# EWR Low Income Workgroup

June 2, 2022

MPSC

Michigan Public Service Commission

# Agenda

Welcome and Introdctions
Brad Banks, MPSC

DTE and Consumers Energy Low-Income Needs Assessment Findings
Jeana Swedenburg
Cadmus

Environmental Justice and Equity in Electrification
Andrea Salazar
Michaels Energy

My Next Electric!
Resdiential Electrification Education
William Gallmeyer
Green Projects Group
Matt Candler,
Founder, My Next Electric!

Wrap Up and Adjourn

# DTE Energy and Consumers Energ Income Needs Assessment

REVISED DRAFT

June 2022

# OVERVIEW

Approach and Assumptions

Service Territory

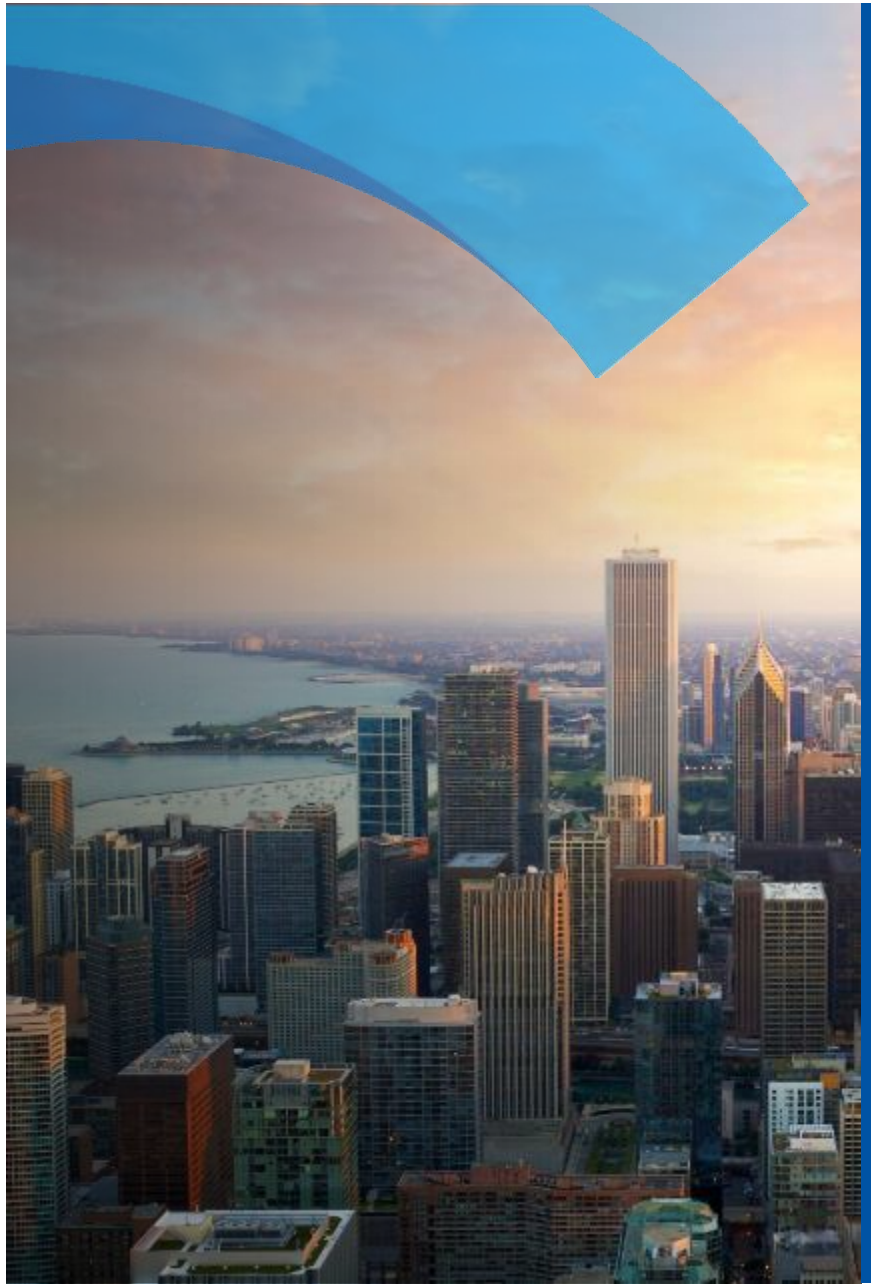
Participation Gaps

Characterization

Prioritization Scenarios

Intent of Use & Questions

# APPROACH & ASSUMPTIONS



# Study Objectives

Map historical participation

Identify gaps in coverage

Characterize eligible communities

Develop prioritization scenarios

# APPROACH AND ASSUMPTIONS

| | |
|---|---|
| **Data Sources** | • Historical participation data provided by Consumers Energy and DTE Energy<br>• Territory shapefiles provided by the utilities<br>• Census Bureau ACS and PUMS data on income, demographics, energy burden (PUMS only) |
| **Income Eligibility** | • 200% of federal poverty level guideline (FPL) |
| **Study Coverage** | • All DTE Energy and Consumers Energy income-qualified single-family and multi-family programs were included in the analysis<br>• Geographies: Census Tracts, Public Use Microdata Areas (PUMAs)<br>• Metrics: # not served, % not served, composite need score |

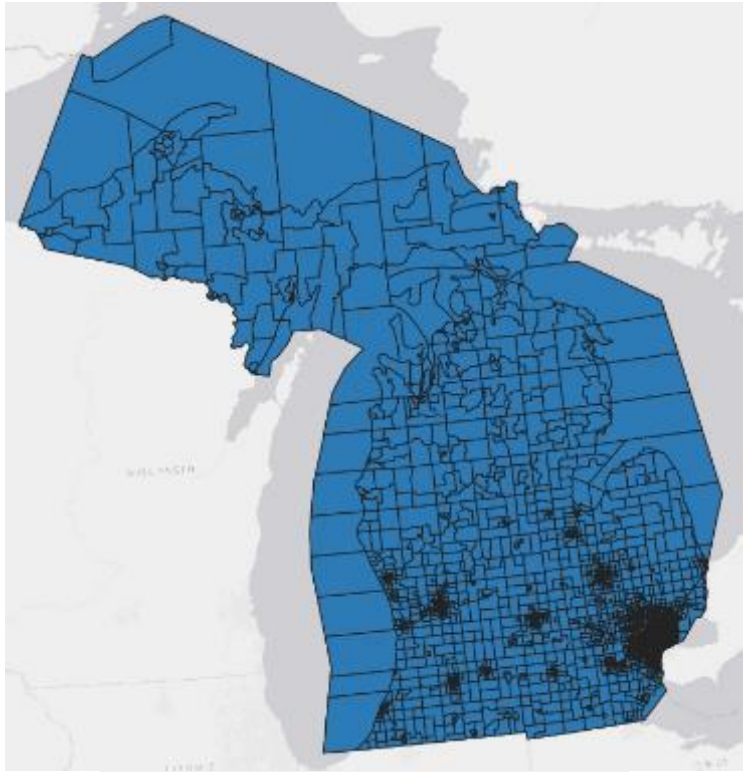
# DATA OVERVIEW

| Program | Years | Total |
|---|---|---|
| **DTE Energy** | | |
| Income-Qualified Single-Family Programs | 2009-2021 | 83,725 |
| Income-Qualified Multi-Family Programs* | 2009-2011, 2018-2021 | 886 |
| **Consumers Energy** | | |
| Income-Qualified Single-Family Programs | 2010-2020 | 135,212 |
| Income-Qualified Multi-Family Programs* | 2016-2020 | 953 |

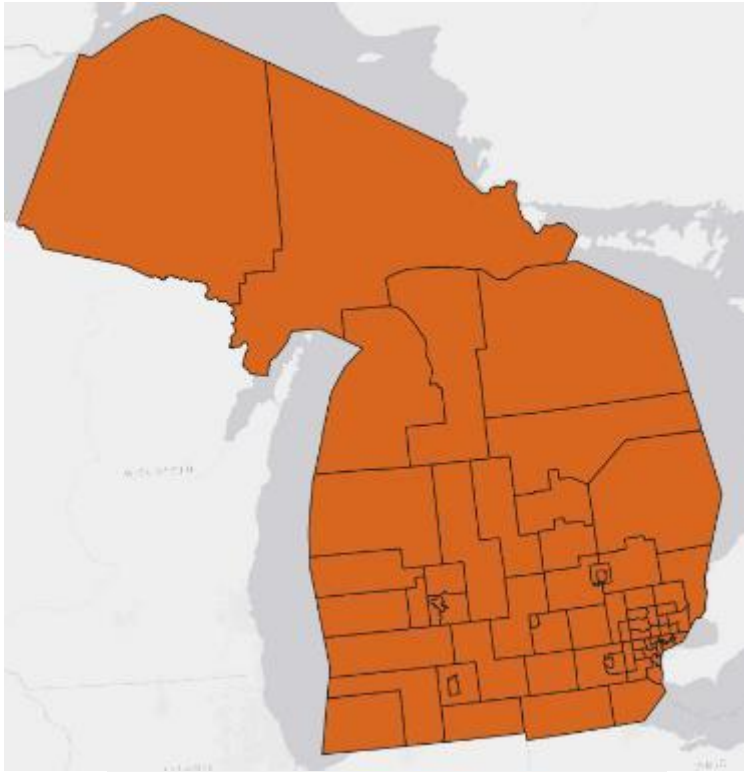
*Multi-family project data is provided at the building level; underrepresenting the full count of units served in each geolocation.

# CENSUS BUREAU GEOGRAPHIES

| Geography | Average Households per Geography | Geographies in DTE Energy Service Territory | Geographies in Consumers Energy Service Territory |
|---|---|---|---|
| Census Tract | 1,400 | 1,948 | 1,931 |
| PUMA | 57,000 | 55 | 56 |



**Census Tract**



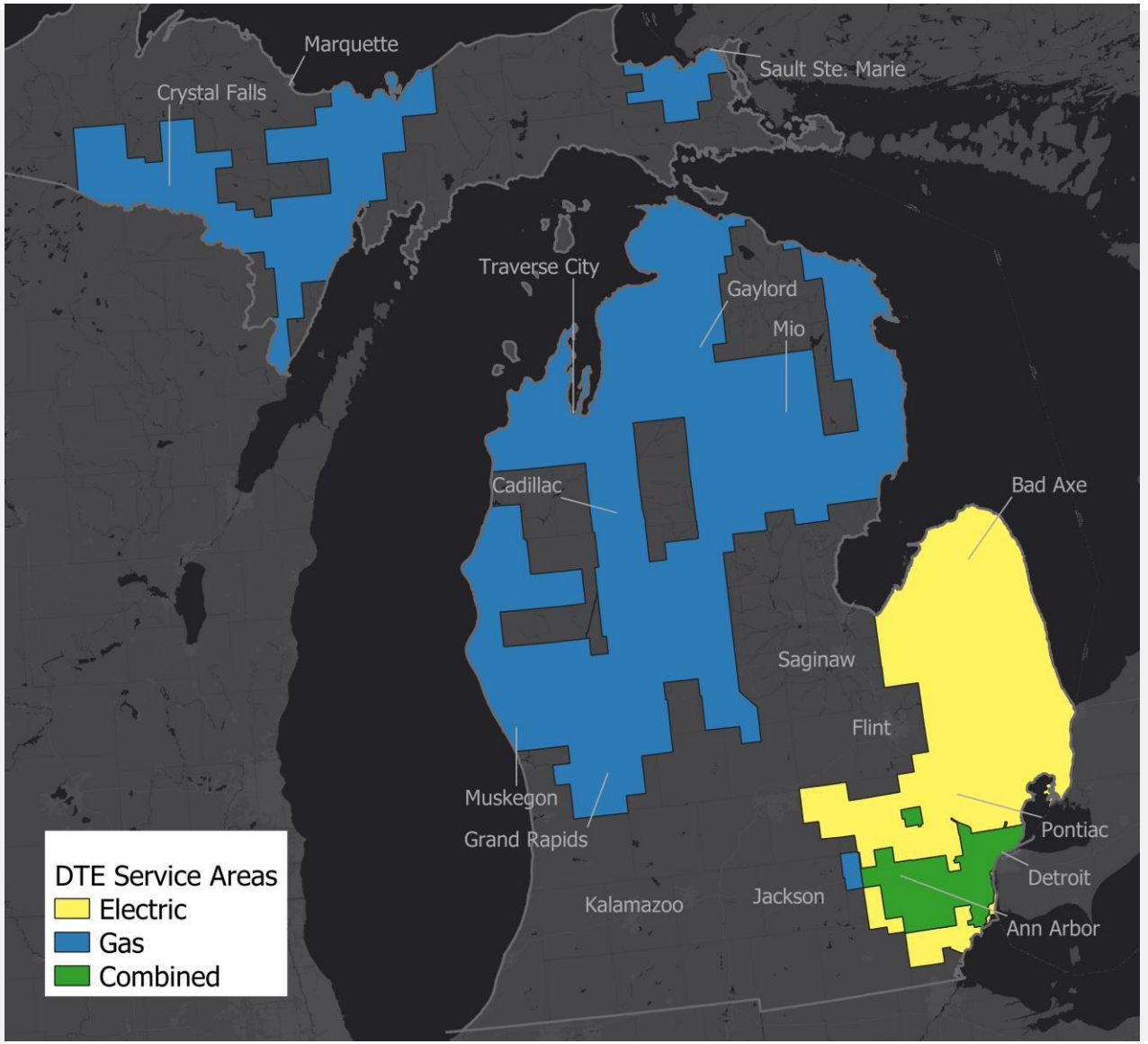
**PUMA**

# METRICS

| Metric | Areas Identified | Used to Assess |
|---|---|---|
| Count<br>(of eligible, unserved households) | Largest number of potential participants not yet served | - Efficiency<br><br>- Potential for targeted delivery<br><br>- Magnitude |
| Percentage<br>(of eligible, unserved households) | Low historical participation relative to eligible population | - Equity<br><br>-Potential for targeting regions with relatively lower historical delivery |

# SERVICE TERRITORY

# DTE ENERGY SERVICE TERRITORY



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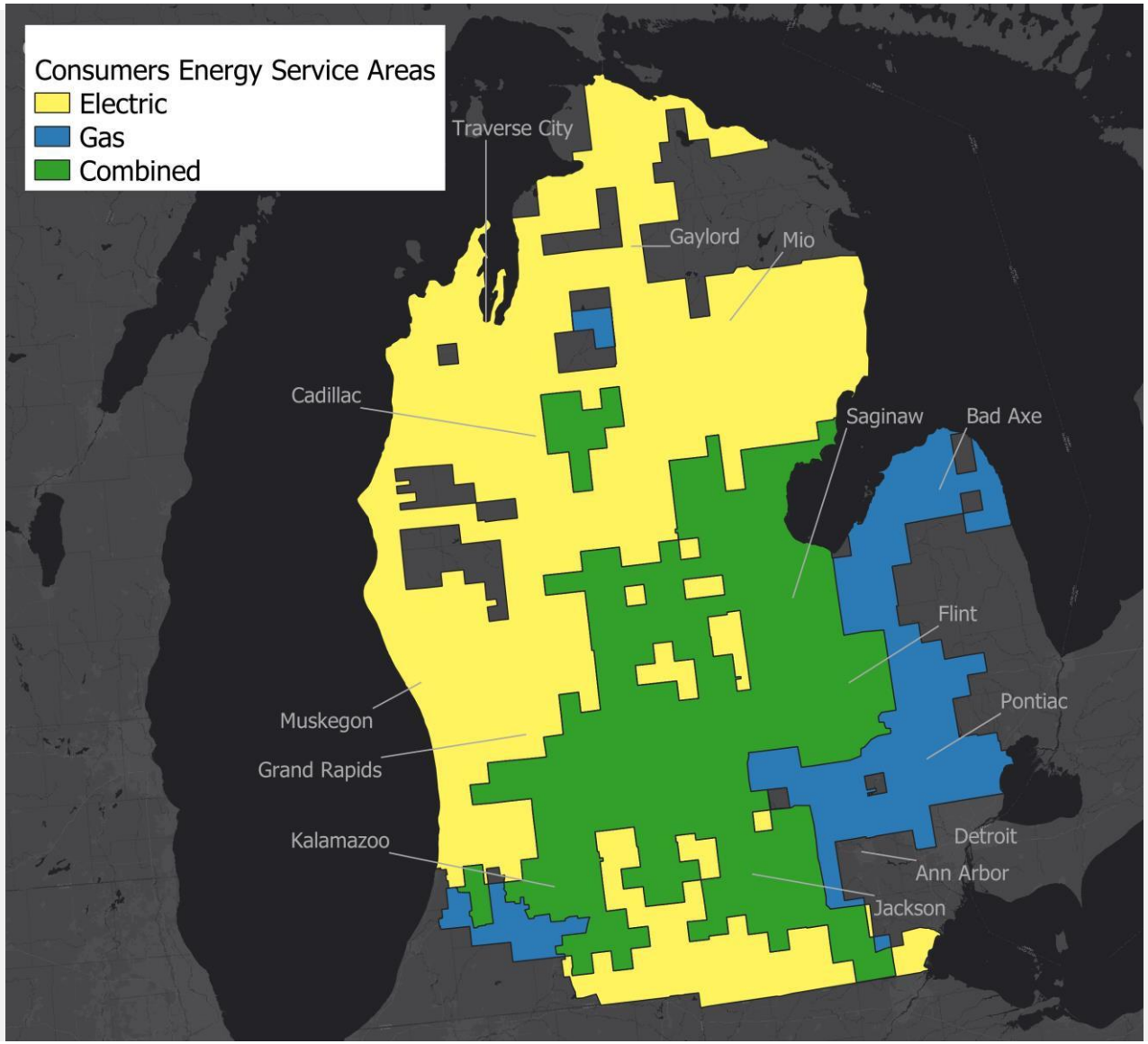
# CONSUMERS ENERGY SERVICE TERRITORY



