



Community Attitudes to **Renewable Energy** in NSW



Office of
Environment
& Heritage

The Office of Environment and Heritage (OEH) has compiled this document in good faith, exercising all due care and attention. No representation is made about the accuracy, completeness or suitability of the information in this publication for any particular purpose. OEH shall not be liable for any damage which may occur to any person or organisation taking action or not on the basis of this publication. Readers should seek appropriate advice when applying the information to their specific needs.

Published by:

Office of Environment and Heritage

59 Goulburn Street, Sydney NSW 2000

PO Box A290, Sydney South NSW 1232

Phone: (02) 9995 5000 (switchboard)

Phone: 131 555 (environment information and publications requests)

Phone: 1300 361 967 (national parks, general environmental enquiries, and publications requests)

Fax: (02) 9995 5999

TTY users: phone 133 677, then ask for 131 555

Speak and listen users: phone 1300 555 727, then ask for 131 555

Email: info@environment.nsw.gov.au

Website: www.environment.nsw.gov.au

Report pollution and environmental incidents

Environment Line: 131 555 (NSW only) or info@environment.nsw.gov.au

See also www.environment.nsw.gov.au

ISBN 978 1 74359 041 9

OEH 2015/0419

November 2015

Contents

| | |
|--|-------------|
| List of tables | iv |
| List of figures | vi |
| Executive summary | viii |
| 1 Introduction | 1 |
| 1.1 Background | 1 |
| 1.2 Research purpose | 1 |
| 1.3 Research methods | 1 |
| 1.4 Statistical significance testing | 2 |
| 2 Findings | 3 |
| 2.1 Community awareness and knowledge of renewable energy technologies | 3 |
| 2.2 Attitudes towards renewable energy technologies | 10 |
| 2.3 Attitudes towards local wind and solar farms | 24 |
| 3 Regional summaries | 43 |
| 3.1 North East Region | 43 |
| 3.2 Hunter/Central Coast Region | 49 |
| 3.3 North West Region | 55 |
| 3.4 South East Region | 61 |
| 3.5 South West Region | 67 |
| 3.6 Illawarra Region | 73 |
| 3.7 Greater Sydney Region | 77 |

List of tables

| | | |
|--------------------|--|----|
| Table 1.1: | Region and number of people sampled for survey | 1 |
| Table 2.1: | Survey results showing regional variation in awareness/self-assessed knowledge of renewable energy technologies | 5 |
| Table 2.2: | Survey results showing demographic variation in awareness/self-assessed knowledge of renewable energy technologies | 6 |
| Table 2.3: | Exposure to wind turbines | 8 |
| Table 2.4: | Survey results showing regional variation in awareness/self-assessed knowledge/exposure to wind and solar farms | 8 |
| Table 2.5: | Survey results showing demographic variation in awareness/self-assessed knowledge/exposure to wind farms and solar farms | 9 |
| Table 2.6: | Survey results showing regional variation in overall support of renewable energy and its expansion in NSW | 11 |
| Table 2.7: | Survey results showing demographic variation in overall support of renewable energy and its expansion in NSW | 12 |
| Table 2.8: | Survey respondents' reasons for the cost of renewable energy technologies being both an advantage and a disadvantage. | 15 |
| Table 2.9: | Perceived advantages of using renewables (unprompted) provided by survey respondents who supported or opposed renewable energy technologies | 17 |
| Table 2.10: | Perceived disadvantages of using renewables (unprompted) provided by respondents who supported or opposed renewable energy technologies | 18 |
| Table 2.11: | Survey results showing regional variation in perceived advantages and disadvantages of generating electricity from renewable sources (unprompted) | 19 |
| Table 2.12: | Survey results showing demographic variation in perceived advantages and disadvantages of generating electricity from renewable sources (unprompted) | 20 |
| Table 2.13: | Personal cost as a mitigating factor on support for renewable energy technologies – by region | 21 |
| Table 2.14: | Personal cost as a mitigating factor on support for renewable energy technologies – by demographics | 22 |
| Table 2.15: | Support for building wind and solar farms in NSW – by region | 23 |
| Table 2.16: | Support for building wind and solar farms in NSW – by demographic | 23 |
| Table 2.17: | Regional variation in responses to building wind and solar farms in NSW, in local region, and within 1–2 kilometres of residence | 26 |
| Table 2.18: | Demographic variation in responses to building wind and solar farms in NSW, in local region, and within 1–2 kilometres of where they lived | 28 |
| Table 2.19: | Regional variation in reasons for supporting wind or solar farms within 1–2 kilometres of where they lived (unprompted) | 32 |
| Table 2.20: | Demographic variation in reasons for supporting a wind or solar farm within 1–2 kilometres of residence (unprompted) | 33 |
| Table 2.21: | Regional variation in concerns of those opposed to a wind or solar farm within 1–2 kilometres of where they lived (unprompted) | 38 |
| Table 2.22: | Demographic variation in concerns about a wind or solar farm within 1–2 kilometres of where they lived (unprompted) | 39 |
| Table 2.23: | Regional variation in perceived impact on local community of a wind farm within 1–2 kilometres of residence (prompted) | 42 |
| Table 2.24: | Demographic variation in perceived impact on local community of a wind farm within 1–2 kilometres of residence (prompted) | 42 |

| | | |
|--------------------|---|----|
| Table 3.1: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 46 |
| Table 3.2: | Reasons for supporting a wind/solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted) | 47 |
| Table 3.3: | Concerns about building a wind/solar farm within 1–2 kilometres of where survey respondents lived (unprompted) | 48 |
| Table 3.4: | Perceived impact of wind farms on property value and visual appeal (prompted) | 48 |
| Table 3.5: | Level of concern about noise and health issues caused by wind farms (prompted) | 48 |
| Table 3.6: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 52 |
| Table 3.7: | Reasons for supporting a wind/solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted) | 53 |
| Table 3.8: | Concerns about building a wind/solar farm within 1–2 kilometres of where survey respondents lived (unprompted) | 54 |
| Table 3.9: | Perceived impact of wind farms on property value and visual appeal (prompted) | 54 |
| Table 3.10: | Level of concern about noise and health issues caused by wind farms (prompted) | 54 |
| Table 3.11: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 58 |
| Table 3.12: | Reasons for supporting a wind/solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted). | 59 |
| Table 3.13: | Concerns about building a wind/solar farm within 1–2 kilometres of where survey respondents lived (unprompted). | 60 |
| Table 3.14: | Perceived impact of wind farms on property value and visual appeal (prompted). | 60 |
| Table 3.15: | Level of concern about noise and health issues caused by wind farms (prompted). | 60 |
| Table 3.16: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted). | 64 |
| Table 3.17: | Reasons for supporting a wind/solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted) | 65 |
| Table 3.18: | Concerns about building a wind/solar farm within 1–2 kilometres of where survey respondents lived (unprompted) | 66 |
| Table 3.19: | Perceived impact of wind farms on property value and visual appeal (prompted) | 66 |
| Table 3.20: | Level of concern about noise and health issues caused by wind farms (prompted) | 66 |
| Table 3.21: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 70 |
| Table 3.22: | Reasons for supporting a wind/solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted) | 71 |
| Table 3.23: | Concerns about building a wind/solar farm within 1–2 kilometres of where survey respondents lived (unprompted) | 72 |
| Table 3.24: | Perceived impact of wind farms on property value and visual appeal (prompted) | 72 |
| Table 3.25: | Level of concern about noise and health issues caused by wind farms (prompted) | 72 |
| Table 3.26: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 76 |
| Table 3.27: | Perceived advantages and disadvantages of using renewable energy technologies (unprompted) | 80 |

List of figures

| | | |
|---------------------|---|----|
| Figure 2.1: | Community awareness of renewable energy technologies | 3 |
| Figure 2.2: | Self-assessed knowledge of renewable energy technologies | 4 |
| Figure 2.3: | Awareness and self-assessed knowledge of wind farms and solar farms | 7 |
| Figure 2.4: | Overall support for generating electricity in NSW using renewable energy technologies | 10 |
| Figure 2.5: | Use of renewable energy to produce electricity in NSW over the next five years | 10 |
| Figure 2.6: | Perceived advantages/disadvantages of using renewable energy to generate electricity (unprompted) | 13 |
| Figure 2.7: | Perceptions about the cost of renewable energy | 14 |
| Figure 2.8: | Overall views about using renewable energy to produce electricity in NSW | 21 |
| Figure 2.9: | Support for building wind farms and solar farms in NSW | 22 |
| Figure 2.10: | Support for and opposition to building a wind/solar farm in three proximities – in NSW, the local region, and within 1–2 kilometres of where they lived | 24 |
| Figure 2.11: | Reasons for supporting a wind/solar farm within 1–2 kilometres of where the respondent lived (unprompted) | 30 |
| Figure 2.12: | Concerns about wind and solar farms located 1–2 kilometres from where the respondent lived (unprompted) | 35 |
| Figure 2.13: | Concerns, after prompting, about the impact of wind farms located 1–2 kilometres of where the respondent lived on property value and visual appeal | 40 |
| Figure 2.14: | Concerns, after prompting, about the noise and health impacts of wind farms located 1–2 kilometres from where they lived | 40 |
| Figure 2.15: | Concerns about a wind farm within 1–2 kilometres of where the respondent lived– unprompted versus prompted | 41 |
| Figure 3.1: | Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 44 |
| Figure 3.2: | Support for using renewable energy technologies to generate electricity in NSW | 45 |
| Figure 3.3: | Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 45 |
| Figure 3.4: | Overall views about using renewable energy to produce electricity in NSW and its cost | 46 |
| Figure 3.5: | Support for and opposition to building solar/wind farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived | 47 |
| Figure 3.6: | Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 50 |
| Figure 3.7: | Support for using renewable energy technologies to generate electricity in NSW | 51 |
| Figure 3.8: | Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 51 |
| Figure 3.9: | Overall views about using renewable energy to produce electricity in NSW and its cost | 52 |
| Figure 3.10: | Support for and opposition to building solar/wind farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived | 53 |
| Figure 3.11: | Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 56 |
| Figure 3.12: | Support for using renewable energy technologies to generate electricity in NSW | 57 |
| Figure 3.13: | Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 57 |

| | |
|---|----|
| Figure 3.14: Overall views about using renewable energy to produce electricity in NSW and its cost | 58 |
| Figure 3.15: Support for and opposition to building solar/wind farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived | 59 |
| Figure 3.16: Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 62 |
| Figure 3.17: Support for using renewable energy technologies to generate electricity in NSW | 63 |
| Figure 3.18: Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 63 |
| Figure 3.19: Overall views about using renewable energy to produce electricity in NSW and its cost | 64 |
| Figure 3.20: Support for and opposition to building solar/wind farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived | 65 |
| Figure 3.21: Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 68 |
| Figure 3.22: Support for using renewable energy technologies to generate electricity in NSW | 69 |
| Figure 3.23: Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 69 |
| Figure 3.24: Overall views about using renewable energy to produce electricity in NSW and its cost | 70 |
| Figure 3.25: Support for and opposition to building solar/wind farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived | 71 |
| Figure 3.26: Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 74 |
| Figure 3.27: Support for using renewable energy technologies to generate electricity in NSW | 75 |
| Figure 3.28: Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 75 |
| Figure 3.29: Overall views about using renewable energy to produce electricity in NSW and its cost | 76 |
| Figure 3.30: Support for and opposition to building solar/wind farms in NSW | 76 |
| Figure 3.31: Awareness/self-assessed knowledge of renewable energy technologies by survey respondents | 78 |
| Figure 3.32: Support for using renewable energy technologies to generate electricity in NSW | 79 |
| Figure 3.33: Use of renewable energy technologies to produce electricity in NSW over the next 5 years | 79 |
| Figure 3.34: Overall views about using renewable energy to produce electricity in NSW and its cost | 80 |
| Figure 3.35: Support for and opposition to building solar/wind farms in NSW | 80 |

Executive summary

The Office of Environment and Heritage (OEH) commissioned research from Newspoll on community attitudes to renewable energy in general, self-assessed knowledge of renewable energy and wind and solar farms in New South Wales. The aims of the research were to:

- provide a comprehensive picture of community awareness, knowledge and attitudes to renewable energy technologies
- provide an understanding of community attitudes to local wind and solar farms and perceived benefits and impacts
- establish a baseline measure of community attitudes on which to base evaluation of the activities of the Regional Clean Energy Program.

A representative sample of 2000 people aged 18 years and over from across NSW was surveyed by telephone from late August to mid-September 2014. This report presents the findings of this survey at a state level and in six regional areas.

Awareness and self-assessed knowledge of renewable energy technologies

When asked to name types of renewable energy, 76% of survey respondents thought of solar and 64% thought of wind. After prompting, virtually all respondents said they had heard of solar (99%) and wind (98%). Many people reported they knew 'a lot' or 'a moderate amount' about solar power (74%) and wind power (57%).

Awareness of other renewable energy technologies was lower. Unprompted awareness of hydroelectric power by survey respondents was 31%, for bioenergy 3% and geothermal power 9%. After prompting people were fairly confident of their knowledge of hydroelectric power, but most admitted they knew little about bioenergy and geothermal power.

There was almost universal awareness (97%) of the concept of **wind farms**, wind turbines or windmills being used to generate electricity. Fewer respondents (66%) said they had heard of the idea of commercial **solar farms**. About half of survey respondents who had heard of wind farms and solar farms said they knew 'a lot' or 'a moderate amount' about these technologies.

Men and university-educated people reported knowing more about renewable energy, wind and solar farms than women and people without a university education.

The research also considered differences in awareness and self-assessed knowledge between regions. This analysis found that while the essential substance of people's responses was the same there were some regional differences, such as:

- people in the North East Region of NSW had the highest awareness and self-assessed knowledge of renewable energy
- wind power was more top-of-mind for people in the South East Region and awareness and self-assessed knowledge of both wind and solar farms was higher in this area than in other regions
- Sydney residents tended to have lower top-of-mind awareness of wind and solar power, and lower awareness and self-assessed knowledge of solar farms.

Attitudes to renewable energy technologies

Whilst 88% of people identified advantages with renewables, 62% also saw disadvantages. In weighing up the pros and cons, the vast majority of people (91%) supported the use of renewables to generate electricity in NSW. There was also a widely held view that NSW should be producing more of its electricity in this way (83%), rather than less (3%), or maintaining current levels (11%). Most people surveyed supported the use of both wind farms (81%) and solar farms (89%).

The principal advantages people saw in renewables were:

- benefits to the **environment** (80%)
 - cleaner/creating less ‘pollution’ or fewer greenhouse gases (52%)
 - more sustainable, reducing reliance on non-renewable resources such as coal (39%)
- **lower cost**, or at least the potential for reduced cost in the long run (37%).

The principal disadvantages people saw in renewables were:

- **higher cost** (39%), particularly in the set-up phase
- concerns about **efficiency and reliability** (18%).

About four-in-ten people believed there were no disadvantages to renewables, or could not think of any.

The perceived cost of renewables is a complex and multi-dimensional issue. Some people were aware of the competing priorities of higher cost now versus lower cost in the long run, were wary of the potential for higher domestic electricity costs, and some were willing to pay more to support renewable energy technologies.

Regional attitudes to local wind and solar farms

People living in non-metropolitan regions of NSW – North East, Hunter/Central Coast (excluding Newcastle), North West, South East and South West – were asked for their views about siting wind and solar farms in their local region and within 1 to 2 kilometres of where they lived. The closer to peoples’ homes wind or solar farms were located, the lower the level of support for them (see table).

| | Within NSW | Within local region | Within 1–2 kilometres of peoples’ homes |
|-------|------------|---------------------|---|
| Wind | 81% | 73% | 59% |
| Solar | 91% | 84% | 78% |

The main benefits identified by people who supported locating solar farms within 1–2 kilometres of their homes were the environment (62%) and cost (29%). The same benefits were identified by people who supported locating wind farms close to their homes (69% and 23%, respectively).

When asked if a solar or wind farm was located within 1–2 kilometres of where people lived, 17% opposed solar farms and 37% opposed wind farms. The main unprompted reasons people opposed having wind farms this close to their homes were noise (61%), visual impact (38%) and health (23%). Some supporters of wind farms expressed similar concerns (32%, 11% and 8%, respectively).

The number of supporters or opponents of solar or wind farms who raised unprompted concerns about noise, visual impact, health and property values varied from negligible to just over 40%. When survey respondents were prompted about these concerns, these figures changed to between 45% to 77%. This rise after prompting suggests that the in-principle majority support for wind farms, subject to communication about these issues, could be a fragile one.

Conclusions

It is clear there is widespread in-principle support for using renewable energy in NSW and most people do not need convincing about its environmental benefits. There are mixed views about the costs, efficiency and reliability of renewable energy. Reasoned arguments about the long term financial payoff from investing in renewable infrastructure are important for those who have concerns.

The proximity to peoples’ homes is important with the location of large-scale renewable energy projects. This is particularly relevant to wind farms.

1 Introduction

1.1 Background

In 2013 the NSW Government released the Renewable Energy Action Plan (REAP) which outlines three goals, comprising 24 specific actions, designed to grow the use of renewable energy in NSW to 20% by 2020. These three goals are:

- Goal 1: to attract renewable energy investments and projects
- Goal 2: to build community support for renewable energy
- Goal 3: to attract and grow expertise in renewable energy technology.

The Regional Clean Energy Program (RCEP) has responsibilities under Goal 2, Actions 11 and 12, to build an informed and engaged community and support for renewable energy.

The RCEP is a four-year program that builds on the Renewable Energy Precincts (REP) program which was established in 2010. It involves the equivalent of six full-time regionally-based coordinators engaging and informing communities about renewable energy and supporting the development of community-owned renewable energy projects.

1.2 Research purpose

The Office of Environment and Heritage (OEH) commissioned research to develop an understanding of its customers both at a statewide and regional level. The specific aims of the research were to:

- provide a comprehensive picture of community awareness, knowledge and attitudes to renewable energy technologies
- provide an understanding of community attitudes to local wind and solar farms, along with perceived benefits and impacts
- establish a baseline measure of community attitudes which, through comparison with future surveys, will help evaluate the impact of programs.

In 2010, the then NSW Department of Environment, Climate Change and Water commissioned a survey relating to community attitudes to wind farms. This differed from the current survey in scope and geographic coverage. The 2010 survey was undertaken in areas of NSW designated as Renewable Energy Precincts. The current survey has statewide coverage and is stratified by RCEP regions that do not align with the Renewable Energy Precincts. Where the same or similar questions were asked in the two surveys, the report contains some (appropriately qualified) comparisons.

1.3 Research methods

Between 27 August 2014 and 11 September 2014 a NSW-wide telephone survey of 2000 people aged 18 years and over was conducted. The sample was geographically stratified across seven regions (Table 1.1).

Table 1.1: Region and number of people sampled for the survey.

| Region | Sample size |
|----------------------|-------------|
| Greater Sydney | 500 |
| North East | 250 |
| Hunter/Central Coast | 250 |
| North West | 250 |
| Illawarra | 250 |
| South East | 250 |
| South West | 250 |
| Total | 2000 |

Within each region the results were post-weighted by an interlocking matrix of sex and age within five age ranges (18–24, 25–34, 35–49, 50–64 and 65+ years). The results within each region were also weighted by the highest level of education achieved, and then all regions were recombined in their correct population proportions.

Preliminary qualitative research was conducted to assist with the design of the quantitative research rather than act as a standalone piece of research. The report draws on elements of the preliminary research to expand on issues raised in the survey. The preliminary research comprised four focus groups of mixed sex and age, with one group being held in Sydney and three in regional NSW.

The survey questionnaire was piloted to test survey flow and comprehension. This identified the need for changes which were implemented in the final survey.

1.4 Statistical significance testing

Statistically significant differences between regions or demographic segments are identified throughout the report. Statistical significance testing was undertaken, at the 95% level of confidence, by comparing a particular segment or group with its complement. For example:

- for a test of significance by region, respondents residing in a given region were compared with all people who were **not** residing in that region
- for a test by age, respondents in a given age group (for example people aged 65 and over) were compared with all people who were **not** in that age group (in this example, people under the age of 65)
- for a test of significance by gender, men were compared with women.

In tables throughout this report segments that are significantly **higher** than others are indicated with an asterisk (*) and segments that are significantly **lower** than others are indicated with the symbol †.

2 Findings

2.1 Community awareness and knowledge of renewable energy technologies

2.1.1 Overall awareness and self-assessed knowledge of renewable energy technologies

The following results were obtained when survey participants were asked about their awareness of renewable technologies (Figure 2.1).

General awareness

- Solar and wind power were the dominant technologies people associated with 'renewable energy'. When asked to name types of renewable energy, unprompted 76% of NSW adults mentioned solar and 64% mentioned wind. After prompting, virtually everyone said they had heard of them both (solar 99%, wind 98%).
- Although most people had also heard of **hydroelectric** power (89% after prompting), far fewer thought of it unprompted as a source of renewable energy (31%).
- Unprompted awareness of **bioenergy** or **geothermal** power was limited to a small minority, (bioenergy including biomass or biofuel 3%; geothermal 9%). Unprompted, a few others (2%) mentioned something that could be classified as bioenergy, although they did not refer to the terms 'bioenergy', 'biomass' or 'biofuel'. This included things such as methane, ethanol, manure, sugar cane, crops/plants or using waste/garbage. After prompting, about 60% of people claimed to have heard of bioenergy and geothermal power.

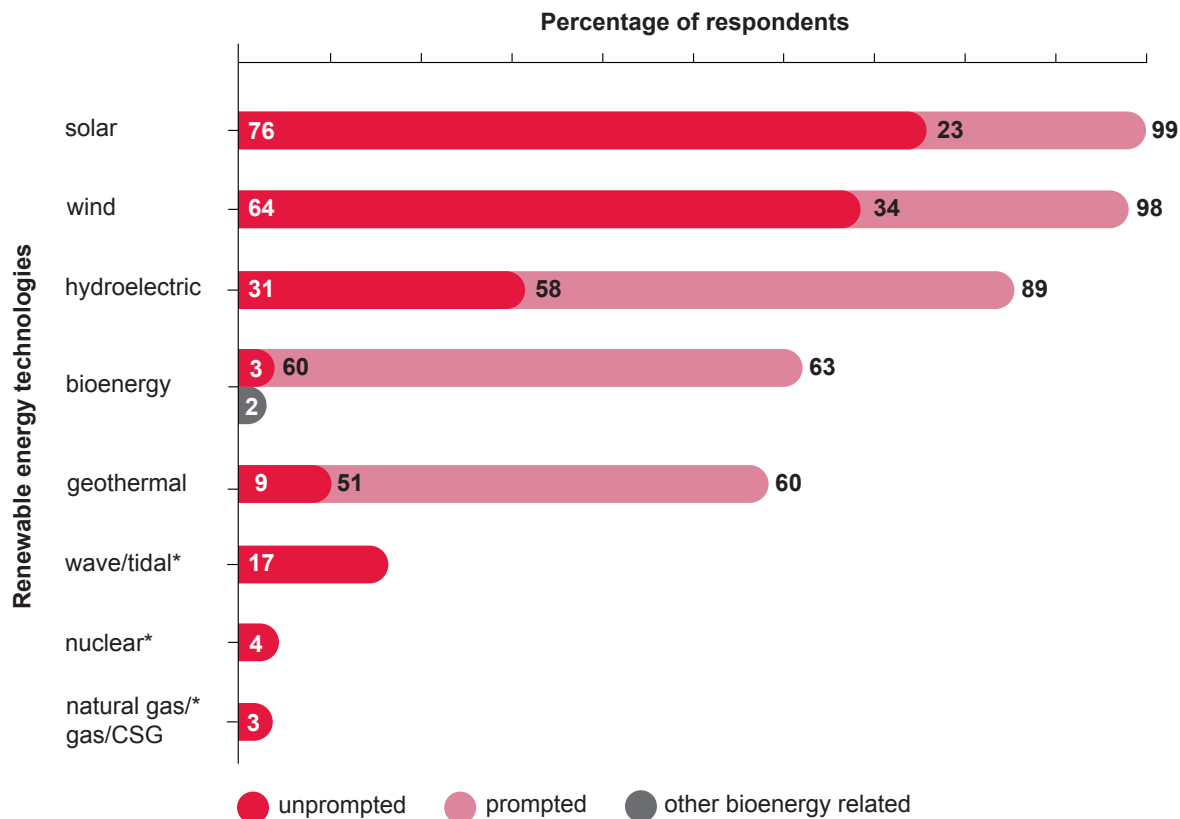


Figure 2.1: Community awareness of renewable energy technologies.

Question A1. What types of renewable energy can you think of that can be used to generate electricity?

Question A2. Which of these types of renewable energy have you heard of before?

'Prompted' refers to the answers survey respondents gave after being prompted with suggested answers.

'Unprompted' refers to the answers survey respondents voluntarily gave to survey questions.

*Prompted awareness of these technologies was not measured.

Number of survey respondents = 2000. CSG = coal seam gas.

Beyond the five renewable energy sources shown in Figure 2.1, the survey also captured unprompted mentions of:

- **wave or tidal power** (17%)
- **nuclear power** (4%), and
- **gas/natural gas or coal seam gas (CSG)** (3%).

Some people (16%) were unable to nominate **any** type of renewable energy.

Self-assessed knowledge

Self-assessed knowledge of renewable technologies varied amongst survey respondents (Figure 2.2). For example:

- many survey respondents believed they knew ‘a lot’ or ‘a moderate amount’ about solar power (74%), wind power (57%) and hydroelectric power (49%)
- a small number of respondents felt they knew ‘a lot’ or ‘a moderate amount’ about bioenergy (15%) or geothermal power (18%)
- for solar, wind and hydroelectric power, many survey respondents felt they knew ‘a little’ about it, or it was something they had heard of (solar 25%, wind 41%, hydroelectric 40%); this was also the case for bioenergy (46%) or geothermal power (41%).

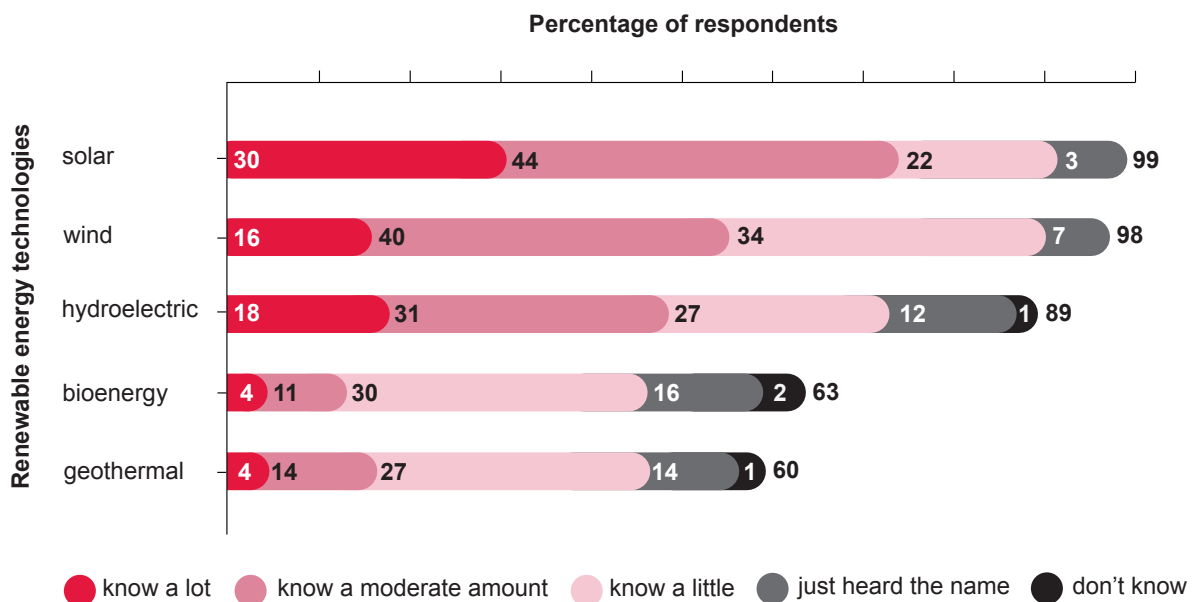


Figure 2.2: Self-assessed knowledge of renewable energy technologies.

Question A4. For each of the following types of renewable energy, please tell me how much you feel you know about it. Would you say you know a lot about it, a moderate amount, a little, or you've just heard the name?

Number of survey respondents = 2000.

2.1.2 Awareness and knowledge of renewable energy technologies among demographic segments

Regional variation

Regional variation in awareness of renewable technologies occurred (Table 2.1)¹. For example:

- unprompted awareness of solar and wind power was higher among people living in regional NSW (82%, 69%) than people living in Sydney (71%, 60%)
- survey respondents living in regional NSW were a little more likely to have heard of hydroelectric power than those living in Sydney (92% total awareness in regional NSW versus 86% total awareness in Sydney)
- people from the North East Region appeared most knowledgeable about renewable energy technologies, with higher levels of unprompted awareness and self-assessed knowledge of solar, wind and hydroelectric power, and a higher awareness of bioenergy and geothermal power
- unprompted awareness of wind power was highest in the South East Region (82%).

Table 2.1: Survey results showing regional variation in awareness/self-assessed knowledge of renewable energy technologies.

| | Total surveyed | Greater Sydney | Regional NSW | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|---|----------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | | | | |
| Solar | | | | | | | | | |
| Total awareness | 99 | 99[†] | 100[*] | 100 | 100 | 99 | 100 | 100 | 100 |
| Unprompted awareness | 76 | 71[†] | 82^{*‡} | 88[*] | 77 | 86[*] | 84[*] | 86[*] | 79 |
| Know a lot/moderate amount | 74 | 73 | 75 | 85[*] | 72 | 73 | 72 | 75 | 73 |
| Wind | | | | | | | | | |
| Total awareness | 98 | 98 | 98 | 99 | 99 | 97 | 97 | 99 | 98 |
| Unprompted awareness | 64 | 60[†] | 69^{*‡} | 74[*] | 67 | 70 | 63 | 82[*] | 61 |
| Know a lot/moderate amount | 57 | 58 | 56 | 64[*] | 51 | 51 | 56 | 68[*] | 54 |
| Hydroelectric | | | | | | | | | |
| Total awareness | 89 | 86[†] | 92[*] | 93[*] | 91 | 91 | 94[*] | 89 | 95[*] |
| Unprompted awareness | 31 | 31 | 31[‡] | 38[*] | 28 | 30 | 28 | 28 | 32 |
| Know a lot/moderate amount | 49 | 49 | 48 | 56[*] | 44 | 45 | 44 | 54 | 50 |
| Bioenergy | | | | | | | | | |
| Total awareness | 63 | 61 | 65 | 71[*] | 61 | 64 | 62 | 67 | 67 |
| Unprompted awareness | 3 | 3 | 2 | 5 | 1[†] | 2 | 2 | 3 | 2 |
| Know a lot/moderate amount | 15 | 16 | 13 | 18 | 11 | 12 | 13 | 16 | 16 |
| Geothermal | | | | | | | | | |
| Total awareness | 60 | 58 | 63 | 69[*] | 61 | 56 | 66 | 69[*] | 60 |
| Unprompted awareness | 9 | 8 | 10 | 8 | 14[*] | 9 | 6 | 15[*] | 8 |
| Know a lot/moderate amount | 18 | 18 | 17 | 23[*] | 15 | 15 | 16 | 19 | 14 |

Notes: * † Indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when than compared with other regions.

