

Societal acceptance of energy technologies: Results from large group processes in four Australian states

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Overview

- **Social research – why bother?**
- **Research background**
- **Attitudes and knowledge of climate change**
- **Support for the range of energy technologies**
- **Knowledge of energy technologies**
- **Key themes from discussion**
- **Conclusions**

Social research – why bother?

- **The best technology is useless if it is not taken up by society**
 - Society can delay or halt the implementation of a new technological process
 - Impacts on the usefulness of research being undertaken
 - Public attitudes to new technologies can change over time however, once formed they can be slow to change
- **Social research can:**
 - enhance technology outcomes through a better knowledge of the end user environment
 - identify societal issues and suggest strategies for addressing them
 - increase the awareness of new technology development
 - manage social risk as well as increasing profile and delivering better research outcomes

Social research capability

- **Researching stakeholder perceptions of complex issues that are strategically important to Australia**
- **Key outcomes:**
 - **Defining** stakeholder perceptions of key issues: Gauging the baseline view on issues
 - **Facilitating** the education of stakeholders: Engaging through workshops
 - **Monitoring** change in the perceptions of stakeholders

Research background

- **Centre for Low Emission Energy Technology (cLET)**

Q: How do we best engage the general public about low emission energy technologies?

A: In the context of climate change; balanced information; mix of the technology options; trusted source

- CATI Survey
 - 900 people across QLD & NSW
- Regional dialogues
 - 10-15 participants
 - Balanced information
 - Facilitated discussion
 - Ask the expert
 - Surveys at beginning and end

Q: This is a successful process, but is there a way to increase impact, and get more bang for your \$\$\$?

Research background

A: Success of process is largely a result of small group dialogue, so such features would need to be maintained.

Q: Can we maintain the success of small group process BUT have x10 people in the room?

- **Large group process**

- 80-100 participant
- 8-9 participants per round table
- Lead facilitator to manage large group (MC)
- Small group facilitators to manage each table
- Expert presenter addresses large group
- Questions are asked and answered as a large group
- Dialogue occurs in small groups

Overview of the day

- **Welcome**
- **Introductions**
- **Pre-workshop questionnaire**
- **Digi-vote: Round 1**
- **Awareness, state of play**

- **MORNING TEA**
- **Presentation: Climate Change**
- **Reactions and points of clarification**
- **Presentation: Energy technologies**
- **Reactions and points of clarification**

- **LUNCH**
- **Deliberation**

- **AFTERNOON TEA**
- **Concerns and key messages**
- **Post-workshop questionnaire**
- **Digi-vote: Round 2**
- **About Energymark**
- **Wrap-up**

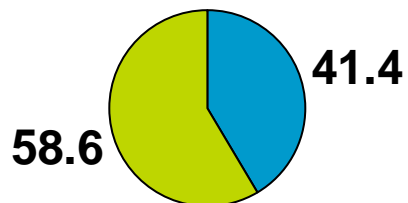


Recruitment

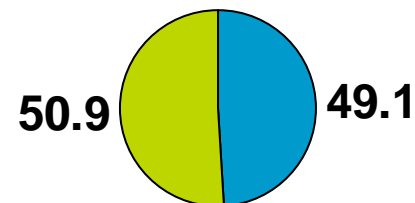
- **Email invitation**
 - Random selection of 5000 names
- **Newspaper ad**
- **e.g. Adelaide = 6% response rate; 70% from email, 30% from newspaper**
- **Experienced 25-40% 'no shows'**
- **Promoted as 'Topic of National Significance'**
- **Small reward**

Who came? (Gender)