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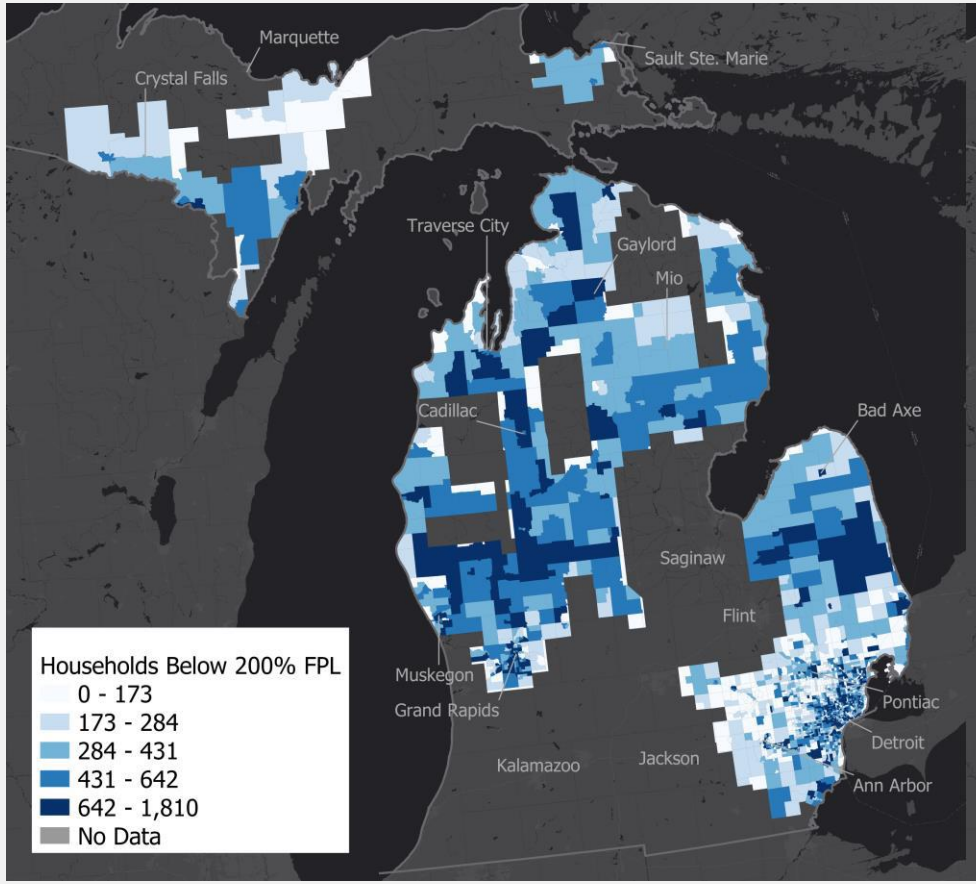
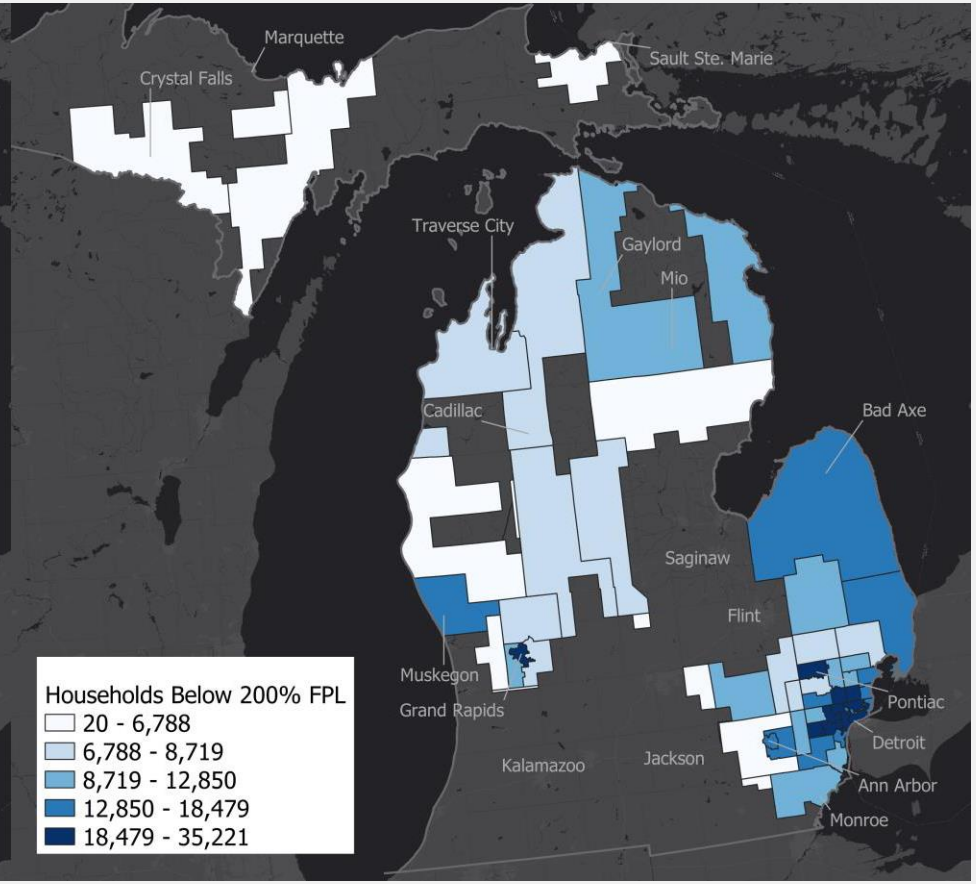
# GAP ANALYSIS:
## ELIGIBLE HOUSEHOLDS (< 200% FPL)
## VS.
## HISTORICAL PARTICIPATION

# DTE ENERGY ELIGIBLE HOUSEHOLDS

## Census Tract




## PUMA




Breaks: Quantiles



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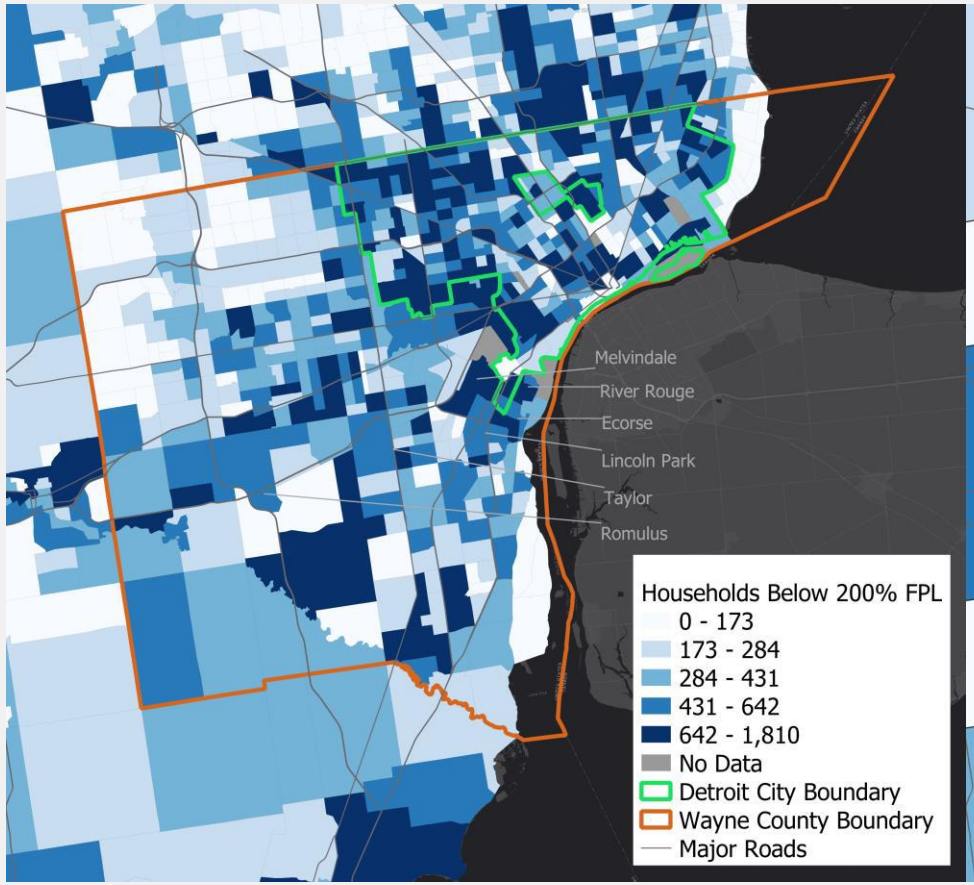
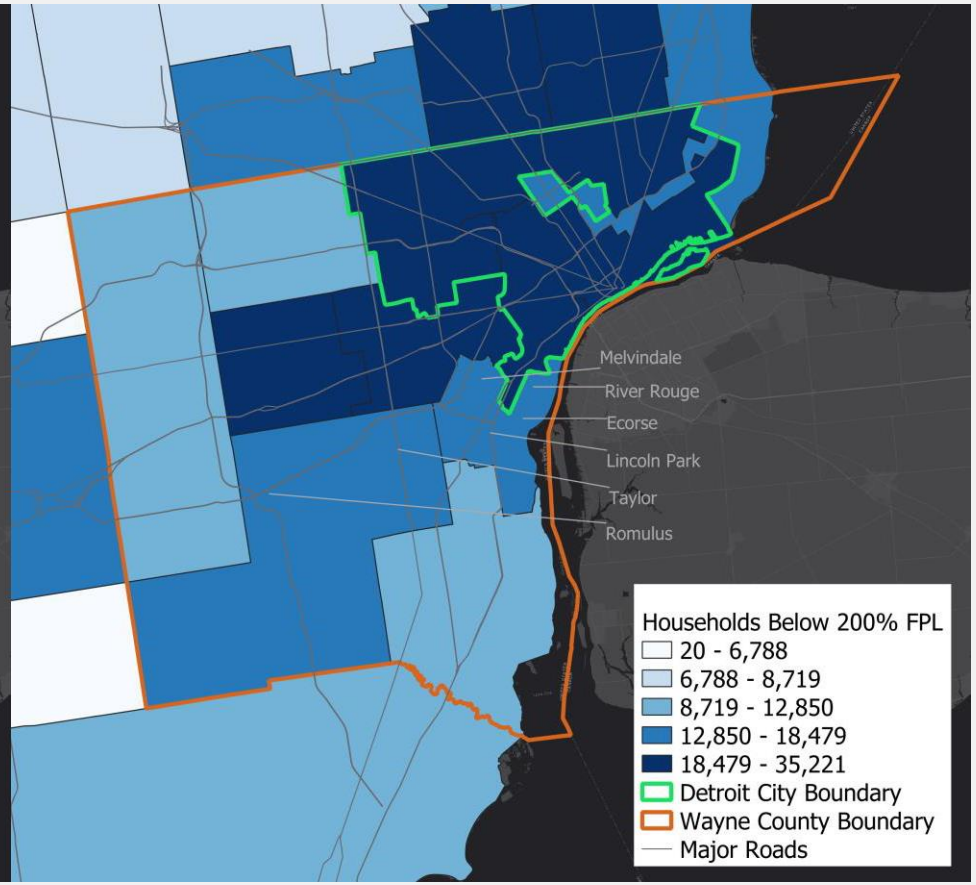
# DTE ENERGY ELIGIBLE HOUSEHOLDS: WAYNE COUNTY

**Census Tract**




**PUMA**

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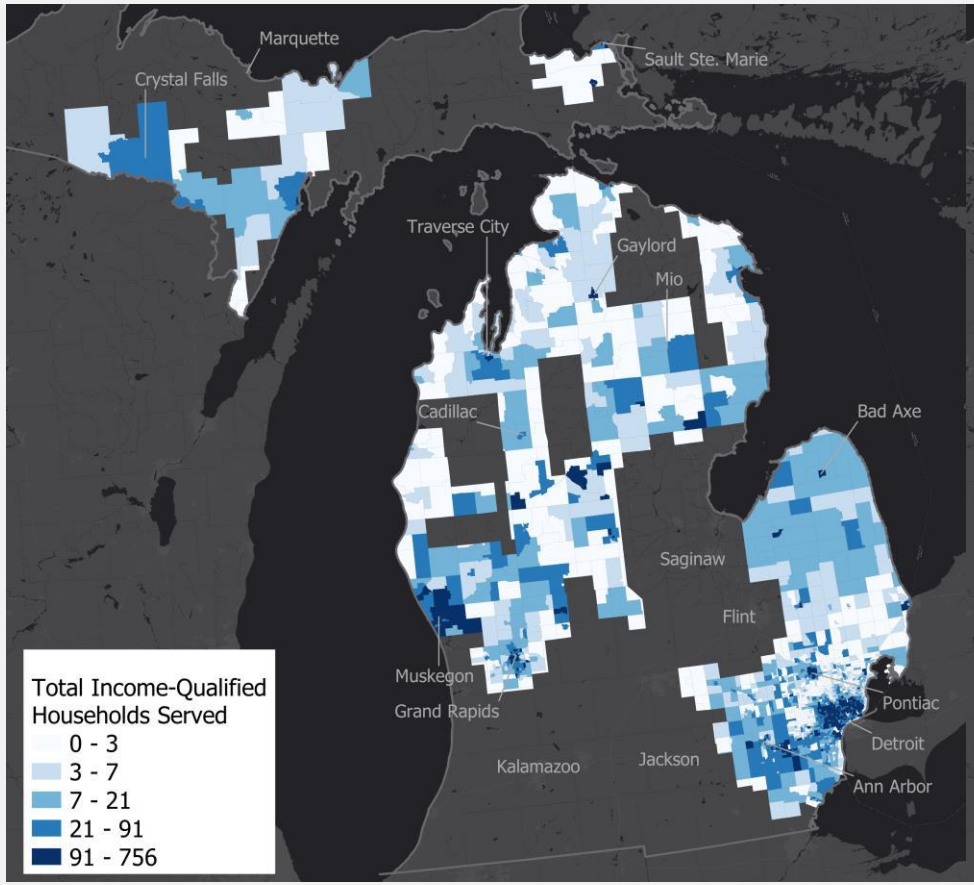
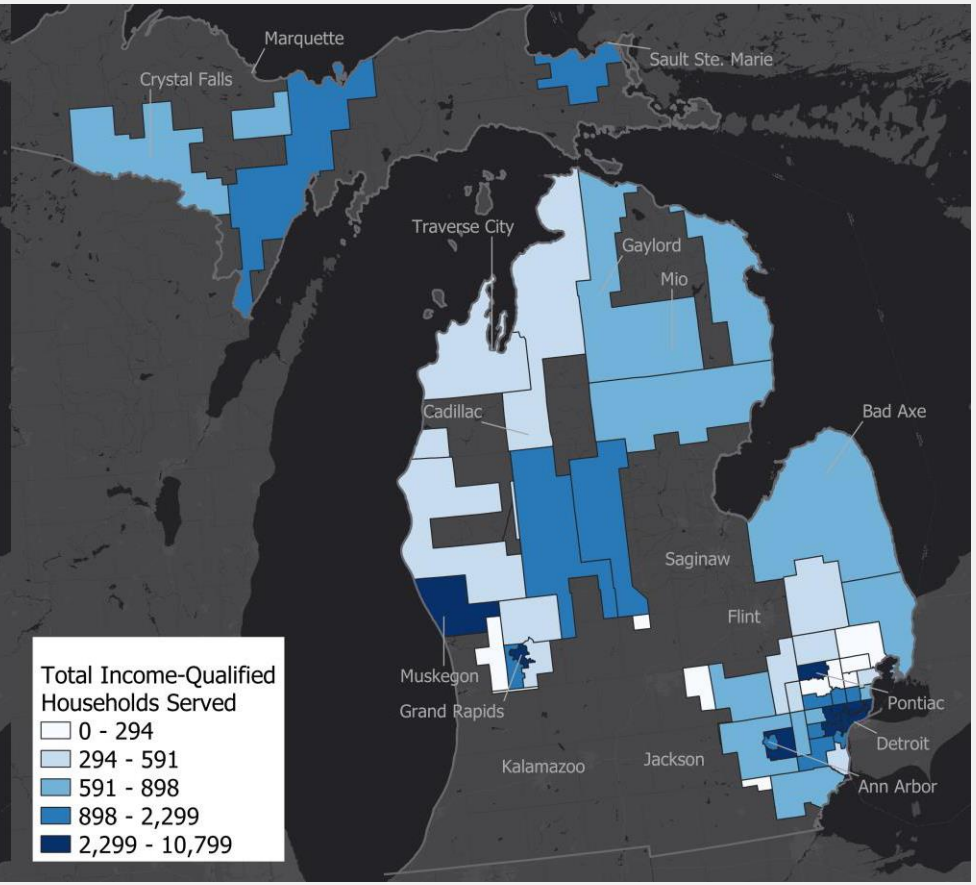
# DTE ENERGY HISTORICAL PARTICIPATION: IQ PROGRAMS