‡ The 2010 'Community Attitudes to Wind Farms' survey measured unprompted awareness of 'clean' energy sources (as opposed to 'renewable' energy sources that can be used to generate electricity) in people residing within regional NSW areas designated as Renewable Energy Precincts. The survey found the unprompted level of awareness among respondents was 74% for solar, 59% for wind and 18% for hydroelectric. The current survey found higher levels of unprompted awareness in survey respondents across all NSW regional areas: 82% for solar, 69% for wind and 31% for hydroelectric. Because of differences in geographic coverage and questions asked, it is not clear whether the different survey results was driven by real change or by methodological differences.

'Total awareness' represents the sum of unprompted and prompted responses. 'Unprompted awareness' refers to responses voluntarily given to survey questions. 'Know a lot/moderate amount' refers to self-assessed knowledge respondents reported about renewable energy technology.

¹ See ‡ in table notes

Demographic variations

Awareness of renewable technologies also varied among demographic segments of the population surveyed (Table 2.2). The following two clear patterns emerged among demographic segments:

- men had higher levels of awareness and self-assessed knowledge than women on nearly all measures
- university-educated people showed greater awareness and self-assessed knowledge across most technologies, whereas people with no post-school qualifications recorded the lowest on these measures.

No striking patterns were observed when different age groups were assessed, although the following reasonably consistent patterns emerged:

- people aged 50 to 64 years had a significantly higher awareness or self-assessed knowledge, or both, of each technology
- for each technology, the level of unprompted awareness was lower among people aged 65+ years than other people
- for four out of five technologies (solar, wind, hydroelectric and geothermal) the level of self-assessed knowledge was lower among people aged 25 to 34 years than people in the other age groups surveyed, as was unprompted awareness of wind and solar power.

Table 2.2: Survey results showing demographic.

| | Total surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|---|----------------|--------|-------|-------------|-------|-------|-------|-----|-------------------------|----------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/ apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Solar | | | | | | | | | | | |
| Total awareness | 99 | 99 | 99 | 99 | 97† | 100 | 100 | 99 | 100 | 99 | 98 |
| Unprompted awareness | 76 | 83* | 69† | 73 | 68† | 85* | 79 | 68† | 87* | 78 | 67† |
| Know lot/moderate amount | 74 | 78* | 70† | 77 | 64† | 76 | 80* | 70 | 83* | 76 | 67† |
| Wind | | | | | | | | | | | |
| Total awareness | 98 | 99 | 98 | 98 | 97 | 99 | 99 | 98 | 99 | 98 | 98 |
| Unprompted awareness | 64 | 73* | 55† | 64 | 56† | 68 | 74* | 53† | 75* | 64 | 56† |
| Know lot/moderate amount | 57 | 65* | 49† | 57 | 44† | 56 | 66* | 60 | 69* | 59 | 48† |
| Hydroelectric | | | | | | | | | | | |
| Total awareness | 89 | 92* | 85† | 86 | 71† | 93* | 94* | 93* | 96* | 88 | 85† |
| Unprompted awareness | 31 | 36* | 26† | 42* | 30 | 38* | 28 | 19† | 39* | 31 | 25† |
| Know lot/moderate amount | 49 | 62* | 36† | 36† | 25† | 51 | 64* | 55* | 63* | 52 | 37† |
| Bioenergy | | | | | | | | | | | |
| Total awareness | 63 | 69* | 57† | 65 | 62 | 65 | 63 | 59 | 72* | 62 | 58† |
| Unprompted awareness | 3 | 4* | 1† | 5 | 4 | 3 | 4 | 0† | 5* | 2 | 2 |
| Know lot/moderate amount | 15 | 21* | 9† | 15 | 12 | 14 | 20* | 12 | 24* | 14 | 10† |
| Geothermal | | | | | | | | | | | |
| Total awareness | 60 | 71* | 49† | 58 | 53 | 60 | 69* | 57 | 73* | 58 | 53† |
| Unprompted awareness | 9 | 15* | 4† | 15* | 10 | 10 | 9 | 5† | 16* | 7† | 7 |
| Know lot/moderate amount | 18 | 27* | 9† | 18 | 11† | 17 | 26* | 15 | 28* | 18 | 11† |

Notes: * † indicates statistically significant difference at the 95% level of confidence. * indicates a result was higher and † indicates a result was lower compared to other groups.

'Total awareness' represents the sum of unprompted and prompted responses. 'Unprompted awareness' refers to responses voluntarily given to survey questions. 'Know a lot/moderate amount' refers to self-assessed knowledge respondents reported.

2.1.3 Specific awareness and self-assessed knowledge of wind farms and solar farms

Having looked at community understanding of the broader category of renewable energy, this section looks at specific awareness and self-assessed knowledge survey respondents had about wind farms and solar farms (Figure 2.3). The following provides an overview of the findings:

- nearly all survey respondents (97%) had heard about the use of wind farms, wind turbines or windmills to generate electricity
- nearly all survey respondents (97%) knew what a wind turbine looked like – about 80% had seen a wind turbine in ‘the distance’ or ‘up close’, and 89% had seen them in pictures or on television (Table 2.3)
- fewer people (66%) said they had heard of commercial solar farms being used to generate electricity
- about half the survey respondents who had heard of wind farms and solar farms said they knew ‘a lot’ or ‘a moderate amount’ about these technologies, and others said they knew ‘a little’ or had heard of them.

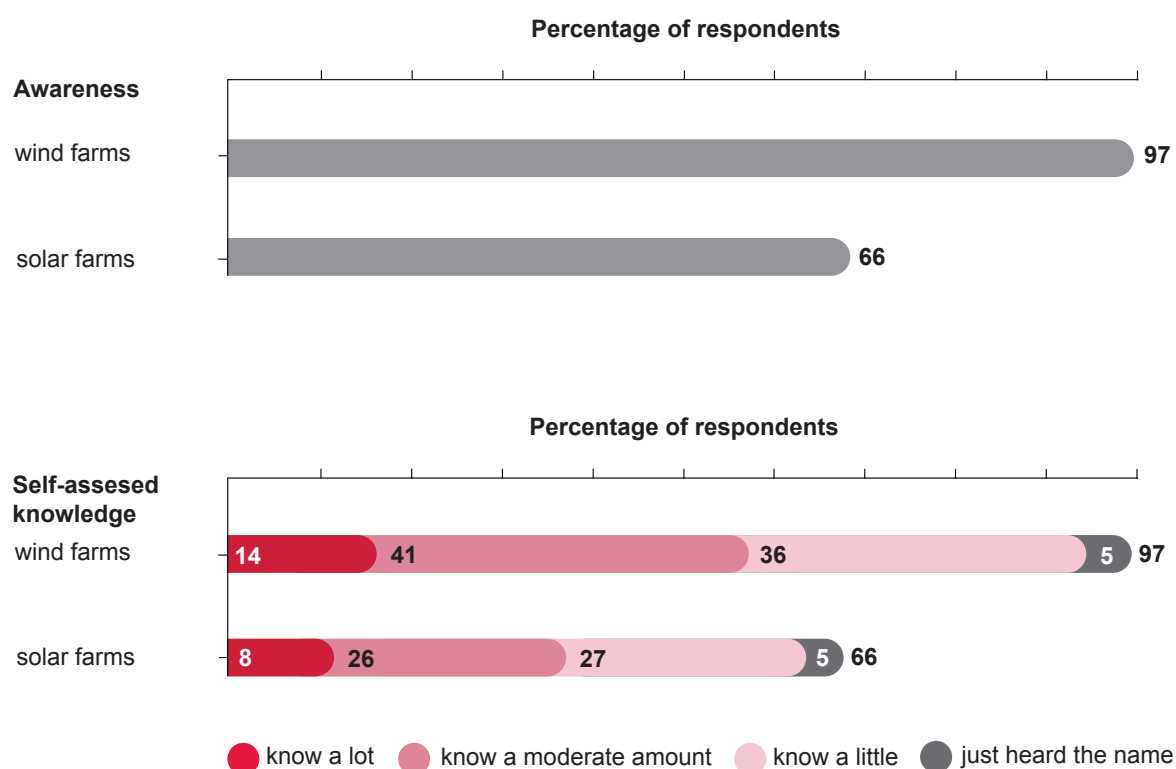


Figure 2.3: Awareness and self-assessed knowledge of wind farms and solar farms.

Question E1/F2. [Wind farms are groups of wind turbines or windmills used to generate electricity. / A commercial solar farm is about the size of a football field, with a large number of solar panels that generate electricity. The electricity is then fed into the national power grid.] Before today, had you heard about the use of wind farms or wind turbines or windmills/ the idea of solar farms being used to generate electricity?

Question E2/F3. Before this survey, how much did you know about wind/solar farms?

Number of survey respondents = 2000.

Table 2.3: Exposure to wind turbines.

| Survey response | Percentage of respondents |
|-------------------------------------|---------------------------|
| Total seen turbine in some way | 97 |
| Total seen 'in distance'/'up close' | 83 |
| Seen in distance | 78 |
| Seen up close | 50 |
| Seen on TV | 89 |
| Seen pictures | 89 |
| Seen some other way | 42 |

Note: Number of respondents = 2000

2.1.4 Awareness, self-assessed knowledge and exposure to wind and solar farms among demographic segments

Regional variation

Survey results about awareness, self-assessed knowledge and exposure to renewable technologies varied between regional NSW and Sydney as well as between regions (Table 2.4). For example:

- overall awareness of wind (98%) and solar farms (70%), and exposure to wind farms (98%), particularly having seen wind turbines 'up close' (59%), was higher in regional NSW than in Sydney
- survey respondents from the South East region were more likely to know a lot/moderate amount about wind farms (67%), and be aware of (84%) and know a lot/moderate amount (44%) about solar farms compared to other regions
- survey respondents from the South East region had the highest level of exposure to wind turbines (99%, including 66% 'up close') and those from the Illawarra (63%) and Hunter/Central Coast (68%) regions were also more likely to have seen a wind turbine 'up close'.

Table 2.4: Survey results showing regional variation in awareness/self-assessed knowledge/exposure to wind and solar farms.

| | Total surveyed | Greater Sydney | Regional NSW | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|-----------------------|----------------|----------------|--------------|------------|----------------------|------------|-----------|------------|------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |

Numbers below are shown as percentages.

Wind farms

| | | | | | | | | | |
|-------------------------------------|----|-----------------------|------------|-----------------------|------------|-----------------------|------------|------------|------------|
| Total awareness | 97 | 96[†] | 98* | 99* | 99 | 95 | 98 | 99 | 99* |
| Know a lot/moderate amount | 55 | 56 | 54 | 55 | 51 | 48[†] | 56 | 67* | 52 |
| Total seen turbine | 97 | 95[†] | 98* | 99 | 99 | 95 | 98 | 99 | 99* |
| Total seen 'in distance'/'up close' | 83 | 80[†] | 87* | 73[†] | 90* | 83 | 93* | 99* | 93* |
| Seen 'up close' | 50 | 44[†] | 59* | 47 | 68* | 50 | 63* | 66* | 52 |

Solar farms

| | | | | | | | | | |
|----------------------------|----|-----------------------|------------|----|----|------------|----|------------|----|
| Total awareness | 66 | 63[†] | 70* | 72 | 68 | 73* | 63 | 84* | 64 |
| Know a lot/moderate amount | 34 | 33 | 36 | 38 | 32 | 38 | 35 | 44* | 36 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

'Total awareness' represents the sum of unprompted and prompted survey responses. 'Know a lot/moderate amount' refers to self-assessed knowledge survey respondents reported.

Demographic variations

Demographic trends were in line with overall awareness/self-assessed knowledge of wind and solar power (section 2.1.1; Table 2.5). For example:

- men were more aware of and believed they knew 'a lot/moderate amount' about wind farms (99% and 64%, respectively) and solar farms (78% and 48%, respectively), and had seen wind turbines (99%, including 57% 'up close'), compared with women
- survey respondents who had university degrees were more likely to know a lot/moderate amount about wind farms (64%) and solar farms (43%), and to have seen wind turbines in the distance/up close (90%), compared with survey respondents with no post-school education
- compared with other age groups, self-assessed knowledge of these technologies was a little lower among 25–34 year olds (40% and 25% reported they knew 'a lot/moderate amount' about wind and solar farms respectively) and higher among 50–64 year olds (64% and 41% reported they knew a lot/moderate amount about wind and solar farms respectively).

Table 2.5: Survey results showing demographic variation in awareness/self-assessed knowledge/exposure to wind farms and solar farms.

| | Total surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|---|----------------|------------|------------|-------------|------------|-------|------------|------------|-------------------------|----------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/ apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Wind farms | | | | | | | | | | | |
| Total awareness | 97 | 99* | 95† | 98 | 91† | 97 | 98 | 99* | 98 | 97 | 96 |
| Know a lot/moderate amount | 55 | 64* | 46† | 55 | 40† | 55 | 64* | 57 | 64* | 58 | 47† |
| Total seen turbine | 97 | 99* | 94† | 98 | 91† | 97 | 97 | 99* | 98 | 97 | 96 |
| Total seen 'in distance/up close' | 83 | 86* | 80† | 84 | 76† | 86 | 85 | 84 | 90* | 84 | 78† |
| Seen 'up close' | 50 | 57* | 44† | 47 | 44 | 54 | 52 | 50 | 60* | 54 | 41† |
| Solar farms | | | | | | | | | | | |
| Total awareness | 66 | 78* | 55† | 66 | 54† | 67 | 74* | 66 | 73* | 67 | 61† |
| Know a lot/moderate amount | 34 | 48* | 21† | 33 | 25† | 35 | 41* | 34 | 43* | 36 | 27† |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

'Total awareness' represents the sum of unprompted and prompted survey responses. 'Know a lot/moderate amount' refers to self-assessed knowledge survey respondents reported about wind and solar farms.

2.2 Attitudes towards renewable energy technologies

2.2.1 Support for the use of renewable energy in NSW

The survey results showed that nine-in-ten people supported the use of renewable energy to generate electricity in NSW. About half of survey respondents **strongly** supported it (Figure 2.4). The rest of respondents were divided equally between a small number who opposed it (4%) and those who were uncommitted (5%).

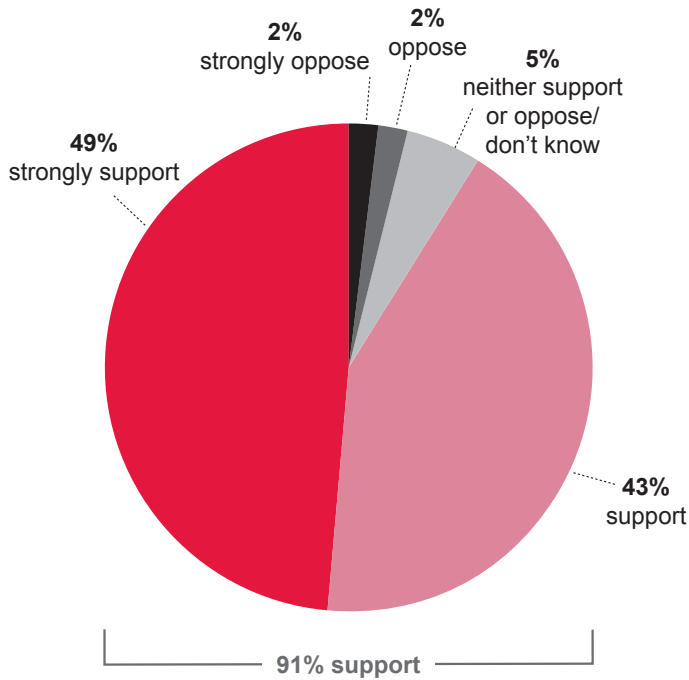


Figure 2.4: Overall support for generating electricity in NSW using renewable energy technologies.

Question A5. Most electricity in NSW is generated by coal-fired power stations. Some of it is generated from renewable energy. To what extent do you support or oppose (strongly oppose, oppose, neither support or oppose/don't know, support, strongly support) using renewable energy for at least some of the electricity in NSW?

Number of survey respondents = 2000.

Most people surveyed (83%) also believed that over the next five years, NSW should produce more of its electricity from renewable energy (Figure 2.5). A small percentage of people believed the use of renewables should be **reduced** (3%).

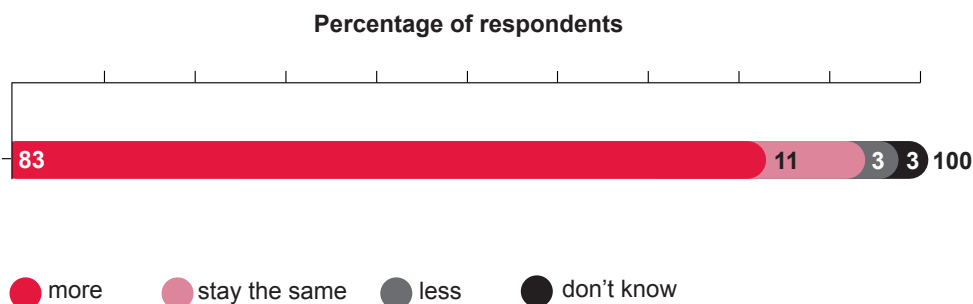


Figure 2.5: Support for use of renewable energy to produce electricity in NSW over the next five years.

Question A6. And over the next five years, do you think NSW should be trying to produce... more of its electricity from renewable energy, less, or should it stay the same as now?

Number of survey respondents = 2000.

Support for use of renewable energy technologies in NSW among regions and demographic segments

Support for the use of renewables, and for an increase in their use over the next five years, was prevalent across all regions and demographic groups. There were some differences in the degree of support, for example:

- survey respondents who lived in the North East region (59%), university educated people (68%) and those aged 35–49 years (55%) were more likely than others to **strongly** support the use of renewables
- university educated survey respondents were more likely to support increased use of renewables over the next five years (90%)
- fewer people living in the Hunter/Central Coast and South West regions strongly supported the use of renewables (around 40%)
- overall support for renewables was lower among people aged 65+ years (85%) and those with no post-school qualifications (88%)
- slightly fewer people aged 65+ years (71%) and those with no post-school qualifications (80%) believed that use of renewables should be increased over the next five years.

Table 2.6: Survey results showing regional variation in overall support of renewable energy and its expansion in NSW

| | Total surveyed | Greater Sydney | Regional NSW | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|---|----------------|----------------|--------------|------------|----------------------|------------|-----------|------------|------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | | | | |
| Use renewable energy to produce some electricity | | | | | | | | | |
| Total support | 91 | 91 | 92 | 93 | 93 | 94 | 91 | 90 | 91 |
| Strongly support | 49 | 50 | 46 | 59* | 41† | 43 | 49 | 49 | 38† |
| Total oppose | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| Over next 5 years | | | | | | | | | |
| Produce more electricity from renewables | 83 | 83 | 85 | 86 | 85 | 81 | 89 | 82 | 79 |
| Stay the same as now | 11 | 10 | 12 | 10 | 12 | 17* | 9 | 11 | 15 |
| Produce less electricity from renewables | 3 | 3 | 2 | 1 | 2 | 2 | 1 | 2 | 3 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

Table 2.7: Survey results showing demographic variation in overall support of renewable energy and its expansion in NSW

| | Total surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|---|----------------|--------|-------|-------------|-------|------------|-------|------------|-------------------------|---------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Use renewable energy to produce some electricity | | | | | | | | | | | |
| Total support | 91 | 92 | 91 | 95 | 92 | 95* | 91 | 85† | 95* | 93 | 88† |
| Strongly support | 49 | 52 | 46 | 52 | 49 | 55* | 50 | 35† | 68* | 45 | 40† |
| Total oppose | 4 | 5 | 3 | 2 | 3 | 2 | 5 | 8* | 3 | 3 | 6* |
| Over next 5 years | | | | | | | | | | | |
| Produce more electricity from renewables | 83 | 83 | 84 | 90* | 89 | 86 | 83 | 71† | 90 | 83 | 80† |
| Stay the same as now | 11 | 13 | 9 | 6† | 6 | 8† | 12 | 22* | 5† | 12 | 14* |
| Produce less electricity from renewables | 3 | 3 | 2 | 4 | 1 | 2 | 4 | 3 | 2 | 3 | 3 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

2.2.2 Perceived advantages and disadvantages of generating electricity from renewable sources (unprompted)

When survey respondents were asked to describe the advantages and disadvantages of using renewable energy to generate electricity they answered in a variety of ways. The issues raised can be divided into a few broad categories (Figure 2.6).

There were two key responses about the **advantages** of using renewable energy to generate electricity:

1. benefits to the environment (80%)
2. lower cost (37%).

There were three key responses about the disadvantages of using renewable energy to generate electricity

1. higher cost (39%)
2. lack of efficiency and/or reliability (18%)
3. no disadvantages to renewables, or unable to think of any (38%).

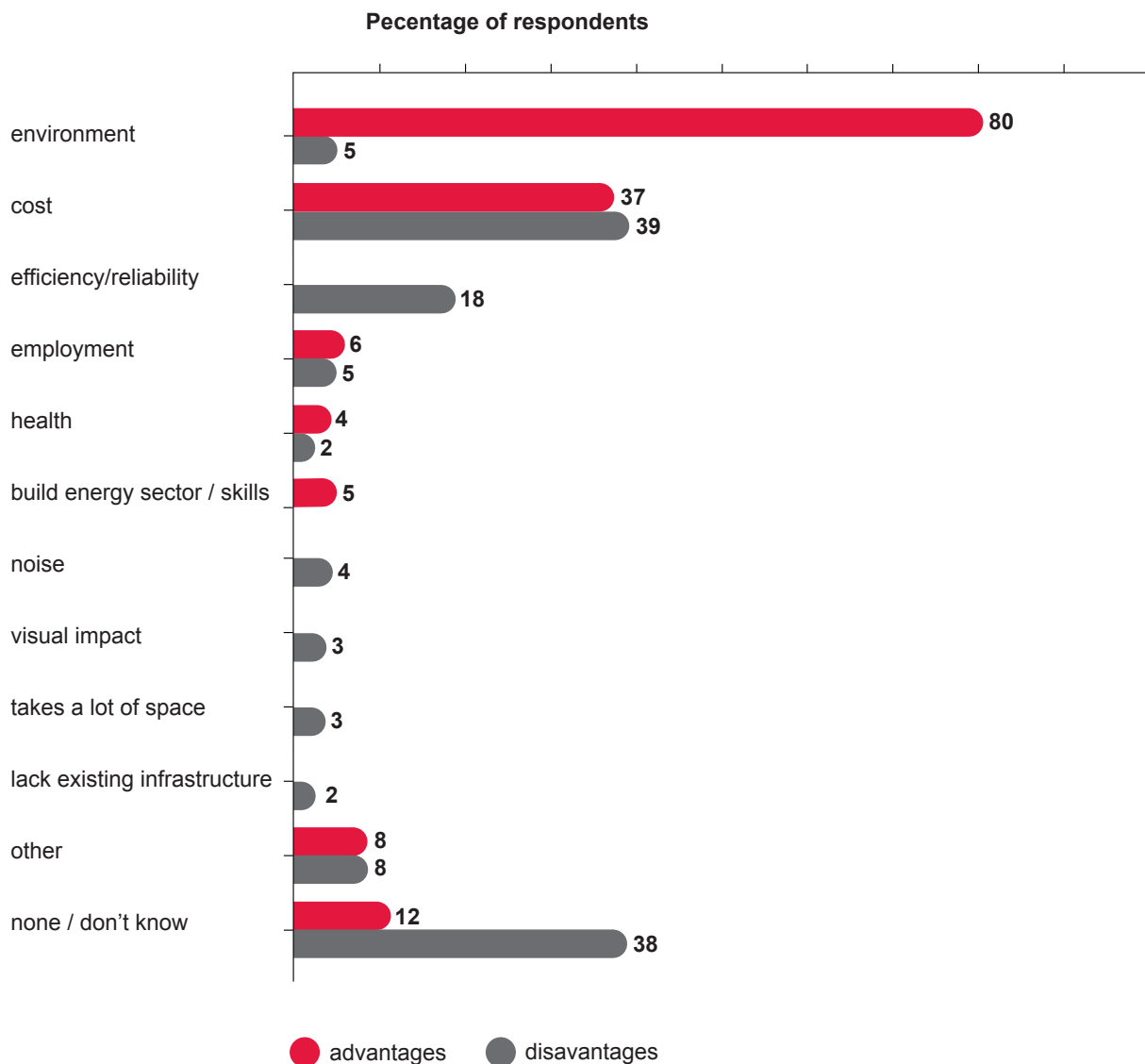


Figure 2.6: Perceived advantages/disadvantages of using renewable energy to generate electricity (unprompted).

Questions A7/8. What would you say are the advantages/disadvantages of generating electricity from renewable sources?

Number of survey respondents = 2000

There were other broad categories of opinion, but all were much smaller than the key responses shown in Figure 2.6. In some cases, different people saw the same issue from different perspectives. For example, some people saw cost as an advantage, while others saw it as a disadvantage, and some simultaneously saw it as both (discussed further below).

The environment

Environmental benefits were clearly the dominant perceived advantage of renewable energy technologies. For example:

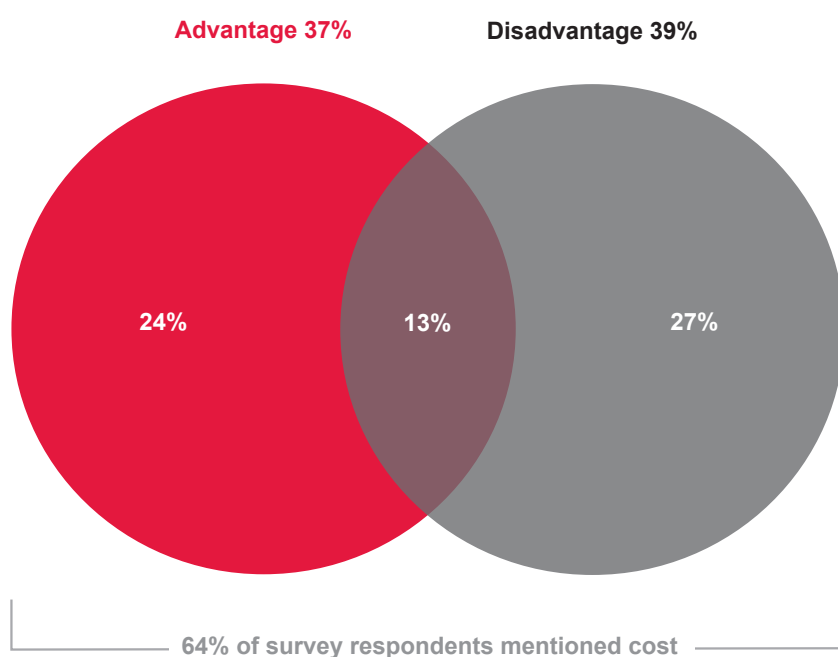
- many survey respondents said that renewables were cleaner or created less ‘pollution’ or fewer greenhouse gases (52%)
- some (39%) mentioned sustainability and reduced reliance on non-renewables such as coal
- some said renewables would help ‘save the planet’ for future generations (7%)
- others saw benefits in the preservation of the landscape and agricultural land, e.g. by not digging up the landscape (5%).

In comparison with the 80% who saw environmental benefits of using renewable energy technologies, a very small proportion (5%) saw renewables as harmful to the environment. For example:

- some respondents (1%) saw renewables as destroying the landscape rather than preserving it (e.g. taking land to build wind farms, or dams for hydroelectricity resulting in flooding valleys)
- other respondents (1%) were concerned about potential impacts on animals or wildlife, including the impact of wind turbines on bird life
- others (1%) said renewables generated pollution/carbon; this included the belief that the harm caused to the environment in manufacturing the required equipment (e.g. solar panels, wind turbines) outweighed other environmental benefits, in other cases it appeared to be based on confusion about what ‘renewable’ meant.

Cost

Cost is one of the more complex issues around renewable energy. The results of the survey showed that almost as many people saw cost as an advantage of renewables (37%) as a disadvantage (39%). This was more than a simple case of opposing points of view (Figure 2.7), and for some people cost could simultaneously be an advantage and a disadvantage (13%).



Number of survey respondents = 2000

Figure 2.7: Perceptions about the cost of renewable energy.

The type of logic or contexts that underpinned people’s thinking on each side of the cost equation were many and varied. Below are some examples of the logic behind some of the responses generated in the survey.

Lower cost as an advantage

Domestic solar panels:

- ‘The ones on the roof are the ones I’m talking about. So no more electricity bills once I’ve paid off the ones on the roof’
- ‘Less cost/households can produce their own electricity.’
- ‘We have solar. We get a small rebate that we make.’

It’s free energy:

- ‘It’s not costing us anything, it’s coming from nature.’
- ‘Wind costs nothing.’
- ‘And it’s free harvesting the wind, the sun and water flow.’

It will become cheaper eventually (if we stick with it):

- ‘Ultimately it should be cheaper.’
- ‘The more that we generate the cheaper it will become.’
- ‘In the long term it’s going to be cheaper.’

People usually did not explain **why** they believed renewable energy would be cheaper. The language people used in saying renewable energy was cheaper was not always definitive; sometimes it was speculative, or merely hopeful. For example:

- ‘Maybe cost?’
- ‘Possibly cheaper in the long run.’
- ‘In theory, apart from capital costs, it will be cheaper for the end user.’
- ‘I hope it would be cheaper.’
- ‘Hopefully it’s cheaper.’

