

Energy Equity: Health Impact Assessment of DTE's Integrated Resource Plan

Presentation for the M-LEEaD Center, March 9 2021



Carina Gronlund



Tony Reames

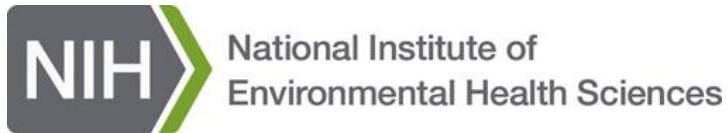


Michelle Martinez



Amy Schulz

Intros & Acknowledgments



What are health impact assessments?

- Consider health impacts of proposals BEFORE decisions are finalized and implemented
- Information about likely/probable health impacts to inform the decision



HIAs as part of democratic decision making

Include recommendations to:

- 1) Reduce adverse health impacts,
- 2) More equitably distribute health costs & benefits





Summary: Health Impact Assessment of DTE IRP

The benefits of energy production are disproportionately realized in surrounding areas.

Health costs associated with exposure to air pollution generated by DTE power plants are not currently considered as part of the decision making process for energy planning.



What is an Integrated Resource Plan?

MI Public Service Commissioners



Dan Scripps, Chair



Tremaine Phillips



Katherine Peretick

“An Integrated Resource Plan (IRP) is a roadmap for how an electric utility will meet its future electricity needs to serve customers in a cost-effective, reliable manner. A plan addresses issues such as the utility’s expected customer demand, retirement of existing power plants, and the timing and amount of new electricity sources such as natural gas fired generation and renewable energy. A plan also addresses programs that assist customers in reducing their energy waste, which can help to lower utility bills, increase electric reliability, and positively impact the environment now and well into the future. **An approved IRP allows for the utility to obtain pre-approval for the recovery of costs of specific near-term projects** proposed in the plan. Public Act 341 of 2016 requires all investor-owned utilities to submit IRPs to the Michigan Public Service Commission (MPSC or Commission) for review and approval.”

https://www.michigan.gov/documents/mpsc/DTE_IRP_Issue_Brief_041520_687227_7.pdf



2017

DTE ENERGY RUSH TO GAS

Certificate of Necessity for
the Blue Water Facility

2021 closure of River
Rouge/ Trenton coal
plants

Construction of the Nexus,
Vector and Rover Pipelines

2018

Building Burners

Dearborn Industrial
Generation Facility-
Consumer's
Subsidiary

CON Approval

DTE-Ford Natural Gas
Permit

2019

DTE Integrated Resource Plan

DTE Energy "Public Meetings"

UM Health Impact
Assessment

Soulardarity Direct
Intervention
Rate Cases

MPSC IRP Hearing June 2019

2020

DTE IRP Decision

ALJ judgement that HIA *should*
be considered in IRP

MPSC rules against health

COVID-19 Emergency Situation:
Demanding #turniton #keepiton

GOV. WHITMER ED-2020-10



WHAT IS ENERGY DEMOCRACY?

BUILD

INSTALL SOLAR STREETLIGHTS

MAKE OUR ELDERS' HOMES ENERGY-EFFICIENT

LAUNCH CO-OP BUSINESSES THAT KEEP ENERGY DOLLARS IN OUR COMMUNITIES

BUY SOLAR POWER FROM OUR NEIGHBORS

SELL COMMUNITY-OWNED POWER BACK TO THE GRID

OWN OUR POWER



WHAT IS ENERGY DEMOCRACY?

CONNECT

MEET THE FAM INSTALLING COMMUNITY SOLAR IN OAKLAND, MINNEAPOLIS, AND APPALACHIA

BUILD TRANS-LOCAL POWER

CONNECT ENERGY DEMOCRACY TO HOUSING, WATER, AND RACIAL JUSTICE

WEAVE ENERGY SOLUTIONS INTO CLIMATE RESILIENCE

EMPOWER OUR SURVIVAL



WHAT IS ENERGY DEMOCRACY?

FIGHT

ASSERT COMMUNITY POWER IN DECISION-MAKING

STOP UTILITY RATE HIKES AND RACIST POLLUTION

TELL A NEW STORY ABOUT ENERGY JUSTICE

CHANGE ENERGY LAWS

CO-CREATE A VISION FOR AFFORDABLE, HEALTHY, COMMUNITY-OWNED POWER

MAKE THE VISION POSSIBLE





2021 UPDATE

Governor Whitmer ED-2020-10

The Department must evaluate the potential impacts of proposed energy generation resources and alternatives to those resources, and also evaluate whether the IRPs filed by the utilities are consistent with the emission reduction goals included in this Directive. For advisory opinions relating to IRPs under both MCL 460.6s and MCL 460.6t, the Department **must include considerations of environmental justice and health impacts** under the Michigan Environmental Protection Act. The Commission's analysis of that evidence must be conducted in accordance with the standards of the IRP statute and the filing requirements and planning parameters established thereto.

