PV market, even when controlling for household income and home ownership, majority-white census tracts have installed more distributed PV than Black- and Hispanic-majority census tracts [4]. Similarly, Barbore et al. 2021 found that in 2019 the median income for households that adopted solar was \$113k, compared to \$64k for all households [5]. In California, Lukanov et al. 2019, found persistently lower levels of distributed PV adoption in the state's disadvantaged communities [7]. Finally, research on community solar policies and programs found that while more than 20 states have a policy to provide incentives or mandates for community solar to subsidize low- and moderate-income consumers, to date, these programs have provided only a small fraction (c.1%) of the total community solar market [6]. To date, little is known about how utility-scale PV projects can provide financial benefits to disadvantaged communities<sup>1</sup>. The anticipated increase in utility-scale PV deployment provides an opportunity to both anticipate and mitigate potential disparities and disproportionate impacts, as well as create wealth and economic benefits in historically marginalized communities.

Utility-scale PV differs from other solar deployment types in that individual households do not, as currently structured, receive direct benefits from project deployments, as in the community solar market where individual households can receive a credit on their electricity bill. Nor do households own utility-scale PV, like

<sup>1</sup> In this paper, we refer to "utility-scale" PV to mean PV projects that are not connected behind a customer's meter. These projects are ground-mounted systems usually above 5 MW.

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# { Equity and Environmental Justice in Clean Energy Policy

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[ Union of  
Concerned Scientists







Science for a  
healthy planet  
and safer world.

