

Auspoll Pty Ltd
ABN: 86 085 341 304
ACN: 085 341 304

Level 2, 6 Bond Street
South Yarra 3141
Ph: +61 3 9856 2988
Fax: +61 3 9826 0290

Level 2, Pier 8/9
23 Hicksons Road
Millers Point
Sydney 2000
Ph: +61 2 9258 4466
Fax: +61 2 9258 4455



REPORT PREPARED BY:

Alex Frankel

General Manager - Victoria
Auspoll Campaign Intelligently
a.frankel@auspoll.com.au
T/ 03 9856 2991
M/ 0435 197 976

Nick Gardener

Research Officer
Auspoll. Campaign Intelligently
n.gardener@auspoll.com.au
T/ 03 9856 2957

Transfield Services. Collector Wind farm - Community Engagement Research

REPORT PREPARED FOR:

Nick Valentine
Project Manager
Major Projects and Engineering
02 9963 9924



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Background

The context of the project



Background

Transfield Services

- ▶ Transfield Services Limited is an Australian-based company that provides a wide range of world class services to a diverse range of clients globally.
- ▶ Transfield Services is listed on the Australian Stock Exchange (ASX) and is a top 100 Australian company. Transfield Services has a turnover of \$2.4 billion and has 28,000 employees across Australia, New Zealand, the United States, the United Arab Emirates, Qatar, South East Asia, India, Canada and South America.

Power generation

- ▶ Transfield Services use best practice systems and processes, backed by technically-skilled people to deliver power services.
- ▶ Transfield Services provides asset management, operations and maintenance services to Townsville and Collinsville Power Stations in Queensland and Kemerton Power station in Western Australia.
- ▶ Transfield services also contract manages the operators wind farms located at Windy Hill in Queensland; Toora in Victoria; and Starfish Hill and Mt Millar, both in South Australia.
- ▶ Transfield Services is in an ideal position to make a major contribution to the Australian Governments renewable energy targets for 2020.

Current Wind farm Projects

- ▶ Transfield Services acquired a portfolio of wind farm development in 2007.
- ▶ This portfolio included wind farm projects at various stages of development in various locations including: Collector (NSW), Baynton (Vic) and Ben More (Vic).

Research Purpose and Objectives

The goals of this research

Research Purpose and Objectives

Research Purpose

- ▶ The purpose of the research is to understand and measure community attitudes to wind farm projects and particularly the proposed Collector farm project.

Research Objectives

The specific objectives of this research are to understand:

- ▶ Awareness of the Collector farm projects;
- ▶ Attitudes to wind farms in general and to the local project;
- ▶ Benefits for the community;
- ▶ Costs for the community;
- ▶ Aspects of the local landscape residents most enjoyed;
- ▶ Perceived impacts of the wind farm on those landscape aspects;
- ▶ Awareness of cultural and historical land marks;
- ▶ Perceived impacts of the wind farm on those landscape aspects;
- ▶ Expectation regarding community engagement;
- ▶ Preferred information channels.



Methodology

The research process used in this project

Methodology

Survey method

- ▶ Computer Assisted Telephone Interviewing (CATI) surveys were conducted. Respondents were contacted by IQCA accredited telephone interviewers.
- ▶ CATI was the most efficient method for reaching the required the population.
- ▶ The survey was conducted from the 10th to the 14th November 2010.

Sample

- ▶ The sample consisted of n=400 residents drawn from around the Collector wind farm location.
- ▶ In order to achieve a statistically robust sample - the basic requirement of an independent and methodologically sound survey¹ - this research drew from a catchment area of 50km radius around the Collector wind farm location.
- ▶ The sample comprised the general population weighted by age, gender and location.
- ▶ Drawing a random sample in this way allowed the survey to be more representative of the population in the Collector wind farm's view shed.
- ▶ This method provides a more representative sample and greater external validity than a local census which focuses only on the population within a specific geographical area and may not capture the range of views and attitudes within the wider community.²

¹ [ESOMAR Market research handbook, 5th Edition. Edited by M. van Hamersveld and C. de Bont. 2007 John Wiley & Sons, Ltd.]

² [Bernard, H. Russell, Social Research methods: Qualitative and Quantitative approaches. 2000 Sage Publications Inc.]

Questionnaire

- ▶ Survey questions were developed in consultation with Transfield and its partners on this project. Survey questions were refined with Transfield and its partners prior to the survey going into field.

Survey accuracy

- ▶ With a sample size of $n=400$, the accuracy of the results overall (after weighting) is $\pm 5\%$ at the 95% confidence interval. This means, for example, that if the survey returns a result of 50%, there is 95% probability that the actual result will be between 45% and 55%.
- ▶ It is important to remember when considering the results, that the margin error for each of the sub-groups is much larger than for the overall results. For example when considering a sub-group size of $n=100$, the accuracy of results (after weighting) is $\pm 10\%$ at the 95% confidence interval. Hence, if the survey returns a result of 50% for a sub-group, there is 95% probability that the actual result will be between 40% and 60%.
- ▶ As a guide, the margin of error for various sub-group sizes within this study are listed below:

Sub-group size	Standard error
300	$\pm 5.8\%$
200	$\pm 7.1\%$
100	$\pm 10.0\%$
50	$\pm 14.1\%$
20	$\pm 22.4\%$

- ▶ Note: All percentage figures in this report are rounded. Accordingly, totals may not add up to 100%.

Key findings

Key findings

Overall, there was a high level of support for the Collector wind farm development.

- ▶ A majority of respondents (68%) said that, based on what they know about wind farms in general and the Collector wind farm specifically, they support the Collector wind farm development.
- ▶ Only 14% of respondents oppose the Collector wind farm development.

When prompted to select from a list of the important aspects of the Collector wind farm, people tended to see economic effects as the most important.

- ▶ *The creation of new jobs for the area (83% Important/ Very/ Extremely important); and*
- ▶ *Community investment program (77%).*

When asked about the main disadvantages of the wind farm (unprompted) people said lifestyle disruptions.

- ▶ *Turbines creating an eyesore (26%); and*
- ▶ *Operating noise (23%).*

When asked about the main benefits of the wind farm (unprompted) people tended to talk about the general benefits of wind farms such as clean energy.

- ▶ When providing an unprompted response about the advantages of the wind farm, people tended to talk about environmental benefits such as:
 - ▶ *Clean energy (44%); and*
 - ▶ *An alternative to fossil fuels (15%).*

Key findings (continued)

The aspects of the landscape people said they enjoyed most were the hills/ the mountain range and the bush.

- ▶ *The hills/ mountain range (34%);*
- ▶ *The bush/ trees and vegetation (25%); and*
- ▶ *The open landscape/ open space (18%).*
- ▶ People tended to prefer viewing these aspects of the landscape from:
 - ▶ *Their home/ backyard/ property (52%); or*
 - ▶ *While driving (into Collector, to/from Canberra or Goulburn)/ along the Federal Highway (37%).*

A small proportion of survey respondents said that the Collector wind farm would have a negative impact on the landscape aspects they enjoyed most.

- ▶ When asked what the impact of the Collector wind farm would be on the aspect of the landscape they most enjoyed, the majority of respondents (60%) said *no impact/minimal impact* while 13% said the wind farm would *Ruin landscape/ view/ create an eyesore*.

There was a low level of awareness of local historical or cultural landmarks.

- ▶ More than two thirds of respondents (67%) said they were unaware of historically or culturally significant local landmarks.
- ▶ The landmark of which respondents (9%) were most aware was the Bushranger Hotel/Memorial.

Key findings (continued)

Sizable minorities were concerned about different aspects of additional wind farms being built in the area in the future.

When presented with various scenarios involving additional wind farms in the area, a majority of respondents (57% - 65%) reported that they were Not very/ Not at all concerned. Sizable minorities (34% - 42%), however, were concerned/very concerned/extremely concerned about the *prospect* of additional wind farms in the area.

Respondents tended to say they had a little information about the Collector wind farm but fewer than half the respondents wanted more information.

- ▶ A majority (58%) of respondents indicated that they had heard little about the Collector wind farm project.
 - ▶ One third of respondents (33%) felt they had heard nothing;
 - ▶ 42% did not want any more information about the proposed Collector wind farm;
 - ▶ Of those who wanted more information (n=175), a majority (59%) said the best way to keep them informed about the progress of the Collector wind farm would be via ads in the local newspaper.

Respondents tended to rate alternative energy sources as highly important.

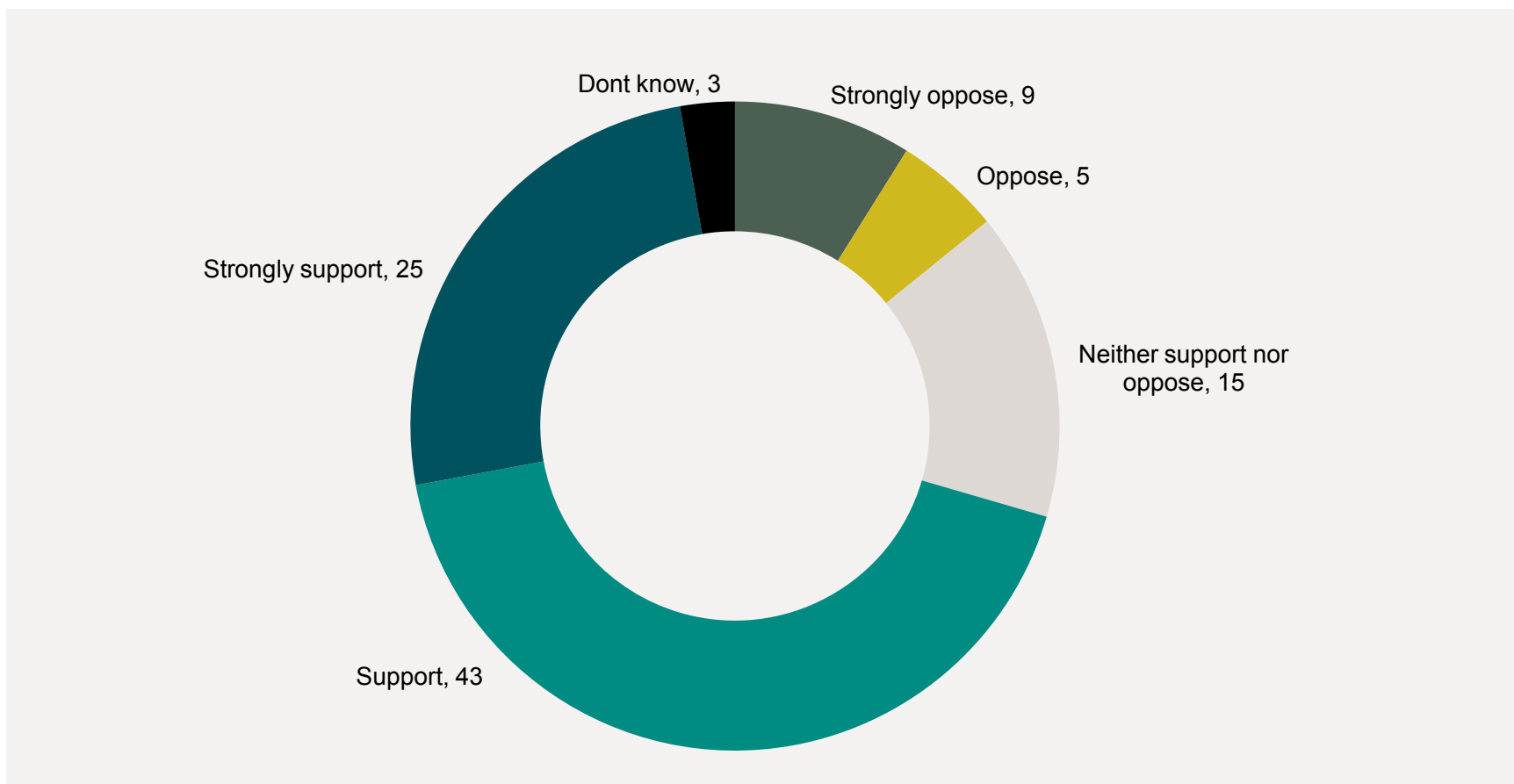
- ▶ A large majority of respondents (79%) rated it as Very / Extremely important that Australia develops alternative energy sources such as wind, solar, tidal and hydro-electric power.

