



Attitudes to Nuclear Power

Are they shifting?

Research Paper No. 43

May 2007

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Summary

In March this year, *The Australian* newspaper carried several stories that suggested there had been a dramatic reversal of attitudes towards nuclear power in Australia and that more people now supported nuclear power than opposed it. However, *The Australian* compared the results of two different survey questions, and any conclusions are therefore invalid. To test the validity of *The Australian's* claims, the Australia Institute commissioned Newspoll to conduct a survey on attitudes to nuclear power. To enable a valid comparison, the survey used the same question as had been asked in two previous Newspoll surveys conducted in May and December 2006.

The suggestion that there has been a 'dramatic shift' in attitudes to nuclear power is not supported by the new survey results. The number opposed to nuclear power remains substantially larger than the number who support it. Only around a third of Australians (36 per cent) support the construction of nuclear power plants and the level of support has remained fairly stable since May 2006. There was a small decrease in opposition to nuclear power between December 2006 and April 2007 (from 50 per cent to 46 per cent). The proportion of Australians who are strongly opposed to nuclear power (31 per cent) is almost double that which is strongly in favour (16 per cent). It appears that the small shift in opposition has predominantly been toward being undecided rather than being in favour of nuclear power.

Opposition to nuclear power is highest among women (55 per cent), the young (49 per cent) and middle-aged (49 per cent), parents (50 per cent), people from middle income households (49 per cent) and those living in Tasmania (57 per cent), Western Australia (55 per cent) and Victoria (51 per cent).

Support for nuclear power is highest amongst men (47 per cent), older Australians (43 per cent), people without children (40 per cent) and those living in South Australia (47 per cent) and New South Wales (41 per cent).

The Government has signalled its intention to run a campaign to promote nuclear energy. However, the evidence suggests the Government has a considerable amount of work to do if its aim is to win broad public support for its nuclear strategy.

1. Introduction

On 6th March this year, *The Australian* newspaper carried a page one story headed 'Nation warms to nuclear future'. Written by Dennis Shanahan and Sid Marris it led with the following claim.

Fear of global warming has dramatically reversed Australians' attitude to nuclear energy, with more people supporting nuclear power for the first time. In the past four months, support for nuclear power has risen from just 35 per cent to 45 per cent, and opposition has fallen in the same time from 50 per cent to 40 per cent (Shanahan and Marris 2007).

As its authority for these claims, the story cited polls *The Australian* had commissioned 'exclusively' from Newspoll, referring to ones carried out in May and December 2006, as well as another conducted in early March 2007.

The story attracted widespread interest and discussion and *The Australian* followed the initial story with an editorial (on 7th March) and two features (on 10th March), one by Matthew Warren and another by Dennis Shanahan, one of the two journalists who wrote the original story (*The Australian* 2007; Warren 2007; Shanahan 2007). Shanahan wrote in his feature article that the Newspoll results show that there has been a 'dramatic reversal' in attitudes to nuclear power. He suggested that the Newspoll results vindicated the Prime Minister's support for a nuclear future.

As a result of articles in *The Australian* and the coverage they attracted, many opinion makers, politicians and journalists now believe Australians are warming to nuclear power. However, the story in *The Australian* seriously misrepresented the Newspoll results. The 'dramatic reversal' claimed by *The Australian* is explained not by a real change of attitudes but by the fact that the newspaper compared the results of two different survey questions.

The May and December 2006 polls asked the following question.

Currently, while there is a nuclear reactor at Lucas Heights in Sydney used for medical and scientific purposes, there are no nuclear power stations in Australia. Are you personally in favour or against nuclear power stations being built in Australia?

The March 2007 question commissioned from Newspoll was as follows.

Thinking now about reducing greenhouse gas emissions to help address climate change. Are you personally in favour or against the development of a nuclear power industry in Australia, as one of a range of energy solutions to help reduce greenhouse gas emissions?

The framing of the two survey questions is completely different. While the earlier question states some relevant facts and asks the question, the second invites respondents to situate the question in the context of how to address climate change and proposes nuclear power as one of a range of solutions.

Research on framing theory has shown that the context in which questions are asked, and the words used to ask them, will significantly alter the responses that people

provide (Levin *et al.* 1998; De Martino *et al.* 2006). This body of research indicates that people do not always rationally weigh alternative responses to questions. Rather their choices and responses are often influenced by how the question is framed. As a result, survey questions should be designed to minimise the framing effects. Where the framing of a question is likely to skew the results toward a certain outcome, it is described as suffering from ‘framing bias’ (Cormier O’Connor *et al.* 1985). This is what occurred in relation to the March 2007 survey commissioned by *The Australian*.