## Census Tract




## PUMA




Breaks: Quantiles



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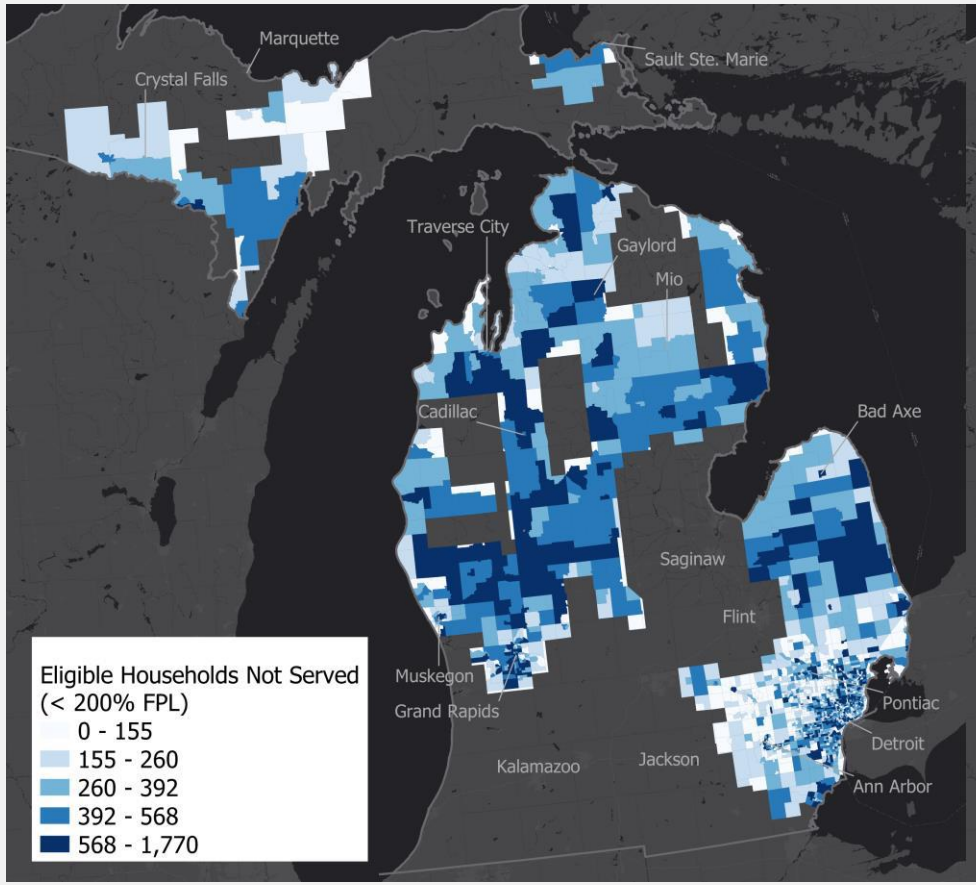
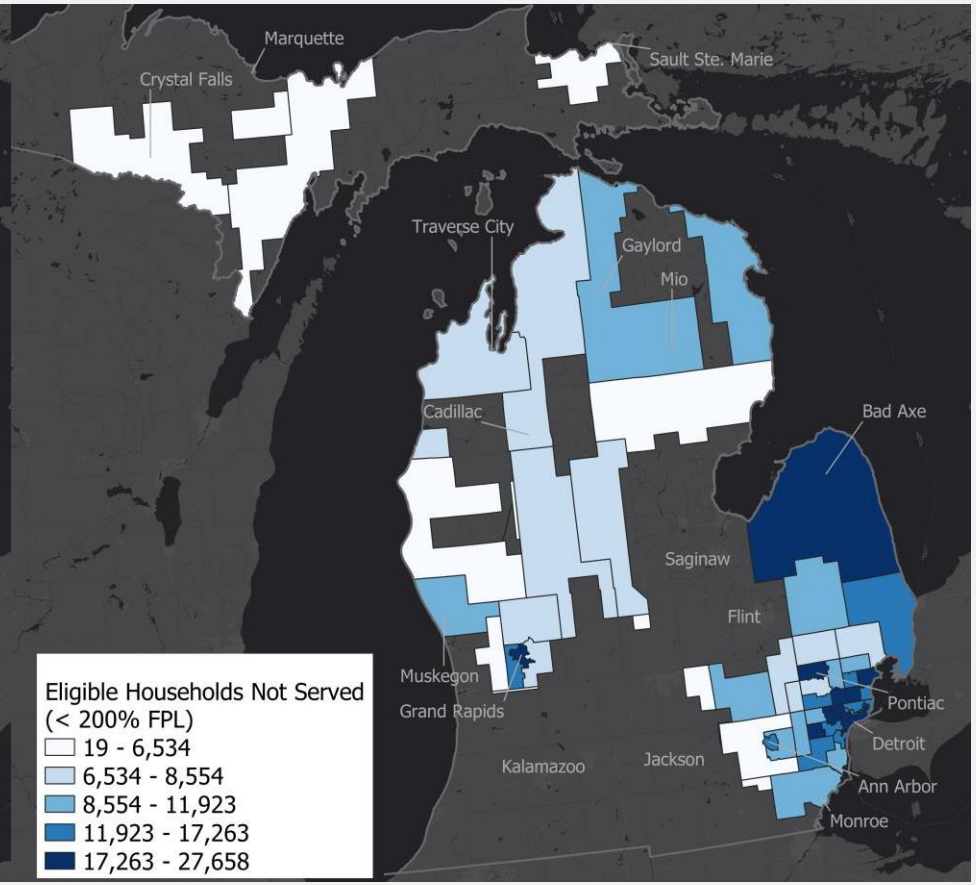
# DTE ENERGY GAP ANALYSIS: # UNSERVED HOUSEHOLDS

**Census Tract**




**PUMA**

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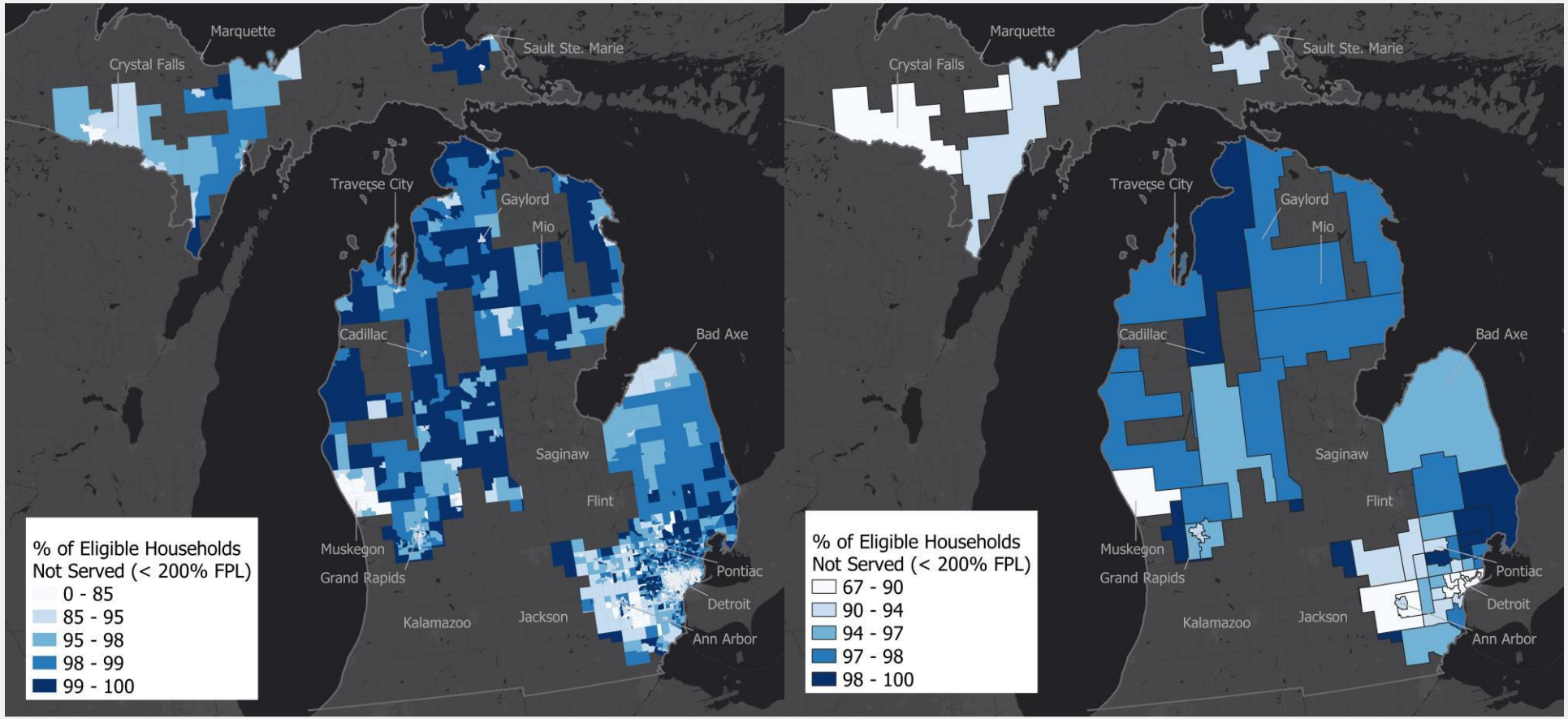
# DTE ENERGY GAP ANALYSIS: % UNSERVED HOUSEHOLDS

**Census Tract** | **PUMA**




Breaks: Quantiles



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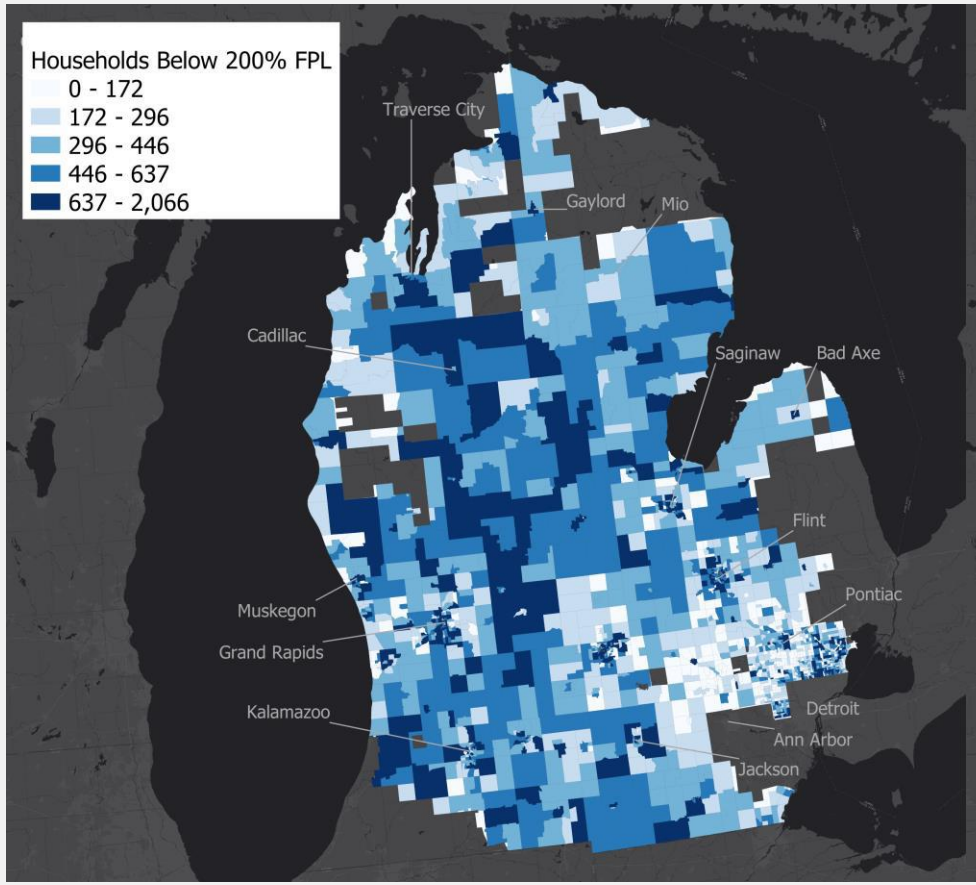
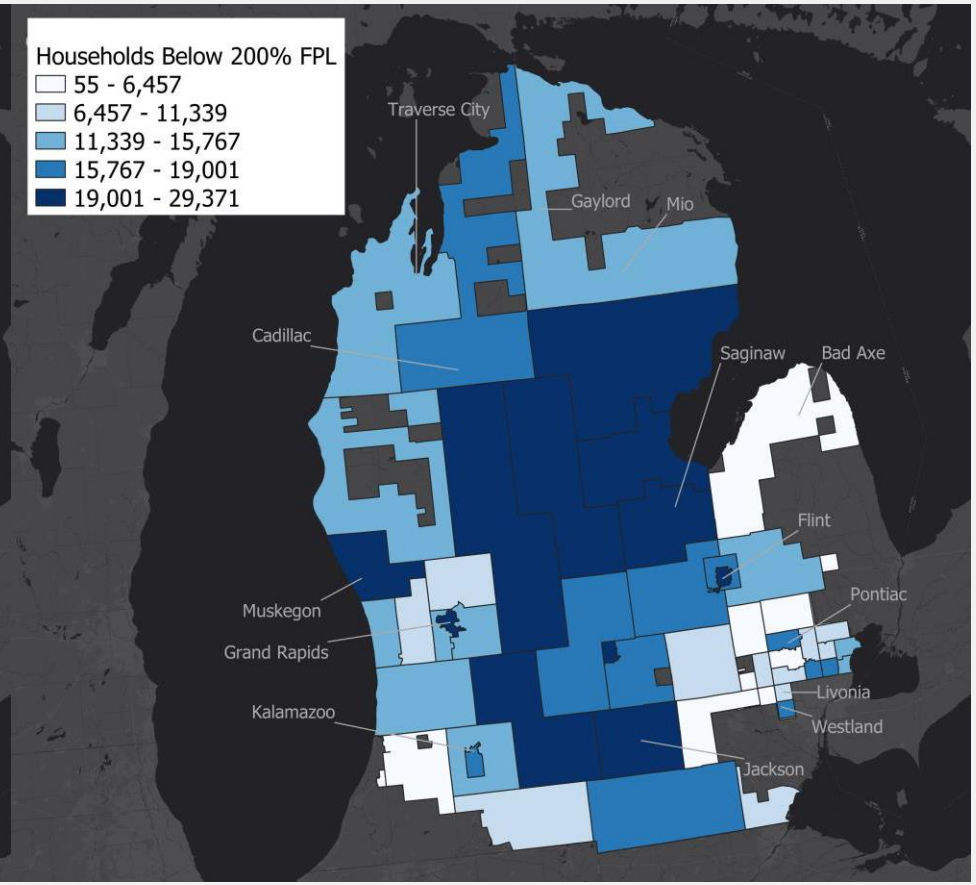
# CONSUMERS ENERGY
# ELIGIBLE HOUSEHOLDS