Detailed findings

Overall support for the Collector wind farm

Overall support for the Collector wind farm was a high.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



A majority of respondents (68%) said they Support/ Strongly support the collector wind farm development. Only a small proportion of respondents (14%) said they Oppose/ Strongly oppose the wind farm.

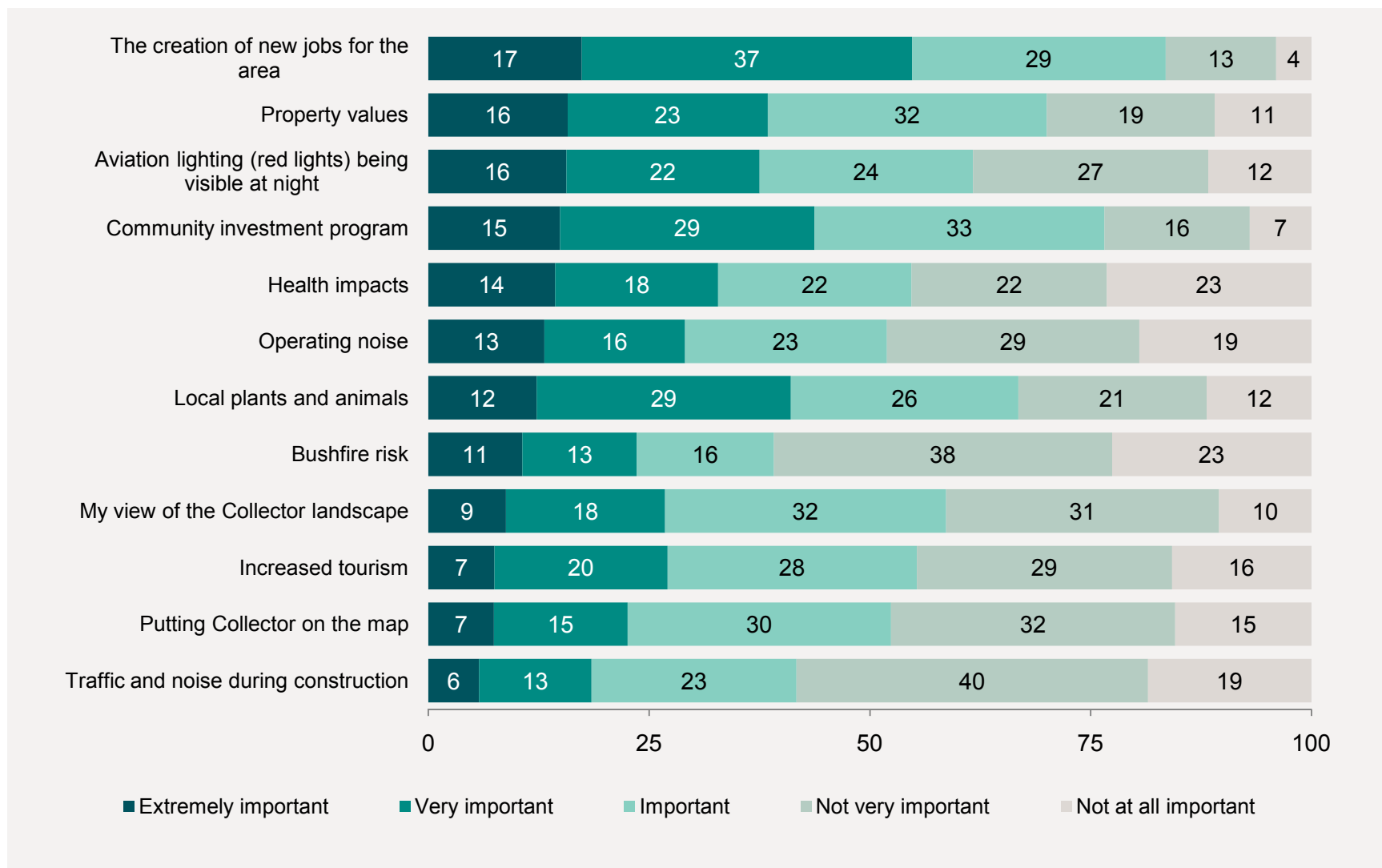
Differences in ratings between demographic sub-groups were within the margin of error.

Key issues associated with the Collector wind farm



Respondents tended to rate economic impacts of the Collector wind farm e.g. new jobs & property values as most important.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.





Respondents tended to rate economic impacts of the Collector wind farm e.g. new jobs & property values as most important.

- ▶ This question measured what was most important to people when thinking about the Collector wind farm.
- ▶ Respondents were prompted with 12 matters the Collector wind farm might effect and were asked to rate the importance of each of these using a scale of Extremely important, Very important, Important, Not very important and Not at all important.
- ▶ Four areas related to the potential economic effects of the wind farm on the local area: *The creation of new jobs, property values, community investment program and increased tourism.*
- ▶ Four areas related to the potential effects of the wind farm on respondents lifestyle: *My view of the Collector landscape, Traffic and noise during construction, Operating noise and Aviation lighting (red lights) being visible at night.*
- ▶ Two areas related to the potential effects of the wind farm on the environment: *Local plants and animals and Bushfire risk.*
- ▶ Other areas were *Health impacts and Putting Collector on the map.*

Importance of the Collector wind farm's potential economic effects

- ▶ Respondents rated *The creation of new jobs for the area* as the most important effect the wind farm might have (83% Important/ Very/ Extremely important).
- ▶ A large proportion of respondents also rated the *Community investment program* (77%) and *Property values* (71%) as Important/ Very/ Extremely important.
- ▶ Respondents were less inclined, however, to rate *Increased Tourism* (55%) as Important/ Very/ Extremely important.



Lifestyle and environmental matters associated with the Collector wind farm tended to have a lower importance than economic matters.

Importance of the Collector wind farm's potential disruption to lifestyle

- ▶ *Aviation lighting* was rated as having the highest level of importance of any potential lifestyle disruption with a majority of respondents (62%) rating it as Important/ Very/ Extremely important including 16% rating it as extremely important.
- ▶ A smaller proportion (52%) of respondents rated *Operating noise* and *My view of the collector landscape* (59%) as Important/ Very/ Extremely important.
- ▶ *Traffic and noise during construction* received the lowest importance rating overall with 42% respondents rating it as Important/ Very/ Extremely important and more than half the respondents (59%) rating it as Not very/ not at all important.

Importance of the Collector wind farm's potential environmental impacts

- ▶ A majority of respondents (67%) rated *Local plants and animals* as Important/ Very/ Extremely important placing it approximately in the middle of all the issues in terms of importance.
- ▶ *Bushfire risk*, however, received the lowest importance rating of all the issues tested with 40% of respondents saying it was Important/ Very/ Extremely important and a majority 61% saying it was Not very/ not at all important.

Advantages and disadvantages of the Collector wind farm



People tend to think the main disadvantages of the wind farm will be lifestyle disruptions e.g. Turbines an “eyesore” and operating noise

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

Perceived problems and disadvantages of the Collector wind farm (unprompted)	%	n=
Turbines (inc lights) are ugly/eyesore	26	103
Operating noise	23	92
It is a problem if too close to housing	10	40
Causes community Division/Issues	9	35
Danger to wildlife	8	33
Positive Benefit mentioned	6	23
Decreasing Property Values	5	18
Inefficient/Unreliable power source	5	18
Costly to build and maintain	4	16
Financial Benefits not immediate	4	14
Traffic problems/Increase in congestion	2	8
Health Problems	2	6
Nothing/ none	21	84
Other	8	33
Don't know/ can't say	6	24

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.



This question measured people’s unprompted perceptions of the potential disadvantages and problems of the Collector wind farm. Responses were spread across a range of issues although the main problems people perceived were Turbines (this also included lights) being ugly and an eyesore (26%) and Operating noise (23%). Only a small proportion of respondents were concerned about negative economic effects with 5% suggesting the wind farm might decrease property values and 4% saying they would be costly to maintain.

People talked about the general advantages of the wind farm, citing the production of clean energy.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

Perceived benefits or advantages of the Collector wind farm (unprompted)	%	n=
Natural energy source/ clean energy/ sustainable renewable power/ enviro friendly	44	176
Alternative/ additional energy source - general	21	82
Alternative to coal/ fossil fuels	15	60
Reduce consumer costs of energy	9	34
Positive impact/ benefits for the community (NFI)	4	17
Creating jobs	4	17
Financial benefits for the community/ farmers	4	16
Negative comments	3	11
It's a good location for a wind farm/ windy area	2	8
There are benefits & advantages - NFI	1	2
Nothing/ none	7	26
Other	3	13
Don't know/ can't say	5	20

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.



This question measured people's unprompted perceptions of the potential advantages and benefits of the Collector wind farm. Respondents tended to describe general benefits of wind farms such as: a natural/ clean energy source (44%), an alternative or additional energy source (21%) and an alternative to coal and fossil fuels (15%).

Landscape values – Aspects of the landscape people most enjoyed



People most enjoyed viewing the hills, mountains, bushland and trees in the landscape around Collector.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location

Aspects of the local landscape most enjoyed	%	n=
Hills/ mountain range	34	137
Bush/ trees/ vegetation	25	101
Rural aspect/ farmland	19	72
Open landscape/ open space	18	71
Lake George/ lakes	10	37
Scenery/ views - general	9	35
Wild life/ birds	8	35
Peaceful and quiet	5	21
Natural beauty	4	16
Nothing/ none	1	2
Other	8	33
Don't know/ can't say	1	5

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.