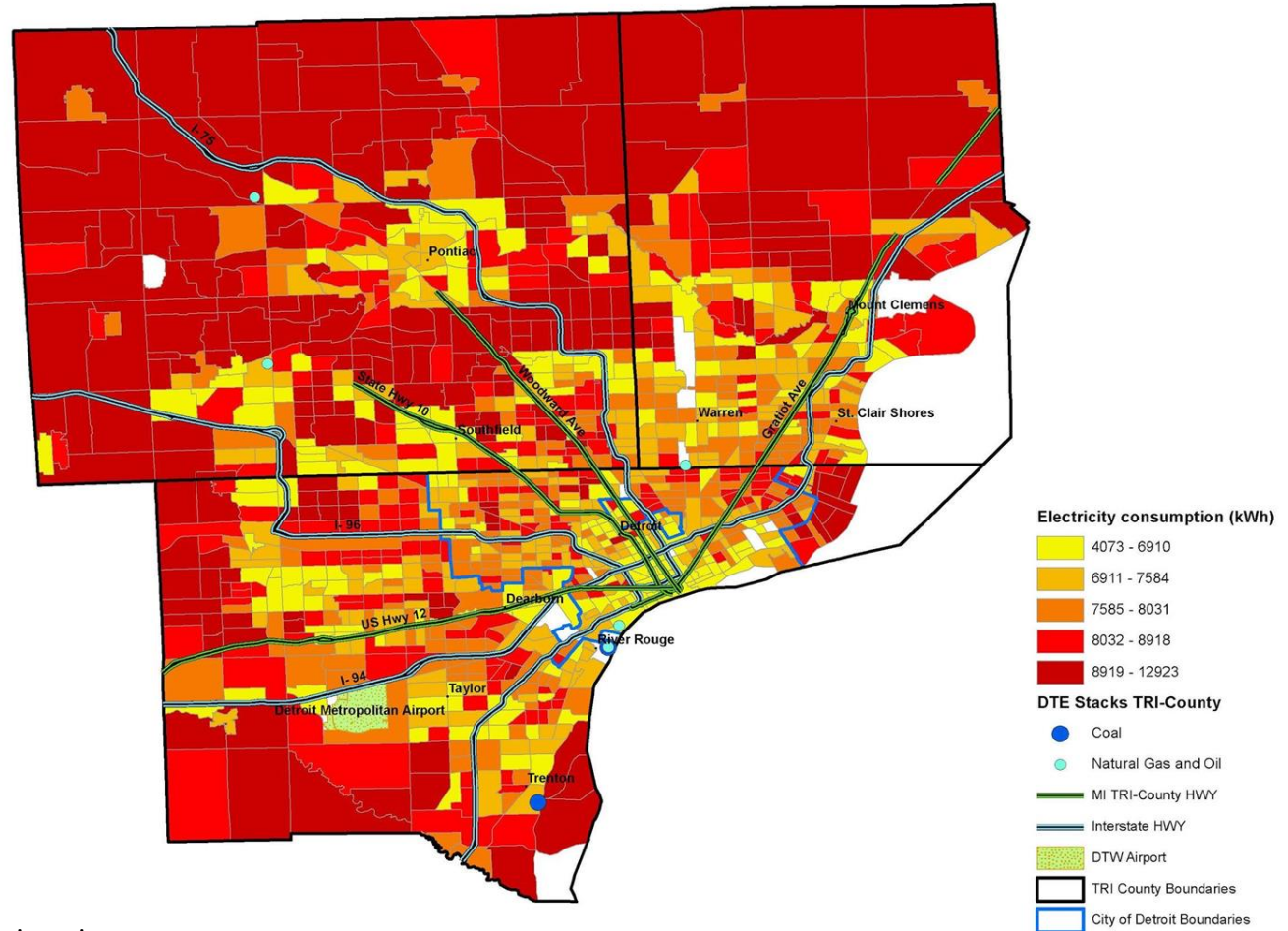
MEJC 2021 REQUEST: Require application of EJ Screen and require data be provided by the utilities that would inform an assessment of accounting. REJECT any plans that would exacerbate disproportionality of injustices on EJ communities including citation or expansion of polluting facilities; or conversely apply solutions that might alleviate this burden with equity lens.

Residential Electricity Consumption

Higher electricity consumption in the suburbs

Lower electricity consumption in Detroit, Pontiac, and other cities closer to Detroit.

Homes in red areas are consuming **2 TIMES MORE ELECTRICITY** than homes in yellow areas



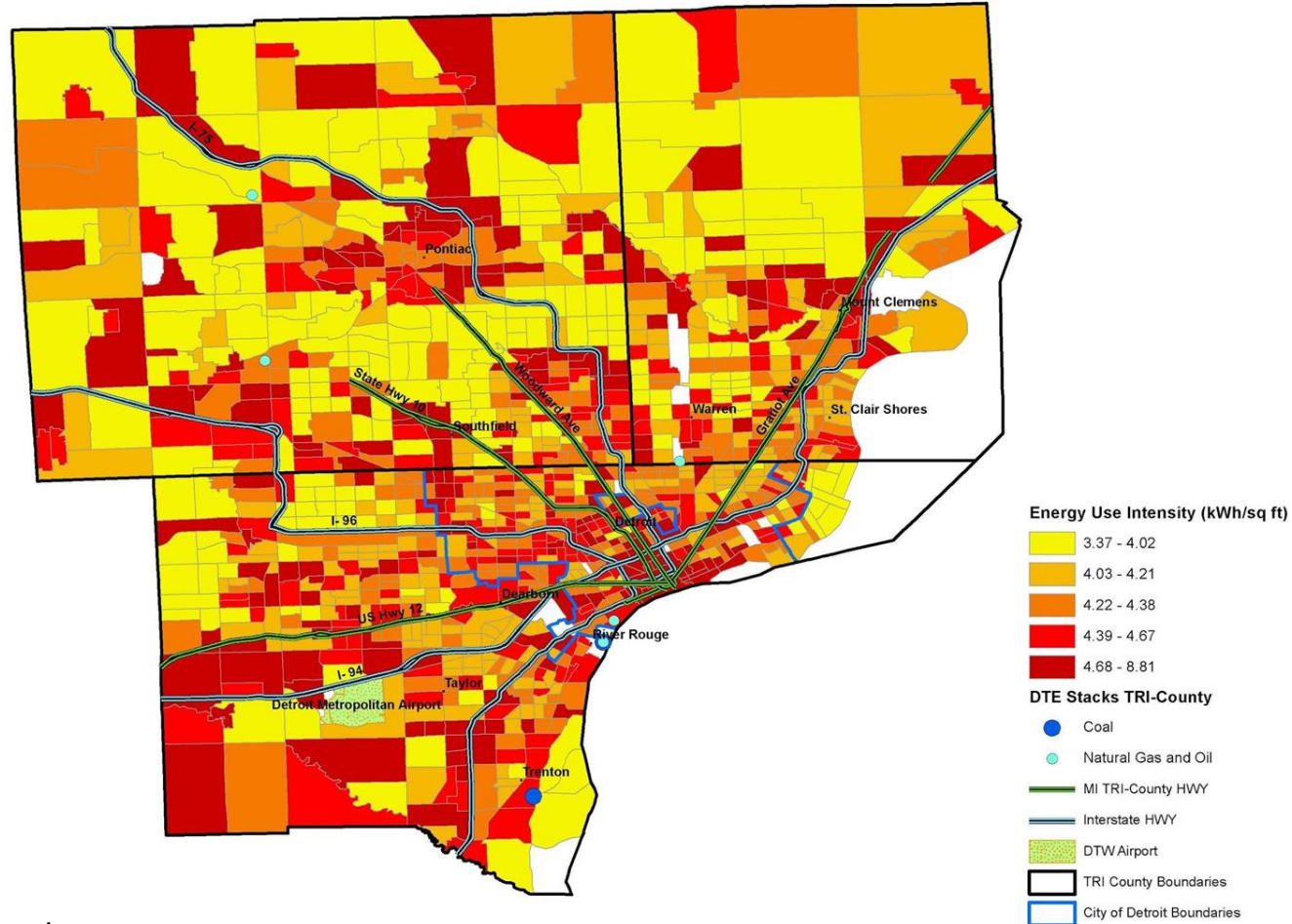
Residential Energy (In)Efficiency

This map allows us to compare apples to apples. It normalizes electricity consumption by home size (square feet).

