



Institute of Global Sustainability  
Energy

# Energy Justice in Massachusetts

~ Vedika Srivastava



## Energy Insecurity

**Inability to access or afford reliable and sufficient energy services.**



Forgoing Basic  
Necessities



Keeping Home at  
Unhealthy  
Temperature



Receiving  
Disconnection  
Notice



Broken Heating or  
Cooling Units



Receiving Energy  
Assistance



Medical Attention  
needed due to  
extreme home  
temperatures



## Energy Burden

**Percentage of household income spent on energy costs (excluding transportation)**



Annual Electricity  
Expenditure



Annual Gas  
Expenditure



Annual Other Fuel  
Expenditures

# Data Sources & Methodology



## RECS Dataset

Residential Energy Consumption Survey

National survey on residential energy consumption, informing policies and promoting sustainability through comprehensive data on usage patterns and expenditures.



## Justice40 Dataset

Address energy disparities and environmental injustices by allocating 40% of federal clean energy investments to disadvantaged communities.

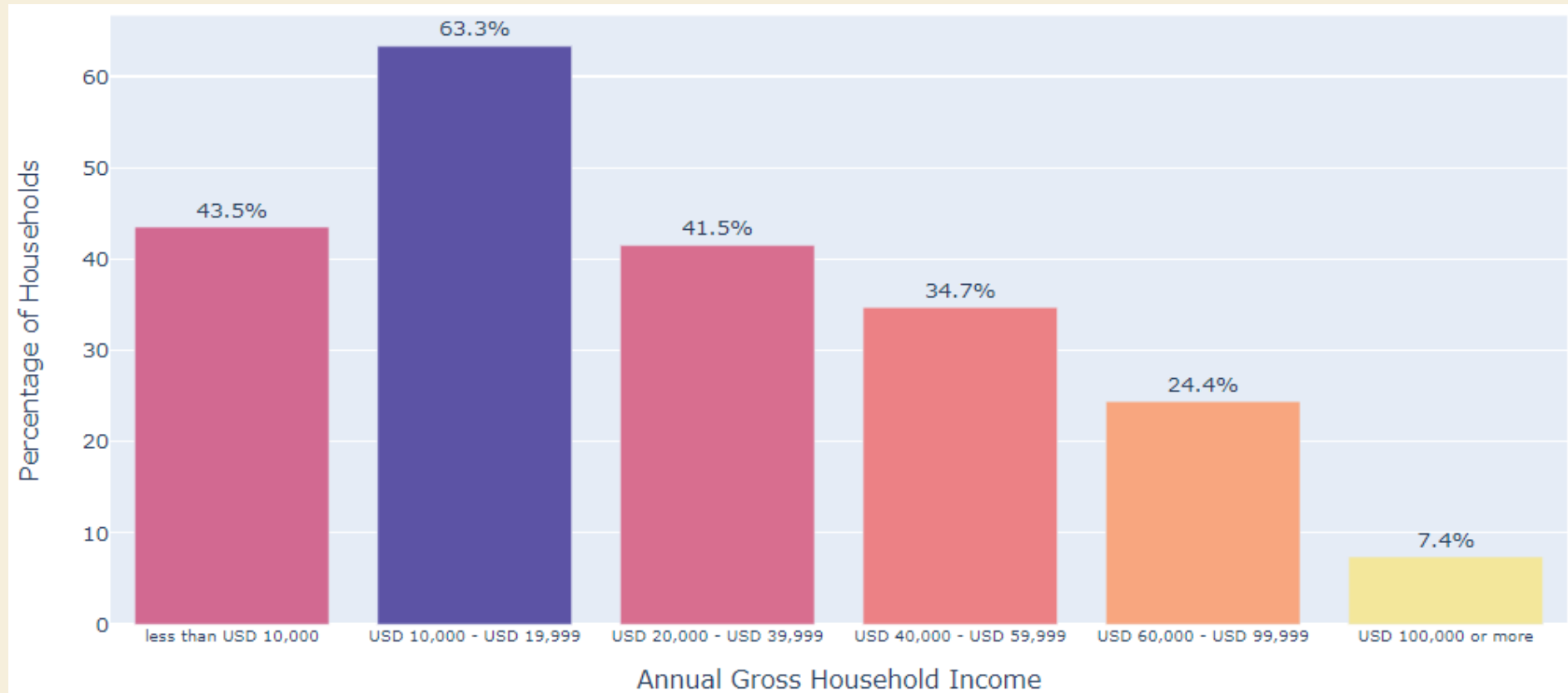


## LEAD Dataset

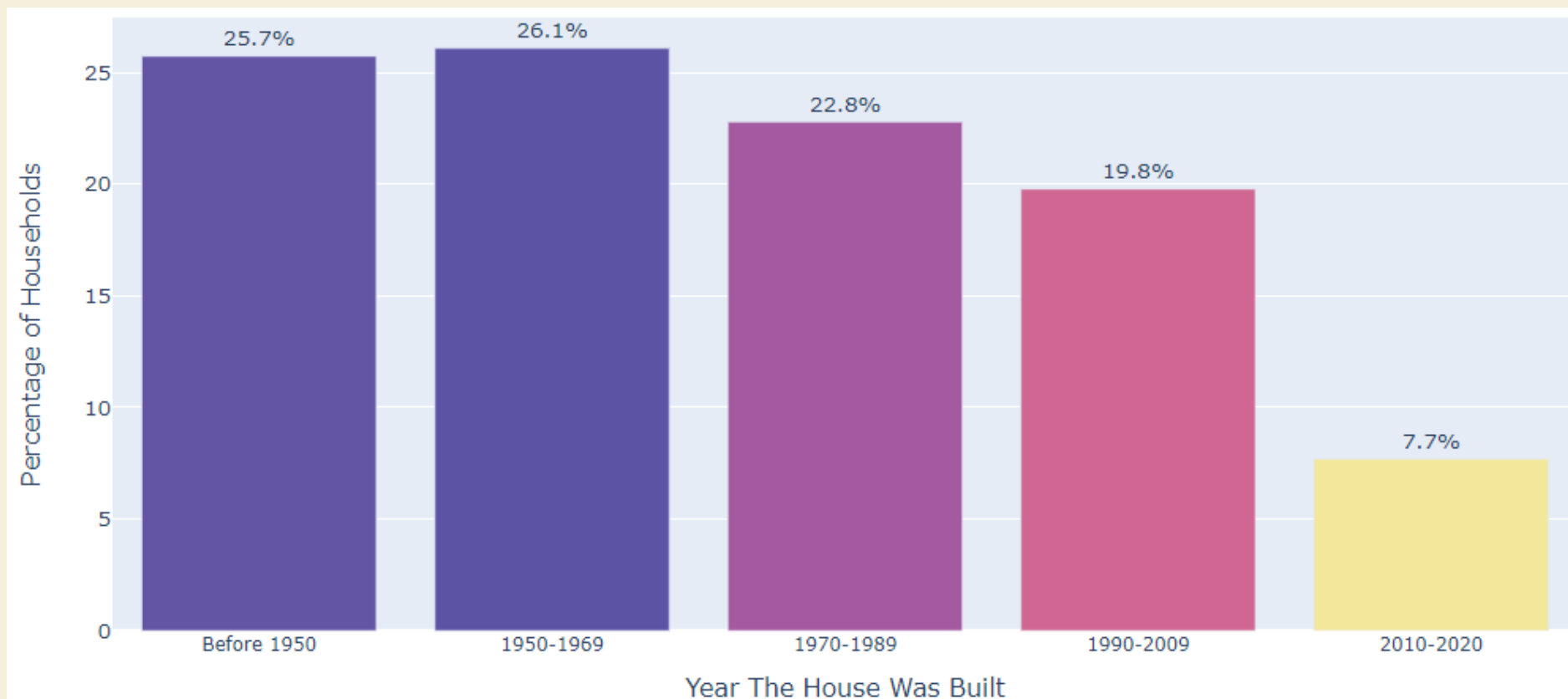
Low-income Energy Affordability Data Tool

Geospatial insights into energy burdens for low-income households, aiding policymakers and stakeholders in addressing energy affordability challenges nationwide.