Lower cost as a disadvantage

The set-up cost/equipment costs are high:

- ‘There’s no disadvantages that I’m aware of other than cost – the expensive equipment.’
- ‘In some instances at the moment the capital cost.’
- ‘Have to spend a lot of money setting up the initial infrastructure and the technology.’
- ‘The cost of setting it up.’

At the moment it costs more:

- ‘Cost at the moment.’
- ‘At this stage cost.’
- ‘It’s a bit more expensive at the moment but I think with time it’ll come down.’
- ‘I think probably in the short term it’s more expensive.’

Again, people did not always explain **why** they believed renewable energy was more costly.

Those who saw both cost advantages **and** disadvantages typically distinguished between cost **now** versus cost **later**, or set-up costs versus (longer-term) operating costs (Table 2.8).

Table 2.8: Survey respondents’ reasons for the cost of renewable energy technologies being both an advantage and a disadvantage.

| Advantages | Disadvantages |
|---|---|
| Saving money in the long run. | The initial cost. |
| Eventually once you work out the technology it should end up being cheaper. | The technology isn’t up to scratch yet to do it as efficiently as coal fire stations, etc so it’s probably a little more expensive. |
| In the long run I’d imagine it’d be cheaper. | Initial costs. |
| It saves more money I guess because it’s using the energy from the sun. | It can cost a bit of money to set up. |
| Well, in the long term it would be cheaper. | The cost to set up the infrastructure |

Efficiency/reliability

Almost one in five people surveyed said renewable technologies lacked efficiency/reliability of supply (18%). Some viewed these technologies as not yet advanced or efficient enough (7%) for electricity generation and unable to provide base-load power (3%). Solar and wind power, in particular, were perceived as dependent on the right weather conditions: people assumed that no daylight/sunshine or no wind equated to no electricity supply. This contributed to the view that it was hard to achieve reliable or sufficient levels of electricity supply from renewables (9%).

Other advantages/disadvantages

Survey respondents gave other unprompted reasons why renewable energy technologies could be advantageous or disadvantageous. For example:

- Employment – 6% of people believed renewable energy would create jobs and employment, but just as many (5%) believed it would cost jobs in existing electricity generation industries or coal mining.
- Long-term national benefits – these responses related to favourable views on job creation, some people saw an opportunity to encourage innovation, investment and development in the renewable energy sector to benefit Australia's future energy needs and for export opportunities (5%).
- Health – some people saw renewables as having positive health benefits through a healthier environment, such as cleaner air and oceans/waterways, reduced greenhouse gases/carbon emissions, etc. (4%). Others had potential health concerns (2%), principally wind turbines causing ill health among people living in nearby communities.
- Noise and visual impact – noise issues (4%) and visual impact (3%) were disadvantages people mainly associated with wind turbines. Some believed that noise ('humming') from wind turbines was a problem for nearby communities and the large size, overall look ('ugliness'), and number of wind turbines grouped together could 'ruin the natural skyline'. Others also saw solar panels as 'eyesores'.
- Infrastructure and space needed – new/additional infrastructure needed to capture, convert and store energy from different renewable energy types (2%), and the amount of land required for wind turbines, solar panels or hydroelectric dams (3%), were viewed as other disadvantages of renewable energy technologies.

2.2.3 Perceived advantages/disadvantages among those who support and those who oppose renewables (unprompted)

The vast majority of people surveyed (91%) supported the use of renewable energy technologies. Most could see advantages and disadvantages but thought advantages outweighed disadvantages (Tables 2.9 and 2.10).

Those who **supported** renewable energy were significantly more likely than the small number who **opposed** it to see both environmental benefits (84%) and cost benefits (38%). Of those who opposed (4%) some could also see these advantages (33%, 20%), and about half of them could not think of any advantages.

Perceptions about the disadvantages of renewable energy among the two groups were similar. About 40% of each group saw a cost disadvantage, but supporters of renewables were more likely to identify higher set-up cost (17%), whereas those who opposed them identified higher cost generally (40%). Those who opposed renewables were more likely to see disadvantages for the environment (17%) and in relation to health (14%).

Interestingly, there were some people who did not appear to base their support or opposition on anything concrete. For example, 8% of supporters did not cite advantages for using renewables, and 29% of those who opposed them did not cite a disadvantage. It was unclear what was driving these opinions. It could be a vague sense that renewables are 'good' or 'bad', or that people were reflecting opinions they had heard without knowing why.

Table 2.9: Perceived advantages of using renewables (unprompted) provided by survey respondents who supported or opposed renewable energy technologies.

| | Total surveyed | Support renewables | Oppose renewables |
|--|----------------|--------------------|-------------------|
| Number of respondents | 2000 | 1844 | 86 |
| Numbers below are shown as percentages. | | | |
| Environmental issues | 80 | 84* | 33† |
| It's better/less harmful for the environment/environmentally friendly | 31 | 33* | 4† |
| Cleaner/less pollution/greenhouse gases | 52 | 55* | 20† |
| Less emissions of greenhouse gases/carbon dioxide/contribute less to global warming | 21 | 22* | 8† |
| Its cleaner/not dirty | 15 | 16* | 5† |
| Less/no (air) pollution | 22 | 24* | 7† |
| Safer/Less (toxic) waste/by products being produced | 6 | 7* | 0 |
| Less water pollution/better or cleaner water quality | 1 | 1 | 0 |
| Sustainability | 39 | 41* | 13† |
| Sustainable/can be reused/won't run out | 23 | 25* | 7† |
| Less reliant on/won't use up/limited supply of coal/fossil fuels/non-renewable resources | 16 | 17* | 6† |
| Making use of available (renewable) resources (solar/wind/water) | 7 | 7 | 1† |
| Save the planet/won't destroy the earth for future generations | 7 | 7 | 1† |
| Preserve landscape/farm/agricultural land | 5 | 6* | 2 |
| Won't damage the landscape (from digging)/destroy the land/the beautiful countryside | 5 | 5* | 2 |
| Better use of land for agriculture/farming/won't destroy agricultural land | 1 | 1 | 0 |
| Better for/less impact on ozone layer | 2 | 2 | 3 |
| Lower cost | 37 | 38* | 20† |
| Cheaper energy bills/cost less for consumers | 7 | 7 | 2† |
| Cost less to generate/run/maintain (in the long run) | 1 | 1* | 0 |
| The cost/savings/cheaper – other cost mentioned and no further information provided | 29 | 30* | 17 |
| Other issues | | | |
| Healthier/good for our health/better quality of living | 4 | 5* | 1 |
| Build long term energy sector/technological advancement/skills | 5 | 5* | 0† |
| Create more jobs | 6 | 7 | 5 |
| Other | 8 | 8 | 11 |
| None/don't know | 12 | 8† | 49* |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when the two groups (support or oppose renewables) were compared.

Table 2.10: Perceived disadvantages of using renewables (unprompted) provided by respondents who supported or opposed renewable energy technologies.

| | Total surveyed | Support renewables | Oppose renewables |
|--|----------------|--------------------|-------------------|
| Number of respondents | 2000 | 1844 | 86 |
| Numbers below are shown as percentages. | | | |
| Cost | 39 | 40 | 42 |
| High start-up/set-up costs/installation/infrastructure/capital cost | 15 | 17* | 4† |
| Expensive to run/maintain | 1 | 1 | 1 |
| Very expensive/high cost/cost/price other/cost mentioned and no further information provided | 26 | 26 | 40* |
| Efficiency/reliability | 18 | 18 | 20 |
| Difficult to generate/produce/supply as subject to sun/wind conditions | 9 | 10 | 5 |
| Cannot provide enough/base load power | 3 | 3 | 3 |
| Inefficient technology/not fully developed/not advanced enough | 7 | 7 | 13 |
| Environment | 5 | 5 | 17* |
| Generate air pollution/carbon emissions/gas emissions/impacts ozone layer | 1 | 1 | 1 |
| Landscape damage/destruction | 1 | 1 | 4 |
| Impact on/dangerous to animals mentioned and no further information required | 1 | 1 | 7* |
| Not good for the environment and no further information provided | 2 | 2 | 4 |
| Other issues | | | |
| Job losses/unemployment/people will lose their jobs | 5 | 6 | 1† |
| Generate noise/noisy/noise pollution | 4 | 4 | 4 |
| Visually unpleasant/distracting/impacting/unsightly/eye sore/visual pollution | 3 | 3 | 5 |
| Takes up a lot of land space/need space/large area | 3 | 3* | 0† |
| Health concerns | 2 | 2† | 14* |
| No existing infrastructure/need to build it (includes mentions of building dams) | 2 | 2* | 0† |
| Other | 8 | 8 | 18* |
| None/don't know | 38 | 37 | 29 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when the two groups (support or oppose renewables) were compared.

2.2.4 Perceived advantages and disadvantages of generating electricity from renewable sources (unprompted) among demographic segments

Regional variation

Perceived advantages and disadvantages of generating electricity from renewable energy technologies varied according to which region survey respondents lived in (Table 2.11). For example:

- survey respondents who lived in Sydney were more likely than those in regional NSW to report **disadvantages** to using renewable energy, particularly in terms of cost (43% versus 34%), and to a smaller degree a lack of existing infrastructure (3% versus 1%)
- Sydneysiders were more likely to see building the renewable energy sector/skills base as an **advantage** of using renewables (6%)
- residents in the North East and South West Regions were less likely to see **disadvantages** in using renewable energy, particularly in terms of cost (30%, 28% respectively)
- people living in the South West Region were less likely to see the environmental advantages of renewables (73%)
- visual impact was more of a concern in the South East Region (8%) than in other areas, whereas in the North West and Illawarra Regions more people viewed cost/savings as an advantage of using renewable energy in NSW (45% and 44%, respectively).

Table 2.11: Survey results showing regional variation in perceived advantages and disadvantages of generating electricity from renewable sources (unprompted).

| | Total surveyed | Greater Sydney | Total NSW regional | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|---|----------------|-----------------------|-----------------------|-----------------------|----------------------|------------|----------------------|------------|-----------------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | | | | |
| Advantages | | | | | | | | | |
| Environment | 80 | 80 | 80 | 84 | 79 | 79 | 83 | 83 | 73[†] |
| Cost | 37 | 35 | 39 | 40 | 34 | 45* | 44* | 37 | 39 |
| Employment | 6 | 7 | 6 | 4 | 7 | 6 | 4 | 9 | 6 |
| Health | 4 | 4 | 4 | 4 | 6 | 4 | 3 | 5 | 2[†] |
| Build energy sector/skills | 5 | 6* | 3[†] | 1[†] | 4 | 2 | 3 | 5 | 3 |
| None/don't know | 12 | 12 | 11 | 8 | 12 | 11 | 8 | 12 | 13 |
| Disadvantages | | | | | | | | | |
| Environment | 5 | 6 | 4 | 3 | 5 | 3 | 5 | 5 | 4 |
| Cost | 39 | 43* | 34[†] | 30[†] | 36 | 36 | 34 | 39 | 28[†] |
| Efficiency/reliability | 18 | 19 | 16 | 17 | 14 | 19 | 14 | 18 | 15 |
| Employment | 5 | 4 | 7 | 6 | 8 | 6 | 7 | 3 | 6 |
| Health | 2 | 3 | 2 | 1 | 2 | 3 | 1 | 3 | 2 |
| Noise | 4 | 5 | 3 | 4 | 2 | 6 | 3 | 4 | 3 |
| Visual impact | 3 | 2 | 4 | 2 | 5 | 4 | 2 | 8 | 3 |
| Takes a lot of space | 3 | 3 | 3 | 2 | 4 | 4 | 1[†] | 2 | 2 |
| Lack existing infrastructure | 2 | 3 | 1[†] | 3 | 0 | 2 | 0[†] | 2 | 2 |
| None/don't know | 38 | 35[†] | 42* | 45* | 40 | 40 | 43 | 34 | 49* |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

Demographic variation

Demographic variation occurred when survey participants were asked about perceived advantages and disadvantages of generating electricity from renewable energy technologies (Table 2.12).

Some key trends that appeared in different demographic segments were:

- Men appear to be more knowledgeable about renewables, with more being able to list advantages and disadvantages of these technologies than women. Men were more likely to have perceived advantages/disadvantages. For example, they cited environmental (84%) and employment (8%), and building the renewable energy sector/skills base (7%) as **advantages** and areas such as cost (44%) and problems with efficiency/reliability (21%) as **disadvantages**.
- Survey participants who had university degrees also self-assessed their knowledge higher than others. A large majority of this segment named advantages and disadvantages of renewables and they were more likely to mention advantages (e.g. environment 93%, employment 12%, building sector/skills 10%) and disadvantages (e.g. cost 53%, efficiency/reliability 25%). Survey participants with no post-school qualifications self-assessed their knowledge about renewables the lowest, with the TAFE/apprenticeship group sitting in between. An interesting exception was the higher proportion among the TAFE/apprenticeship group who viewed cost as an **advantage** of renewables (43%).
- By age group, older people (65+ years) were less likely than younger people to name advantages or disadvantages of renewable technologies. The older age group was less likely to mention advantages and disadvantages such as environmental advantages (66%), high costs/prices (25%) and problems with efficiency/reliability (11%). Although their self-assessed knowledge matched the state average, the **youngest age** group (18–24 years) was much less likely than other age groups to see cost/savings as an advantage (23%) and much more likely see efficiency/reliability as a **disadvantage** of using renewables (32%).

Table 2.12: Survey results showing demographic variation in perceived advantages and disadvantages of generating electricity from renewable sources (unprompted).

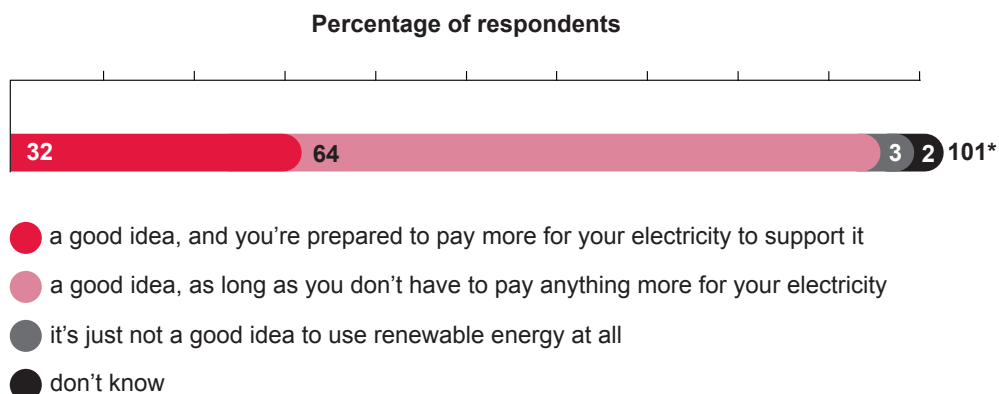
| | Total surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|---|----------------|------------|------------|-------------|-----------|------------|-----------|------------|-------------------------|----------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/ apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Advantages | | | | | | | | | | | |
| Environment | 80 | 84* | 76† | 89* | 79 | 86* | 81 | 66† | 93* | 82 | 71† |
| Cost | 37 | 36 | 37 | 23† | 37 | 41 | 40 | 35 | 35 | 43* | 33 |
| Employment | 6 | 8* | 5† | 7 | 8 | 7 | 6 | 4† | 12* | 5 | 4† |
| Health | 4 | 3 | 5 | 6 | 4 | 4 | 5 | 4 | 4 | 3 | 6 |
| Build energy sector/skills | 5 | 7* | 2† | 8 | 8 | 4 | 4 | 1† | 10* | 3 | 3† |
| None/don't know | 12 | 8† | 14* | 3† | 12 | 7† | 11 | 23* | 4† | 8† | 19* |
| Disadvantages | | | | | | | | | | | |
| Environment | 5 | 6 | 4 | 4 | 9* | 5 | 4 | 3 | 6 | 6 | 4 |
| Cost | 39 | 44* | 35† | 46 | 40 | 46* | 41 | 25† | 53* | 40 | 31† |
| Efficiency/reliability | 18 | 21* | 14† | 32* | 18 | 17 | 16 | 11† | 25* | 17 | 14† |
| Employment | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 3† | 5 | 5 | 6 |
| Health | 2 | 2 | 3 | 3 | 1 | 1† | 5* | 1 | 2 | 3 | 2 |
| Noise | 4 | 4 | 5 | 2 | 1† | 3 | 7* | 5 | 4 | 5 | 3 |
| Visual impact | 3 | 4 | 2 | 3 | 1 | 3 | 4 | 4 | 4 | 3 | 2 |
| Takes a lot of space | 3 | 4 | 2 | 5 | 3 | 2 | 2 | 2 | 4 | 2 | 2 |
| Lack existing infrastructure | 2 | 3 | 1 | 4 | 2 | 2 | 2 | 2 | 3 | 2 | 2 |
| None/don't know | 38 | 30† | 45* | 28† | 32 | 35 | 37 | 55* | 22† | 38 | 48* |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

2.2.5 Personal cost as a mitigating factor on support for renewables

It was clear that along with the environment, cost was a pivotal element in community thinking about renewables. The most prevalent community view was that renewable energy was a good idea ‘provided I don’t have to pay more for my electricity’ (64%; Figure 2.8).

Even so, 32% of survey respondents said that renewables were not only a good idea, but they were also prepared to pay more for their electricity to support them. Only 3% of people said ‘it’s just not a good idea to use renewable energy at all’.



* numbers have been rounded up. Number of survey respondents = 2000.

Figure 2.8: Overall views about using renewable energy to produce electricity in NSW.

Question A9. Overall, which one of the following best describes your view about renewable energy to produce electricity? Do you think it's... ?

Personal cost as a mitigating factor on support for renewables

Survey respondents from Sydney (34%), those with a university education (49%) and 18–24 year olds (41%) were more likely to say that renewable energy was something they were prepared to pay more to support. Conversely, respondents with no post-school qualifications (72%) and those living in country/regional areas (68%), particularly the North West and South West Regions (74% each), were more inclined to say that renewables were a good idea provided they didn't have to pay more to support them (Table 2.13).

Table 2.13: Personal cost as a mitigating factor on support for renewable energy technologies – by region.

| | Total surveyed | Greater Sydney | Total NSW regional | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|--|----------------|-----------------------|-----------------------|----------------------|----------------------|-----------------------|-----------------------|------------|-----------------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | | | | |
| Using renewable energy to produce electricity in NSW is: | | | | | | | | | |
| A good idea | 95 | 95 | 96 | 97 | 95 | 96 | 98[†] | 96 | 94 |
| Prepared to pay more for electricity to support it | 32 | 34[*] | 28[†] | 35 | 30 | 22[†] | 29 | 26 | 20[†] |
| If don't have to pay more for electricity | 64 | 61[†] | 68[*] | 63 | 65 | 74[*] | 69 | 70 | 74[*] |
| Not a good idea | 3 | 3 | 2 | 0[†] | 3 | 2 | 2 | 2 | 5 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when other regions were compared.

Table 2.14: Personal cost as a mitigating factor on support for renewable energy technologies – by demographics.

| | Total surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|--|----------------|--------|-------|-------------|-------|-------|-------|------------|-------------------------|----------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/ apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Using renewable energy to produce electricity in NSW is: | | | | | | | | | | | |
| A good idea | 95 | 95 | 95 | 98* | 96 | 96 | 95 | 92† | 97 | 94 | 95 |
| Prepared to pay more for electricity to support it | 32 | 33 | 30 | 41* | 29 | 35 | 30 | 25† | 49* | 28† | 24† |
| If don't have to pay more for electricity | 64 | 63 | 65 | 57 | 66 | 62 | 65 | 67 | 48† | 66 | 72* |
| Not a good idea | 3 | 3 | 2 | 2 | 1 | 1 | 4 | 6* | 2 | 3 | 3 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

2.2.6 Community support for building wind farms and solar farms

There was substantial majority support for building wind farms in NSW (81%)², and even more support for solar farms (89%). The number of survey respondents who **strongly** supported the idea of solar farms (43%) was also somewhat higher than the number who strongly **supported** wind farms (34%; Figure 2.9).

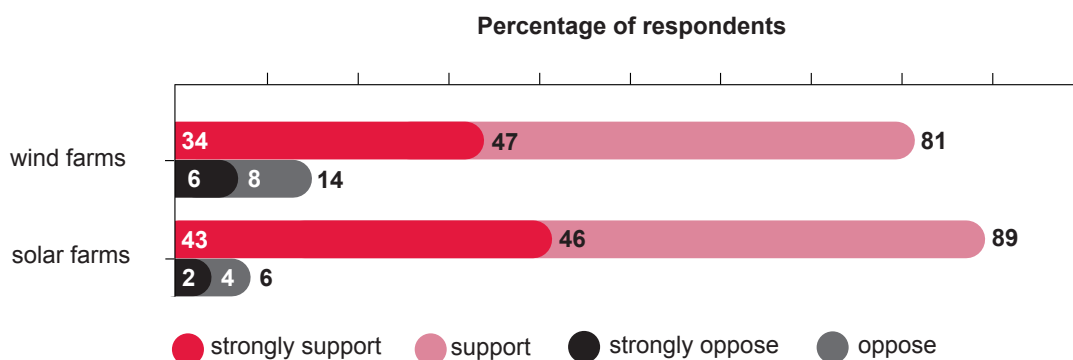


Figure 2.9: Support for building wind farms and solar farms in NSW.

Question E4/F4. Now thinking specifically about wind/solar farms in NSW. Overall, to what extent do you support or oppose wind/solar farms being built in NSW?

Number of survey respondents = 2000.

Regional variations in support for building wind and solar farms in NSW

There was not a lot of variation in support for building wind and solar farms by region (Table 2.15).

Overall support for both wind and solar farms was slightly higher in the Illawarra Region (87% and 95% respectively), and for solar farms in the North West Region (95%). People in the South West Region were a little less likely than others to **strongly** support wind farms (26%). The small level of opposition to solar farms was slightly higher in Sydney (8%) than in regional NSW (4%).

² The 2010 'Community Attitudes to Wind Farms' survey measured support for wind farms in NSW among people living in regional NSW areas designated as Renewable Energy Precincts. That survey reported support of 85%, a similar result to the 81% support across regional NSW reported in the current survey.

Table 2.15: Support for building wind and solar farms in NSW – by region.

| | Total surveyed | Greater Sydney | Total NSW regional | North East | Hunter/Central Coast | North West | Illawarra | South East | South West |
|---|----------------|----------------|--------------------|------------|----------------------|------------|------------|------------|------------|
| Number of respondents | 2000 | 500 | 1500 | 250 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | | | | |
| Wind farms | | | | | | | | | |
| Total support | 81 | 81 | 82 | 81 | 80 | 86 | 87* | 79 | 77 |
| Strongly support | 34 | 36 | 33 | 35 | 32 | 28 | 38 | 35 | 26† |
| Total oppose | 14 | 15 | 13 | 13 | 15 | 10 | 10 | 16 | 15 |
| Solar farms | | | | | | | | | |
| Total support | 89 | 87† | 91* | 91 | 89 | 95* | 95* | 88 | 93 |
| Strongly support | 43 | 43 | 44 | 48 | 42 | 46 | 42 | 46 | 39 |
| Total oppose | 6 | 8* | 4† | 4 | 4 | 3 | 3 | 5 | 3 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

Demographic variation

Patterns in support were more distinct within demographic groups compared to regional areas (Table 2.16). For example:

- men were more likely to support solar farms (93%) and **strongly** supported wind (39%) and solar (49%) farms
- support for wind and solar farms was higher (89% and 94% respectively) and stronger (52% and 60% respectively) among survey participants who were university educated
- support for wind farms was higher among people under 35 (around nine in 10) whereas opposition to wind farms was higher among people aged 50 and over (two in 10)
- opposition to solar farms was highest among people aged 65 and over, although it was relatively small (12%).

Table 2.16: Support for building wind and solar farms in NSW – by demographics.

| | Total Surveyed | Gender | | Age (years) | | | | | Highest education level | | |
|---|----------------|------------|------------|-------------|------------|-------|------------|------------|-------------------------|---------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only |
| Number of respondents | 2000 | 998 | 1002 | 166 | 216 | 575 | 491 | 552 | 680 | 753 | 567 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Wind farms | | | | | | | | | | | |
| Total support | 81 | 82 | 81 | 94* | 88* | 84 | 77† | 69† | 89* | 78 | 79 |
| Strongly support | 34 | 39* | 31† | 44* | 37 | 36 | 34 | 25† | 52* | 29† | 29† |
| Total oppose | 14 | 15 | 13 | 5† | 5† | 13 | 18* | 24* | 7† | 15 | 17* |
| Solar farms | | | | | | | | | | | |
| Total support | 89 | 93* | 86† | 96* | 92 | 91 | 89 | 80† | 94* | 89 | 86† |
| Strongly support | 43 | 49* | 37† | 45 | 47 | 45 | 46 | 31† | 60* | 39 | 36† |
| Total oppose | 6 | 5 | 7 | 2† | 3 | 5 | 8 | 12* | 3† | 5 | 9* |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

2.3 Attitudes towards local wind and solar farms

2.3.1 Responses to building wind and solar farms in NSW, local regions and within 1–2 kilometres of where they lived

Along with measuring opinions about locating wind and solar farms within NSW, the survey also sought people’s attitudes to having them in their local region and even closer, within 1–2 kilometres of where they lived (Figure 2.10).

People who lived outside of the Sydney and Newcastle metropolitan areas and Illawarra region were asked about their responses to building wind and solar farms in NSW, in their local region and within 1–2 kilometres of where they lived. Some of the survey findings were:

- the level of support for having **wind farms**³ in NSW closely reflected statewide sentiment (81%)
- support for having wind farms in the local region was (73%) but remained a fairly solid majority
- a majority supported having a wind farm within 1–2 kilometres of their home (59%) and 37% opposed it
- **solar farms** were preferred over wind farms for the three proximities
- although support dropped progressively from 91% for solar farms in NSW, to 84% in the local region, to 78% within 1–2 kilometres of where they lived, this drop was not as sharp as the drop in support for wind farms
- there was substantial majority support for having a solar farm within 1–2 kilometres of where they lived (78%), and relatively little opposition to it (17%); at this proximity to where they lived, more people would **strongly** support a solar farm (33%) than a wind farm (18%).

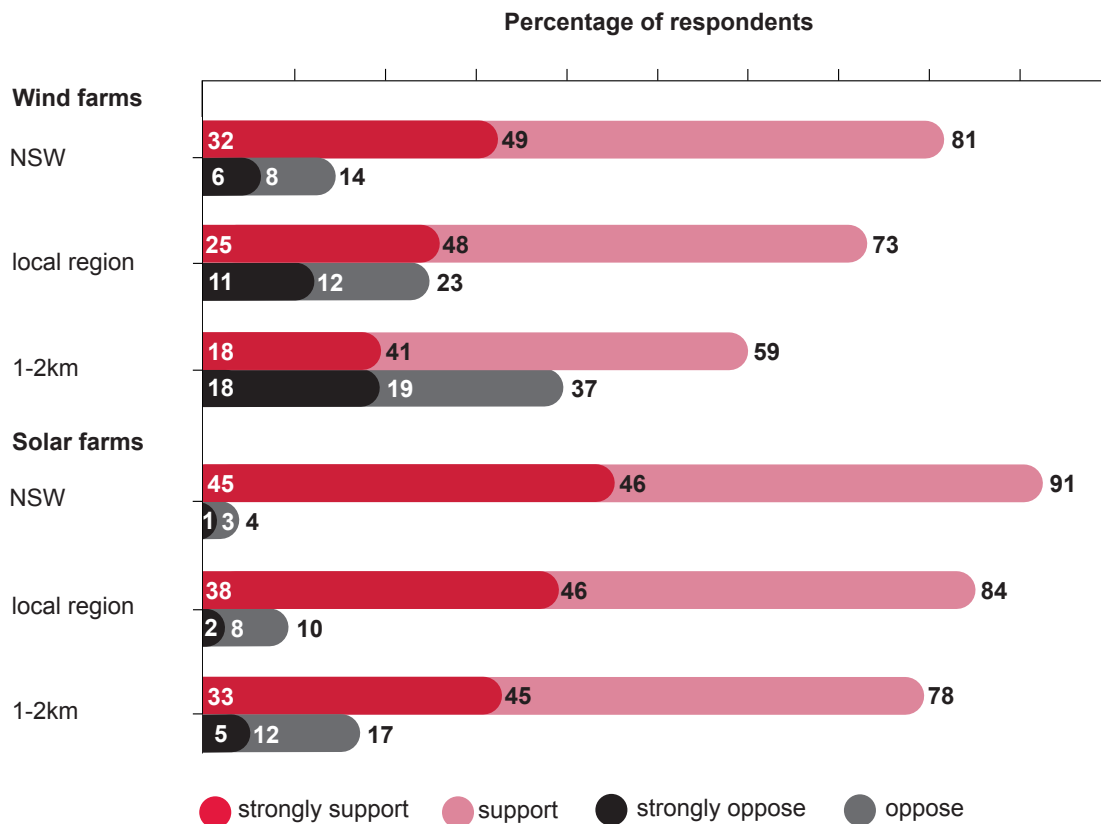


Figure 2.10: Support for and opposition to building a wind/solar farm in three proximities – in NSW, the local region, and within 1–2 kilometres of where they lived.

Question E4/F4 Overall, to what extent do you support or oppose wind/solar farms being built in NSW?

Question E5/F5. To what extent do you support or oppose wind/solar farms being built in your local region?

Question E8a,b/F6a,b. To what extent do you support or oppose a wind/solar farm being built within 1 to 2 kilometres of where you live?

Number of survey respondents (adults in non-metropolitan areas) = 1200.

Responses to building wind and solar farms in NSW, local regions, and within 1–2 kilometres of where they lived, excluding the Sydney and Newcastle metropolitan areas and Illawarra region⁴

Regional variations

Attitudes to wind and solar farms at the three geographic proximities were largely consistent across the non-metropolitan areas (Table 2.17). There were a few significant differences, such as the:

- North East region showed a higher level of strong support for solar farms in the local region (44%) compared to other regions
- Hunter/Central Coast region showed a slightly higher level of strong opposition to wind farms in NSW (10%) and within the local region (15%) compared to other regions
- overall support in the North West region for wind farms in NSW (86%) and support for wind farms (79%) and solar farms (92%) in the local region was higher than other regions.

