



Environmental, Energy, and Climate Justice

James Strange, J.D., Esq.

U.S. Department of Energy, Office of Economic Impact and Diversity

April 26, 2022

Bipartisan Infrastructure Law (BIL)

- A once in a generation investment in our energy, climate, and transportation infrastructure
- BIL has 121 provisions for DOE
- Several provisions for FECM, representing over \$6 billion in investments, and a chance to ensure greater energy justice moving forward.

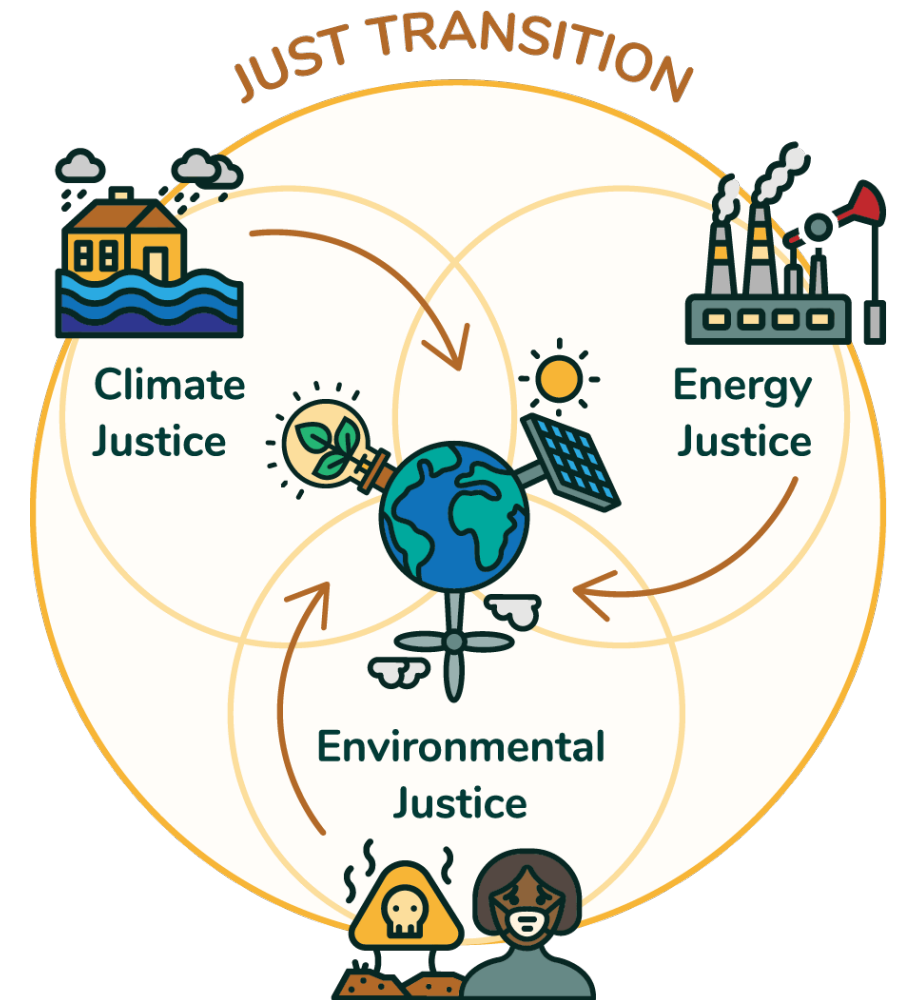
What is Energy Justice?

Seeks **equity** in the **social** and **economic** participation in the energy system

While **remediating** social, economic, and health **burdens** on “frontline communities” explicitly centering their concerns

