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Research Questions

1. How can clean energy campaigns measure and improve their equity?
2. How do the demographics of those participating in the Thermalize Juneau Campaign compare to the overall Juneau demographics?

Introduction

Thermalize Juneau is a clean energy campaign focused on installing ductless heat pumps and energy efficiency improvements into homes in Juneau, Alaska. Participants in the campaigns benefit from bulk purchase discounts as well as education about heat pumps and a streamlined installation process.



A vital component of the journey to clean energy is ensuring that it is available to all demographics. Low-income communities and communities of color have historically been left out of clean energy movements. Thermalize Juneau is working to better address energy equity in their campaign.

Process

1. Perform a literature review on equity metrics for clean energy campaigns.
2. Gather census data on the demographics of Juneau, particularly for homeowners in Juneau.
3. Analyze data from existing surveys and compare it with Juneau population data.
4. Determine how this and future Thermalize campaigns can measure equity.

Works Cited

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 Shaver, Lacey, and Ryan Shea. New Local Campaigns Can Bring Cheaper and Cleaner Rooftop Solar to Communities of Color.
 van Daalen, Chris, et al. Shifting to Zero: Zero Carbon Buildings Policy Toolkit.
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Results

The information below was gathered and synthesized from the references listed in the Works Cited section.

Equity Stages in a Clean Energy Campaign:

- Groundwork Equity – an understanding of historical disparities and how they shaped present local equity issues
- Planning Equity – ensuring that frontline communities are recruited and given a voice in the planning and goal setting phases
- Distributional Equity – serving the needs of all the participants throughout the implementation of the campaign
- Long-Term Equity – continued monitoring of the impacts of the clean energy campaign

It is hard to assign a quantitative number to the equity of a project. There are a series of questions that can be asked for each of the metrics listed above to highlight areas that lack equity and address them. Thermalize Juneau implemented an anonymous registration survey for participants to begin collecting this information.

