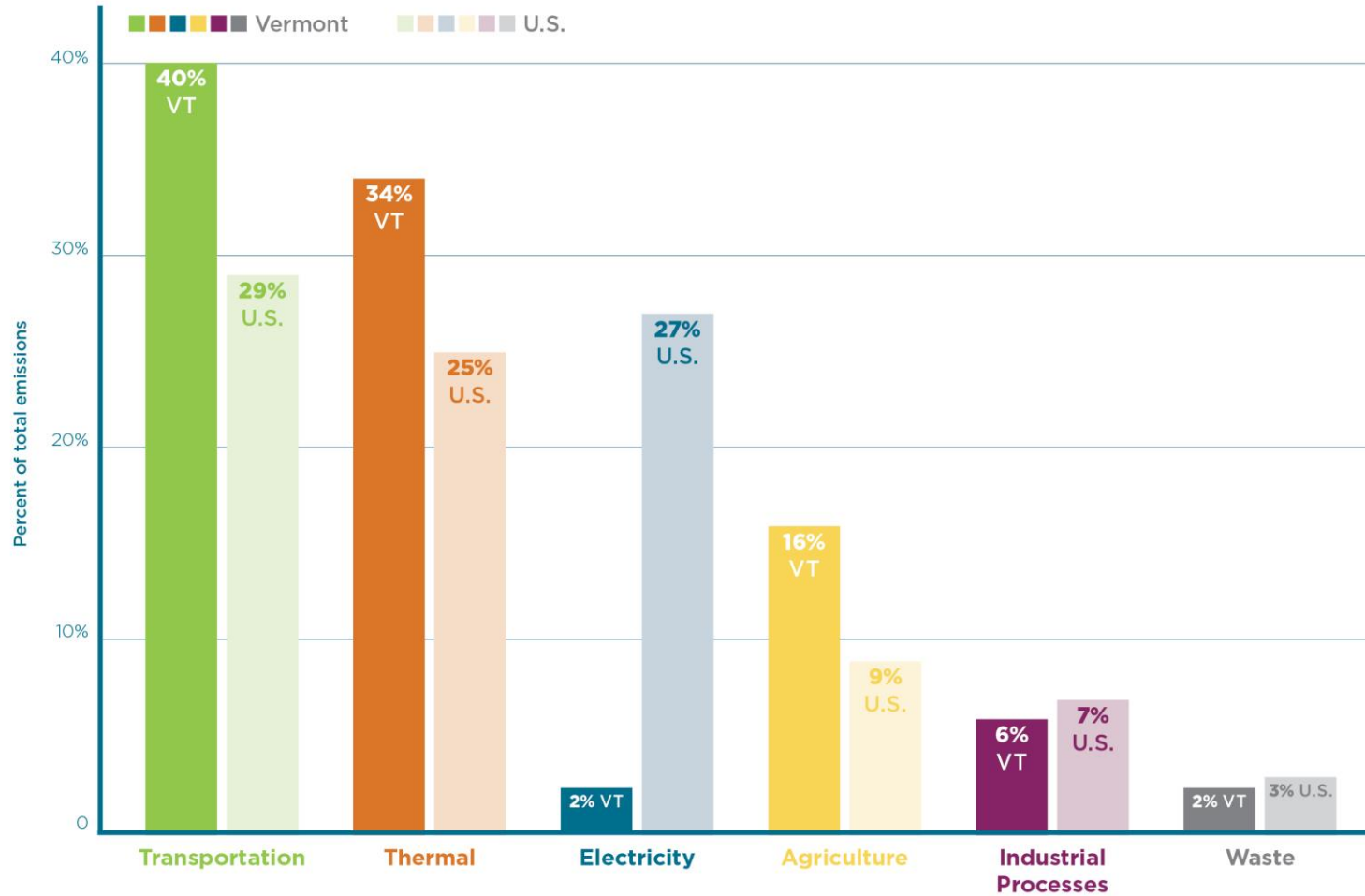


CLIMATE CATALYST INNOVATION PROJECT

Prioritizing outreach to those who could benefit the most from
weatherization and electrification opportunities

GHG emissions by sector, U.S. vs VT (2018)