Respondents enjoyed a variety of aspects of the local landscape but they tended to say they most enjoyed the Hills and mountain range (34%) as well as the Bush, trees and vegetation (25%).

People tended to prefer viewing these aspects of the landscape from their property

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location

Location from which they viewed the aspects of the local landscape they most enjoyed	%	n=
From home/ backyard/ property	52	212
While driving (into Collector, to/from Canberra or Goulburn)/ along the Federal Highway	37	142
Anywhere/ everywhere	7	26
From the town of Collector	3	8
Nothing/ none	1	3
Other	11	42
Don't know/ can't say	<1%	2

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.



The majority of respondents (52%) said they preferred viewing the aspect of the landscape they enjoyed most from their home/ backyard/ property.

People tend to prefer viewing each aspect of the landscape from their property

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

Aspects of the landscape most enjoyed	Location from which they most like to view the aspect of the landscape they enjoy most				
	From home/ backyard/ property	While driving (into Collector, to/from Canberra or Goulburn)/ along the Federal Highway	From the town of Collector	Anywhere/ everywhere	Other
Hills/ mountain range (n=137)	60%	36%	3%	1%	8%
Bush/ trees/ vegetation (n=101)	68%	28%	2%	3%	10%
Rural aspect/ farmland (n=72)	50%	31%	3%	15%	10%
Open landscape/ open space (n=71)	58%	31%	1%	15%	6%
Lake George/ lakes (n=37)	30%	70%	5%	3%	11%
Scenery/ views – general (n=35)	54%	34%	0%	3%	20%

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.

Also, is important to note that when analysing the data at the level of landscape feature most enjoyed and preferred viewing location, sample sizes become quite small thereby increasing the margin of error; consequently results therefore should be treated with caution.



Please note: the data shown in this table in red contains relatively small samples. It is indicative but is not statically significant and therefore should not be reported in a public context.



A majority of people felt that the Collector wind farm would have no impact on the landscape aspect they enjoyed most.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

Impact of the Collector wind farm on the aspect of the local landscape most enjoyed	%	n=
No impact/ minimal impact	60	244
Ruin landscape/ view/ create an eyesore	13	49
Cant say because don't know where they're going/ lack of info	8	29
Will have an impact/ major impact - NFI	6	25
Enhance landscape/ view	6	24
Positive impact on the environment	4	16
Negative impact - NFI	3	12
Good for town/ tourism/ business	2	7
Other	5	20
Don't know/ can't say	2	8

Please note: Respondents were able to give multiple answers hence percentages do not add to 100%.



The majority of respondents (60%) said the Collector wind farm would have no impact/ minimal impact on the aspect of the landscape they most enjoyed. A relatively small proportion of respondents (13%) felt that Collector wind farm would create an eyesore on the landscape. A small proportion of respondents thought the wind farm would have a positive impact on the environment (4%) while 2% thought the wind farm would be good for tourism and business.

Landscape values – Culturally and historically significant local landmarks

A majority of respondents were unaware of historically or culturally significant local landmarks

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



More than two thirds of respondents (67%) said they were unaware of historically or culturally significant local landmarks.

Local landmarks historical or culturally significant

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

Historical or culturally significant local landmarks	%	n=
Bushranger Hotel/Bushrangers memorial	9	38
Township/old stores and churches	6	27
Lake George	5	20
Aboriginal sites/areas	2	10
Bywong, gold mines	2	9
Rocky Hill War Memorial	2	8
Goulburn	2	7
Village of Gundaroo	1	4
Nothing/ none	67	262
Other	8	35

Please note: Although this question was answered only by those who said they were aware of historically or culturally significant local landmarks at Q8 (n=138), those unaware of any cultural or historical landmarks have been included in the above table, under Nothing/ none. This allows percentages to more accurately reflect the level of awareness of these landmarks within the overall sample. Also, respondents were able to give multiple answers hence percentages do not add to 100%.



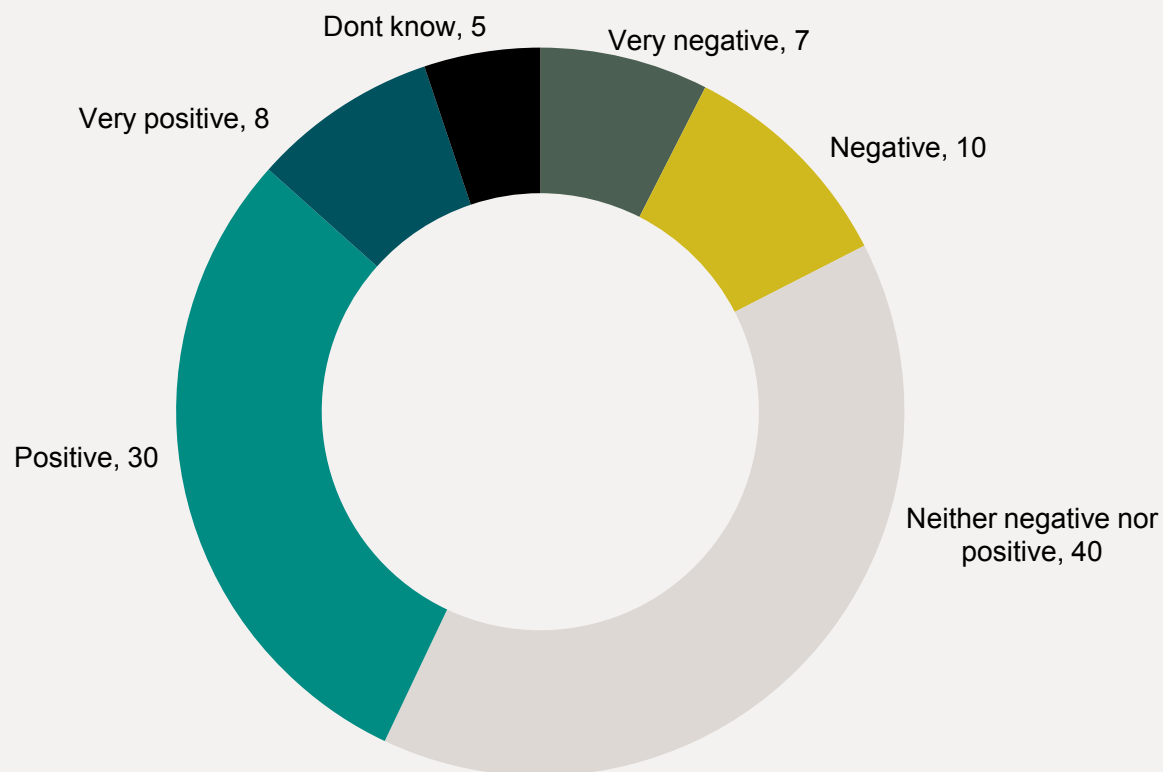
Within the sample overall, only a small percentage of respondents were aware of each landmark. The landmark of which people were most aware was the Bushrangers Hotel/ Bushrangers memorial (9%).

Please note: for most of the categories the sample sizes are small and therefore not statistically significant and caution should be exercised when reporting on these.



Overall, respondents were most likely to rate the impact of the wind farm on cultural and historical landmarks as neither positive nor negative.

Sample: n=138, weighted according to ABS 2006 census data by Age, Gender and location.

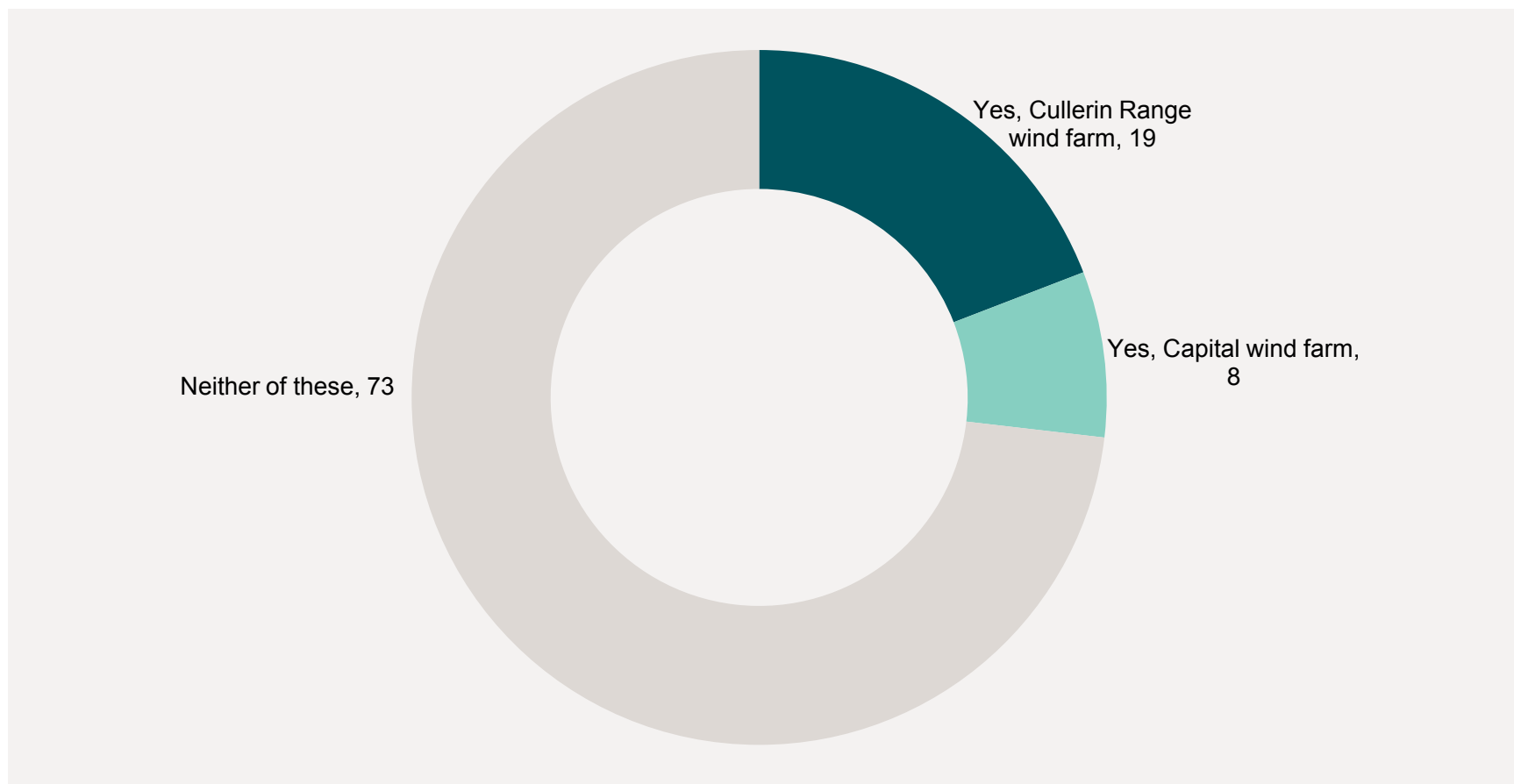


▶ This question was answered by those who said they were aware of historically or culturally significant local landmarks (n=138). It should be noted that a large proportion of respondents (40%) said the impact would be Neither positive nor negative. This neutral group may simply be undecided about the impact of the wind farm and may still be open to compelling arguments about the wind farm's positive or negative impacts on local landmarks.