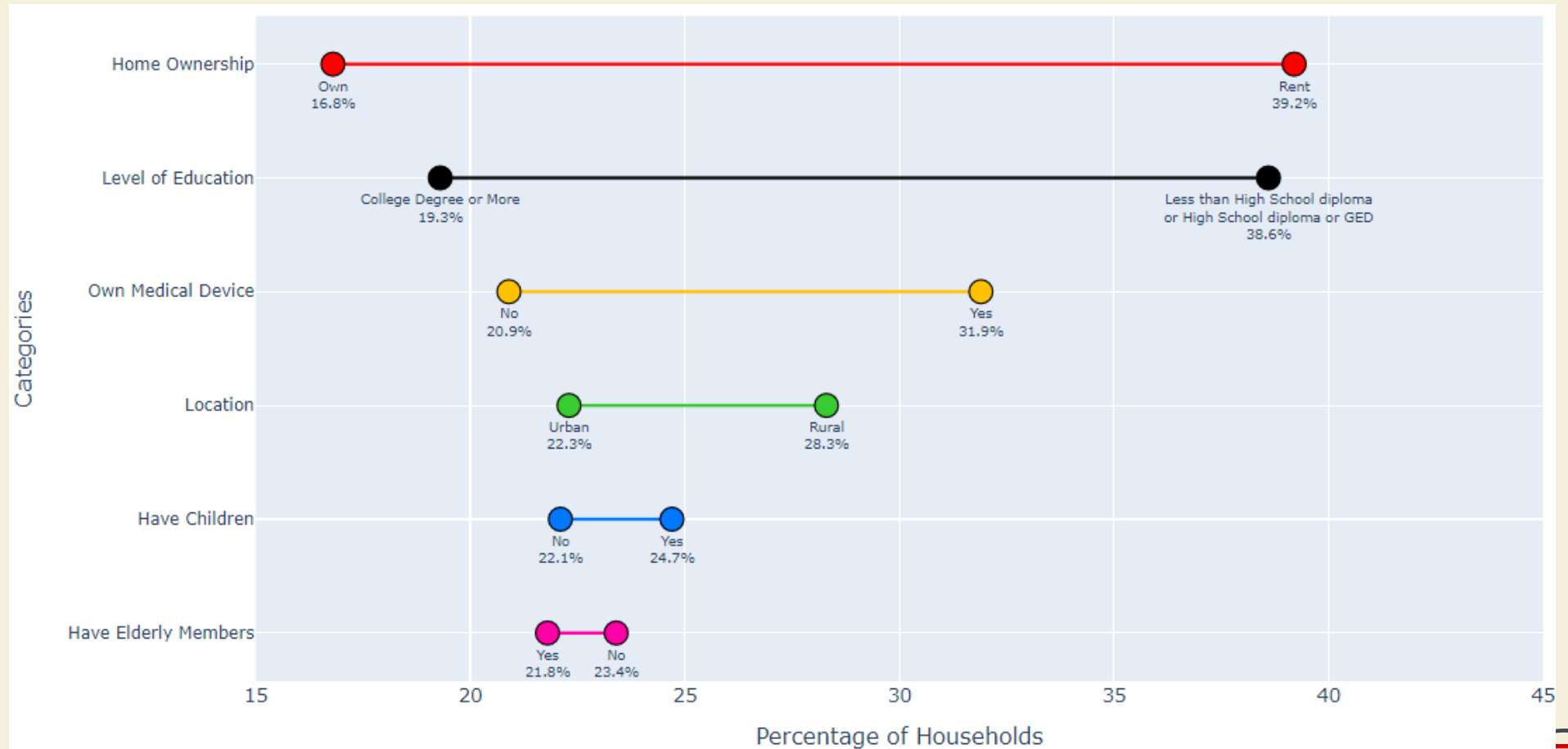
# MA Energy Insecurity by Income Class



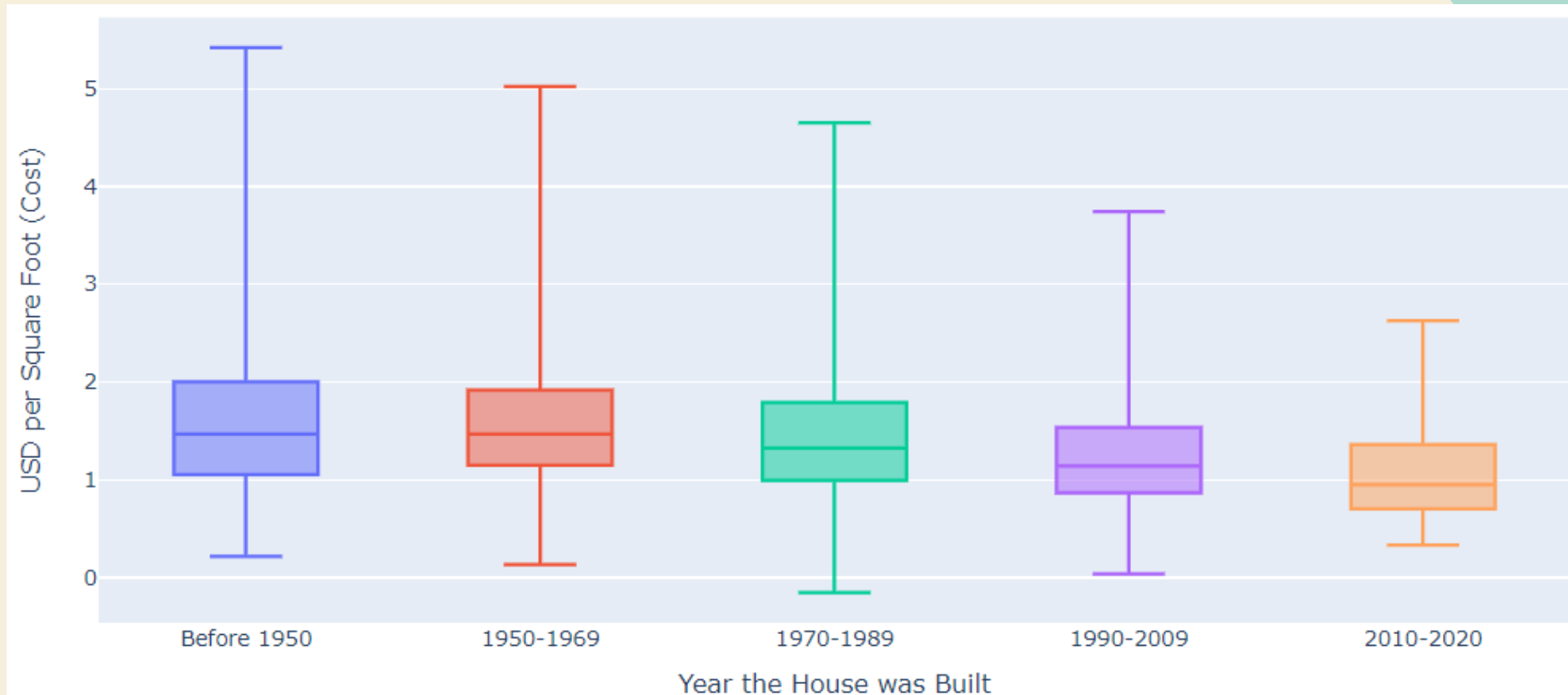