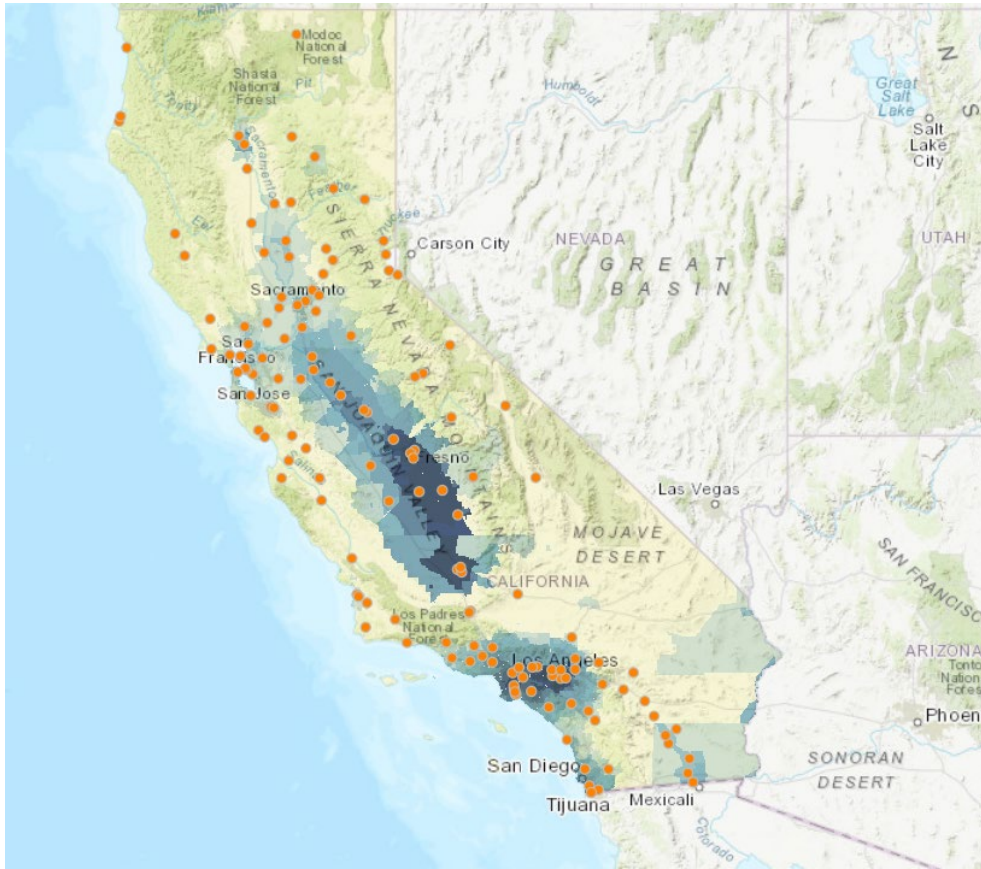
Aims to make energy more **accessible**, **affordable**, **clean**, and **democratically** managed for all communities.

Image Credit: Initiative for Energy Justice [Section 1 - Defining Energy Justice: Connections to Environmental Justice, Climate Justice, and the Just Transition - Initiative for Energy Justice \(iejusa.org\)](#)

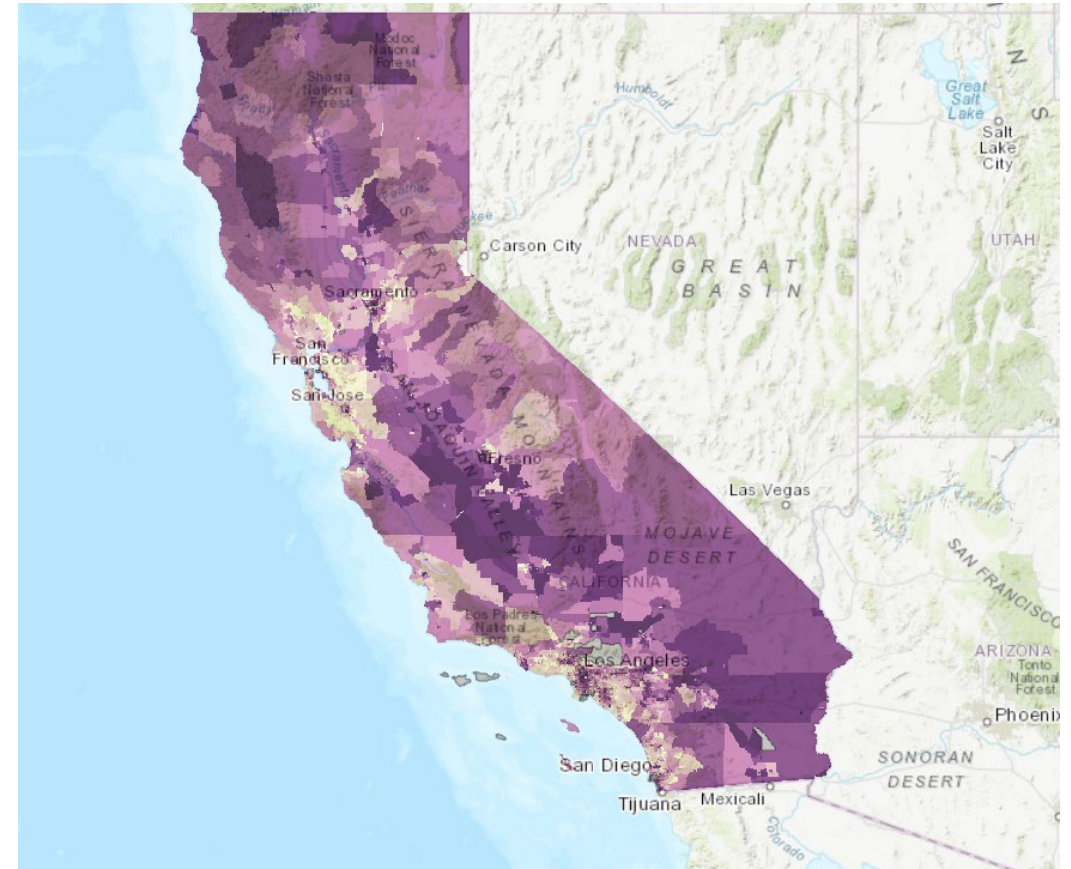


Why Energy Justice?