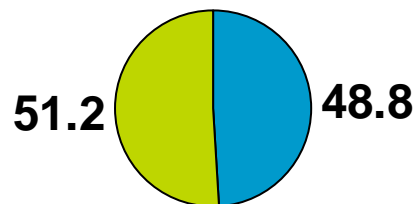
Youth



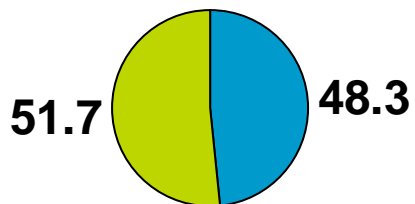
QLD



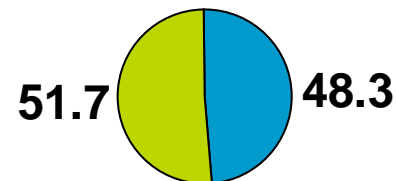
SA



VIC

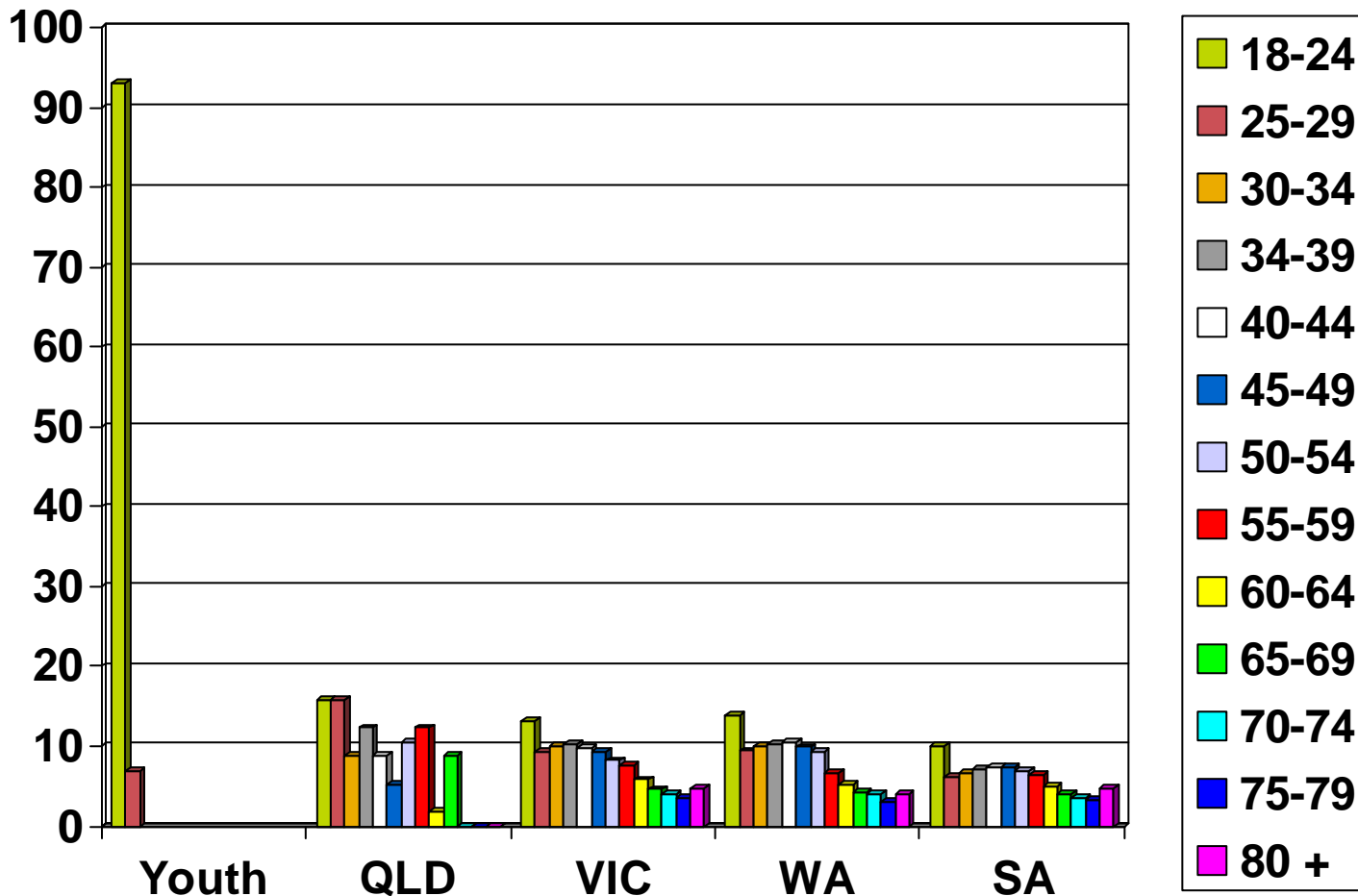


WA



■ Male
■ Female

Who came? (Age)



Questionnaires

- **Demographics**
 - Age
 - Gender
 - Education
 - Income
 - Household structure
- **Values and beliefs**
- **Attitudes**
- **Knowledge (self-rated)**
- **Willingness to change behaviour**
- **Willingness to pay more for electricity**
- **Intended behaviour change**
- **Technology ranking**