³ The 2010 'Community Attitudes to Wind Farms' survey measured support for wind farms in NSW among people living in regional NSW areas designated as Renewable Energy Precincts. This found support of 60% at 1–2 kilometres, which is almost identical to the current survey, at 59%. Compared with the current survey, the 2010 survey found a similar, but slightly higher level of support for wind farms in NSW (85% versus 81%) and within the local region (80% versus 73%)

⁴ In Tables 2.17 and 2.18, patterns in statistically significant differences concerning support for local wind and solar farms in NSW may differ from the patterns in support for local wind and solar farms shown in Tables 2.15 and 2.16. This is because the significance calculations in Tables 2.17 and 2.18 were based on survey participants living in outside of the Sydney, Newcastle and Illawarra metropolitan areas, whereas Tables 2.15 and 2.16 were based on the full NSW sample of 2000 respondents.

Table 2.17: Regional variation in responses to building wind and solar farms in NSW, in local region, and within 1–2 kilometres of residence.

| | Total non-metropolitan areas | North East | Hunter/Central Coast** | North West | South East | South West |
|---|------------------------------|------------|------------------------|------------|------------|------------|
| Number of respondents | 1210 | 250 | 250 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | |
| Wind farms in NSW⁴ | | | | | | |
| Total support | 81 | 81 | 79 | 86* | 79 | 77 |
| Strongly support | 32 | 35 | 32 | 28 | 35 | 26 |
| Total oppose | 14 | 13 | 17 | 10 | 16 | 15 |
| Strongly oppose | 6 | 4 | 10* | 4 | 6 | 4 |
| Wind farms in local region | | | | | | |
| Total support | 73 | 72 | 71 | 79* | 72 | 71 |
| Strongly support | 25 | 27 | 24 | 24 | 31 | 21 |
| Total oppose | 23 | 21 | 27 | 17† | 24 | 23 |
| Strongly oppose | 11 | 8 | 15* | 6† | 10 | 9 |
| Wind farms within 1–2 km | | | | | | |
| Total support | 59 | 61 | 57 | 64 | 56 | 53 |
| Strongly support | 18 | 17 | 18 | 18 | 24 | 16 |
| Total oppose | 37 | 33 | 39 | 34 | 41 | 41 |
| Strongly oppose | 18 | 16 | 21 | 15 | 22 | 17 |
| Numbers below are shown as percentages. | | | | | | |
| Solar farms in NSW⁴ | | | | | | |
| Total support | 91 | 91 | 89 | 95 | 88 | 93 |
| Strongly support | 45 | 48 | 43 | 46 | 46 | 39 |
| Total oppose | 4 | 4 | 4 | 3 | 5 | 3 |
| Solar farms in local region | | | | | | |
| Total support | 84 | 82 | 80 | 92* | 85 | 85 |
| Strongly support | 38 | 44* | 31† | 45 | 42 | 36 |
| Total oppose | 10 | 11 | 12 | 5† | 10 | 7 |
| Solar farms within 1–2 km | | | | | | |
| Total support | 78 | 80 | 76 | 84 | 74 | 77 |
| Strongly support | 33 | 38 | 30 | 33 | 36 | 32 |
| Total oppose | 17 | 16 | 18 | 13 | 21 | 17 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

** excluding Newcastle.

Demographic variations

Survey responses to wind and solar farms at the three geographic proximities varied across the State excluding the Sydney and Newcastle metropolitan areas and Illawarra region (Table 2.18). Key themes within the different demographic groups were as follows:

- men were more supportive of solar farms than women at each of the three geographic proximities
- men were more likely to strongly support (36%) **and** oppose (17%) wind farms in NSW, and to strongly support a wind farm within 1–2 kilometres (23%) of where they lived
- people aged 50 years and over were more likely to oppose wind farms at each geographic proximity
- within the 50–64 years and 65+ years age groups, opinion about a wind farm within 1–2 kilometres of a residence was almost equally divided between those who supported it (around 50%) and those who opposed it (45%)
- university educated respondents were more likely than others to support (and **strongly** support) solar farms at each geographic proximity
- university educated respondents were more likely to support wind farms within NSW, and to strongly support them at each geographic proximity.

Table 2.18: Demographic variation in responses to building wind and solar farms in NSW, in local region, and within 1–2 kilometres of residence.

| | Total non-metropolitan areas | Gender | | Age (years) | | | | | Highest education level | | |
|---|------------------------------|------------|------------|-------------|------------|------------|------------|------------|-------------------------|---------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only |
| Number of respondents | 1210 | 605 | 605 | 86 | 116 | 339 | 315 | 354 | 367 | 484 | 359 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Wind farms in NSW⁴ | | | | | | | | | | | |
| Total support | 81 | 80 | 81 | 92* | 86 | 87* | 75† | 73† | 86* | 79 | 80 |
| Strongly support | 32 | 36* | 27† | 41 | 33 | 36 | 31 | 23† | 49* | 29 | 28† |
| Total oppose | 14 | 17* | 12† | 6† | 10 | 9† | 19* | 20* | 10† | 15 | 15 |
| Strongly oppose | 6 | 9* | 4† | 1† | 8 | 1† | 8 | 11* | 3† | 6 | 7 |
| Wind farms in local region | | | | | | | | | | | |
| Total support | 73 | 72 | 73 | 87* | 82 | 79* | 64† | 64† | 76 | 72 | 71 |
| Strongly support | 25 | 28 | 23 | 31 | 29 | 29 | 23 | 18† | 41* | 21† | 23 |
| Total oppose | 23 | 25 | 21 | 12† | 15 | 17† | 30* | 31* | 18† | 24 | 25 |
| Strongly oppose | 11 | 12 | 10 | 1† | 10 | 4† | 17* | 15* | 9 | 11 | 11 |
| Wind farms within 1–2 km | | | | | | | | | | | |
| Total support | 59 | 62 | 56 | 67 | 67 | 66* | 52† | 51† | 63 | 58 | 58 |
| Strongly support | 18 | 23* | 13† | 20 | 24 | 19 | 18 | 14 | 31* | 15 | 16 |
| Total oppose | 37 | 37 | 37 | 31 | 25† | 31† | 45* | 45* | 33 | 38 | 38 |
| Strongly oppose | 18 | 20 | 17 | 6† | 16 | 13† | 25* | 24* | 17 | 20 | 18 |
| Solar farms in NSW⁴ | | | | | | | | | | | |
| Total support | 91 | 94* | 89† | 98* | 95 | 93 | 88 | 87† | 97* | 92 | 88† |
| Strongly support | 45 | 52* | 37† | 48 | 47 | 46 | 48 | 36† | 63* | 44 | 38† |
| Total oppose | 4 | 3 | 4 | 1 | 3 | 2† | 6 | 6 | 1† | 4 | 5 |
| Solar farms in local region | | | | | | | | | | | |
| Total support | 84 | 88* | 79† | 83 | 88 | 87 | 81 | 80 | 90* | 85 | 80† |
| Strongly support | 38 | 46* | 31† | 41 | 44 | 42 | 38 | 30† | 54* | 39 | 33† |
| Total oppose | 10 | 9 | 11 | 10 | 10 | 7 | 10 | 12 | 8 | 9 | 12 |
| Solar farms within 1–2 km | | | | | | | | | | | |
| Total support | 78 | 83* | 74† | 86 | 78 | 84* | 74 | 73 | 84* | 79 | 75 |
| Strongly support | 33 | 41* | 26† | 31 | 38 | 32 | 36 | 29 | 48* | 31 | 30 |
| Total oppose | 17 | 15 | 19 | 12 | 16 | 12 | 20 | 22 | 12† | 16 | 20 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

2.3.2 Reasons for supporting (and perceived benefits of) a wind or solar farm within 1–2 kilometres of where they lived (unprompted)

Survey participants who supported the location of a wind farm within 1–2 kilometres of where they lived were asked why they supported this. Participants who opposed a wind farm being located within 1–2 kilometres of where they lived were asked what benefits, if any, they could identify. The same questions were asked to those who supported and opposed locating solar farms within 1–2 kilometres of where they lived.

Participants who **supported** the location of a wind or solar farm within 1–2 kilometres of where they lived, gave largely the same unprompted reasons for wind and solar. Principal among them were:

1. environmental benefits (69% wind/62% solar)
2. lower cost (23% wind/29% solar)
3. benefits to the local economy (14% for both wind and solar).

Most people surveyed who **opposed** a wind or solar farm being located within 1–2 kilometres of their residence could not identify any benefits (about 70% for wind and solar). Those who identified benefits principally related them to the environment (12% wind, 9% solar), cost (9%, 14%) and the local economy (8%, 7%). Around one in 10 of those who supported and those who opposed the concept also said the infrastructure would increase electricity-generating capacity.

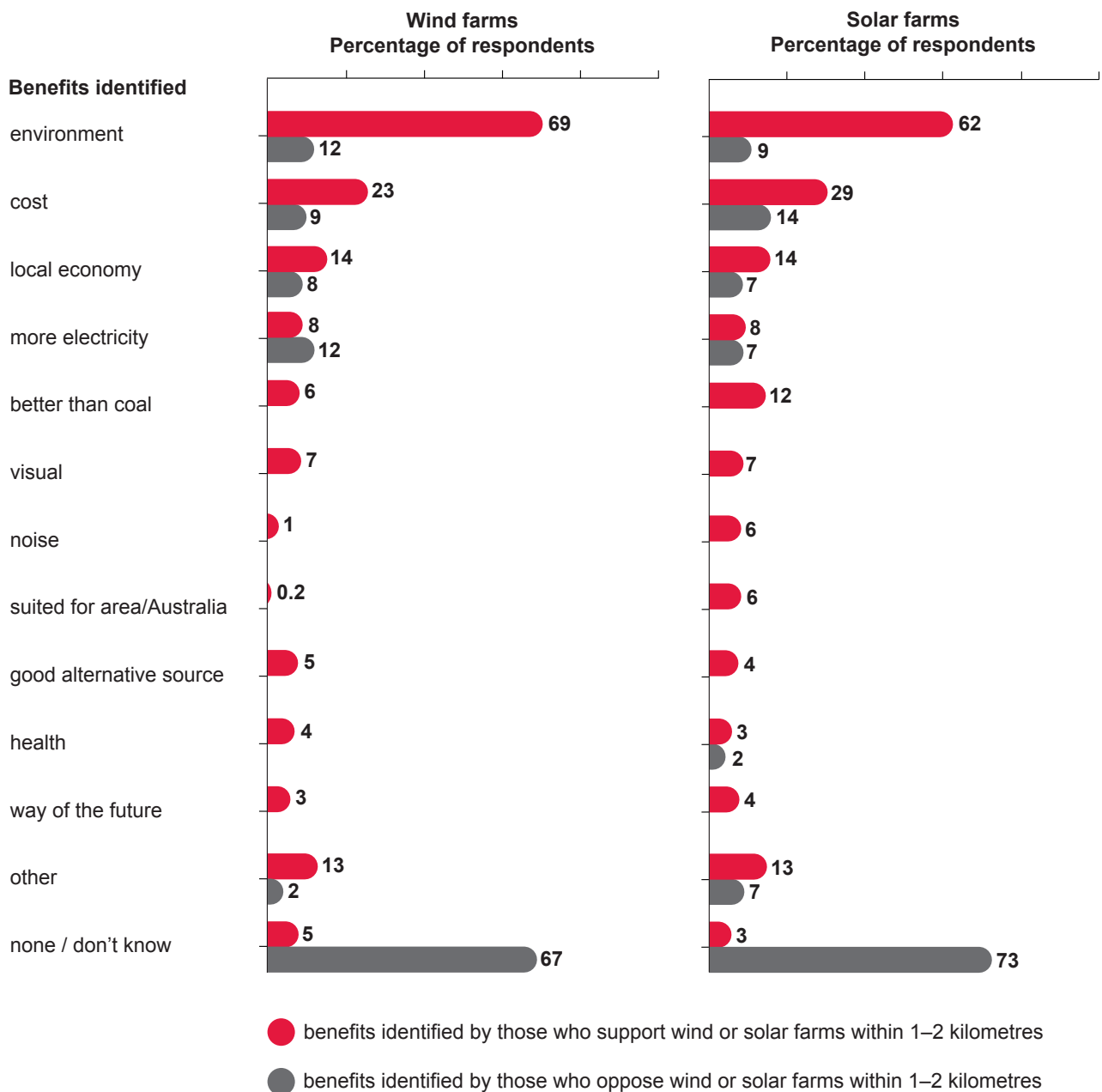


Figure 2.11: Reasons for supporting a wind/solar farm within 1–2 kilometres of where the respondent lived (unprompted).

Question E9a/F9a. For what particular reason would you support it?

Question E10b/F10b. What benefits, if any, would there be in having a wind/solar farm within 1-2 kilometres from where you live?

Survey respondents included adults in non-metropolitan areas; number in support of solar farms = 960; number in opposition to solar farms = 194; number in support of wind farms = 702; number in opposition to wind farms = 458.

Respondents raised a wide variety of reasons why a wind or solar farm within 1–2 kilometres of their residence would benefit them or the wider community. For example:

- **Environment** – Reflecting the perceived advantages of using renewables in general, the two key reasons for supporting local wind and solar farms on environmental grounds were (i) they were cleaner/created less ‘pollution’ or fewer greenhouse gases, and (ii) sustainability.
- **Cost** – Supporters also believed (or hoped) that local wind and solar farms would (eventually) reduce the cost of electricity, or at least in some way be cheaper.
- **Local economy** – The perceived benefit to the local economy included creating jobs. For wind farms, a small proportion of supporters (2%) also mentioned the potential financial benefit to property owners who hosted a wind farm, and 1% said wind farm could be a potential tourist attraction.
- **More electricity** – Some respondents believed the infrastructure would add to the supply of electricity. (This included some who may have misconstrued that the idea of a local wind or solar farm would be to supply electricity for the local area, but they appeared to be few in number. The potential for this confusion was noted in the pilot study and to alleviate this, the words ‘The electricity would be fed into the national power grid’ were included in relevant questions.)
- **Better than coal** – This included reducing **reliance** on coal, not burning coal or fossil fuels, or simply that wind or solar was better than using coal or coal-fired power stations.
- **Visual and noise** – There was an interesting contrast in opinion on these issues. Some people supported solar farms because they perceived them as less visually unappealing or noisy than a wind farm – they were more acceptable because they were perceived as relatively unobtrusive. In contrast, some people who supported wind farms found them visually appealing, and a few said ‘they’re not that noisy anyway’.
- **Suited for the area/Australia** – Some people who supported solar farms saw the inherent logic of using solar in an area with an abundance of sunshine, whether it be Australia (‘Australia is one of the sunniest places in the world’) or the local area (‘We’re in a relatively open farming area and we do cop a lot of sun throughout the year’). In some cases solar’s suitability for the local area related to the available space (‘I live in a small country town and there’s paddocks available for it to be set up’).
- **Good alternative source of energy** – This refers to people saying that wind and solar were a better alternative to ‘traditional’ energy sources – which they also linked with the environmental and cost benefits.
- **Health** – These responses fell into two broad categories: (i) the perception that local wind and solar farms had **no negative** health impacts, or none the respondent was aware of, or (ii) local wind and solar farms were healthier because they were cleaner and safer (e.g. no air pollution, nuclear waste).
- **The way of the future** – Some people saw local wind and solar farms as part of ‘the way forward’ on energy, in terms of addressing the limited supply of non-renewables and also moving toward greater use of cleaner, low impact (environmentally), renewable sources.
- **Need to be built somewhere** – Among other reasons for supporting local wind and solar farms was the view that they ‘need to be built somewhere’ and local communities should support this (‘Someone should have it in their backyard and, if I’m in the area which has the right conditions for it, I should be prepared to support it’).
- **Simply a good idea** – Some supporters of local wind and solar farms held the general view that they were a good idea (‘It’s [wind farms] absolutely doing good and anything we can do to help the natural is much better’), or have no reason to oppose them (‘Well, I don’t think it’s going to harm anyone’). Others had a desire to support renewable energy technologies generally (‘Because I endorse renewable energy’).

Reasons for supporting wind and solar farms within 1–2 kilometres of where they lived (unprompted) among demographic segments

Regional variations

The reasons for supporting local wind and solar farms within 1–2 kilometres of where the respondent lived were generally quite consistent across regions (Table 2.19). However, there were some differences in degree; for example:

- respondents from the Hunter/Central Coast region (excluding Newcastle) were slightly more likely than respondents from other areas to support wind farms for environmental reasons (76%) and view solar farms to be better than coal (16%), and less likely to see the local economic benefits of solar farms (8%)
- respondents from the North West region were less likely to nominate environmental factors as a reason to support wind farms (60%), particularly in terms of sustainability, but they were more likely to see wind farms feeding energy into the national grid (15%) and saw the potential for solar power to benefit their local economy (21%).

Table 2.19: Regional variation in reasons for supporting wind or solar farms within 1–2 kilometres of a residence (unprompted).

| | Total non-metropolitan areas | North East | Hunter/Central Coast** | North West | South East | South West |
|---|------------------------------|------------|------------------------|------------|------------|------------|
| Wind farms | | | | | | |
| Number of respondents | 702 | 150 | 122 | 153 | 145 | 132 |
| Numbers below are shown as percentages. | | | | | | |
| Environment | 69 | 69 | 76* | 60† | 66 | 62 |
| Cost | 23 | 20 | 22 | 29 | 20 | 28 |
| Local economy | 14 | 13 | 12 | 16 | 16 | 19 |
| More electricity | 8 | 7 | 5 | 15* | 5 | 10 |
| Better than coal | 6 | 6 | 10 | 5 | 2 | 3 |
| Visual | 7 | 5 | 6 | 9 | 12* | 6 |
| Noise | 1 | 0 | 0 | 3* | 4* | 1 |
| Suited for area/Australia | 0 | 0 | 0 | 1* | 0 | 0 |
| Good alternative source | 5 | 7 | 4 | 4 | 5 | 7 |
| Health | 4 | 6 | 3 | 3 | 1† | 2 |
| Way of the future | 3 | 5 | 3 | 0† | 4 | 5 |
| Solar farms | | | | | | |
| Number of respondents | 960 | 199 | 165 | 205 | 196 | 195 |
| Numbers below are shown as percentages. | | | | | | |
| Environment | 62 | 62 | 66 | 56 | 63 | 56 |
| Cost | 29 | 27 | 32 | 30 | 23 | 30 |
| Local economy | 14 | 15 | 8† | 21* | 18 | 16 |
| More electricity | 8 | 7 | 7 | 11 | 7 | 9 |
| Better than coal | 12 | 14 | 16* | 9 | 6† | 5† |
| Visual | 7 | 6 | 7 | 6 | 9 | 7 |
| Noise | 6 | 10* | 4 | 5 | 6 | 6 |
| Suited for area/Australia | 6 | 9* | 2† | 5 | 6 | 11* |
| Good alternative source | 4 | 4 | 5 | 3 | 2 | 2 |
| Health | 3 | 3 | 4 | 2 | 4 | 1 |
| Way of the future | 4 | 2 | 4 | 4 | 4 | 3 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

** excluding Newcastle.

Demographic variations

Variation in the reasons for supporting local wind and solar farms within 1–2 kilometres of where respondents lived occurred across the different demographic groups (Table 2.20). For example:

- respondents in the 25–34 year old age group were more likely than those in other age groups to view local wind and solar farms as benefiting the local economy (about 25%)
- about four in 10 respondents in age groups 50 years and over were more likely to view local wind and solar farms as lower cost energy options
- respondents with a university education were more likely to support local wind and solar farms for environmental reasons (nearly 80%)
- respondents with no post-school education were less likely to support wind and solar farms within 1–2 kilometres of where they lived (61%, 55% respectively).

Table 2.20: Demographic variation in reasons for supporting a wind or solar farm within 1–2 kilometres of residence (unprompted)

| | Total non-metropolitan areas | Gender | | Age (years) | | | | | Highest education level | | |
|---|------------------------------|-----------|-----------|-------------|------------|------------|------------|------------|-------------------------|---------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only |
| Wind farms | | | | | | | | | | | |
| Number of respondents | 702 | 370 | 332 | 64 | 75 | 209 | 169 | 185 | 225 | 272 | 205 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Environment | 69 | 70 | 67 | 62 | 76 | 69 | 73 | 62 | 79* | 73 | 61† |
| Cost | 23 | 24 | 22 | 11† | 15 | 16† | 42* | 24 | 18 | 21 | 27 |
| Local economy | 14 | 17 | 12 | 9 | 25* | 16 | 11 | 10 | 18 | 14 | 13 |
| More electricity | 8 | 8 | 8 | 8 | 13 | 8 | 7 | 5 | 7 | 10 | 7 |
| Better than coal | 6 | 7 | 6 | 2 | 5 | 7 | 6 | 9 | 7 | 5 | 7 |
| Visual | 7 | 8 | 6 | 15* | 7 | 8 | 5 | 5 | 12* | 6 | 7 |
| Noise | 1 | 2* | 0† | 2 | 1 | 2 | 1 | 0 | 1 | 2 | 0 |
| Suited for area/Australia | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Good alternative source | 5 | 5 | 5 | 6 | 4 | 6 | 4 | 6 | 8 | 5 | 4 |
| Health | 4 | 4 | 3 | 2 | 0 | 5 | 2 | 7* | 2 | 3 | 5 |
| Way of the future | 3 | 3 | 4 | 0 | 3 | 3 | 2 | 7* | 5 | 3 | 3 |
| Solar farms | | | | | | | | | | | |
| Number of respondents | 960 | 494 | 466 | 76 | 94 | 280 | 243 | 267 | 308 | 380 | 272 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Environment | 62 | 58 | 66 | 53 | 57 | 67 | 64 | 59 | 78* | 62 | 55† |
| Cost | 29 | 26 | 33 | 19 | 15† | 26 | 36* | 39* | 24 | 26 | 34* |
| Local economy | 14 | 17 | 12 | 14 | 27* | 16 | 10† | 9† | 20* | 15 | 11 |
| More electricity | 8 | 9 | 7 | 8 | 8 | 8 | 7 | 9 | 7 | 7 | 9 |
| Better than coal | 12 | 13 | 11 | 3† | 17 | 13 | 13 | 12 | 16 | 13 | 10 |
| Visual | 7 | 9 | 5 | 12 | 4 | 9 | 7 | 3† | 8 | 7 | 6 |
| Noise | 6 | 6 | 7 | 3 | 6 | 5 | 9 | 6 | 7 | 7 | 5 |
| Suited for area/Australia | 6 | 5 | 7 | 8 | 8 | 6 | 6 | 3† | 8 | 6 | 5 |
| Good alternative source | 4 | 3 | 4 | 4 | 6 | 3 | 2 | 4 | 4 | 3 | 4 |
| Health | 3 | 4 | 2 | 4 | 1 | 3 | 5 | 1 | 3 | 2 | 4 |
| Way of the future | 4 | 5* | 2† | 2 | 3 | 4 | 2 | 5 | 3 | 2 | 5 |

Notes: * † number of survey respondents. Indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

2.3.3 Concerns about a wind or solar farm within 1–2 kilometres of where they lived (unprompted)

Mirroring the questions asked of those who supported wind farms in their local area, survey respondents who opposed this were asked what concerns they had. Similarly, those who supported wind farms near their place of residence were also asked what concerns, if any, they had. Parallel questions were also asked about solar farms.

- For those who opposed **wind farms** being located near their place of residence, the most commonly raised concerns were about noise (61%), visual impact (38%) and health (23%). These concerns were also expressed, although at a lower rate, by people who supported wind farms (32%, 11% and 8% respectively).
- The small group of survey respondents who opposed **solar farms** being located near their place of residence gave a cluster of reasons for this such as the lack of suitability of a solar farm for their area (33%), the amount of space required (16%), environmental impacts (16%), and visual impacts (20%).
- Most respondents who supported solar farms in their local area had no concerns (59%).
- Some respondents reported that lack of information or knowledge about solar farms was a barrier to acceptance (13%).
- For wind and solar farms, few people unprompted raised concerns about negative impacts on property values (1–3%).

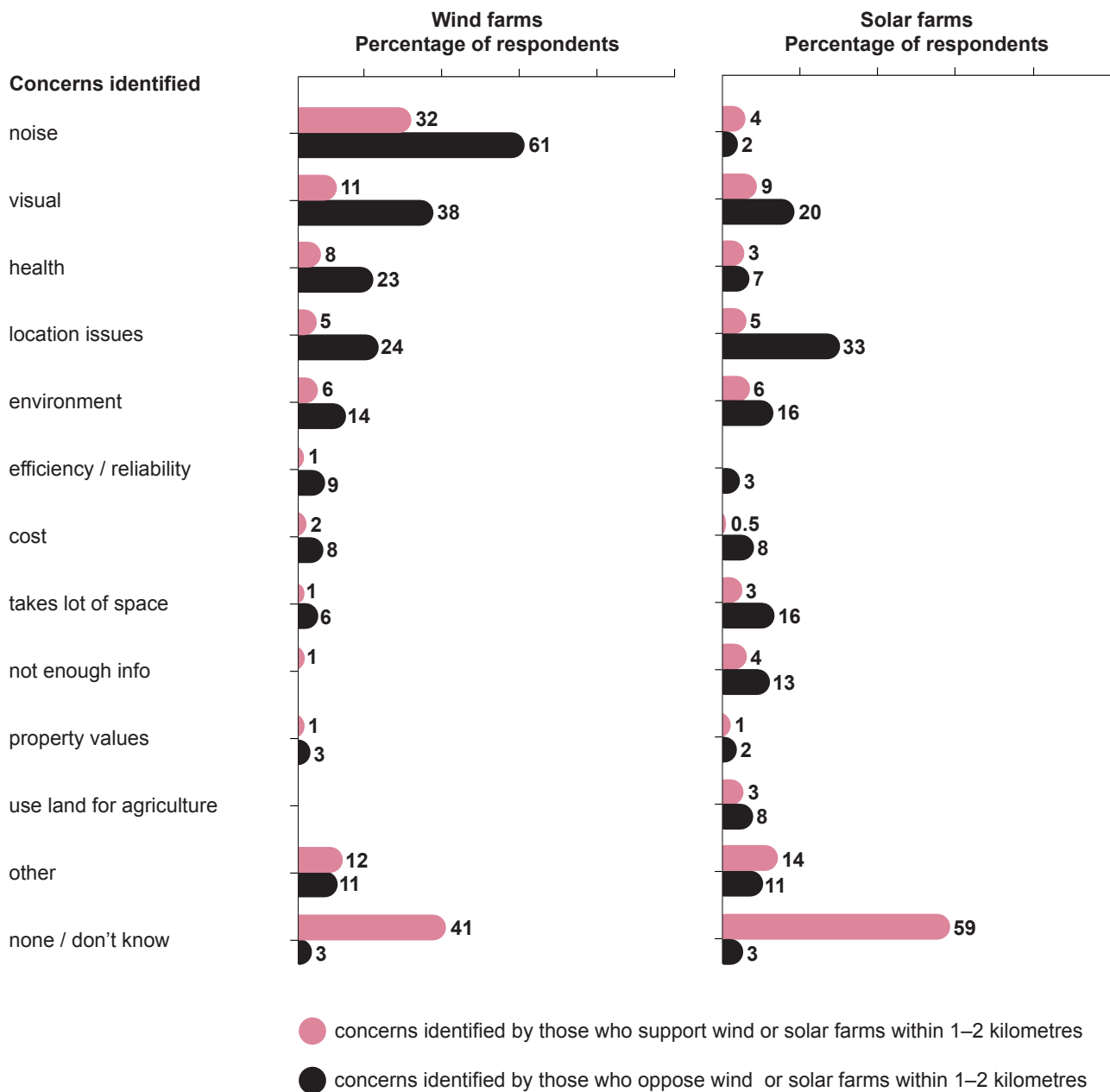


Figure 2.12: Concerns about wind and solar farms located 1–2 kilometres from where the respondent lived (unprompted).

Question E10a/F10a. What concerns do you have with it?

Question E9b/F9b. What concerns, if any, would you have with a wind/solar farm within 1–2 kilometres from where you live?

Survey respondents included adults in non-metropolitan areas: number in support of solar farms = 960; number in opposition to solar farms = 194; number in support of wind farms = 702; number in opposition to wind farms = 458.

Number of respondents = 1200.

Noise

Some survey respondents raised concerns about nearby communities hearing noise from turning wind turbines, especially at night, and particularly when there was a 'farm' of them ('They put them in Victoria on farming land and on hillsides and the people who live there are nearly driven crazy by the sound of them'; 'They are in big groups and when they are in action you get some low frequency humming or buzzing').

There was also some overlap with health concerns, with specific mention of the impact of low frequency noise or 'humming' on human health (e.g. causing migraines, sleep problems) and animal health ('it affects wildlife and birds and it's because of the pitch of the turbines and the blades').

For the small proportion of respondents who mentioned noise in relation to solar farms, issues raised included noise at the construction phase; noise because it was 'industrial', and in some cases people queried whether solar farms were noisy or not ('Are they noisy?'; 'Could be workmen and humming noises or whatever it is that creates the power').

Visual impact

Some people did not like the general look of wind and solar farms ('wind farms are ugly'), or commented on their impact on the look of a specific local area ('They ruin the look of the landscape, there's no hiding them'; 'We are in a residential setting, it wouldn't suit the aesthetics of the area'; 'I do think that would have a big impact on tourism because it is a very pretty area').

Health

For solar farms, rather than mentioning specific adverse health effects, people said there may be associated health issues. However, survey respondents reported a range of specific problems believed to affect those living near wind farms, such as:

- 'because of the vibrations [the wind farm] gives off, people in Goulburn have a lot of trouble with their inner ear... it affects your balance, affects your mood, the noise has been linked to increased anxiety and stress in patients with pre-existing psychiatric imbalances... also nausea.'
- 'I've read a lot about people living near wind farms getting illness... certain types of cancers.'
- 'I heard a lot of people get headaches and that sort of stuff.'
- 'There's been asthma, a lot of respiratory problems, what I've only heard from talking to people.'

Location issues

A number of issues were raised about the general suitability of local communities as locations for solar or wind farms. These included:

- population density ('We are in a residential area and it could not be built 1–2 kilometres from where we live', 'It's just not in the right area... close to people, in built up areas.')
- local industry ('I live in a small country town which is all agricultural... [a solar farm] wouldn't fit in with the industry... it's more for in the country where it's not heavily populated', 'would not be suitable for wind farms... it's a heavily orcharded area.')
- local features ('I am surrounded by national parks and forests. You are not going to cut down a national park to build a solar farm, are you?', '[Our town is] heritage listed so there's older buildings and older houses so it wouldn't suit this area.')
- weather conditions ('[local community] would be a terrible place to put the solar farm – it's cold and miserable', 'I don't think we get a reliable amount of wind here... we're in a small local valley').

