

Which wood heater interventions will Australians accept?

A discrete choice experiment

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Background

- Air pollution from wood heaters constitutes an important—and modifiable—cause of death and illness in Australia.
- Despite only 10% of Australian households using wood heaters as their primary source of heating, they are the top cause of population level exposure to anthropogenic air pollution, an important risk factor for multiple chronic diseases.
- For this reason, reducing wood heater smoke is crucial to reducing pollution and improving public health.

Key issues

- Despite multiple ongoing educational initiatives and tightening wood heater pollution standards over a decade, there have been no examples of these interventions leading to a reduction in wood smoke pollution.
- Many people believe wood combustion to be a cost-effective and renewable energy source, and most underestimate the adverse impacts on health and wellbeing in the community.

Aims

- There is a strong imperative to understand the reasoning and values underlying Australians' views towards wood heaters and wood heater interventions.
- This project aims to meet this need by eliciting preferences from the public regarding interventions to reduce wood heater use, through a discrete choice experiment (DCE).

Methods

- DCEs are a quantitative survey technique that uncover how individuals value attributes of a program, product or service by asking them to state their choice over a set of hypothetical alternatives.
- We will ask ~800 Australians to make a series of hypothetical choices between competing wood heater interventions with differing characteristics, which will allow us to derive key insights into the factors enabling intervention uptake and acceptability.
- The project has been co-designed with policy makers via the National Environmental Science Program's (NESP) Sustainable Communities and Waste Hub.



Outcomes

Over the remaining four years of NESP, we will work with our policy partners to integrate our findings into the design and evaluation of new wood heater interventions based on robust understandings of community views.

Example hypothetical choice set

Please imagine you are able to decide on which of the programs below should be put in place to reduce wood heater smoke in Australia.

- Each program has different costs to the individual wood heater owner, and to the average taxpayer.
- Each program also has different impacts on the carbon emissions and energy costs of the wood heater household, and health benefits for Australia as a whole.
- The programs can also be voluntary or compulsory.

Only one program can be put in place, and so you must choose the one that overall you believe will be the most worthwhile.

	Program A	Program B
Cost to the household participating in the scheme	Free	\$1000 for all
Cost to the average taxpayer/rate payer	\$20 extra per year for 5 years	No additional tax
Wood heater removal and replacement with lower pollution options	Compulsory	Voluntary
Impact on carbon emissions in participating households	The same	Decreased by 80%
Household energy costs per year in participating households	The same	Decreased by 30%
Health benefit due to reduced smoke – Australia wide, every year into the future	This saves 5 lives, prevents 50 people from needing an ambulance or an admission to hospital and 500 people from missing an average of 2 school or workdays.	This saves 500 lives, prevents 5000 people from needing an ambulance callout or hospital admission, and saves 50,000 people from missing an average of 2 work or school days each year.
I would support:	<input type="checkbox"/> Option A	<input type="checkbox"/> Option B

Acknowledgements

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