**Union of  
Concerned Scientists**



# { Integrated Resource Plans }

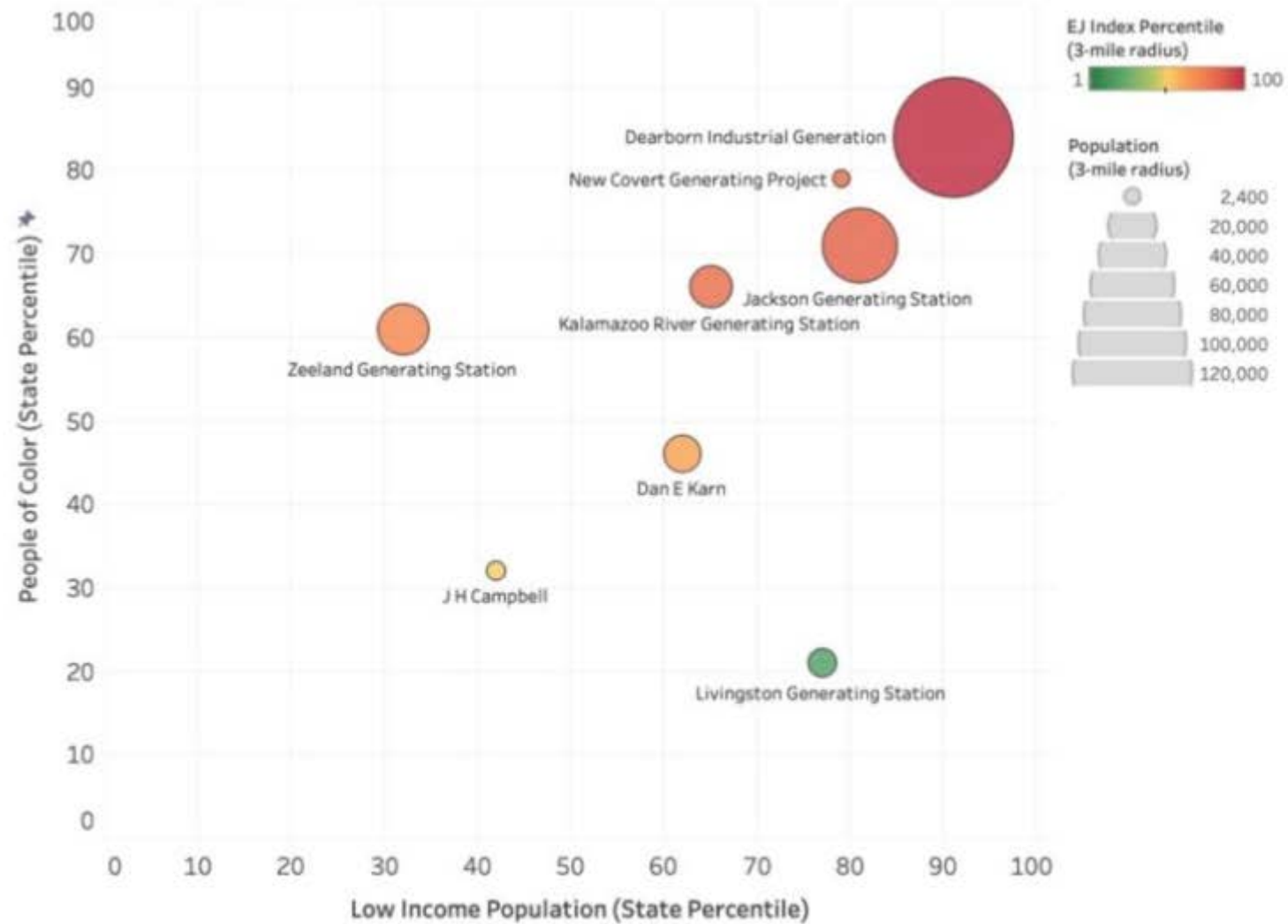


# Four Ways to Bring Health and Equity to Utility Planning

1. Identify Demographics and Environmental Risk Factors of Communities Near Power Plants
2. Determine the Exposures and Health Impacts of Power Plant Emissions
3. Evaluate Other Health and Environmental Hazards
4. Assess the Impact on Energy Costs and Energy Access

*Source: <https://www.psehealthyenergy.org/news/blog/four-ways-to-bring-health-and-equity-to-utility-planning/>*

## Consumers Power Plants



**Figure 1:** Demographics of populations living within three miles of plants Consumers Energy proposed to use in its IRP.

# On the Road to 100 Percent Renewables

*States Can Lead an Equitable Energy Transition*









## Policy Recommendations: Ensuring a Just and Equitable Energy Transition

- Target reductions in power plant pollution
- Promote just transitions for fossil fuel workers and frontline communities
- Directly invest in communities to increase clean energy
- Reduce energy burdens
- Develop workforce programs and entrepreneurship initiatives in renewable energy to foster high-quality, good-paying jobs
- Ensure that frontline communities have power in decisionmaking
- Target transmission additions and “non-wires” alternatives at reducing reliance on urban-based fossil fuel plants
- Ensure sustainable and responsible life cycles for clean energy technologies
- Support strong federal policies