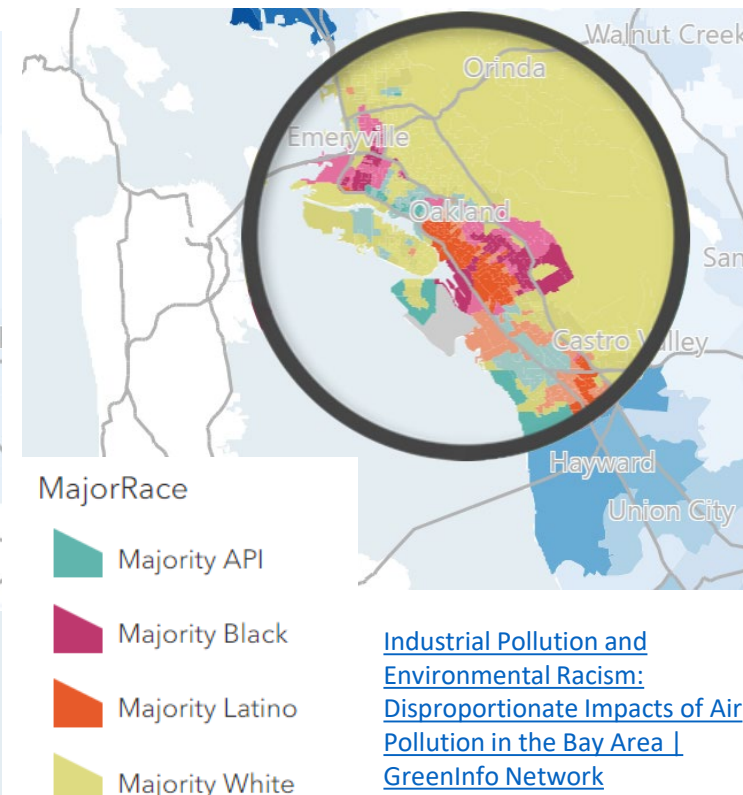
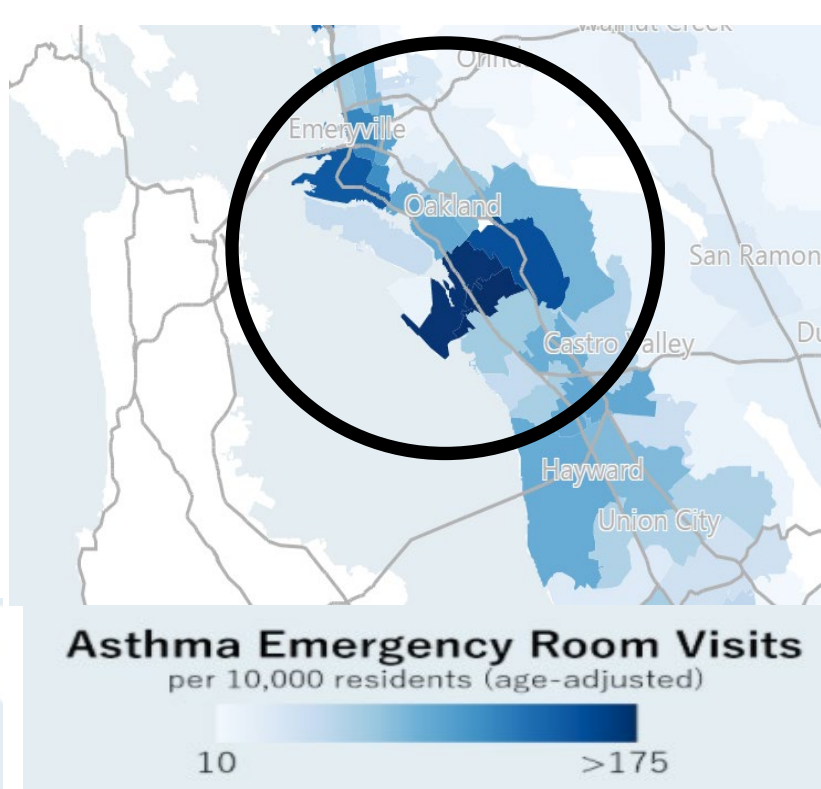
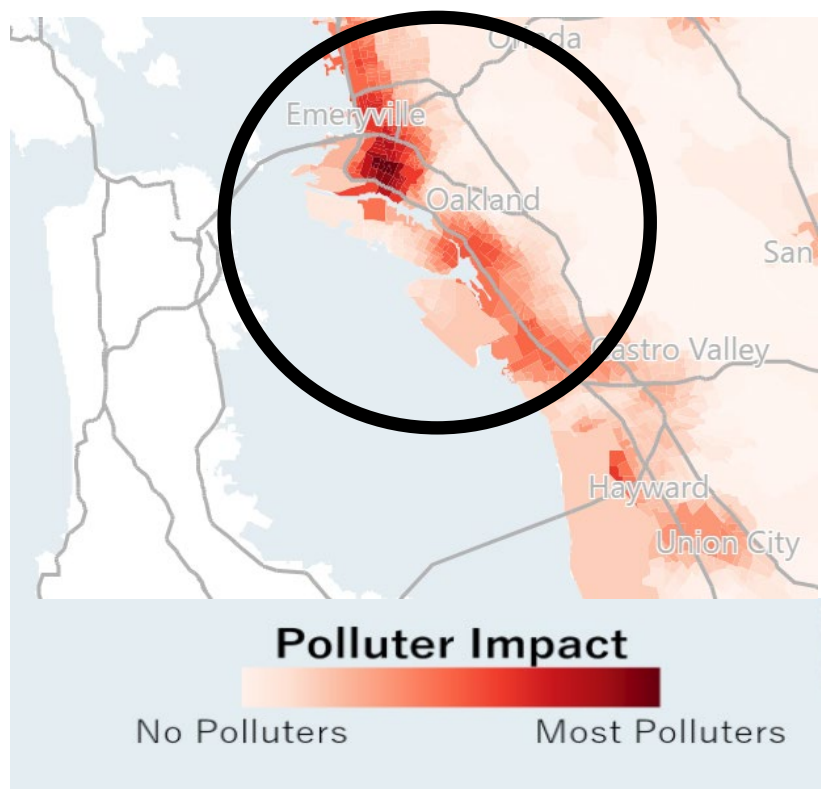
Density of PM2.5 Particles