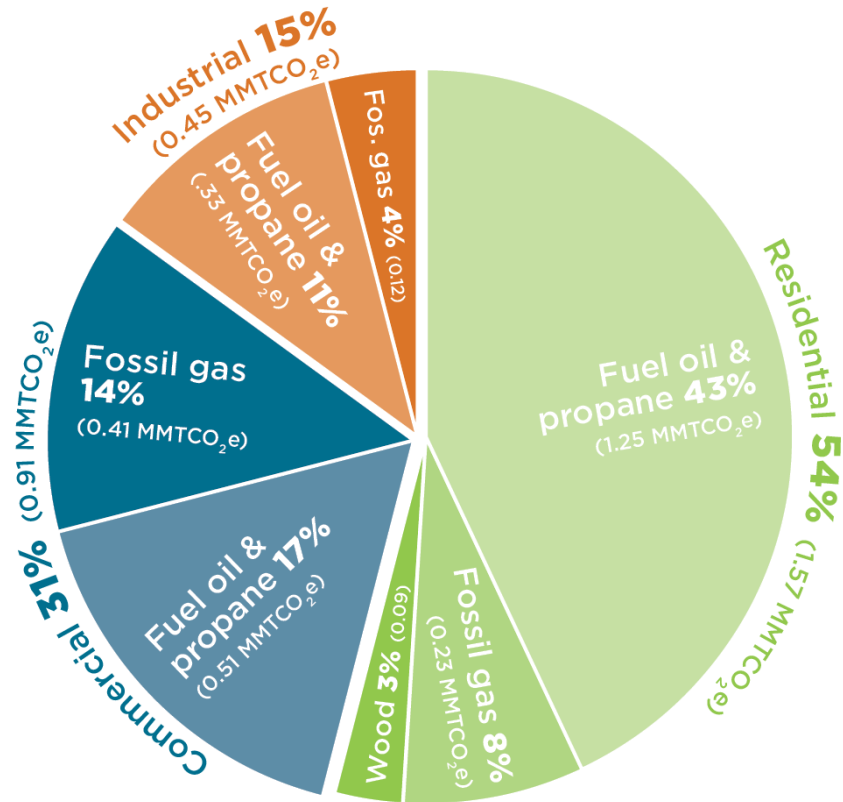


Source: Vermont Agency of Natural Resources, Vermont Greenhouse Gas Emissions Inventory and Forecast (1990-2017), 2021.; U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018, 2021. Note: Due to time lags in state and federal data reporting, 2018 is the latest data available.



GHG EMISSIONS BY SECTOR

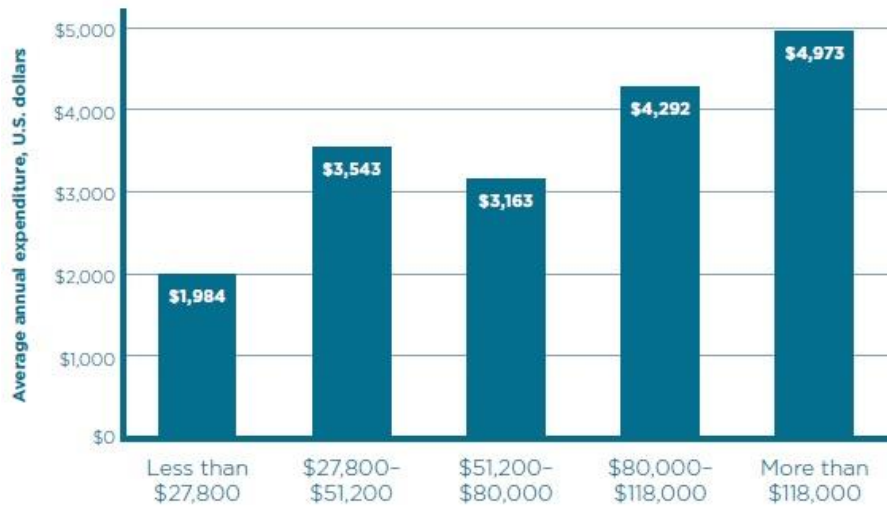
Vermont thermal GHG emissions by sector and fuel type



Source: Vermont Agency of Natural Resources, Vermont Greenhouse Gas Emissions Inventory and Forecast (1990-2017), 2021. There is a small amount of emissions from wood heating in the commercial sector, but it is too small to show up on this pie chart