If homes were equally efficient, the map would be one color.

The distribution in this map is an inverse of the consumption map.

Homes in red areas are **2 TIMES LESS ENERGY EFFICIENT** than homes in yellow areas.



Residential electricity cost burdens

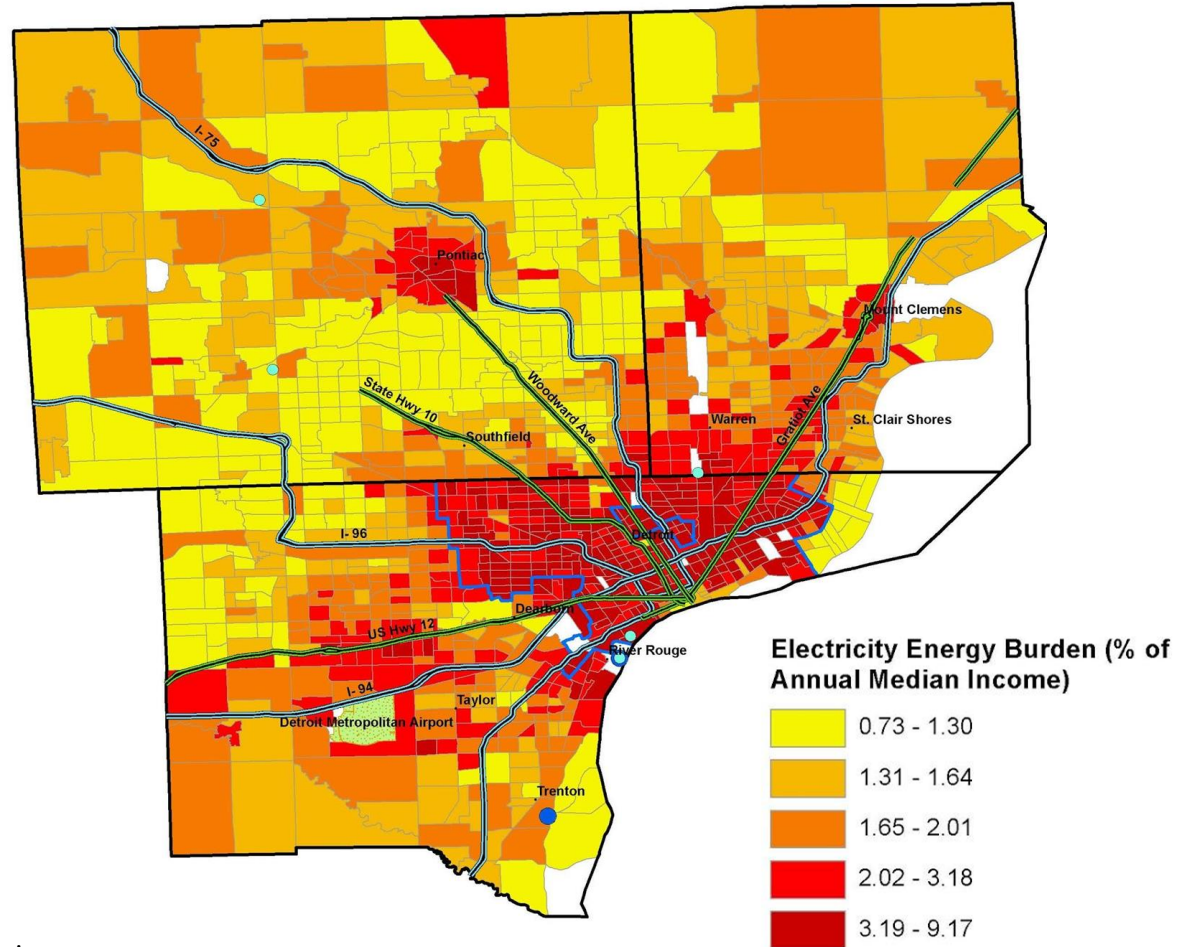
Average monthly cost for electricity in Michigan \$97.41 or \$1,169/year (US EIA)

An affordable energy burden is 6% of household income (2% for just electricity)

Positive correlation between EUI and burden

~200,000 electricity shutoffs performed per year

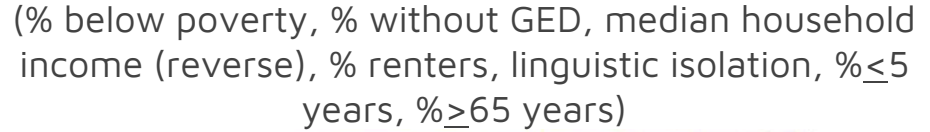
At the start of COVID-19, 50,000 accounts were in arrears and at least 11,060 accounts without power