California Poverty Rates



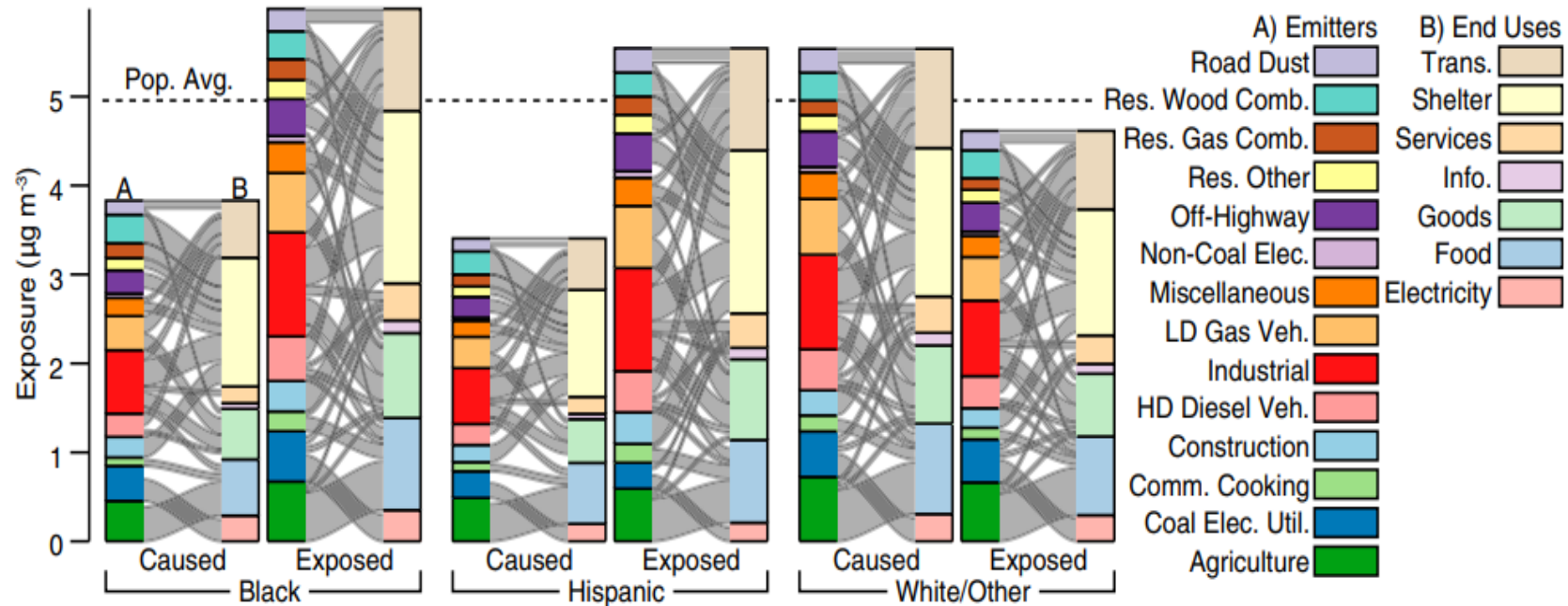
A legacy of mining, energy drilling, and pollution



Communities near power plants and energy infrastructure are subjected to toxic pollutants that contribute to high rates of asthma, cancer, heart disease

Environmental Exposure by Race

"Fine particulate matter (PM2.5) air pollution exposure is the largest environmental health risk factor in the United States... PM2.5 exposure is disproportionately caused by consumption of goods and services mainly by the non-Hispanic white majority, but disproportionately inhaled by Black and Hispanic minorities."