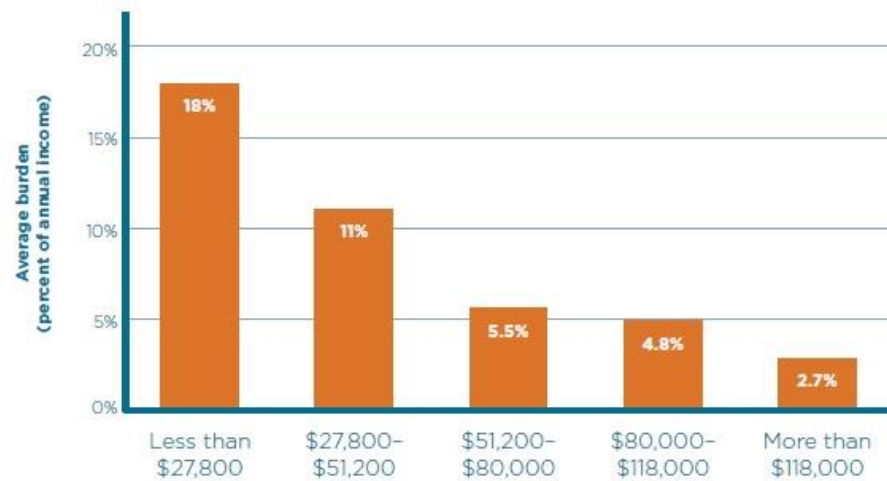
THERMAL EMISSIONS BY SECTOR

Combined heating and electricity expenditures in Vermont, by income quintile



Source: U.S. Census Bureau, American Community Survey, 2018.

Combined heating and electricity energy burden in Vermont, by income quintile



Source: U.S. Census Bureau, American Community Survey, 2018.

ENERGY BURDEN

New policies and programs must help reduce energy burdens

Emissions reduction by household income (clean grid)

- Space Heater Natural Gas
- Water Heater Electric Resistance
- Water Heater Natural Gas
- Space Heater Electric Resistance
- Space Heater Fuel Oil
- Clothes Drying Electric Resistance
- Space Heat Propane
- Cooking Natural Gas
- Water Heater Fuel Oil
- Water Heat Propane
- Clothes Drying Natural Gas
- Cooking Propane
- Clothes Drying Propane