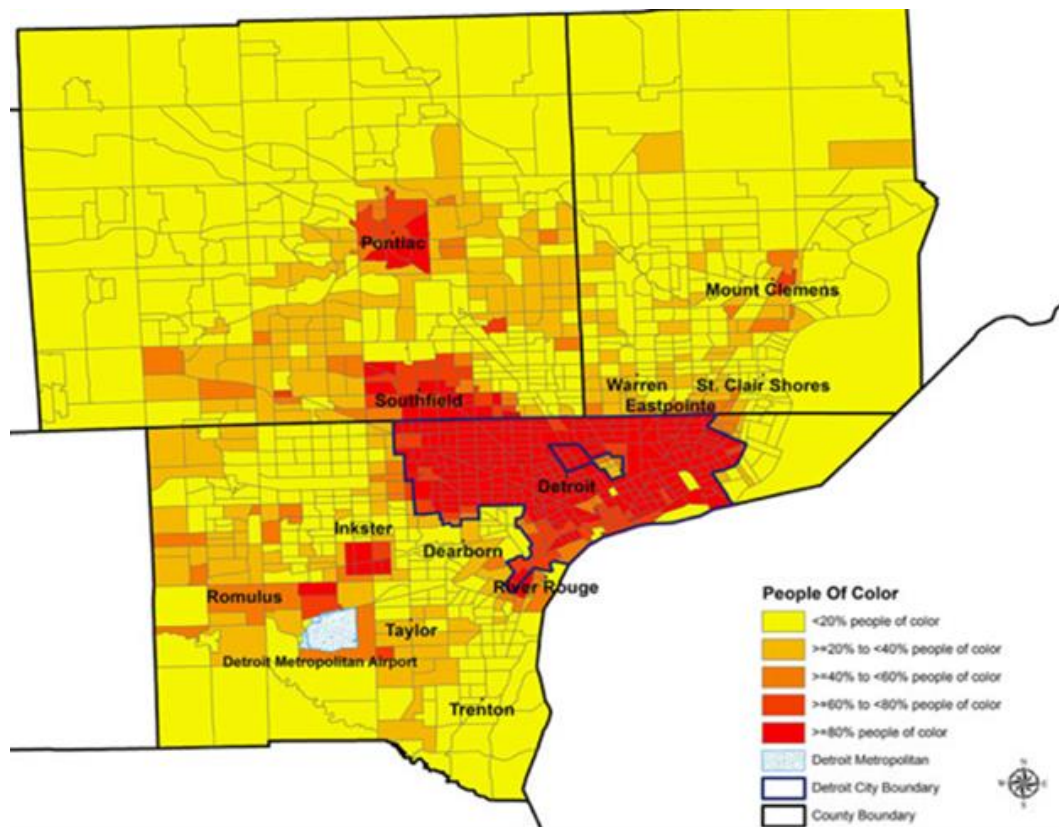
Amy Schulz, ajschulz@umich.edu



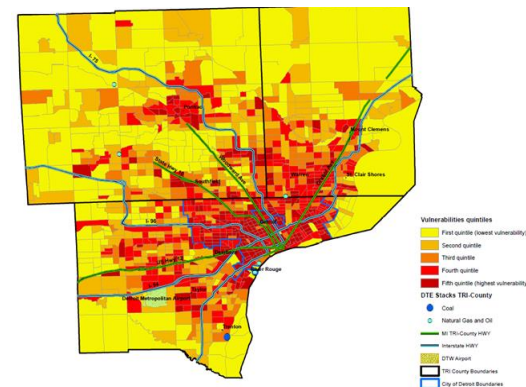
(% below poverty, % without GED, median household income (reverse), % renters, linguistic isolation, % ≤ 5 years, % ≥ 65 years)