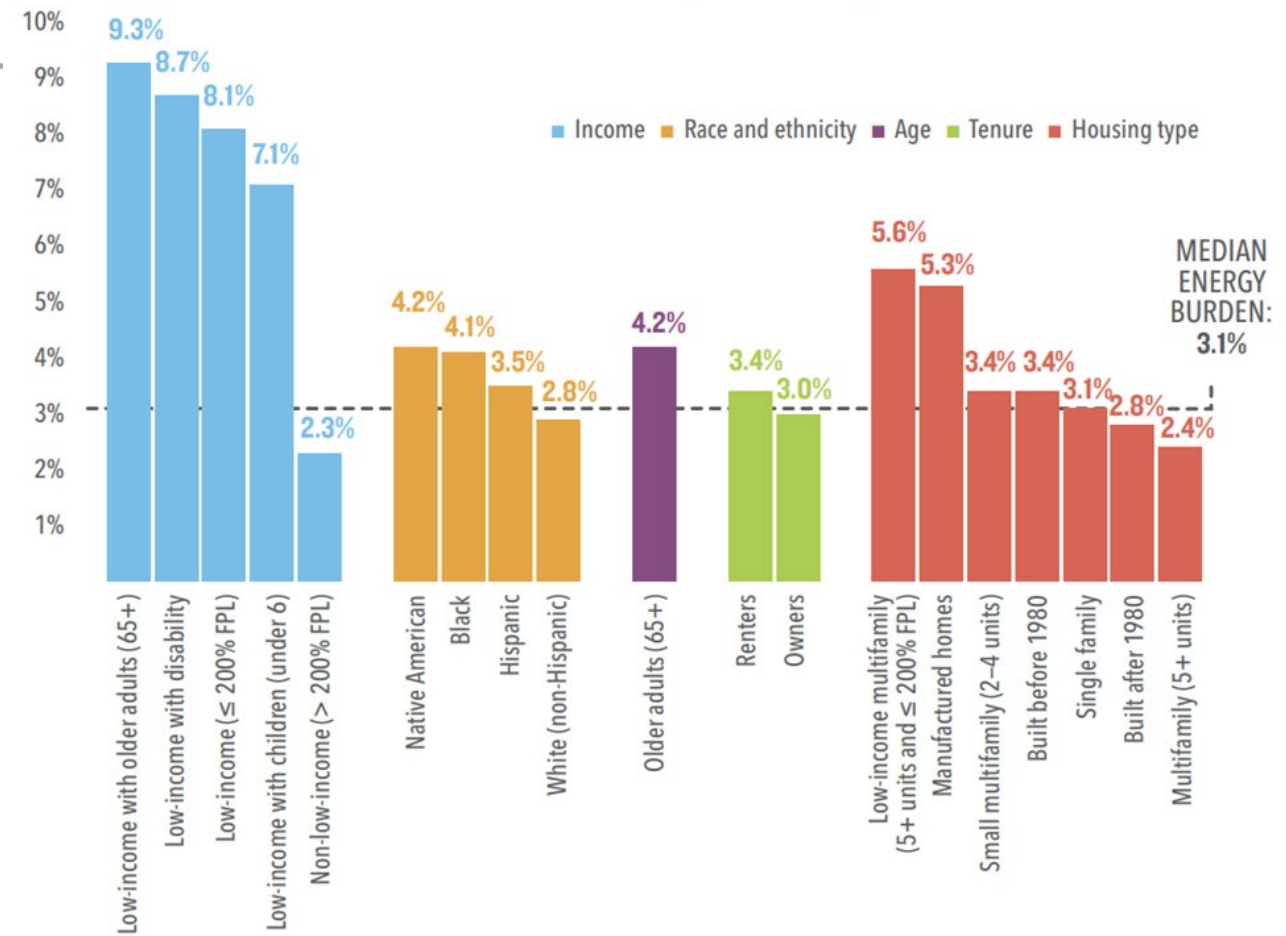
Source: Christopher W. Tessum, et al. "Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure." *Proceedings of the National Academy of Sciences* (March 2019).

Energy Burden

“Low-income households spend three times more of their income on energy costs compared to the median spending of non-low-income households”

"The median energy burden for Black households is 43% higher than for non-Hispanic white households, and the median energy burden for Hispanic households is 20% higher than that for non-Hispanic white households"




FIGURE ES1. National energy burdens across subgroups (i.e., income, race and ethnicity, age, tenure, and housing type) compared to the national median energy burden






Source: Ariel Dreihobl, et al. "How High Are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burden across the United States." American Council for an Energy-Efficient Economy (September 2020).