# MA Energy Insecurity by Home Age



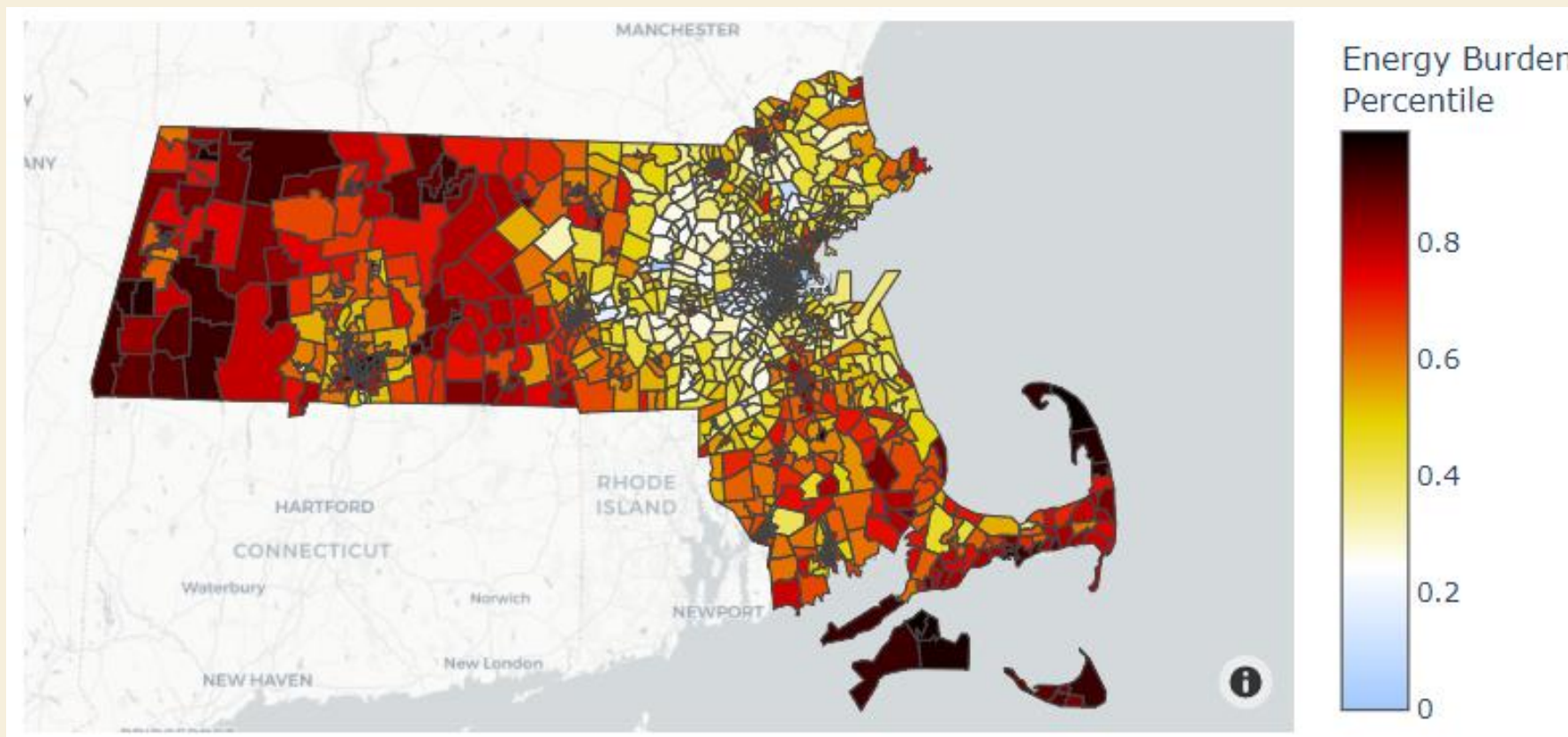
# MA Energy Insecurity: Social Vulnerability