Attitudes and knowledge of climate change

	Feb 2008, Youth	Mar 2008, QLD	Jun 2008, VIC	Nov 2008, WA	Feb 2009, SA
	LG	LG	LG	LG	LG
Support	7.0	6.7	6.6	6.2	6.5
Knowledge	4.9	4.4	4.3	4.2	4.6

Support: 1= Strongly disagree; 4=Unsure; 7=Strongly agree

Knowledge: 1= No knowledge; 4= Moderate knowledge; 7= High knowledge

Support for the range of energy technologies

Note: Significant changes between before and after at $p < 0.05$ are underlined

	Feb 2008, Youth		Mar 2008, QLD		Jun 2008, VIC		Nov 2008, WA		Feb 2009, SA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Biofuels	<u>4.0</u>	<u>3.5</u>	4.9	5.0	<u>4.4</u>	<u>4.9</u>	<u>4.6</u>	<u>5.1</u>	<u>4.9</u>	<u>5.2</u>
CCS	3.8	4.4	4.1	4.4	<u>4.2</u>	<u>5.0</u>	4.4	4.6	<u>4.7</u>	<u>5.6</u>
Coal	2.1	2.2	2.9	3.2	3.3	3.8	3.2	3.5	<u>3.2</u>	<u>3.7</u>
Geothermal	5.8	5.6	5.4	5.5	5.1	5.1	5.3	5.0	<u>5.7</u>	<u>6.1</u>
Hydro	<u>5.2</u>	<u>4.8</u>	5.3	5.2	5.0	5.3	<u>5.8</u>	<u>5.1</u>	<u>5.5</u>	<u>5.2</u>
Nat. Gas	4.5	4.5	4.8	4.8	5.0	5.0	4.7	4.6	5.1	5.1
Nuclear	3.3	3.4	2.9	2.9	<u>3.1</u>	<u>3.8</u>	<u>4.2</u>	<u>4.6</u>	3.8	3.9
Oil	2.9	2.5	3.3	3.2	3.4	3.4	3.3	3.5	<u>3.2</u>	<u>3.6</u>
Solar	6.8	6.7	6.5	6.6	6.6	6.7	6.7	6.8	6.7	6.6
Wave/tidal	5.7	5.5	5.8	5.7	5.3	5.6	5.6	5.9	<u>5.8</u>	<u>4.2</u>
Wind	6.2	6.1	6.2	6.3	6.1	6.3	6.3	6.4	6.3	6.5

Knowledge of energy technologies

	Feb 2008, Youth		Mar 2008, QLD		Jun 2008, VIC		Nov 2008, WA		Feb 2009, SA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Biofuels	4.1	4.6	4.2	4.9	3.3	4.7	3.6	4.7	3.8	5.0
CCS	3.0	4.9	3.2	4.4	2.8	5.1	2.8	4.8	2.9	5.1
Coal	4.3	5.2	4.3	5.0	4.2	5.5	4.2	5.0	4.4	5.4
Geothermal	3.6	4.9	3.5	4.6	3.3	4.9	3.3	4.7	3.7	5.3
Hydro	3.6	4.6	4.2	4.9	4.2	5.1	4.2	4.9	4.3	5.1
Nat. Gas	3.3	4.9	4.1	4.8	4.2	5.4	4.2	5.0	4.4	5.2
Nuclear	4.4	4.9	3.8	4.5	3.7	4.8	3.7	4.7	4.1	4.8
Oil	4.0	4.6	4.2	4.8	4.2	5.3	4.2	4.8	4.4	5.0
Solar	4.6	5.6	4.8	5.3	4.7	5.6	4.7	5.5	4.9	5.7
Wave/tidal	2.9	3.8	3.6	4.4	3.6	4.7	3.6	4.7	3.6	4.8
Wind	3.6	5.0	4.2	5.1	4.3	5.3	4.3	5.2	4.5	5.4

Key themes from discussion

- **Identify a path to action**
- **Leadership from government**
- **Education & information**
- **Concerns & benefits of technologies**
- **Role of individual action**
- **Global problem – united solution**
- **Rights of developing countries**
- **The role of industry**
- **Social costs – low socio economic**
- **Scepticism**
- **Media's role**

Conclusions

- **Large group is effective**
 - Influenced by individual's strength of existing opinions – does the new information create dissonance
 - Quality and objectiveness of information
 - Trusted and knowledgeable expert
 - Facilitators
 - Dialogue between individuals
- **A way to access larger numbers – less resource intensive**

SOME TIPS!!

- Over recruit to ensure numbers
- Don't disclose the topic prior to the workshop

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