## Census Tract




## PUMA




Breaks: Quantiles



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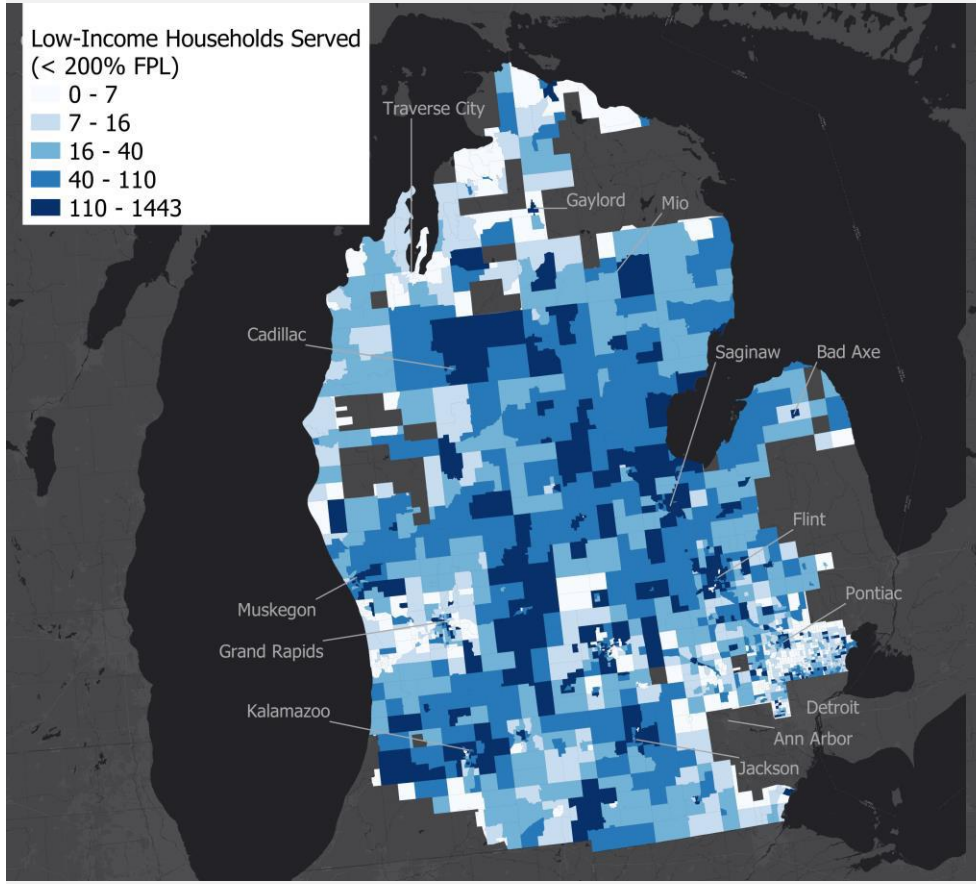
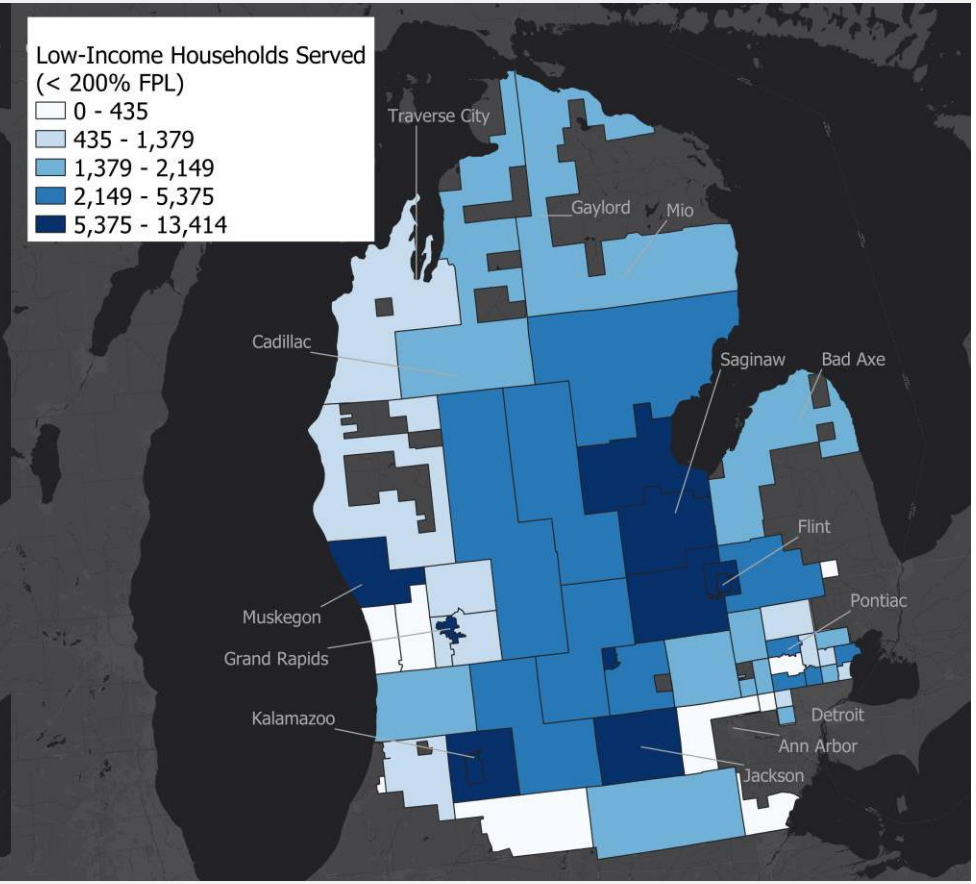
# CONSUMERS ENERGY HISTORICAL PARTICIPATION: IQ PROGRAMS

## Census Tract




## PUMA




Breaks: Quantiles



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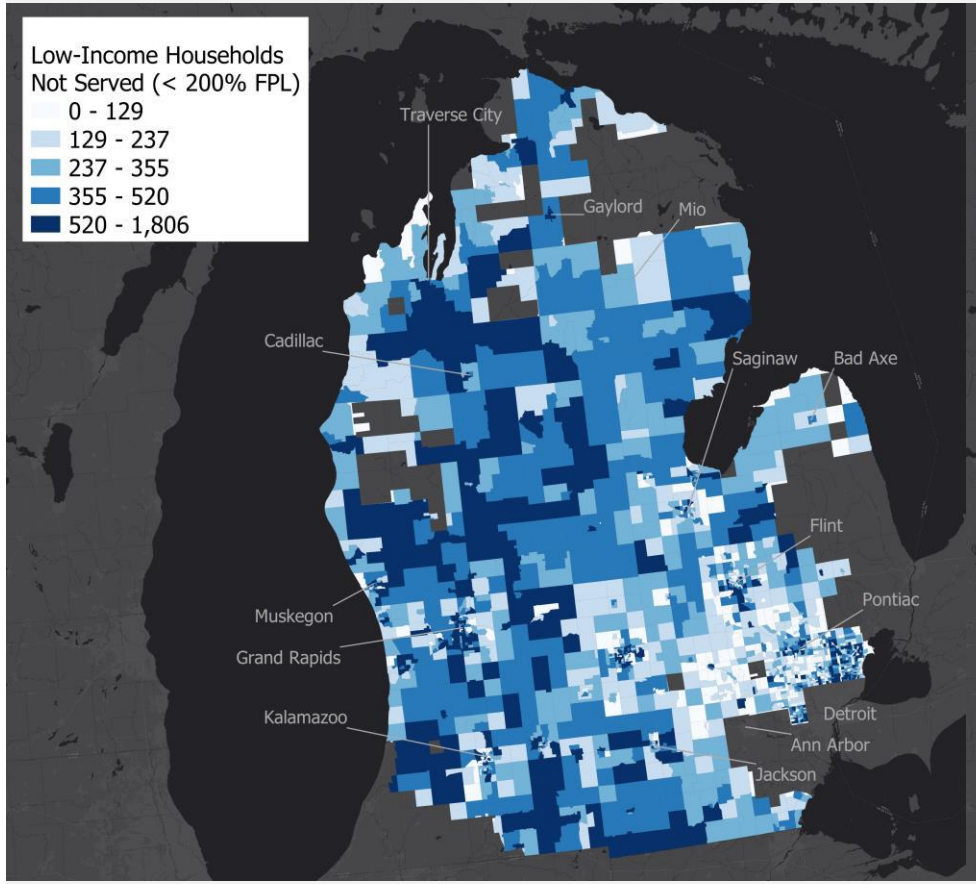
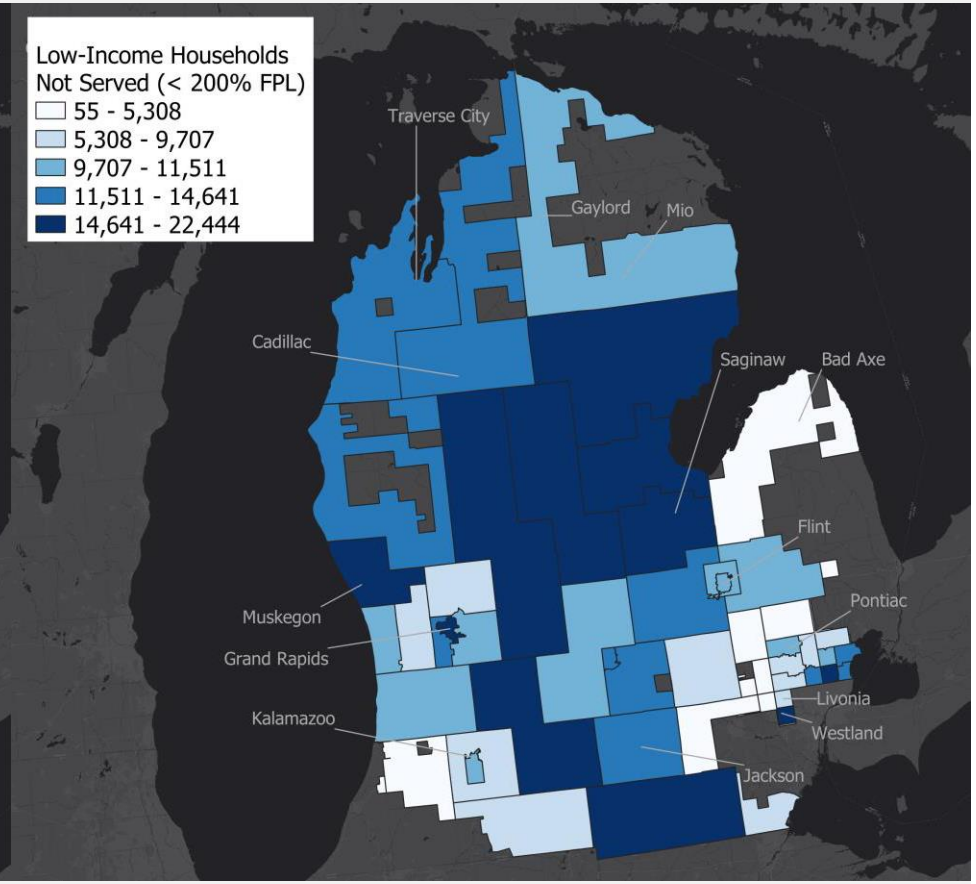
# CE GAP ANALYSIS: # UNSERVED HOUSEHOLDS

## Census Tract




## PUMA

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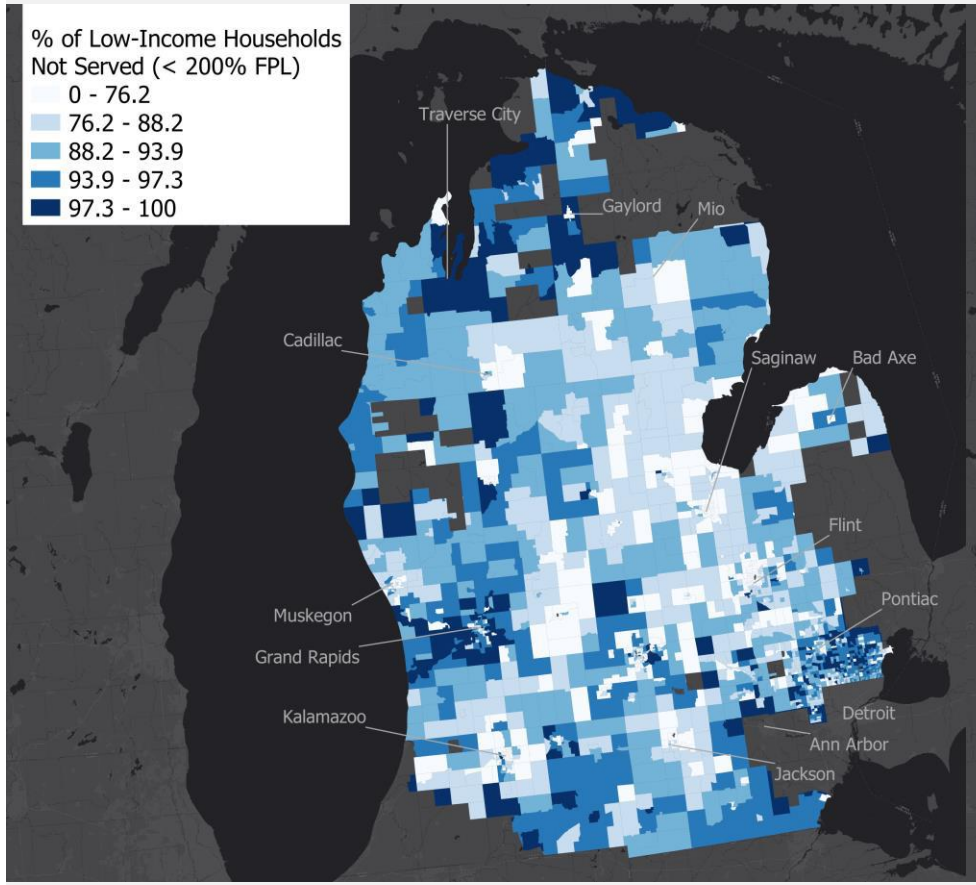
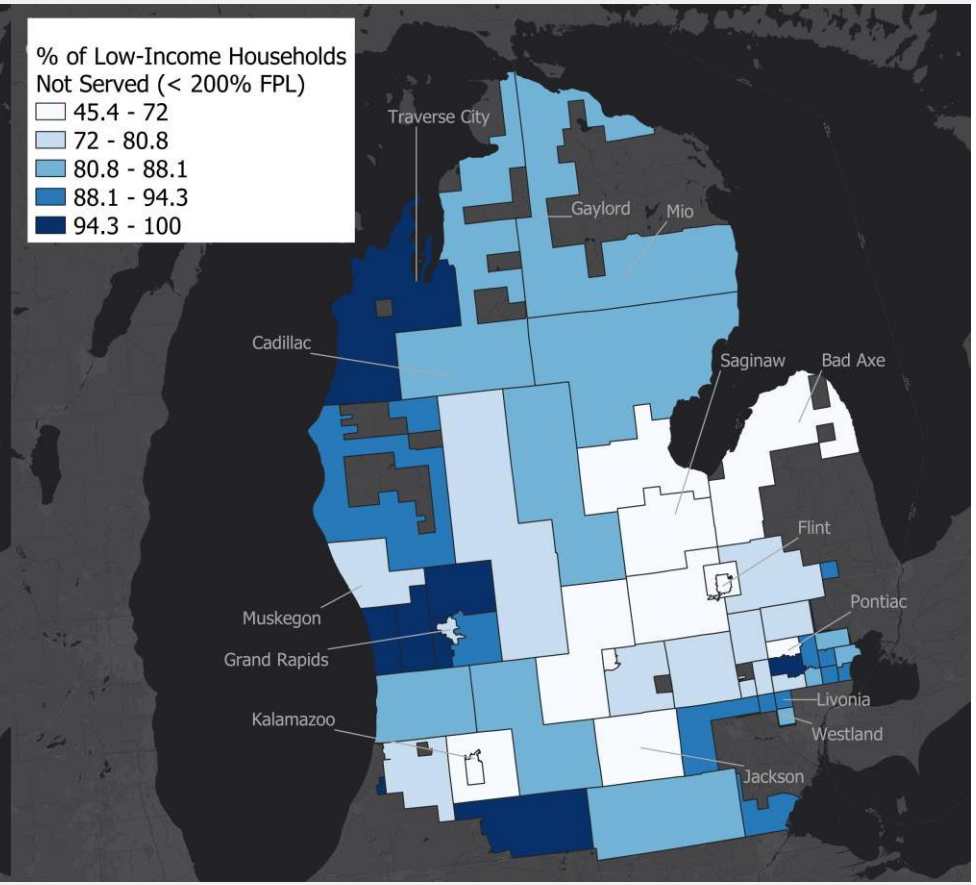
# CE GAP ANALYSIS: % UNSERVED HOUSEHOLDS

## Census Tract




## PUMA




Breaks: Quantiles



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# COMPOSITE NEED SCORING & CHARACTERIZATION

# COMPOSITE NEED SCORING

**What it is:** A way to characterize underserved areas.

**Use:** Pinpointing areas with greatest need. Combines percentages of eligible households with selected high need variables.

| Example Variables | Example Scoring Methodology |
| --- | --- |
| Using DOE high need priority criteria as a reference:<br><br>Income-eligible households with<br>• High energy burden<br>• Children under 18 years of age<br>• People over 65<br>• People with a disability | 1) Use the percentile as the score for each of the 4 indicators for each PUMA (ranking percentages of eligible households)<br><br>2) Sum the scores for all 4 indicators to produce a composite score for each PUMA |

# PRIORITIZATION SCENARIOS

## Primary Scenario

Using DOE high need priority criteria as a reference:

Income-eligible households with
- High energy burden
- Children under 18 years of age
- People over 65
- People with a disability

## Alternative Scenarios

**DTE Energy**
- DOE metrics + language, race, ethnicity
- DOE metrics + single-family vs. multi-family

**Consumers Energy**
- DOE metrics + heating fuel + multi-family
- DOE metrics + heating fuel + renter

# BASE PRIORITIZATION SCENARIOS

| | Scenario | | |
|---|---|---|---|
| **Need Criteria** | **1** | **2** | **3** |
| Energy burden | x | x | x |
| % of households with children under 18 | x | x | x |
| % of households with members over 65 | x | x | x |
| % of households with members with a disability | x | x | x |
| % of households in single-family housing | | x | |
| % of households in multi-family housing | | | x |

Each scenario's prioritization scores may have different ranges. For that reason, raw numeric scores cannot be compared across scenarios. However, maps can be used to compare differences in geographic distributions of scores between scenarios.