The research indicates that if the positive attributes of an option are emphasised in the question (i.e. it is given a positive frame), more people are likely to support it (Levin *et al.* 1998; 2002). In the March 2007 poll, the potential for nuclear power to help reduce greenhouse gas emissions provides a positive frame for the question. Consequently, by placing the question in the context of climate change, *The Australian* skewed the results in favour of nuclear power. This is reflected in the results from the Newspoll surveys. The May 2006 survey found that 38 per cent were in favour, 51 per cent were opposed and 11 per cent were uncommitted. The December 2006 survey found similar results; 35 per cent in favour, 50 per cent opposed and 15 per cent uncommitted. Not unsurprisingly given the nature of the question, the March 2007 survey found that 45 per cent were in favour, 40 per cent were opposed and 15 per cent were uncommitted.

The inference from *The Australian’s* reporting of the Newspoll results is that public opinion is shifting rapidly in response to the Prime Minister’s nuclear campaign and concerns about climate change. This conclusion is not supported by the surveys conducted by Newspoll or any other organisation. In fact, there is evidence to suggest that no such shift has occurred and that attitudes to nuclear power have been relatively stable for at least the last two years. A poll conducted in 2005 for the International Atomic Energy Agency found that 34 per cent of Australians supported the construction of nuclear power plants (GlobeScan 2005). However, when nuclear power was positively framed in the context of climate change, support increased to 47 per cent, two percentage points higher than the findings from the March 2007 poll. A more recent survey conducted by Pollinate that was reported in the *Australian Financial Review* on 12 March 2007, asked respondents first about their attitudes to uranium mining and then asked: Do you support the construction of nuclear reactors for the production of electricity in Australia? It found that 29 per cent of Australians were in favour of nuclear power, 51 per cent were opposed and 20 per cent were undecided (Grigg 2007). The results from these surveys suggest that public opinion on the question of nuclear power is relatively stable, not ‘dramatically’ shifting as reported in *The Australian*.

In order to test whether there has been a dramatic shift in public opinion, the Australia Institute commissioned Newspoll to conduct a survey using the same question that was asked in the May and December 2006 polls.

Newspoll conducted a national phone survey of 1,200 Australians aged 18 years and over. It was carried out between 19 – 22 April 2007. The respondents were selected by means of a stratified random sample process. Demographic information was collected to enable the results to be correlated with relevant factors, including household income, sex and place of residence.

Section 2 provides the results from the survey and, where possible, compares them to the results from the Newspoll surveys in May and December 2006. Section 3 discusses the implications of the results.

2. Results

The responses are reported in Tables 1 – 6. Table 1 shows the totals, Table 2 provides responses by sex, Table 3 by age, Table 4 by parental status, Table 5 by household income and Table 6 by state. Data from the May and December polls is included in Tables 1 – 3. May and December 2006 poll data have not been included in Tables 4 – 6 because the relevant data has not been made publicly available.

The level of support for nuclear power has remained largely unchanged since the December 2006 poll. Thirty-six per cent of Australians say they are in favour of nuclear power stations being built in Australia (16 per cent strongly in favour and 21 per cent partly in favour). The December 2006 poll found that 35 per cent were in favour (14 per cent strongly and 21 per cent partly).

The level of opposition to nuclear power has declined slightly since the May and December 2006 polls. Forty-six per cent of Australians now say they oppose the construction of nuclear power stations in Australia, down from 50 per cent in December 2006.¹ The number of Australians who are strongly opposed to nuclear power has fallen from 36 per cent in December 2006 to 31 per cent, while those who are somewhat against has remained relatively stable (up from 14 to 15 per cent). However, the proportion of Australians who are strongly opposed to nuclear power is still almost double that which is strongly in favour.

The other noticeable change in the results is the rise in people who are uncommitted or don't know. In the May 2006 poll, 11 per cent of Australians said they were neither for nor against nuclear power. This rose to 15 per cent in the December 2006 poll and it has risen again to 18 per cent in the latest survey.

The results contradict the statements made in *The Australian* in March. There has not been a 'dramatic reversal' of the attitude of Australians to nuclear power. The level of support for nuclear power has remained relatively stable, while there has been a small decrease in opposition and an increase in the number of people who are uncommitted. If anything, the results suggest a small proportion of Australians may have shifted from being opposed to uncommitted and that they are waiting for further information before making a final decision.