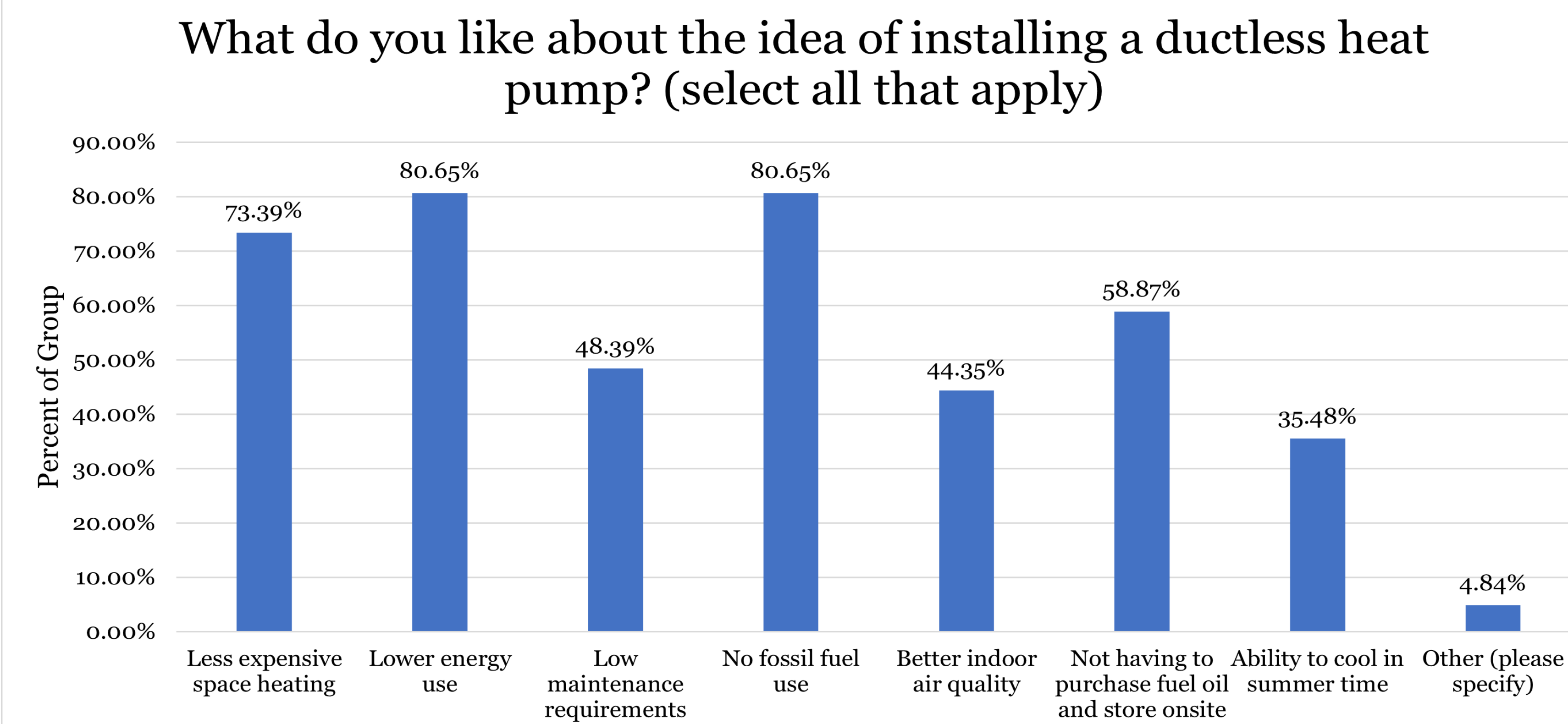


Figure 1: survey response on why people signed up

128/159 of Thermalize participants took the anonymous participant survey. Of those 128, 124 answered the question about what they liked about ductless heat pumps and 120 answered the questions about income and race.