# Energy Cost by Age of Home

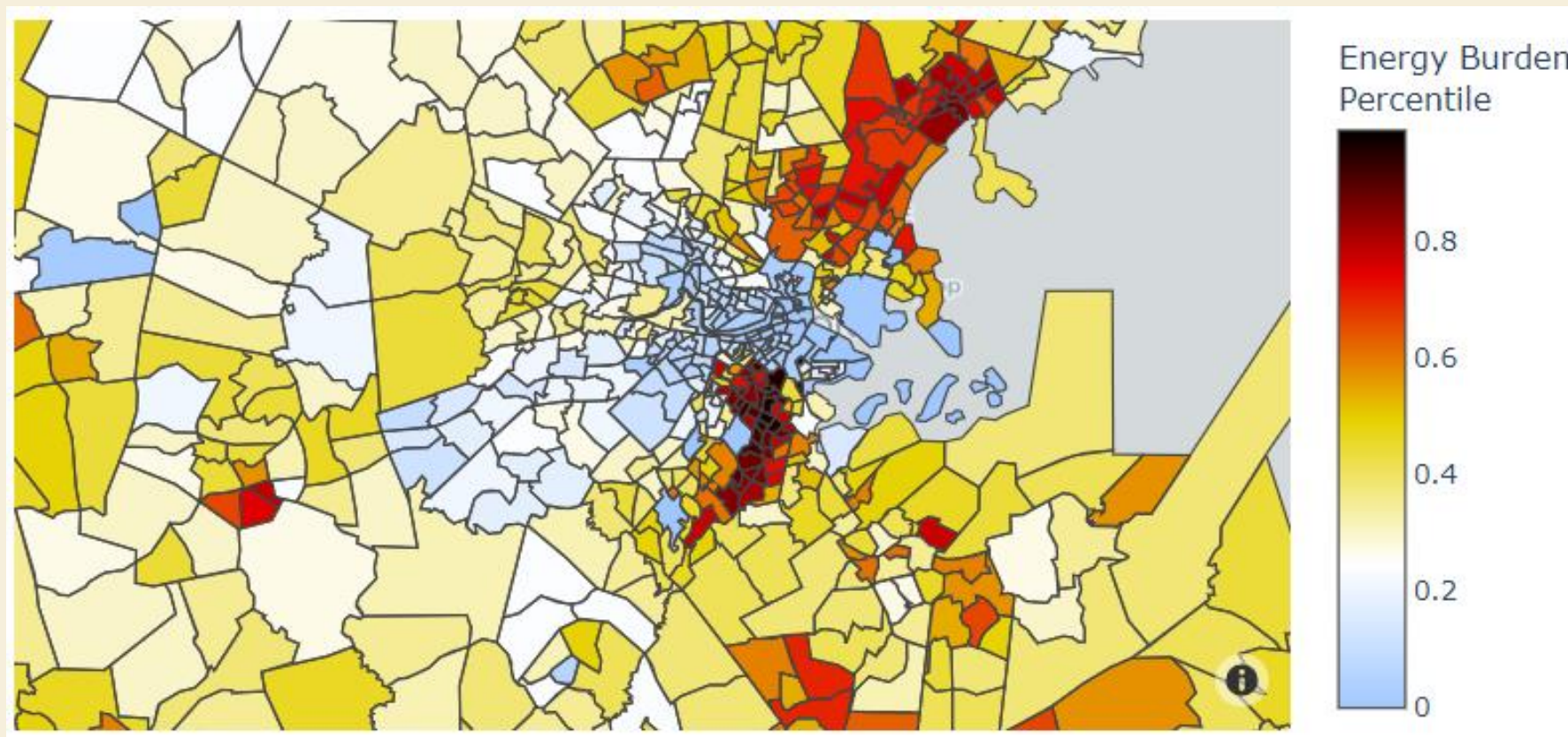