# ENERGY BURDEN CALCULATION

Household Energy Burden:

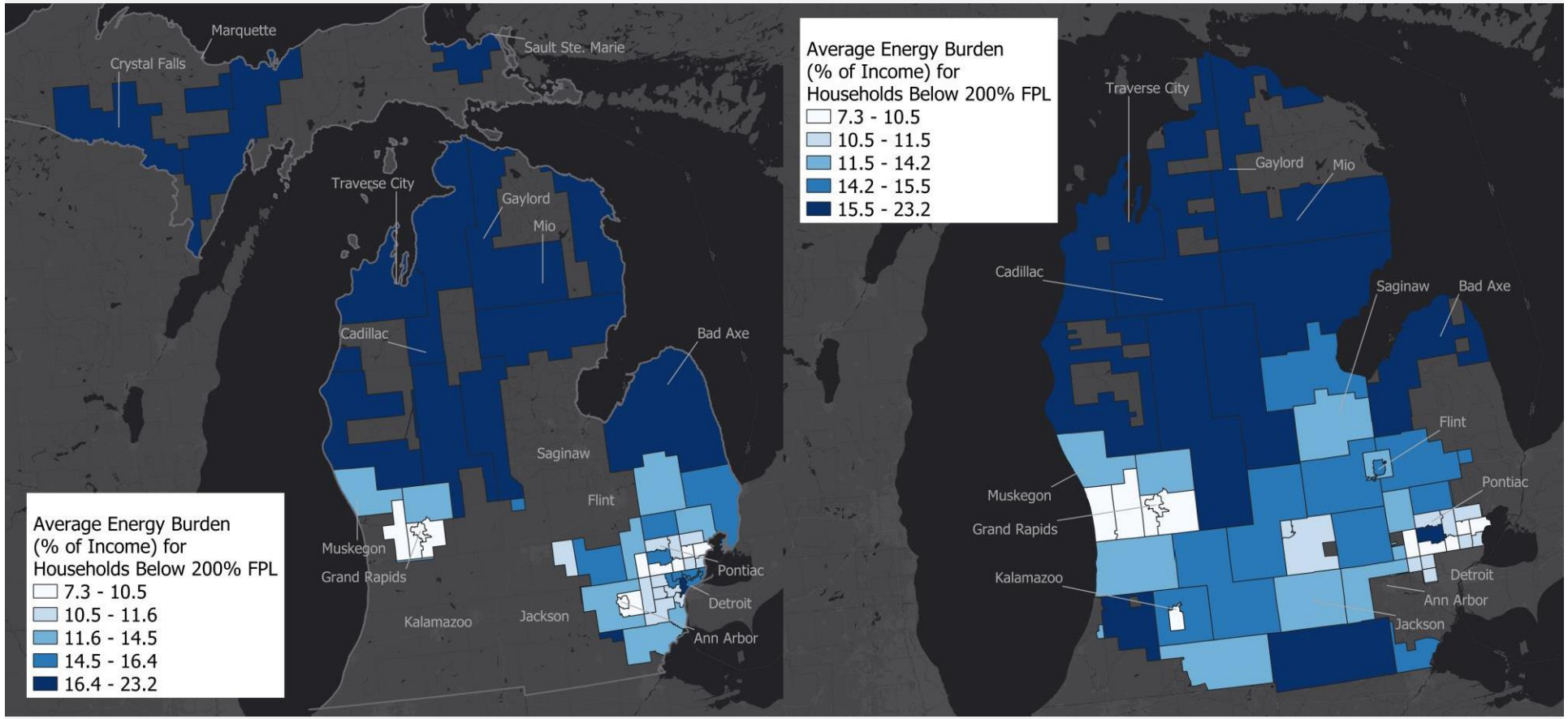
$$100 * \frac{\text{Annual fuel cost for all heating fuel types (electricity, gas, \& other)}}{\text{Annual household income}}$$

Averaged for each PUMA

# NEED CRITERIA: ENERGY BURDEN

## DTE Energy

## Consumers Energy



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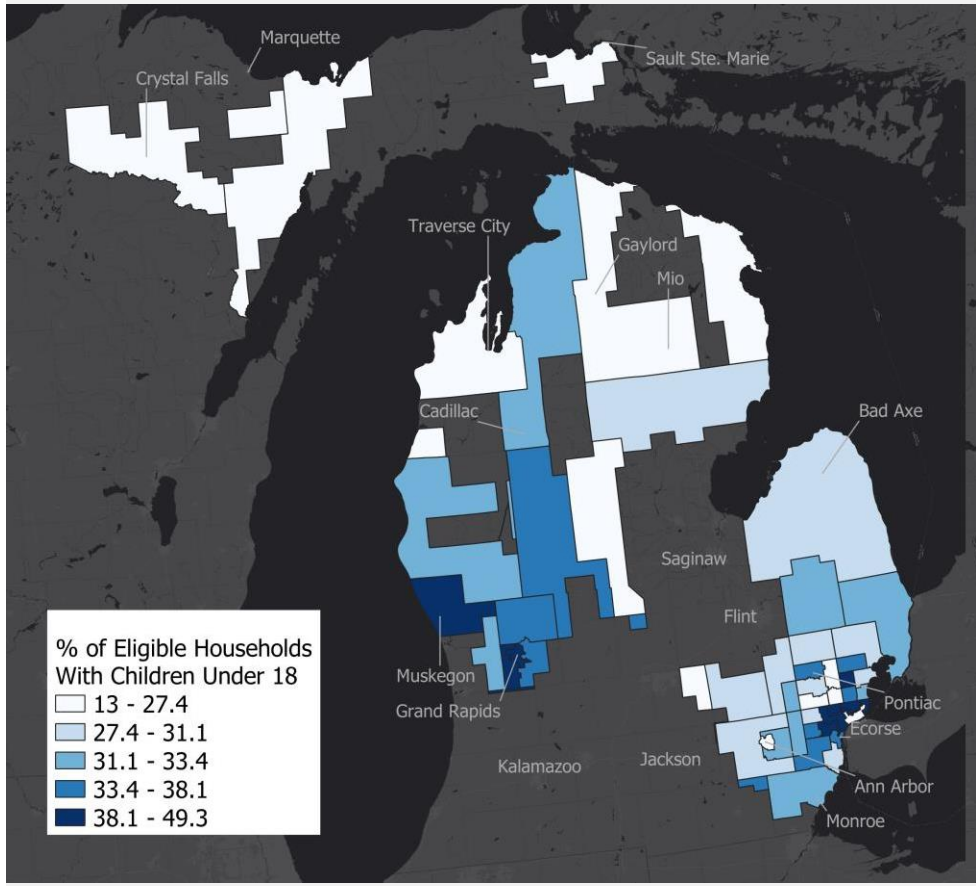
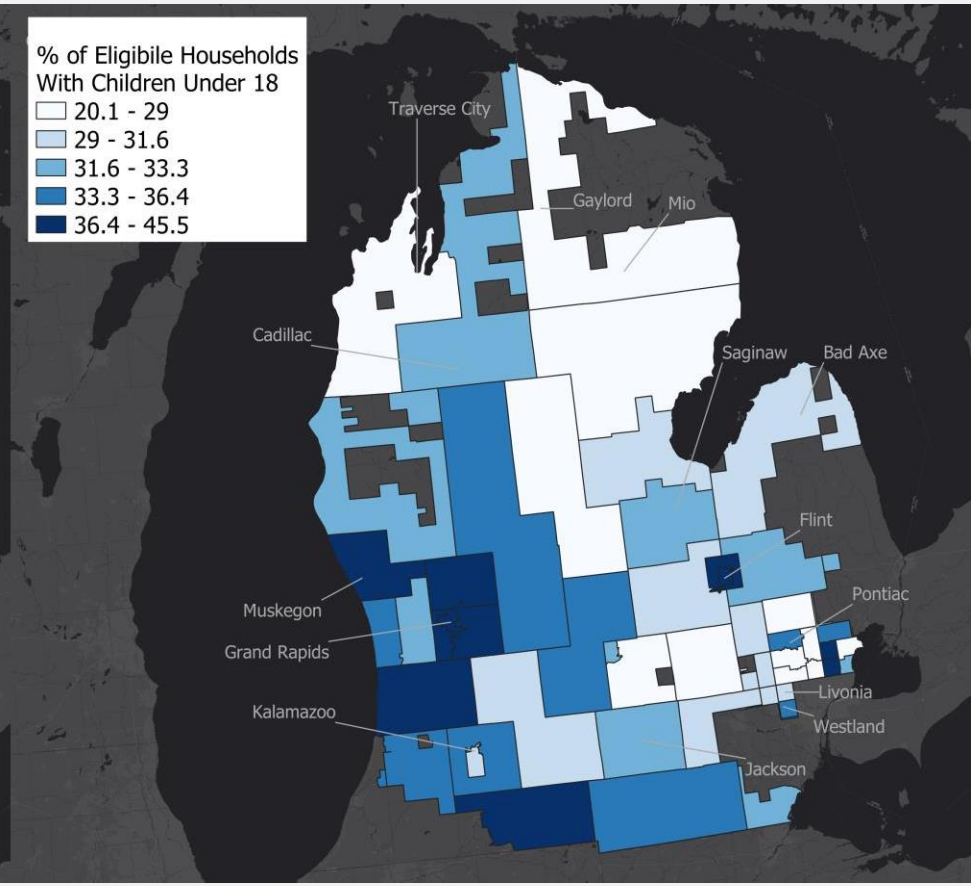
# NEED CRITERIA: % HOUSEHOLDS WITH CHILDREN UNDER 18

## DTE Energy




## Consumers Energy



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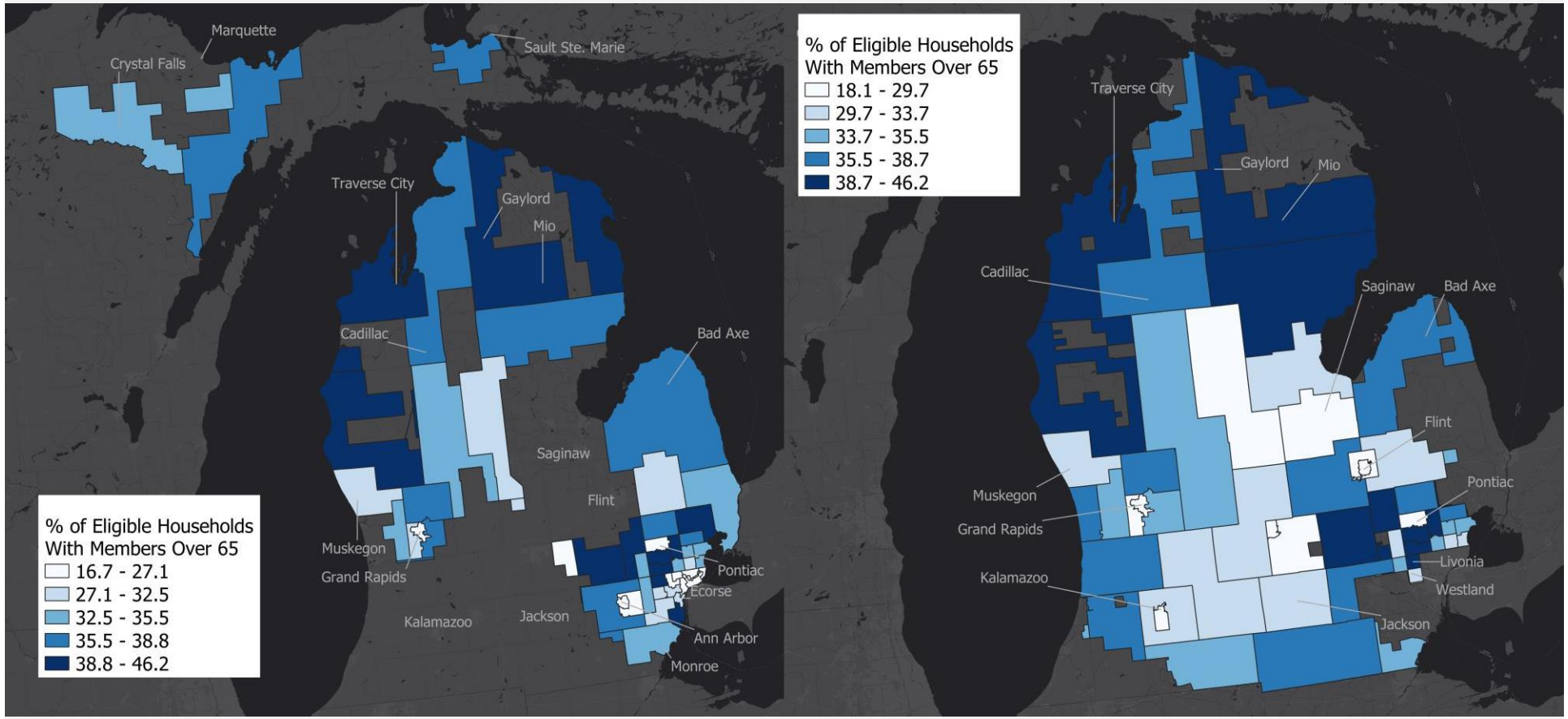
# NEED CRITERIA: % HOUSEHOLDS WITH ADULTS OVER 65