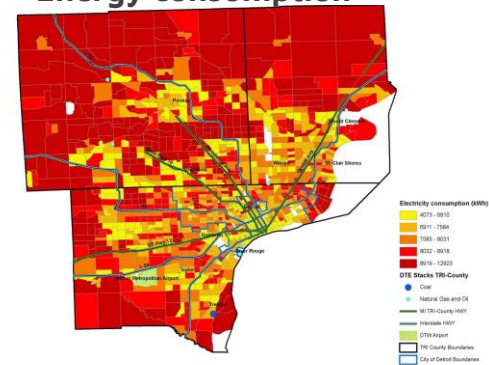
Percent People of Color



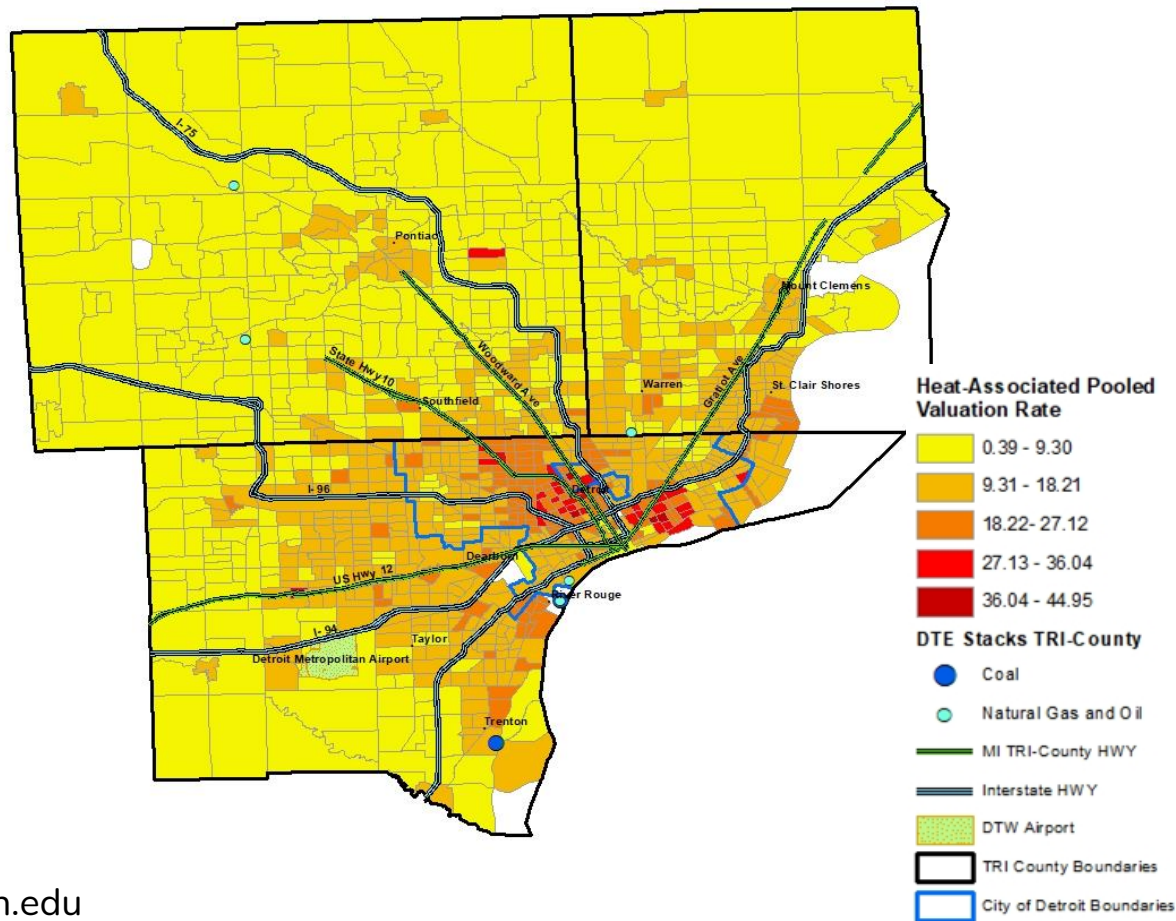
Cumulative vulnerability



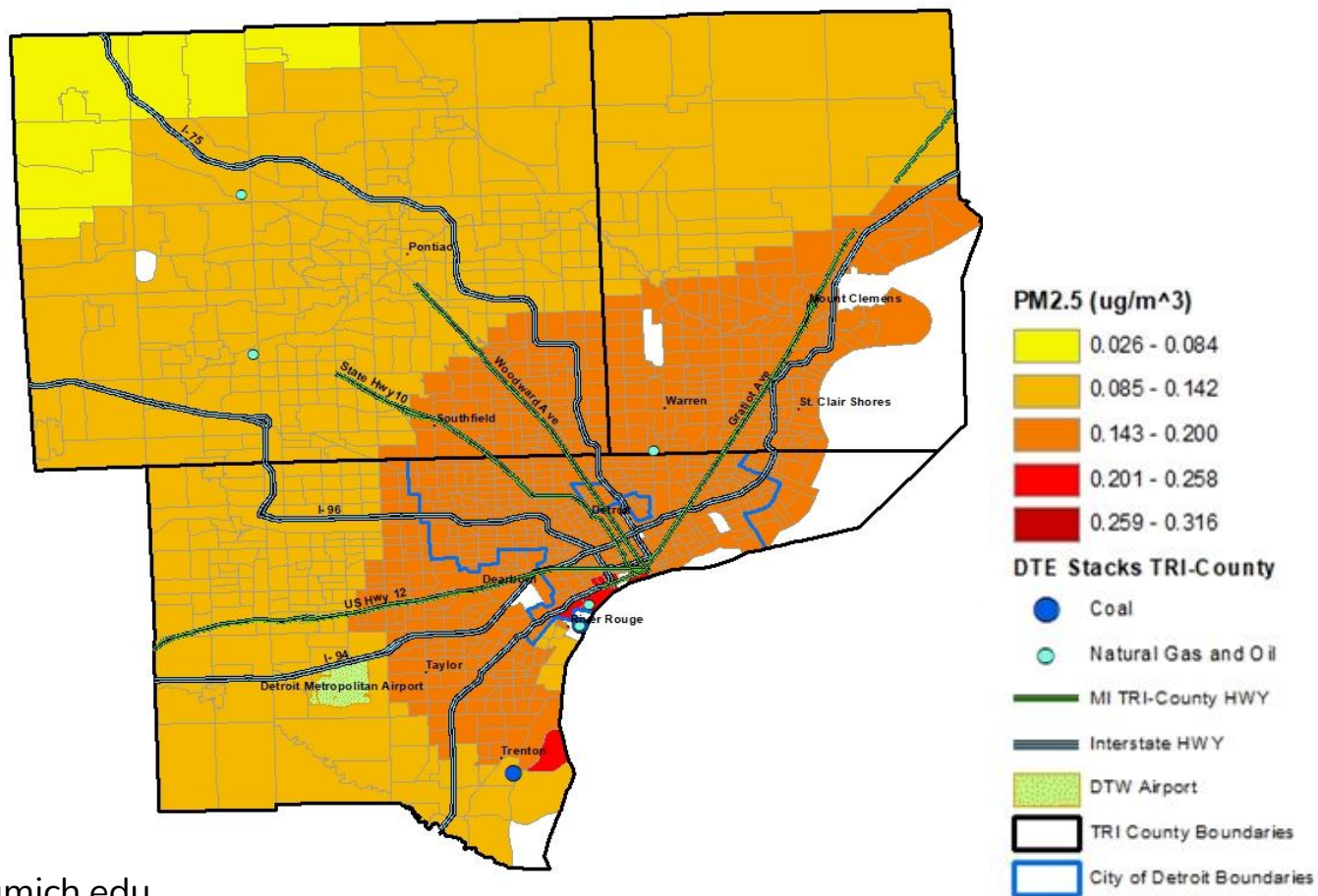
Energy consumption



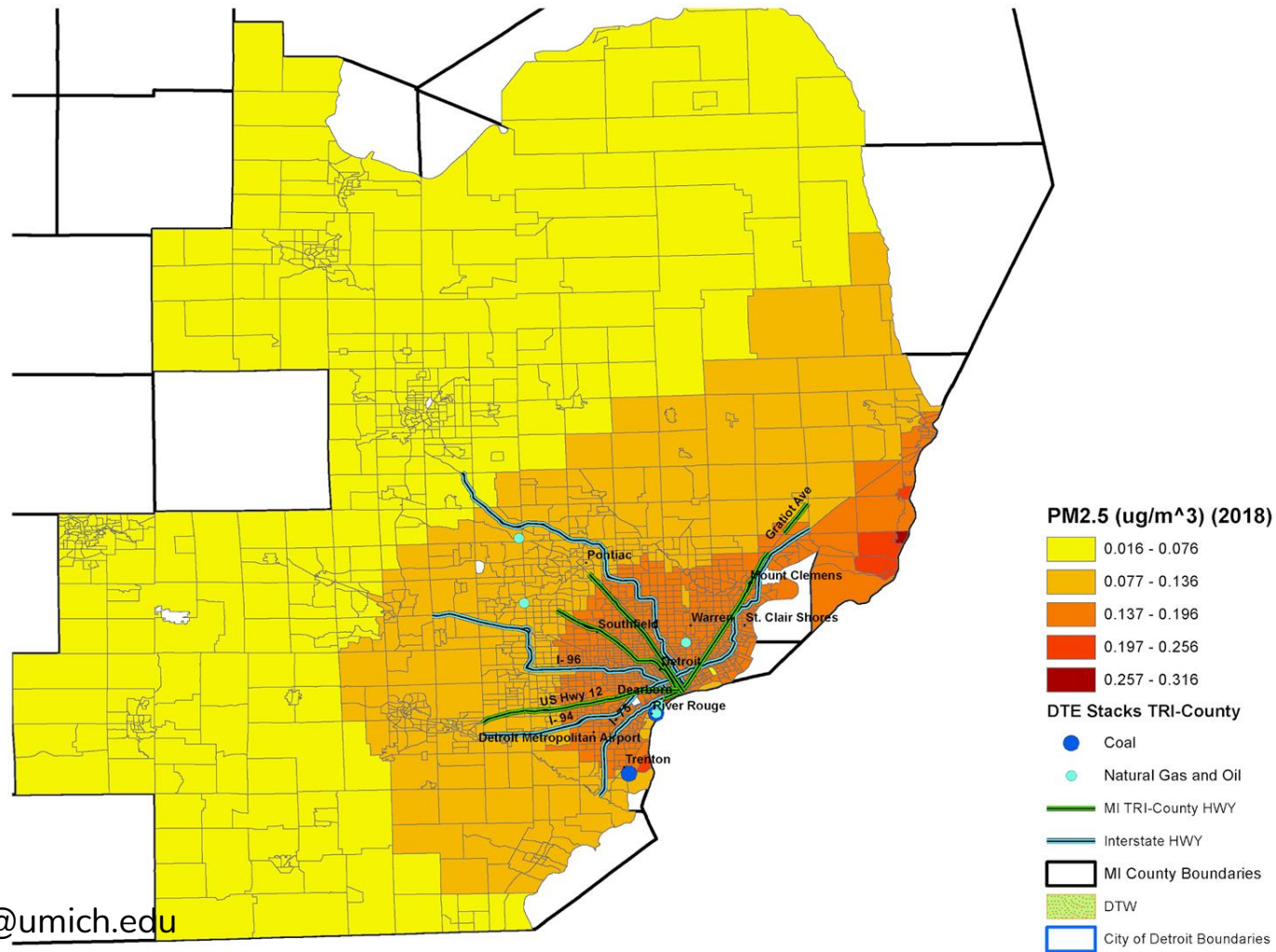
Annual health costs per person associated with extreme heat are higher in areas with *less residential air conditioning* availability