Perception of cumulative effects of wind farms in the area

Most respondents could see neither the Cullerin Range nor the Capital wind farm from their home.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

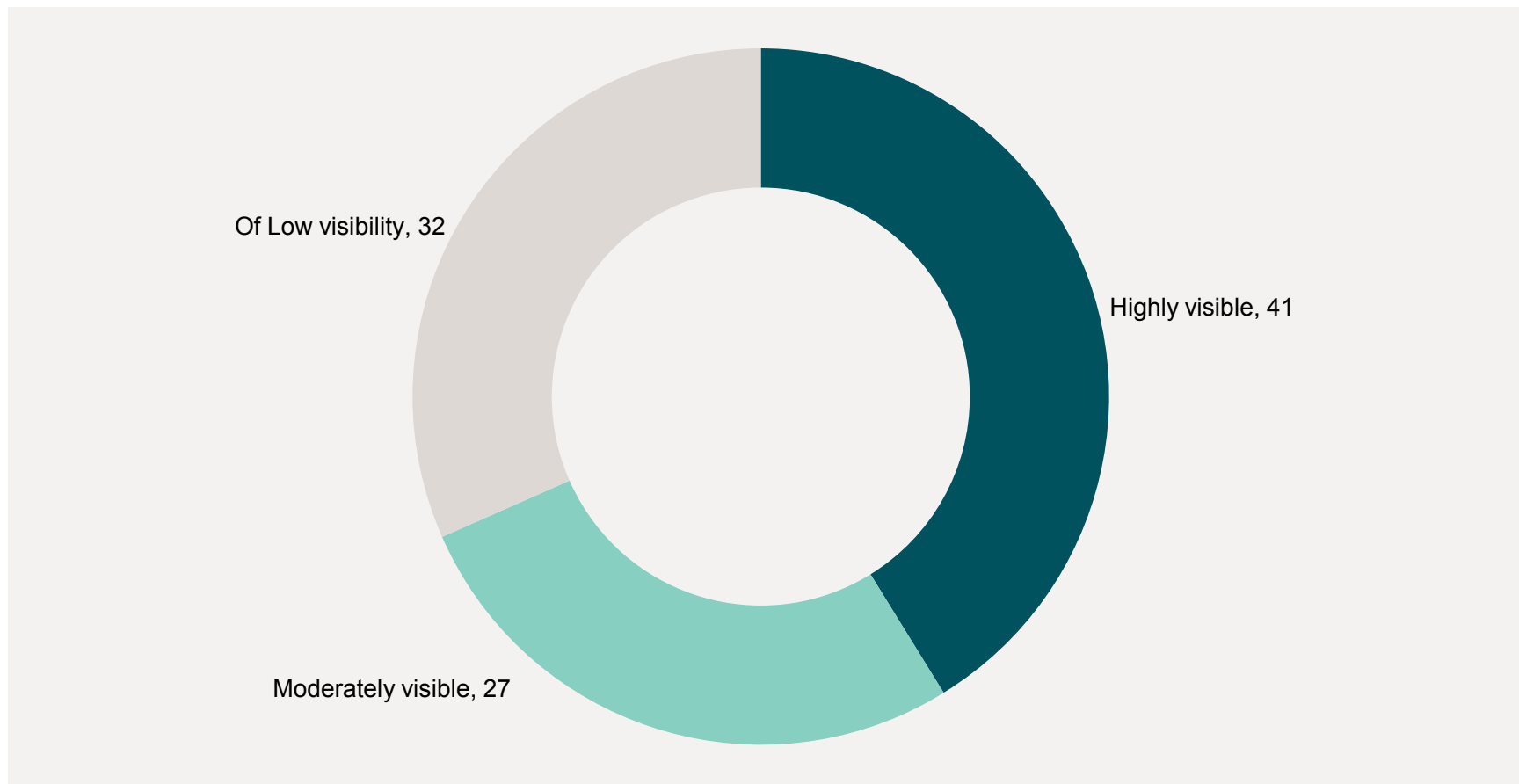


A large majority of respondents (73%) indicated that they could see neither the Cullerin Range wind farm nor the Capital wind farm from their home.



Those who could see the Cullerin Range and Capital wind farms (26% of total sample) tended to say that they were moderately or highly visible.

Sample: n=104, weighted according to ABS 2006 census data by Age, Gender and location.

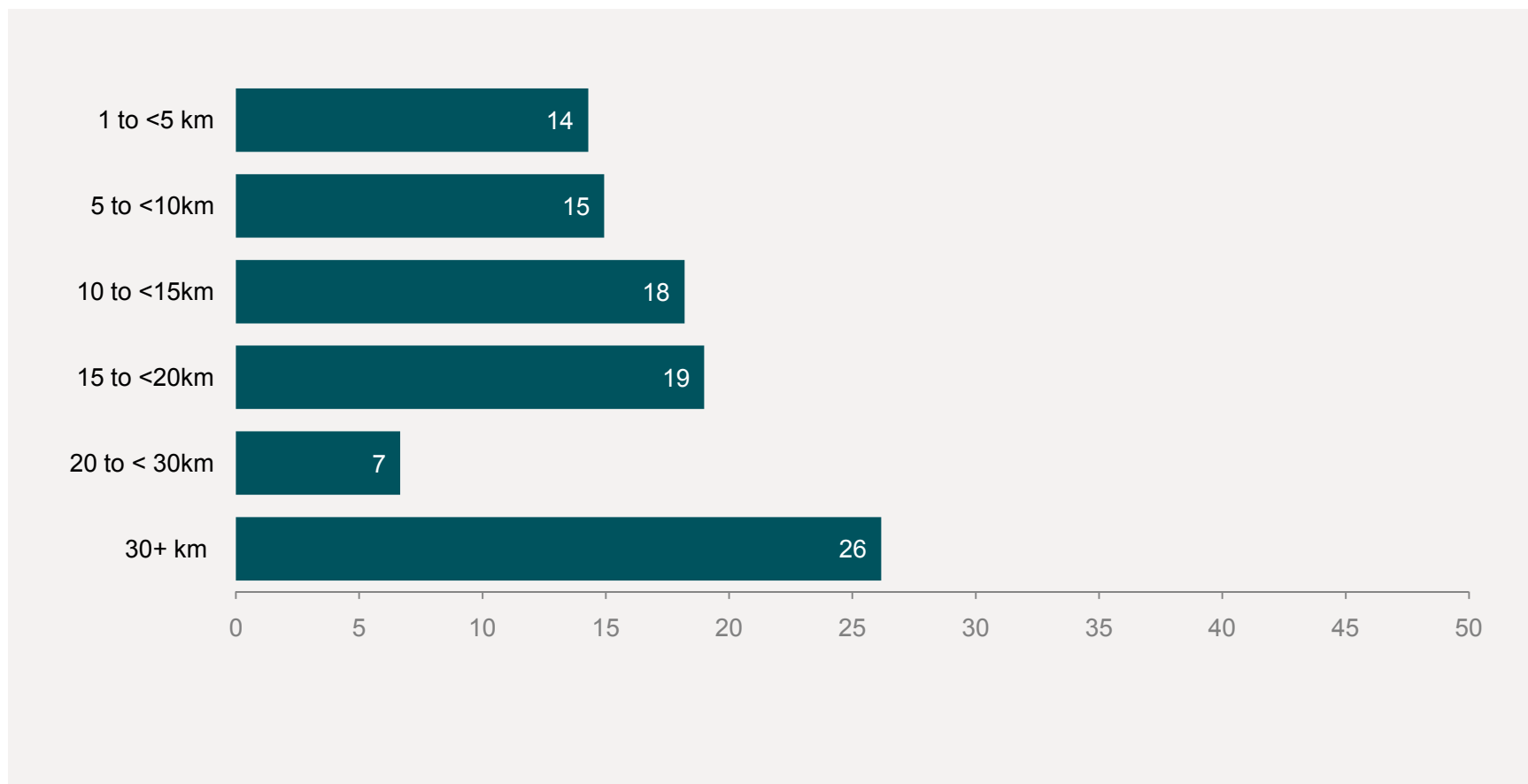


This question was answered only by those who had reported that either the Cullerin Range or the Capital wind farm was visible from their home (n=104). While responses were spread across the different levels of visibility a large minority (41%) said these wind farms were highly visible while 27% said they were moderately visible.



Estimated distance from Cullerin Range wind farm or Capital wind farm by those who could see them from their home.