Climate Impacts

"Of the four socially vulnerable groups examined, minorities are most likely to currently live in areas where the analyses project the highest levels of climate change impacts with 2°C of global warming or 50 cm of global sea level rise."

-  **AIR QUALITY AND HEALTH***
New asthma diagnoses in children due to particulate air pollution.
-  **EXTREME TEMPERATURE AND HEALTH**
Deaths due to extreme temperatures.
-  **EXTREME TEMPERATURE AND LABOR**
Lost labor hours for weather-exposed workers.

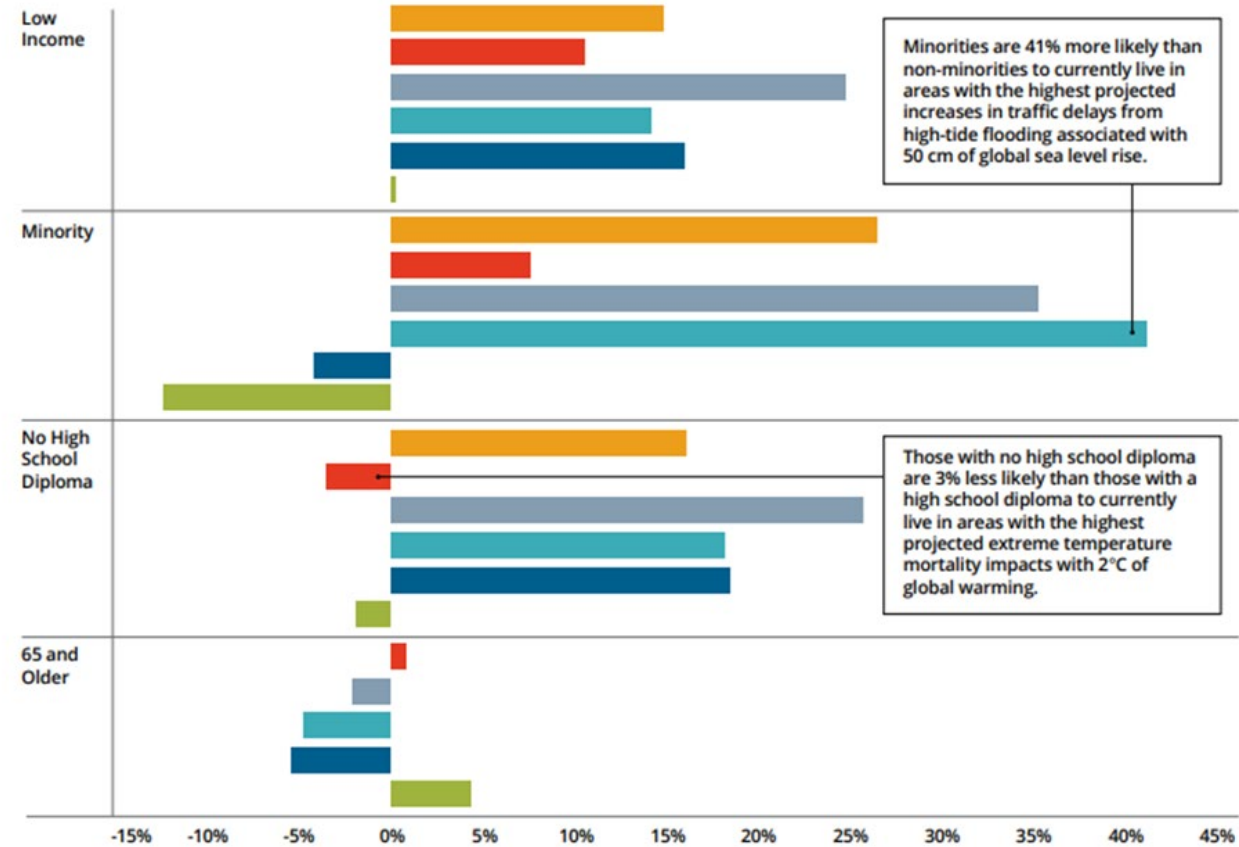
*Impacts not estimated for 65 and Older.

-  **COASTAL FLOODING AND TRAFFIC**
Traffic delays from high-tide flooding.
-  **COASTAL FLOODING AND PROPERTY**
Property inundation due to sea level rise.
-  **INLAND FLOODING AND PROPERTY**
Property damage or loss due to inland flooding.

Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts

Figure ES.2 – Differences in Risks to Socially Vulnerable Groups Relative to Reference Populations with 2°C of Global Warming or 50 cm of Global Sea Level Rise

The estimated risks for each socially vulnerable group are relative to each group's "reference" population, defined as all individuals other than those in the group being analyzed. The estimated risks presented in the chart are for scenarios with 2°C of global warming (relative to the 1986-2005 average) or 50 cm of global sea level rise (relative to 2000). For the inland flooding analysis, the baseline is 2001-2020. Results for additional scenarios are provided in the following chapters and appendices.