¹ The margin of error is approximately three per cent.

Table 1 Are you personally in favour or against nuclear power stations being built in Australia? (per cent)

	May 2006	December 2006	April 2007
Strongly in favour	18	14	16
Partly in favour	20	21	21
Total in favour	38	35	36
Strongly against	37	36	31
Partly against	14	14	15
Total against	51	50	46
Don't know	11	15	18

Source: Newspoll and *The Australian* (2006a; 2006b).

Note: Totals may not add to 100 due to rounding.

Consistent with the findings from the May and December 2006 surveys, the results from the April 2007 survey show that women are more likely to oppose nuclear power than men – see Table 2. Fifty-five per cent of women are opposed to the construction of nuclear power plants, while only 27 per cent are in favour. In contrast, 37 per cent of men oppose nuclear power and 47 per cent are supportive. Yet, even amongst men, those who are strongly opposed to nuclear power (26 per cent) outnumber those who are strongly supportive (24 per cent).

In the December 2006 poll, 57 per cent of women were opposed to nuclear power and 24 per cent were in favour, while 42 per cent of men were opposed and 47 per cent were in favour. These figures indicate that most of the fall in opposition to nuclear power since the December 2006 poll has come from men altering their preferences.

The two most notable trends from the survey data on males and females is the decline in opposition to nuclear power amongst women and the decline in support amongst males. Opposition amongst women fell from 62 per cent in May 2006, to 57 per cent in December 2006, then to 55 per cent in April 2007. Meanwhile, support for nuclear power amongst men has fallen from 51 per cent in May 2006 to 47 per cent in December 2006 and April 2007.

Table 2 Are you personally in favour or against nuclear power stations being built in Australia? By sex (per cent)

	May 2006		December 2006		April 2007	
	Male	Female	Male	Female	Male	Female
Strongly in favour	30	7	23	6	24	7
Partly in favour	21	19	24	18	23	19
Total in favour	51	26	47	24	47	27
Strongly against	29	44	32	40	26	35
Partly against	10	18	10	17	10	20
Total against	39	62	42	57	37	55
Don't know	10	12	11	19	17	18

Source: Newspoll and *The Australian* (2006a; 2006b).

Note: Totals may not add to 100 due to rounding.

On 10 March 2007, *The Australian* ran a story by Matthew Warren titled, ‘Generation Y says why not go nuclear’ (Warren 2007). Using *The Australian*’s March 2007 survey as evidence, he argued there was ‘warming support for the idea of nuclear energy’ and that younger Australians aged 18 to 35 ‘may be the Howard Government’s unlikely allies in the promotion of nuclear energy’. This argument is not supported by our results – see Table 3.

Forty-nine per cent of Australian’s aged 18 to 34 are opposed to nuclear power, 34 per cent are supportive and 18 per cent are uncommitted. In the December 2006 poll, 50 per cent were opposed, 32 per cent were in favour and 18 per cent were uncommitted.

Contrary to Warren’s argument, support for nuclear power is highest amongst the 50 plus age group, where 43 per cent of people are supportive, 42 per cent are opposed and 15 per cent are uncommitted. In the December 2006 poll, support for nuclear power amongst the 50 plus age group was 39 per cent, opposition was 45 per cent and 16 per cent were uncommitted.

The biggest movement since the December 2006 poll occurred in the 35 to 49 age group. Opposition to nuclear power fell from 56 per cent to 49 per cent, support fell from 33 per cent to 30 per cent and those who said they were uncommitted almost doubled, rising from 11 per cent to 21 per cent.

Table 3 Are you personally in favour or against nuclear power stations being built in Australia? By age (per cent)

Age group	May 2006			December 2006			April 2007		
	18-34	35-49	50+	18-34	35-49	50+	18-34	35-49	50+
Strongly in favour	16	14	23	11	13	18	12	10	22
Partly in favour	16	19	23	21	20	21	22	20	21
Total in favour	32	33	46	32	33	39	34	30	43
Strongly against	43	41	29	32	41	34	25	36	31
Partly against	13	15	14	18	15	11	23	13	11
Total against	56	56	43	50	56	45	49	49	42
Don’t know	12	11	11	18	11	16	18	21	15

Source: Newspoll and *The Australian* (2006a; 2006b).

Note: Totals may not add to 100 due to rounding.