# MA Energy Burden (2018)

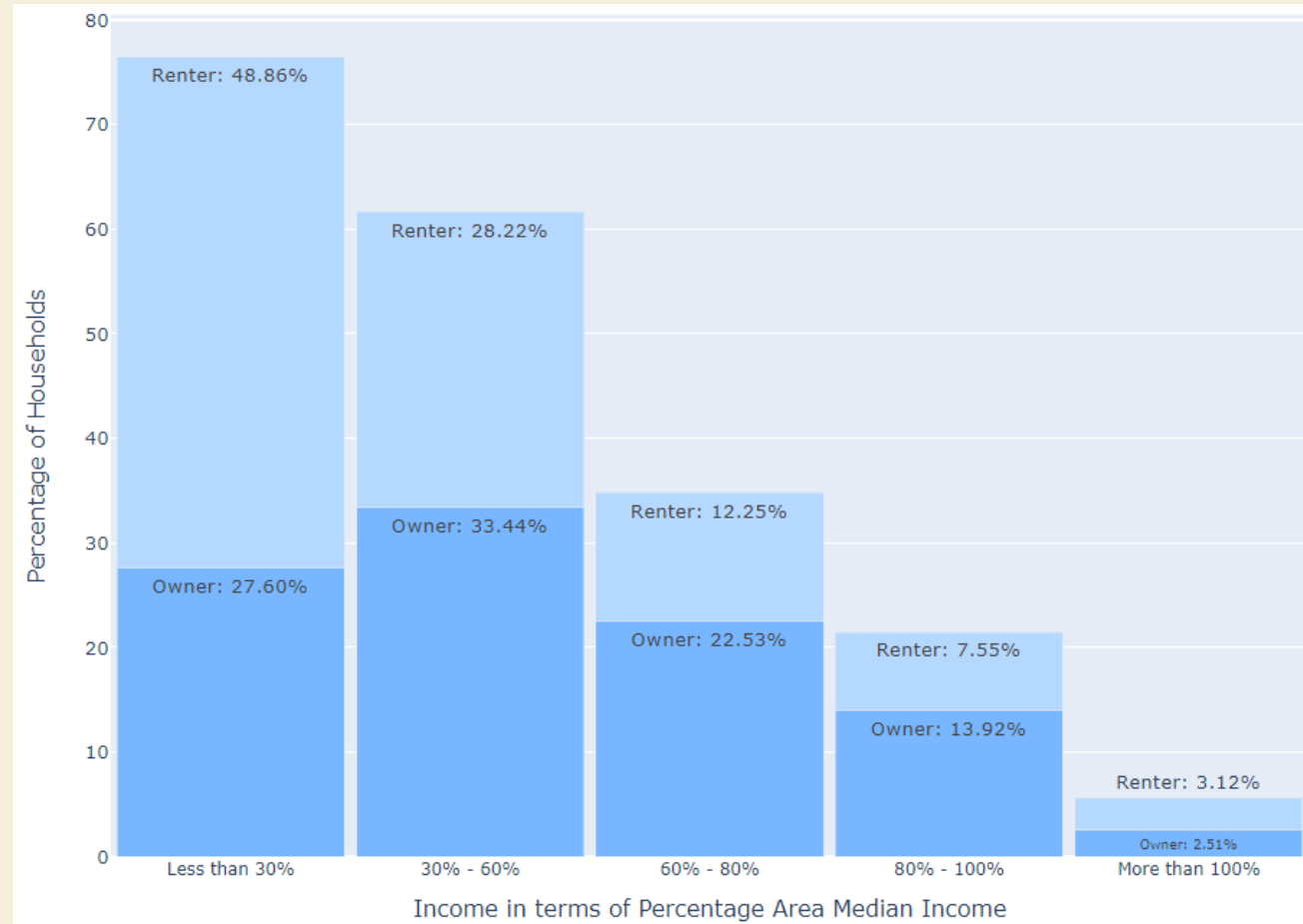




