

Aaron Pardy &amp; Dr. Katya Rhodes

**Objectives:**

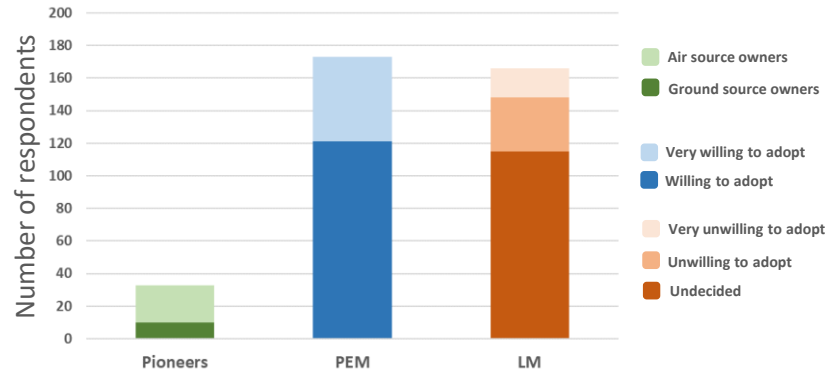
- How do heat pump owners differ from non-owners in terms of attitudinal, contextual, and socio-demographic factors?
- What are the potential policy implications based on the size and composition of these groups?

**Background:**

- Leading academics and governments identify heat pumps as key technologies for decarbonizing home heating
- However, less than 10% of households in BC cities use heat pumps for their space heating needs
- For optimal policy design and communication, need to understand how heat pump market segments differ
- Useful framework: “Pioneers”, “Potential Early Mainstream” (PEM), and “Late Mainstream” (LM)<sup>1</sup>

**Methods:**

- Web-based survey of 372 respondents from urban centres in BC
- Market segments determined by heat pump ownership and stated willingness to adopt heat pumps
- Respondents were given information about relevant home heating technologies, including heat pumps, before being asked about their willingness to adopt heat pumps
- Segments compared using attitudinal, contextual, and socio-demographic factors<sup>2</sup>
- ANOVAs and Tukey HSD used to test association of key variables with segment membership

**Results – Segmentation:****Results – Statistical Analysis:**

Compared to the LM, Pioneers and the PEM are more likely to be:

- Younger
- Educated at post-secondary institutions
- Liberal politically
- Open to change
- Technology-oriented
- Environmentally-oriented
- Concerned about climate change
- Trusting of government
- Living in newer houses
- Living in single-family detached homes
- Aware of heat pumps

**Conclusions:**

- High potential demand for heat pumps
- More awareness on the existence of heat pumps needed, especially for older households
- Environmental framing will not be persuasive for everyone

**References:**

1. 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.
2. Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424.