## DTE Energy

## Consumers Energy



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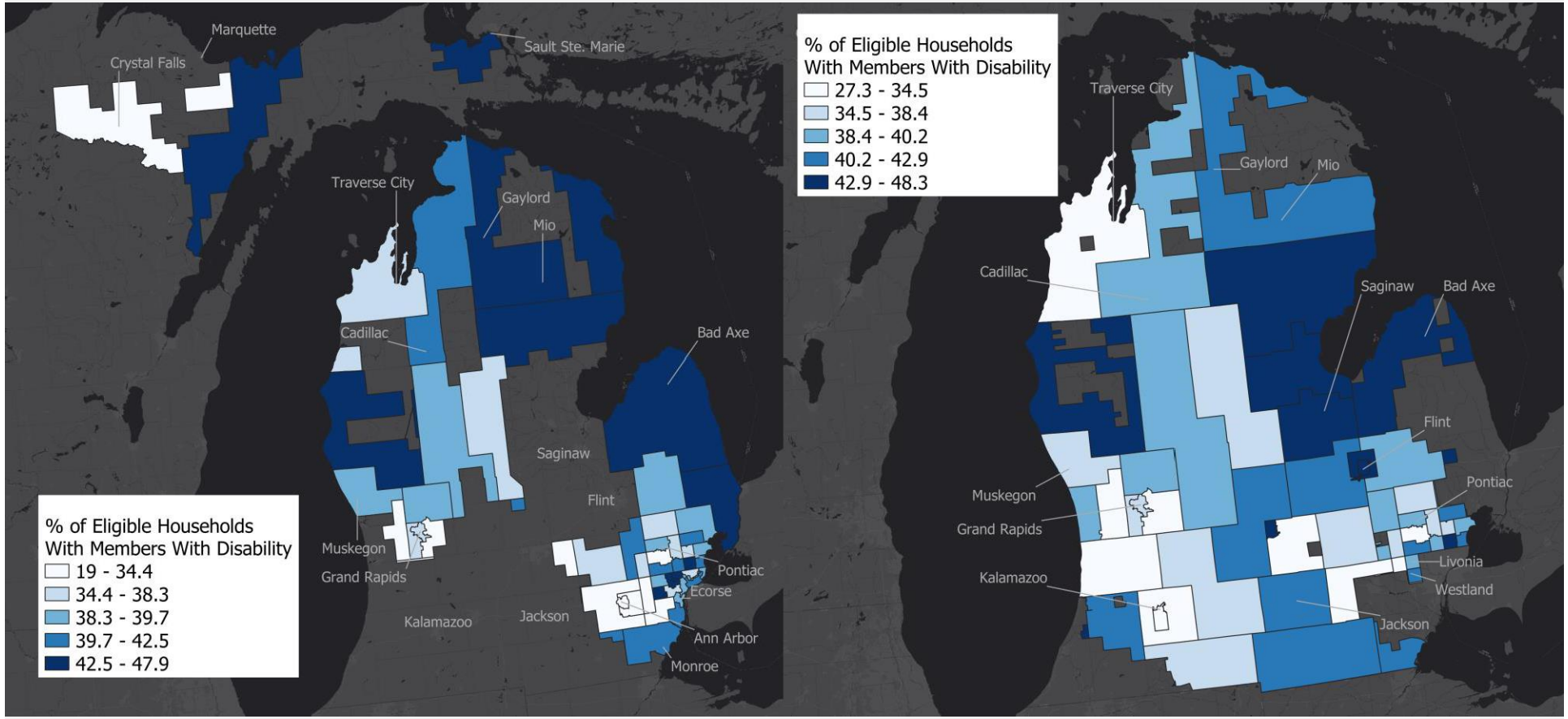
# NEED CRITERIA: % HOUSEHOLDS WITH MEMBERS WITH DISABILITY

## DTE Energy

## Consumers Energy



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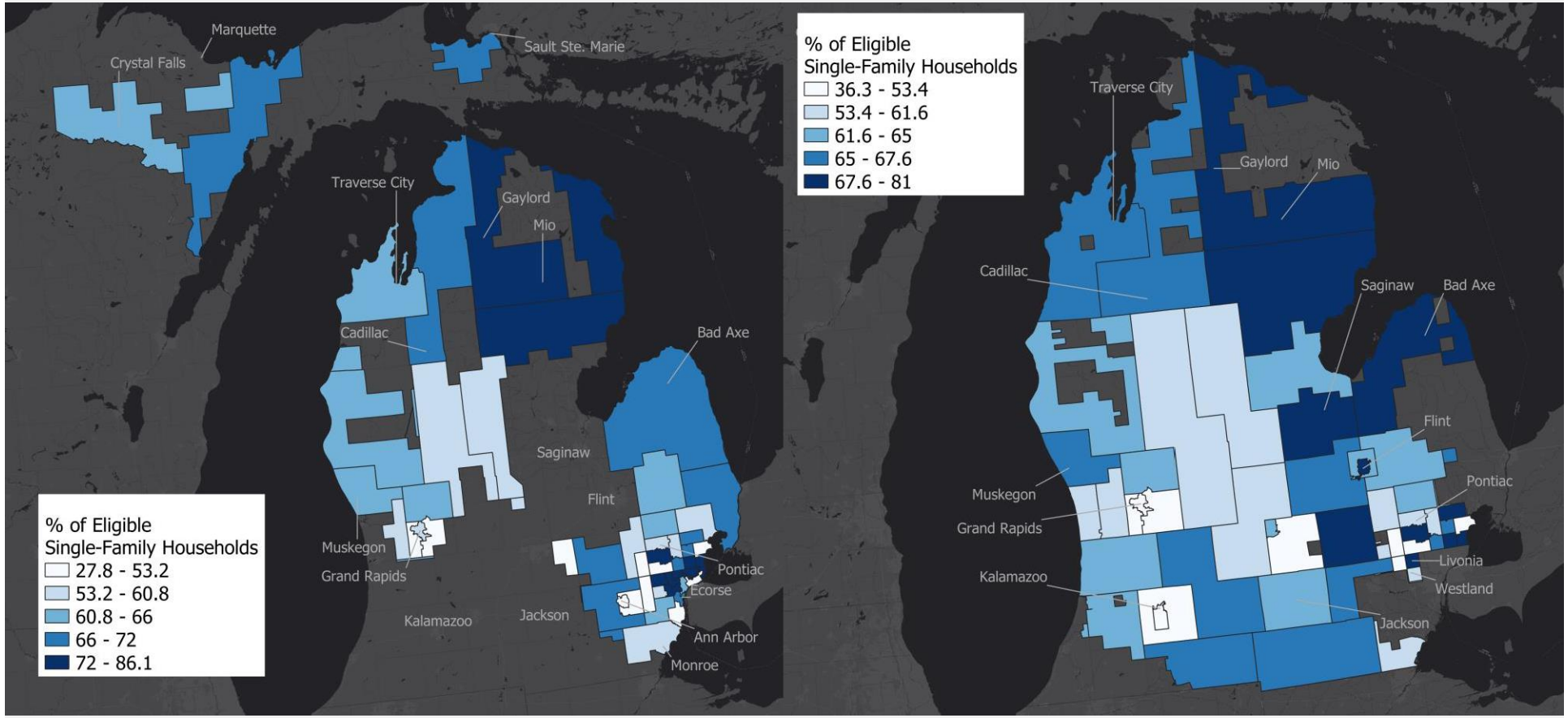
# NEED CRITERIA: % SINGLE-FAMILY HOUSEHOLDS

## DTE Energy

## Consumers Energy



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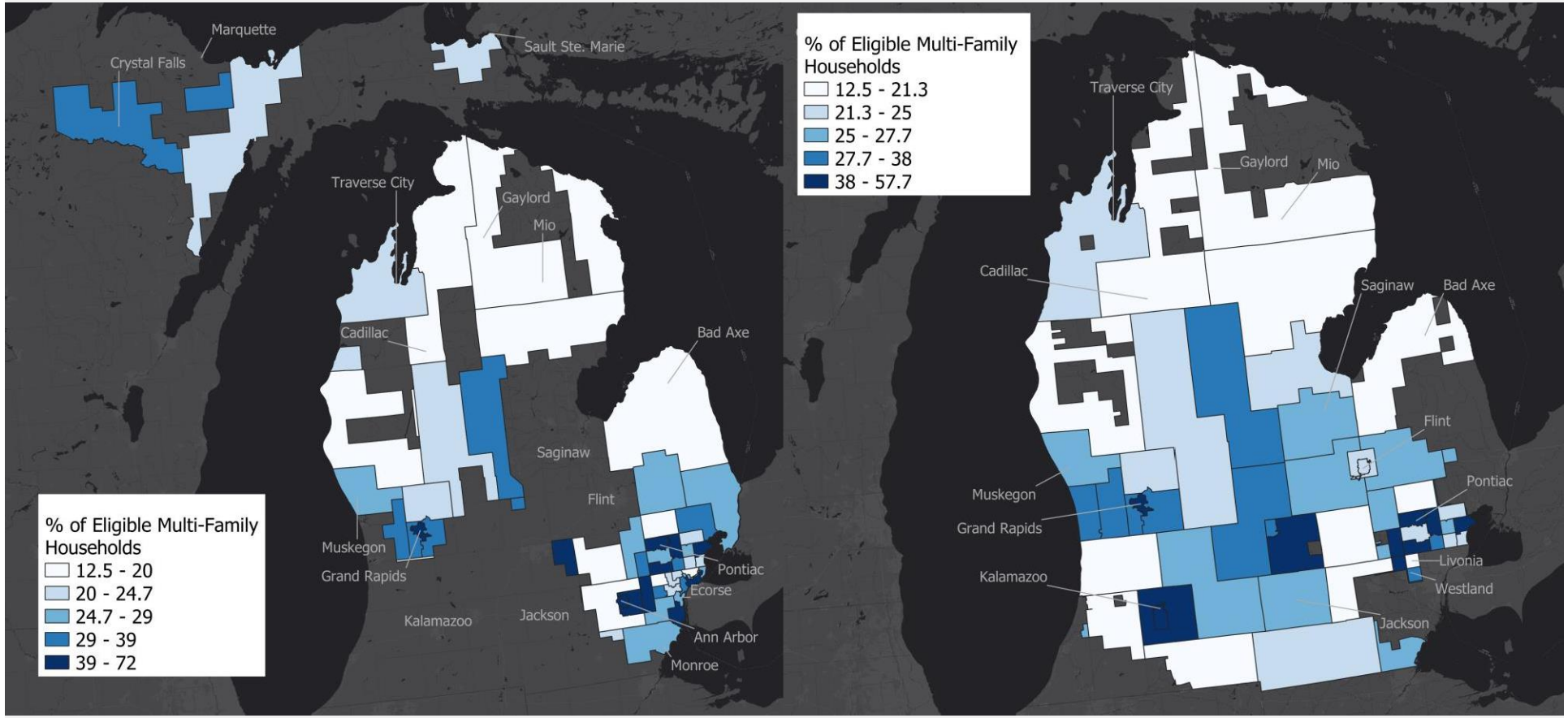
# NEED CRITERIA: % MULTI-FAMILY HOUSEHOLDS

## DTE Energy

## Consumers Energy



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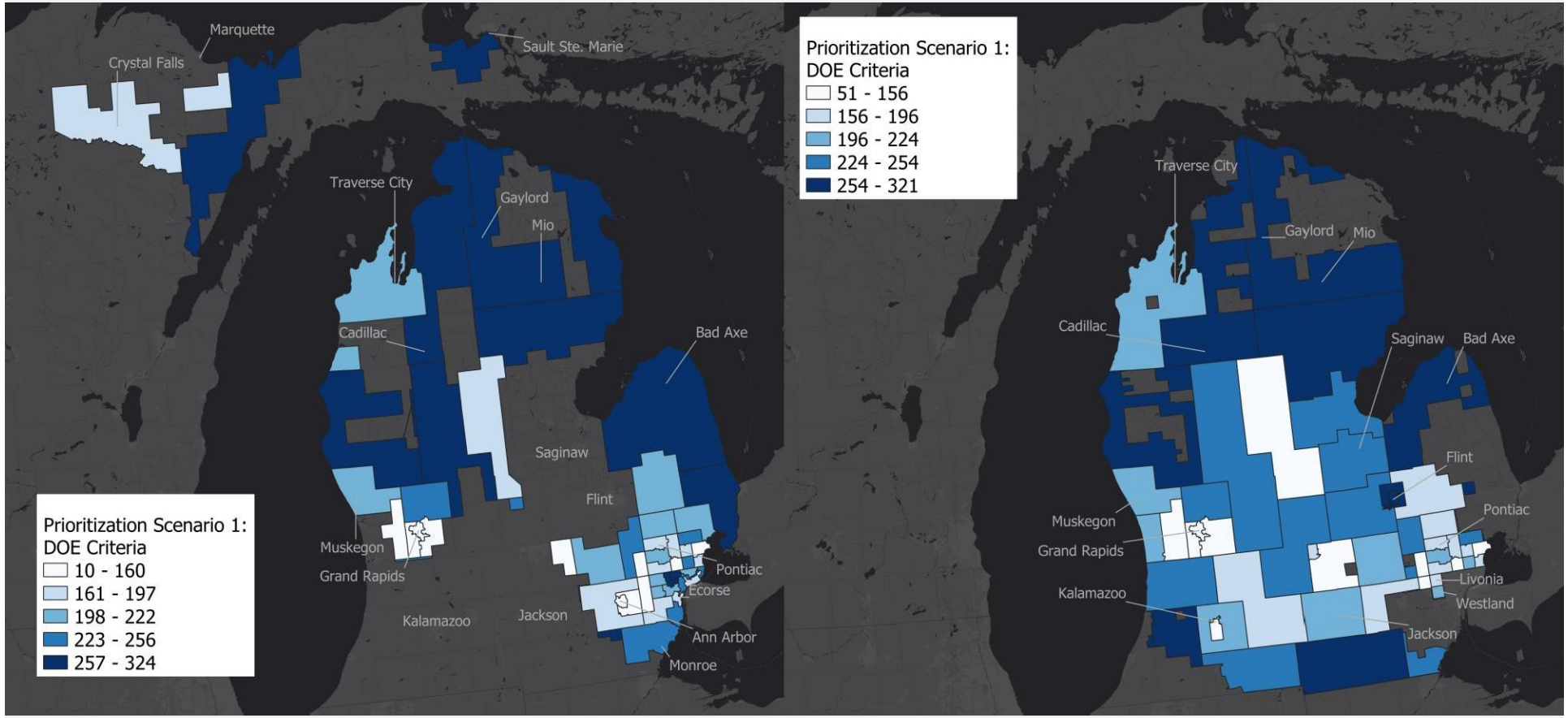
# PRIORITIZATION SCENARIOS

# PRIORITIZATION SCENARIO 1: DOE CRITERIA

## DTE Energy

## Consumers Energy



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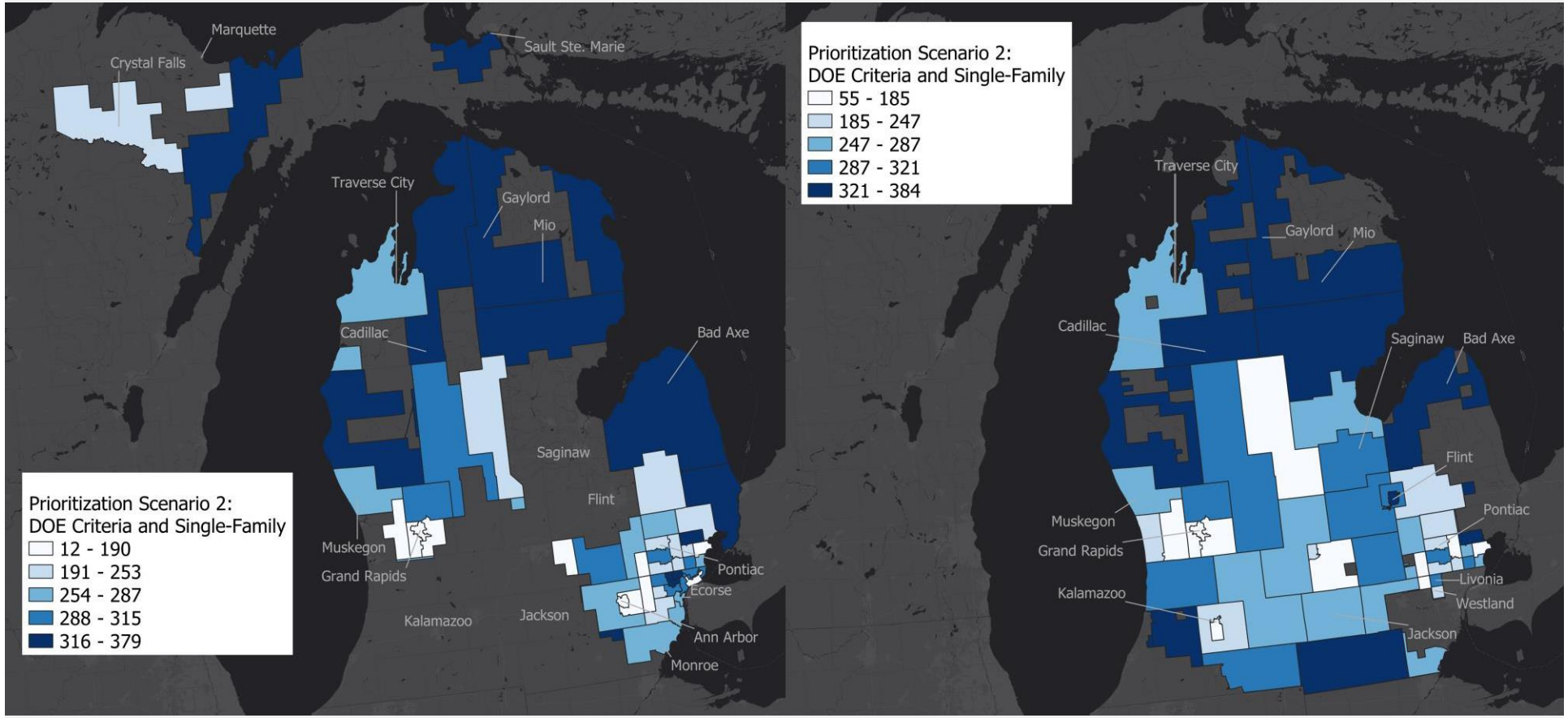
# PRIORITIZATION SCENARIO 2: DOE + SINGLE-FAMILY