There are significant differences in attitudes towards nuclear power between parents and people without children – see Table 4. Approximately 50 per cent of parents are opposed to nuclear power, 29 per cent are supportive and 20 per cent are undecided. In contrast, 44 per cent of non-parents are opposed, 40 per cent are supportive and 16 per cent are uncommitted.

May and December 2006 poll data on parental attitudes have not been included because the relevant data has not been made publicly available.

Table 4 Are you personally in favour or against nuclear power stations being built in Australia? By parental status (per cent)

April 2007		
	Parents	Non-parents
Strongly in favour	9	19
Partly in favour	21	21
Total in favour	29	40
Strongly against	30	31
Partly against	21	13
Total against	50	44
Don't know	20	16

Note: Totals may not add to 100 due to rounding.

Opposition to nuclear power is highest amongst people from middle income households – see Table 5. Forty-nine per cent of people from households with an annual income of between \$30,000 and \$69,999 oppose nuclear power, compared to 46 per cent in both low (less than \$30,000) and high income households (\$70,000 and above). Support for nuclear power was relatively consistent across the three household income groups: 37 per cent for low income households and 38 per cent for both middle and high income households. More people from low and high income households are undecided than those from middle income households (18 per cent for low and 17 per cent for high income households compared to 13 per cent for middle income households).

May and December 2006 poll data on household income groups have not been included because the relevant data has not been made publicly available.

Table 5 Are you personally in favour or against nuclear power stations being built in Australia? By household income (per cent)

April 2007			
Household income			
	Less than \$30,000	\$30,000 to \$69,999	\$70,000 plus
Strongly in favour	15	18	16
Partly in favour	21	20	22
Total in favour	37	38	38
Strongly against	34	34	26
Partly against	12	15	19
Total against	46	49	46
Don't know	18	13	17

Note: Totals may not add to 100 due to rounding.

Attitudes to nuclear power differ between the states – see Table 6. A relatively large proportion of people oppose nuclear power in Tasmania (57 per cent), Western Australia (55 per cent) and Victoria (51 per cent). Support for nuclear power is highest in South Australia (47 per cent) and New South Wales (41 per cent). There are a large proportion of people who are uncommitted in both Victoria (21 per cent) and New South Wales (19 per cent).

Table 6 Are you personally in favour or against nuclear power stations being built in Australia? By state (per cent)

April 2007						
	State					
	NSW	VIC	QLD	SA	WA	TAS
Strongly in favour	16	12	18	21	16	11
Partly in favour	25	16	19	26	19	16
Total in favour	41	28	37	47	35	27
Strongly against	26	35	32	21	38	37
Partly against	13	16	16	17	17	20
Total against	40	51	48	39	55	57
Don't know	19	21	16	14	10	17

Note: Totals may not add to 100 due to rounding.

3. Implications

Claims made by *The Australian* that there had been a ‘dramatic shift’ in attitudes to nuclear power in Australia is not supported by the available evidence. There has been a small decrease in opposition to nuclear power between December 2006 and April 2007. However, almost half of Australians (46 per cent) are still opposed to nuclear power and the proportion of Australians who are strongly opposed to nuclear power (31 per cent) is almost double that which is strongly in favour (16 per cent). Further, only around a third of Australians (36 per cent) support the construction of nuclear power plants and the level of support has remained fairly stable since May 2006. It appears that the small shift in opposition has predominantly been toward being undecided rather than being in favour of nuclear power.

On 28 April, the Prime Minister announced a strategy to ‘increase uranium exports and to prepare for a possible expansion of the nuclear industry in Australia’. The media release that was issued by the Prime Minister notes that the Government will develop ‘communications strategies so that all Australians and other stakeholders can clearly understand what needs to be done and why’ (Howard 2007). No doubt these communications strategies will aim to increase support for the Government’s nuclear energy plans.

Although the effectiveness of these strategies remains to be seen, public attitudes have been reasonably resilient to the Government’s previous efforts to promote nuclear power. Since early 2006, the Government has tried to promote nuclear power as a safe and prudent solution to climate change. A key component of its efforts was the establishment of the Uranium Mining, Processing and Nuclear Energy Review (UMPNER) Taskforce, which handed down a report in December 2006 that argued that nuclear power was a ‘practical option’ for Australia (UMPNER 2006). Despite the report’s findings and the efforts of the Government, more people still oppose nuclear power than support it. In addition, as a number of other surveys have shown (Macintosh 2007; Newspoll and *The Australian* 2007), two thirds of Australians do not want to live near nuclear power stations. The evidence suggests the Government has a considerable amount of work to do if its aim is to win broad public support for its nuclear strategy.

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