DTE Air Pollution Exposure

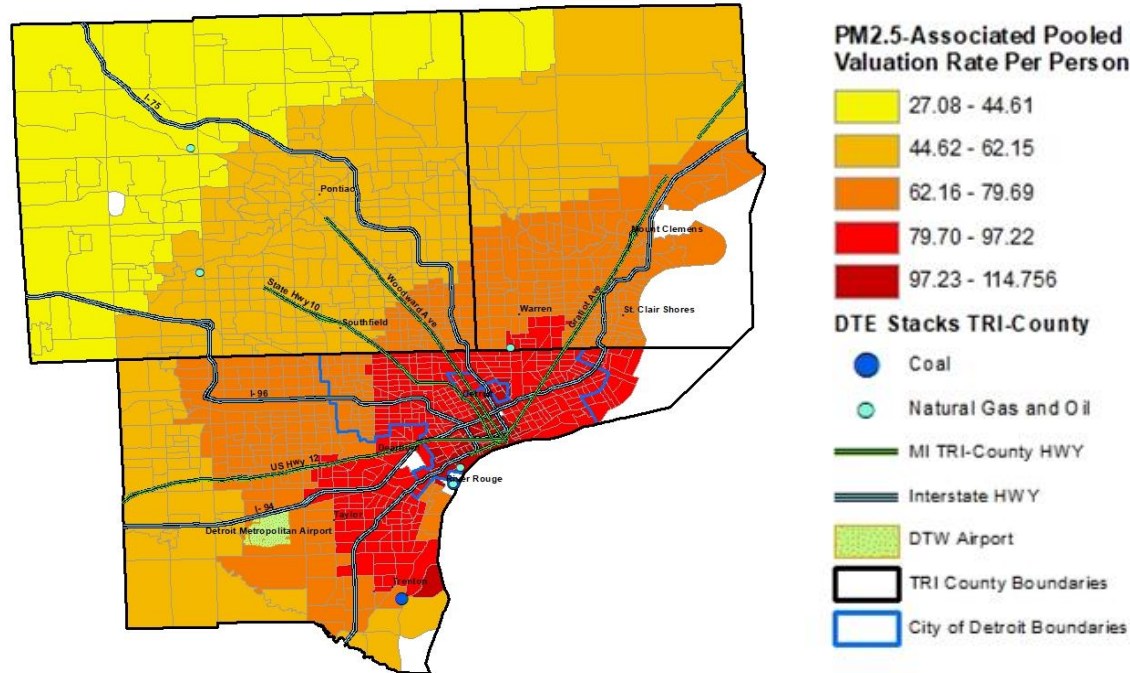


DTE Air Pollution Exposure across DTE Service Area

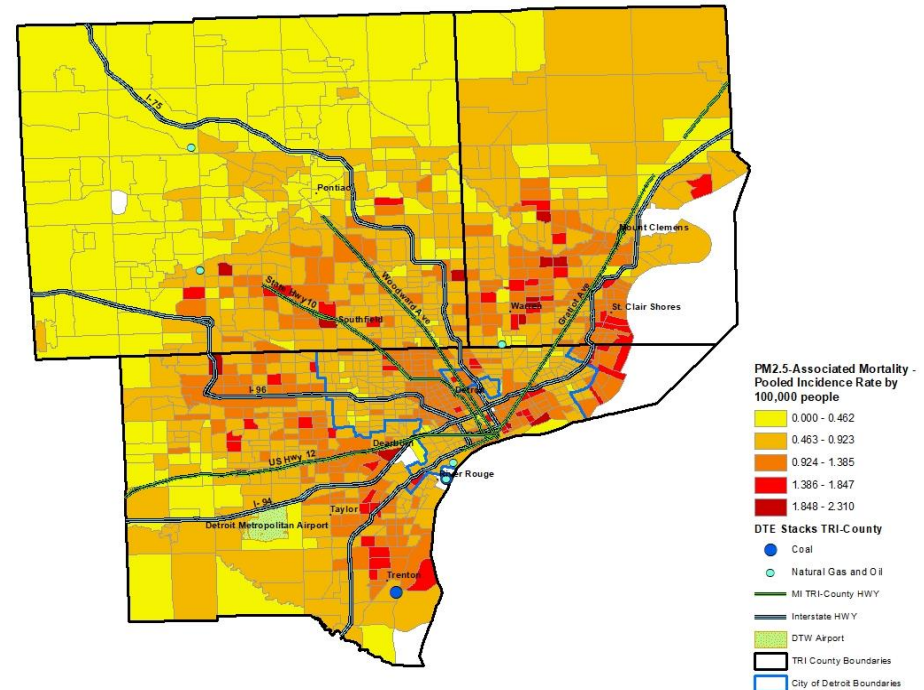
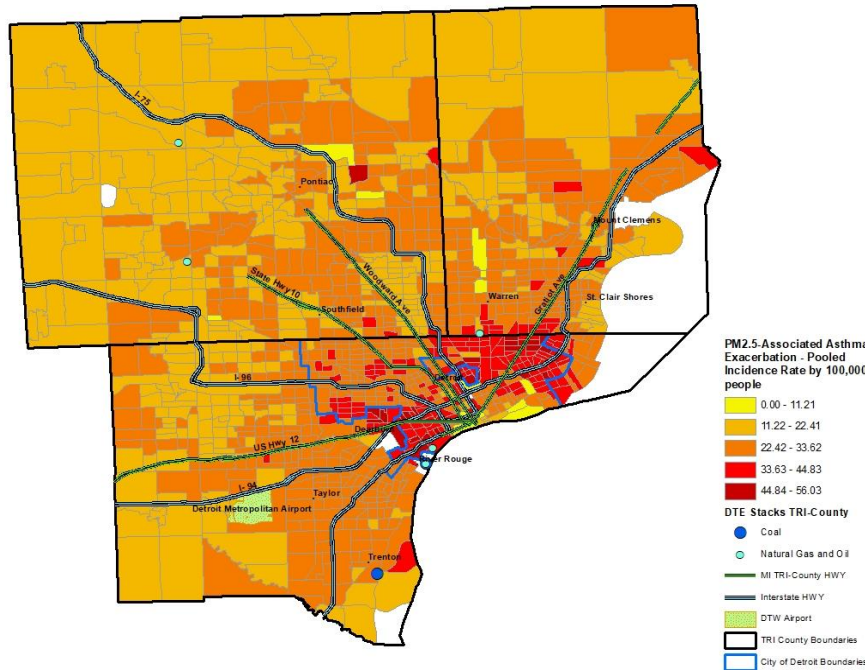


