Business Customer Survey Results

Solar, batteries and energy efficiency

February 2018

Ausgrid Better Together

mcnair yellowSquares

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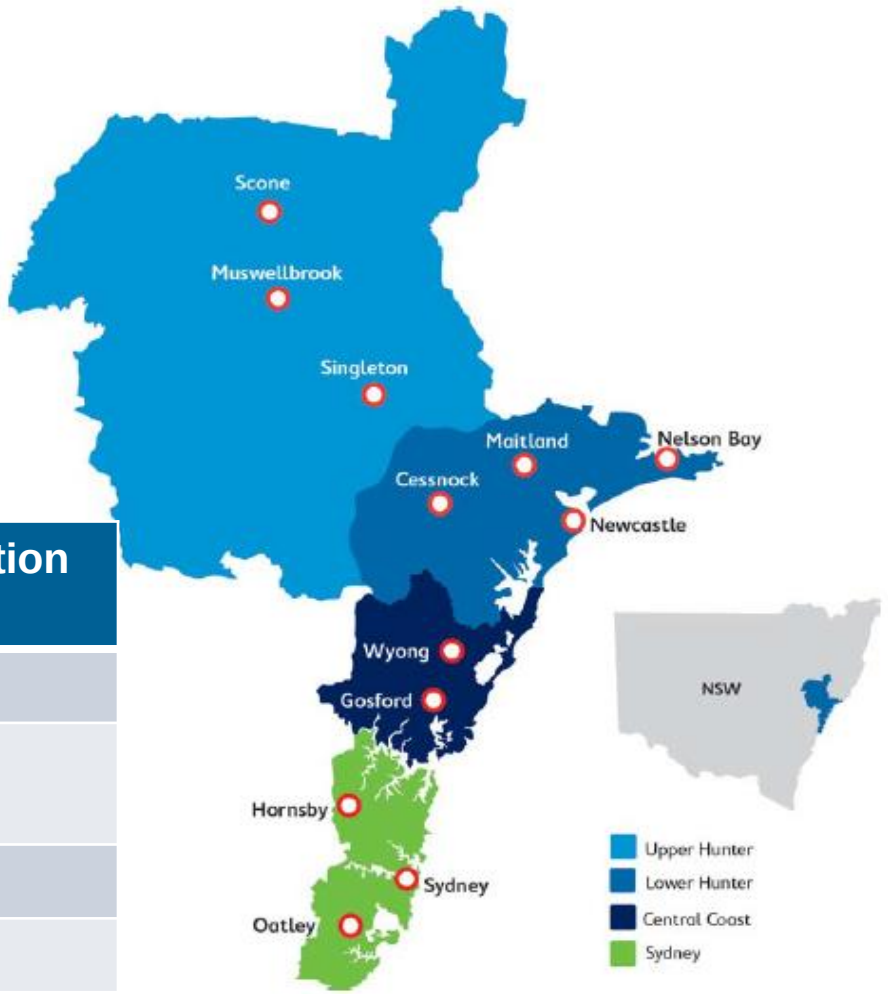
Ausgrid Customer Overview

- Ausgrid distributes electricity to 1.7 million customers across the Sydney, Central Coast and Hunter regions of NSW.
- Area of more than 22,000 km$^{2.}$
- Network infrastructure includes substations, poles, wires and metering equipment.



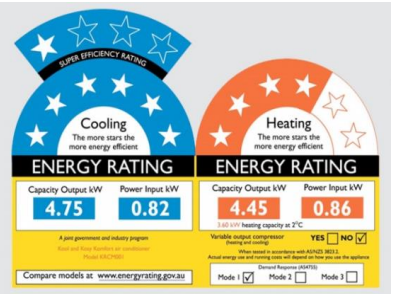
Customer type	Total Customers	Annual Consumption (GWh)
Large business (>160 MWh pa)	13,000 (1%)	13,188 (52%)
Small-medium business (<160 MWh pa)	167,000 (10%)	3,573 (14%)
Residential	1,522,000 (89%)	8,745 (34%)
Total	1,702,000	25,506

*Figures are rounded and based on 2016-17 average customer numbers and electricity consumption

Research Objectives

- The research was commissioned to gain an understanding of experiences, motivations and barriers for businesses investing in solar, batteries and energy efficiency.

- The results from this research will assist Ausgrid in the development of demand management options for the deferral of network investment.



Approach and Sample

- The survey was designed by McNair yellowSquares in collaboration with Ausgrid.
- Combination of CATI and online survey.
- The decision maker for energy investments for the business was interviewed.
- Participants for this study were from a sample of Ausgrid customers. Sample lists of business names and telephone numbers were provided by Ausgrid.
- Quota sampling was employed to over sample large solar (>30kW) and non-solar customers (>160MWh pa).
- A total of 617 responses were received over 11 weeks between 24 Aug and 7 Nov 2017.
- Results in this report are based on unweighted data.

Company Size	Large (>$3k/qtr)	Small – Medium (<$3k/qtr)	Total
Non-Solar	156	159	315
Solar <30 kW	13	105	118
Solar > 30kW	88	35	123
Solar - don't know	14	47	61
Total	271	346	617

Key Insights – Energy Efficiency

- The main electricity consuming appliances for all customers were for **lighting, heating and cooling** of buildings**, computers and IT equipment** and **refrigeration**.
- Most customers who have invested in energy efficiency have invested in **efficient lighting** and solar customers are more likely than non-solar customers to have invested in energy efficient lighting.
- 60% of non-solar customers have invested to improve energy efficiency in the last 3 years, whereas **87% of solar customers have invested to improve energy efficiency**.

Key Insights – Energy Efficiency

- Nearly **three quarters of all customers who have invested in energy efficiency have observed at least some reduction in energy use and costs**.
- Solar customers were **twice** as likely as non-solar customers to have stated that they observed a large reduction in energy use and costs.
- Amongst solar customers, those customers who had **systems of 10kW or less**, were more likely to state they had **received a large reduction in energy use and cost**.
- The **average payback** periods for investments in energy efficiency ranges between **4 and 6 years**, with efficient lighting having the lowest payback period and efficient heating/cooling the longest average payback period.
- The **main reasons given for why business customers had not invested** in energy efficiency was because they **don't know enough about energy efficiency options**.
- The main suggestion from business customers for incentivizing energy efficiency were government grants and subsidies.

Key Insights – Solar Customers

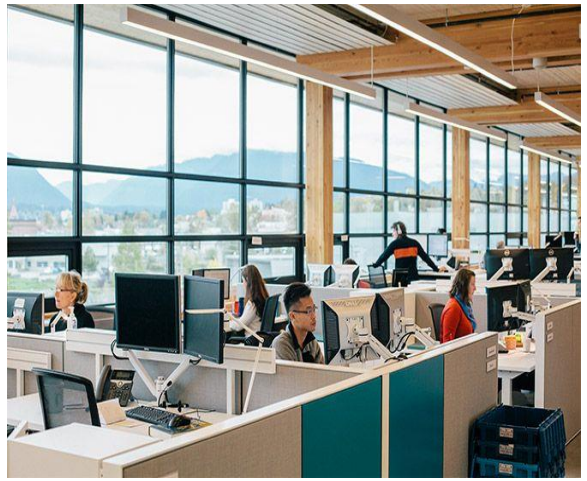
- More than eight in ten solar customers installed a system in the last five years.
- The **average cost of installing the system ranged widely** commensurate with system size from $19,000 for smaller systems of <10kW to $72,500 for large systems of 30kW+.
- The majority of solar customers finance the installation of the systems through **business capital**, although larger users are more likely to have financed through other means.
- The **average expected payback period across the total surveyed is 5.6 years**, with more than half saying that the expected payback period was more than 5 years. Customers surveyed who had large systems of 30kW or higher experienced a slightly higher payback period of 6 years.
- In contrast, **non-solar users who intend to install solar expected a shorter a payback period of 4.6 years**.

Key Insights – Solar Customers

- The main reasons for installing solar is **to save money**. Secondary reasons given were to **reduce business carbon emissions and to take advantage of government rebates (save money)**.
- **More than half of solar customers rely on solar company information** to help them decide about installing a solar system. They also rely on the solar company information and available **roof space** when deciding the size of the system to install.
- **Quarterly dollar savings amounts appear commensurate with the system size installed.** Customers who have bought 30kW+ systems reported a higher quarterly dollar savings range than those with smaller systems
- The **majority of solar customers (63%) are satisfied** with their **cost savings**. Those with larger systems of 30kW+ were the most satisfied system size group (74%)
- **About three quarters (78%) of solar customers indicated they were satisfied with the solar installer** with 77% satisfied with the operation of the solar system.

Key Insights – Non-Solar Customers

- **More than half of non-solar customers do not intend to install a solar system in the future**.
- The **main barriers to take up are due to the building they are in** or because of the **cost or payback** associated with the installation.
- The **most popular suggestion** that non-solar customers have to help incentivize solar installation are **government subsidies**.
- While only a small number of non-solar customers surveyed were considering to install solar (19), their motivation for installing solar and their expectations of the benefits and costs are similar to the existing solar customers.



Key Insights – Non-Solar Customers

- Non-solar customers are **significantly less likely than solar customers to own their own premises**, are likely to have nearly twice as many different premises across New South Wales and 1.5 times as many premises as solar customers elsewhere in Australia.
- Non-solar customers are also more likely than solar customers to run businesses that **operate either 24/7 or outside of the usual Monday – Friday office hours**.
- Non-solar customers are also likely to have been in business **at the current premises for a shorter period of time** than solar customers.

Key Insights – Ausgrid Interactions

Reliability and Power Outages

- **Overall customers are satisfied with the reliability of their electricity supply** and there is no significant difference in satisfaction levels between solar and non-solar customers.
- **Overall customers are satisfied with Ausgrid's response to power outages** and there is no significant difference between solar customer satisfaction and non-solar customers.
- The **majority of customers (58%) would prefer to be informed about outages via text message** with a link to a website for further information.

Key Insights – Ausgrid Interactions

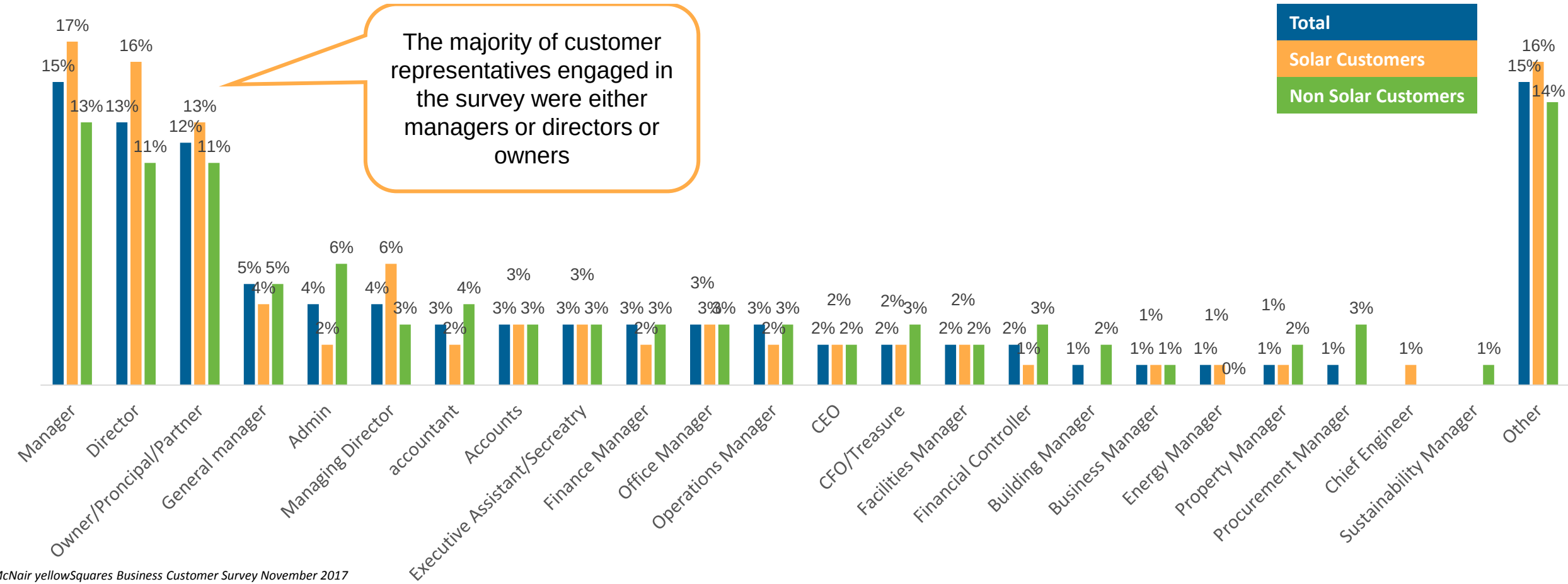
Solar Connection Process

- The majority of customers (84%) who interacted with Ausgrid about connecting solar were either satisfied (43%) or neither satisfied or dissatisfied (41%) with their ***interactions***.
- The majority of customers (90%) who interacted with Ausgrid about connecting solar were either satisfied (60%) or neither satisfied or dissatisfied (30%) with the ***connection process*** in general.

Business Characteristics:

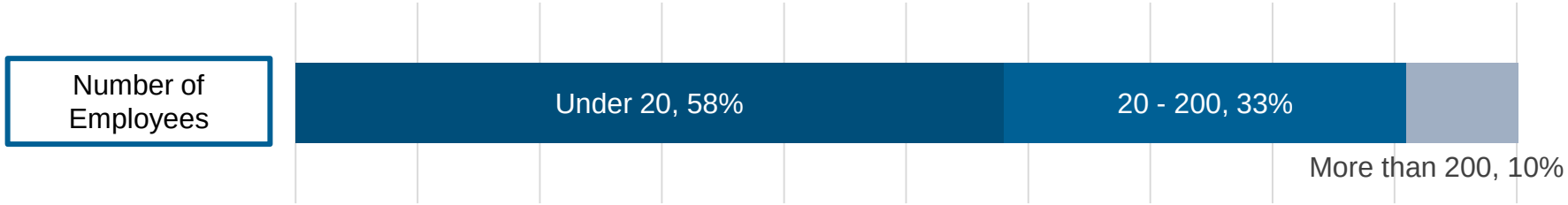
Energy Use and Energy Efficiency

Position title of respondent



McNair yellowSquares Business Customer Survey November 2017
Total n=617; Solar n= 302; Non-solar n=315
2. What is your Position title?

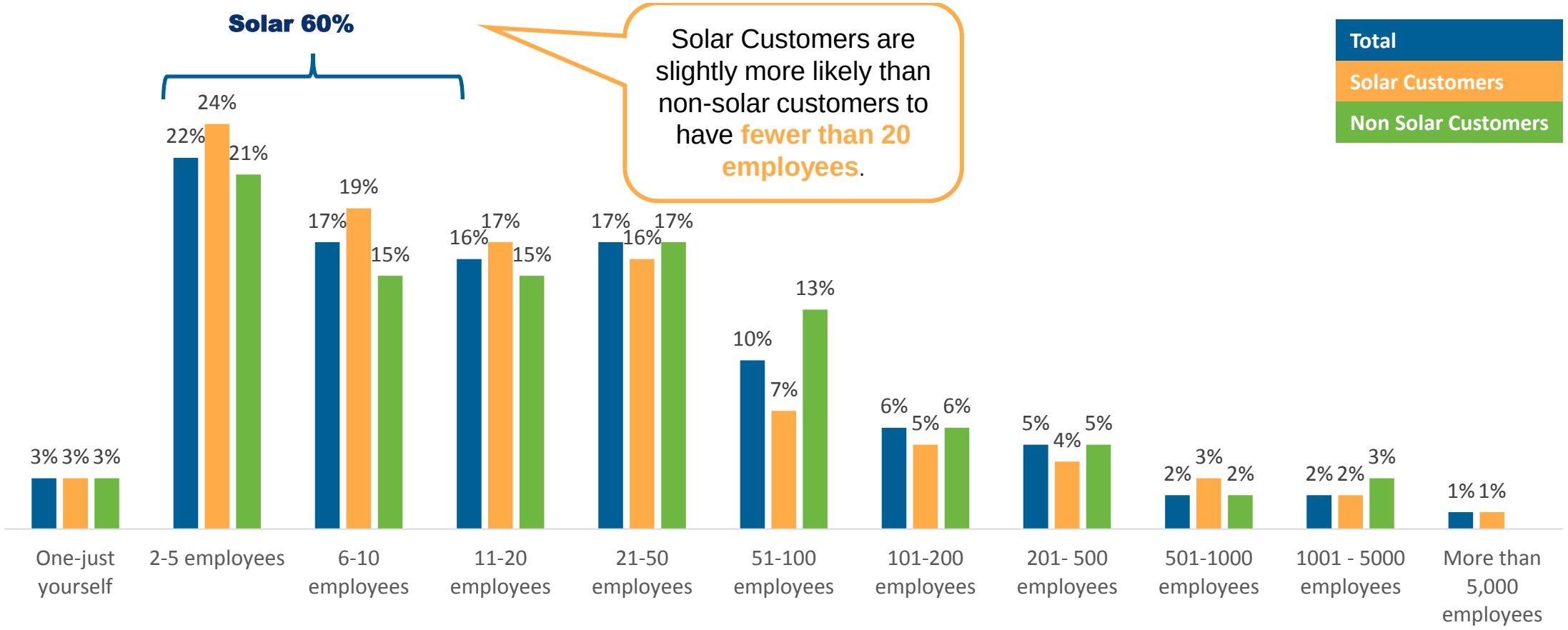
The majority of customers have small or medium sized businesses based on employee size.



- 60% of Solar Customers have **fewer than 20 employees**. Solar customers who responded were slightly more likely than Non-Solar Customers to have fewer than 20 employees.
- There are no significant differences between Solar Customers and Non-Solar Customers in the industries that they work.
- Main industries for Solar Customers are **Manufacturing** and **Retail trade**.

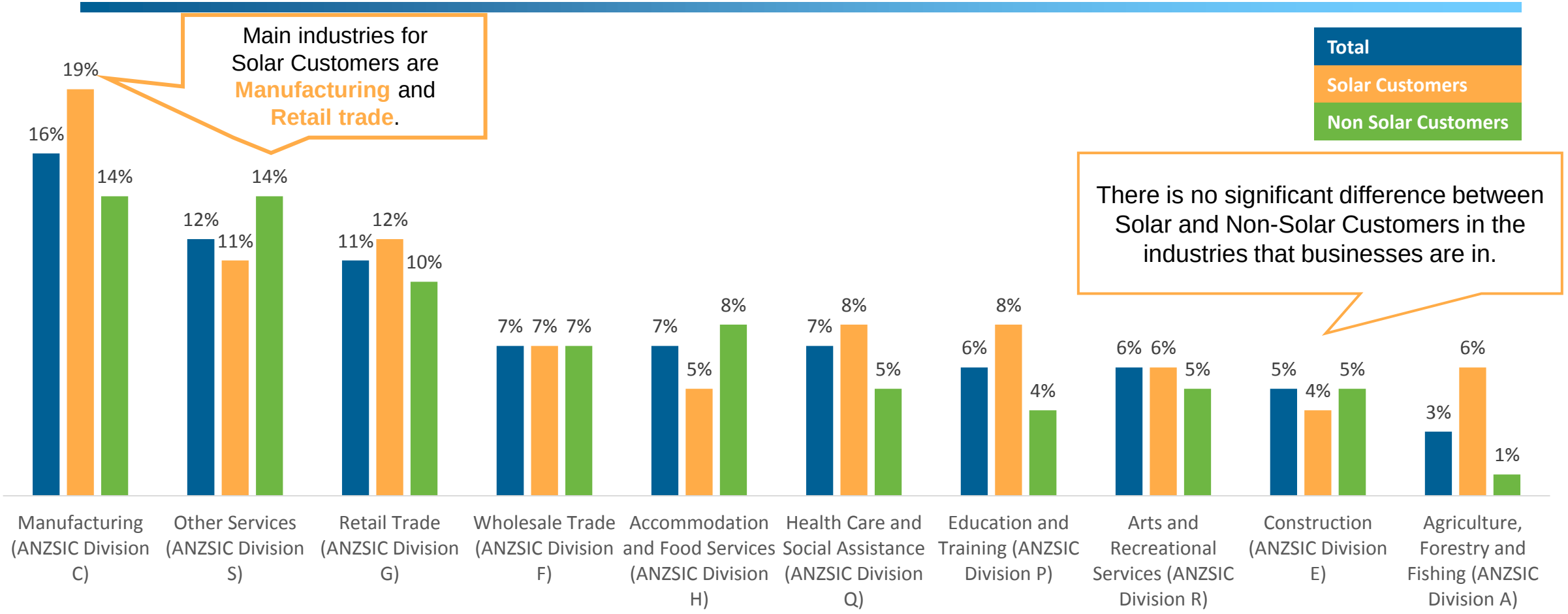
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
5. How many people are employed full time and part time in your business at this address?
6. In which of these industry groups does the business operate? (If more than one, choose the main industry group)

Company Size



McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
5. How many people are employed full time and part time in your business at this address?