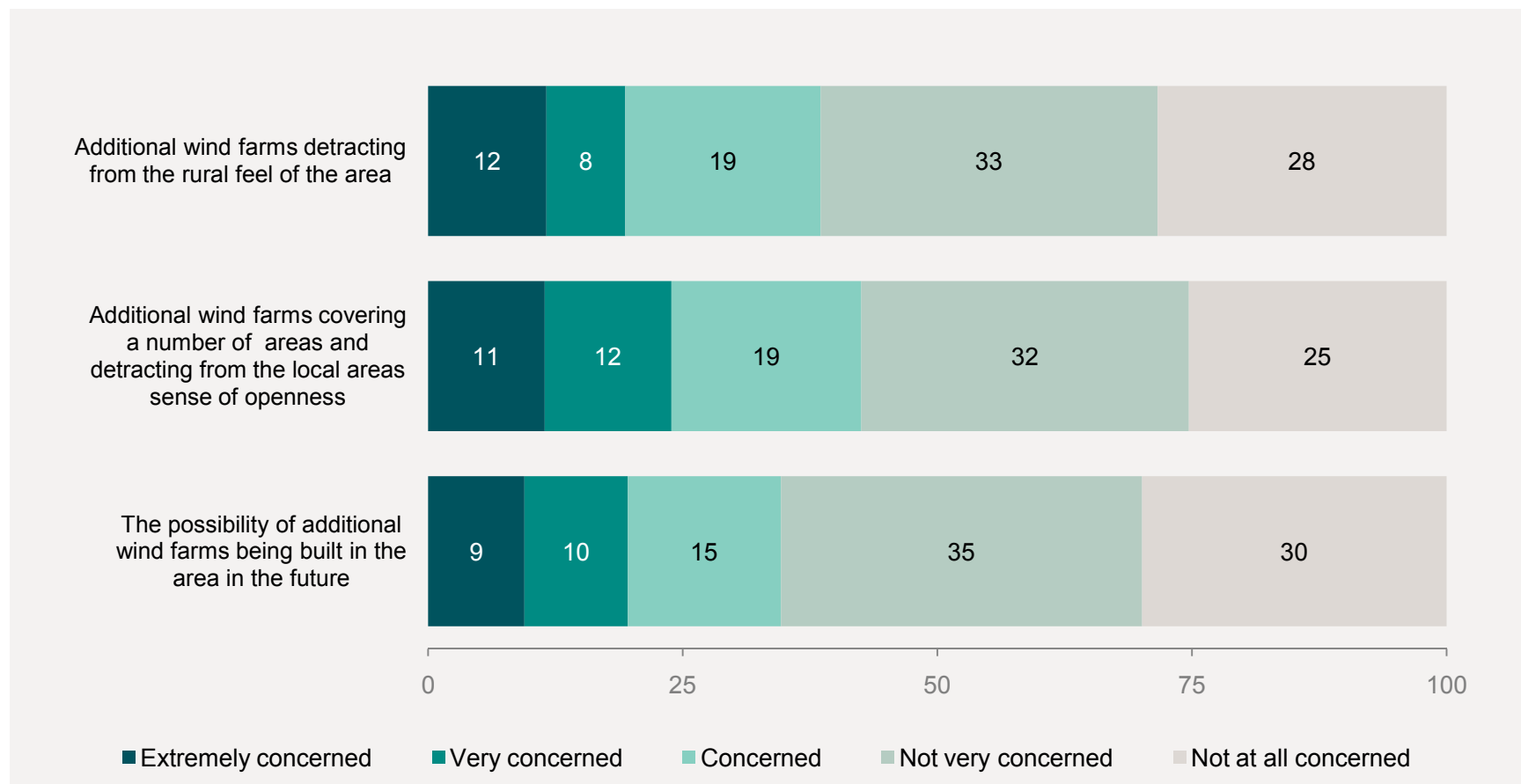
Sample: n=104, weighted according to ABS 2006 census data by Age, Gender and location.



This question was answered by those who said they could see either the Cullerin Range or Capital wind farm from their home (n=104). Hence, of our total sample (n=400) a small proportion (3%, n=13) estimate the distance between their home and the Cullerin and Capital wind farms is 1 - 5kms.

Sizable minorities were concerned about different aspects of additional wind farms being built in the area in the future.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



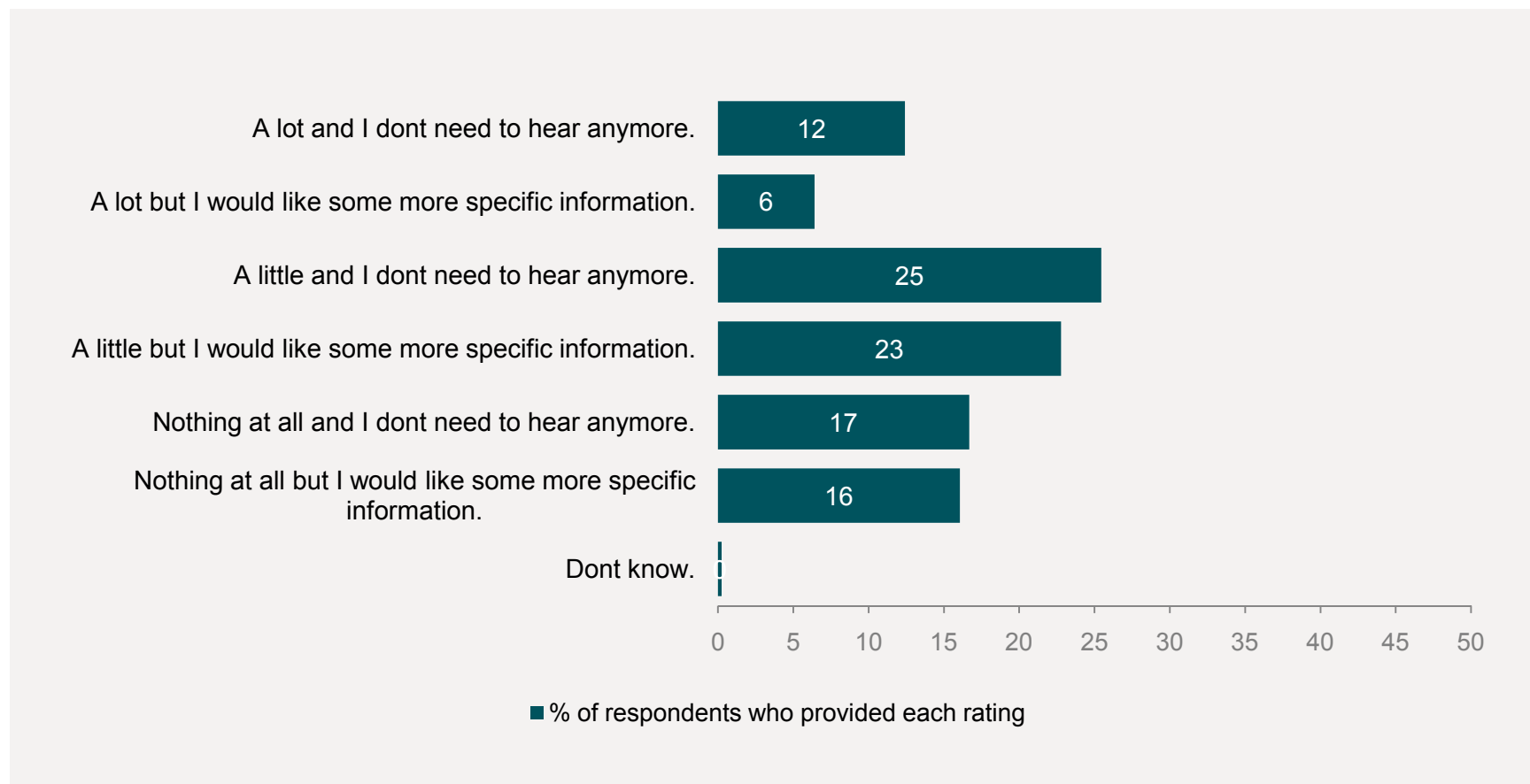
For each scenario involving additional wind farms in the area, a majority of respondents (57% - 65%) reported that they were Not very/ Not at all concerned. It is important to note, however, that approximately 40% of respondents were Extremely/ Very concerned/ Concerned about each scenario.

Information and communication about the Collector wind farm



Respondents tended to say they had a little information about the Collector wind farm but fewer than half wanted more information

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



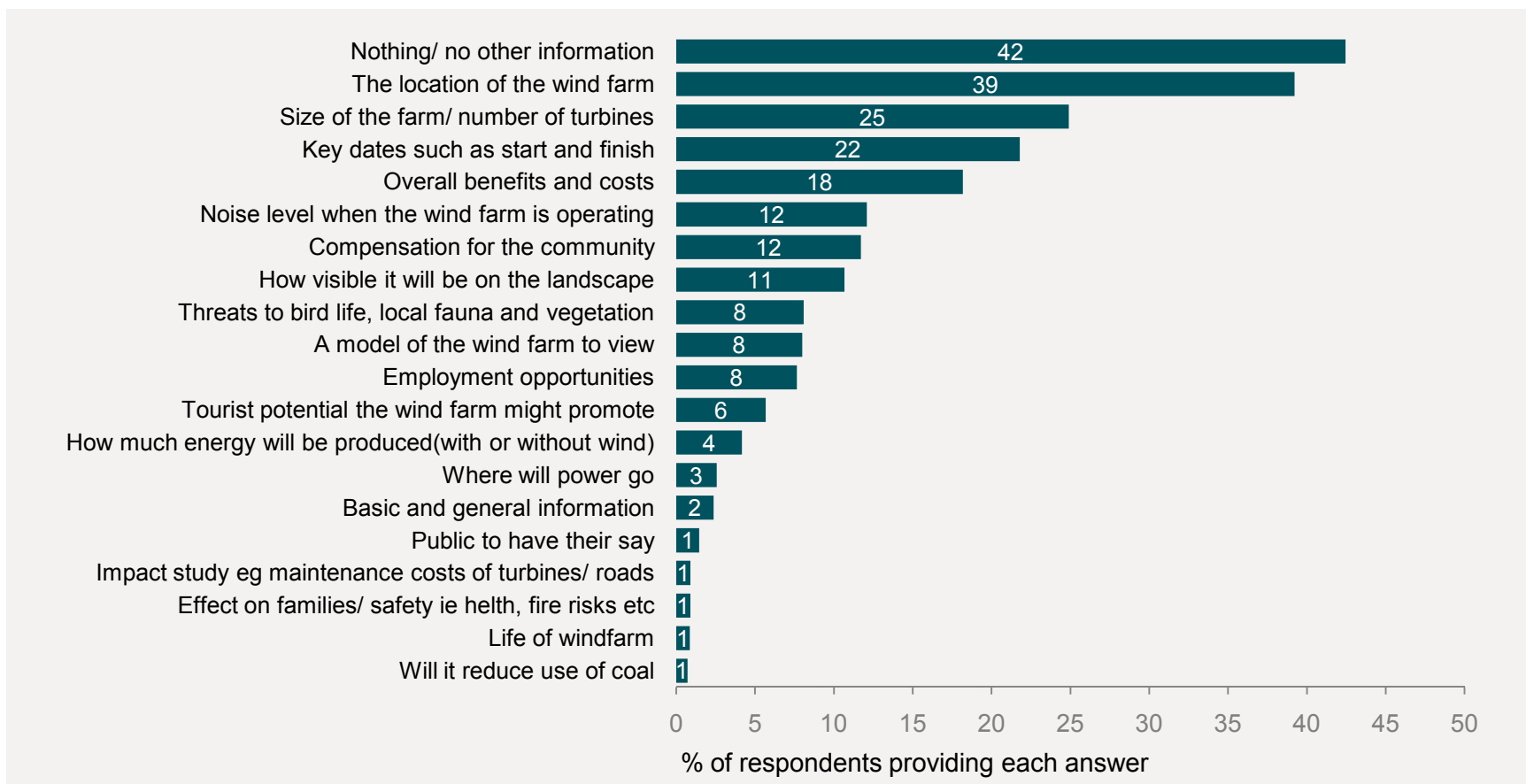
Nearly half (48%) the respondents indicated that they had heard little about the Collector wind farm project. Also, one third of respondents (33%) felt they had heard nothing.

Overall, fewer than half the respondents (45%) indicated that they wanted to hear more about the project.