# Let Communities Choose

*Clean Energy Sovereignty in Highland Park, Michigan*

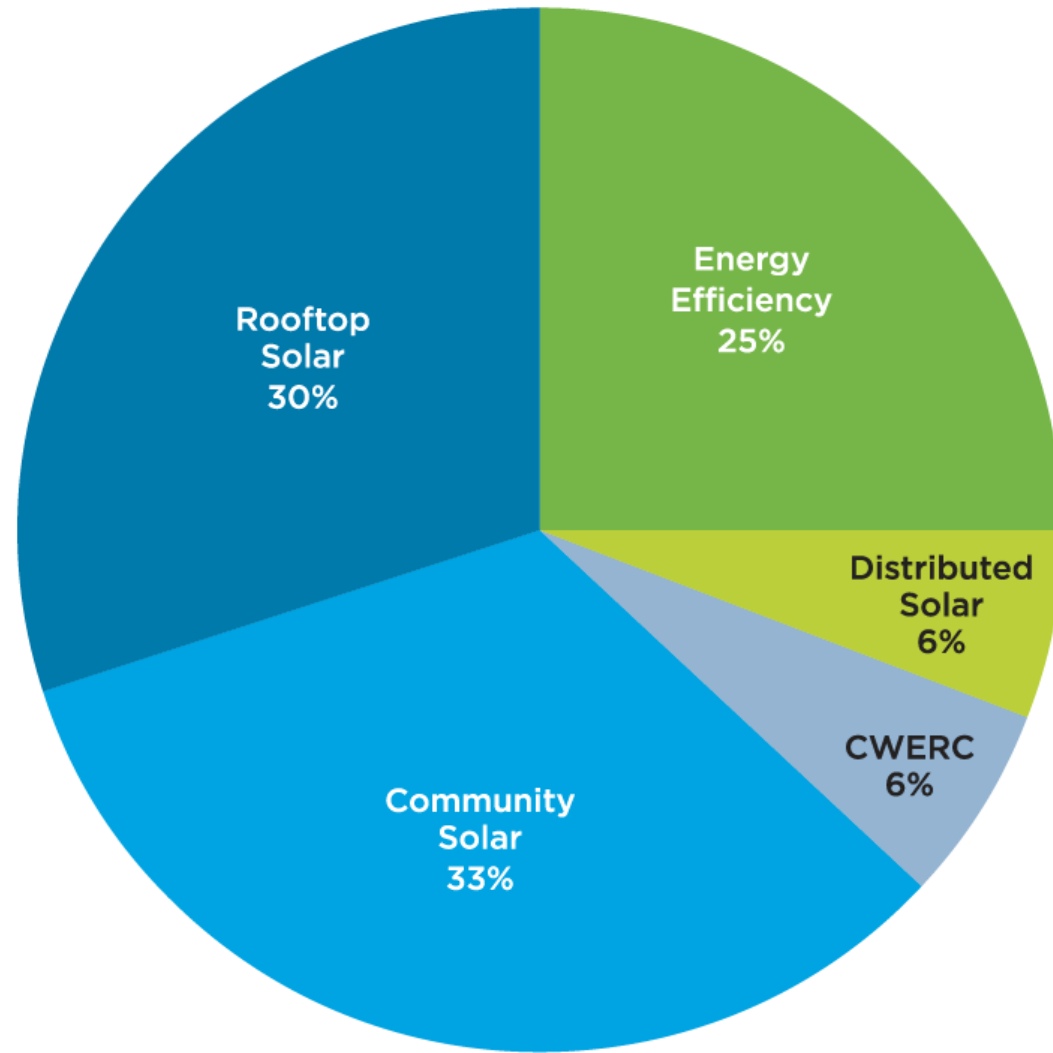


Union of  
Concerned  
Scientists



SOULDARITY

# Components of a 100 Percent Clean Energy Vision for Highland Park





## State of Michigan/Utilities

- Eliminate the cap and size restrictions on distributed solar.
- Increase energy efficiency requirements for utilities.
- Require virtual net metering to enable community solar.
- Improve compensation for customer-owned solar.
- Expand access to lower-cost financing for low-income households.
- Create benchmarks for solar rollout in under-resourced communities.
- Support the conversion of federal tax credits to cash grants for those without tax liability.
- Support the ability of communities to pursue alternatives to traditional utility service.

## City of Highland Park

- Enact a comprehensive solar ordinance.
- Set local clean energy benchmarks.
- Build city-owned community solar and let residents subscribe.
- Develop local solar and energy efficiency businesses.
- Establish a local revolving loan fund.
- Set standards for developers to provide sustainable community benefits.
- Create a sustainability commission.
- Research alternatives to traditional utility service.





# { Thank You

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Concerned Scientists**

## Want to Learn More?

Text **SCIENCE** to **67369** to receive UCS text messages directly to your phone.

# Equity in Grid Modernization

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# Two Questions

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Why is distribution system planning and grid modernization important for the clean energy industry?

Why is it important to do distribution system planning and grid modernization equitably?



# JUST and Reasonable

- The policy basis for pursuing energy justice flows from the Commission's obligation to approve "just and reasonable" rates.
- In a forthcoming NYU Law Journal article, Professors Klass and Chan argue **"rate setting is and always has been social policy implemented within a legislative framework designed to promote the public interest."**
- These foundational principles and norms provide regulators with the authority and, arguably, the duty to ensure that all members of the public enjoy equitable access to utility products and services on just and reasonable terms.

DRAFT—DO NOT CITE OR QUOTE WITHOUT PERMISSION

REGULATING FOR ENERGY JUSTICE

NEW YORK UNIVERSITY LAW REVIEW (forthcoming 2022)

Gabriel Chan\* & Alexandra B. Klass\*\*

*In this Article, we explore and critique the foundational norms that shape U.S. federal and state energy regulation and suggest pathways for reform that can incorporate principles of "energy justice." These energy justice principles—developed in academic scholarship and social movements—include the equitable distribution of costs and benefits in the transition to clean energy, equitable participation and representation in energy decision-making, and restorative justice for structurally marginalized groups.*

*While new legislation, particularly at the state level, is critical to the effort to advance energy justice, our focus here is on regulators' ability to implement reforms now using their existing authority to advance the public interest and establish just, reasonable, and nondiscriminatory rates, charges, and practices. Throughout the Article, we challenge the longstanding narrative that utility regulators are engaged solely in a technical ratemaking exercise in setting utility rates. We argue that rate setting is and always has been social policy implemented within a legislative framework designed to promote the public interest. As we explain, when regulators and advocates expressly recognize this fact, it creates new opportunities for the regulatory system to achieve energy justice goals.*