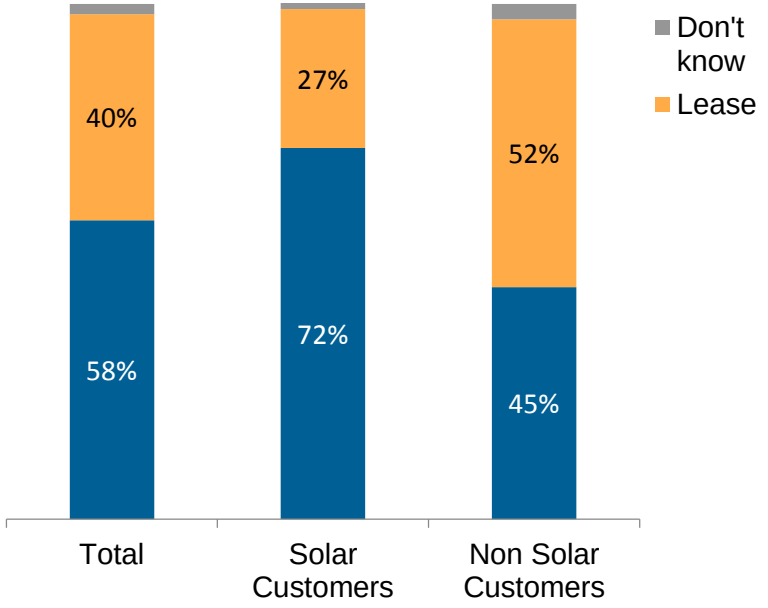
Industry



McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
6. In which of these industry groups does the business operate? (If more than one, choose the main industry group)

Solar customers are more likely to own their own premises, however are less likely to have other premises in NSW or other states

Own vs Lease Premises



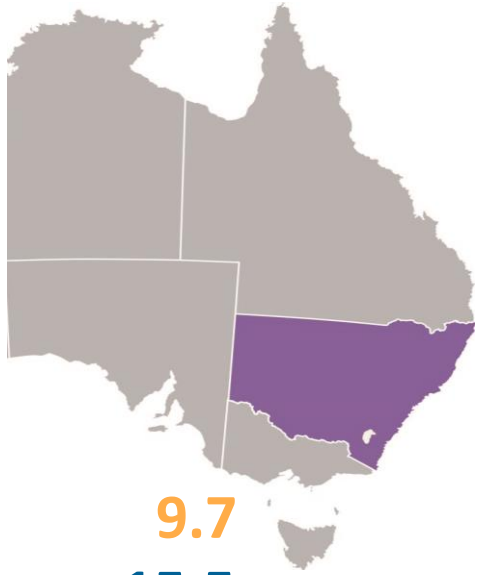
Years in Business at Current Premises

28.7 years

25.0 years

21.5 years

Number of Other Premises in NSW

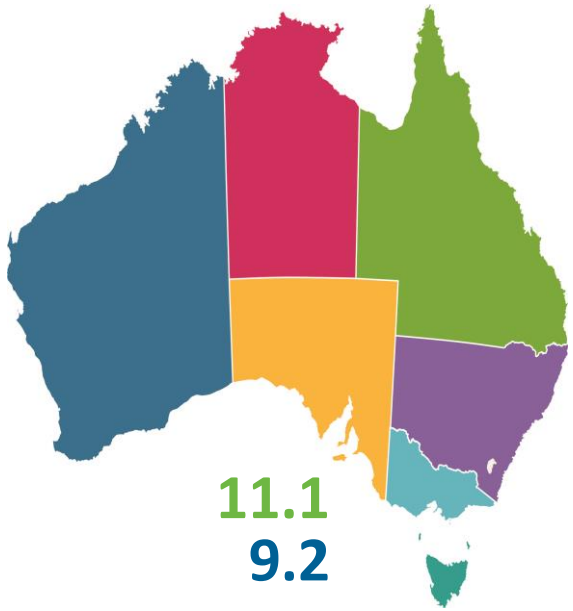


9.7

15.5

21.1

Number of Other Premises Elsewhere in Australia



11.1

9.2

7.3

Total

Solar Customers

Non Solar Customers

McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
7. Do you own or lease these premises?
8. How many years has the business been in operation at these premises?
11a. How many other business premises do you have? - In NSW
11b. How many other business premises do you have? - In other states or territories of Australia

Operation times

Days of Operation

Operate Monday - Thursday	Operate Fridays	Operate Saturdays	Operate Sundays
99%	97%	54%	38%
98%	98%	57%	38%
99%	97%	50%	38%

Hours of Operation

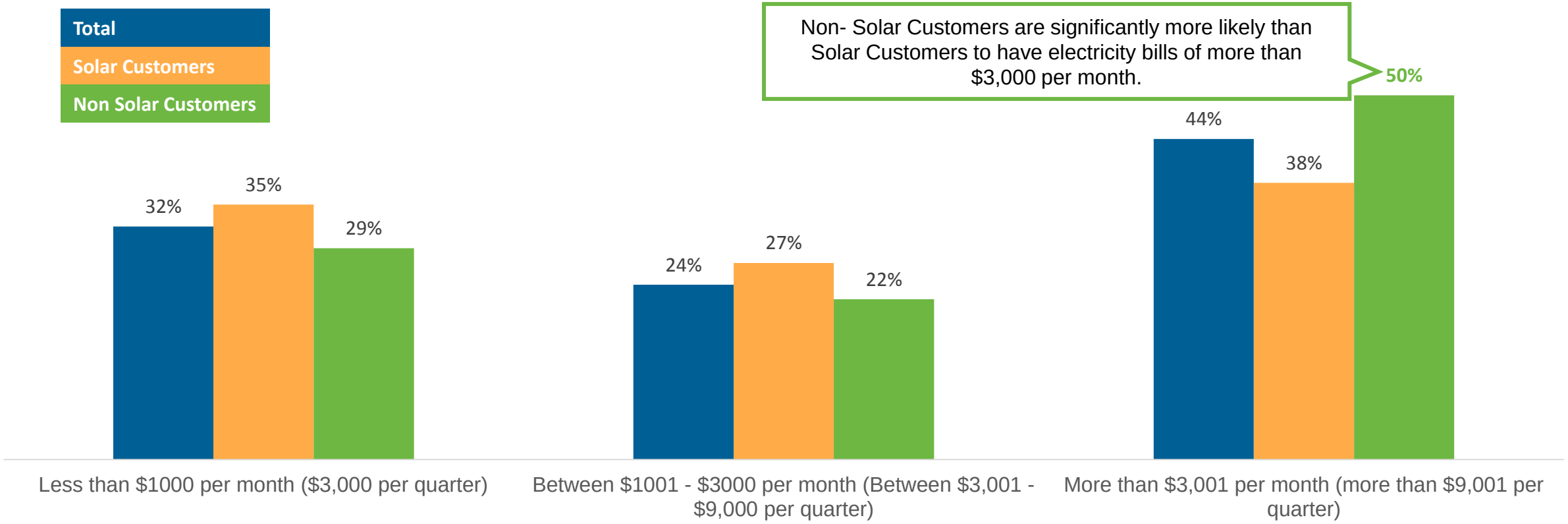
Total
Solar Customers
Non Solar Customers

7 Days 10+ Hours	Mon-Fri 12+ Hours	Mon-Fri 8-12 Hours	Mon-Fri 8+ Hours	No Day Specified 12+ Hours
11%	4%	18%	11%	10%
12%	2%	22%	12%	8%
10%	6%	15%	10%	11%

No Day Specified 8-12 Hours	Less than 5 Days 8 Hours	24 x 7	Six Days 8 Hours	Varied
28%	2%	11%	4%	2%
24%	2%	8%	4%	3%
32%	2%	14%	3%	2%

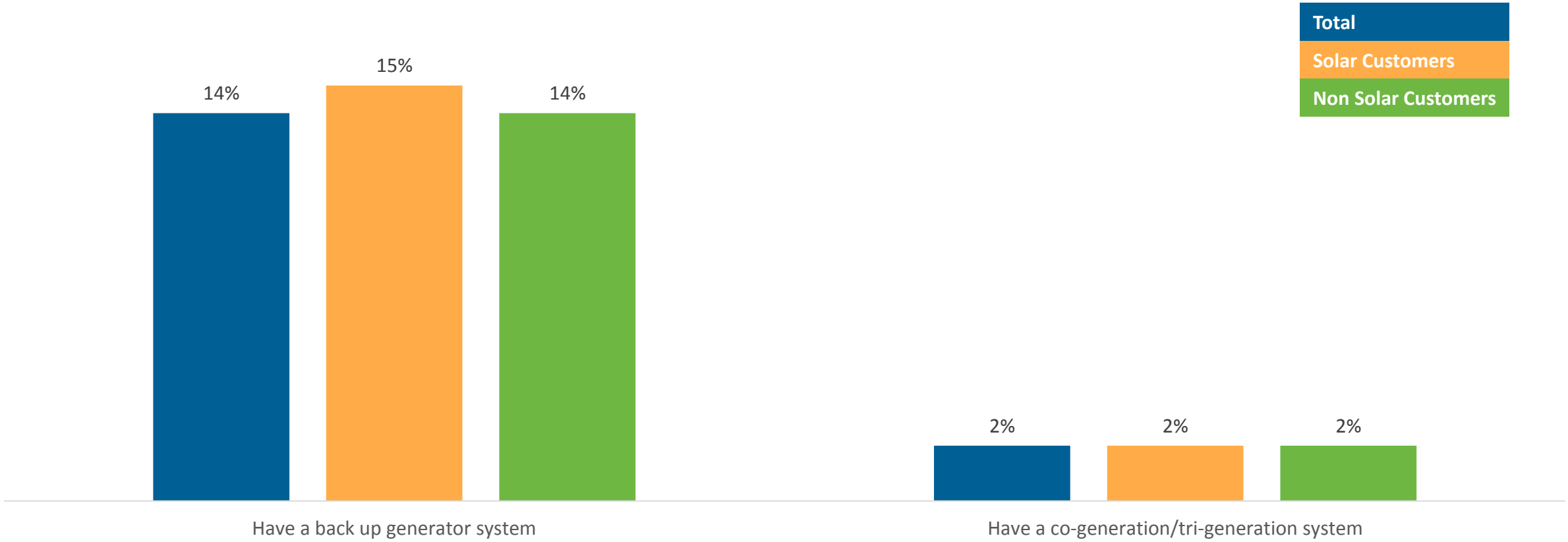
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
9. On what days does your business normally operate?
10. What are your usual business hours of operation

Non-solar customers are more likely to have larger electricity bills than solar customers



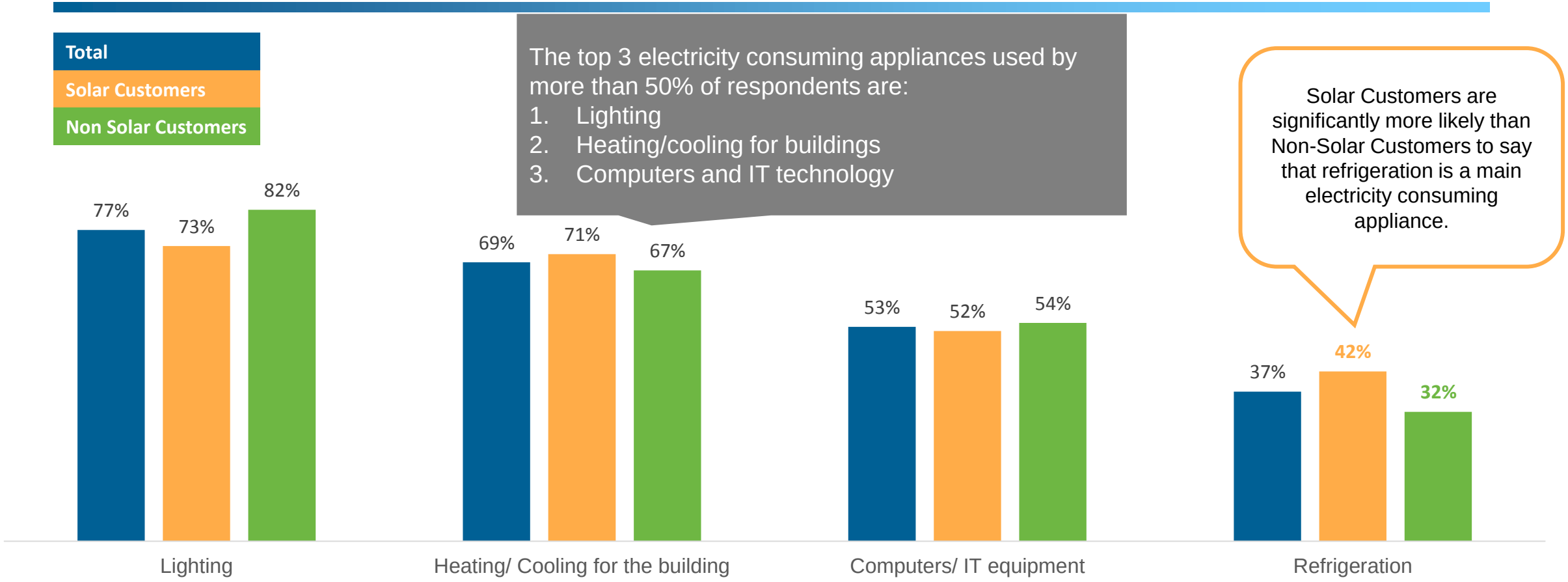
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
12. Roughly, how much is your electricity bill per month or quarter?

Emergency back-up or Cogeneration Systems



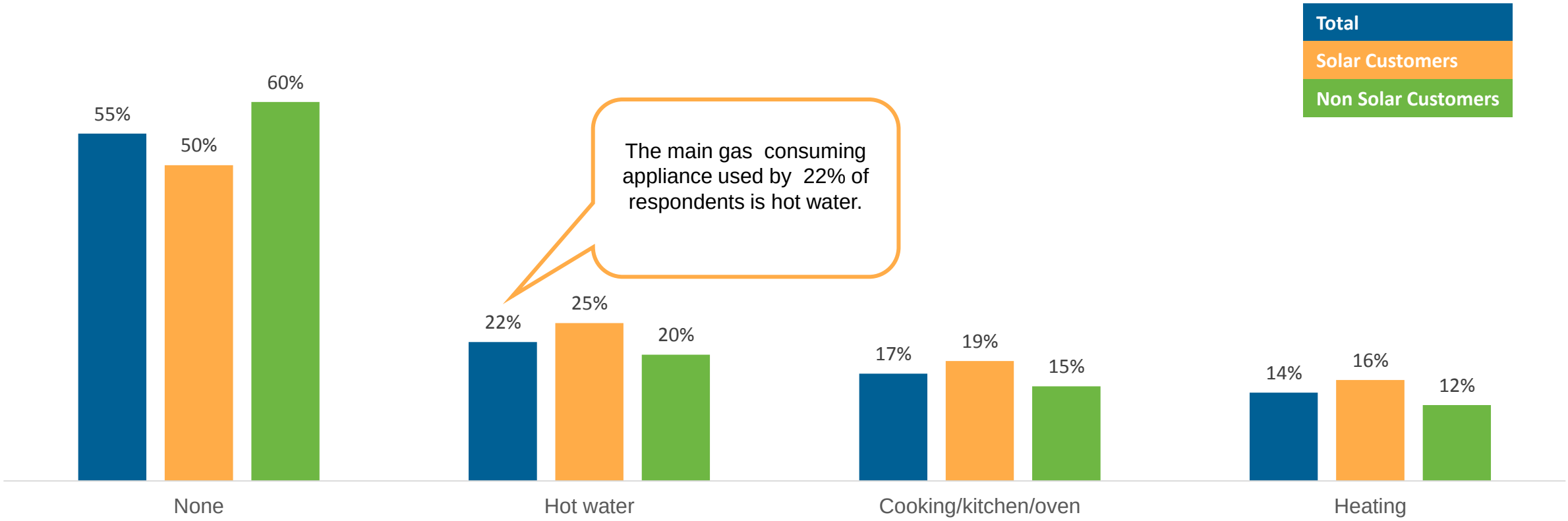
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
21. Do you have a back-up generator system?

Lighting and building heating or cooling are the main sources of electricity consumption for business customers



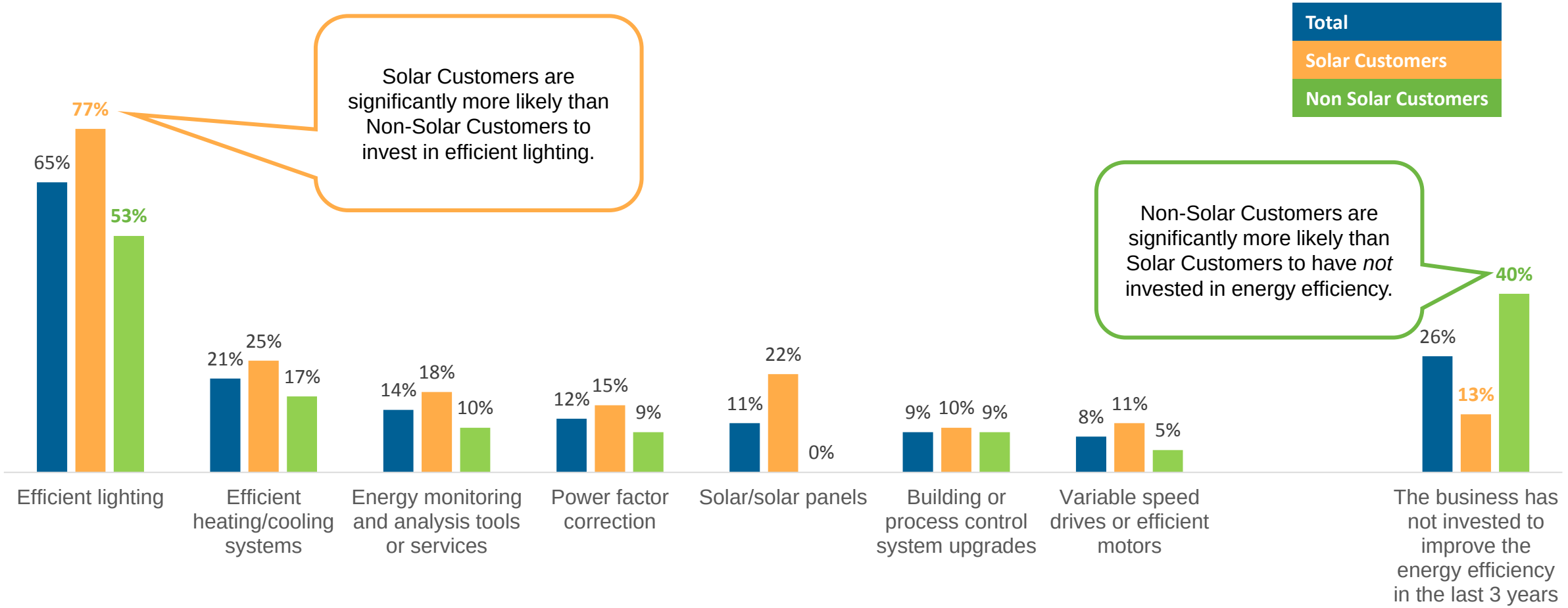
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
13. What are the main electricity consuming appliances for your business?