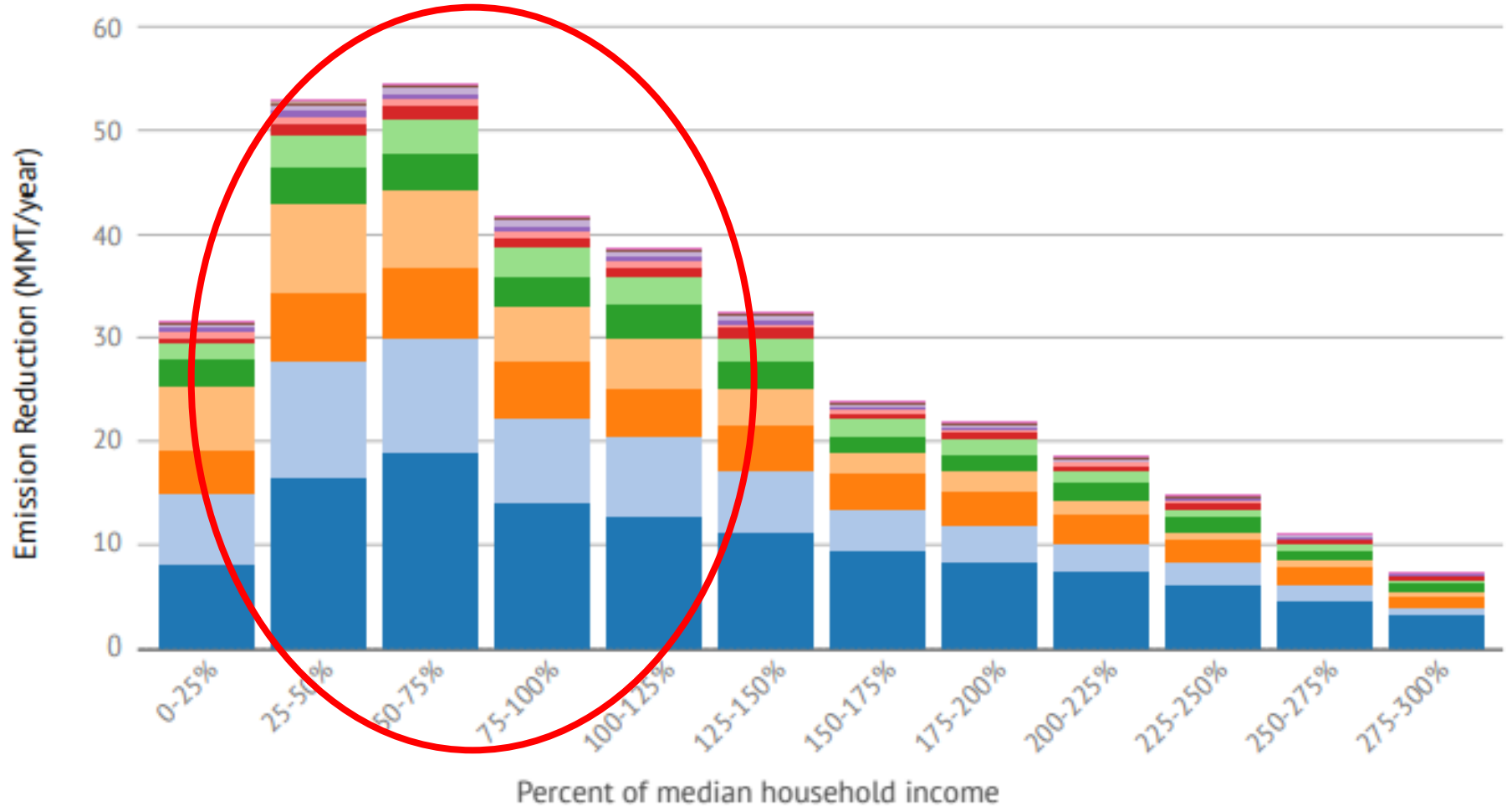


Figure 4: *The majority of emissions reduction potential can be realized by assisting households under the median income to upgrade appliances to modern electric versions.*

Climate change is rightly characterized as a global threat, but in many ways the key to addressing it lies in our local communities. Households, and the decisions they make, account for approximately 42 percent of energy-related greenhouse gas emissions in the United States. Reaching people where they live requires more than just aspirational goals or even generous funding; it requires solutions that will speak to them “at the kitchen table” as well as coordinated strategies for driving results. It also means delivering benefits directly to those households most in need.

- *Rewiring Communities: A Plan to Accelerate Climate Action and Environmental Justice By Investing in Household Electrification at the Local Level.* Adam Zurofsky, Jeffrey Schub, John Rhodes, Tony Curnes and Sam Calisch.

**ACCELERATE CLIMATE
ACTION BY INVESTING
IN HOUSEHOLD
ELECTRIFICATION AT
THE LOCAL LEVEL**

- The IRA (and other existing programs in Vermont) provides huge opportunities to reduce thermal emissions through financial incentives for heat pumps and weatherization.
- Williston received funding under the Climate Catalyst Innovation Grant program to conduct targeted outreach to provide information about IRA incentives to low and moderate-income households with outdated heating systems and/or homes in need of weatherization. How to most effectively leverage that funding is yet to be determined.
- **By connecting people most in need with the available resources, the proposed project aims to get more households to switch from fossil fuel heating and hot water systems to electrified heating and hot water systems while ensuring that Williston residents who are most burdened by energy costs are prioritized for help.**

PROJECT OVERVIEW

Task

1. Develop structures database
2. Develop prioritization model
3. Identify high-priority residences to target
4. Coordinate with partners
5. Develop outreach plan
6. Implement outreach plan
7. Summarize and report results of outreach efforts

TASK TIMELINE

Where are we currently?