Environment

People were concerned about general environmental damage such as destruction of habitat/loss of landscape due to land clearing for the infrastructure associated with wind and solar farms. The impact on animal life was also a key concern – the impact of wind farm noise on the general health of local farm animals, wildlife and birdlife ('there is a lot of talk about wildlife and cows etc. being disturbed by them'), as well as the danger to birds flying over solar and wind farms ('Birds think [the solar farm] is a lake therefore dive into it and kill themselves', '[wind farms] have a good habit of killing birds which fly into them').

Efficiency/reliability

Some concerns were raised about the efficiency of wind farms and the reliability of energy supply ('How can you say that they're viable if you don't get wind. You'd have to revert to some other means', 'They're not viable – you need a thousand of them to run a torch, they don't generate enough power'). To a lesser degree there were reliability concerns about solar, on the premise that no sunlight equalled no electricity.

Cost

There were concerns about high set-up and ongoing costs (including the level of government subsidy), as well as the overall cost-effectiveness of using these technologies versus current non-renewable options. For example:

- ‘Their [wind farms] operating and capital cost is too high, requiring too much subsidy.’
- ‘When there is not wind, they don’t work, and there’s no value for money – and if it’s too windy, they have to be turned off, there’s no value for money.’
- ‘They’re not cost-effective, sun doesn’t always shine so sometimes they will not be generating any power at all.’
- ‘We’ve got heaps of coal and it’s very cheap to produce and we should be using it instead of the over-costed renewable stuff.’

Need a lot of space

There were comments made on the amount of space needed for the infrastructure for local wind and solar farms (‘you need so much more space in collecting [wind, solar energy] than you do for an existing power station’).

Not enough info

Some people said they didn’t have enough information about solar farms or did not know enough about them to support one being located in their area. In some cases this linked with concerns about dangers that may be connected with the technologies, including health issues (‘I’d have to research it. I’d oppose if it gave off any bad sort of energies to human beings’; ‘I guess I don’t know enough about it and therefore there are concerns in my mind on whether it is dangerous’; ‘there is not enough known about the effects solar farms can have on health’).

Property values

A small number of survey respondents raised concerns about decreased land/house values and often mentioned this in conjunction with the visual impact they perceived local wind and solar farms would have (‘Could be ugly and decrease land value’; ‘Visual impact - impact on property prices arising from that visual impact’).

Use land for agriculture

Some people had the view that solar farms should not be built on ‘good agricultural land’ that is, or could be, used for farming crops or cattle grazing.

Other issues

Other concerns raised included wind turbines falling over, parts falling off or catching fire, as well as problems with glare/reflection and bushfire risk from solar panels.

2.3.4 Concerns of those opposed to wind and solar farms within 1–2 kilometres of where they lived among regional and demographic segments (unprompted)

Regional variations

The reasons survey respondents gave for opposing wind and solar farms in their local area were largely consistent across different regions (Table 2.21). However, there were some differences; for example:

- people living in the Hunter/Central Coast (excluding Newcastle) region were more likely to be concerned about visual appeal (47%) and the amount of space wind farms would require (10%)
- property values were more likely to be a concern for people living in the South East region in relation to both wind and solar farms (12%/13%), and visual impact for solar farms (36%).
- along with visual impact (36%).

Table 2.21: Regional variation in concerns of those opposed to a wind or solar farm within 1–2 kilometres of residence (unprompted).

| | Total non-metropolitan area | North East | Hunter/Central Coast** | North West | South East | South West |
|---|-----------------------------|----------------------|------------------------|-----------------|----------------------|----------------------|
| Wind farms | | | | | | |
| Number of respondents | 458 | 88 [#] | 81 [#] | 89 [#] | 98 [#] | 102 |
| Numbers below are shown as percentages. | | | | | | |
| Noise | 61 | 59 | 58 | 69 | 56 | 66 |
| Visual | 38 | 31 | 47* | 28 | 39 | 35 |
| Health | 23 | 29 | 20 | 23 | 27 | 20 |
| Location issues | 24 | 29 | 21 | 30 | 19 | 20 |
| Environment | 14 | 15 | 13 | 17 | 11 | 13 |
| Efficiency/reliability | 9 | 12 | 6 | 14 | 7 | 10 |
| Cost | 8 | 9 | 8 | 8 | 10 | 8 |
| Takes a lot of space | 6 | 1[†] | 10* | 5 | 5 | 1[†] |
| Property values | 3 | 1 | 2 | 3 | 12* | 4 |
| Solar farms | | | | | | |
| Number of respondents | 194 | 41 | 35 | 35 | 42 | 41 |
| Numbers below are shown as percentages. | | | | | | |
| Noise | 2 | 0 | 2 | 3 | 3 | 3 |
| Visual | 20 | 24 | 13 | 21 | 36* | 17 |
| Health | 7 | 11 | 5 | 3 | 10 | 6 |
| Location issues | 33 | 36 | 34 | 28 | 28 | 29 |
| Environment | 16 | 15 | 19 | 18 | 8 | 13 |
| Efficiency/reliability | 3 | 0 | 2 | 4 | 8 | 4 |
| Cost | 8 | 4 | 9 | 11 | 7 | 6 |
| Takes a lot of space | 16 | 6[†] | 25 | 20 | 4 | 16 |
| Not enough information | 13 | 9 | 20 | 15 | 3[†] | 7 |
| Property values | 2 | 0 | 0[†] | 3 | 13* | 4 |
| Use land for agriculture | 8 | 8 | 5 | 7 | 11 | 17 |

Notes: # note the small to very small sample sizes implies these results have a low level of statistical confidence and should be interpreted with caution.

* † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when regions were compared.

** excluding Newcastle.

Demographic variations

The reasons survey respondents gave for opposing wind and solar farms within 1–2 kilometres of where they lived varied across different demographic groups (Table 2.22). For example:

- Opposition to wind farms on the grounds of visual impact (47%) and cost (12%) was higher among men, whereas women were concerned about health issues (28%) and the amount of space required (9%).
- With solar farms, men were more concerned about the suitability of the location (43%), whereas women were more interested in sourcing more information about them (20%).
- In regard to age group, health concerns about wind farms (32%) and visual impacts for solar farms (30%) were higher among people aged 50–64 years.
- Survey respondents aged 65 years and over were more likely to oppose local wind and solar farms (16% and 8%, respectively) due to a perceived lack of efficiency/reliability compared with other age groups.
- University educated people were concerned about negative impacts on property values in regard to wind farms (10%), and the amount of space required in relation to solar farms (32%).

Table 2.22: Demographic variation in concerns about a wind or solar farm within 1–2 km of residence (unprompted).

| | Total non-metropolitan area | Gender | | Age (years) | | | | Highest education level | | |
|---|-----------------------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-------------------------|---------------------|-----------------|
| | | Men | Women | 18–34 | 35–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only |
| Wind farms | | | | | | | | | | |
| Number of respondents | 458 | 226 | 232 | 54 [#] | 114 | 133 | 157 | 126 | 191 | 141 |
| Numbers below are shown as percentages. | | | | | | | | | | |
| Noise | 61 | 64 | 58 | 54 | 63 | 66 | 57 | 66 | 59 | 61 |
| Visual | 38 | 47* | 30 [†] | 40 | 43 | 43 | 28 [†] | 43 | 45 | 31 [†] |
| Health | 23 | 17 [†] | 28* | 12 [†] | 19 | 32* | 23 | 31 | 22 | 22 |
| Location issues | 24 | 24 | 23 | 22 | 24 | 19 | 30 | 25 | 24 | 23 |
| Environment | 14 | 13 | 15 | 7 | 14 | 19 | 13 | 19 | 12 | 14 |
| Efficiency/reliability | 9 | 12 | 7 | 1 [†] | 4 [†] | 11 | 16* | 13 | 10 | 8 |
| Cost | 8 | 12* | 5 [†] | 5 | 4 | 10 | 12 | 4 [†] | 12 | 7 |
| Takes a lot of space | 6 | 2 [†] | 9* | 21* | 4 | 1 [†] | 3 | 8 | 7 | 4 |
| Property values | 3 | 4 | 3 | 2 | 6 | 4 | 2 | 10* | 4 | 1 [†] |

| | Total non-metropolitan area | Gender | | Age (years) | | | Highest education level | | | |
|---|-----------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|---------------------|-----------------|--|
| | | Men | Women | 18–49 | 50–64 | 65+ | Uni degree | TAFE/apprenticeship | School only | |
| Solar farms | | | | | | | | | | |
| Number of respondents | 194 | 94 | 100 | 67 [§] | 56 [§] | 71 [§] | 44 [§] | 79 [§] | 71 [§] | |
| Numbers below are shown as percentages. | | | | | | | | | | |
| Noise | 2 | 1 | 2 | 2 | 0 | 4 | 4 | 3 | 1 | |
| Visual | 20 | 22 | 18 | 15 | 30* | 15 | 31 | 21 | 16 | |
| Health | 7 | 4 | 8 | 5 | 5 | 9 | 0 | 10 | 6 | |
| Location issues | 33 | 43* | 25 [†] | 36 | 33 | 27 | 25 | 34 | 34 | |
| Environment | 16 | 20 | 14 | 20 | 15 | 13 | 5 | 15 | 19 | |
| Efficiency/reliability | 3 | 5 | 1 | 0 | 1 | 8* | 0 | 5 | 2 | |
| Cost | 8 | 11 | 5 | 2 [†] | 12 | 10 | 8 | 17* | 1 [†] | |
| Takes a lot of space | 16 | 10 | 21 | 22 | 9 | 17 | 32* | 10 | 18 | |
| Not enough information | 13 | 5 [†] | 20* | 11 | 13 | 17 | 12 | 11 | 15 | |
| Property values | 2 | 4 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | |
| Use land for agriculture | 8 | 7 | 9 | 9 | 5 | 9 | 11 | 6 | 9 | |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

§ the small to very small sample size implies these results have low statistical power and should be interpreted with caution.

due to small sample sizes, age groups were combined in this table: for wind farms, the age groups 18–24 and 25–34 years were combined, and for solar farms, the age groups 18–24, 25–34 and 35–49 years were combined.

2.3.5 Focus on wind farms – perceived impact on local community of a wind farm within 1–2 kilometres of where the respondent lived (prompted)

Survey respondents were asked a series of questions to further explore their views on wind farms being built within 1–2 kilometres of where they lived. This was to test whether concerns they had not previously thought of about the wind farms arose **after prompting** (Figures 2.13 and 2.14). The results showed:

- About half felt that a wind farm within 1–2 kilometres of where they lived would negatively impact on **property values** (54%), or negatively impact on the **visual appeal** (51%) of the local area.
- After prompting, 58% said that **noise** would be of **great** or **some** concern to them, and 42% that **health** issues would be of great or some concern to them.

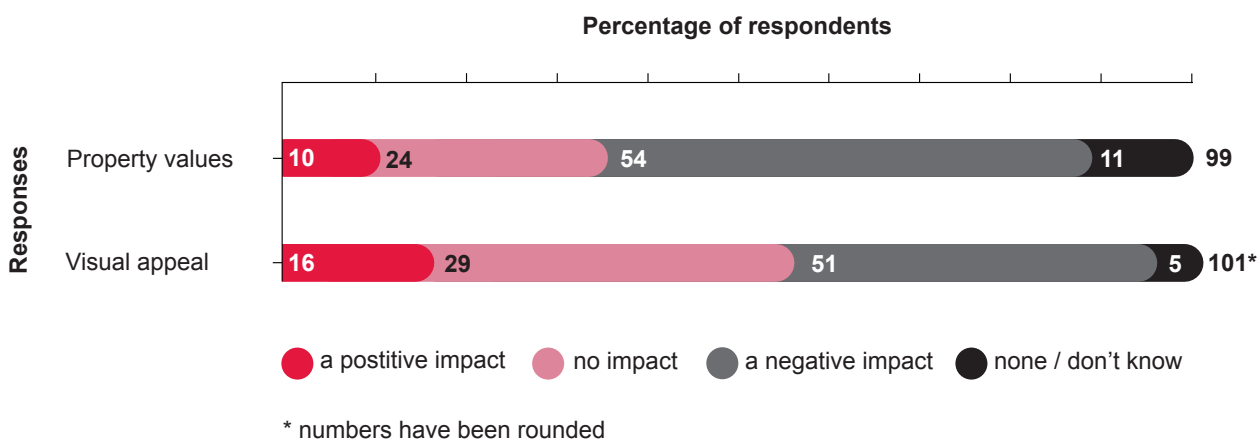


Figure 2.13: Concerns, after prompting, about the impact of wind farms located 1–2 kilometres of where the respondent lived on property value and visual appeal.

Question J1b/J2. What impact would a wind farm 1 to 2 kilometres from where you live have on the property values/visual appeal of your local area?

Number of survey respondents = 1200.

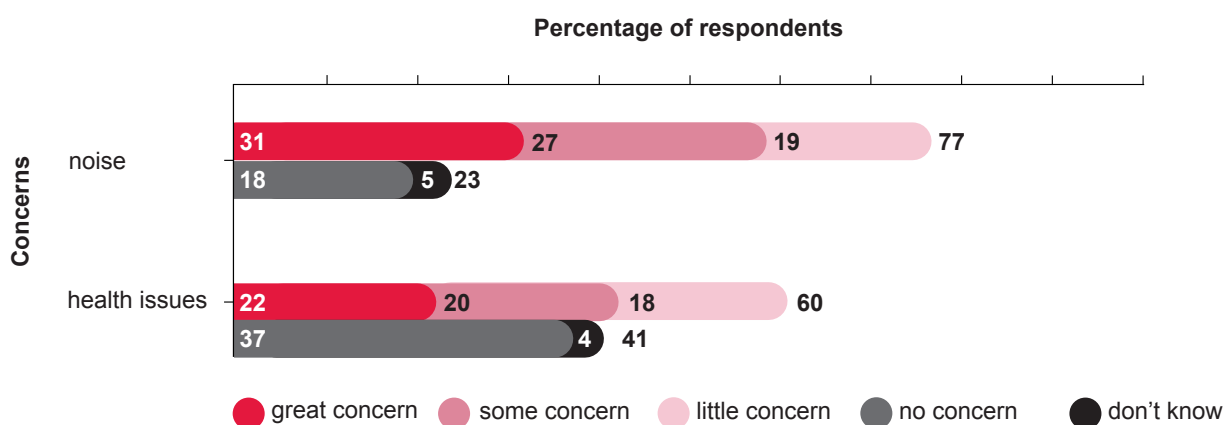


Figure 2.14: Concerns, after prompting, about the noise and health impacts of wind farms located 1–2 kilometres from where they lived.

Question J3/4. To what extent, if any, would noise/health issues be a concern for you living within 1 to 2 kilometres of a wind farm?

Number of respondents = 1200.

The number of respondents who perceived negative impacts or had some concerns about these issues increased with prompting. This was the same among those who supported and those who opposed wind farms within 1–2 kilometres of where they lived (Figure 2.15).

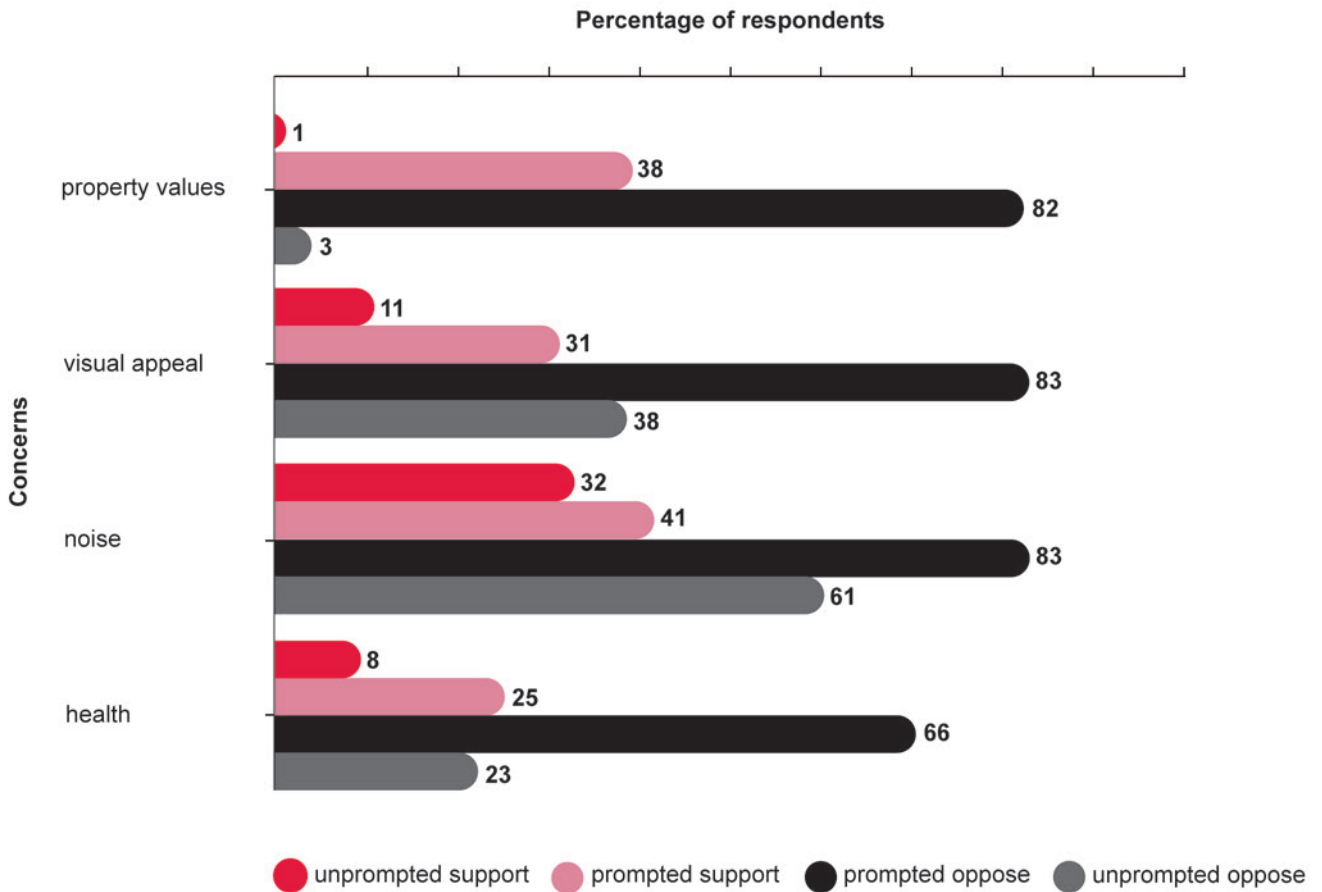


Figure 2.15: Concerns about a wind farm within 1–2 kilometres of where the respondent lived– unprompted versus prompted.

Question E9b/E10a. What concerns, if any, would you have with a wind farm being within 1 to 2 kilometres from where you live? Question J1b/J2. What impact would a wind farm, 1 to 2 kilometres from where you live, have on the property values/visual appeal of your local area?

Questions J3/J4. To what extent if any, would noise/health issues be a concern for you living within 1 to 2 kilometres of a wind farm?

Survey respondents included adults in non-metropolitan areas who supported (702) or opposed (458) wind farms.

In the context of a **real** proposal to place a wind farm within 1–2 kilometres of a community, people will most likely make up their minds based on its exact location relative to their home or community. The location may immediately allay concerns people have, or it could have the opposite effect.

An important factor to note about the difference between the unprompted and prompted level of concern about these issues, however, is that they suggest the in-principle majority support of 59% for a local wind farm may be a **fragile** majority, subject to communication about these issues in a real-world situation.

Perceived impact on local community of a wind farm within 1–2 kilometres of where the respondent lived among segments (prompted)

There were few significant differences between regions or demographic groups when survey respondents were prompted about concerns they may not previously thought of about the wind farms. Some differences included:

- women were more likely to have great/some concerns about noise (65%) and health issues (48%), than men
- people living in the South East region were more likely than others to have great/some concerns about health (49%), and believe that a wind farm would have a negative impact on property values (66%).

Table 2.23: Regional variation in perceived impact on local community of a wind farm within 1–2 kilometres of residence (prompted).

| | Total non-metropolitan areas | North East | Hunter/Central Coast** | North West | South East | South West |
|---|------------------------------|-----------------------|------------------------|-----------------------|----------------------|-----------------------|
| Number of respondents | 1210 | 250 | 210 | 250 | 250 | 250 |
| Numbers below are shown as percentages. | | | | | | |
| Property values | | | | | | |
| Positive impact | 10 | 12 | 10 | 11 | 5[†] | 9 |
| No impact | 24 | 20 | 27 | 28 | 21 | 21 |
| Negative impact | 54 | 56 | 51 | 50 | 66* | 58 |
| Visual appeal | | | | | | |
| Positive impact | 16 | 19 | 13 | 20 | 12 | 16 |
| No impact | 29 | 23[†] | 28 | 36* | 29 | 30 |
| Negative impact | 51 | 53 | 51 | 43[†] | 56 | 50 |
| Noise | | | | | | |
| Little/no concern | 37 | 36 | 36 | 43 | 38 | 31 |
| Some/great concern | 58 | 59 | 56 | 54 | 60 | 64 |
| Health issues | | | | | | |
| Little/no concern | 54 | 52 | 60* | 52 | 48 | 47[†] |
| Some/great concern | 41 | 42 | 36 | 43 | 49* | 48 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

** excluding Newcastle.

Table 2.24: Demographic variation in perceived impact on local community of a wind farm within 1–2 km of residence (prompted).

| | Total non-metropolitan areas | Gender | | Age (years) | | | | | Highest education level | | |
|---|------------------------------|-----------------------|-----------------------|-------------|-------|-------|-----------------------|-----|-------------------------|---------------------|-------------|
| | | Men | Women | 18–24 | 25–34 | 35–49 | 50–64 | 65+ | Uni Degree | TAFE/apprenticeship | School only |
| Number of respondents | 1210 | 605 | 605 | 86 | 116 | 339 | 315 | 354 | 367 | 484 | 359 |
| Numbers below are shown as percentages. | | | | | | | | | | | |
| Property values | | | | | | | | | | | |
| Positive impact | 10 | 8 | 11 | 18* | 13 | 10 | 7 | 8 | 5[†] | 9 | 12 |
| No impact | 24 | 25 | 23 | 28 | 29 | 28 | 19[†] | 22 | 26 | 24 | 24 |
| Negative impact | 54 | 58 | 51 | 48 | 50 | 50 | 64* | 54 | 58 | 57 | 51 |
| Visual appeal | | | | | | | | | | | |
| Positive impact | 16 | 16 | 15 | 23 | 21 | 15 | 14 | 13 | 13 | 13 | 20* |
| No impact | 29 | 29 | 28 | 34 | 32 | 29 | 26 | 27 | 32 | 28 | 28 |
| Negative impact | 51 | 52 | 49 | 41 | 43 | 48 | 56 | 55 | 50 | 53 | 49 |
| Noise | | | | | | | | | | | |
| Little/no concern | 37 | 46* | 28[†] | 45 | 43 | 35 | 31[†] | 38 | 40 | 34 | 38 |
| Some/great concern | 58 | 50[†] | 65* | 47 | 52 | 62 | 63 | 55 | 54 | 61 | 56 |
| Health issues | | | | | | | | | | | |
| Little/no concern | 54 | 62* | 47[†] | 70* | 62 | 55 | 47[†] | 51 | 61* | 54 | 52 |
| Some/great concern | 41 | 35[†] | 48* | 29 | 33 | 42 | 50* | 41 | 36 | 41 | 43 |

Notes: * † indicates statistically significant difference at the 95% level of confidence; * indicates a result was higher and † indicates a result was lower when demographics were compared.

3 Regional summaries

This section of the report provides bullet point and graphic summary of the key survey results about renewable energy technologies for the seven regions in NSW. They are **not** intended to be a report on how people in each region **differ** from each other in relation to awareness, knowledge and attitudes.

3.1 North East Region

(Number of respondents = 250)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 88% and wind 74%
- 93% supported using renewables to generate electricity in NSW
- 86% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted) were:
 - environmental benefits 84%
 - lower cost 40%
- most common perceived **disadvantages** (unprompted):
 - higher cost 30%
 - concerns about efficiency and reliability 17%
 - no disadvantages 45%
- 63% were prepared to use renewables 'provided I don't have to pay more for my electricity', and 35% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 91% supported the use of solar farms in NSW, 82% in their local region, and 80% within 1–2 kilometres of where they lived
- wind: 81% supported the use of wind farms in NSW, 72% in their local region, and 61% within 1–2 kilometres of where they lived
- among the 33% who **opposed** a wind farm within 1–2 kilometres of where they lived, the unprompted concerns most commonly raised were noise (59%), visual impact (31%), health issues (29%) and location suitability (29%).

Renewable energy – awareness, knowledge and attitudes

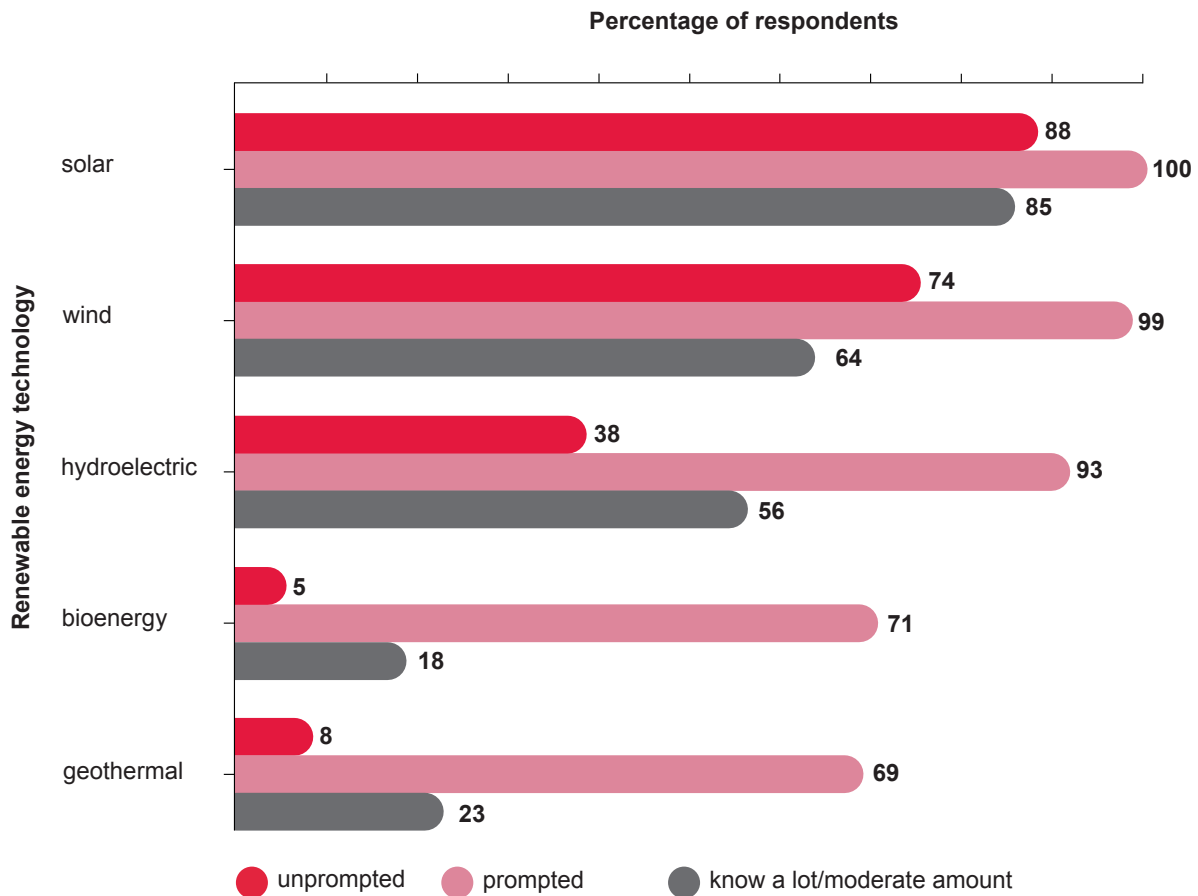


Figure 3.1: North East Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

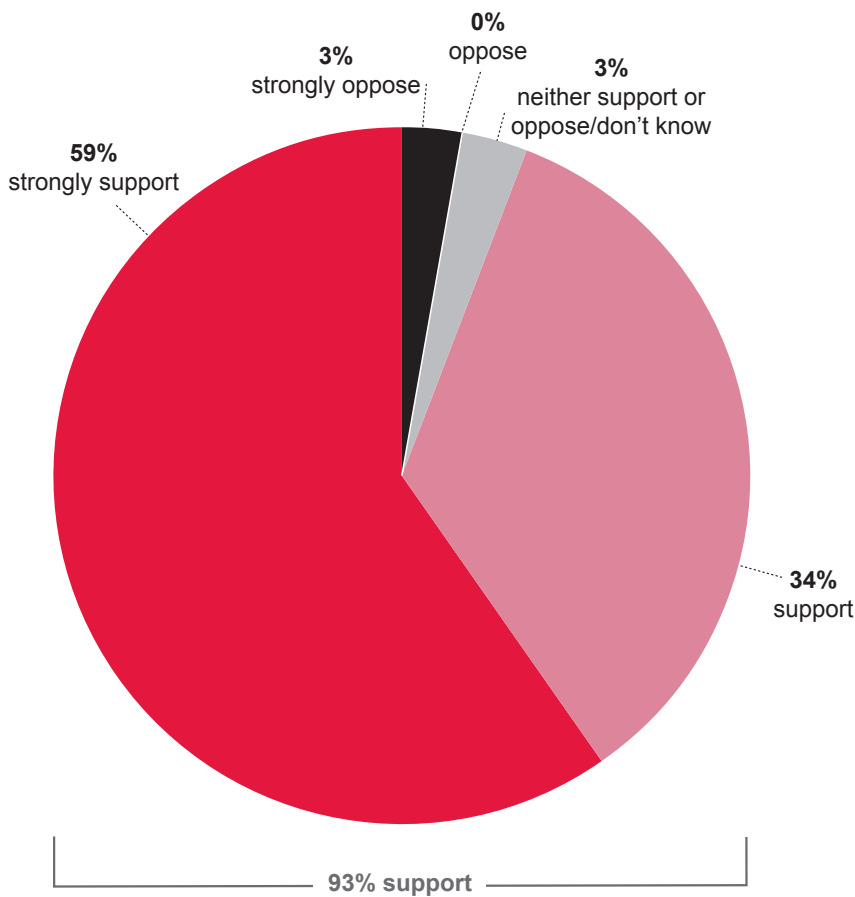


Figure 3.2: North East Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

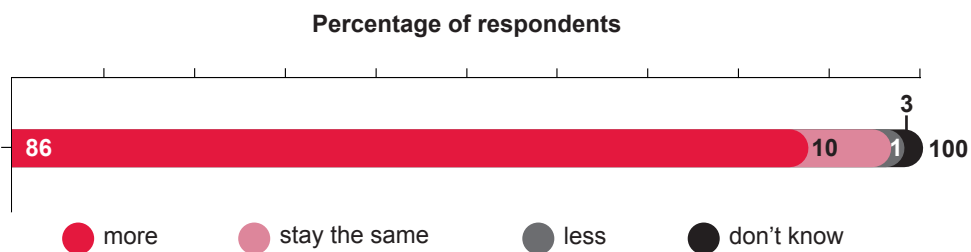


Figure 3.3: North East Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

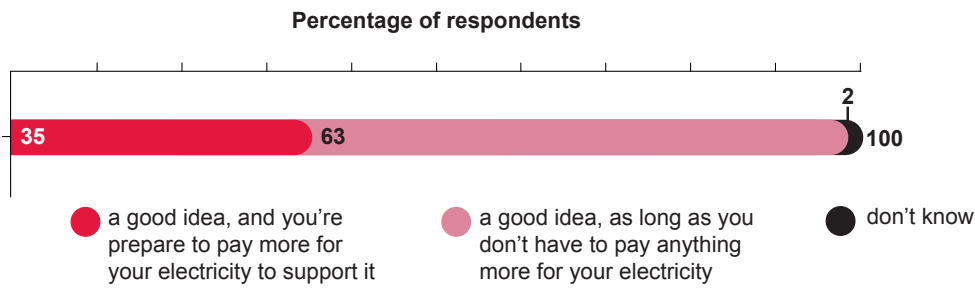


Figure 3.4: North East Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Note that no survey respondents answered 'it's just not a good idea to use renewable energy at all'.