Half of all businesses surveyed had a gas consuming appliance



McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
14. What are the main gas consuming appliances for your business?

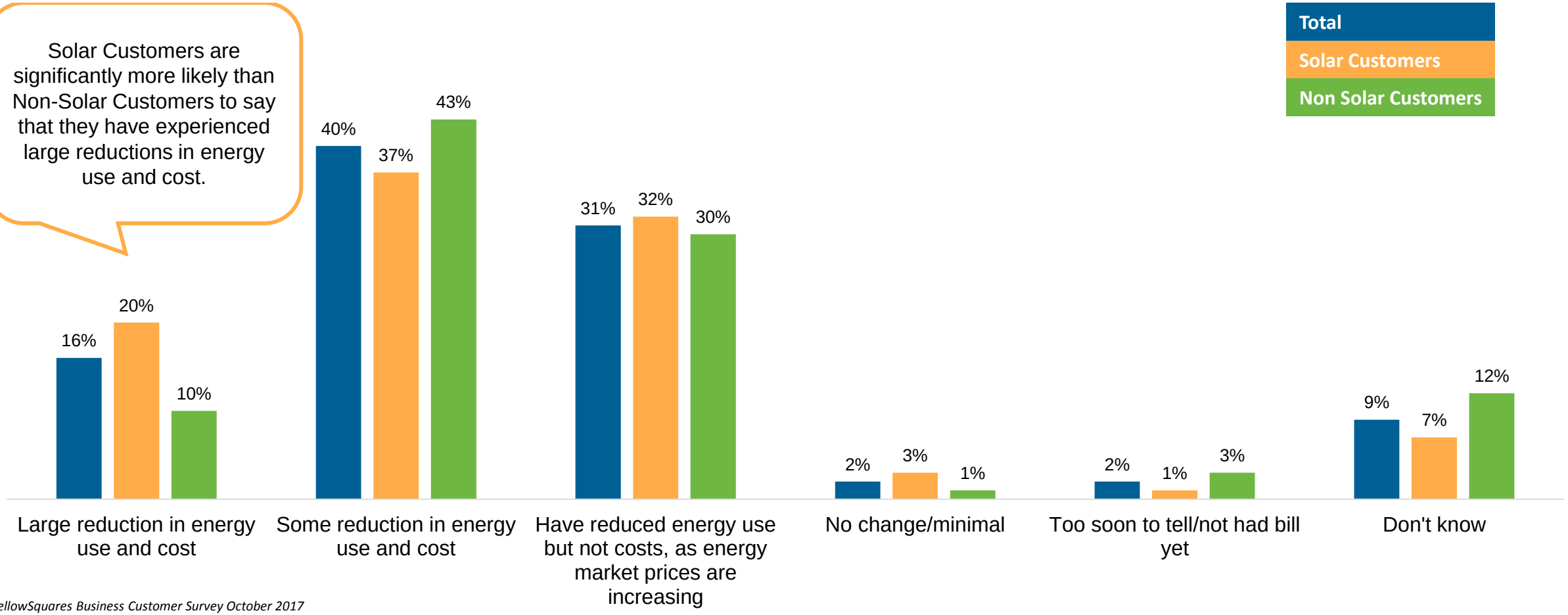
Almost three quarters of business customers have made some investment in energy efficiency



McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
15. Have you invested to improve the energy efficiency of your business in the last 3 years?

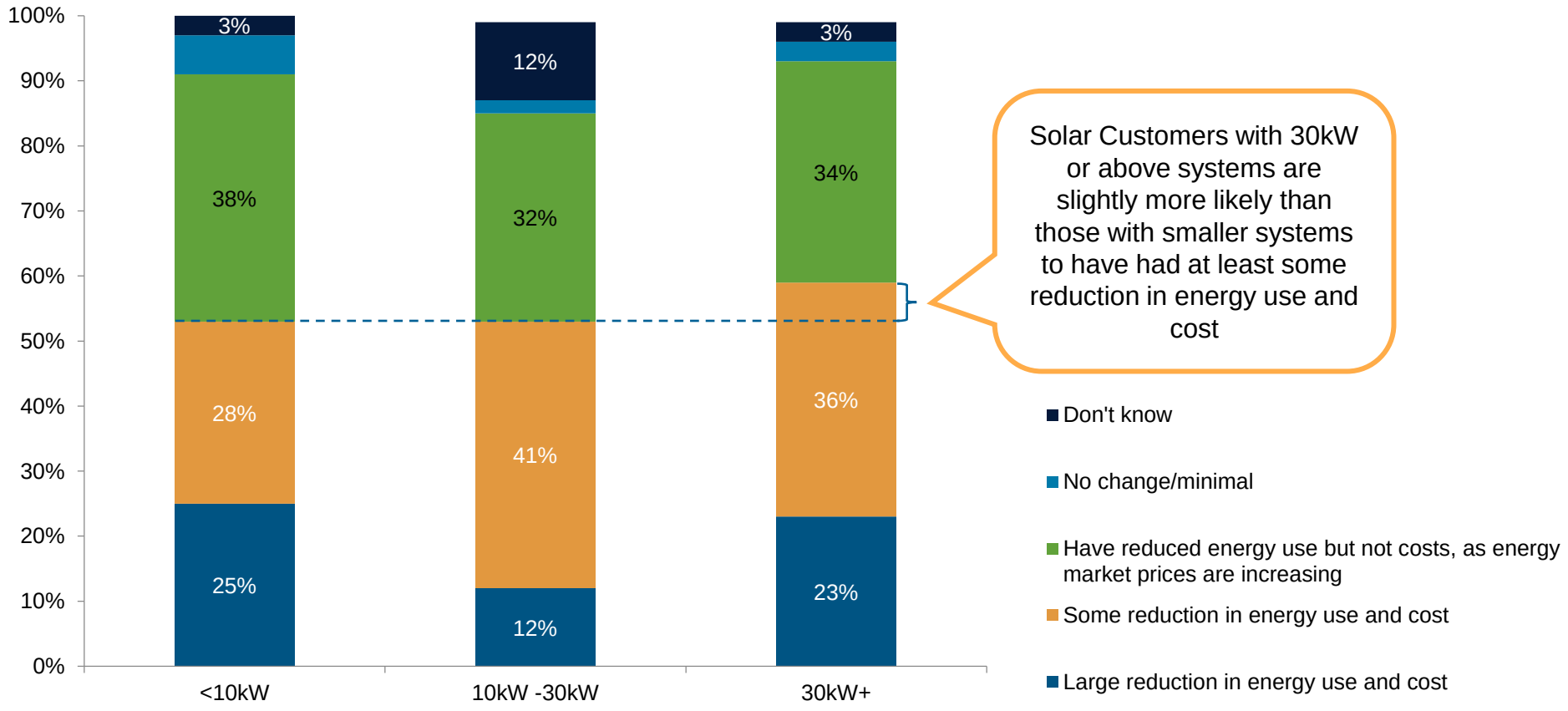
More than half of those who had invested in energy efficiency saw some reduction in costs and energy use

Solar Customers are significantly more likely than Non-Solar Customers to say that they have experienced large reductions in energy use and cost.



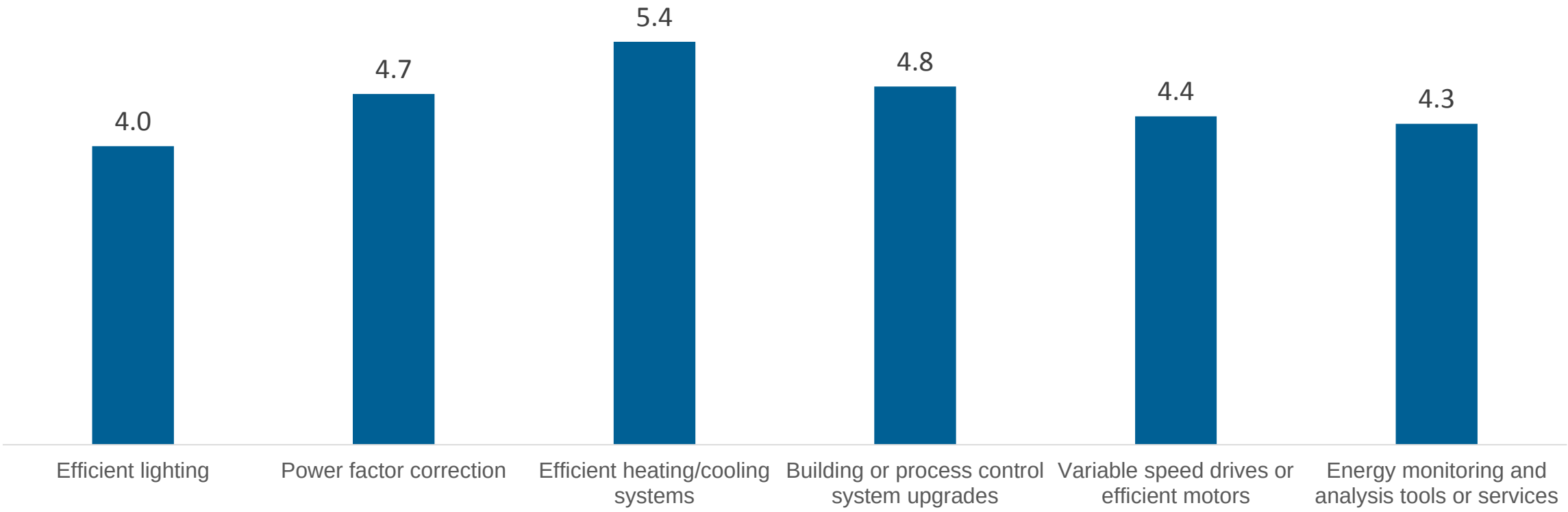
McNair yellowSquares Business Customer Survey October 2017
Total Invested in Energy Efficiency n=455; Solar n= 264; Non-solar n=191
16. What impact has this investment had on your business?

Investment Impact by System Size



McNair yellowSquares Business Customer Survey October 2017
Total Invested in Energy Efficiency n=455; Solar n= 264; Non-solar n=191
16. What impact has this investment had on your business?

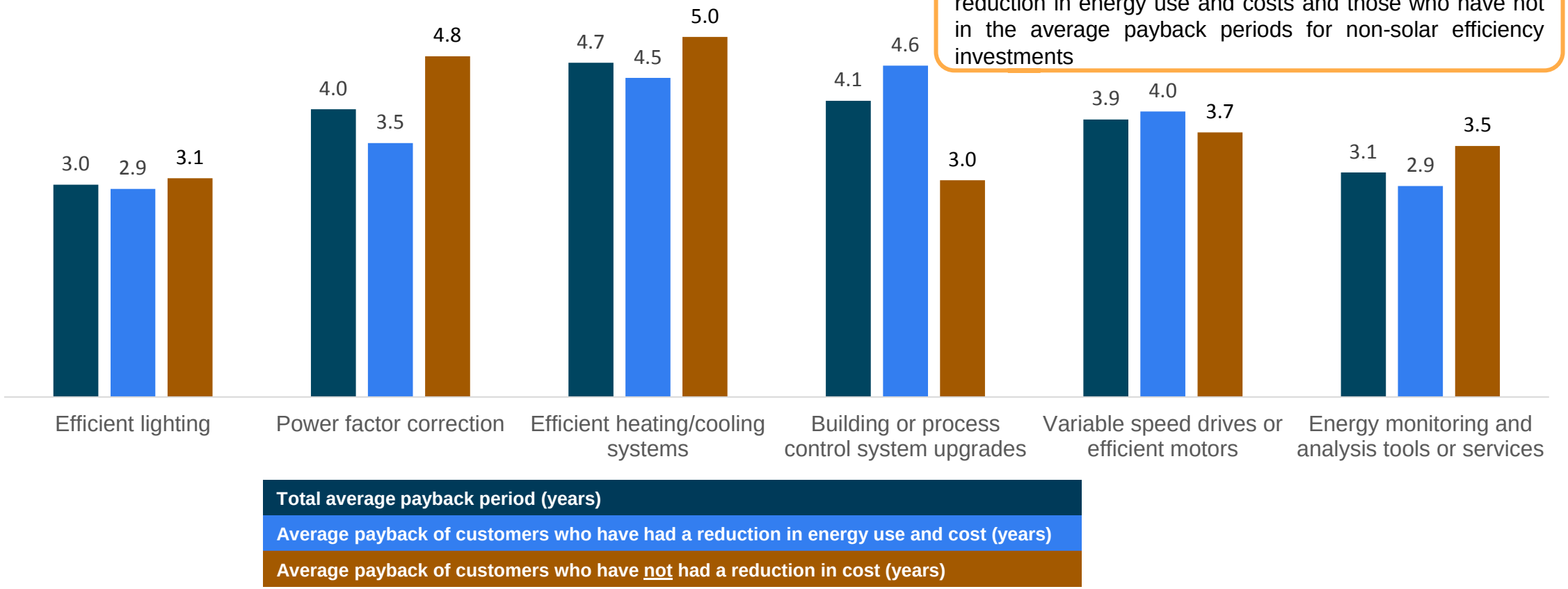
Reported average payback periods for non-solar efficiency investments is between 4 and 5.4 years



McNair yellowSquares Business Customer Survey October 2017
Efficient Lighting n=401; Power factor correction n=71; Efficient heating/cooling n=128; Building or process control system upgrades n=56; Variable speed drives or efficient motors n= 51; Energy monitoring n=85;
17. What was the payback period for your investment(s)?

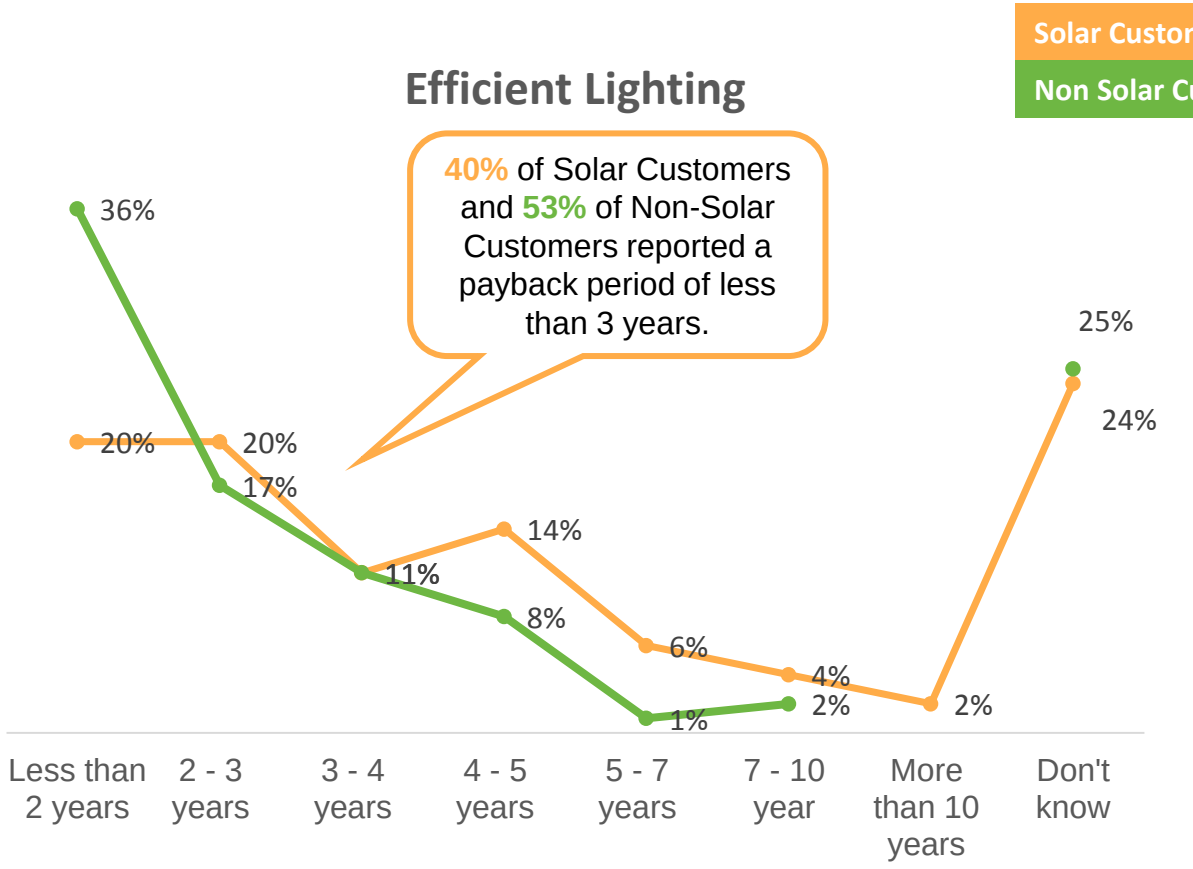
Comparison of average payback periods - Those who have reduction in energy use and cost vs those who have not

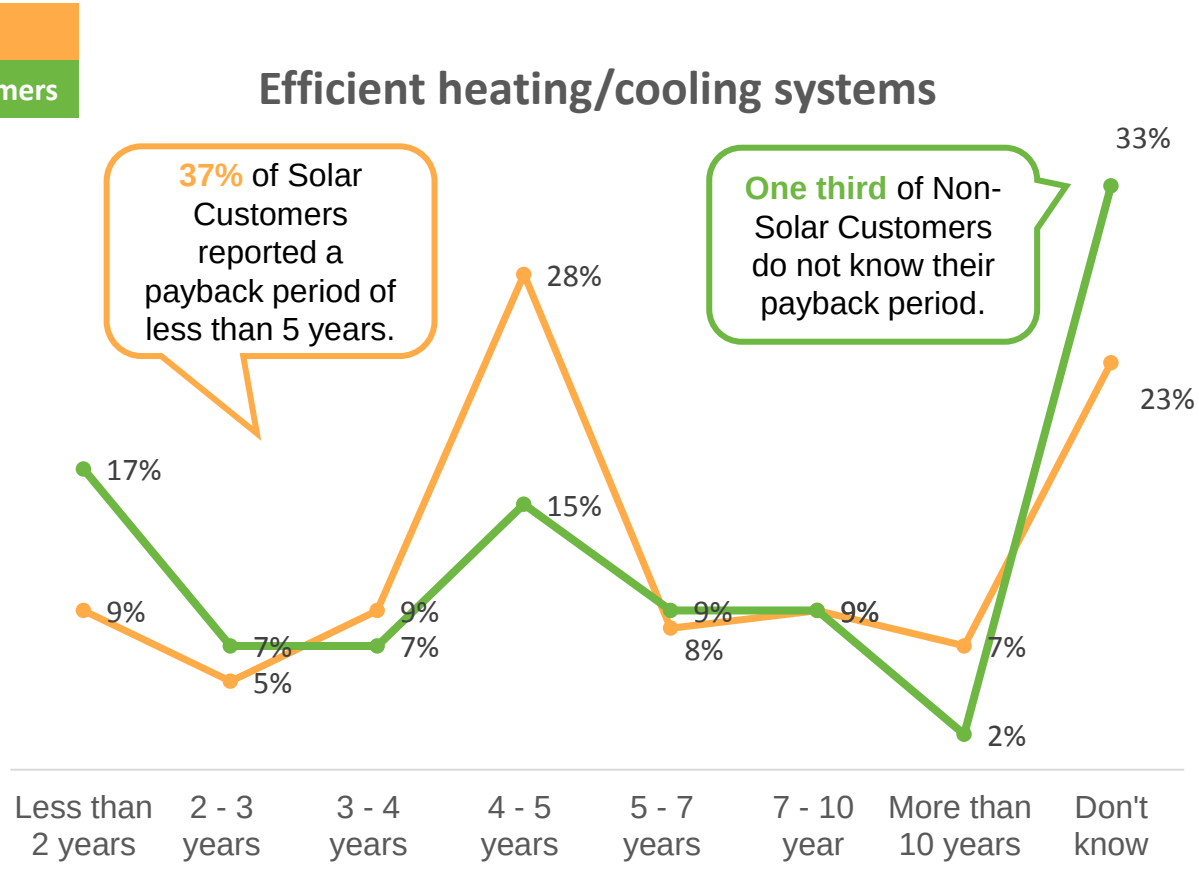
There is little difference between those who have seen a reduction in energy use and costs and those who have not in the average payback periods for non-solar efficiency investments