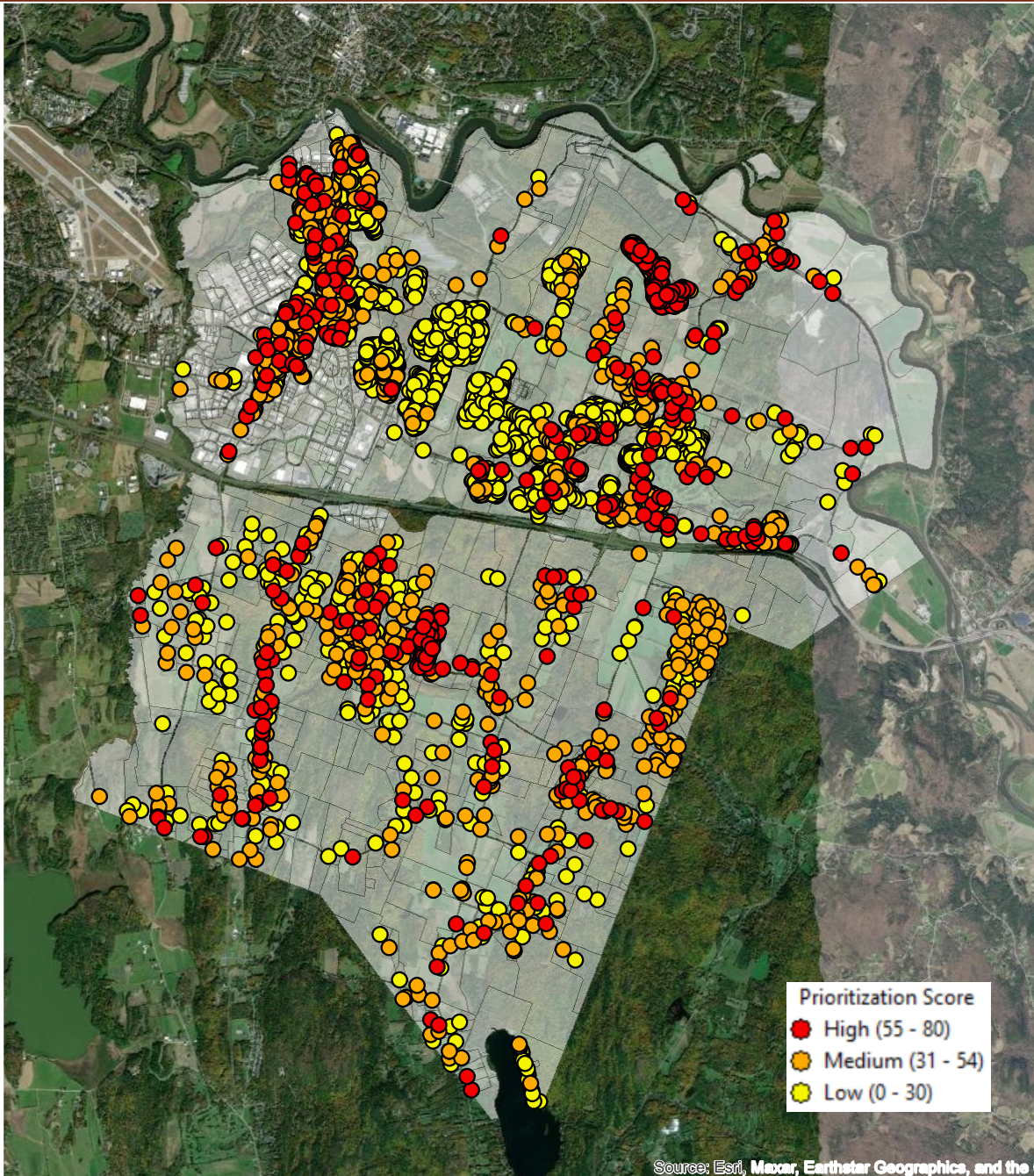
<u>Scoring Factors</u>	<u>Total Points</u>
------------------------	---------------------

- | | |
|--|----|
| 1. Energy Burden – energy costs as a percentage of income | 30 |
| 2. Emissions Intensity of current heating source | 30 |
| 3. Home Assessed Value (to make sure LMI households are prioritized) | 20 |

Total Score	80
--------------------	-----------

- | | |
|--|----|
| 4. Opportunity Score – added to total score | 10 |
| a) Clusters of high-priority homes may present cost advantages to a contractor | |
| b) Homes with electric baseboard heat will likely support electric loads of heat pumps and owners are highly motivated to switch | |
| c) Homes with solar arrays will help defray additional electric expense | |