People tended to want either no additional information or details of the wind farm's size and location.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

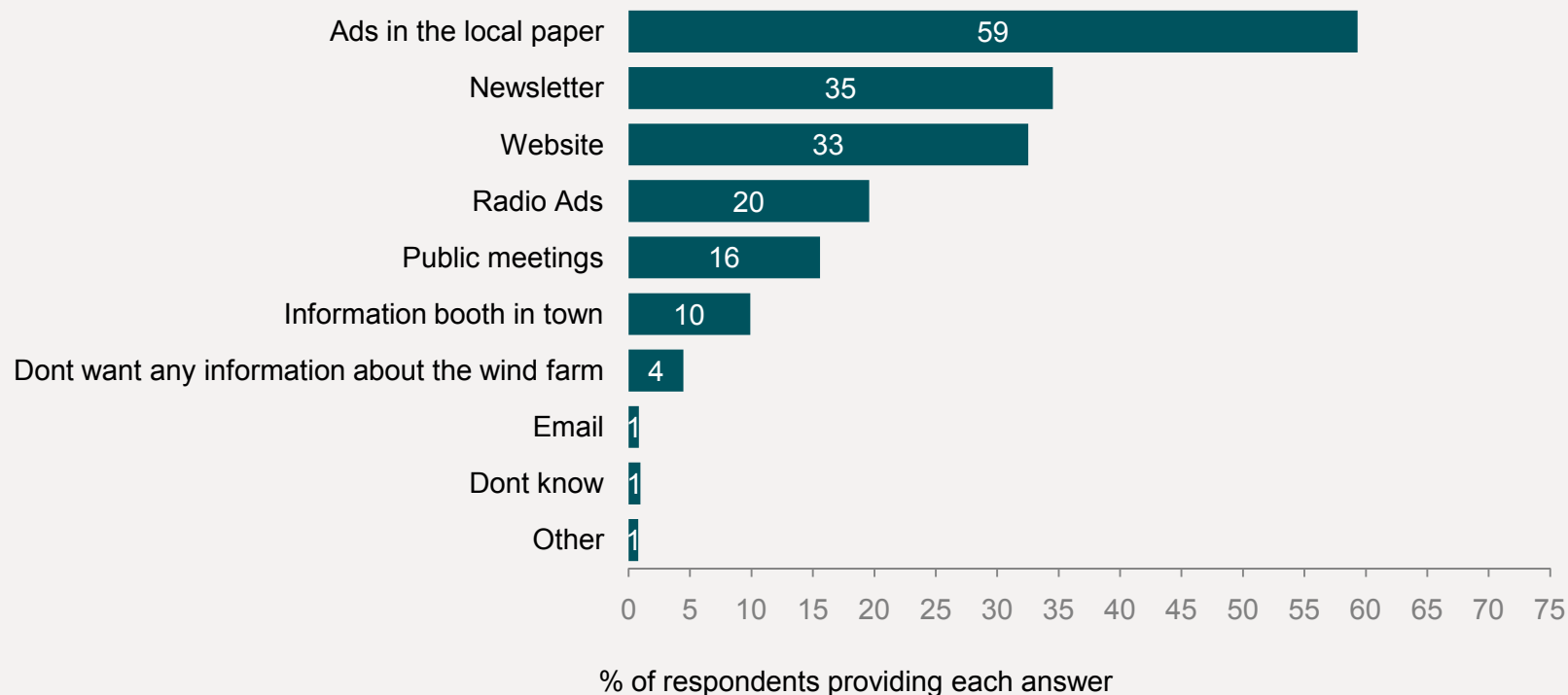


Respondents were able to provide multiple answers to this question hence percentages do not add to 100%. A large proportion of respondents (42%) did not want any more information about the proposed Collector wind farm. Of those who wanted to know more about the wind farm, the information they tended to want was *the location of the wind farm* (39%), *the size of the farm/ number of turbines* (25%) and *key dates such as start and finish* (22%).



People tend to want information about the wind farm from the local newspaper.

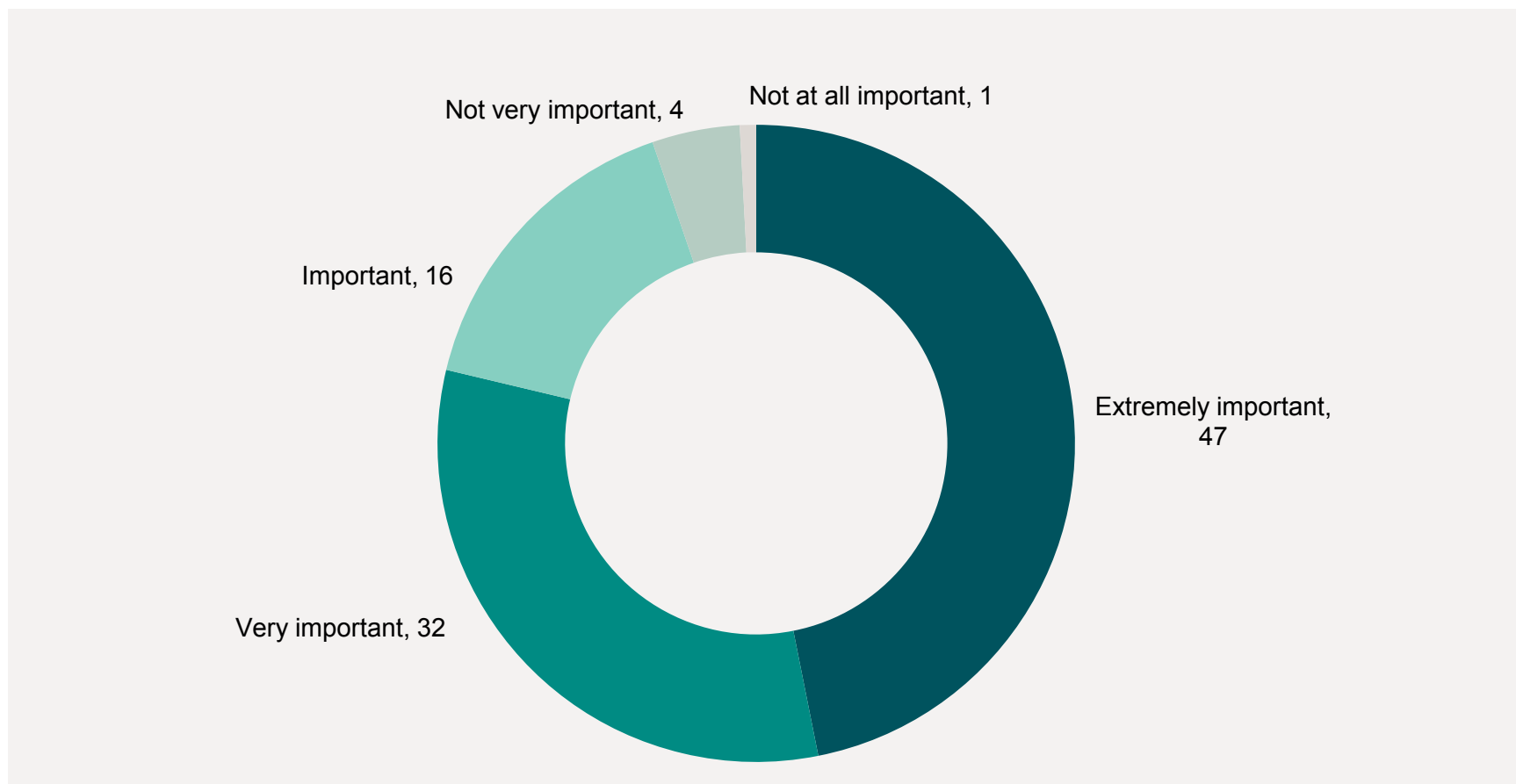
Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



Respondents were able to provide multiple answers to this question hence percentages do not add to 100%. A majority of respondents (59%) said the best way to keep them informed about the progress of the Collector wind farm would be via ads in the local newspaper. There was a moderate level of support for information via Newsletters (35%) and a website (33%).

Respondents tended to rate alternative energy sources as highly important.

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.

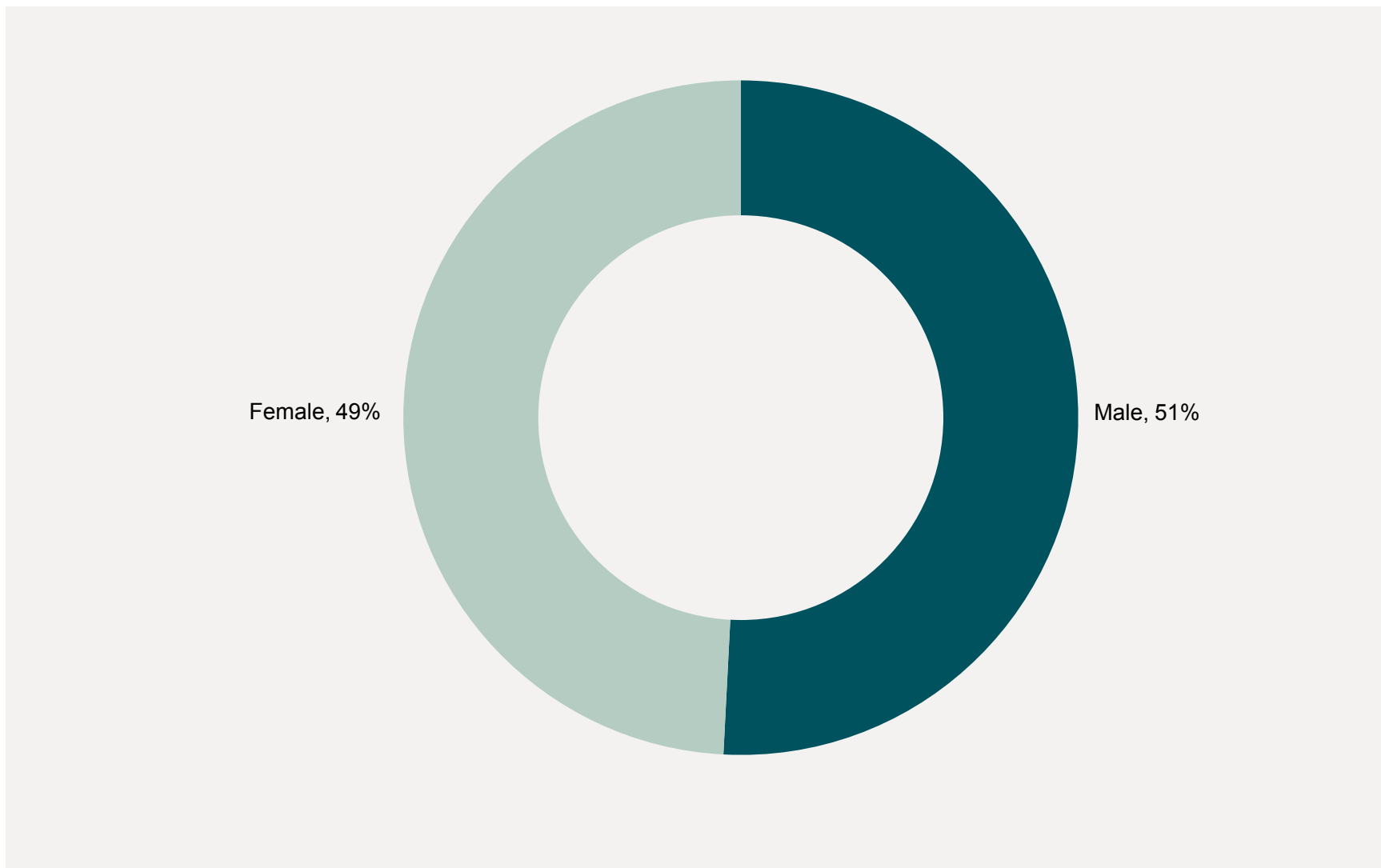


A large majority of respondents (79%) rated it as Very / Extremely important that Australia develops alternative energy sources such as wind, solar, tidal and hydro-electric power. Only 5% of respondents rated the development of alternative energy sources as Not very/ Not at all important.