McNair yellowSquares Business Customer Survey October 2017
Efficient Lighting n=401/220; Power factor correction n=71/41; Efficient heating/cooling n=128/81; Building or process control system upgrades n=56/32; Variable speed drives or efficient motors n= 51/30; Energy monitoring n=85/50;
*17. What was the payback period for your investment(s)? 16. What impact has this investment had on your business?(Large reduction in energy use and cost *TO* Some reduction in energy use and cost) **

The majority of business customers reported a payback period of less than 5 years for their efficiency investments in lighting and building heating and cooling



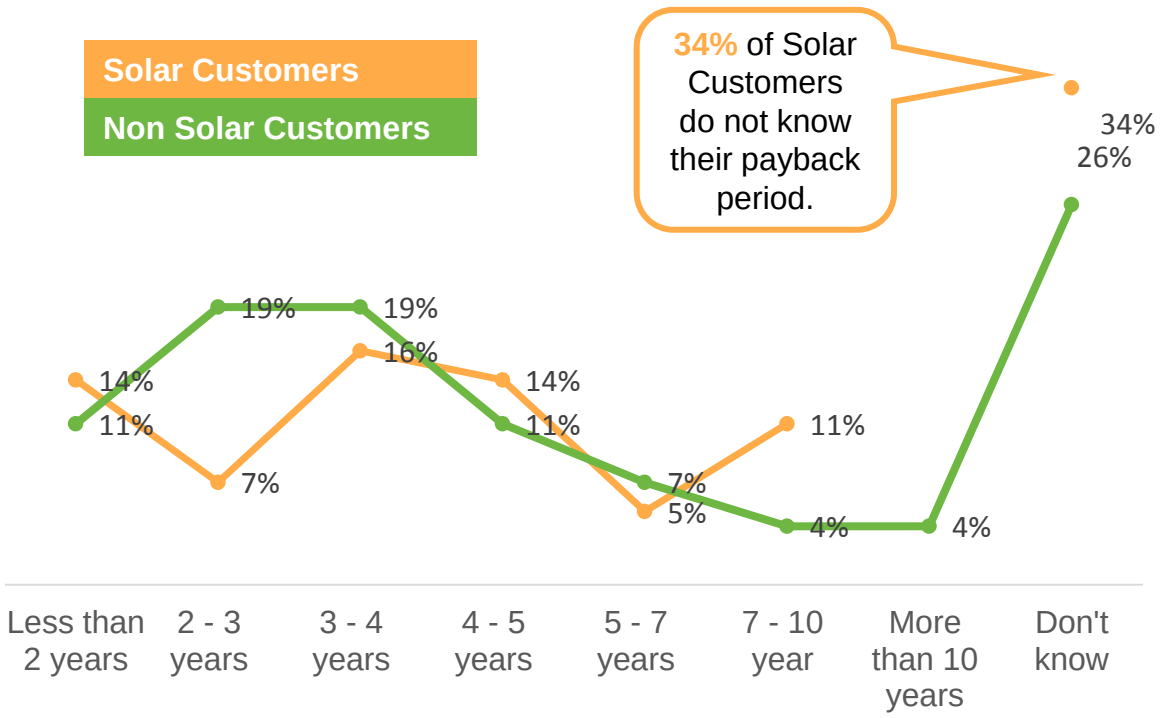


McNair yellowSquares Business Customer Survey October 2017
Solar n= 233; Non-solar n=168
17. What was the payback period for your investment(s)?

McNair yellowSquares Business Customer Survey October 2017
Solar n=74; Non-solar n=54
17. What was the payback period for your investment(s)?

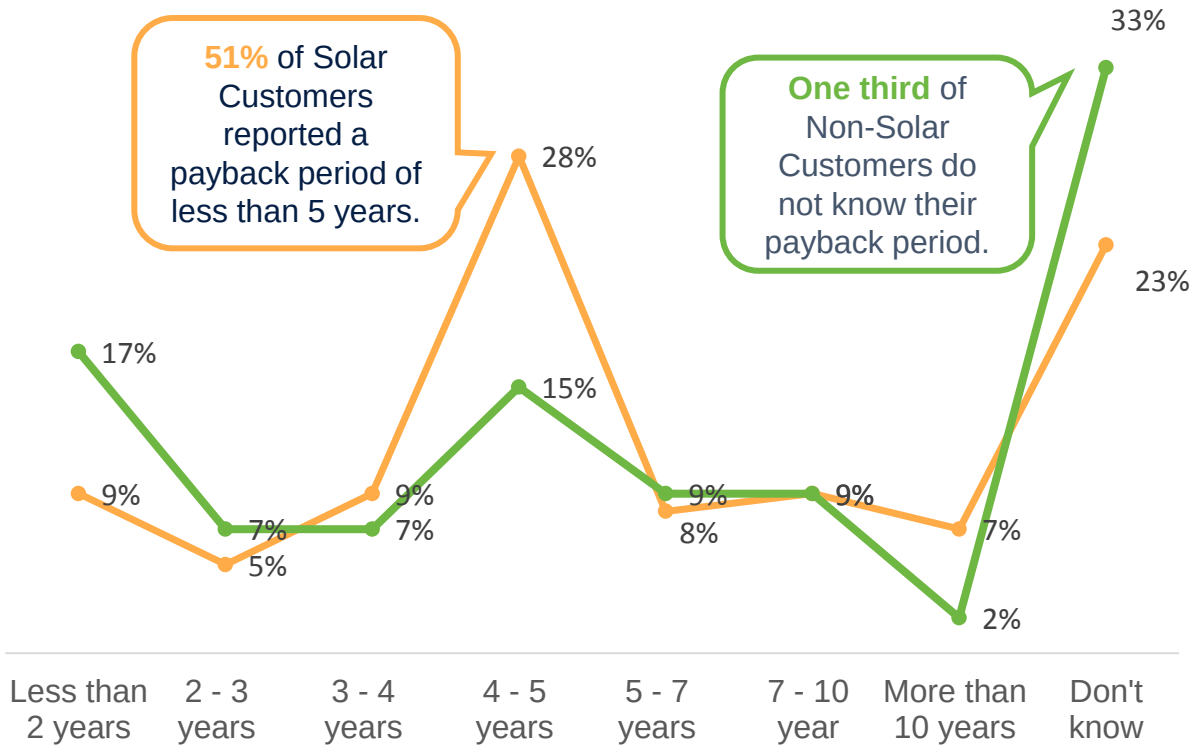
Reported Payback Periods

Power Correction Factor



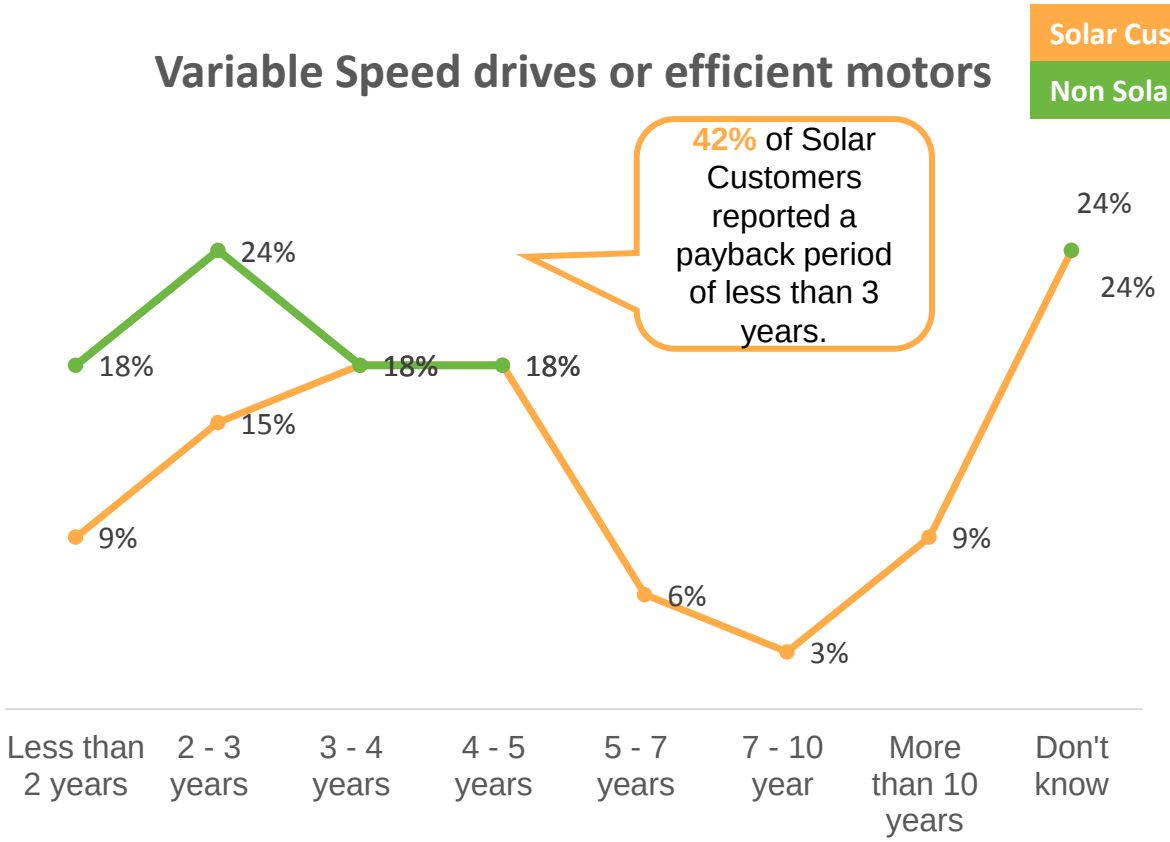
McNair yellowSquares Business Customer Survey October 2017
Solar n= 44; Non-solar n=27
17. What was the payback period for your investment(s)?

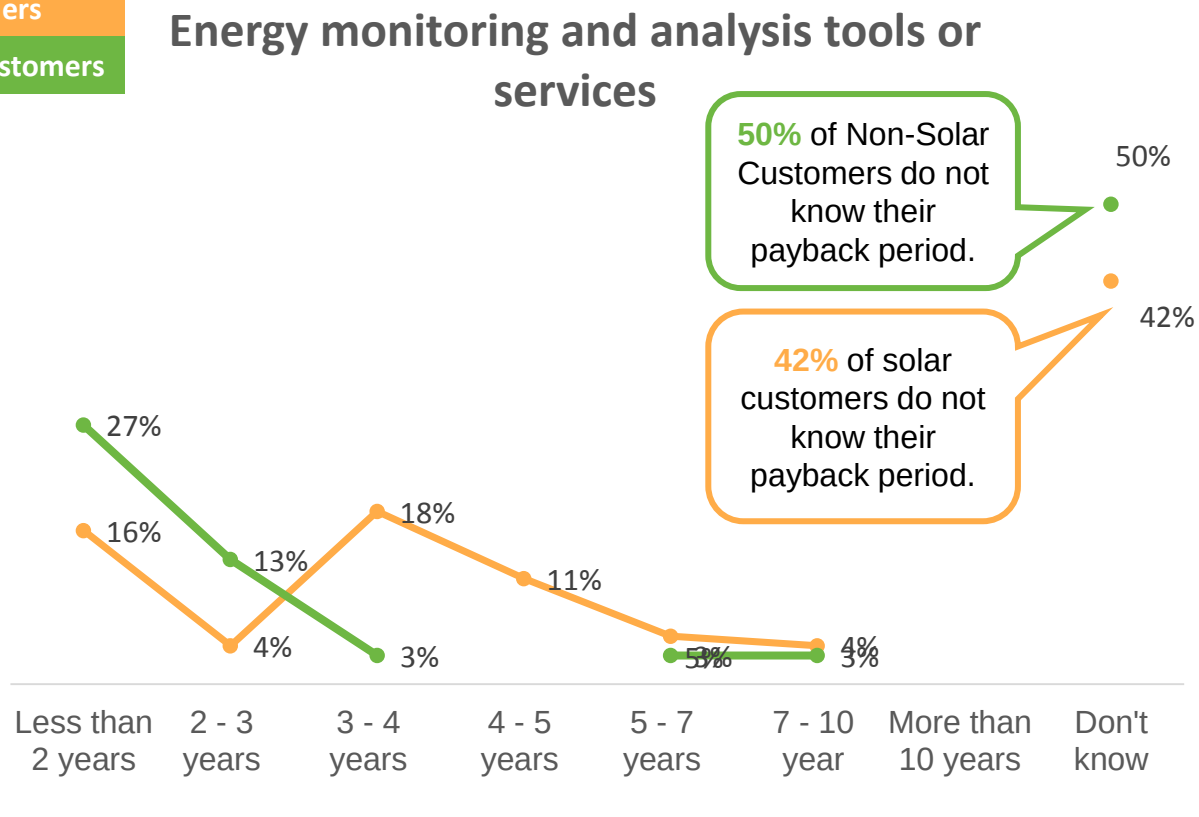
Building or process control system update



McNair yellowSquares Business Customer Survey October 2017
Solar n=28; Non-solar n=28
17. What was the payback period for your investment(s)?

Reported Payback Periods

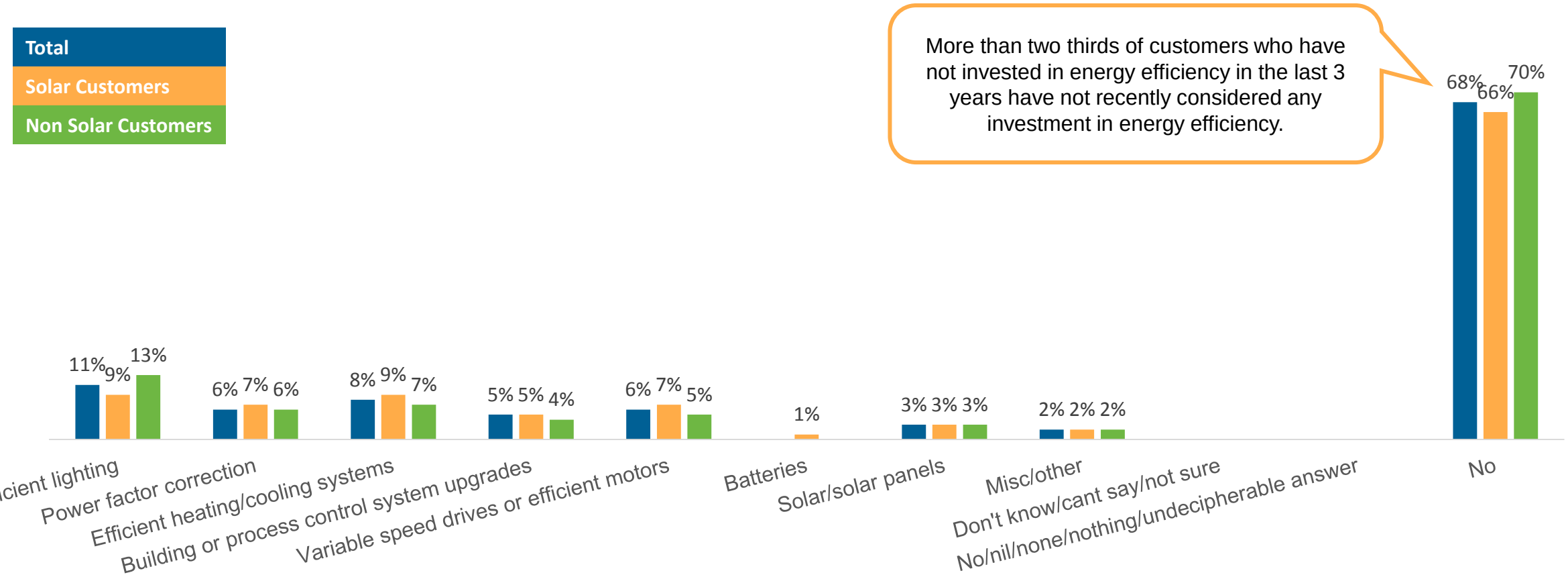




McNair yellowSquares Business Customer Survey October 2017
Solar n= 34; Non-solar n=17
17. What was the payback period for your investment(s)?

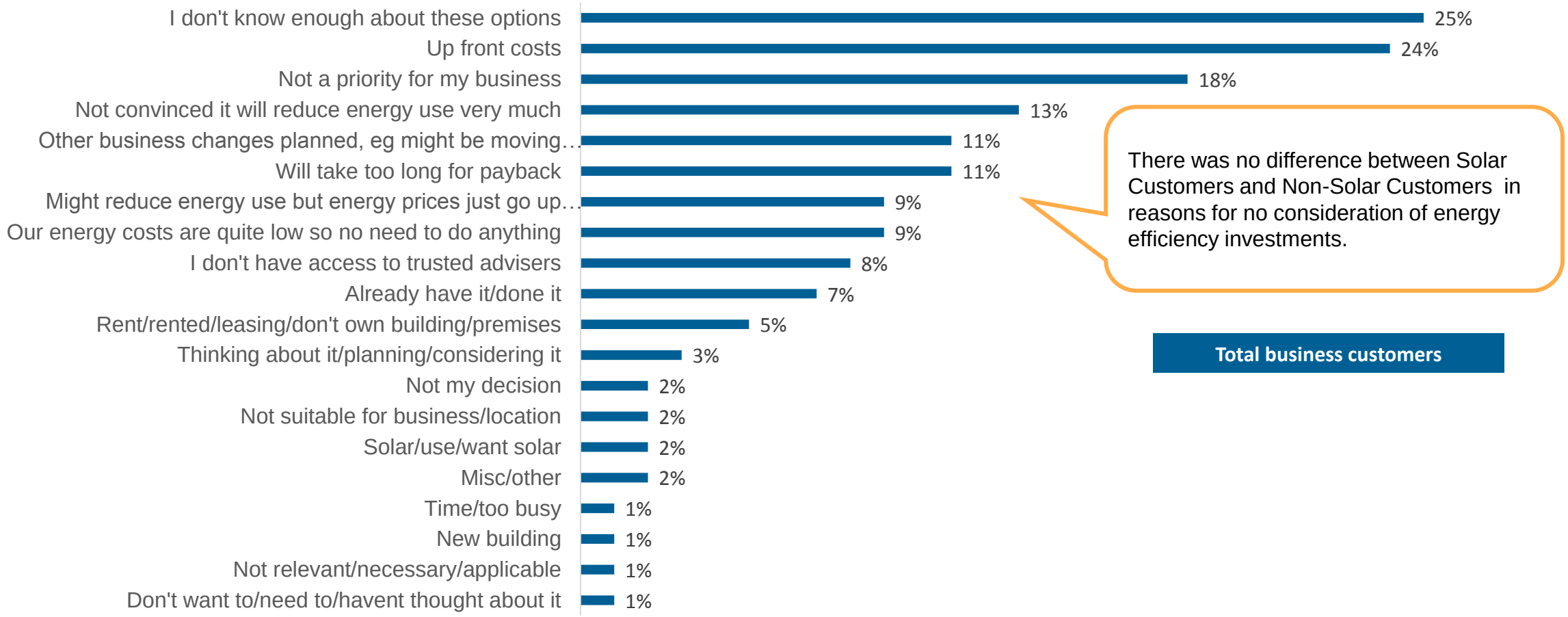
McNair yellowSquares Business Customer Survey October 2017
Solar n=55; Non-solar n=30
17. What was the payback period for your investment(s)?