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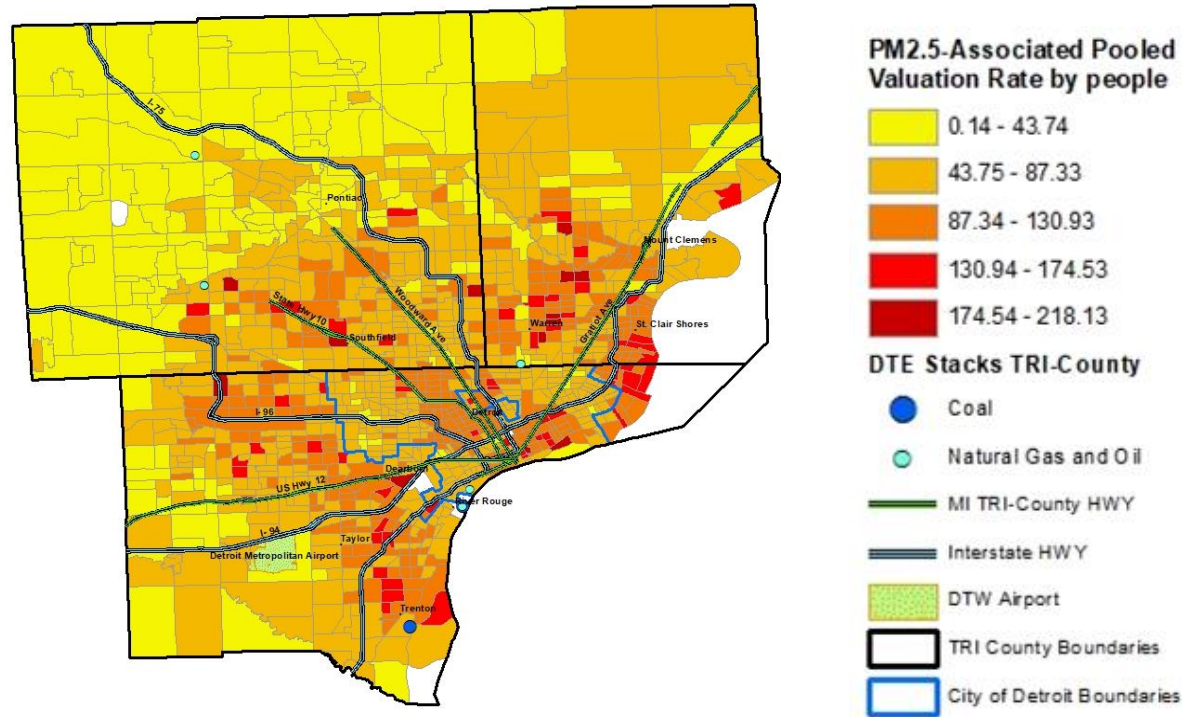
Annual Health Costs per Person Attributable to Air Pollution from DTE Power Plants - Age Standardized



Annual Rates of Asthma Symptom Days and Mortality Attributable to Air Pollution from DTE Power Plants

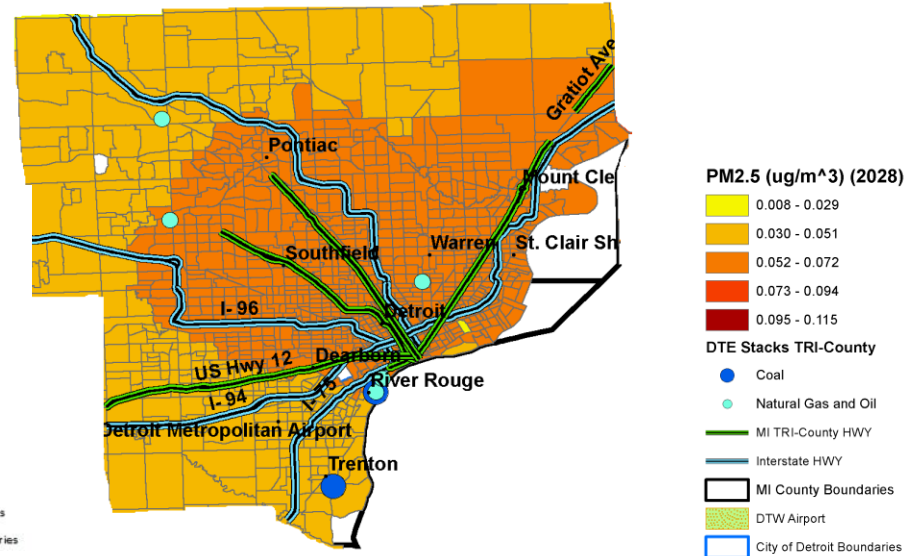
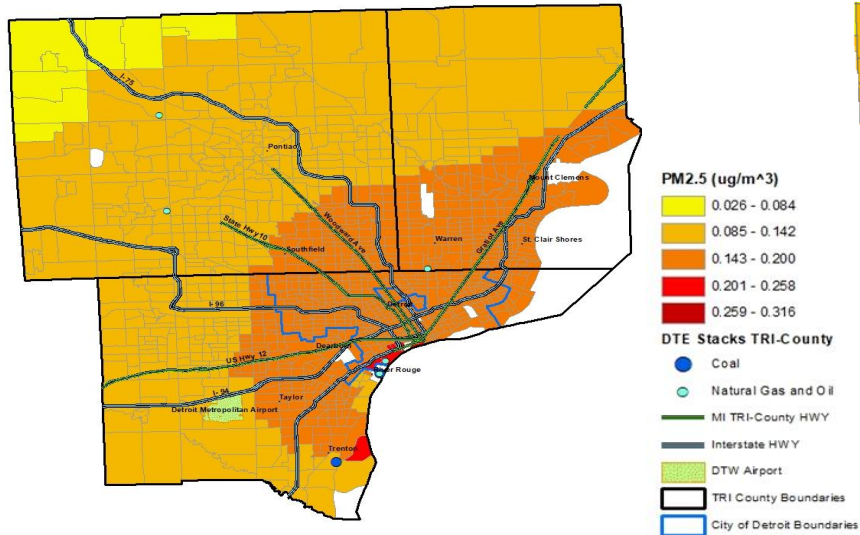


Annual Health Costs per Person Attributable to Air Pollution from DTE Power Plants