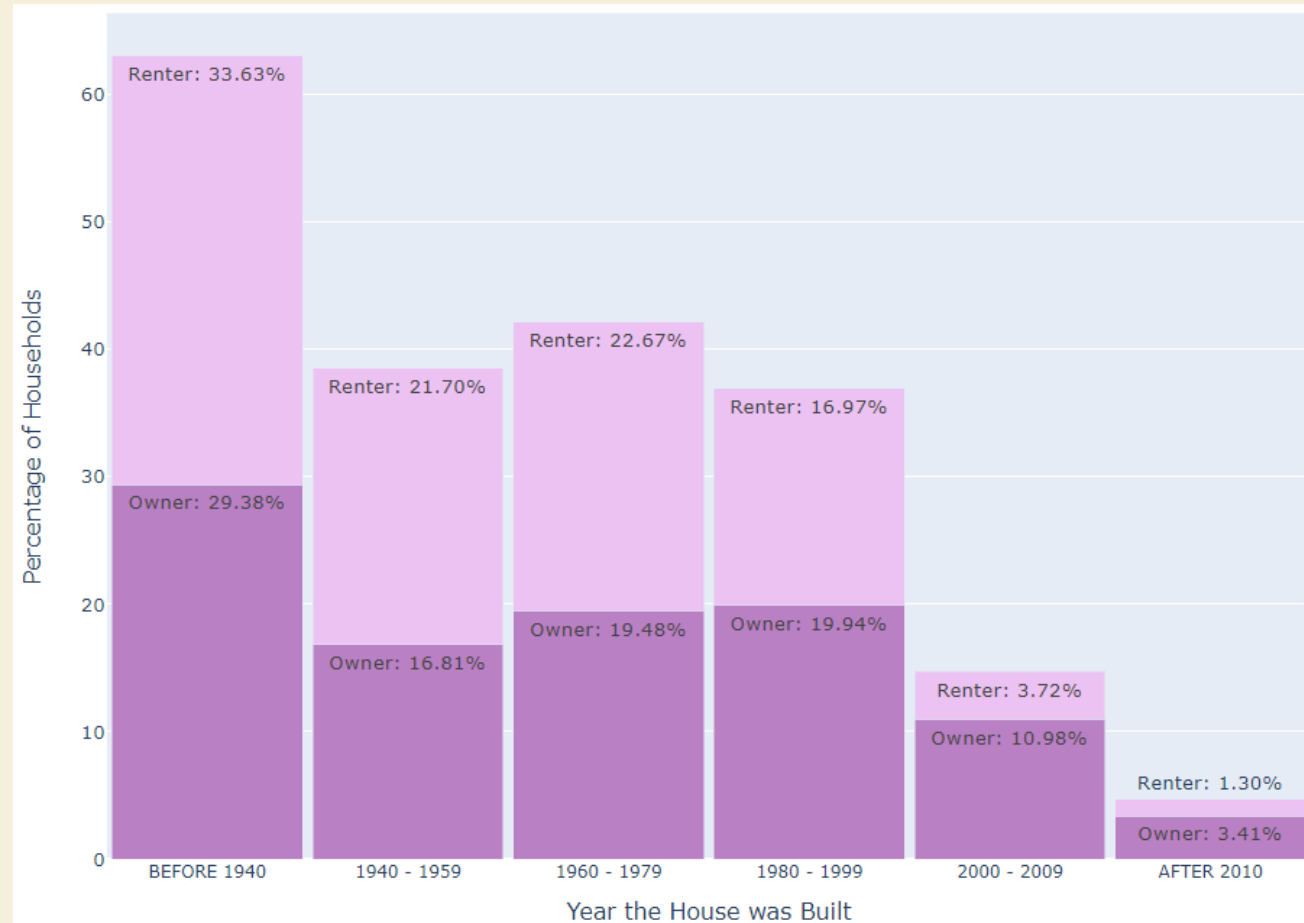
# Eastern MA Energy Burden (2018)