Considered future investments in energy efficiency amongst those who have not invested in energy efficiency in the last 3 years



McNair yellowSquares Business Customer Survey October 2017
Total n= 617; Solar n= 302; Non-solar n=315
18. Have you recently considered implementing any of the following energy efficiency improvements for your business?

Of business customers who had not recently considered investments in energy efficiency, the main reasons were either cost or lack of knowledge

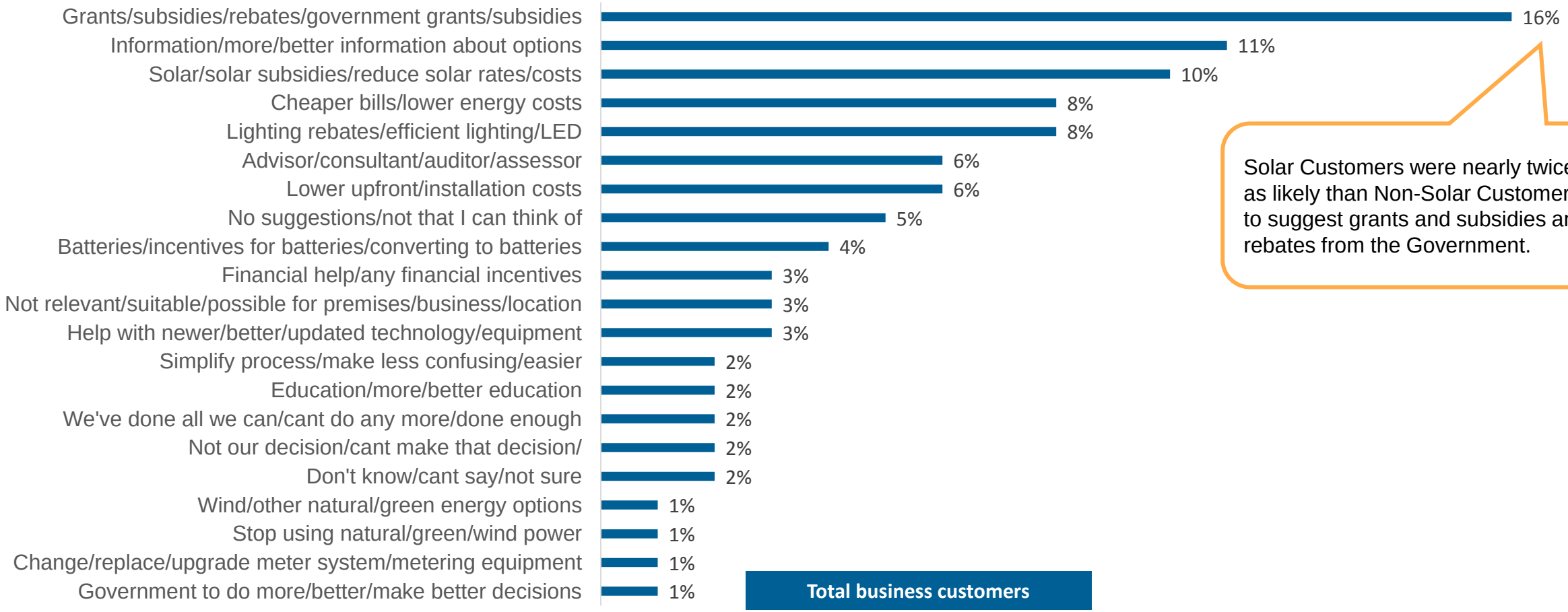


There was no difference between Solar Customers and Non-Solar Customers in reasons for no consideration of energy efficiency investments.

Total business customers

McNair yellowSquares Business Customer Survey October 2017
Total not recently considering investment in energy efficiency n=420
19. If you are not considering making energy efficiency improvements, what are the reasons why not?

Suggestions to assist businesses to become more energy efficient



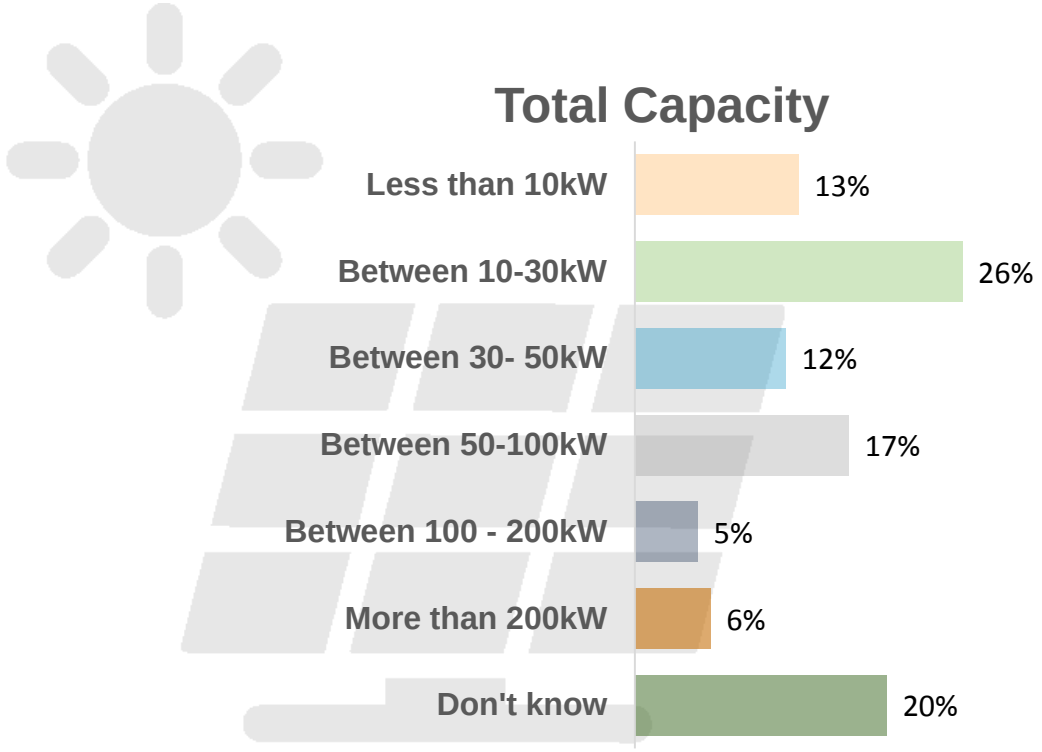
Solar Customers were nearly twice as likely than Non-Solar Customers to suggest grants and subsidies and rebates from the Government.

McNair yellowSquares Business Customer Survey October 2017
Total n=617
20. Do you have any suggestions about what could be done to assist or incentivise (either as subsidies or as assistance or information) your business to become more energy efficient?

Solar Customers:

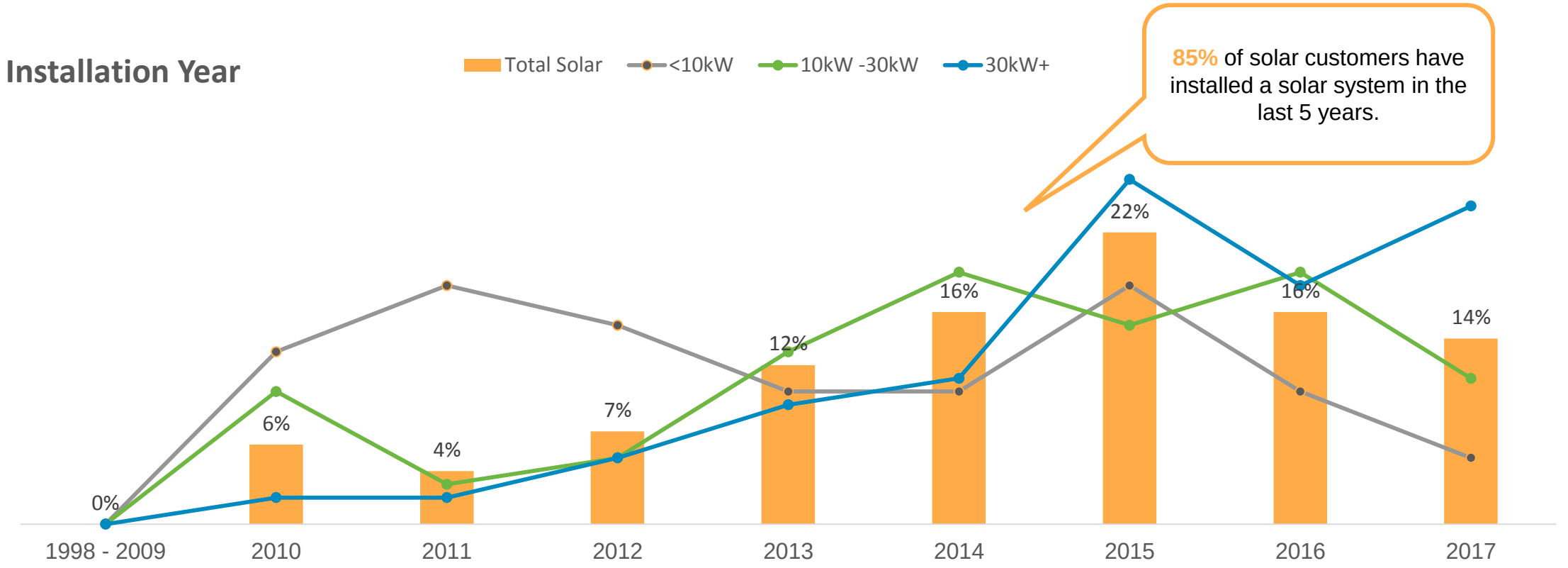
Experiences and Motivations for Installing Solar

Survey respondents and system capacity



McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
25. What is the total generation capacity of solar systems at this business premise?

The majority of solar customers had installed their solar system in the last 5 years

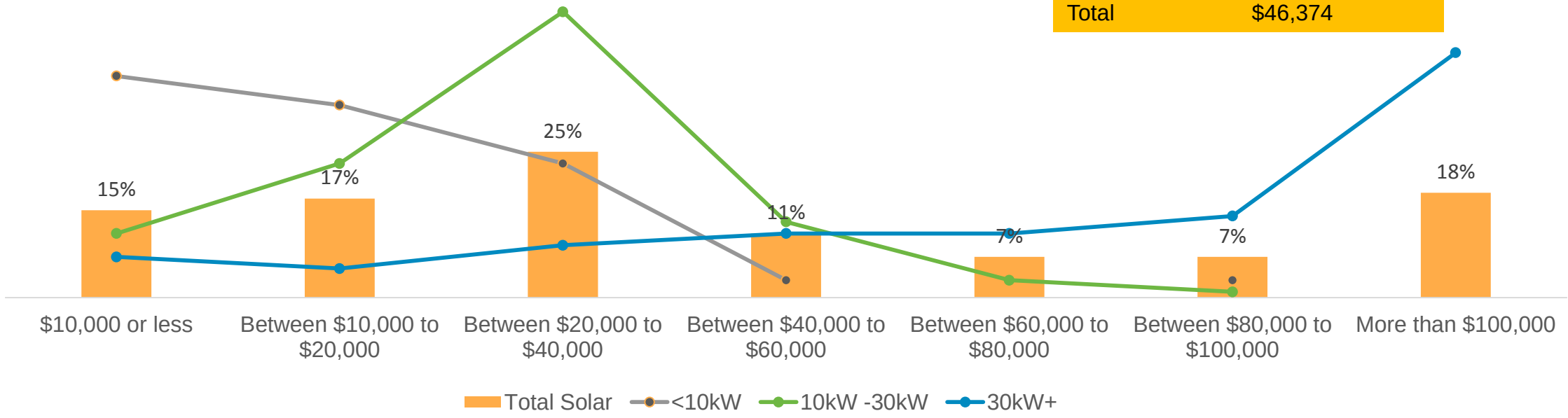


McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kW n=39; 10kW-30kW n=79; >30kw n= 123
26. What year was it installed (or the latest installation year if you have more than one system)?

Solar System Installation Cost

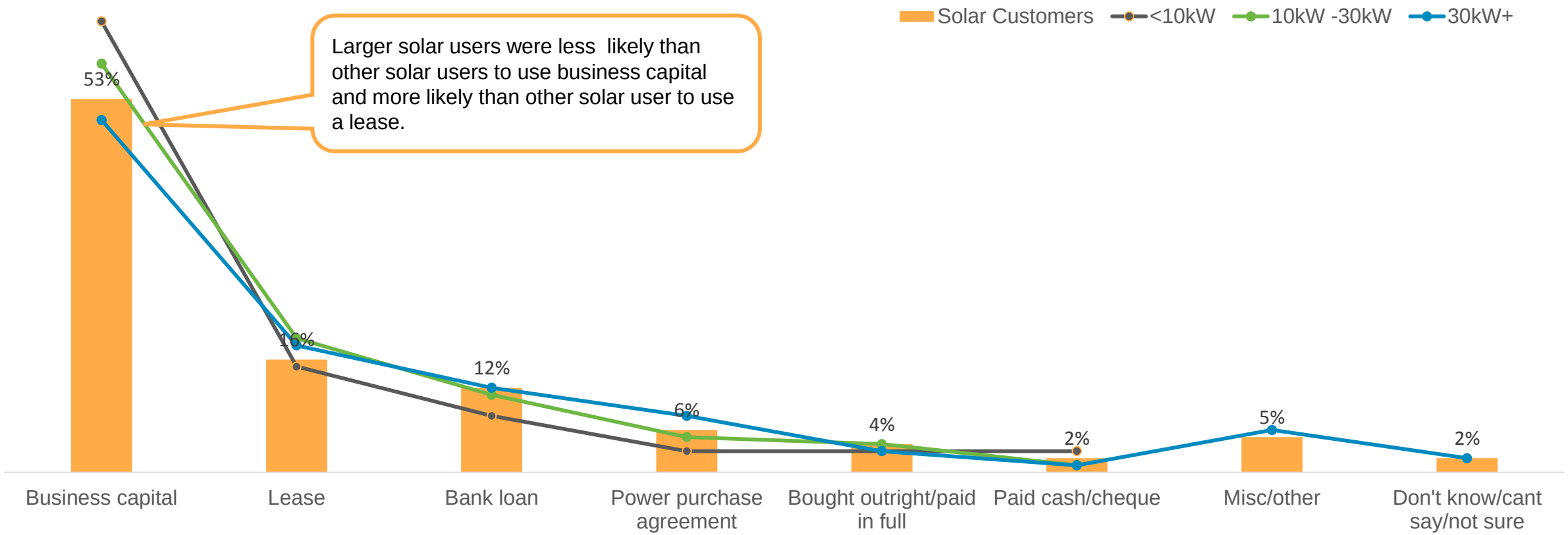
The average cost of the most recent system installed for survey respondents ranged between $19,000 - $73,000 across system sizes. The largest proportion of those surveyed (25%) paid between $20,000 and $40,000 for a system.

System Size	Average
<10kW	$19,400
10kW-30kW	$28,600
30kW+	$72,500
Total	$46,374



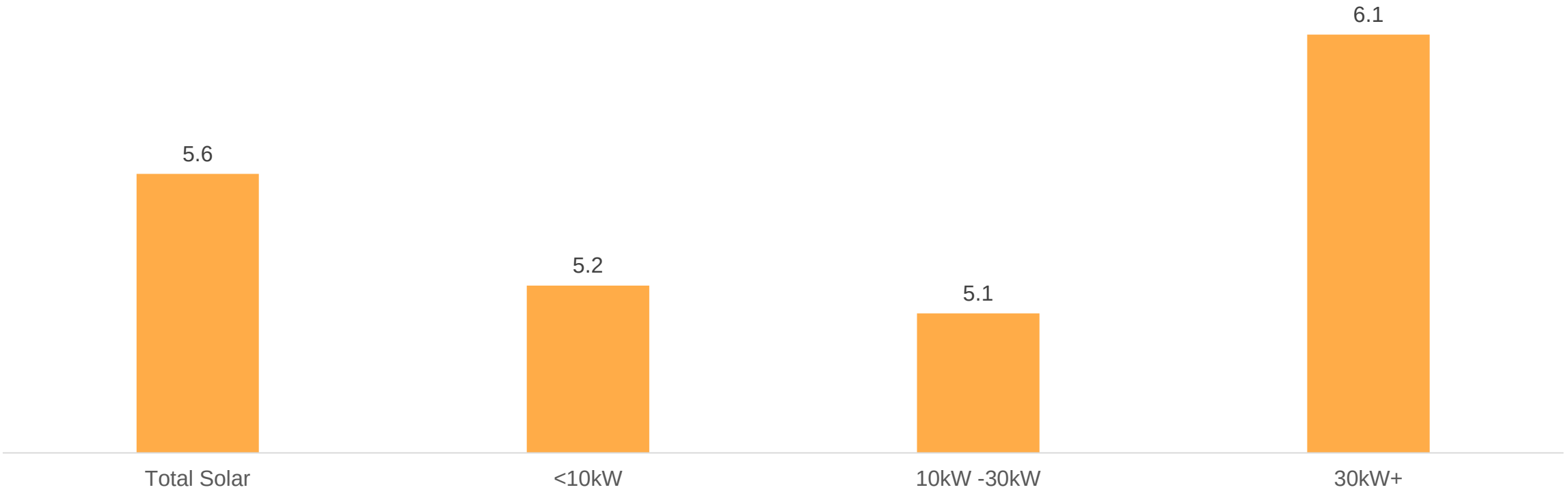
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
27. How much did you pay for your solar power system (after certificates/rebates)? Most recent solar installation if more than one.

The majority of solar customers used business capital to finance their solar installation



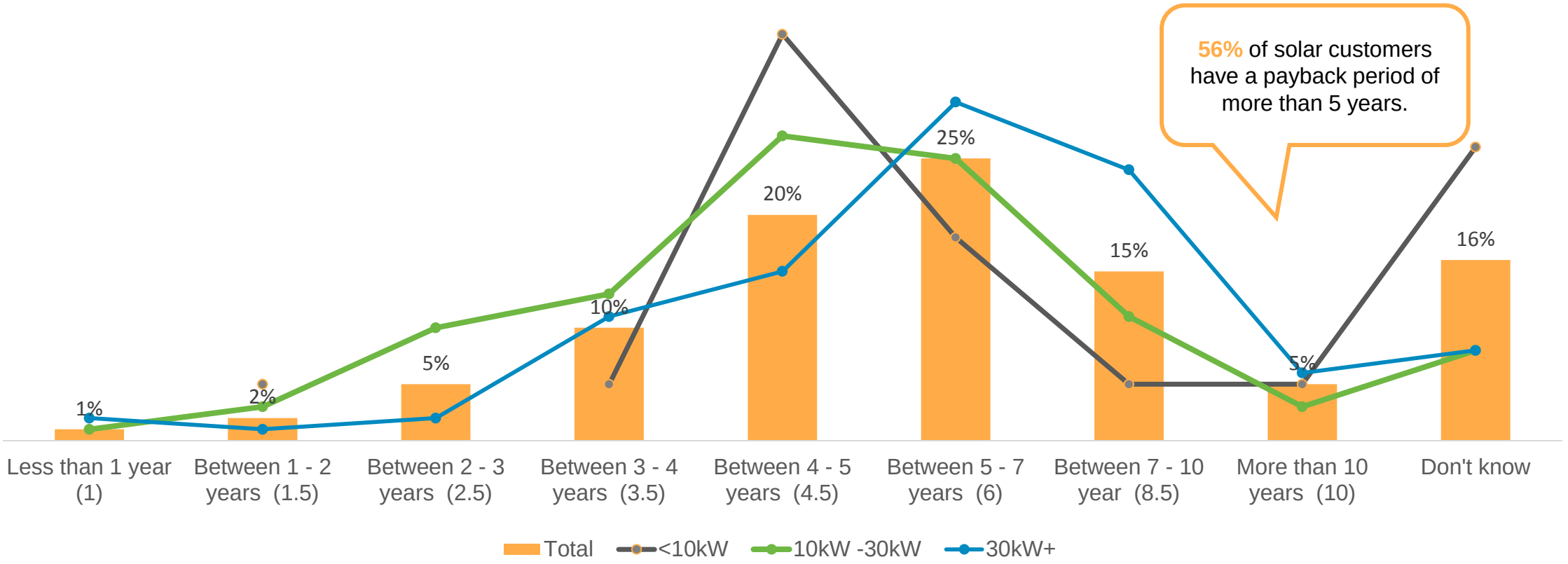
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
28. How did you finance the purchase?