Table 3.1: North East Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|------------------------------|---|---------------------|
| Number of respondents | 250 | 250 |
| | Numbers below are shown as percentages. | |
| Environment | 84 | 3 |
| Cost | 40 | 30 |
| Efficiency/reliability | 0 | 17 |
| Employment | 4 | 6 |
| Health | 4 | 1 |
| Build energy sector/skills | 1 | 0 |
| Noise | 0 | 4 |
| Visual impact | 0 | 2 |
| Takes a lot of space | 0 | 2 |
| Lack existing infrastructure | 0 | 3 |
| Other | 9 | 8 |
| None/don't know | 8 | 45 |

Attitudes to wind or solar farms

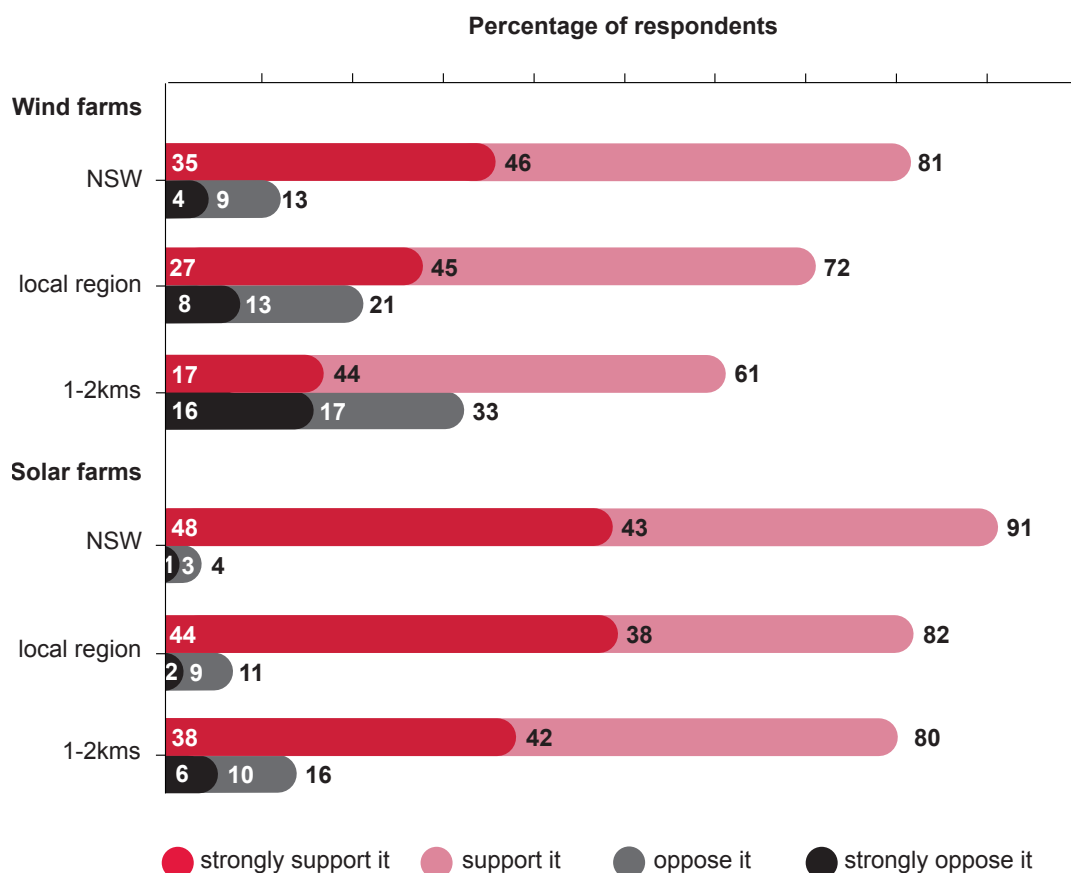


Figure 3.5: North East Region – support for and opposition to building wind or solar farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived.

Table 3.2: North East Region – reasons for supporting a wind or solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted).

| Reasons for support | Solar farm | Wind farm |
|---------------------------|---|-----------|
| Number of respondents | 199 | 150 |
| | Numbers below are shown as percentages. | |
| Environment | 62 | 69 |
| Cost | 27 | 20 |
| Local economy | 15 | 13 |
| More electricity | 7 | 7 |
| Better than coal | 14 | 6 |
| Visual | 6 | 5 |
| Noise | 10 | 0 |
| Suited for area/Australia | 9 | 0 |
| Good alternative source | 4 | 7 |
| Health | 3 | 6 |
| Way of the future | 2 | 5 |
| Other | 9 | 12 |
| None/don't know | 2 | 5 |

Table 3.3: North East Region – unprompted concerns of respondents who oppose a wind or solar farm within 1–2 kilometres of where survey respondents lived.

| | Solar farm | Wind farm |
|---|-----------------|-----------|
| Number of respondents | 41 ¹ | 88 |
| Numbers below are shown as percentages. | | |
| Noise | 0 | 59 |
| Visual | 24 | 31 |
| Health | 11 | 29 |
| Location issues | 36 | 29 |
| Environment | 15 | 15 |
| Efficiency/reliability | 0 | 12 |
| Cost | 4 | 9 |
| Takes a lot of space | 6 | 1 |
| Not enough information | 9 | 0 |
| Property values | 0 | 1 |
| Use of land for agriculture | 8 | 0 |
| Other | 20 | 9 |
| None/don't know | 1 | 2 |

Notes: 1. Caution interpreting results because of small sample size.

Table 3.4: North East Region – perceived impact of wind farms on property value and visual appeal (prompted).

| | Positive | Negative | No impact | Don't know |
|---|----------|----------|-----------|------------|
| Numbers below are shown as percentages. | | | | |
| Property values | 12 | 56 | 20 | 12 |
| Visual appeal of area | 19 | 53 | 23 | 5 |

Note: Number of respondents = 250.

Table 3.5: North East Region – level of concern about noise and health issues caused by wind farms (prompted).

| | Great/ some concern | Little/ no concern | Don't know |
|---|------------------------|-----------------------|------------|
| Numbers below are shown as percentages. | | | |
| Noise | 59 | 36 | 5 |
| Health | 42 | 52 | 6 |

Note: Number of respondents = 250.

3.2 Hunter/Central Coast Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the Hunter/Central Coast Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

Note: People living in Newcastle were not asked questions in relation to local wind and solar farms. Consequently, results about renewable energy were based on the entire region and results concerning local wind and solar farms in the Hunter/Central Coast region do not include Newcastle.

(Number of respondents = 210)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 77% and wind 67%
- 93% supported using renewables to generate electricity in NSW
- 85% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 79%
 - lower cost 34%
- most common perceived **disadvantages** (unprompted):
 - higher cost 36%
 - concerns about efficiency and reliability 14%
 - no disadvantages 40%
- 65% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 30% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 89% supported the use of solar farms in NSW, 80% in their local region, and 76% within 1–2 kilometres of where they lived.
- wind: 79% supported the use of wind farms in NSW, 71% in their local region, and 57% within 1–2 kilometres of where they lived
- among the 39% who **opposed** a wind farm within 1–2 kilometres of where they lived, the unprompted concerns most commonly raised were noise (58%), visual impact (47%), health issues (20%) and location suitability (21%).

Renewable energy – awareness, knowledge and attitudes

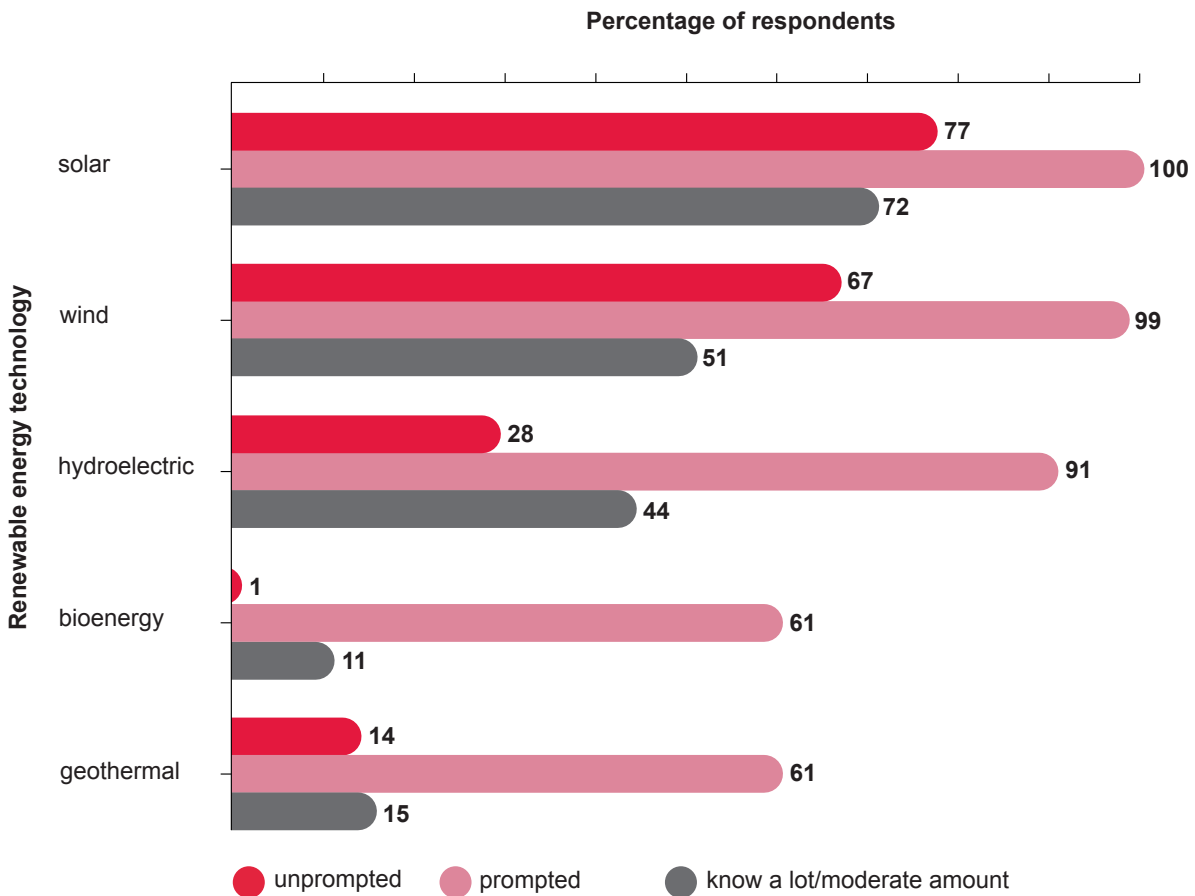


Figure 3.6: Hunter/Central Coast Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

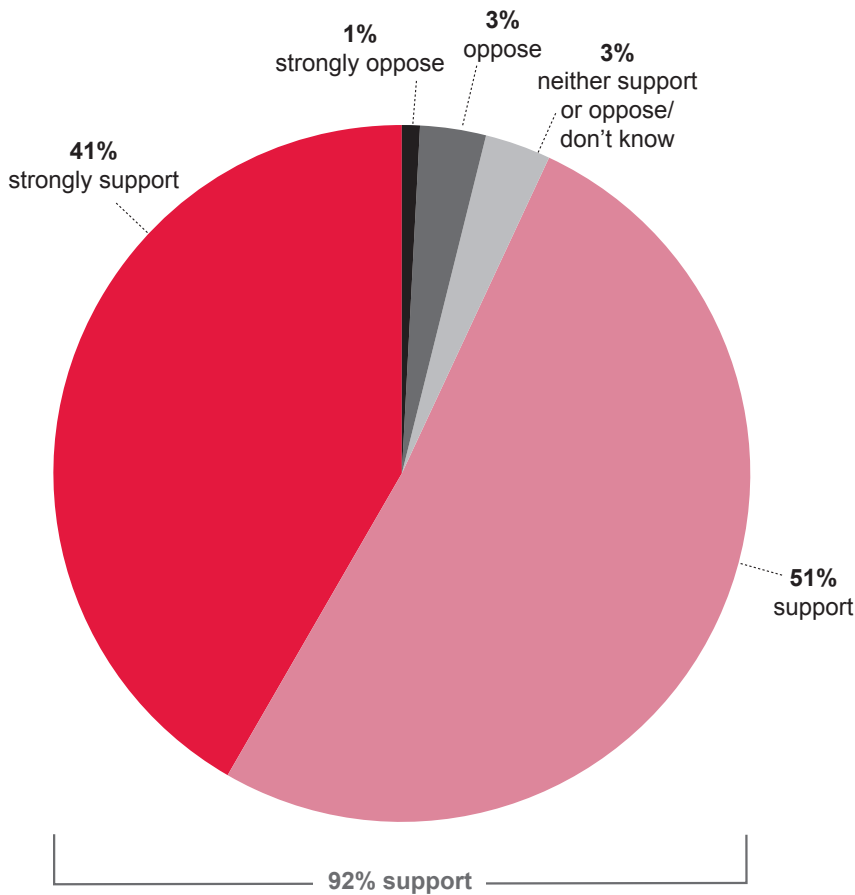


Figure 3.7: Hunter/Central Coast Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

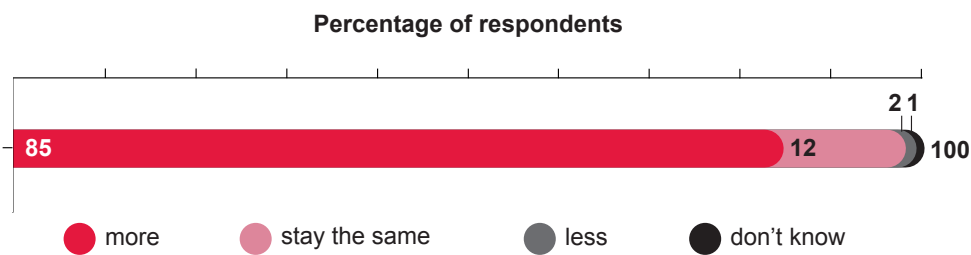


Figure 3.8: Hunter/Central Coast Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

Percentage of respondents

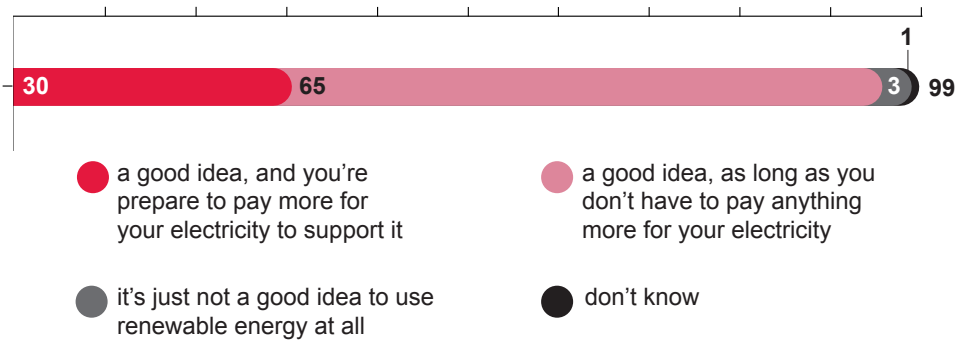
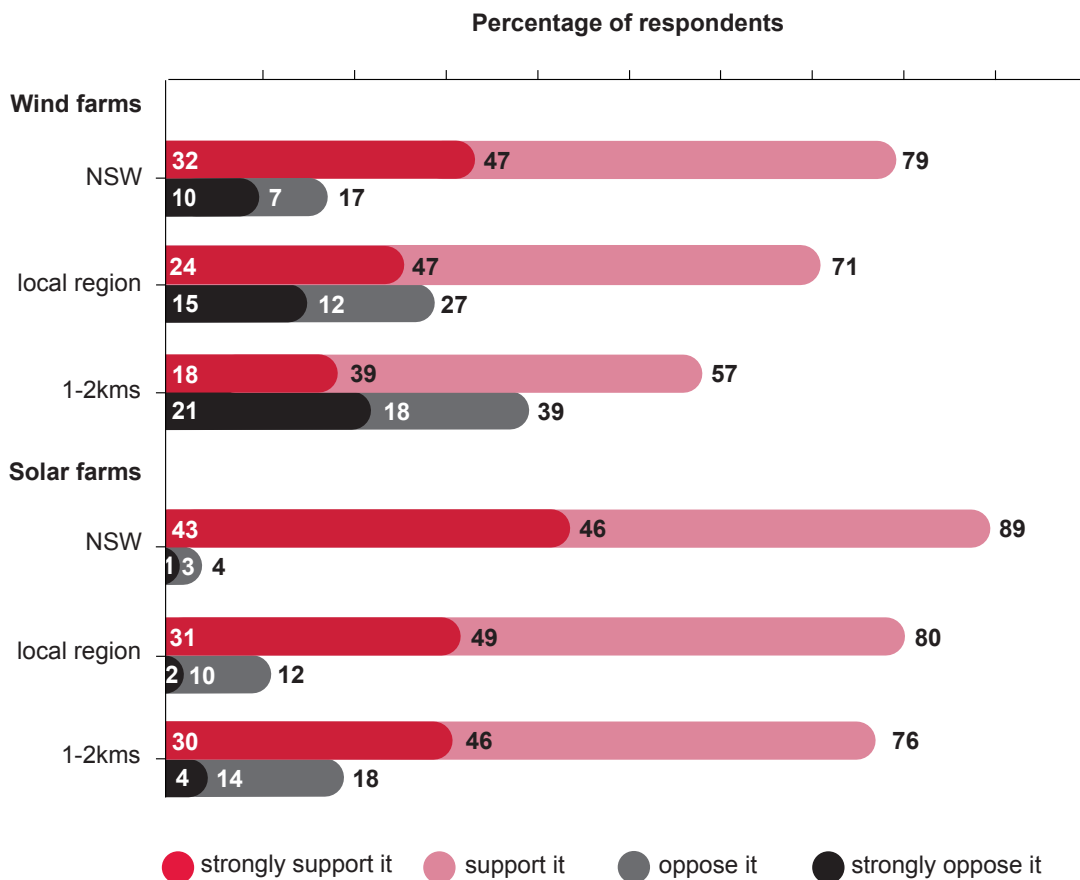


Figure 3.9: Hunter/Central Coast Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Table 3.6: Hunter/Central Coast Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|---|-----------|--------------|
| Number of respondents | 250 | 250 |
| Numbers below are shown as percentages. | | |
| Environment | 79 | 5 |
| Cost | 34 | 36 |
| Efficiency/reliability | 0 | 14 |
| Employment | 7 | 8 |
| Health | 6 | 2 |
| Build energy sector/skills | 4 | 0 |
| Noise | 0 | 2 |
| Visual impact | 0 | 5 |
| Takes a lot of space | 0 | 4 |
| Lack existing infrastructure | 0 | 0 |
| Other | 7 | 9 |
| None/don't know | 12 | 40 |

Attitudes to wind or solar farms



*Respondents living in Newcastle were not asked these questions (number of respondents =210)

Figure 3.10: Hunter/Central Coast Region – support for and opposition to building wind or solar farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived.*

Table 3.7: Hunter/Central Coast Region – reasons for supporting a wind or solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted).

| | Solar farm | Wind farm |
|---------------------------|---|-----------|
| Number of respondents | 165 | 122 |
| | Numbers below are shown as percentages. | |
| Environment | 66 | 76 |
| Cost | 32 | 22 |
| Local economy | 8 | 12 |
| More electricity | 7 | 5 |
| Better than coal | 16 | 10 |
| Visual | 7 | 6 |
| Noise | 4 | 0 |
| Suited for area/Australia | 2 | 0 |
| Good alternative source | 5 | 4 |
| Health | 4 | 3 |
| Way of the future | 4 | 3 |
| Other | 16 | 14 |
| None/don't know | 2 | 3 |

Table 3.8: Hunter/Central Coast Region – unprompted concerns of respondents who oppose a wind or solar farm within 1–2 kilometres of where survey respondents lived.

| | Solar farm | Wind farm |
|---|-----------------|-----------|
| Number of respondents | 35 ¹ | 81 |
| Numbers below are shown as percentages. | | |
| Noise | 2 | 58 |
| Visual | 13 | 47 |
| Health | 5 | 20 |
| Location issues | 34 | 21 |
| Environment | 19 | 13 |
| Efficiency/reliability | 2 | 6 |
| Cost | 9 | 8 |
| Takes a lot of space | 25 | 10 |
| Not enough information | 20 | 0 |
| Property values | 0 | 2 |
| Use of land for agriculture | 5 | 0 |
| Other | 1 | 11 |
| None/don't know | 4 | 5 |

1. Caution interpreting results because of small sample size

Table 3.9: Hunter/Central Coast Region – perceived impact of wind farms on property value and visual appeal (prompted).

| | Positive | Negative | No impact | Don't know |
|---|----------|----------|-----------|------------|
| Numbers below are shown as percentages. | | | | |
| Property values | 10 | 51 | 27 | 12 |
| Visual appeal of area | 13 | 51 | 28 | 8 |

Note: Number of respondents = 210.

Table 3.10: Hunter/Central Coast Region – level of concern about noise and health issues caused by wind farms (prompted).

| | Great/ some concern | Little/ no concern | Don't know |
|---|------------------------|-----------------------|------------|
| Numbers below are shown as percentages. | | | |
| Noise | 56 | 36 | 8 |
| Health | 36 | 60 | 3 |

*Respondents living in Newcastle were not asked these questions.

Note: Number of respondents = 210.

3.3 North West Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the North West Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

(Number of respondents = 250)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 86% and wind 70%
- 94% supported using renewables to generate electricity in NSW
- 81% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 79%
 - lower cost 45%
- most common perceived **disadvantages** (unprompted):
 - higher cost 36%
 - concerns about efficiency and reliability 19%
 - no disadvantages 40%
- 74% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 22% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 95% supported the use of solar farms in NSW, 92% in their local region, and 84% within 1–2 kilometres of where they lived
- wind: 86% supported the use of wind farms in NSW, 79% in their local region, and 64% within 1–2 kilometres of where they lived
- among the 34% who **opposed** a wind farm within 1–2 kilometres of where they lived, the unprompted concerns most commonly raised were noise (69%), location suitability (30%), visual impact (28%) and health issues (23%).

Renewable energy – awareness, knowledge and attitudes

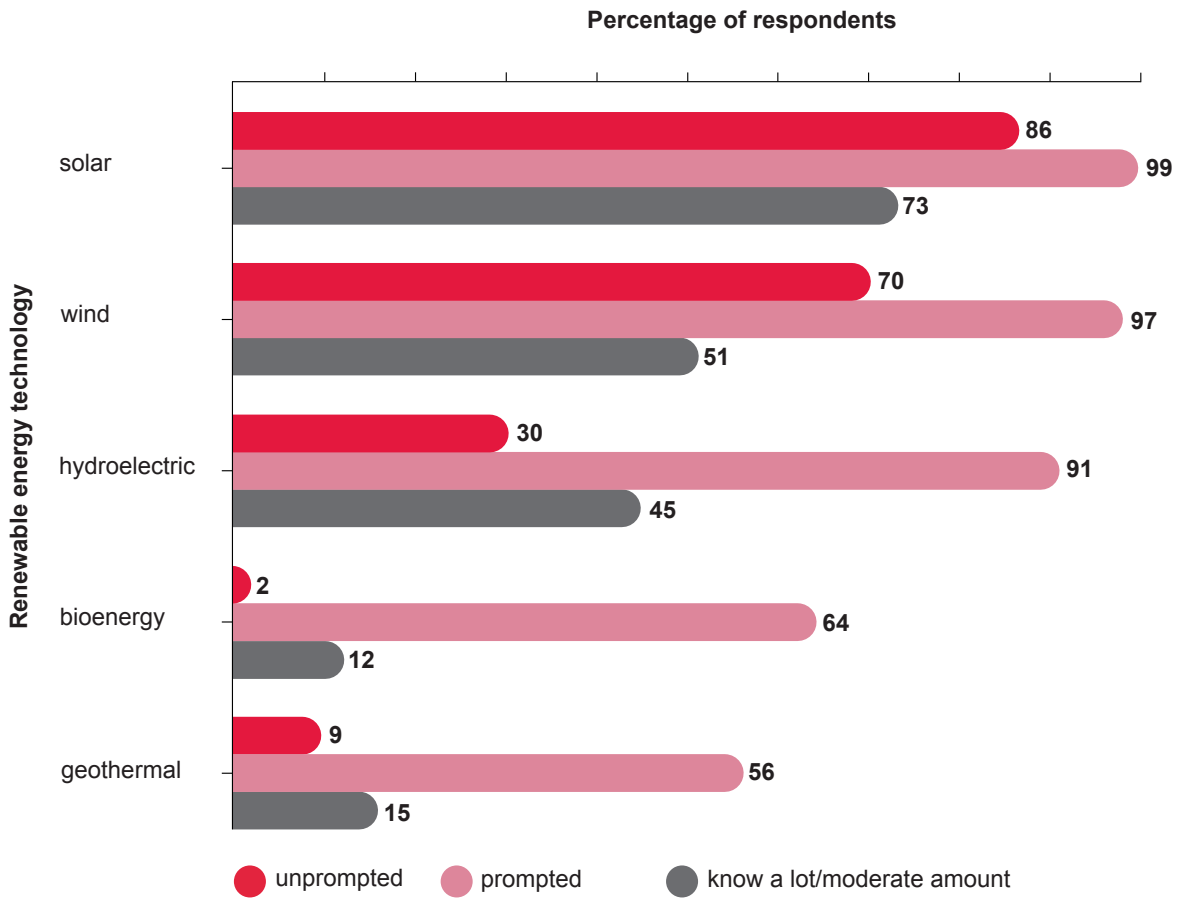


Figure 3.11: North West Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

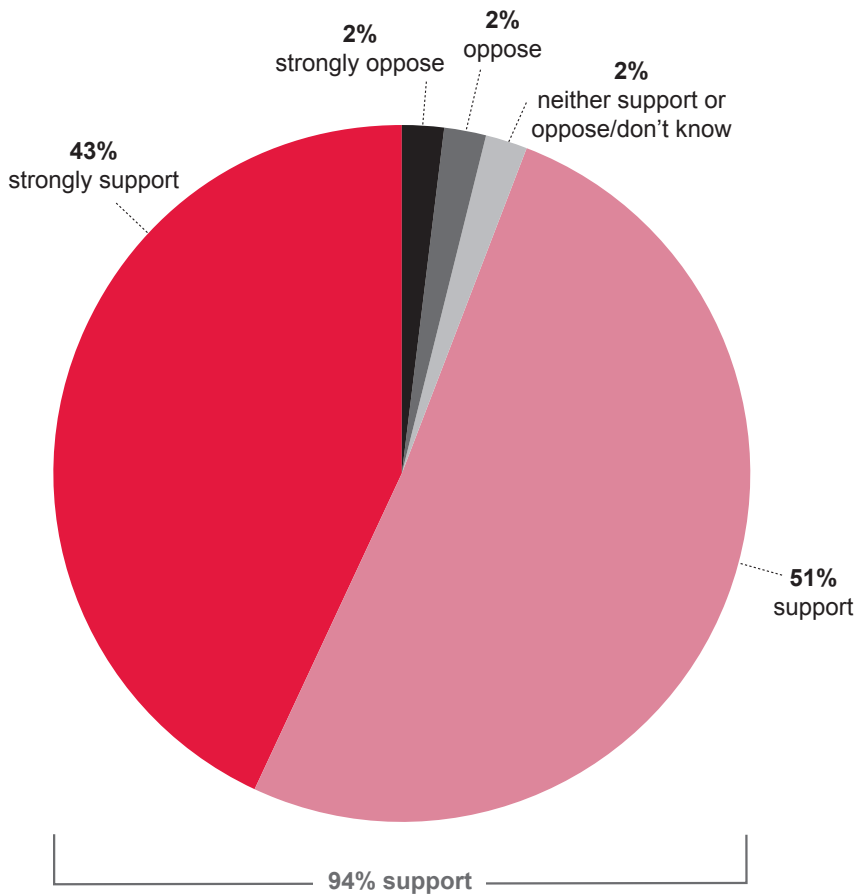


Figure 3.12: North West Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

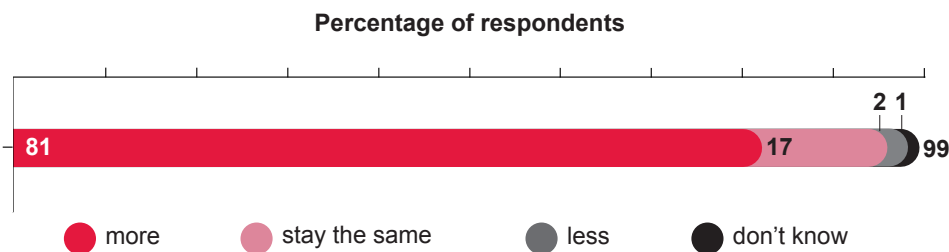


Figure 3.13: North West Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

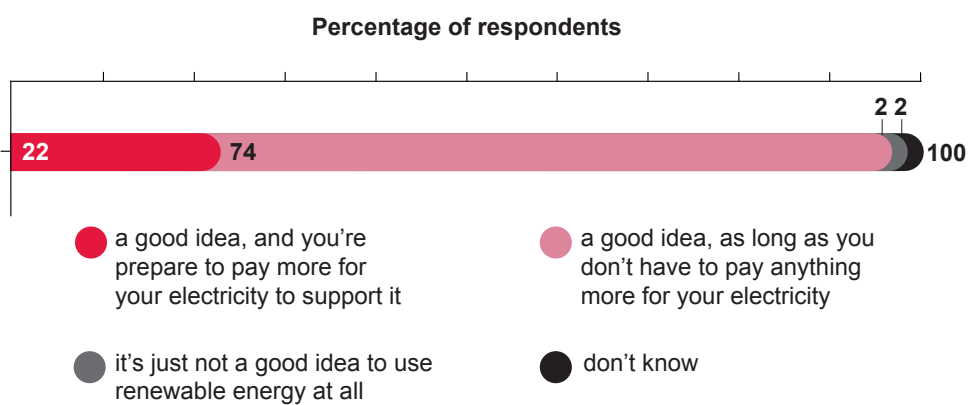


Figure 3.14: North West Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Table 3.11: North West Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|---|------------------|---------------------|
| Number of respondents | 250 | 250 |
| Numbers below are shown as percentages. | | |
| Environment | 79 | 3 |
| Cost | 45 | 36 |
| Efficiency/reliability | 0 | 19 |
| Employment | 6 | 6 |
| Health | 4 | 3 |
| Build energy sector/skills | 2 | 0 |
| Noise | 0 | 6 |
| Visual impact | 0 | 4 |
| Takes a lot of space | 0 | 4 |
| Lack existing infrastructure | 0 | 2 |
| Other | 9 | 4 |
| None/don't know | 11 | 40 |