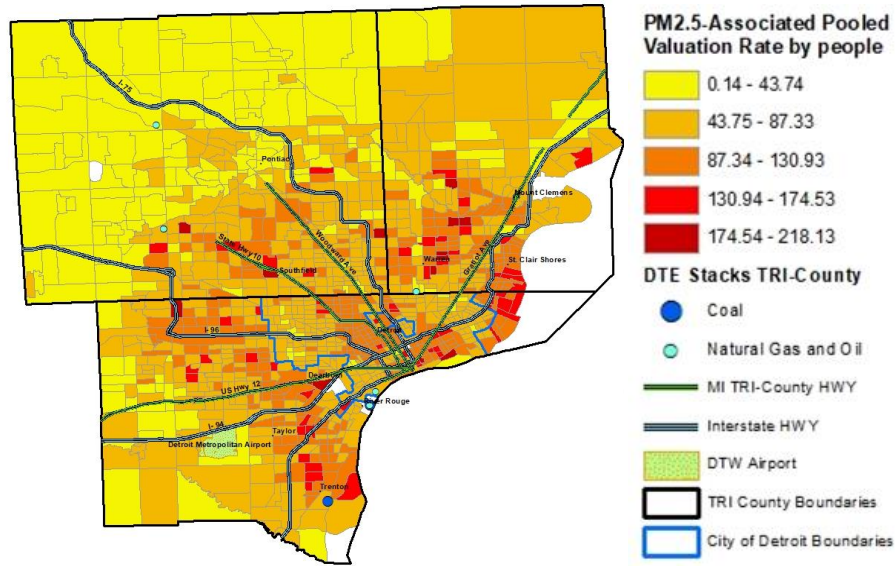


DTE Air Pollution Exposure across DTE Service Area

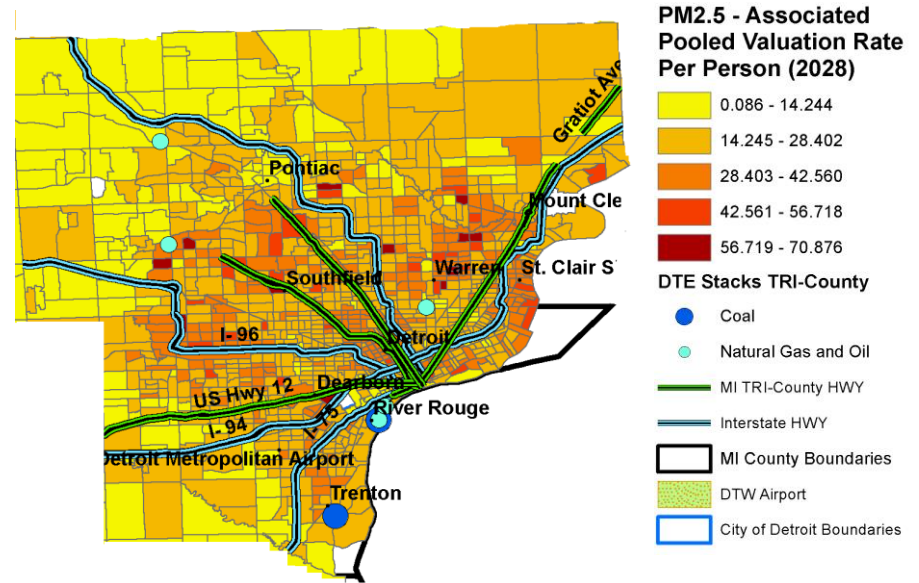
DTE Air Pollution Exposure across DTE Service Area Following Closure of River Rouge, St. Clair, and Trenton Coal Plants



Annual Health Costs per Person Attributable to Air Pollution from DTE Power Plants



Annual Health Costs per Person Attributable to Air Pollution from DTE Power Plants Following Closure of River Rouge, St. Clair, and Trenton Coal Plants





Summary: Health Impact Assessment of DTE IRP

The costs of energy production, including the health impacts of pollution generated, fall disproportionately in low to moderate income neighborhoods.

Those neighborhoods are disproportionately African American and Latinx.

The health burden - and associated costs - also fall more heavily on the youngest and the oldest members of DMA communities.



May 2020 Recommendations

- Health Impact Assessments should be required components of IRPs
- Affordability assessments should include health costs of pollution, and costs of climate change, associated with fossil fuels
- Safety assessments should include consideration of health impacts
- When uncertain about health impacts, cleaner, safer forms of energy production (e.g., solar) should be prioritized.



Sept 2020 - Gov Whitmer orders MPSC to include Health and EJ in utility planning

The Department (MPSC) must evaluate the potential impacts of proposed energy generation resources and alternatives to those resources, and also evaluate whether the IRPs filed by the utilities are consistent with the emission reduction goals included in this Directive. For advisory opinions relating to IRPs under both MCL 460.6s and MCL 460.6t, the Department **must include considerations of environmental justice and health impacts** under the Michigan Environmental Protection Act. The Commission's analysis of that evidence must be conducted in accordance with the standards of the IRP statute and the filing requirements and planning parameters established thereto.



March 2021 - Utilize EJ Screening tool to assess and *redress* race, income, and geography-based disparities of energy benefits & burdens

1. Air pollution
2. Affordability & shutoffs
3. Access to renewable resources (e.g. community solar)
4. Energy efficiency
5. Safety & reliability



Toward Energy Justice

- Health Impact Assessments are a tool to rectify energy injustice and environmental injustice
- Energy Justice means benefits and burdens distributed without respect to race/income/etc., and burdens are reduced as much as possible overall
- Without policy intervention, our profit-driven, monopoly energy system, regulated by MPSC, has little accountability to impacted communities and does not advance energy justice alone.
- Most impacted communities, as seen from HIA, must “wield power” in the decision-making process and utilize tools to do so in their absence,.



Links to resources

CAPHE's Public Health Action Plan: <http://caphedetroit.sph.umich.edu/>

CAPHE's Resource Manual: <http://caphedetroit.sph.umich.edu/resource-manual-cover-page-with-full-manual/>

Emissions and health impacts in DMA: <http://caphedetroit.sph.umich.edu/wp-content/uploads/2016/10/Resource-Manual-5.0-Pollutant-sources-Website-Version-10-4-16.pdf>

Planet Detroit - Weekly, local environmental news: <https://planetdetroit.org/>

Michigan Environmental Justice Coalition: <https://www.michiganej.org/>

Support Work for Me DTE: <https://work4medte.good.do/covid-19/MPSC/>



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Upcoming M-LEEaD Webinars: Research Addressing Community-Identified Environmental Health Priorities

March 23, 2021 Water and Health

March 30, 2021 Climate Hazards, Housing and Health in Detroit

April 13, 2021: Environmental Racism and Environmental Justice

April 20, 2021: Community Action to Promote Healthy Environments