The average payback periods for solar systems is 5.6 years with larger users having a payback period of more than 6 years.



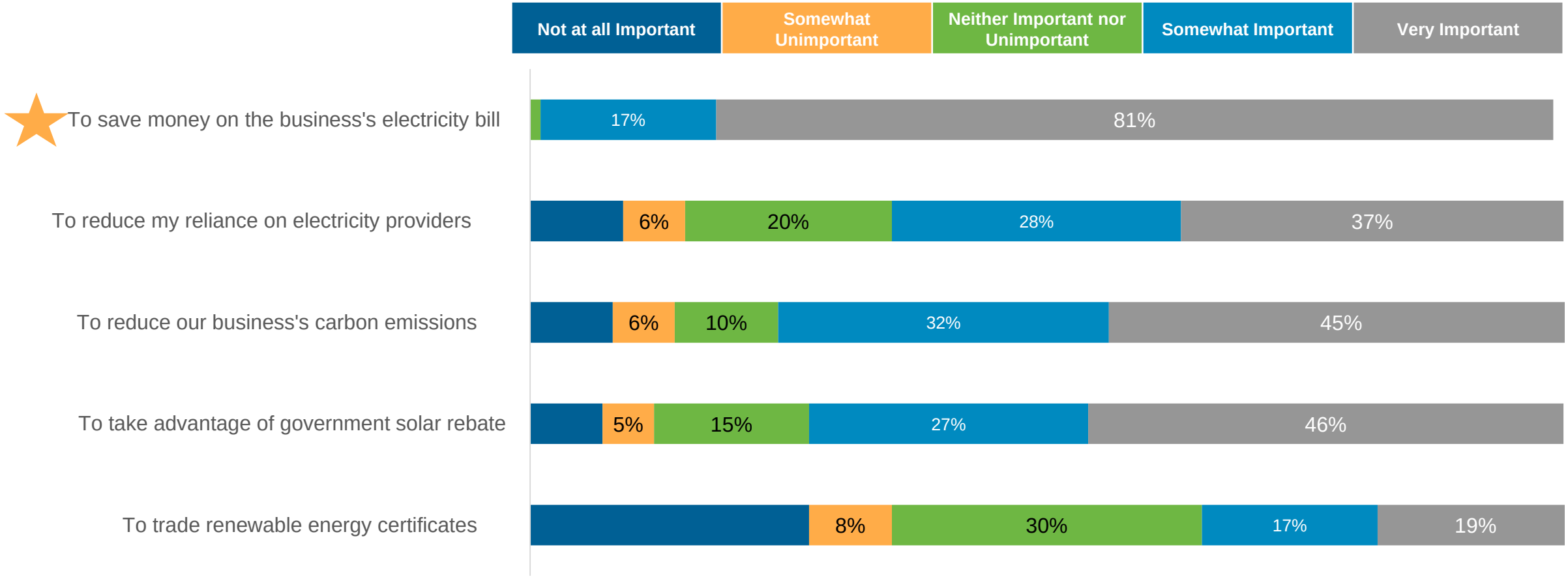
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123 2
29. What was (is anticipated to be) the payback period of the solar system?

Expected Payback Period



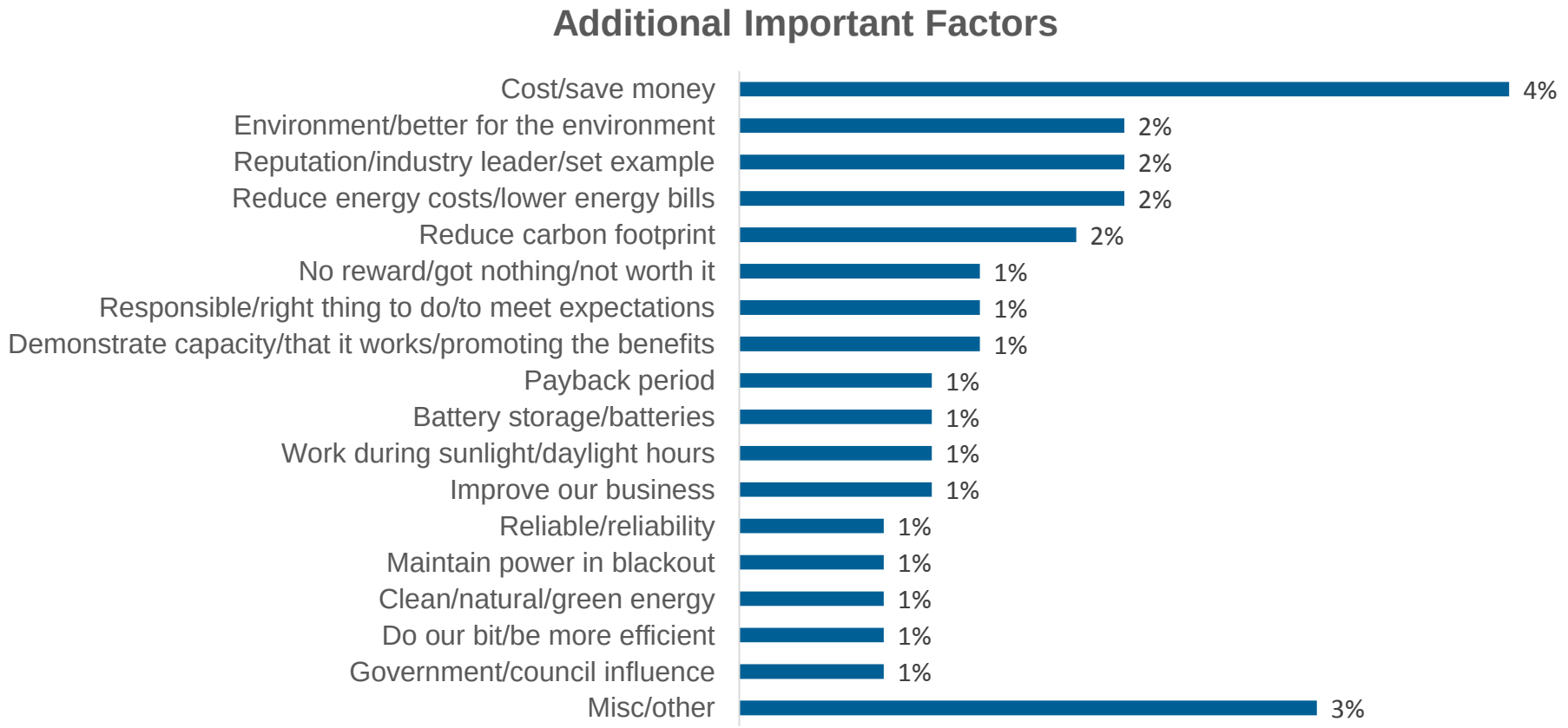
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
29. What was (is anticipated to be) the payback period of the solar system?

The most important factor in motivating solar purchase is to save money on the business's electricity bill



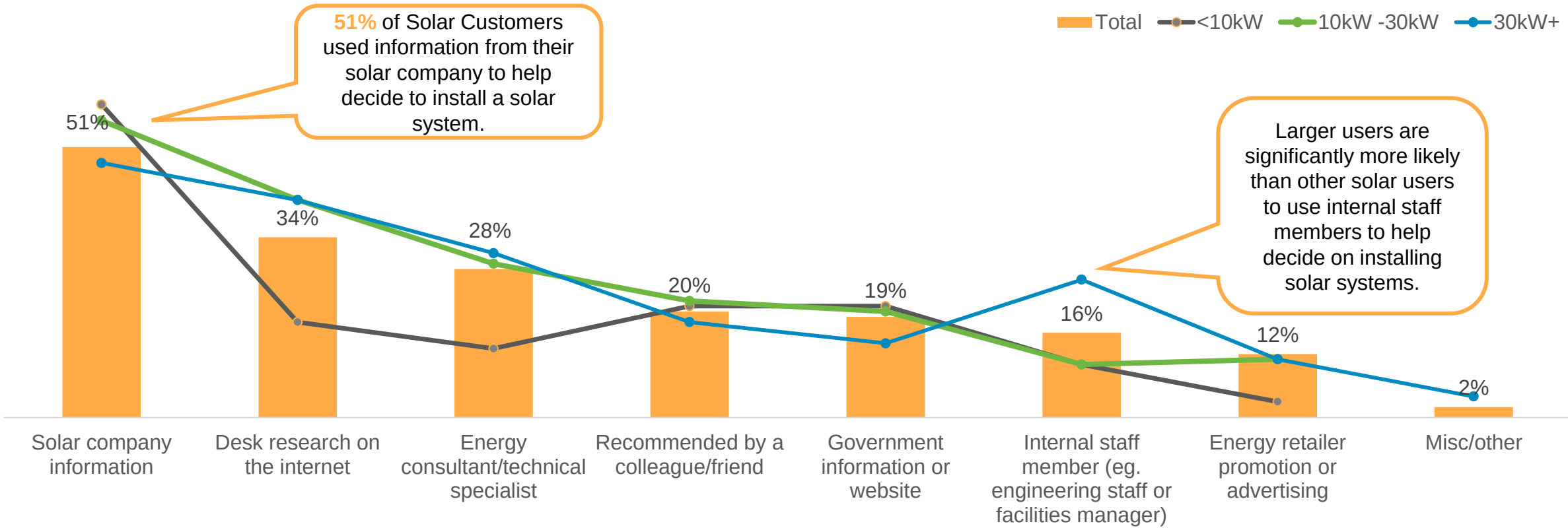
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302;
30. Select how important each of the following is to your business
30a. Are there any other issues that you consider important for motivating you to purchase a solar system for your business? - Yes

Additional Important Factors in Motivating Solar Purchase



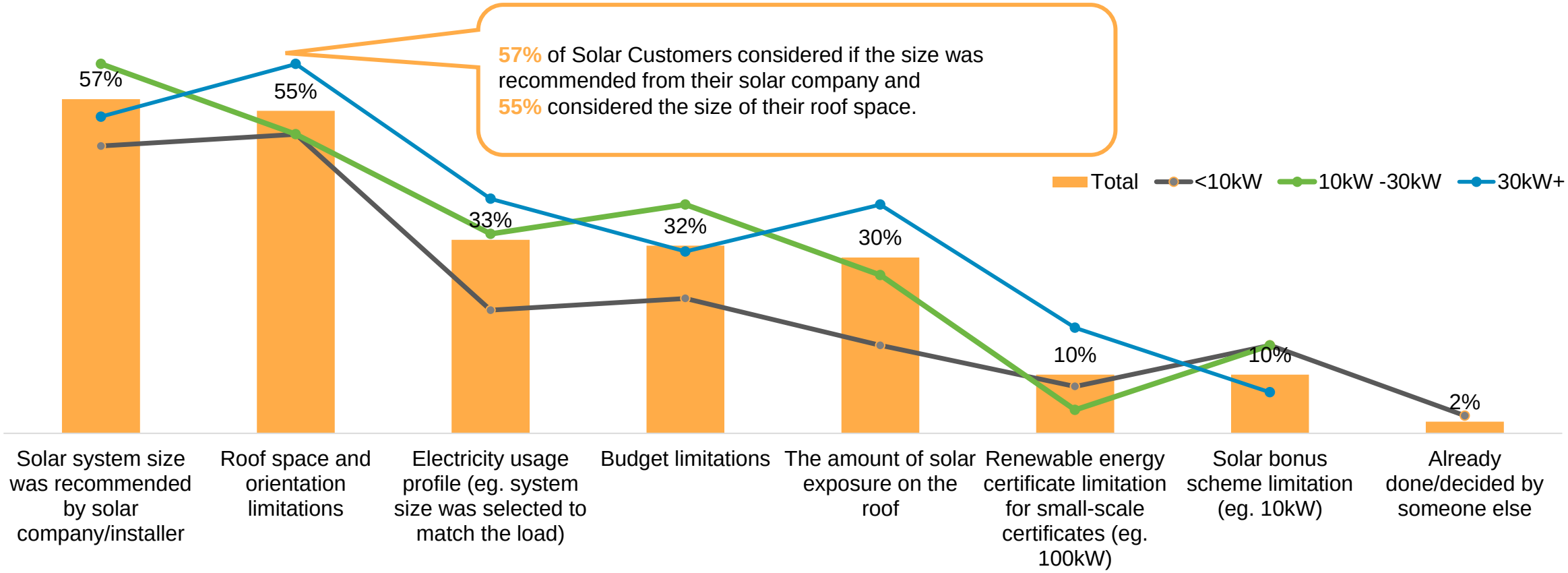
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302;
30. Select how important each of the following is to your business
30a. Are there any other issues that you consider important for motivating you to purchase a solar system for your business? - Yes

Solar customers relied mostly on information from the solar company to help them decide to install a solar system



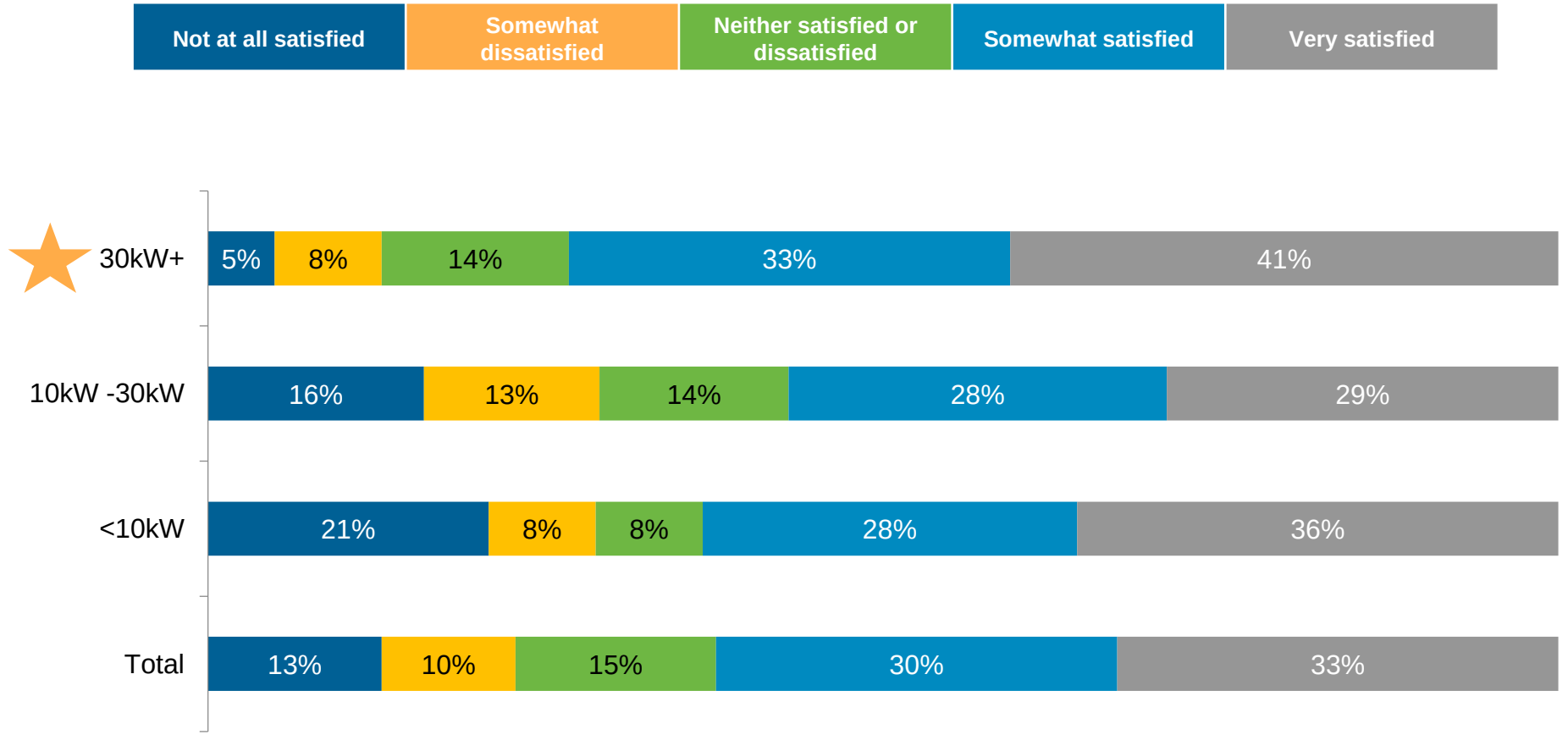
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123.
31. Which of these sources did you use to help decide to install a solar power system?