DEVELOPING A PRIORITIZATION MODEL

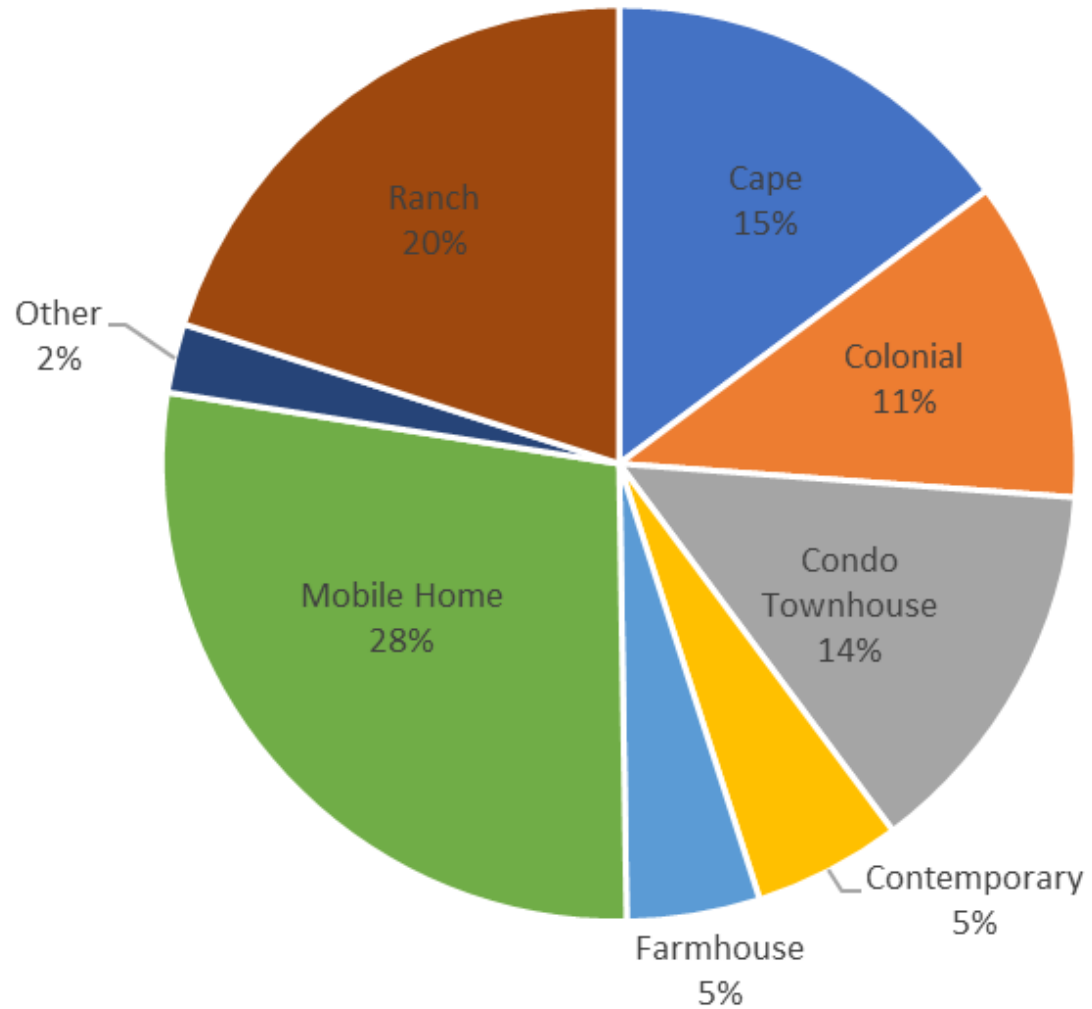


Source: Esri, Maxar, Earthstar Geographics, and the C

MODEL RESULTS

OVERALL PRIORITIZATION

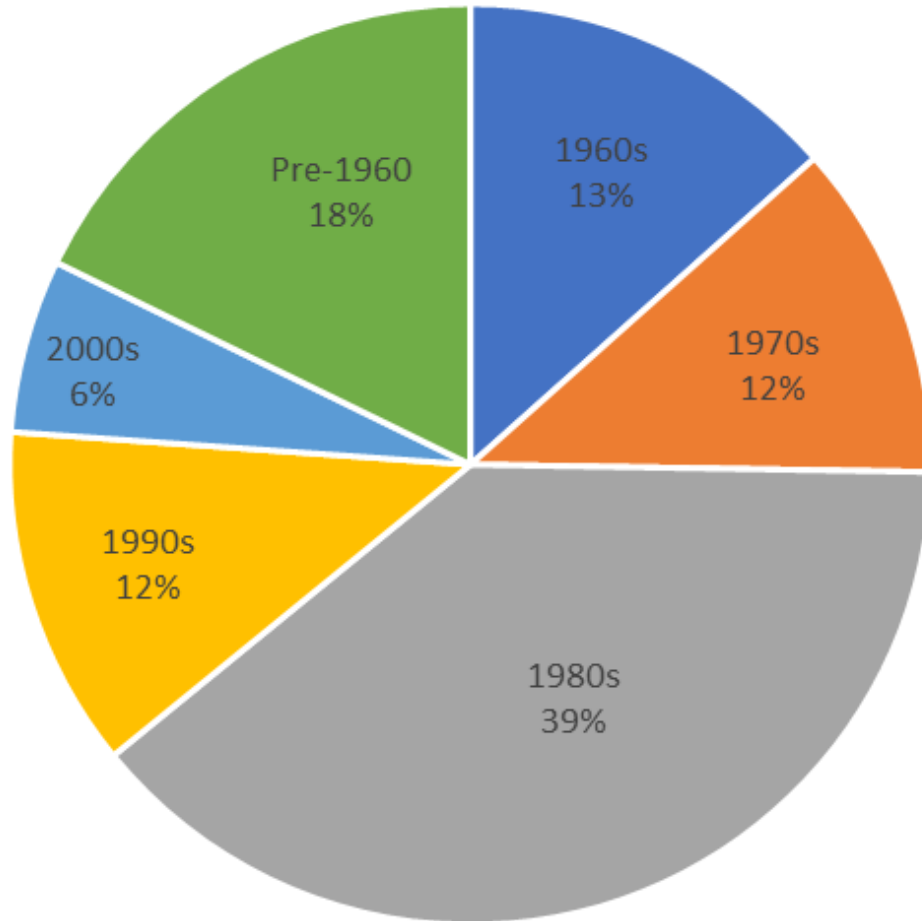
Building Type



MODEL RESULTS

DWELLING TYPE

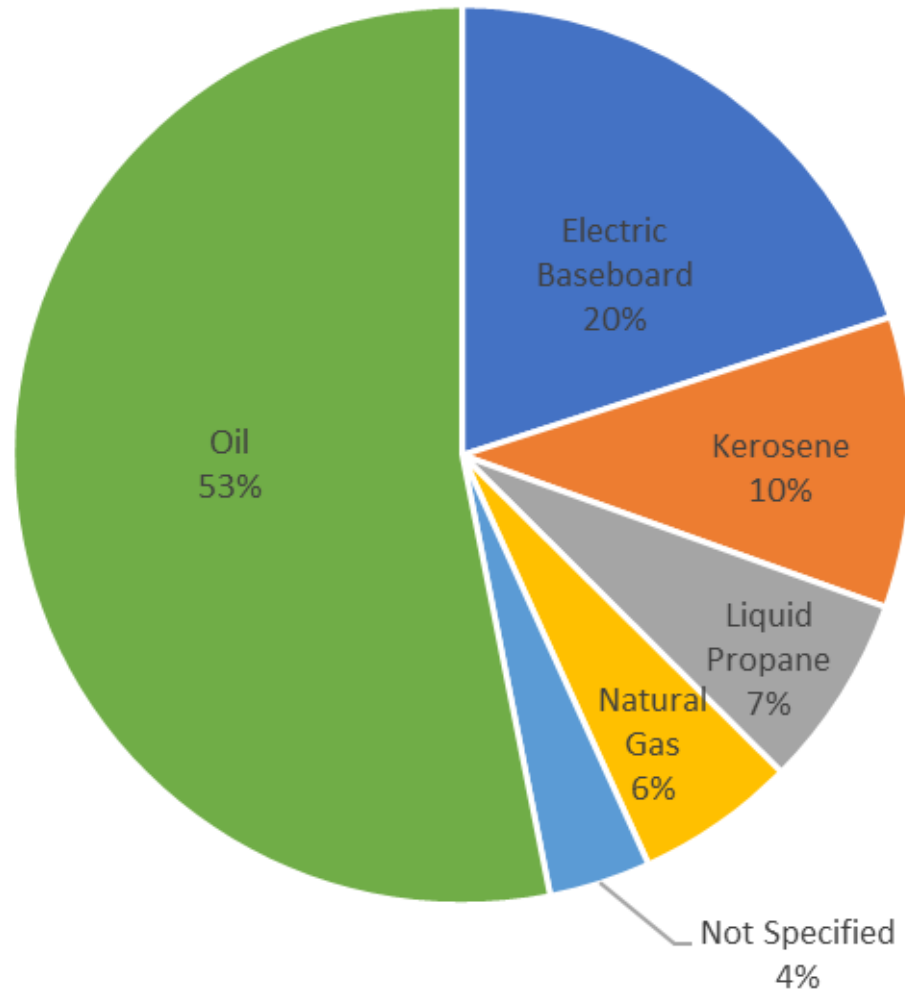