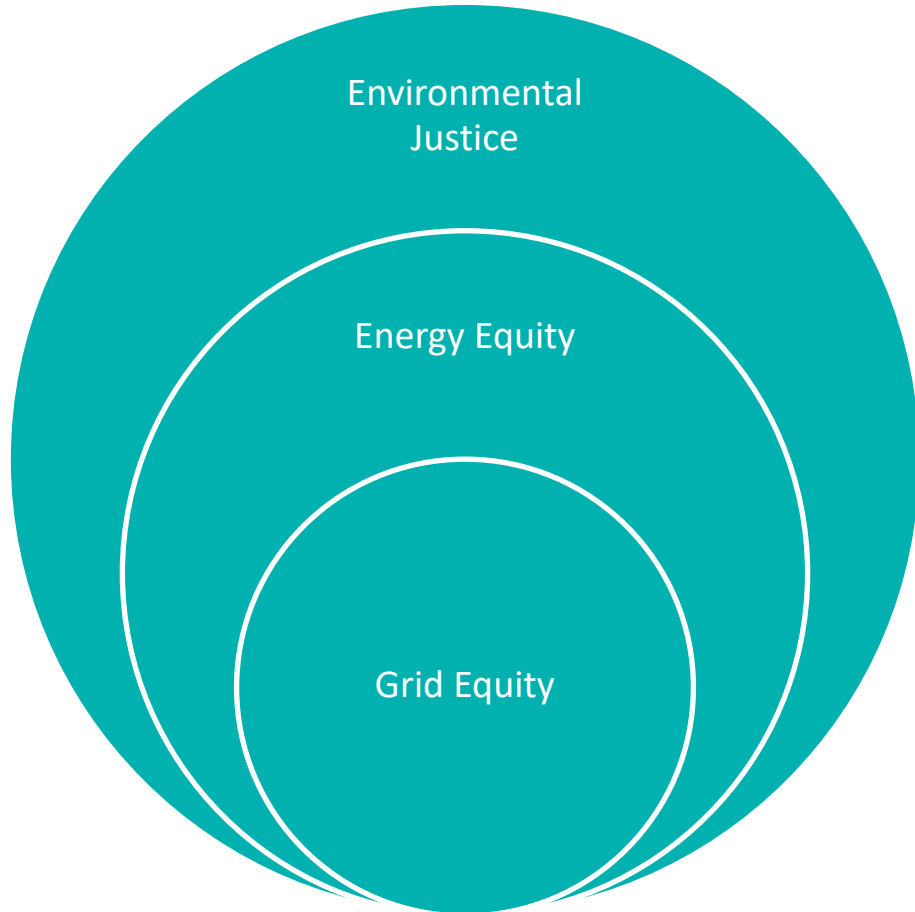
*Through our reexamination of energy system governance, we evaluate new approaches to advance the public interest and set just and reasonable rates for energy consumers. These new approaches consider system benefits as well as costs, enhance universal and affordable access to utility service, alleviate income constraints on residential energy consumption as an economic development tool, increase equitable access to distributed energy resources such as energy efficiency and rooftop solar, and enhance procedural justice in ratemaking proceedings. We argue that over the long run, these pathways to a more just energy system align the interests of all system stakeholders by creating community wealth and collective prosperity.*

\* Associate Professor, University of Minnesota Humphrey School of Public Affairs.  
\*\* Distinguished McKnight University Professor, University of Minnesota Law School.  
We received valuable research assistance from Olivia Carroll, Kylee Evans, and Max Meyer.

Klass, Alexandra B. and Chan, Gabriel, Regulating for Energy Justice (February 11, 2022). New York University Law Review, Forthcoming, Available at SSRN: <https://ssrn.com/abstract=4032969> or <http://dx.doi.org/10.2139/ssrn.4032969>

# What is “Grid Equity”

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Environmental Justice is the top level and relates to broad environmental issues (i.e. water, land-use)

Energy Equity is a subset of environmental justice that applies specifically to energy systems

Grid Equity is subset of energy justice that is focused on ensuring that the distribution grid provides safe, reliable, and clean electric service to all customers on an equitable basis.