When deciding on the size of the system businesses considered information from their solar company and also their roof size

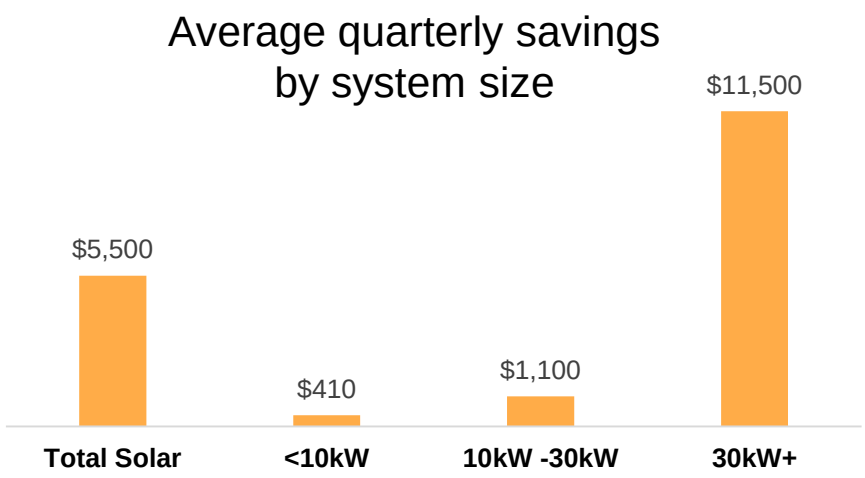


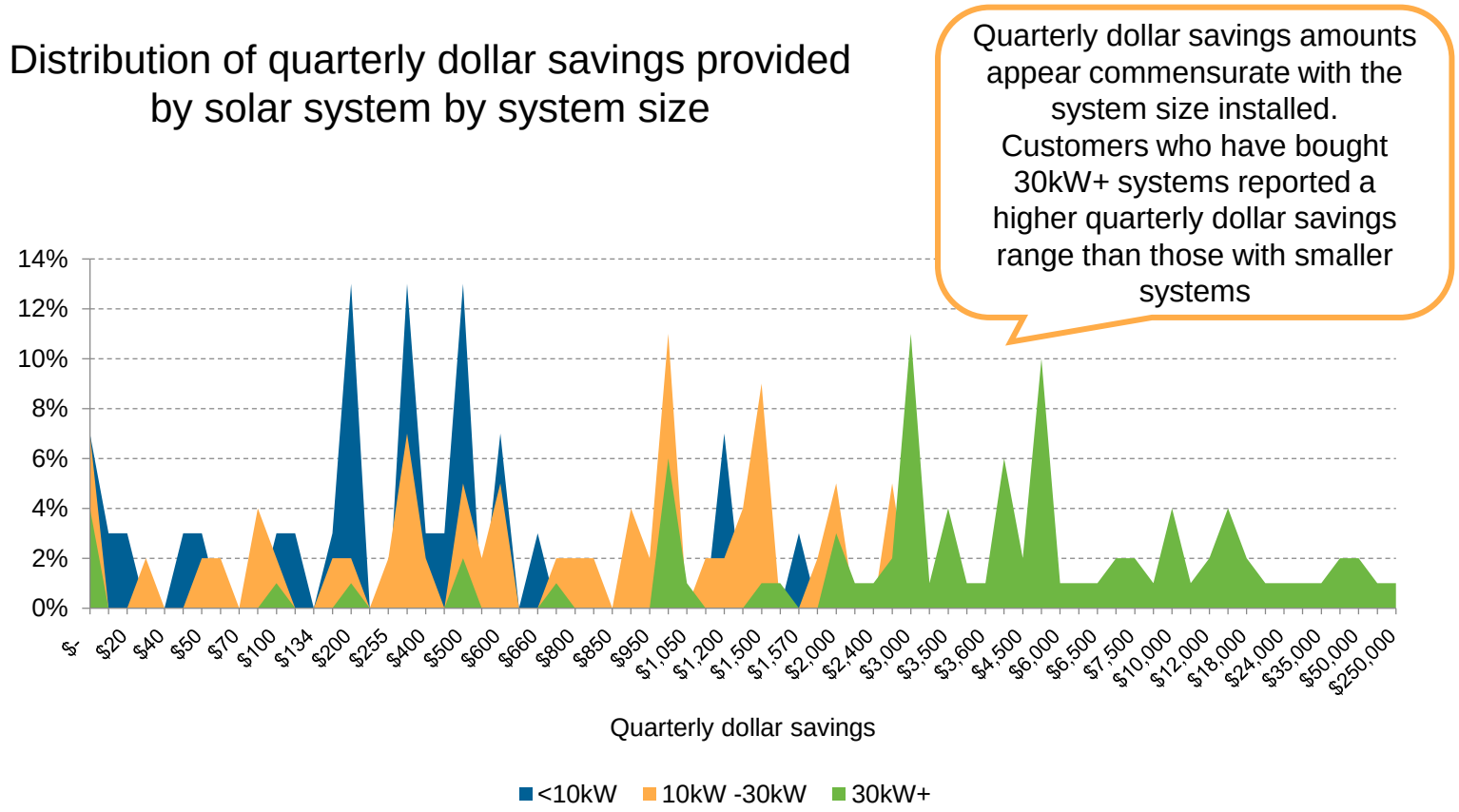
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
32. Which of the following factors did you have to consider when deciding what size of solar system to purchase?

Almost three quarters of customers surveyed who installed a 30kW+ system were the most satisfied (somewhat or very) with their cost savings compared to other groups



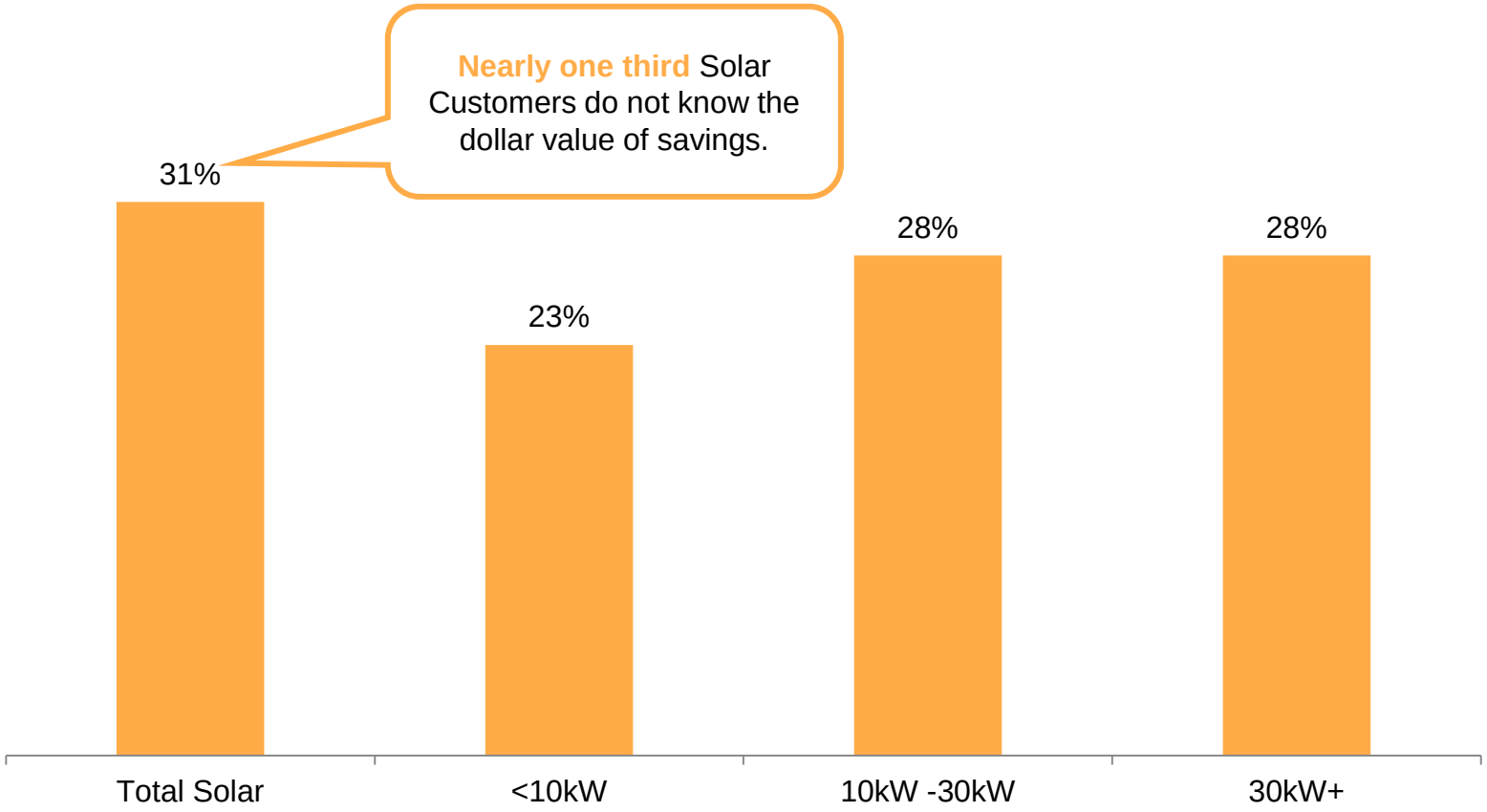
Quarterly dollar savings provided by solar system





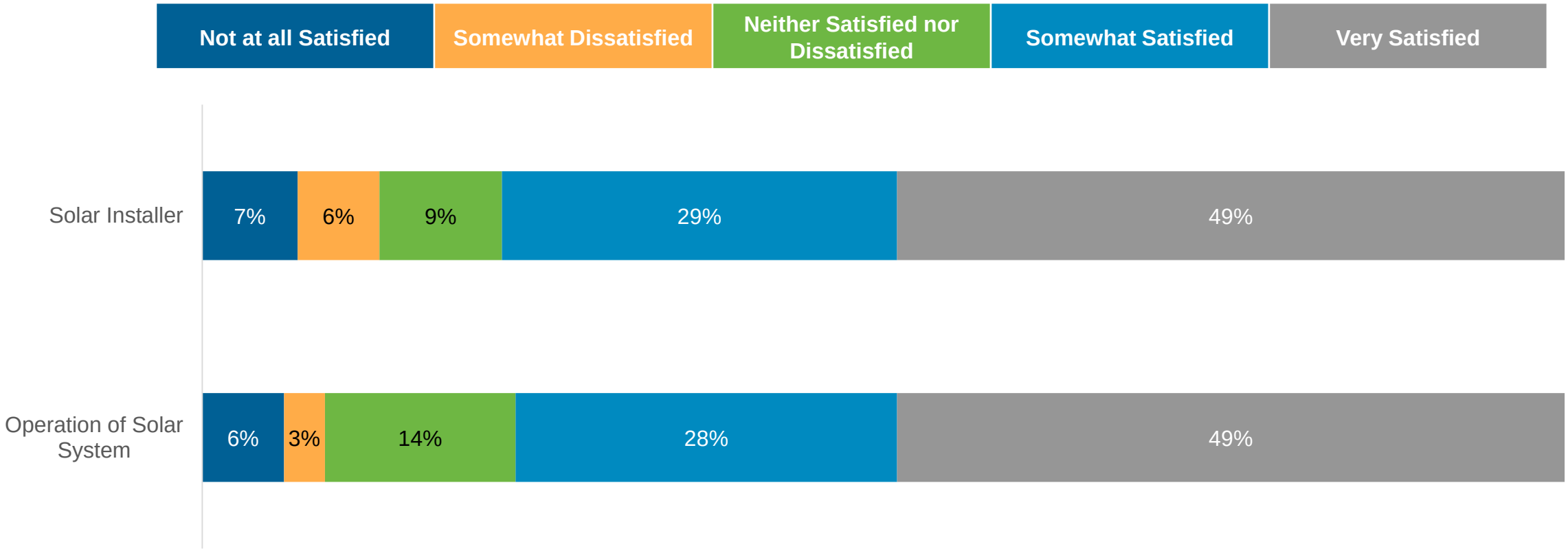
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
34. How much in dollar savings per quarter does your solar system provide to your business's electricity costs?

Solar customers who do not know the dollar value of their savings – answered “Don’t Know”



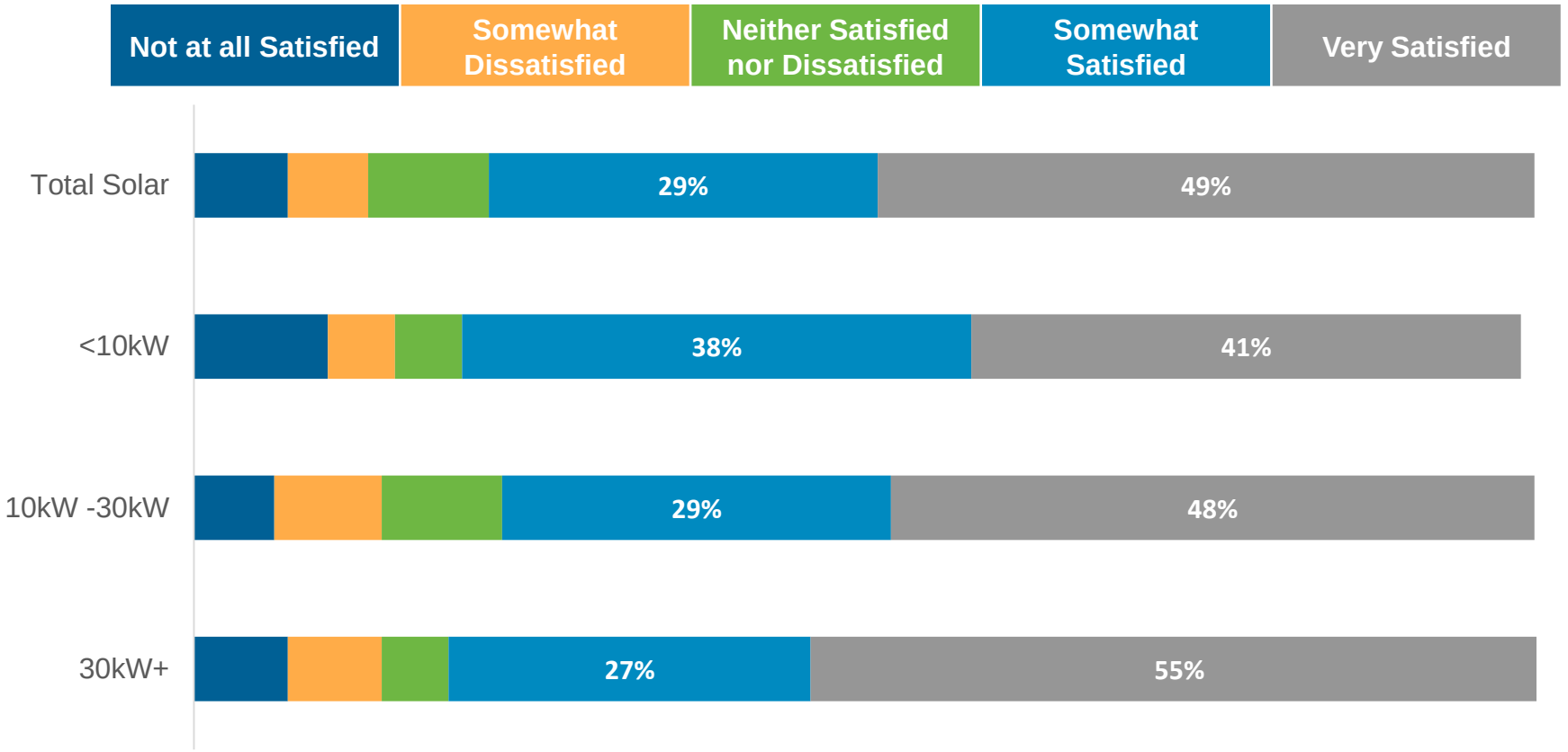
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
34. How much in dollar savings per quarter does your solar system provide to your business's electricity costs?

Over three quarters of solar customers were satisfied with their solar installer and also with the operation of their system



McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
35. How satisfied or dissatisfied were you with your solar system installer?
36. How satisfied overall are you with the operation of your solar system?

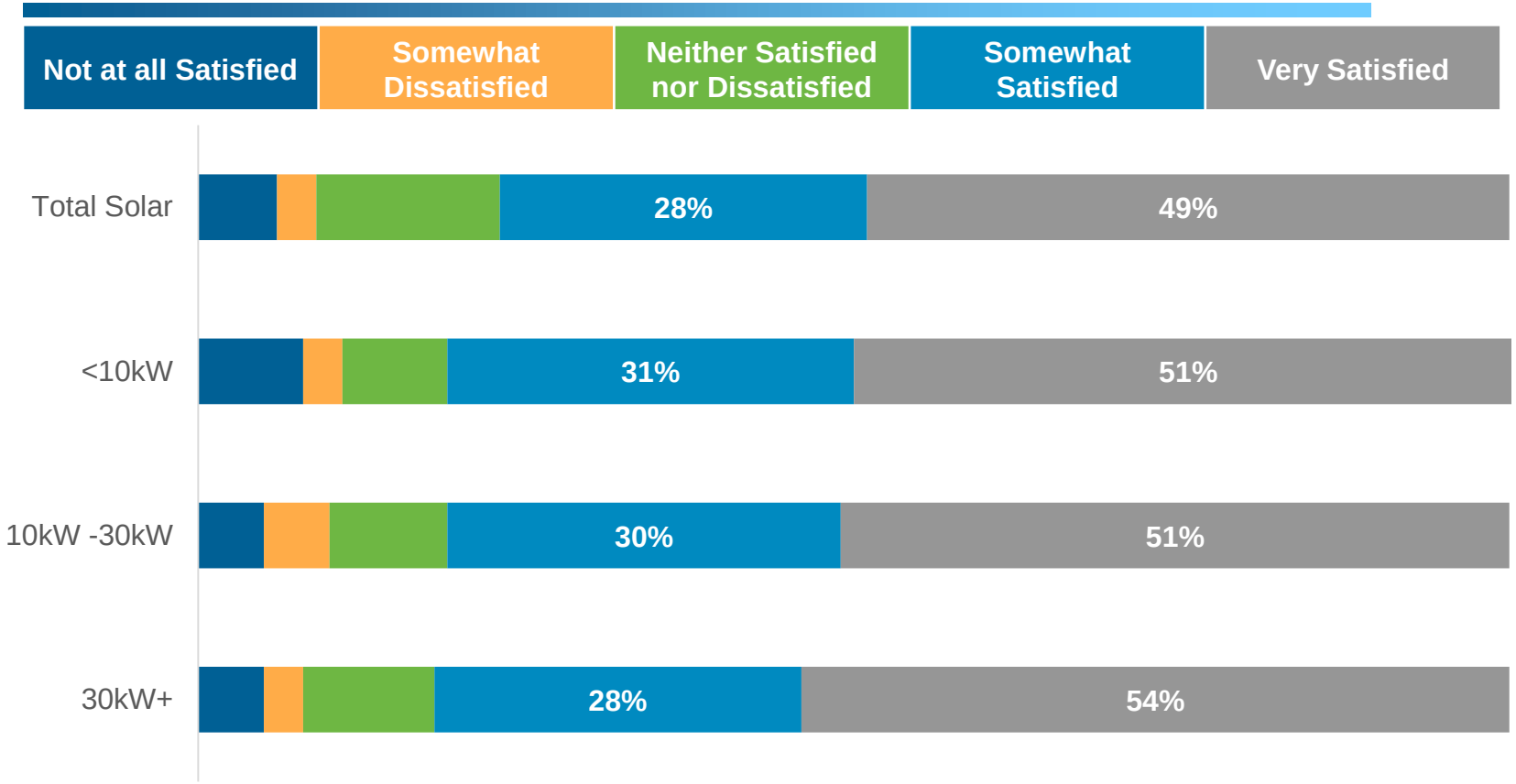
Satisfaction with Solar System Installer



More than three quarters were satisfied with their Solar Installer.

McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123 29.
35. How satisfied or dissatisfied were you with your solar system installer?

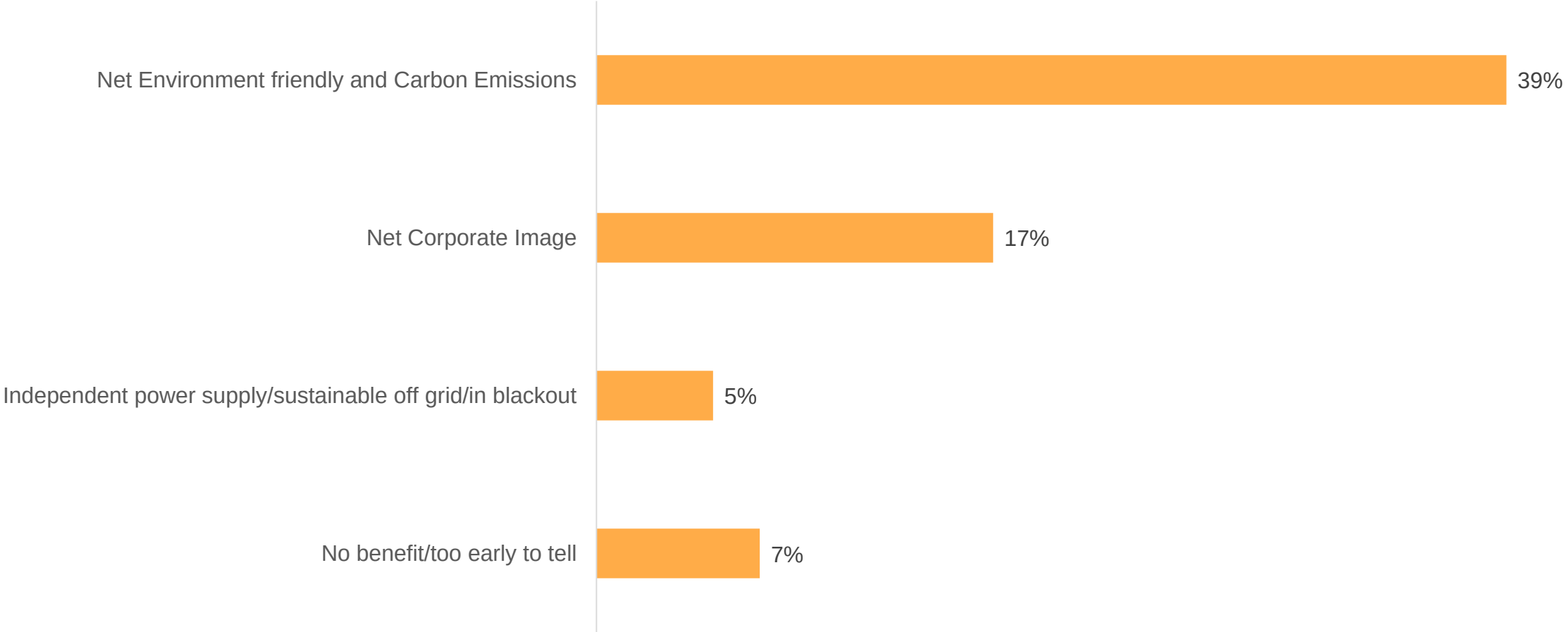
Satisfaction with Operation of the Solar System



More than **three quarters** were satisfied with the operation of their solar system.