Decade Built



MODEL RESULTS

STRUCTURE AGE

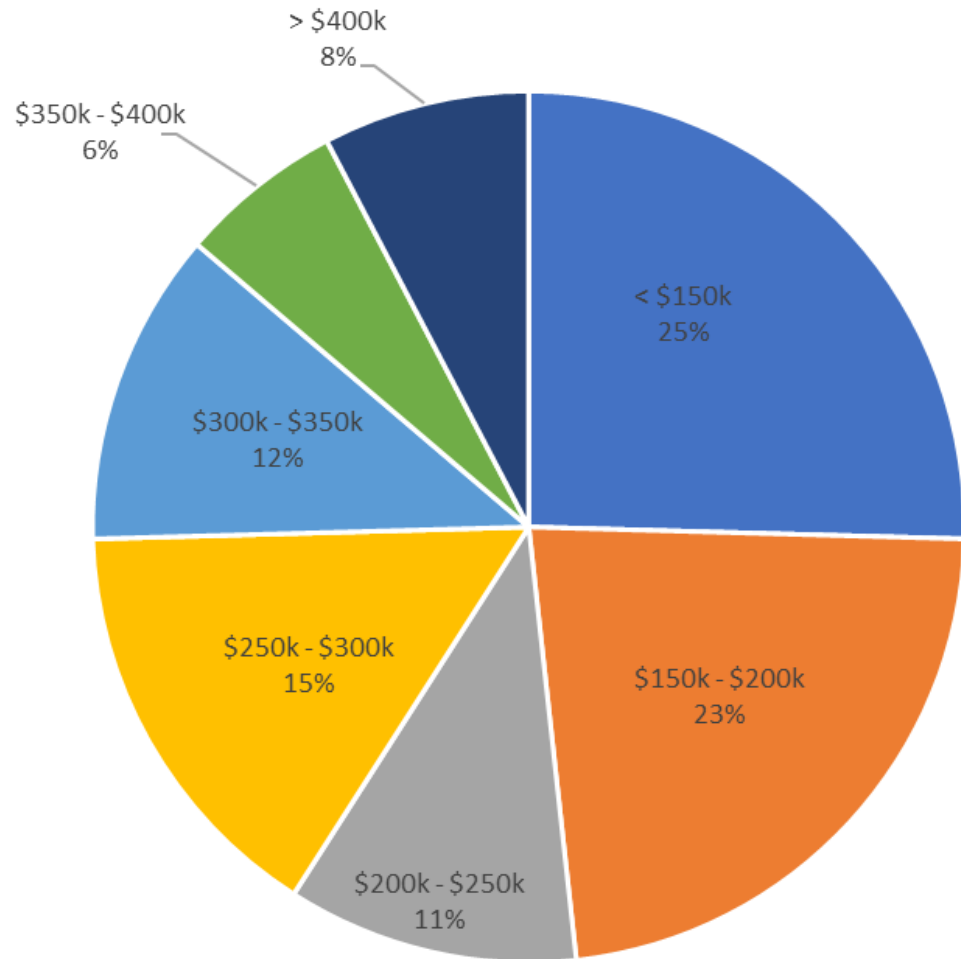
Heating Fuel



MODEL RESULTS

HEATING FUEL

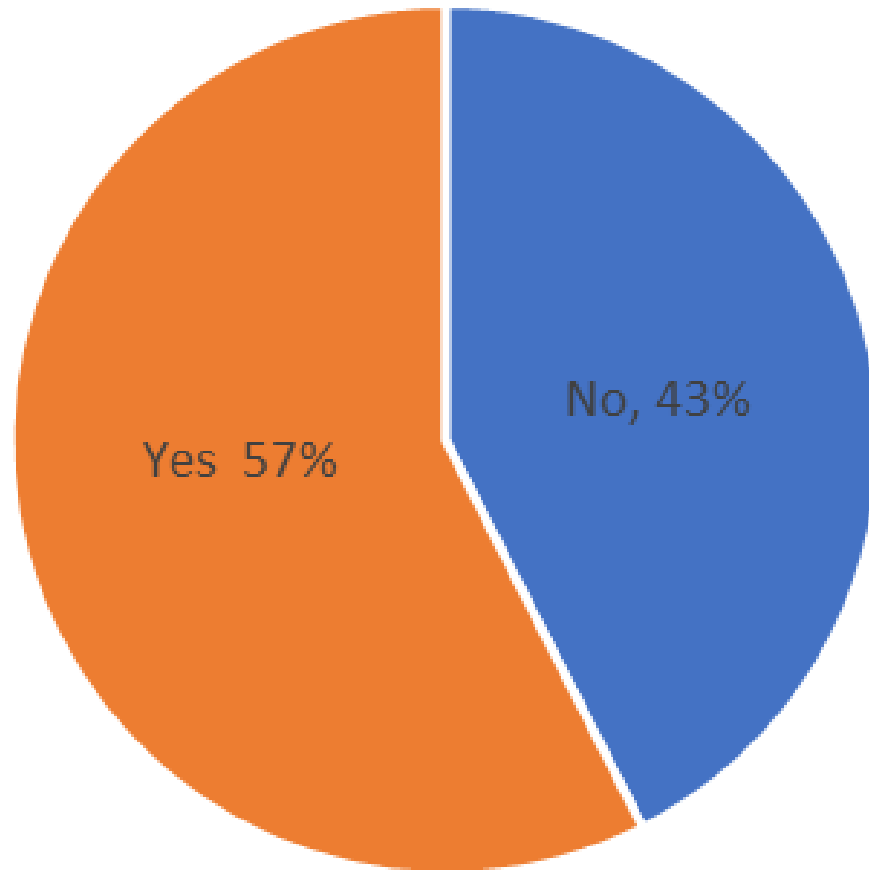
Assessed Home Value



**MODEL
RESULTS**

**DWELLING
ASSESSED VALUE**




Opportunity



MODEL RESULTS

OPPORTUNITY
SCORE

Task

1. Develop structures database
2. Develop prioritization model
3. Identify high-priority residences to target
4. **Coordinate with partners**  **Now**
5. **Develop outreach plan**  **Spring/
Summer**
6. Implement outreach plan  **Fall 2023**
7. Summarize and report results of outreach efforts

NEXT STEPS