Demographics

Gender

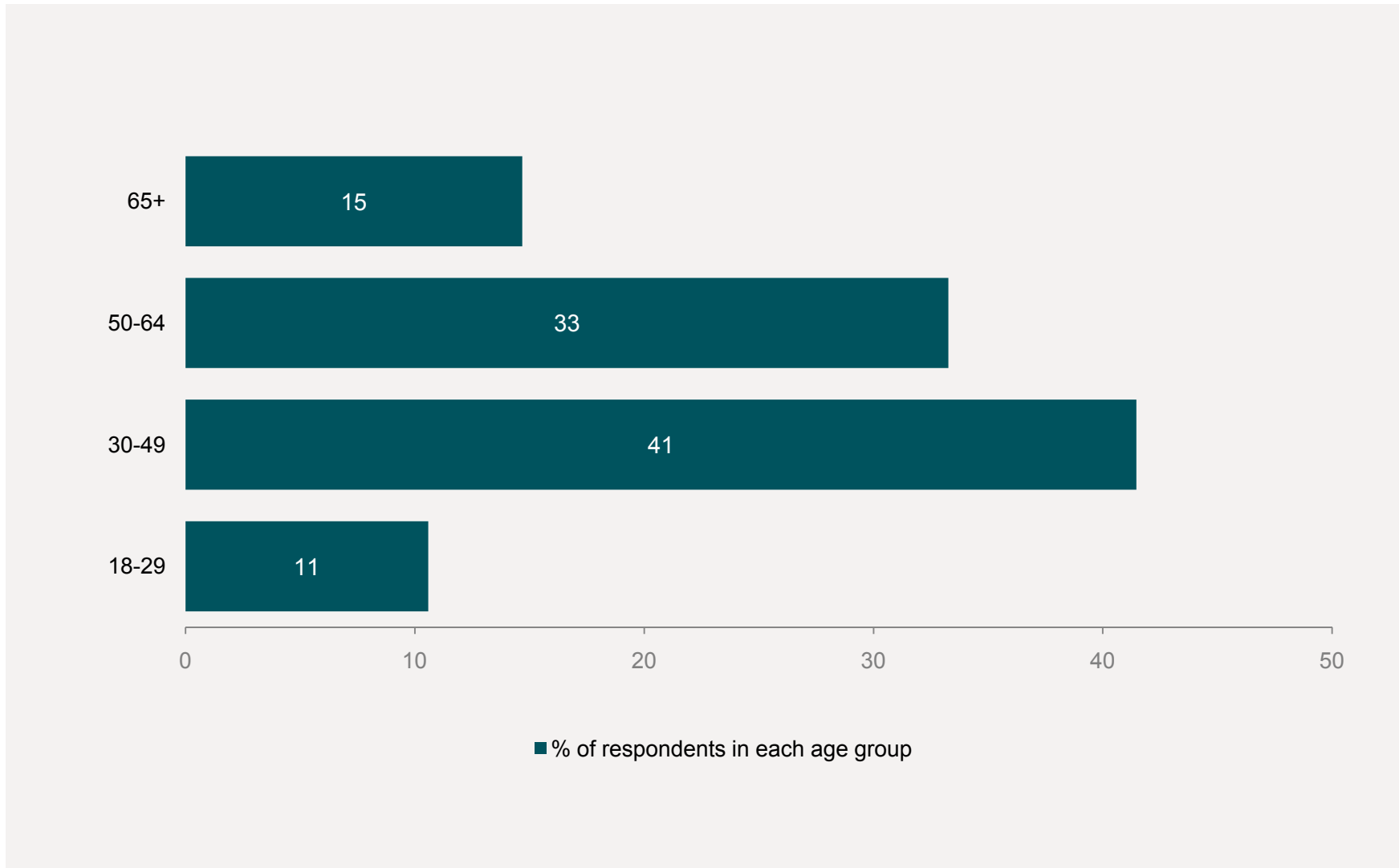
Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



Age

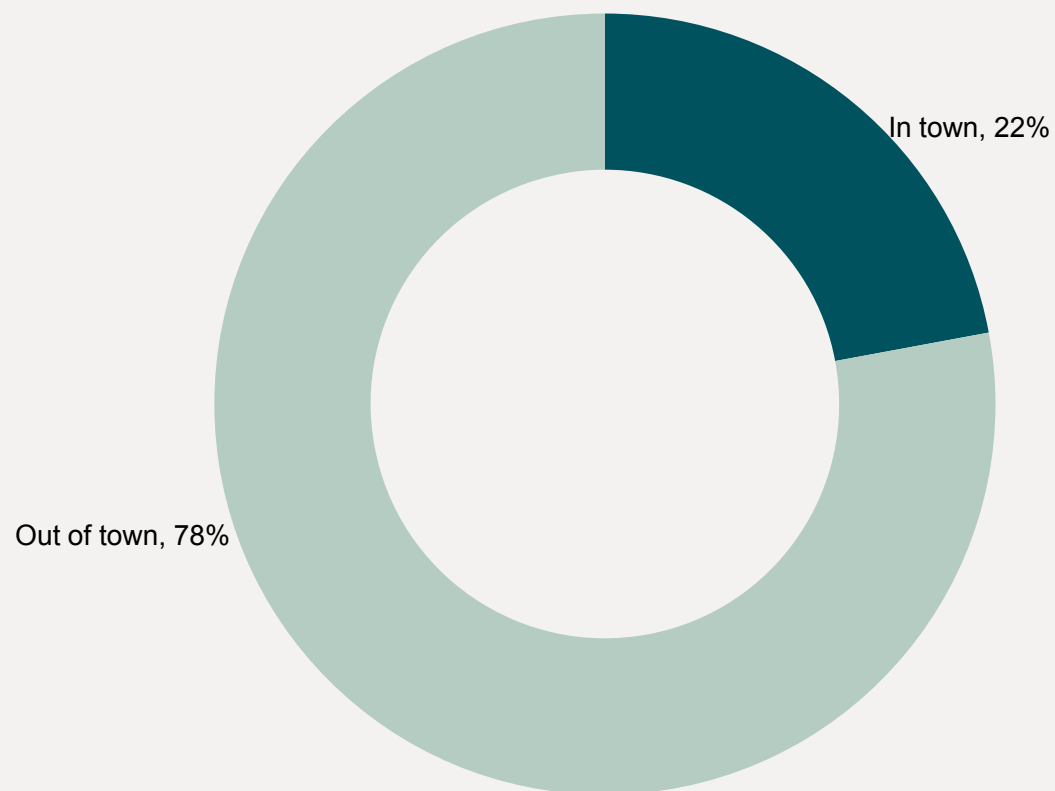


Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



Location: in town or out of town

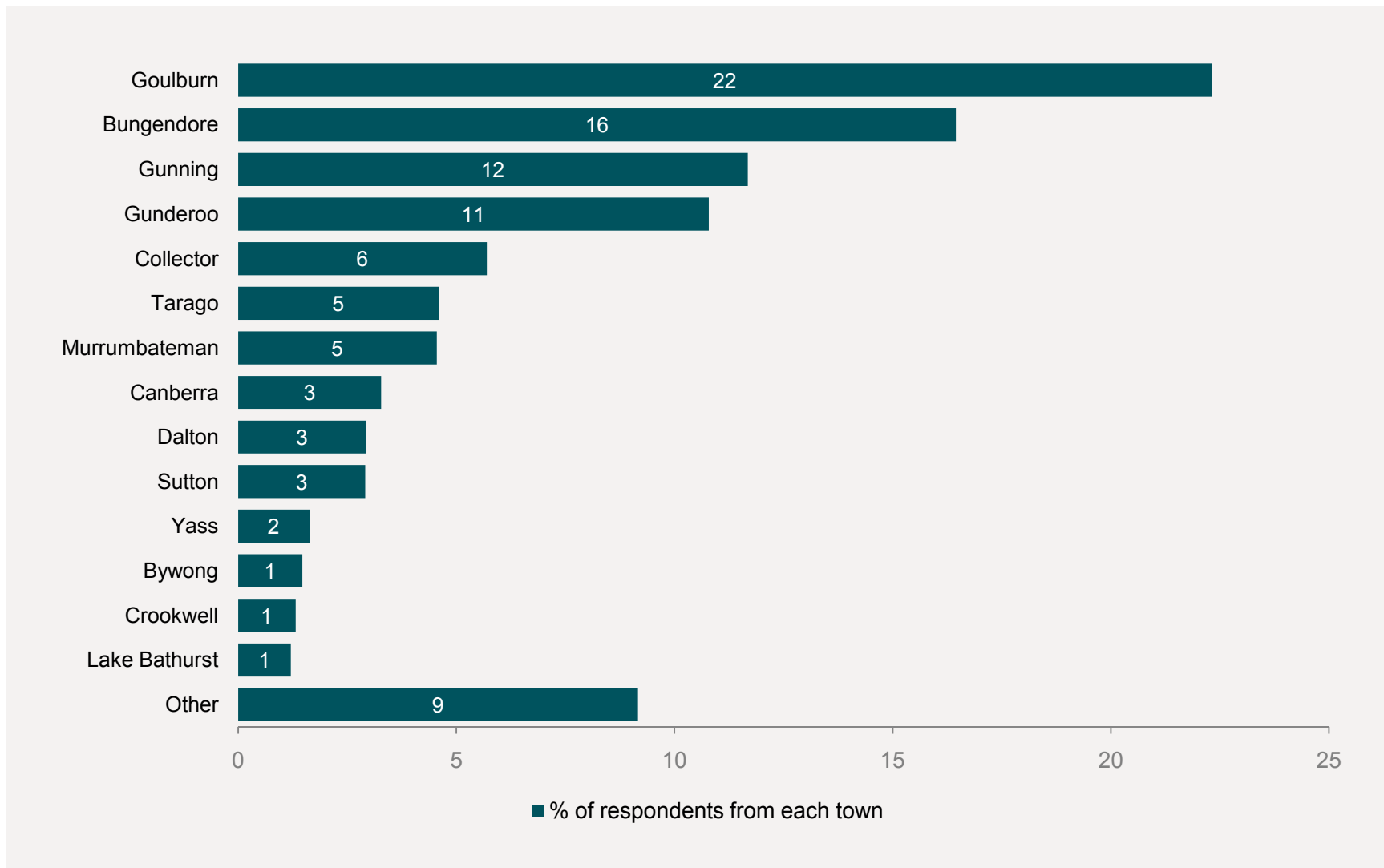
Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



The majority of respondents (78%) reported that they lived out of town.