# Why Distribution System Planning and Grid Modernization?

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- Platform / Workhorse of the electric sector
  - Delivers utility scale renewables
  - Interconnection point for distributed front-of-the-meter distributed energy resources
    - Community solar
    - Small wholesale
  - Interconnection for behind-the-meter (BTM)
  - Network Benefits
- Beneficial Electrification is a critical part of decarbonization
  - EV's
  - Heat pumps
  - Electrification of industrial processes
- Increasing attention and importance as distribution system costs increase while resource costs decline
  - Rising proportion of revenues and profits for vertically integrated utilities
  - Only source of growth for utilities in deregulated states

# Equity in Distribution System Planning and Investment

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Are customers  
receiving equitable  
service  
across all  
dimensions?

- Safety
- Affordability
- Capacity for future Electrification
  - EV's
  - Heat Pumps
  - Distributed Energy Resources
- Reliability
- Power quality

# Equity and Reliability: Do all customers have the same reliability?

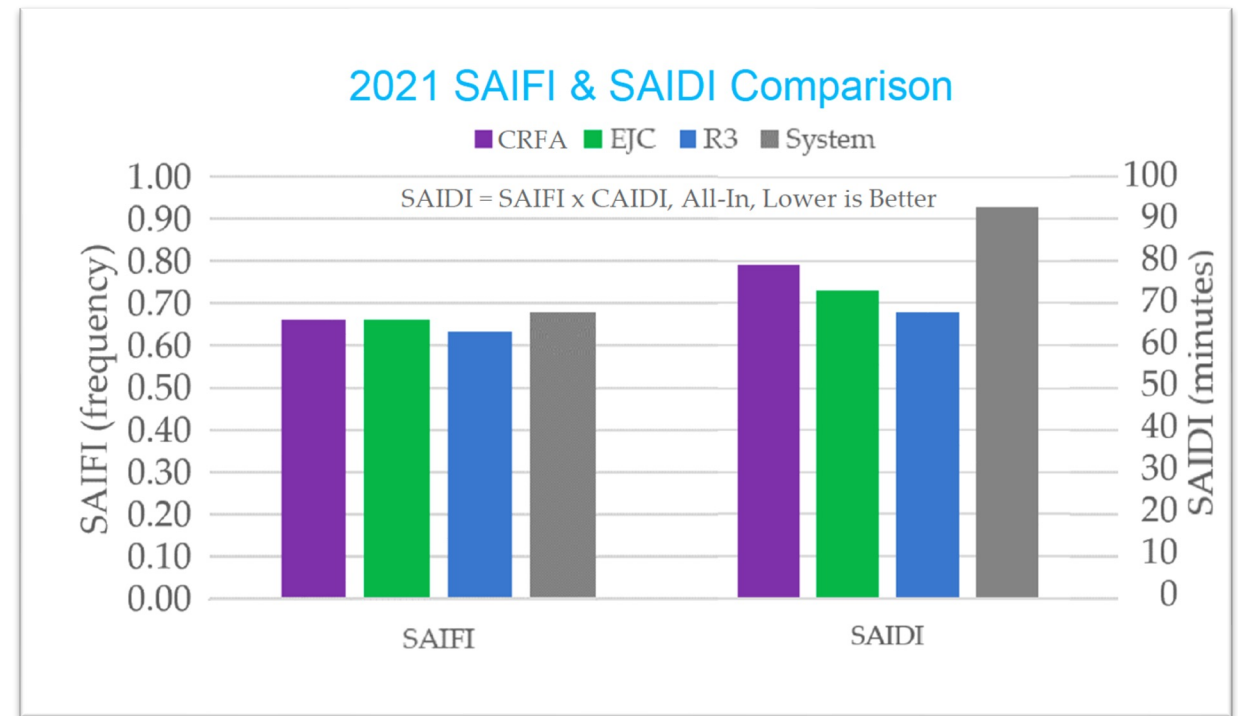
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- Turns out to be a harder question to answer
- Utilities plan around their wires instead of their customers
- Masks problems with customers in different geographies

# Illinois Multi-year Grid Plan

Objectives of PBR include: to “maintain and improve service reliability and safety, including and particularly in environmental justice, low-income and equity investment eligible communities.” (220 ILCS 5/16-108.18(c)(1))