Attitudes to wind or solar farms

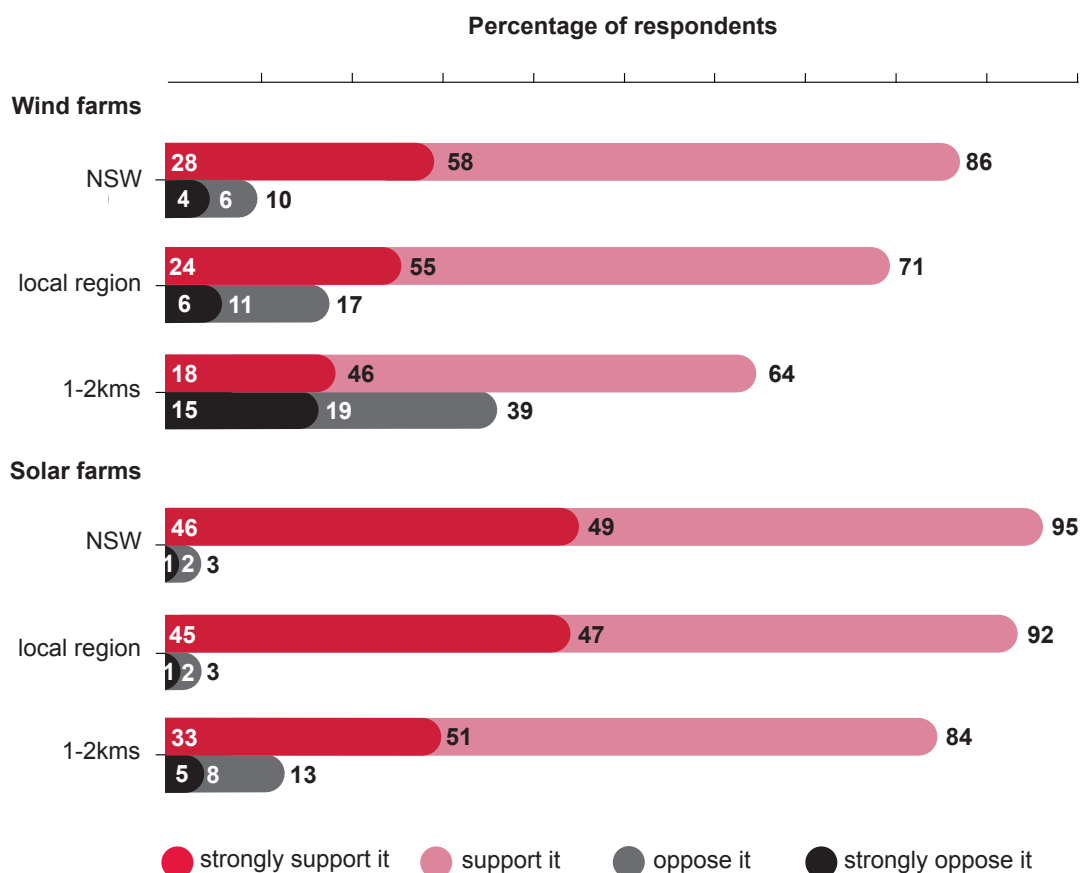


Figure 3.15: North West Region – support for and opposition to building wind or solar farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived.

Table 3.12: North West Region – reasons for supporting a wind or solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted).

| | Solar farm | Wind farm |
|---------------------------|---|-----------|
| Number of respondents | 205 | 153 |
| | Numbers below are shown as percentages. | |
| Environment | 56 | 60 |
| Cost | 30 | 29 |
| Local economy | 21 | 16 |
| More electricity | 11 | 15 |
| Better than coal | 9 | 5 |
| Visual | 6 | 9 |
| Noise | 5 | 3 |
| Suited for area/Australia | 5 | 1 |
| Good alternative source | 3 | 4 |
| Health | 2 | 3 |
| Way of the future | 4 | 0 |
| Other | 16 | 12 |
| None/don't know | 4 | 8 |

Table 3.13: North West Region – concerns about building a wind or solar farm within 1–2 kilometres of where survey respondents lived (unprompted).

| | Solar farm | Wind farm |
|---|-----------------|-----------|
| Number of respondents | 35 ¹ | 89 |
| Numbers below are shown as percentages. | | |
| Noise | 3 | 69 |
| Visual | 21 | 28 |
| Health | 3 | 23 |
| Location issues | 28 | 30 |
| Environment | 18 | 17 |
| Efficiency/reliability | 4 | 14 |
| Cost | 11 | 8 |
| Takes a lot of space | 20 | 5 |
| Not enough information | 15 | 0 |
| Property values | 3 | 3 |
| Use of land for agriculture | 7 | 0 |
| Other | 17 | 14 |
| None/don't know | 0 | 0 |

1. Caution interpreting results because of small sample size

Table 3.14: North West Region – perceived impact of wind farms on property value and visual appeal (prompted).

| | Positive | Negative | No impact | Don't know |
|---|----------|----------|-----------|------------|
| Numbers below are shown as percentages. | | | | |
| Property values | 11 | 50 | 28 | 11 |
| Visual appeal of area | 20 | 43 | 36 | 1 |

Note: Number of respondents = 250.

Table 3.15: North West Region – level of concern about noise and health issues caused by wind farms (prompted).

| | Great/ some concern | Little/ no concern | Don't know |
|---|------------------------|-----------------------|------------|
| Numbers below are shown as percentages. | | | |
| Noise | 54 | 43 | 3 |
| Health | 43 | 52 | 5 |

Note: Number of respondents = 250.

3.4 South East Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the South East Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

(Number of respondents = 250)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 86% and wind 82%
- 90% supported using renewables to generate electricity in NSW
- 82% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 83%
 - lower cost 37%
- most common perceived **disadvantages** (unprompted):
 - higher cost 39%
 - concerns about efficiency and reliability 18%
 - no disadvantages 34%
- 70% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 26% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 88% supported the use of solar farms in NSW, 85% in their local region, and 74% within 1–2 kilometres of where they lived
- wind: 79% supported the use of wind farms in NSW, 72% in their local region, and 56% within 1–2 kilometres of where they lived
- among the 41% who **opposed** a wind farm within 1–2 kilometres of where they lived, the unprompted concerns most commonly raised were noise (56%), visual impact (39%) and health issues (27%).

Renewable energy – awareness, knowledge and attitudes

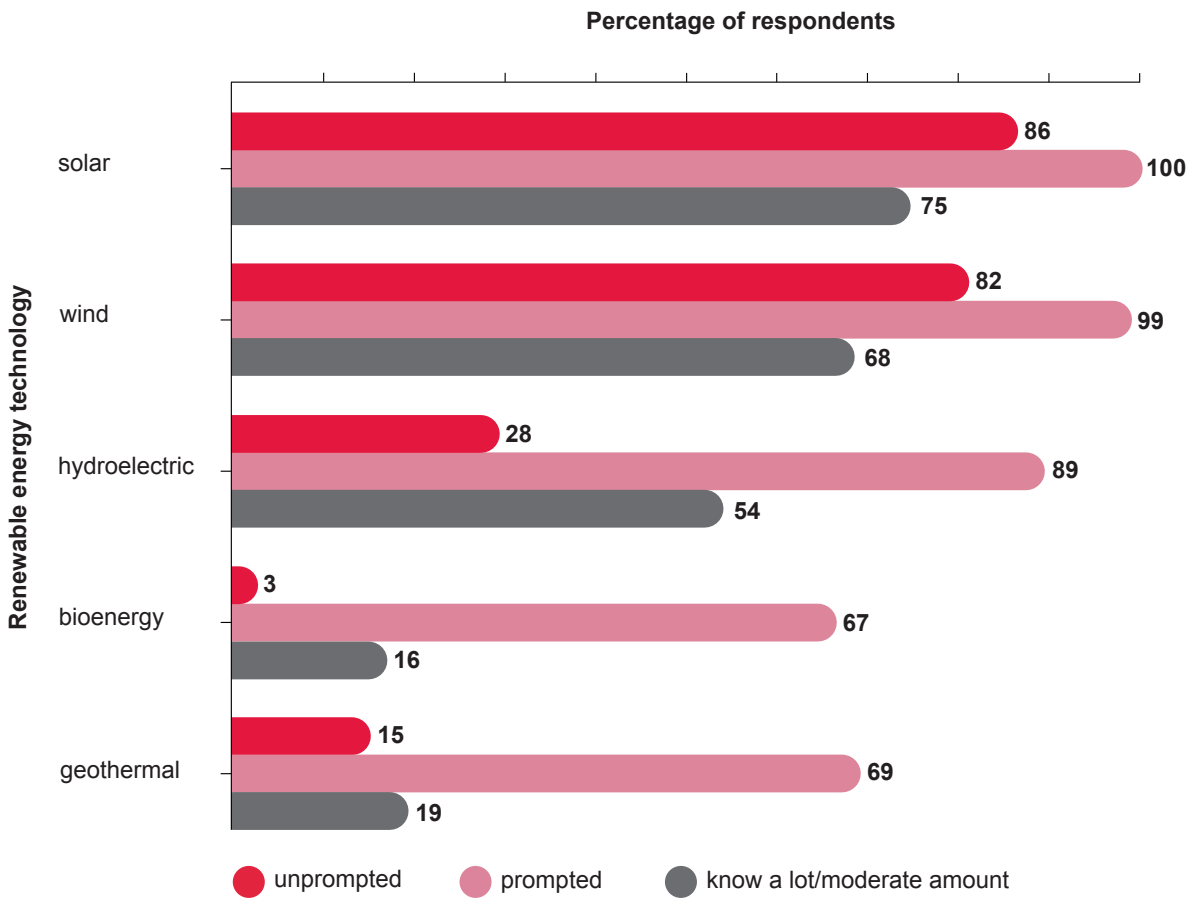


Figure 3.16: South East Region – Awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

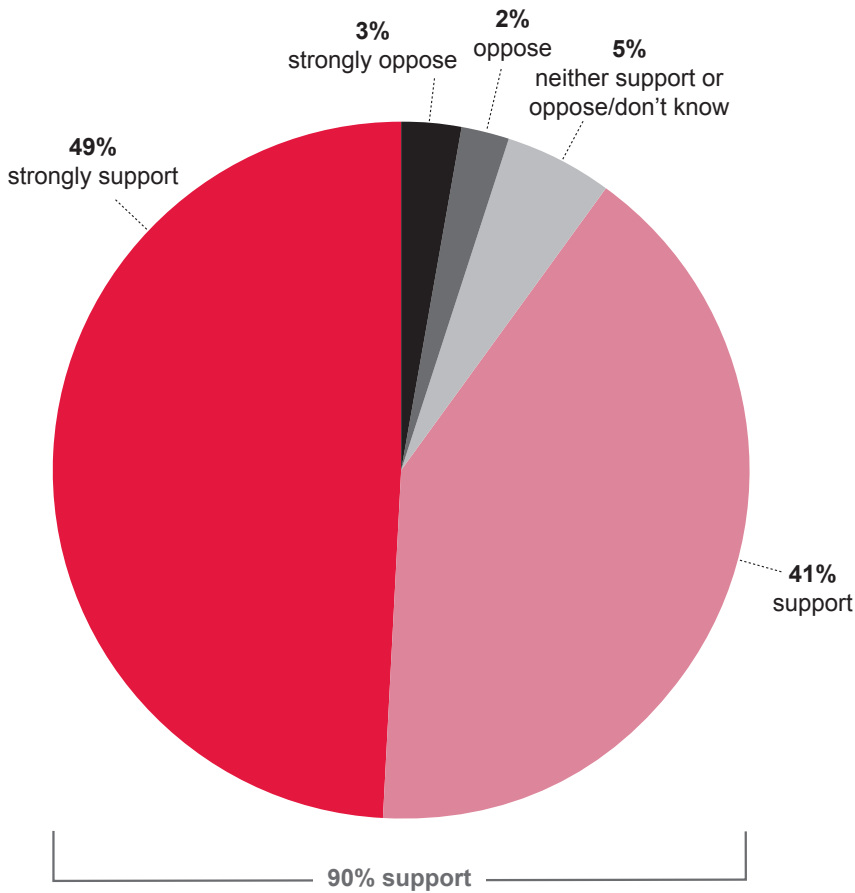


Figure 3.17: South East Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

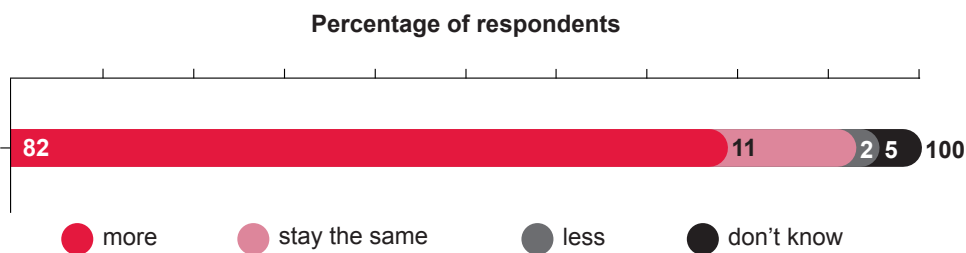


Figure 3.18: South East Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

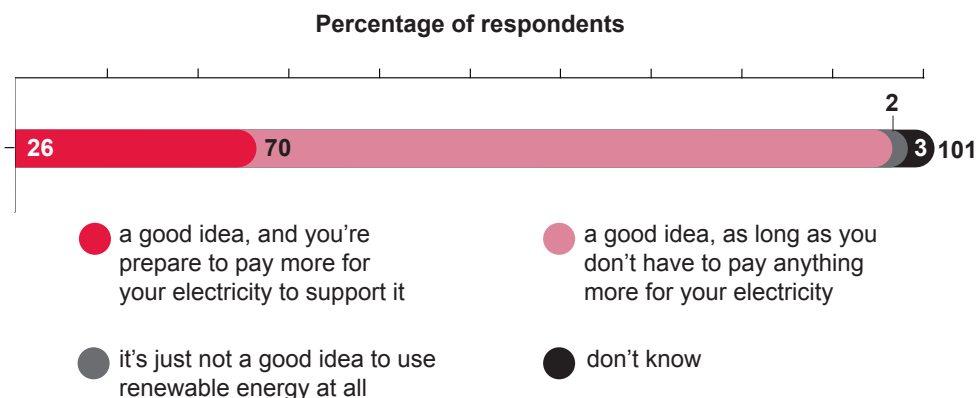


Figure 3.19: South East Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Note. Numbers may not sum to 100 due to rounding.

Table 3.16: South East Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|------------------------------|---|---------------------|
| Number of respondents | 250 | 250 |
| | Numbers below are shown as percentages. | |
| Environment | 83 | 5 |
| Cost | 37 | 39 |
| Efficiency/reliability | 0 | 18 |
| Employment | 9 | 3 |
| Health | 5 | 3 |
| Build energy sector/skills | 5 | 0 |
| Noise | 0 | 4 |
| Visual impact | 0 | 8 |
| Takes a lot of space | 0 | 2 |
| Lack existing infrastructure | 0 | 2 |
| Other | 6 | 14 |
| None/don't know | 12 | 34 |

Attitudes to wind or solar farms

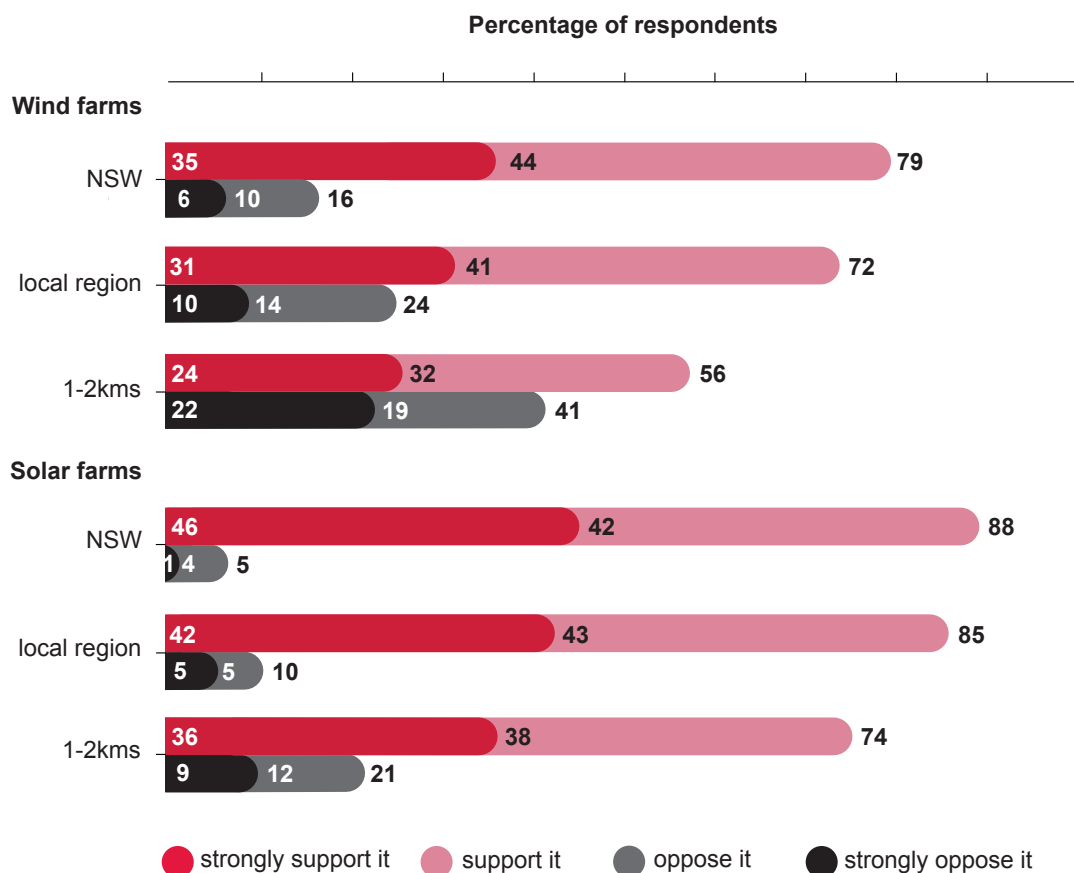


Figure 3.20: South East Region – support for and opposition to building wind or solar farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived.

Table 3.17: South East Region – reasons for supporting a wind or solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted).

| | Solar farm | Wind farm |
|---|------------|-----------|
| Number of respondents | 196 | 145 |
| Numbers below are shown as percentages. | | |
| Environment | 63 | 66 |
| Cost | 23 | 20 |
| Local economy | 18 | 16 |
| More electricity | 7 | 5 |
| Better than coal | 6 | 2 |
| Visual | 9 | 12 |
| Noise | 6 | 4 |
| Suited for area/Australia | 6 | 0 |
| Good alternative source | 2 | 5 |
| Health | 4 | 1 |
| Way of the future | 4 | 4 |
| Other | 13 | 7 |
| None / don't know | 3 | 3 |

Table 3.18: South East Region – concerns about building a wind or solar farm within 1–2 kilometres of where survey respondents lived (unprompted).

| | Solar farm | Wind farm |
|---|-----------------|-----------|
| Number of respondents | 42 ¹ | 98 |
| Numbers below are shown as percentages. | | |
| Noise | 3 | 56 |
| Visual | 36 | 39 |
| Health | 10 | 27 |
| Location issues | 28 | 19 |
| Environment | 8 | 11 |
| Efficiency/ reliability | 8 | 7 |
| Cost | 7 | 10 |
| Takes a lot of space | 4 | 5 |
| Not enough information | 3 | 0 |
| Property values | 13 | 12 |
| Use of land for agriculture | 11 | 0 |
| Other | 21 | 13 |
| None / don't know | 4 | 4 |

1. Caution interpreting results because of small sample size

Table 3.19: South East Region – perceived impact of wind farms on property value and visual appeal (prompted).

| | Positive | Negative | No impact | Don't know |
|---|----------|----------|-----------|------------|
| Numbers below are shown as percentages. | | | | |
| Property values | 5 | 66 | 21 | 8 |
| Visual appeal of area | 12 | 56 | 29 | 2 |

Note: Number of respondents = 250.

Table 3.20: South East Region – level of concern about noise and health issues caused by wind farms (prompted).

| | Great/ some concern | Little/ no concern | Don't know |
|---|------------------------|-----------------------|------------|
| Numbers below are shown as percentages. | | | |
| Noise | 60 | 38 | 2 |
| Health | 49 | 48 | 3 |

Note: Number of respondents = 250.

3.5 South West Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the South West Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

(Number of respondents = 250)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 79% and wind 61%
- 91% supported using renewables to generate electricity in NSW
- 79% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 73%
 - lower cost 39%
- most common perceived **disadvantages** (unprompted):
 - higher cost 28%
 - concerns about efficiency and reliability 15%
 - no disadvantages 49%
- 74% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 20% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 93% supported the use of solar farms in NSW, 85% in their local region, and 77% within 1–2 kilometres of where they lived
- wind: 77% supported the use of wind farms in NSW, 71% in their local region, and 53% within 1–2 kilometres of where they lived
- among the 41% who **opposed** a wind farm within 1–2 kilometres of where they lived, the unprompted concerns most commonly raised were noise (66%), visual impact (35%), health issues and location suitability (20% each).

Renewable energy – awareness, knowledge and attitudes

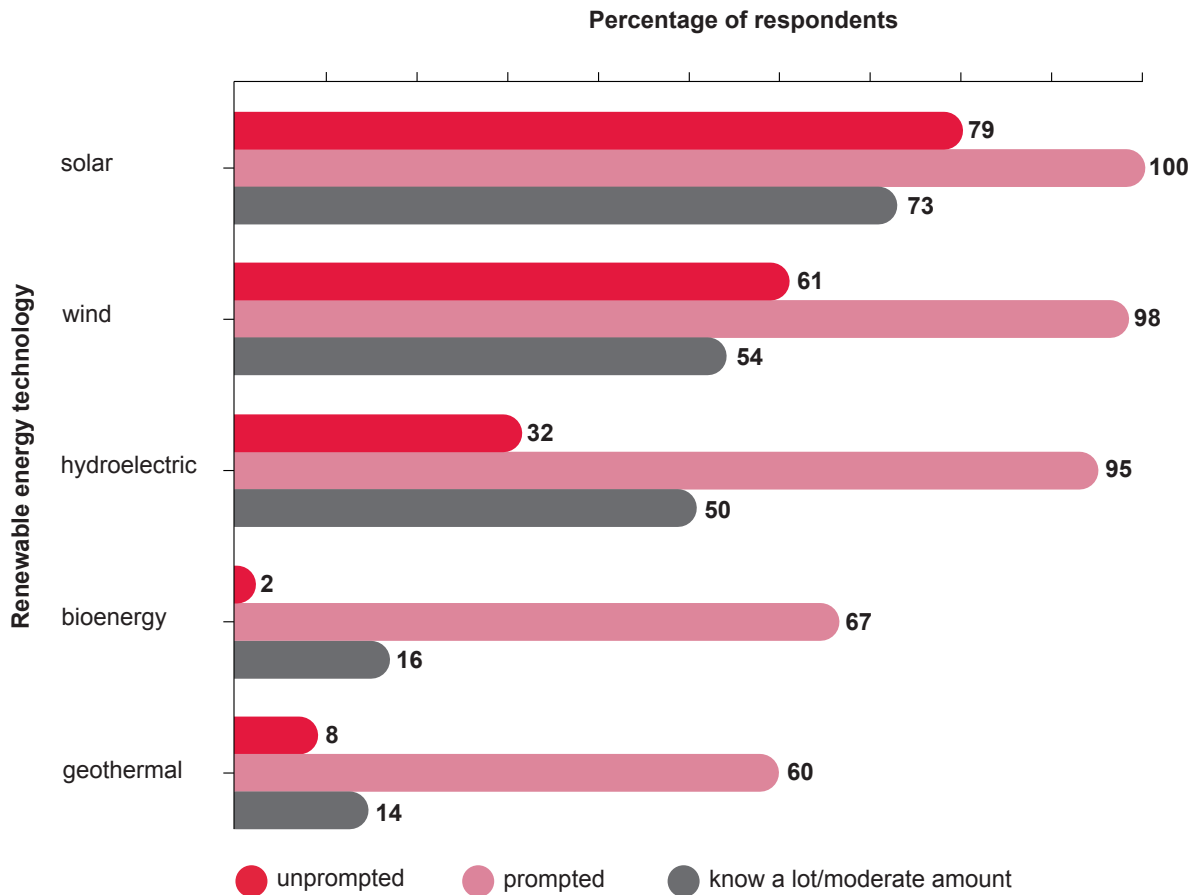


Figure 3.21: South West Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

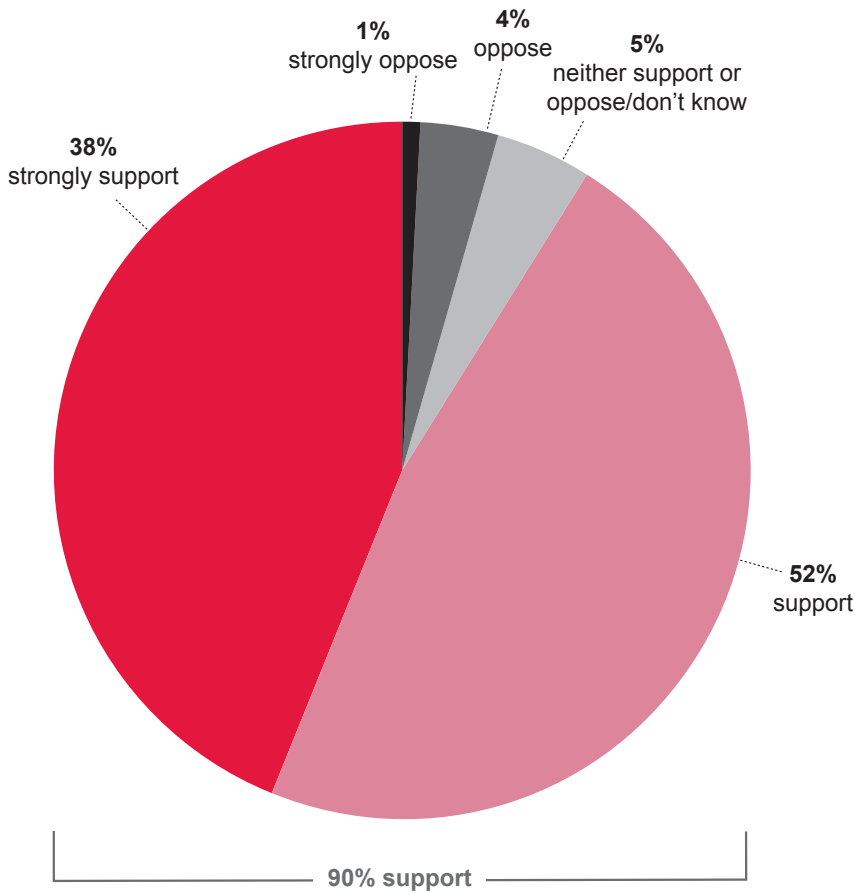


Figure 3.22: South West Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

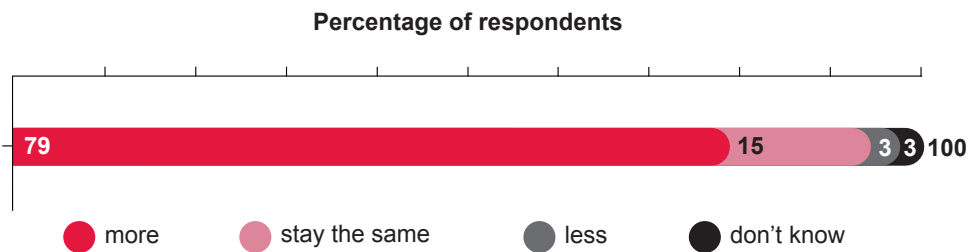


Figure 3.23: South West Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

Percentage of respondents

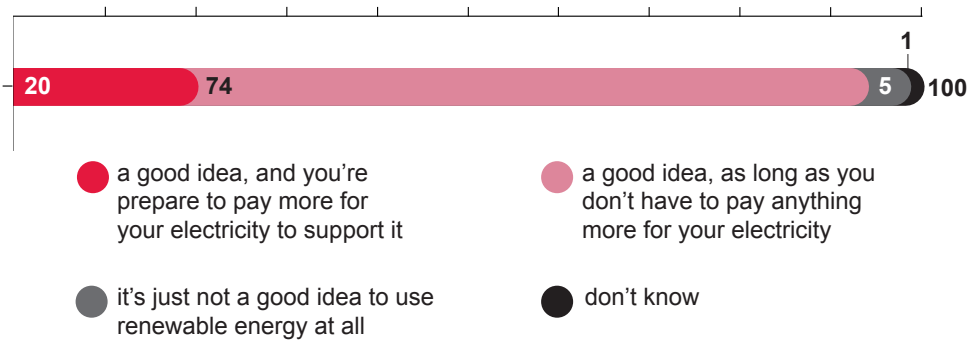


Figure 3.24: South West Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Table 3.21: South West Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|---|-----------|--------------|
| Number of respondents | 250 | 250 |
| Numbers below are shown as percentages. | | |
| Environment | 73 | 4 |
| Cost | 39 | 28 |
| Efficiency/reliability | 0 | 15 |
| Employment | 6 | 6 |
| Health | 2 | 2 |
| Build energy sector/skills | 3 | 0 |
| Noise | 0 | 3 |
| Visual impact | 0 | 3 |
| Takes a lot of space | 0 | 2 |
| Lack existing infrastructure | 0 | 2 |
| Other | 11 | 8 |
| None/don't know | 13 | 49 |