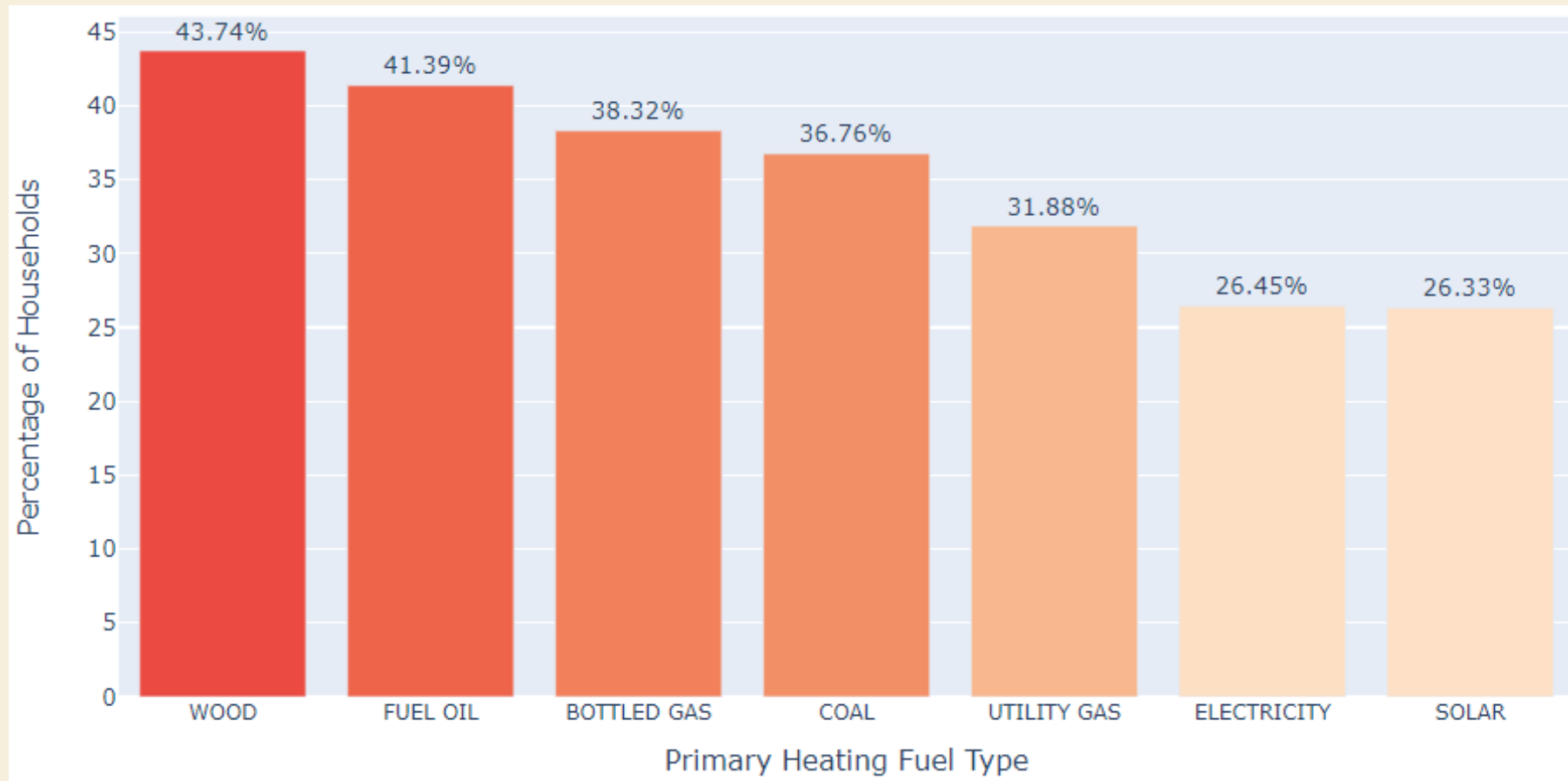
# MA High Energy Burden: Income and Housing



# MA High Energy Burden: Home Age and Housing



# MA High Energy Burden: Fuel Type



# Key Takeaways

- **High-Income, High Insecurity:**  
Over 22% of respondents in high-income Massachusetts face energy challenges impacting their basic needs and home comfort.
- **Renters Hit Hardest:**  
Renters bear a disproportionate burden, with 25.97% experiencing energy insecurity, calling for targeted support and policies.
- **Income Matters:**  
Income disparities play a crucial role, with 73.83% of respondents with an Area Median Income of 0-30% facing the highest energy insecurity.

# Limitation

- Limited Household Representation
- Lack of Locational Data
- Time-Series Data Gap
- Variation in Data Collection

# Future Work

- Integrating New Data Sources
- Leveraging Statistical Inference
- Intersectional Approach

# Acknowledgement

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# THANK YOU!!