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Objective

- How do heat pump owners differ from non-owners in terms of attitudinal, contextual, and socio-demographic factors?
- How do these factors and heat pump adoption differ across Canadian provinces?

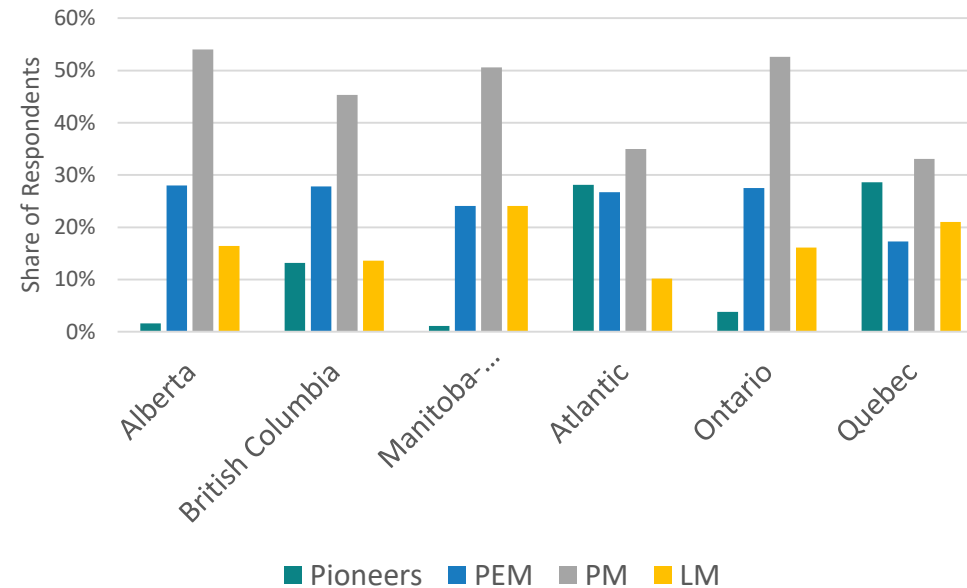
Background

- The buildings sector accounts for 91 Mt (12%) of Canada's annual GHG emissions.
- Projected 11% heat-pump market share of 11% nationally by 2030 and up to 68% by 2050. Currently only 2%.¹
- In order to target policy design need to identify market segments that are willing to adopt the technology. "Pioneers", "Potential Early Mainstream", "Potential Mainstream", "Late Mainstream".²

Methods

- Web-based survey of 3,804 respondents from across Canada.
- Market segments determined by heat pump ownership and stated willingness to adopt heat pumps.
- Segments compared along provincial dimension as well as using attitudinal, contextual and socio-demographic factors (ABC Theory).³
- Use ANOVA and Tukey HSD to test relationship between ABC factors and segment membership.

Results



Results

- Substantial heterogeneity in heat pump adoption across provinces. Quebec and Atlantic provinces have highest adoption.
- PEM households more likely to be currently shopping for home heating solution.
- PEM households are younger.
- Both LM and Pioneers are more likely to vote.

Conclusion

- Large potential for uptake of heat pump technology as a solution for buildings decarbonisation (>20% PEMs).
- This is enough to meet 2030 projections.
- Policy can be targeted at market segments most likely to take up the technology (young, currently shopping).

References

1. CCI (2021). *Canada's net zero future: finding our way in the global transition*. Canadian Climate Institute. Accessed July 20, 2022.
2. Axsen, J., Goldberg, S. & Bailey, J. (2016). How might potential future plug-in electric vehicle buyers differ from current "Pioneer" owners? *Transportation Research Part D*, 47, 357-370.
3. Stern, P.C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424.