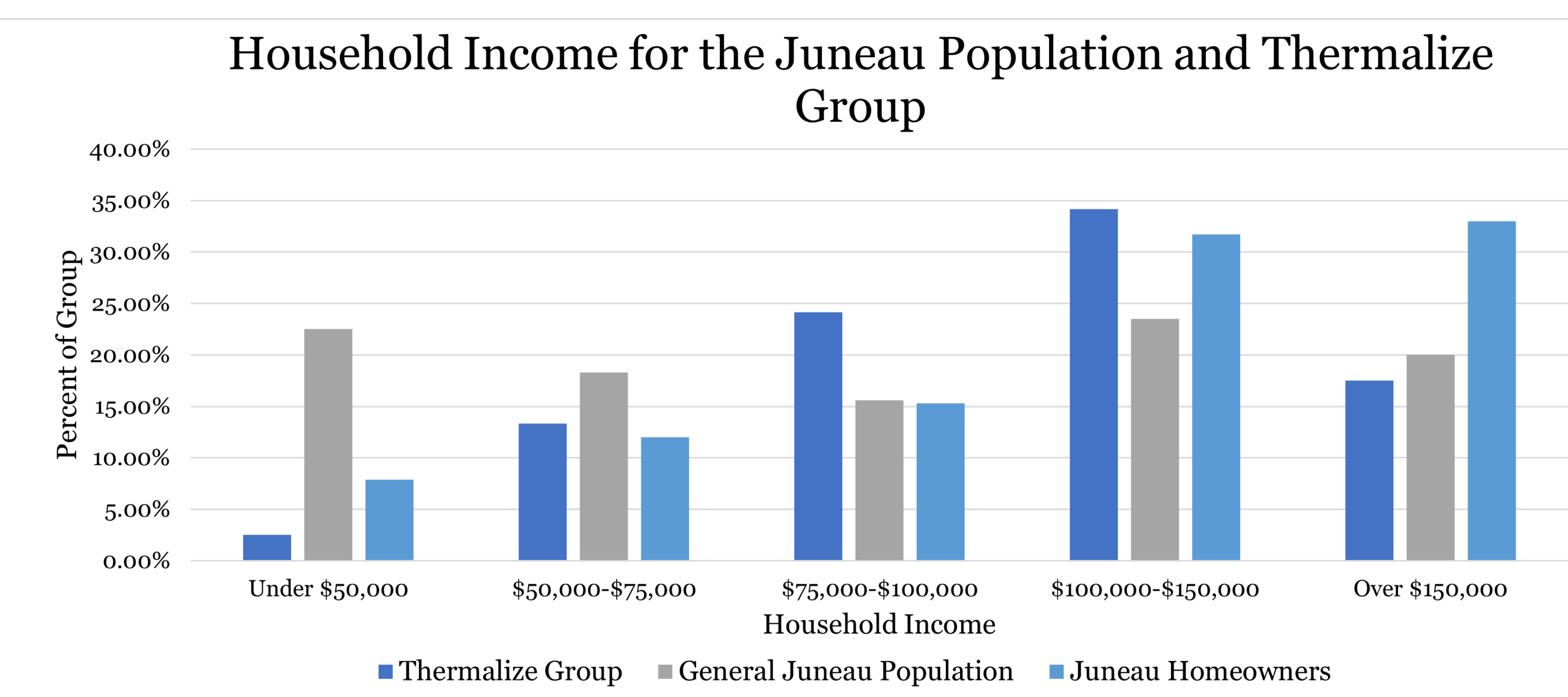


Figure 2: household income from survey and data from the 2019 census

Race of Thermalize Campaign Participants and Juneau Residents

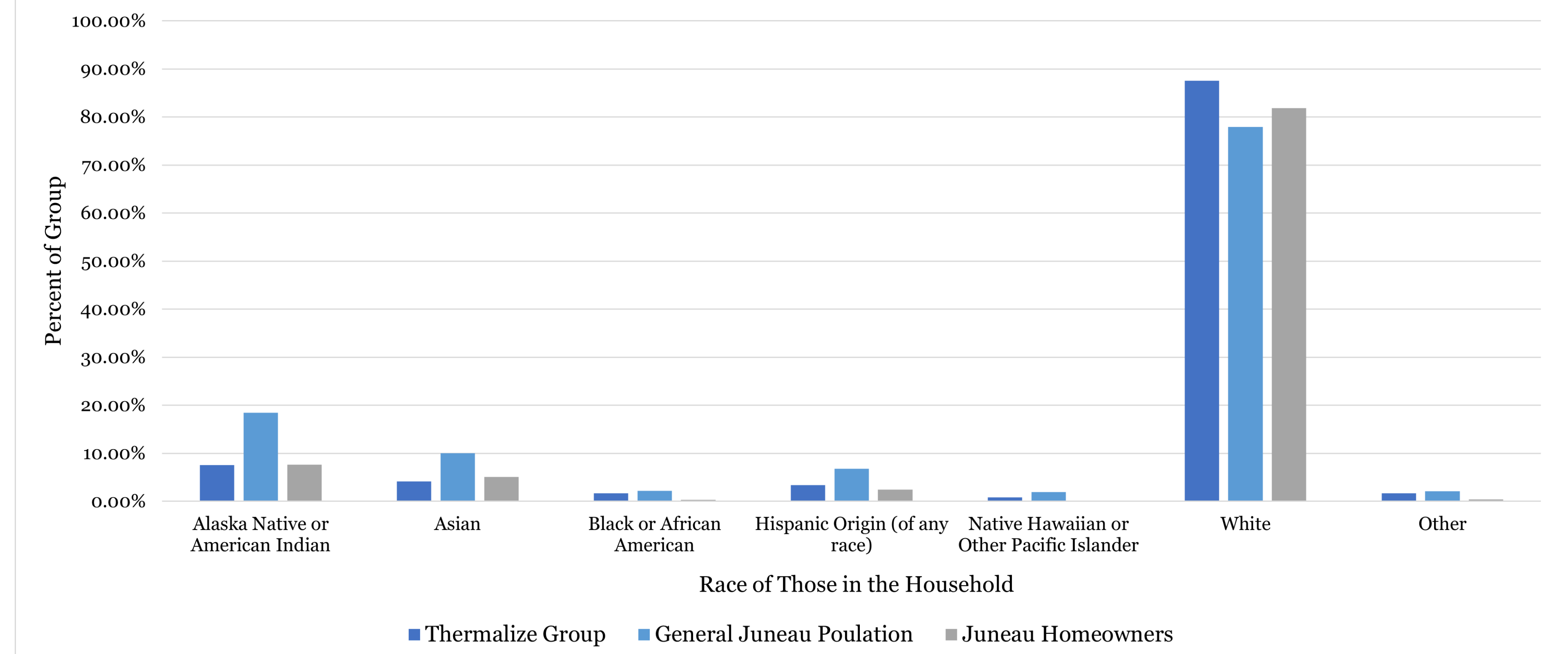


Figure 3: race of households from survey and data from the 2019 census

Discussion

GROUNDWORK EQUITY was not addressed through Thermalize Juneau 2021 and will be an area to address in future Thermalize campaigns.

PLANNING EQUITY

- » The most appealing aspects of a heat pump were “lower energy use” and “no fossil fuel use” (Figure 1).
- » There is potential for the campaign to recruit more people who care about the long-term financial savings vs environmental impacts. Possible improvements would be better financing mechanisms or larger discounts offered through the campaign.
- » The campaign is not representative of all the incomes in Juneau (Figure 2), although lower income households are directed towards a separate complementary program, the Juneau Carbon Offset Fund
- » The campaign is not representative of all races present in Juneau (Figure 3). DISTRIBUTIONAL AND LONG-TERM EQUITY are part of the ongoing and future work of this campaign.

Future Work

- Continue to analyze survey data
 - Correlate household income with household size
 - Account for those who qualify for the Juneau Carbon Offset Fund
 - Definitely identify those who were not reached through this campaign.
- Conduct a community – wide survey to reach those who did not participate in Thermalize and identify barriers and possible solutions.
- Draft an exit survey for campaign participants to be sent out at the end of the campaign to learn about experiences and how to improve them.

Acknowledgements

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