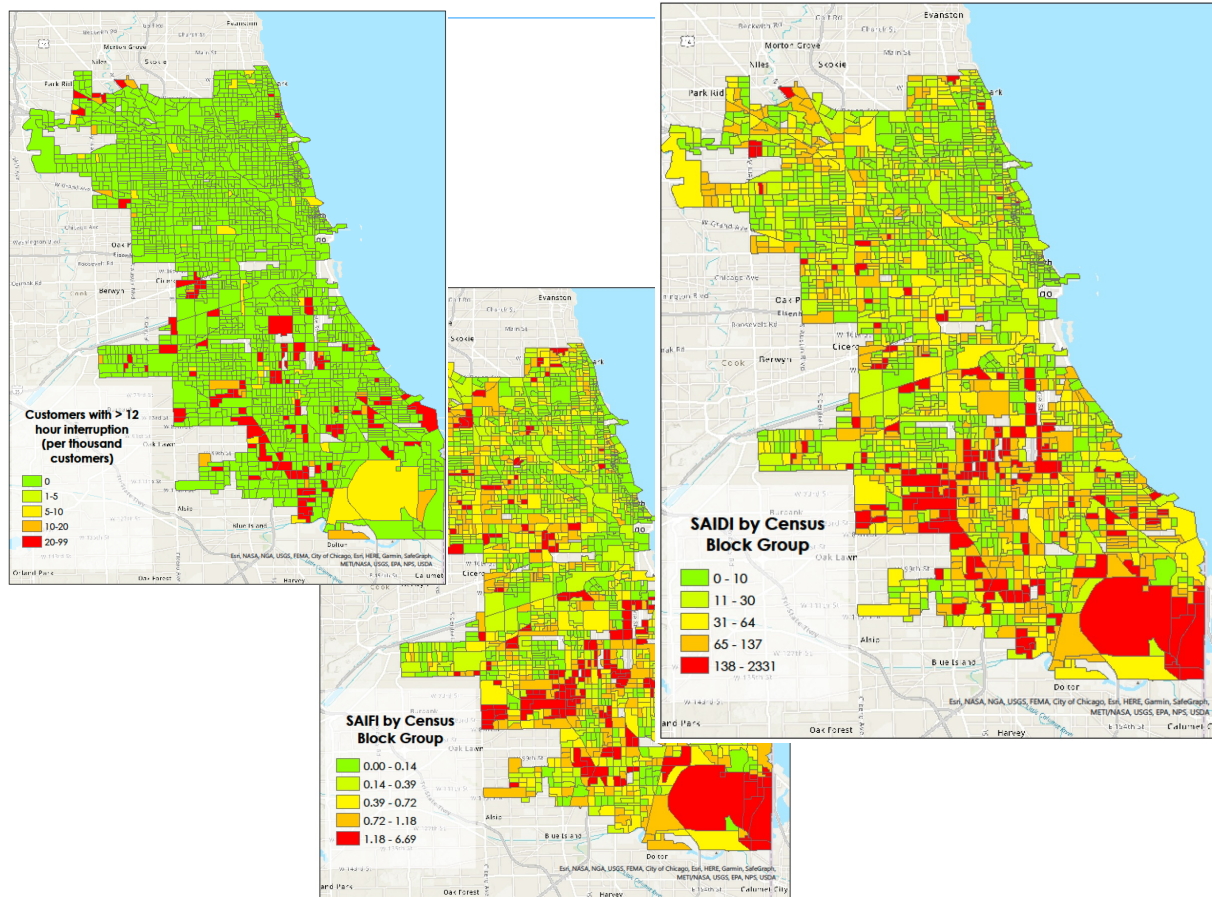
CEJA requirement: “(i) Metrics designed to ensure the utility maintains and improves the high standards of both overall and locational reliability and resiliency, and makes improvements in power quality, including and particularly in environmental justice and equity investment eligible communities.” (200 ILCS 5/16-108.18(e)(2)(A)(i))



System level data showed slightly better system-wide reliability in EJ/R3 communities than systemwide (ComEd Presentation to ICC Grid Planning Workshop, March 15, 2022)



# More Granular Analysis Reveals Familiar Patterns



## Equity Investment Eligible Communities (EEICs) in Chicago

- 83% more frequent outages
- 140% longer outages
- 11.75 times more likely to have 4 or more outages
- 4.26 times more likely to have an outage lasting more than 12 hours



Credit: Presentation by The Accelerate Group, LLC to May 3, 2022 ICC Workshop and Rebuttal Testimony of



# Thank You!

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