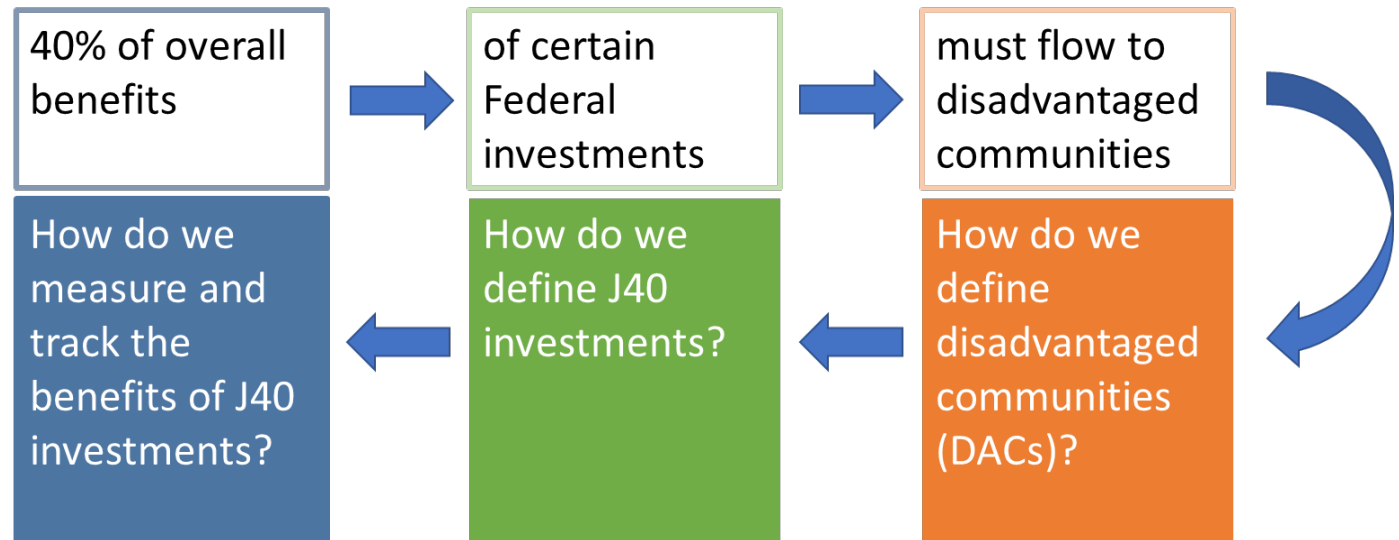


[Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts \(epa.gov\)](https://www.epa.gov/climate-change-and-social-vulnerability-in-the-united-states-a-focus-on-six-impacts)

Justice40 Initiative

Executive Order 14008, *On Tackling the Climate Crisis at Home and Abroad*, Federal Government intends to address current and historic environmental injustice

E.O. establishes a goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities



What is Covered in Justice40?

Covered Program

- ✓ Climate change
- ✓ Clean energy and energy efficiency
- ✓ Clean transportation
- ✓ Affordable and sustainable housing
- ✓ Training and workforce development (related to climate, natural disasters, environment, clean energy, clean transportation, housing, water and wastewater infrastructure, and legacy pollution reduction, including in energy communities)
- ✓ Remediation and reduction of legacy pollution
- ✓ Critical clean water and waste infrastructure

Covered Investment

- ✓ Federal grants and procurement spending (including discretionary budget authority, direct/mandatory spending, and formula funding)
- ✓ Financing (including credit, loans, and guarantees)
- ✓ Programmatic Federal staffing costs (e.g. federal pay for staff that provide technical assistance)
- ✓ Direct financial benefits (including provision of goods and services)
- ✓ Additional federal investments under covered programs as determined by OMB

DOE Interim Disadvantaged Community Definition

Disadvantaged communities

Current Thoughts:

- Census Tract Level
- 36 Indicators

VULNERABILITY

FOSSIL DEPENDENCE

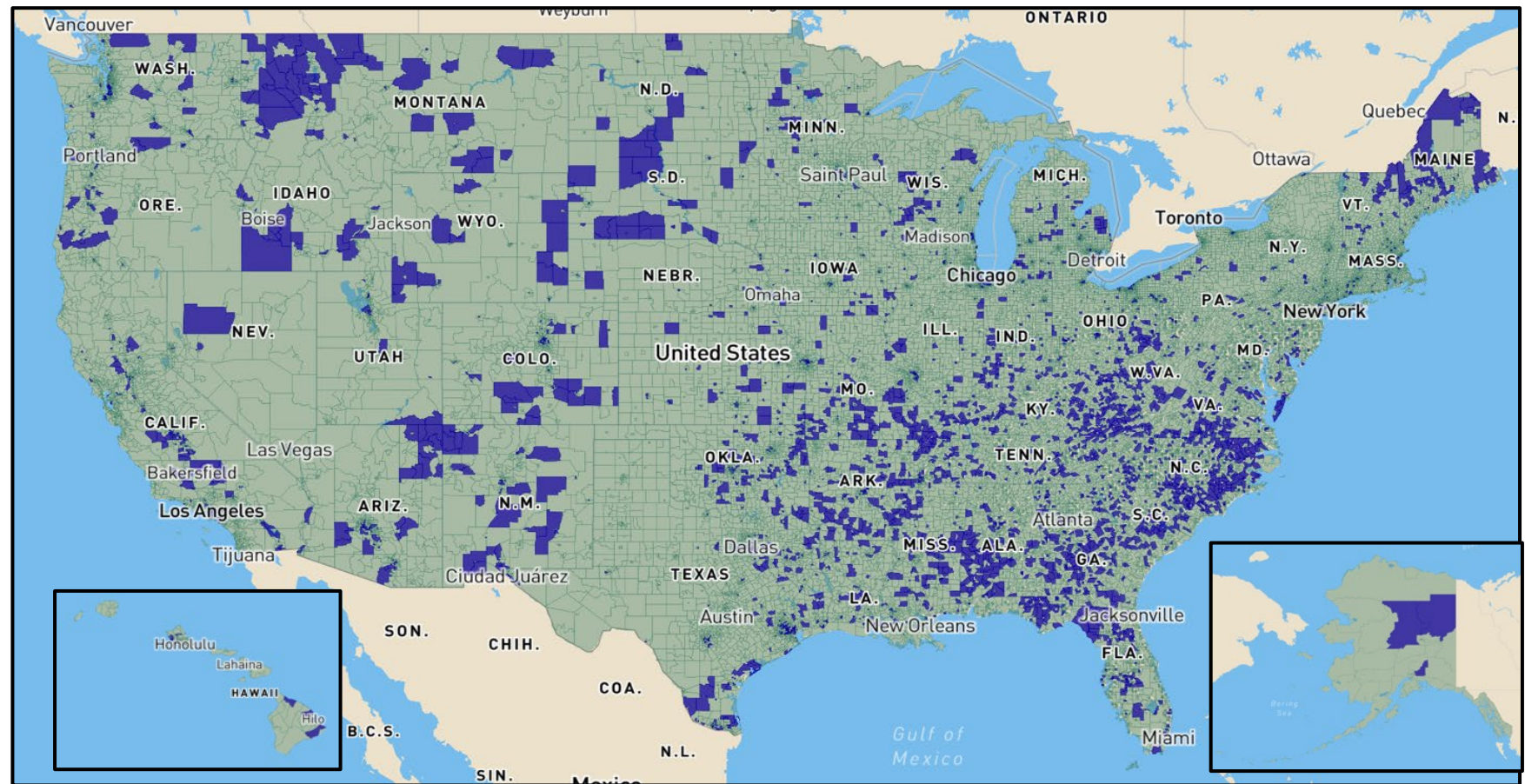
ENERGY BURDEN

ENVIRONMENTAL HAZARDS

Can also identify non-geographic DACs – groups that share a common characteristic

Distribution of census tracts identified as geographic DACs

■ DAC



DOE Justice40 Benefits and Policy Priorities

- Benefits are a broad category that vary by program and can be defined as measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in DACs:
- 1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in the clean energy job pipeline and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or diverse business enterprises) in DACs; (6) increases in clean energy jobs, job pipeline, and job training for individuals in DACs; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience.

Justice and Engagement in FECM

- Advancing Justice, Labor, and Engagement is one of three priority directions in the new FECM Strategic Vision
- Justice, equity, and labor requirements will be included in funding opportunities
- Request for Information provided initial opportunity to gather input on these priorities

Question to consider...

- Have you identified disadvantaged communities (DACs) that anticipated benefits can flow to?
- What possible or anticipated *negative* impacts could flow to DACs
- How will you engage the community before project initiation, during the Project, and after the Project is complete?
- If an R&D project, how do DACs factor into the data, analyses, and conclusions?

More Information

- FECM Strategic Vision: [Strategic Vision: The Role of FECM in Achieving Net-Zero Greenhouse Gas Emissions | Department of Energy](#)
- Council on Environmental Quality Carbon Capture, Utilization, and Sequestration Guidance: [Federal Register :: Carbon Capture, Utilization, and Sequestration Guidance](#)
- Council on Environmental Quality Report to Congress on Carbon Capture, Utilization, and Sequestration: [CEQ-CCUS-Permitting-Report.pdf \(whitehouse.gov\)](#)
- [Justice40 Initiative | Department of Energy](#)