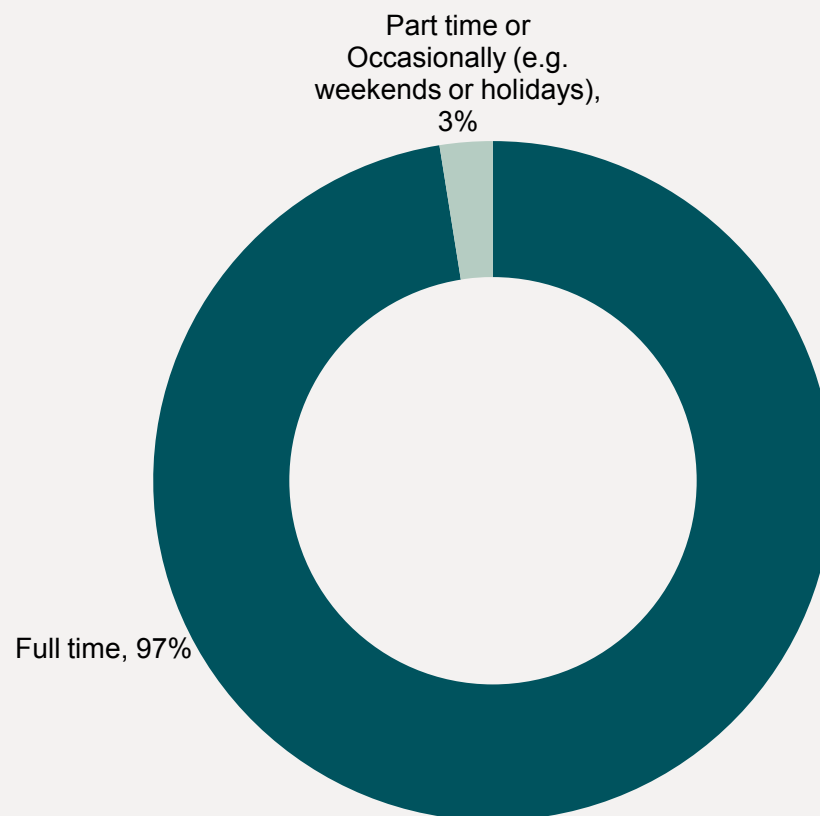
Town nearest to where they live

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



Live in the area full-time or part-time

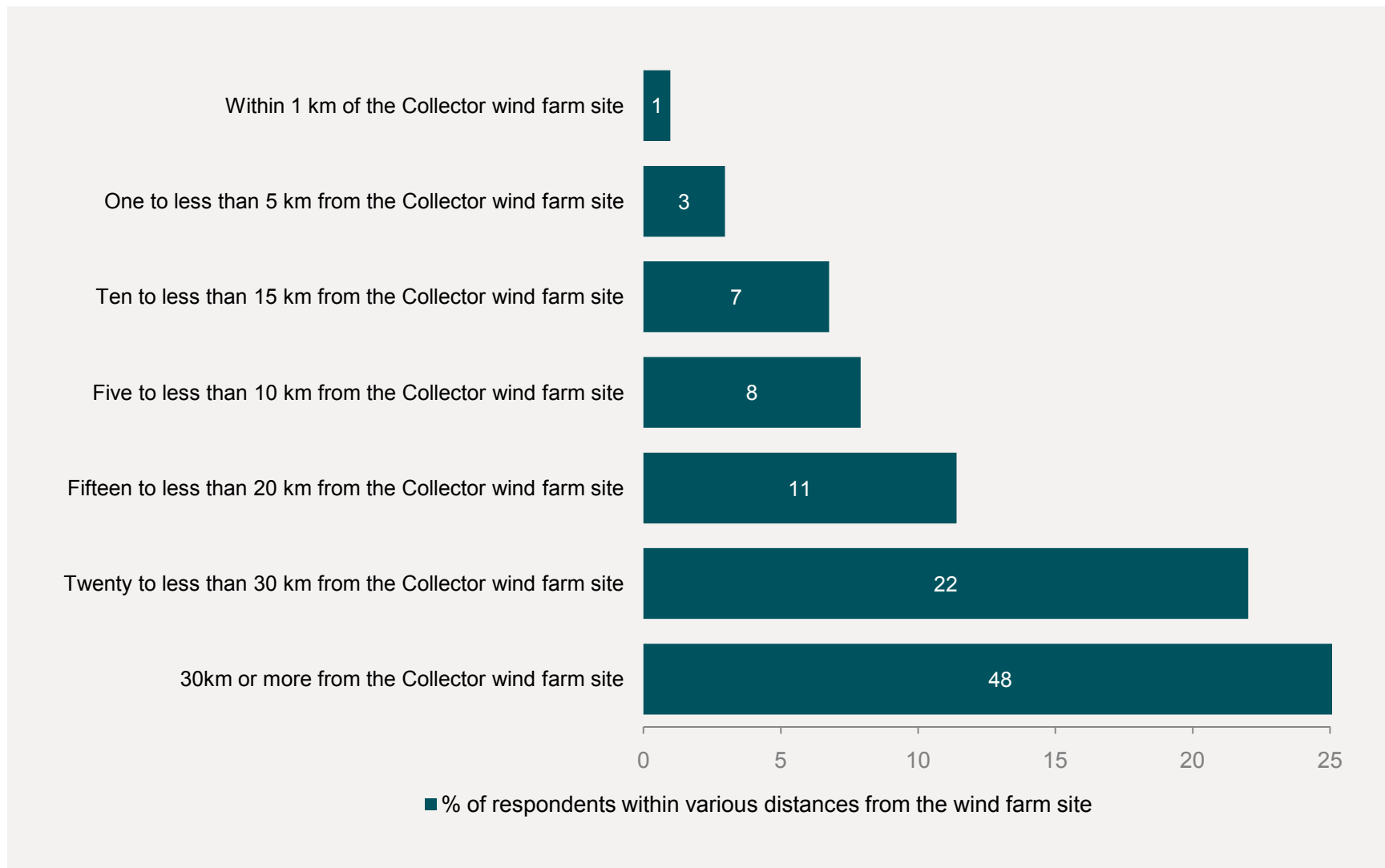
Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



The vast majority of respondents (97%) lived in or around the area of the Collector wind farm full-time.

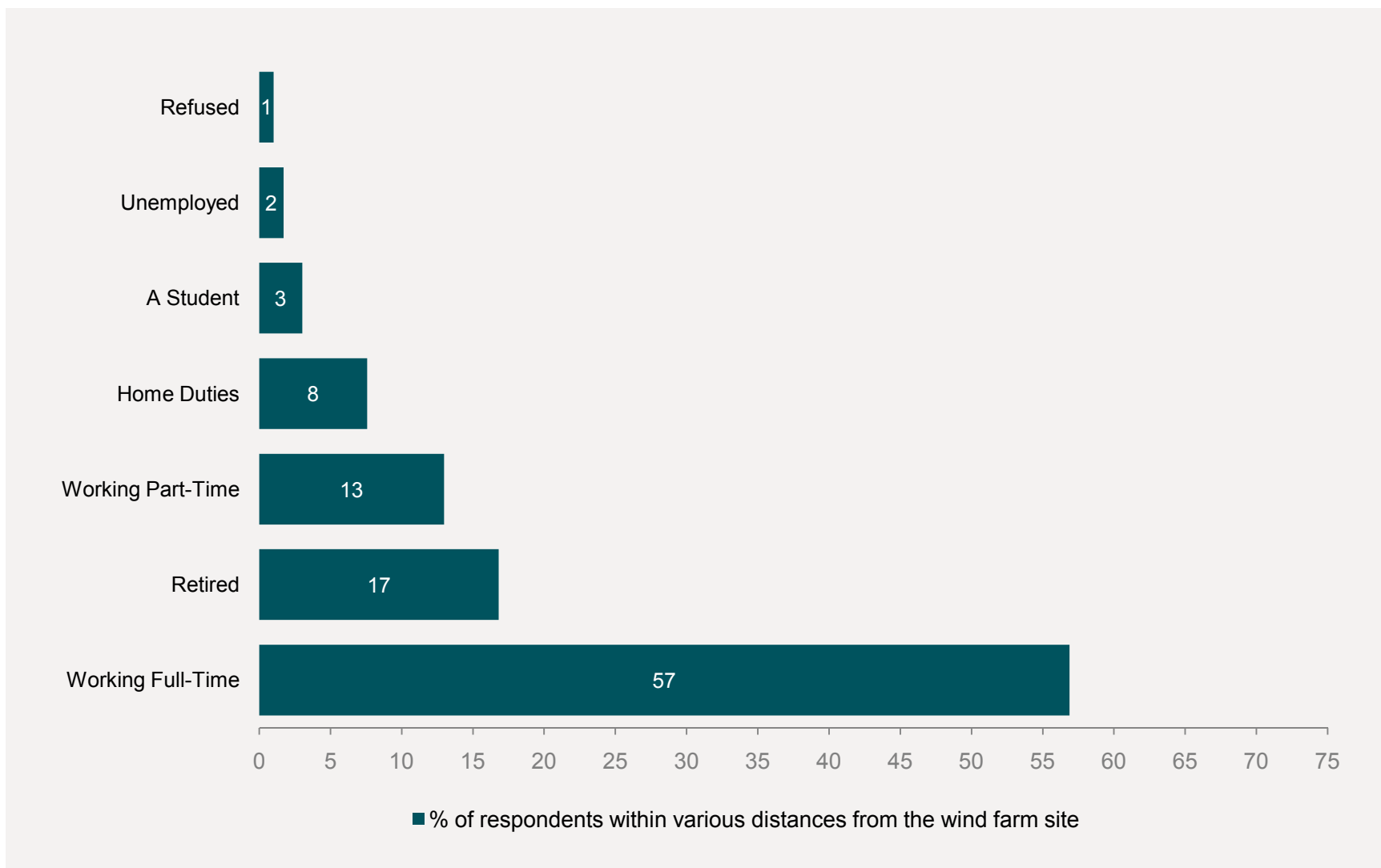
Distance from Collector wind farm

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



Working status

Sample: n=400, weighted according to ABS 2006 census data by Age, Gender and location.



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