## DTE Energy

## Consumers Energy



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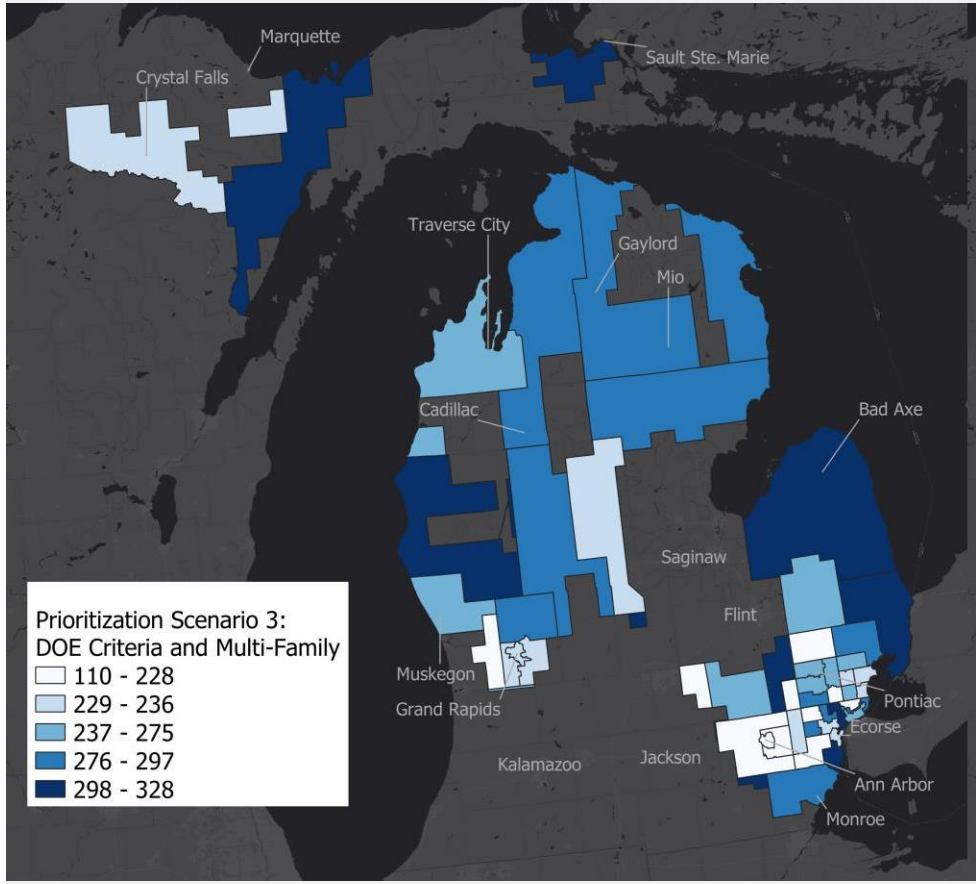
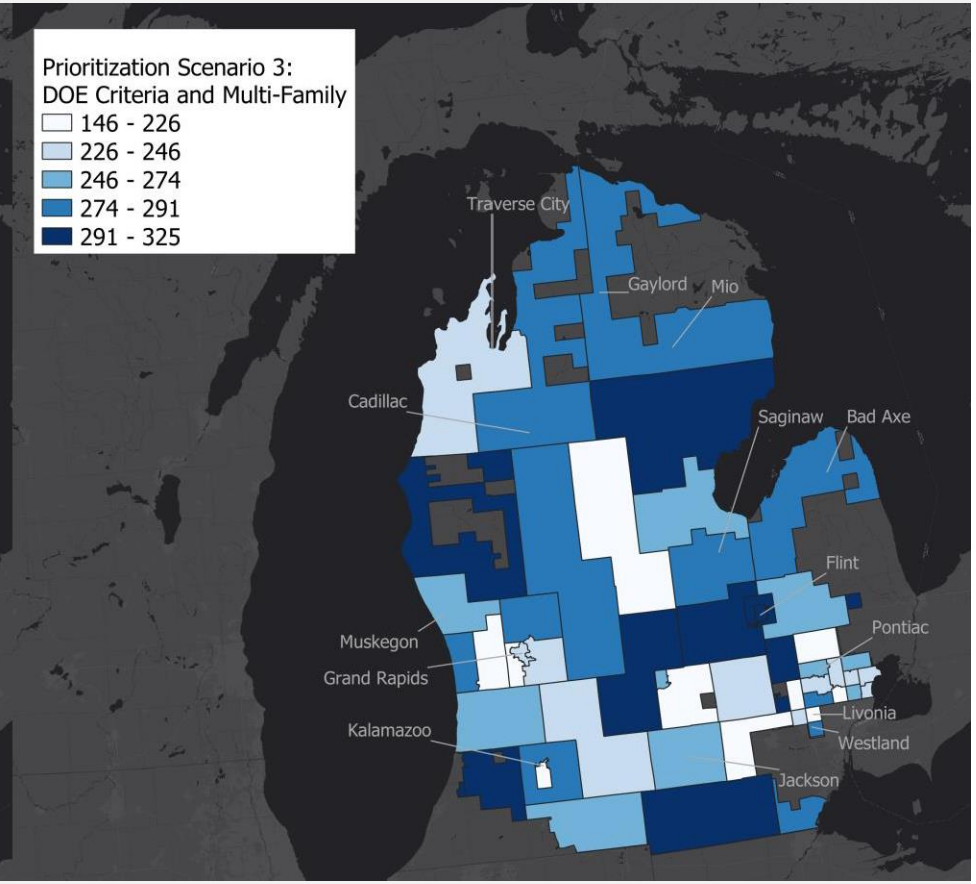
# PRIORITIZATION SCENARIO 3: DOE + MULTI-FAMILY

## DTE Energy




## Consumers Energy



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# INTENT OF USE

# INTENT OF USE

**This LINA research will support the utilities in other initiatives such as:**

- Developing a protocol and **implementation strategy** for future geographic targeting initiatives (for IQ specifically)
- Promoting awareness of **air sealing and insulation** measures among partner agencies and contractors
- Increasing trade ally awareness regarding the identification of **health and safety deferrals**
- Identifying opportunities to **leverage funding** from other federal, state, and/or private sources

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# Questions


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# Environmental Justice and Equity In Electrification

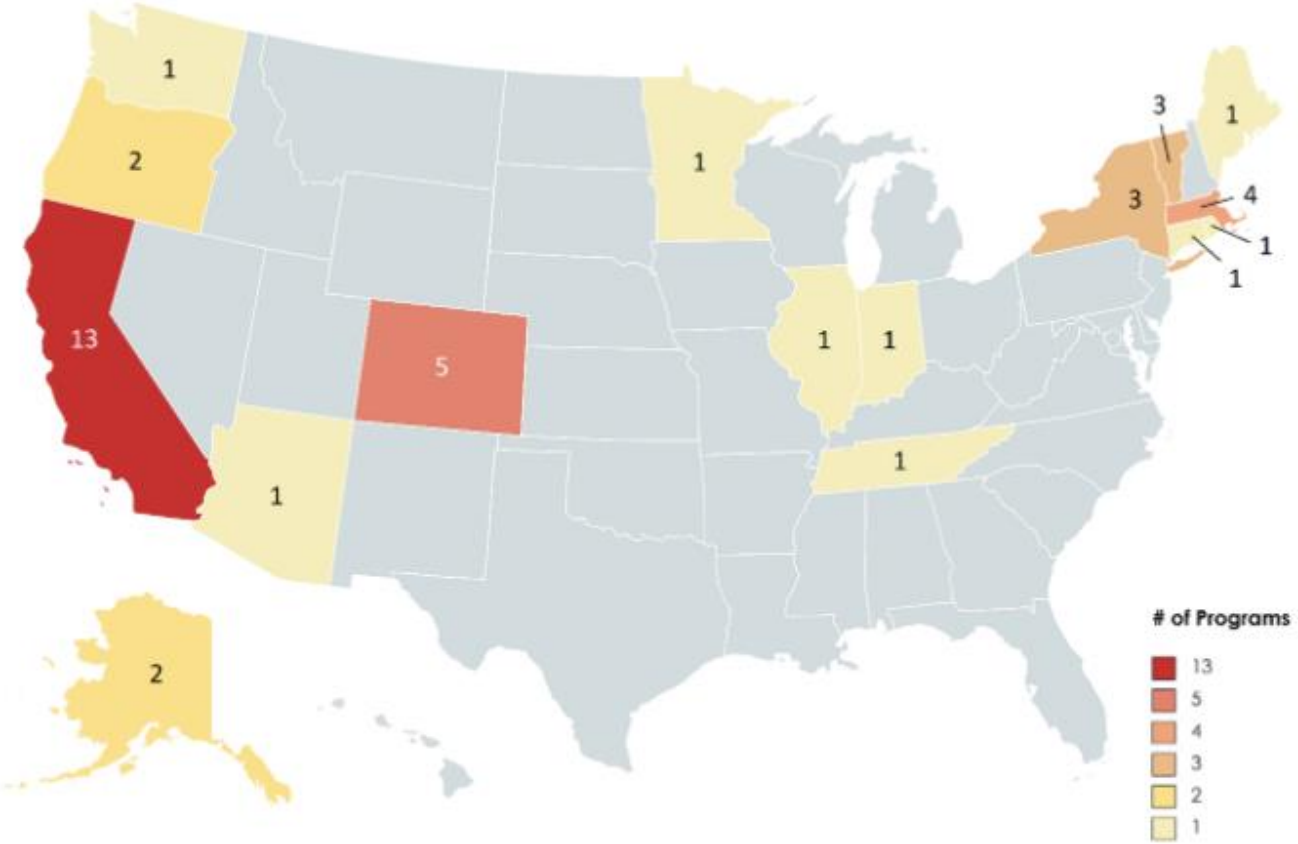
Energy Waste Reduction Low Income Workgroup

June 2, 2022

# Agenda

- Electrification
- Equity
- Equity in Electrification
- Environmental Justice
- Stories from Minnesota and Colorado

# Electrification




Building Electrification Programs

Credit: ACEEE Building Electrification: Programs and Best Practices Report, 2022

# Equity

"When race and other social identities can no longer be used to predict life outcomes"

City of Denver's Office of Social Equity and Innovation

# Equity in the Electrification Context

**"elimination of barriers to full participation in the process, and access to the full benefits of the outcome"**

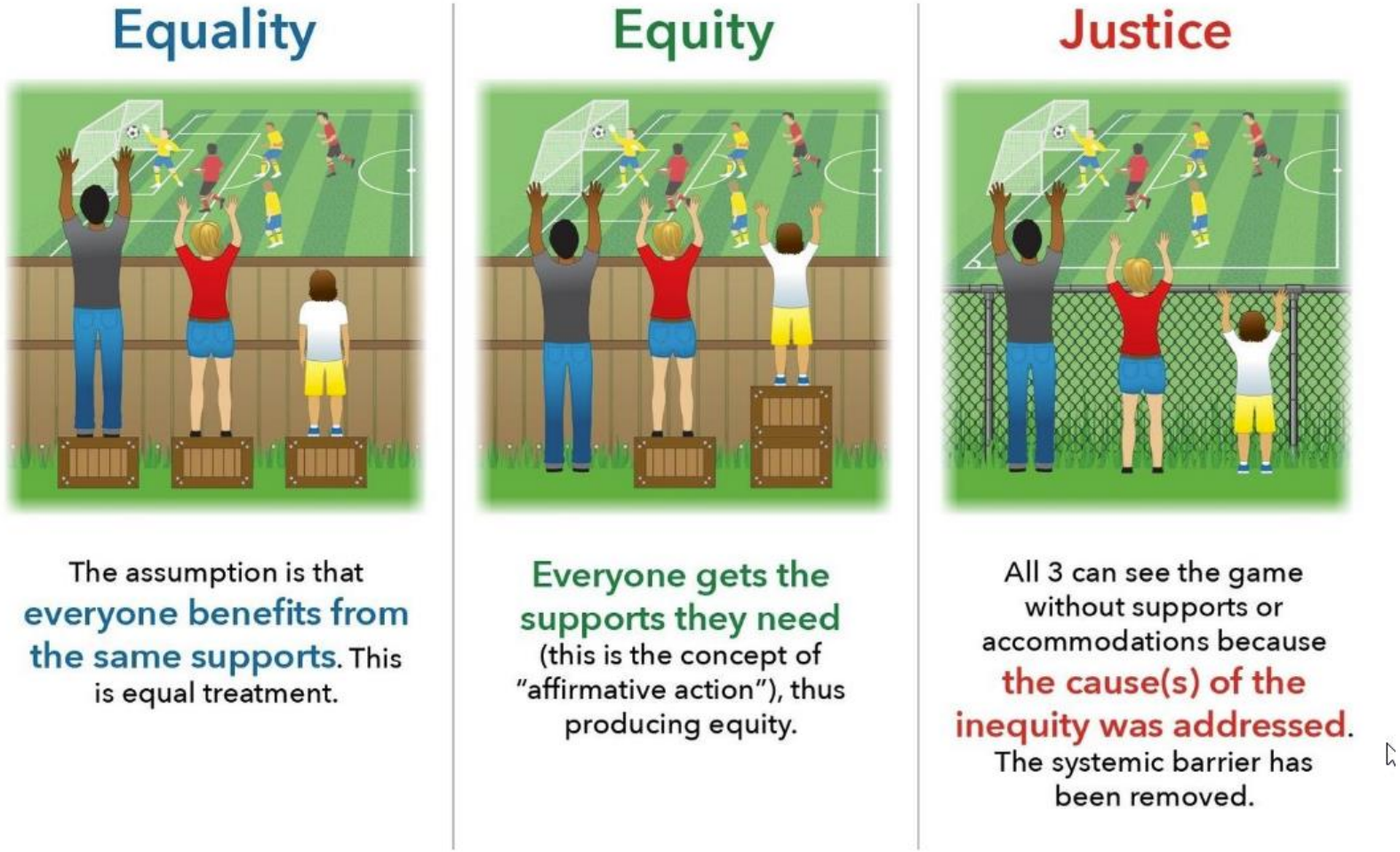
# Environmental Justice

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies.