Attitudes to wind or solar farms

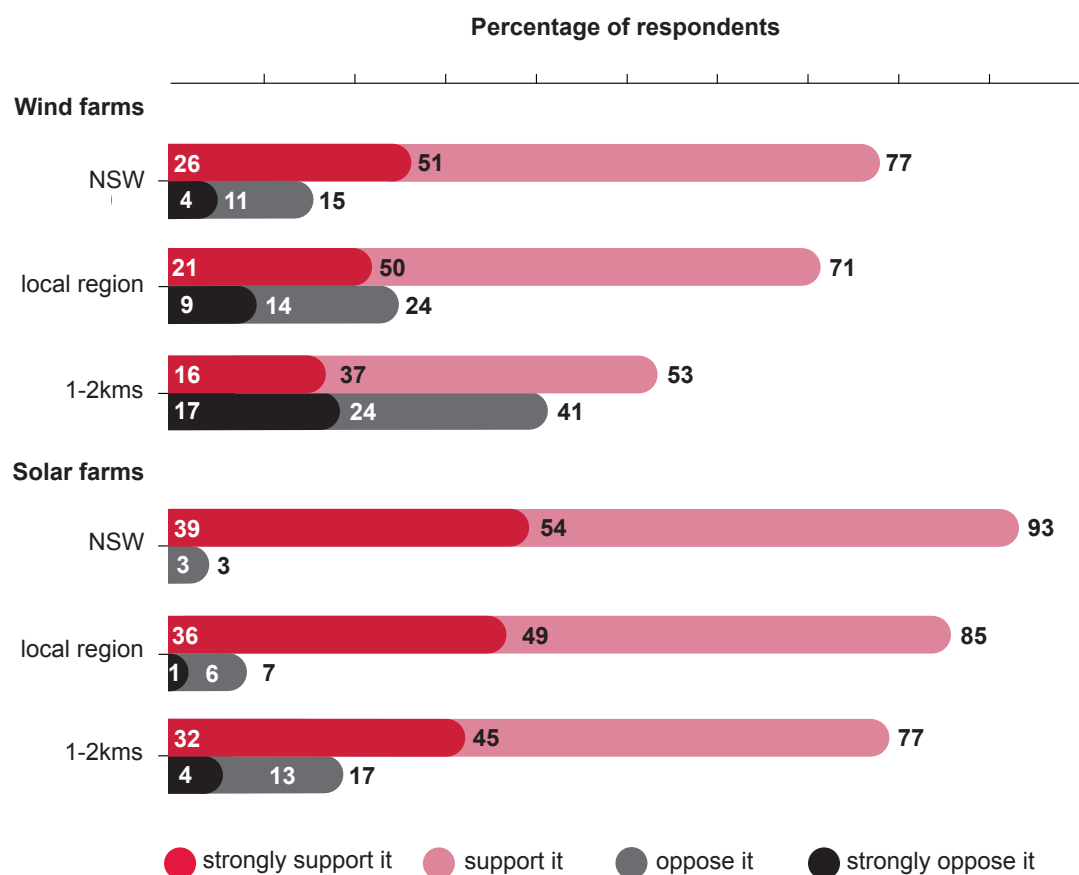


Figure 3.25: Support for and opposition to building wind or solar farms in three proximities – in NSW, in the local region, and within 1–2 kilometres of where survey respondents lived.

Table 3.22: South West Region – reasons for supporting a wind or solar farm located within 1–2 kilometres of where a survey respondent lived (unprompted).

| | Solar farm | Wind farm |
|---------------------------|---|-----------|
| Number of respondents | 195 | 132 |
| | Numbers below are shown as percentages. | |
| Environment | 56 | 62 |
| Cost | 30 | 28 |
| Local economy | 16 | 19 |
| More electricity | 9 | 10 |
| Better than coal | 5 | 3 |
| Visual | 7 | 6 |
| Noise | 6 | 1 |
| Suited for area/Australia | 11 | 0 |
| Good alternative source | 2 | 7 |
| Health | 1 | 2 |
| Way of the future | 3 | 5 |
| Other | 9 | 16 |
| None/don't know | 4 | 6 |

Table 3.23: South West Region – concerns about building a wind and solar farm within 1–2 kilometres of where survey respondents lived (unprompted).

| | Solar farm | Wind farm |
|---|-----------------|-----------|
| Number of respondents | 41 ¹ | 102 |
| Numbers below are shown as percentages. | | |
| Noise | 3 | 66 |
| Visual | 17 | 35 |
| Health | 6 | 20 |
| Location issues | 29 | 20 |
| Environment | 13 | 13 |
| Efficiency/reliability | 4 | 10 |
| Cost | 6 | 8 |
| Takes a lot of space | 16 | 1 |
| Not enough information | 7 | 0 |
| Property values | 4 | 4 |
| Use of land for agriculture | 17 | 0 |
| Other | 14 | 7 |
| None/don't know | 4 | 3 |

1. Caution interpreting results because of small sample size

Table 3.24: South West Region – perceived impact of wind farms on property value and visual appeal (prompted).

| | Positive | Negative | No impact | Don't know |
|---|----------|----------|-----------|------------|
| Numbers below are shown as percentages. | | | | |
| Property values | 9 | 58 | 21 | 12 |
| Visual appeal of area | 16 | 50 | 30 | 3 |

Note: Number of respondents = 250.

Table 3.25: South West Region – level of concern about noise and health issues caused by wind farms (prompted).

| | Great/ some concern | Little/ no concern | Don't know |
|---|------------------------|-----------------------|------------|
| Numbers below are shown as percentages. | | | |
| Noise | 64 | 31 | 5 |
| Health | 48 | 47 | 5 |

Note: Number of respondents = 250.

3.6 Illawarra Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the Illawarra Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

Note: This summary does not contain information about attitudes to local wind and solar farms because these issues were not explored in this region.

(Number of respondents = 250)

Key facts

Renewable energy

- dominant technologies associated with 'renewable energy' were solar 84% and wind 63%
- 91% supported using renewables to generate electricity in NSW
- 89% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 83%
 - lower cost 44%
- most common perceived **disadvantages** (unprompted):
 - higher cost 34%
 - concerns about efficiency and reliability 14%
 - no disadvantages 43%
- 69% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 29% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 95% supported and 42% **strongly** supported the use of solar farms in NSW
- wind: 87% supported and 38% **strongly** supported the use of wind farms in NSW.

Renewable energy – awareness, knowledge and attitudes

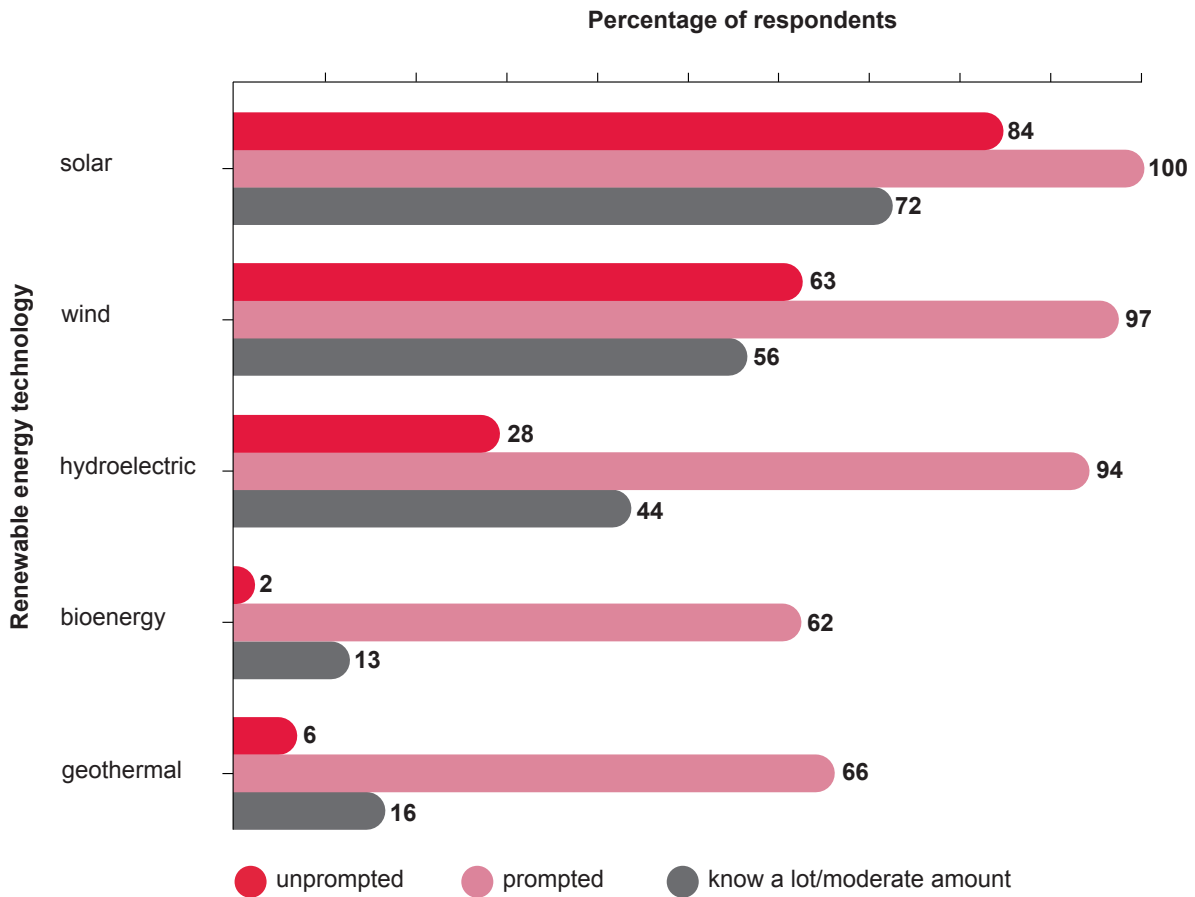


Figure 3.26: Illawarra Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

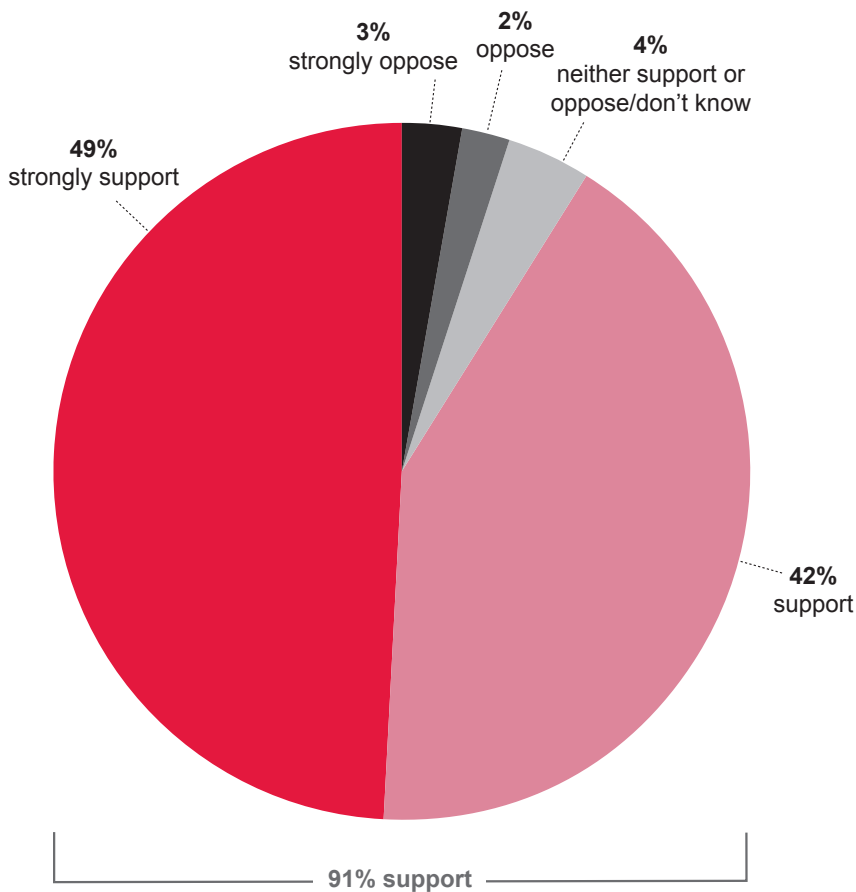


Figure 3.27: Illawarra Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

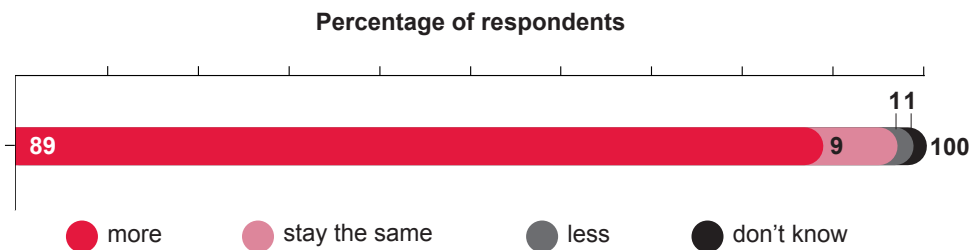


Figure 3.28: Illawarra Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

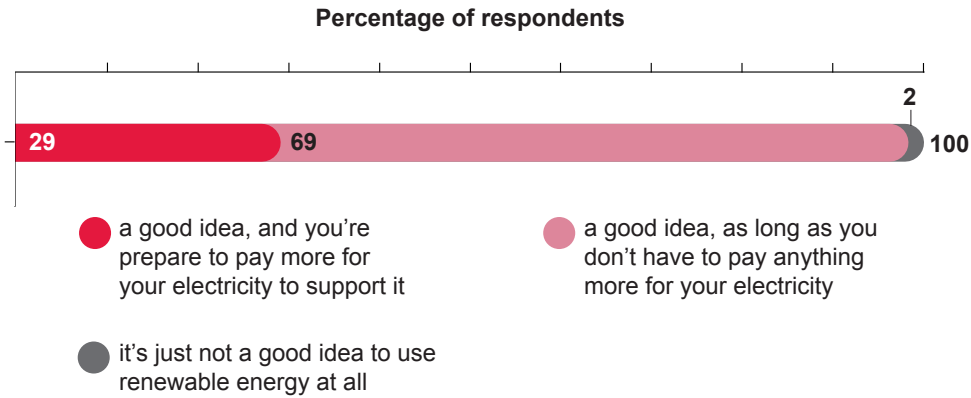


Figure 3.29: Illawarra Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Table 3.26: Illawarra Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|---|-----------|--------------|
| Number of respondents | 250 | 250 |
| Numbers below are shown as percentages. | | |
| Environment | 83 | 5 |
| Cost | 44 | 34 |
| Efficiency/reliability | 0 | 14 |
| Employment | 4 | 7 |
| Health | 3 | 1 |
| Build energy sector/skills | 3 | 0 |
| Noise | 0 | 3 |
| Visual impact | 0 | 2 |
| Takes a lot of space | 0 | 1 |
| Lack existing infrastructure | 0 | 0 |
| Other | 9 | 10 |
| None/don't know | 8 | 43 |

Community attitudes to wind and solar farms

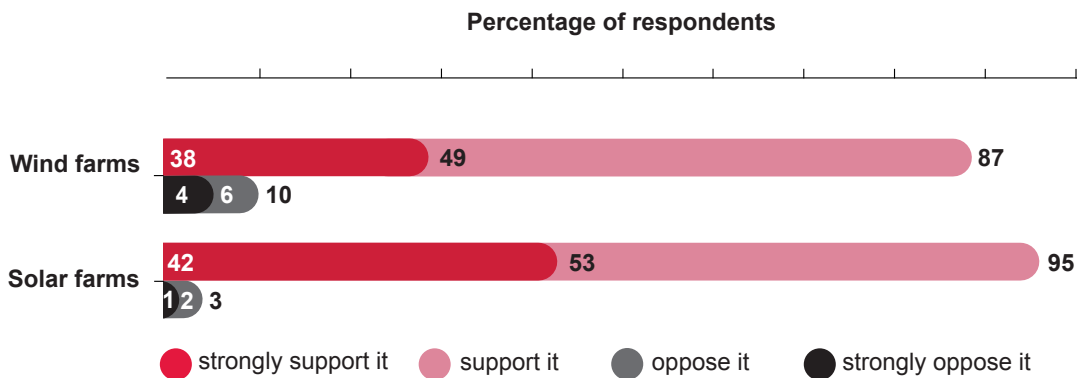


Figure 3.30: Illawarra Region – support for and opposition to building wind or solar farms in NSW.

3.7 Greater Sydney Region

This is a bullet point and graphic summary of key survey results about renewable energy technologies for the Greater Sydney Region of NSW. It is **not** intended to be a report on how people in this region **differ** from people in other regions in relation to awareness, knowledge and attitudes.

Note: This summary does not contain information about attitudes to local wind and solar farms because these issues were not explored in this region.

(Number of respondents = 500)

Key facts

Renewable energy

- dominant technologies associated with renewable energy were solar 71% and wind 60%
- 91% supported using renewables to generate electricity in NSW
- 83% believed NSW should **increase** the use of renewables over the next five years
- most common perceived **advantages** of renewables (unprompted):
 - environmental benefits 80%
 - lower cost 35%
- most common perceived **disadvantages** (unprompted):
 - higher cost 43%
 - concerns about efficiency and reliability 19%
 - no disadvantages 35%
- 61% were prepared to use renewables 'provided I don't have to pay more for my electricity' and 34% were prepared to pay more to support them.

Solar and wind farms in NSW

- solar: 87% supported and 43% **strongly** supported the use of solar farms in NSW
- wind: 81% supported and 36% **strongly** supported the use of wind farms in NSW.

Renewable energy – awareness, knowledge and attitude

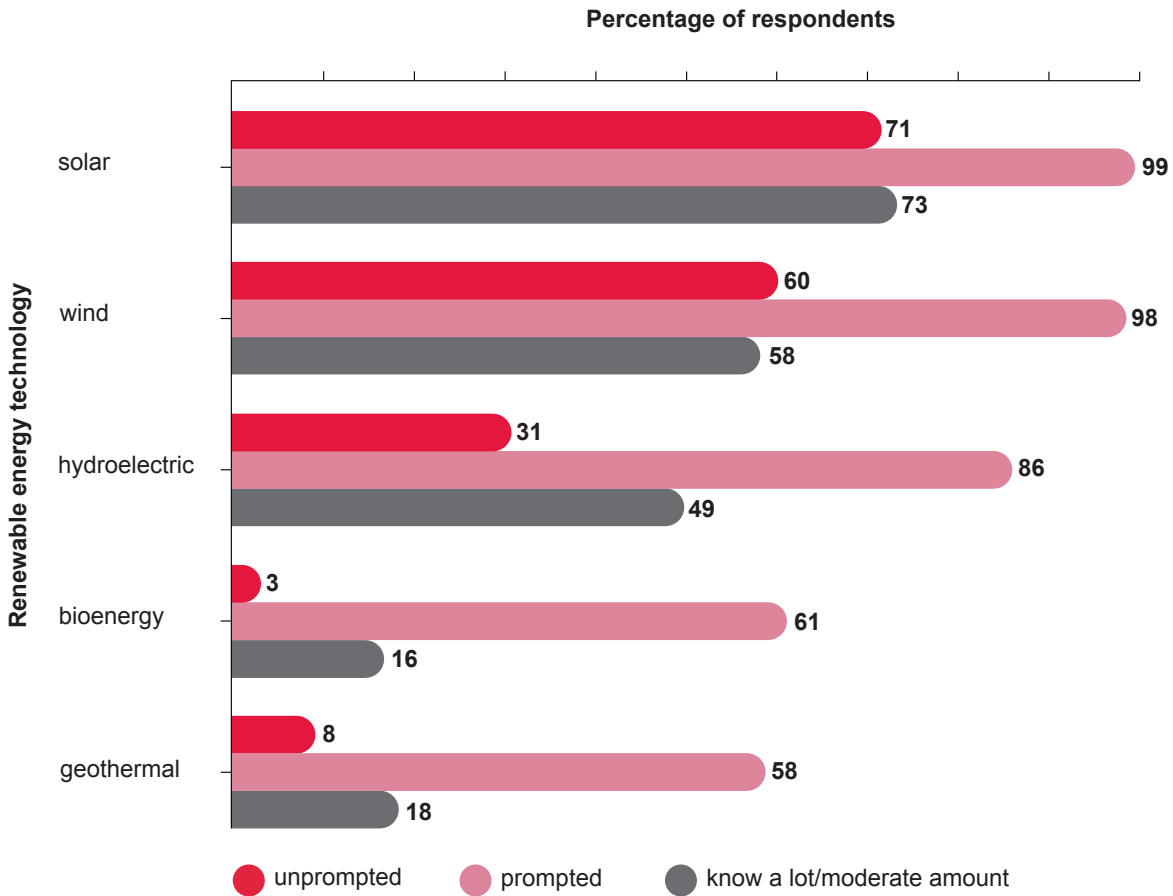


Figure 3.31: Greater Sydney Region – awareness/self-assessed knowledge of renewable energy technologies by survey respondents.

‘Prompted’ refers to answers survey respondents gave after being prompted with suggested answers. ‘Unprompted’ refers to answers survey respondents voluntarily gave to survey questions. ‘Know a lot/moderate amount’ refers to the level of knowledge survey respondents reported they had about each renewable technology.

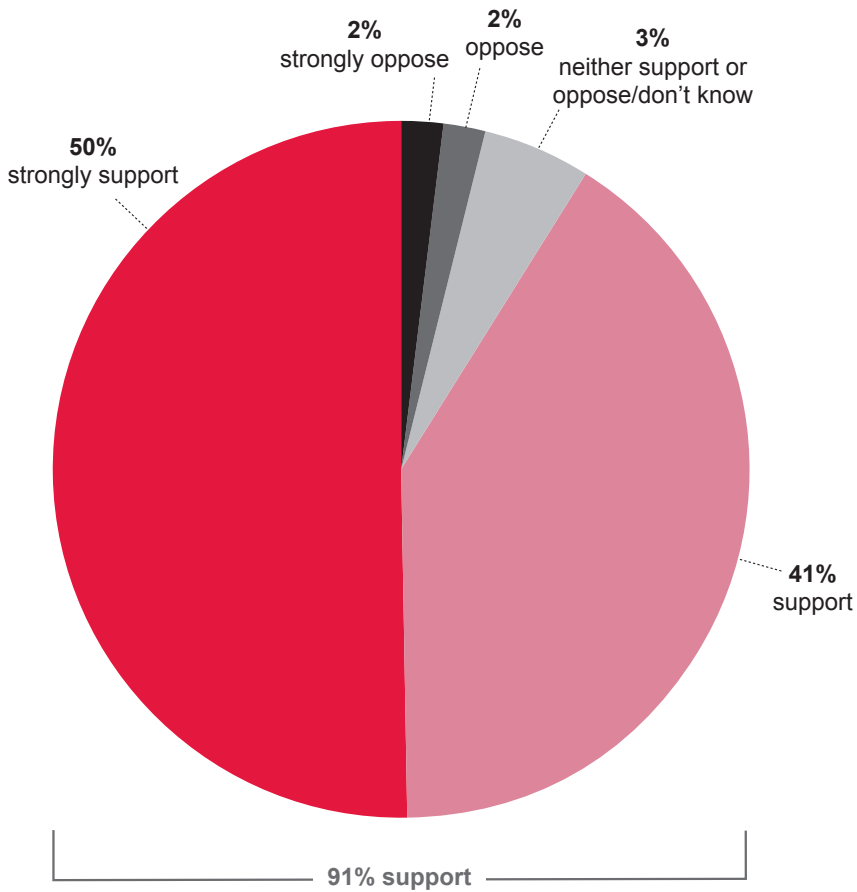


Figure 3.32: Greater Sydney Region – support for using renewable energy technologies to generate electricity in NSW.

Survey respondents were asked to what extent they supported or opposed renewable energy technologies for producing at least some of the electricity in NSW.

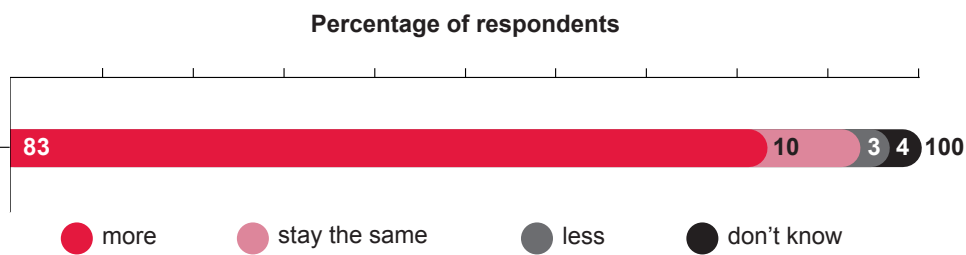


Figure 3.33: Greater Sydney Region – use of renewable energy technologies to produce electricity in NSW over the next 5 years.

Survey respondents were asked whether, over the next five years, they thought NSW should try to produce more of its electricity from renewable energy, less, or it should stay the same as now.

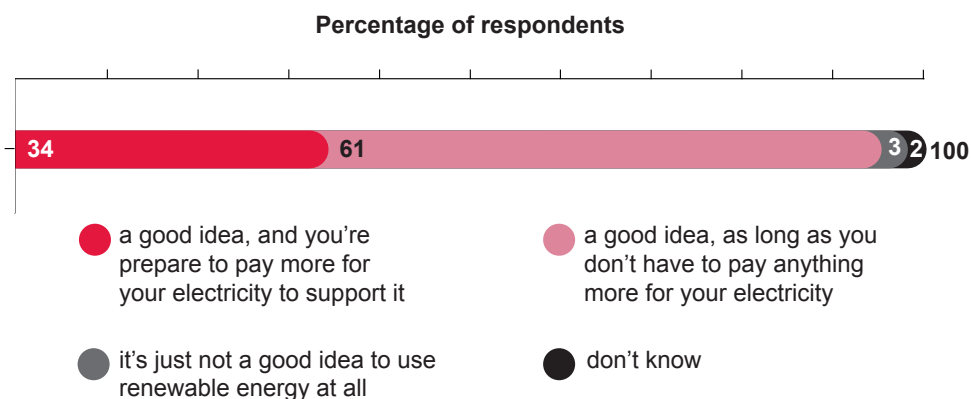


Figure 3.34: Greater Sydney Region – overall views about using renewable energy to produce electricity in NSW and its cost.

Table 3.27: Greater Sydney Region – perceived advantages and disadvantages of using renewable energy technologies (unprompted).

| | Advantage | Disadvantage |
|---|-----------|--------------|
| Number of respondents | 500 | 500 |
| Numbers below are shown as percentages. | | |
| Environment | 80 | 6 |
| Cost | 35 | 43 |
| Efficiency/reliability | 0 | 19 |
| Employment | 7 | 4 |
| Health | 4 | 3 |
| Build energy sector/skills | 6 | 0 |
| Noise | 0 | 5 |
| Visual impact | 0 | 2 |
| Takes a lot of space | 0 | 3 |
| Lack existing infrastructure | 0 | 3 |
| Other | 8 | 8 |
| None/don't know | 12 | 35 |

Community attitudes to wind and solar farms

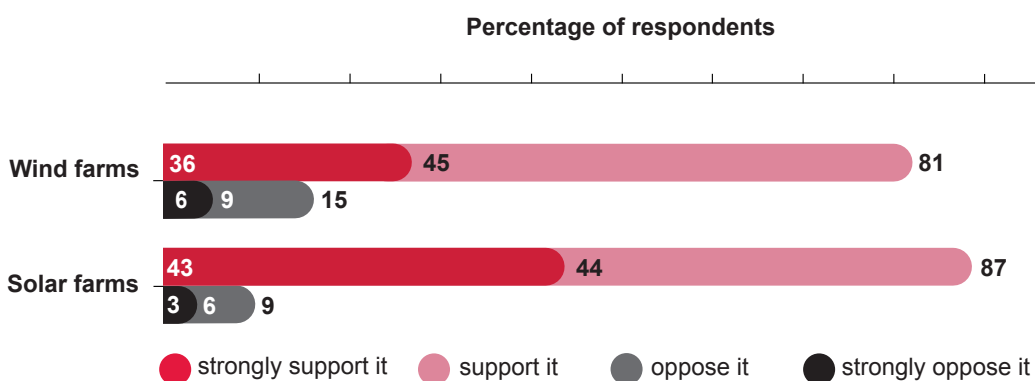


Figure 3.35: Greater Sydney Region – support for and opposition to building wind or solar farms in NSW.