No group of people should bear a disproportionate share of the negative environmental consequences resulting from … policies"

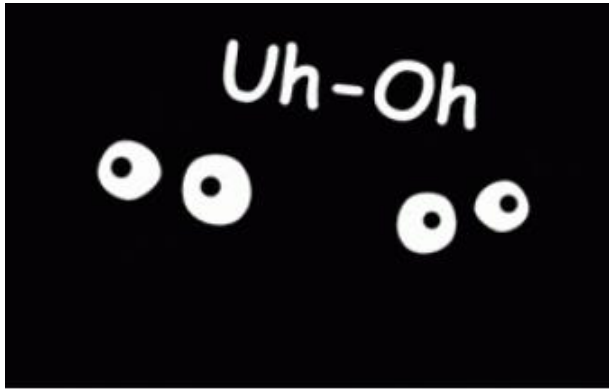
EPA's Office of Environmental Justice

# Equity vs. Environmental Justice



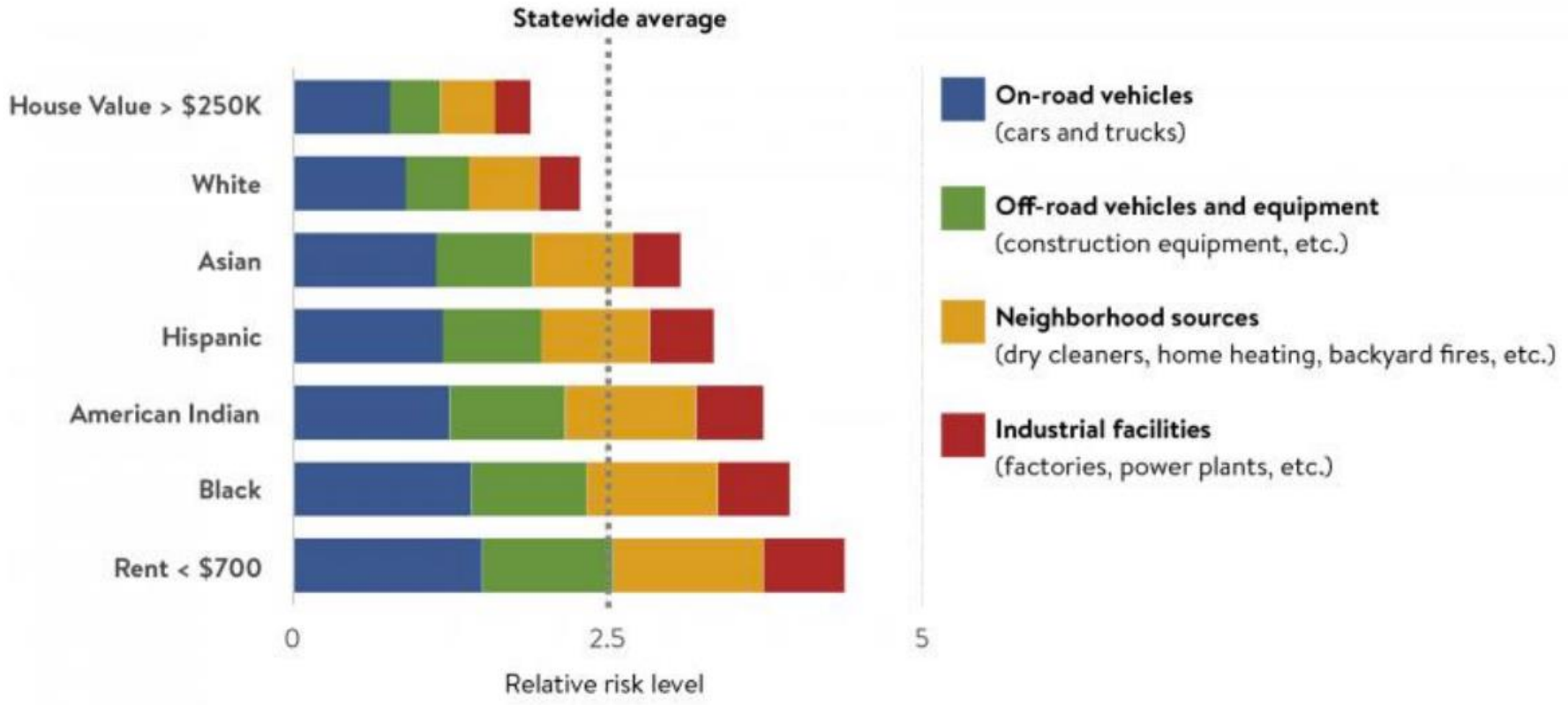

Credit: Mobilize Green Article: Environmental Equity Vs. Environmental Justice: What's the Difference?

# How does inequity in electrification manifest?




# Who Are We Talking About?
## Minnesota

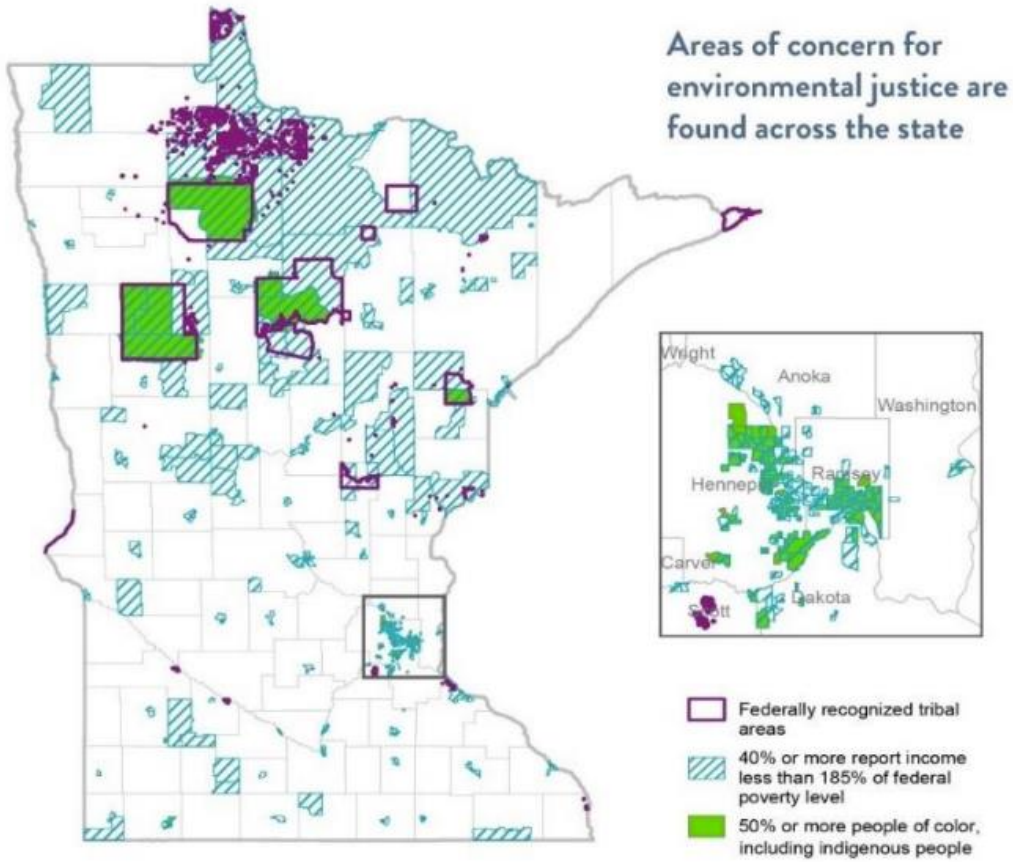
**Figure 2: Air pollution risk by demographic indicators**




Credit: Minnesota Pollution Control Agency

# Who Are We Talking About?
## Minnesota

**Figure 3: MPCA map of areas of concern for environmental justice[2]**




Credit: Minnesota Pollution Control Agency

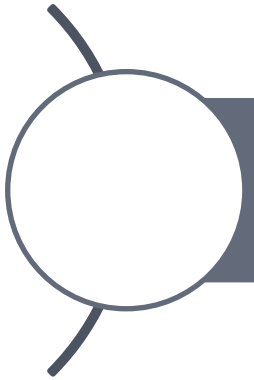
EPA's Environmental Justice Screening and Mapping Tool

EGLE's MiEJScreen Environmental Justice Screening Tool

# Who Are We Talking About?
## Colorado Commercial and Multifamily

- Market rate buildings located in NEST neighborhoods with high Social Equity and Climate Vulnerability Indices
- Buildings with affordable housing units or otherwise serving frontline communities
- Buildings with human service/restricted income providers and tenants/owners
- Buildings of significance to community members

# Who Are We Talking About?
## Colorado Commercial and Multifamily

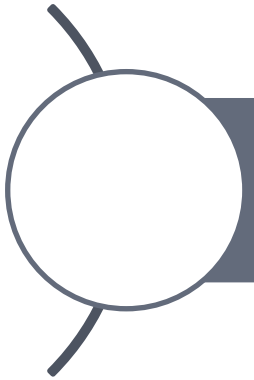


**Market rate buildings located in NEST neighborhoods with high Social Equity and Climate Vulnerability Indices**

NEST = Neighborhood Equity & Stabilization initiative

- Historic neighborhoods undergoing large-scale development
- Mission to preserve culture and character of neighborhoods helping longtime businesses and residents remain in place and improve quality of life

# Who Are We Talking About?
## Colorado Commercial and Multifamily



**Market rate buildings located in NEST neighborhoods with high Social Equity and Climate Vulnerability Indices**

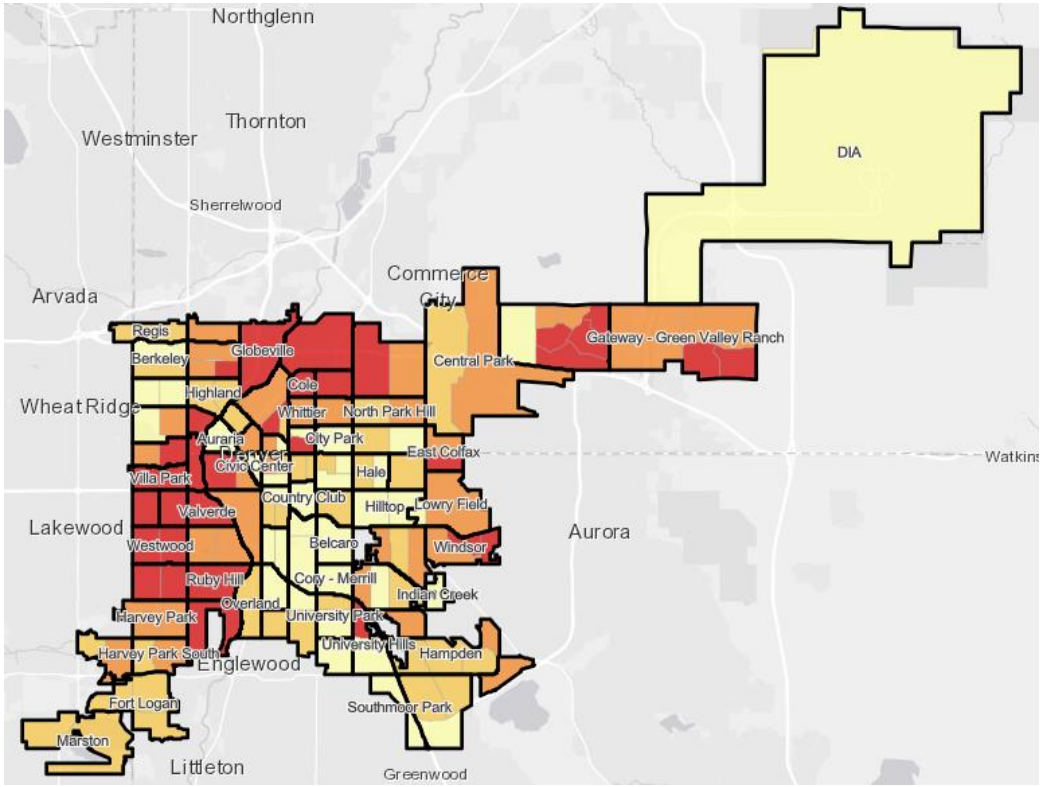
Social Equity Index = Weighted social equity indicators including

- Utility burden
- Income stress
- Asthma rates
- Racial composition

# Who Are We Talking About?
## Colorado Commercial and Multifamily

### Four Climate Vulnerability Indices

- Heat
- Air Quality
- Drought
- Severe Weather




Heat Vulnerability Index Map

Darker reds = higher vulnerability to extreme heat

# Who Are We Talking About?
## Colorado Commercial and Multifamily

- Market rate buildings located in NEST neighborhoods with high Social Equity and Climate Vulnerability Indices
- Buildings with affordable housing units or otherwise serving frontline communities
- Buildings with human service/restricted income providers and tenants/owners
- Buildings of significance to community members

# Equity in Electrification:
## Starting with Inclusion in the Stakeholder Process

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## Starting with Inclusion in the Stakeholder Process

### Minnesota

- Include person with inclusivity experience on team
- Seek to understand how representation and inclusivity might be encouraged
- Consult tribal liaison
- Invite women, BIPOC, or other marginalized speakers
- Hold webinars to accommodate rural attendees

# Equity in Electrification:
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### Colorado

- Establish a co-creation process
- Include under-represented people with inclusivity experience on team
- Target outreach to under-resourced building owners, managers, and under-represented contractors*
- Meet under-resourced participants where they're at: right time, right place*
- Offer gift incentives for under-represented participation*

# Sought Equity Outcomes

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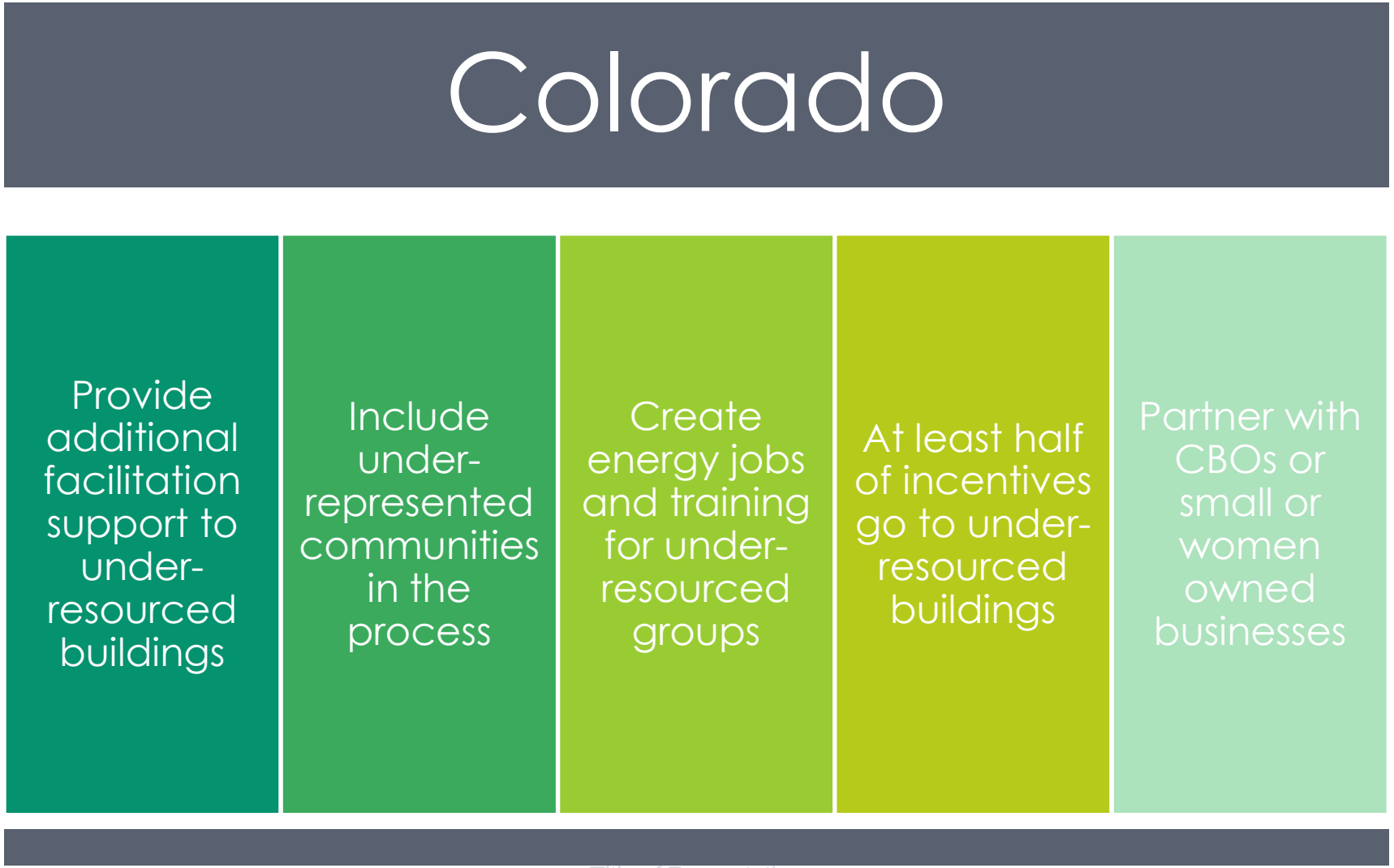

# Policy Recommendations

NEVER design alone!

Clearly define exemptions

Consider using non-energy impacts as metrics or including them in cost benefit tests

Consider other metrics and goals needed to ensure equitable electrification

- Low-income/BIPOC participation
- Geographic participation
- Jobs created and job training
- Location of infrastructure investments
- Improving indoor and outdoor air quality in EJ communities
- Reducing energy burden

# Program Design Recommendations

- NEVER design alone!
- Offer different program designs and incentives to different groups to ensure equitable participation
- Offer electric heating rates, TOU rates and DR programs to decrease operating costs
- Couple building shell upgrades and health and safety upgrades with electrification upgrades
- Make program as accessible and straightforward as possible

# Program Design Recommendations

- Consider incenting ground-source loops to reduce per-user investment
- Couple incentives for PV with electrification

# Other Recommendations

- Name and communicate challenges and limitations of work
- Name and communicate objectives of work related to fostering participation from impacted communities
- Do literature review/research on equity and electrification
- Include equity as a topic for all subcommittees and meetings

# Questions?

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# Close & Adjourn

Thank You!

MPSC

Michigan Public Service Commission