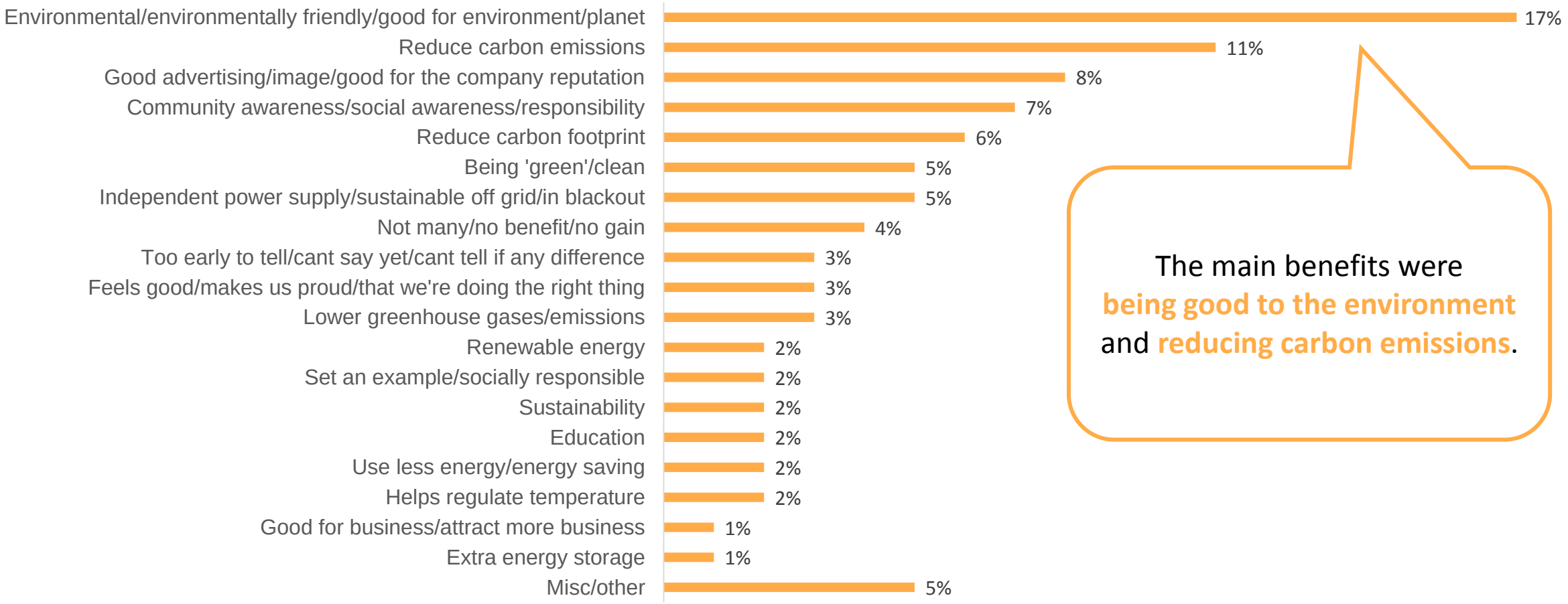
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123 29.
36. How satisfied overall are you with the operation of your solar system?

Apart from financial benefits solar customers are also likely to report environmental benefits and reductions to their carbon emissions



McNair yellowSquares Business Customer Survey October 2017
Total Solar n= 302
37. What other benefits (other than financial) do you think you have gained from having a solar system?

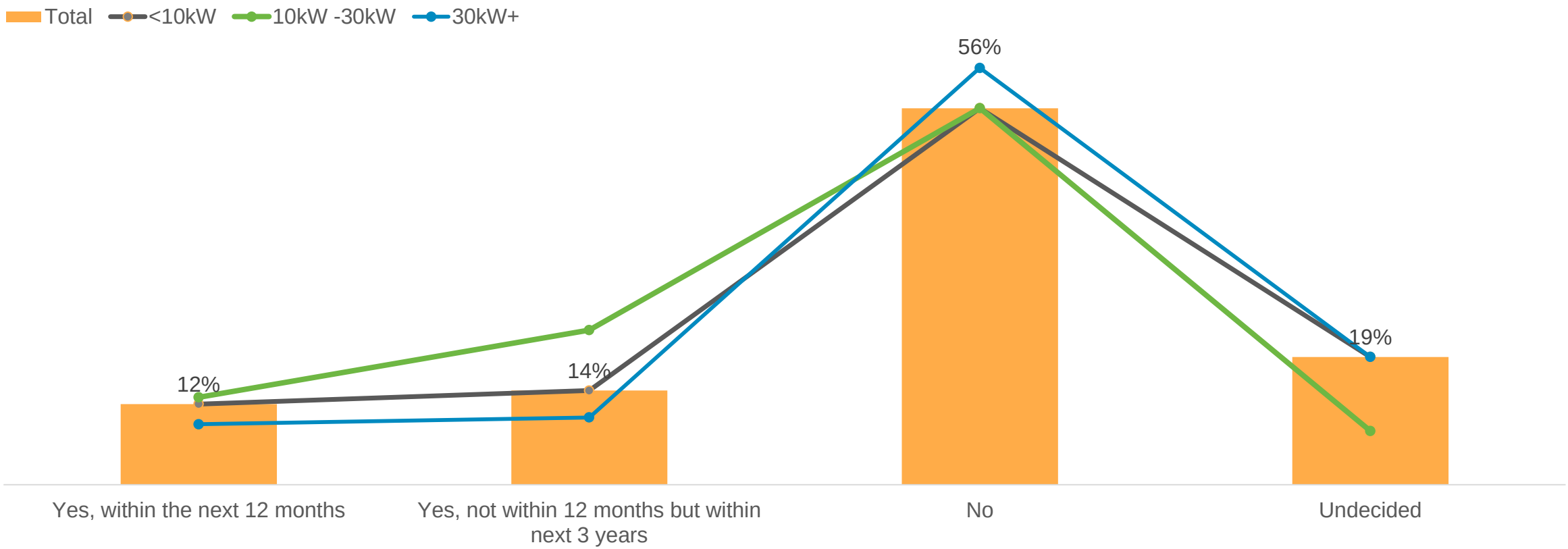
Details of benefits gained from owning a solar system



The main benefits were **being good to the environment** and **reducing carbon emissions**.

McNair yellowSquares Business Customer Survey October 2017
Total Solar n= 302
37. What other benefits (other than financial) do you think you have gained from having a solar system?

One quarter of solar customers are considering future solar installations and a further 19% are undecided

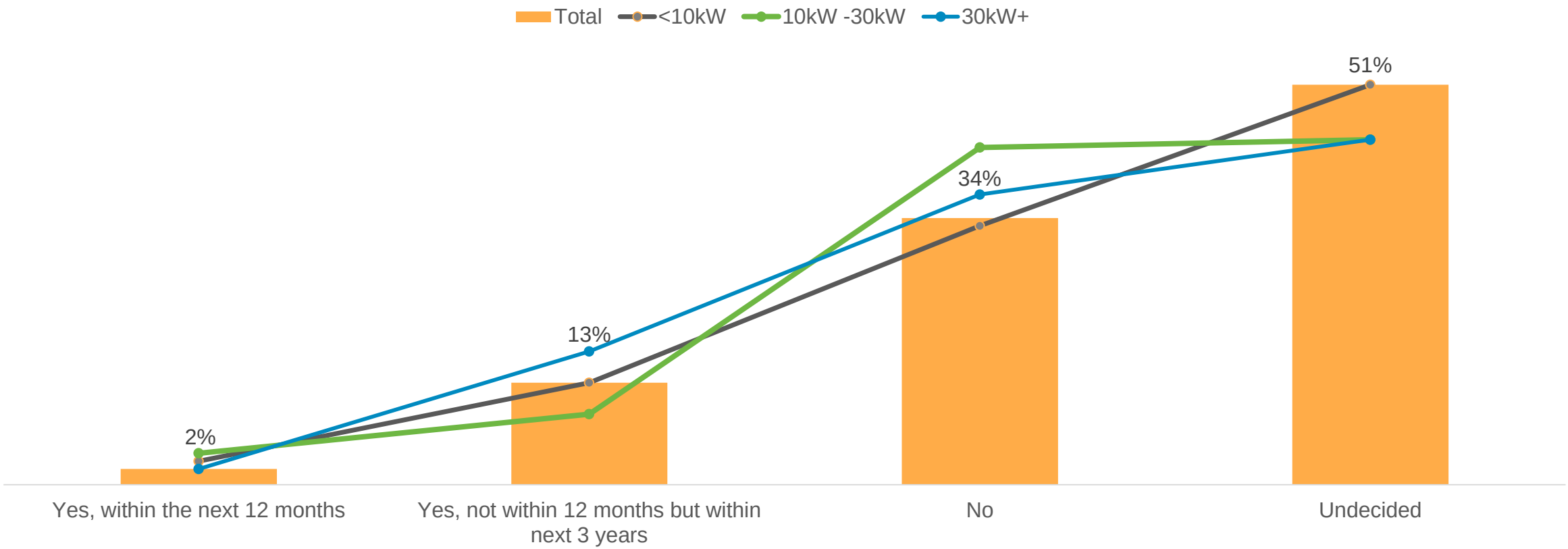


McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
43. Do you plan to install additional solar systems in the future?

Solar Customers:

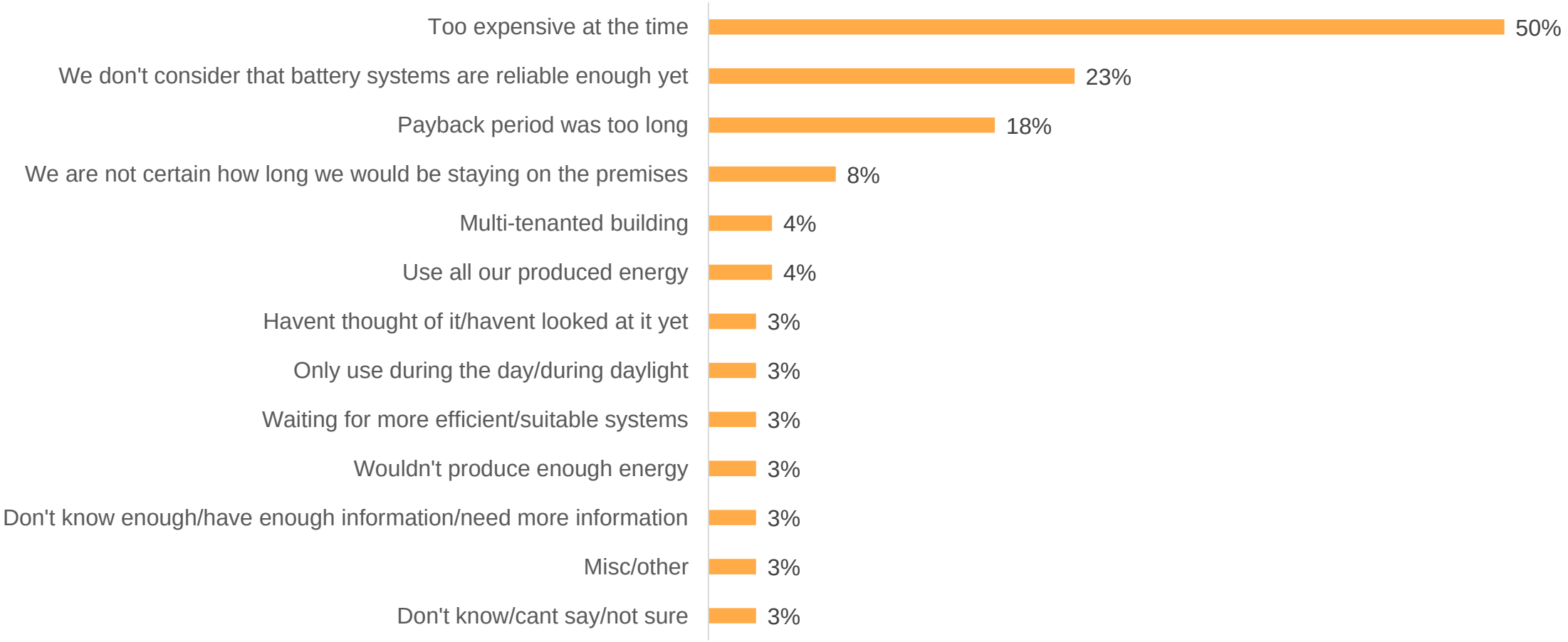
Questions about Batteries

15% of solar customers would consider battery storage installations in the next 3 years



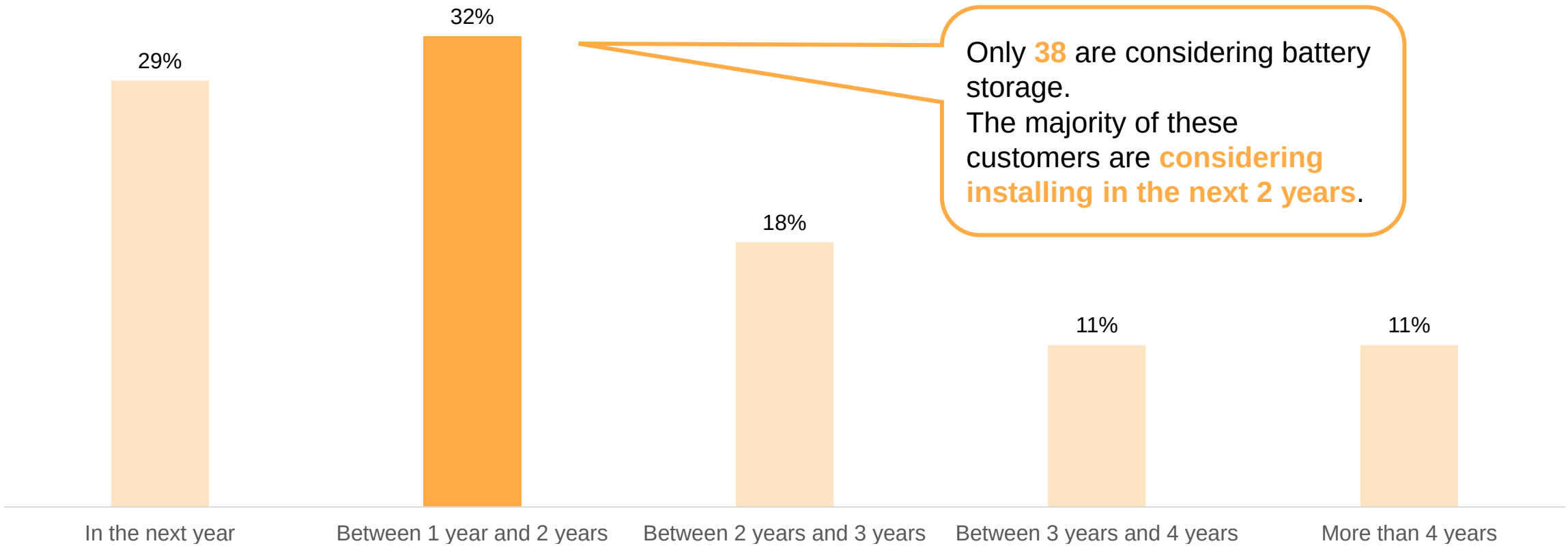
McNair yellowSquares Business Customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123
44. Has your business considered installing a battery storage system? (not including Uninterruptable Power Supply (UPS) systems)

The main reasons for not considering batteries is that it is too expensive or not reliable enough



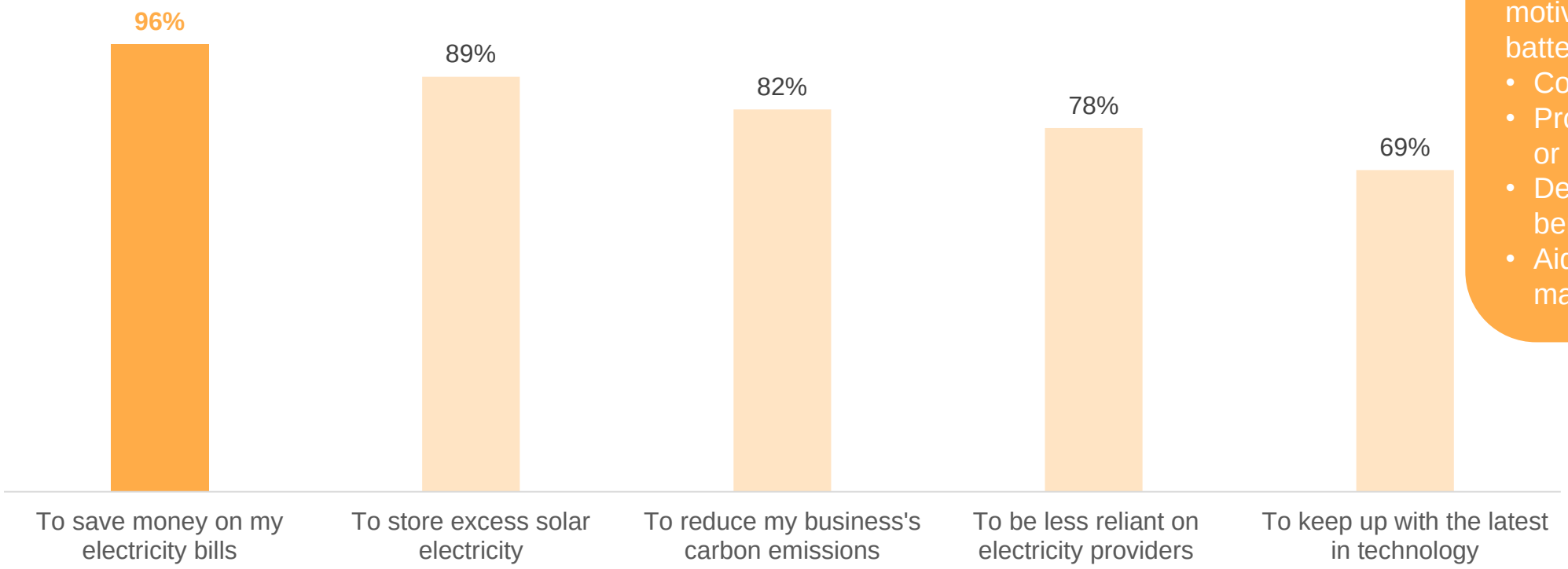
McNair yellowSquares Business Customer Survey October 2017
Total Solar not considering battery storage n= 257
45. What were the reasons why you have not considered battery storage or have not gone ahead with a battery system?

Installation of Battery Storage



McNair yellowSquares Business Customer Survey October 2017
Total Solar considering battery storage n= 38
46. When are you planning to purchase a battery system?

The main reason to install battery storage is to save money on electricity bills

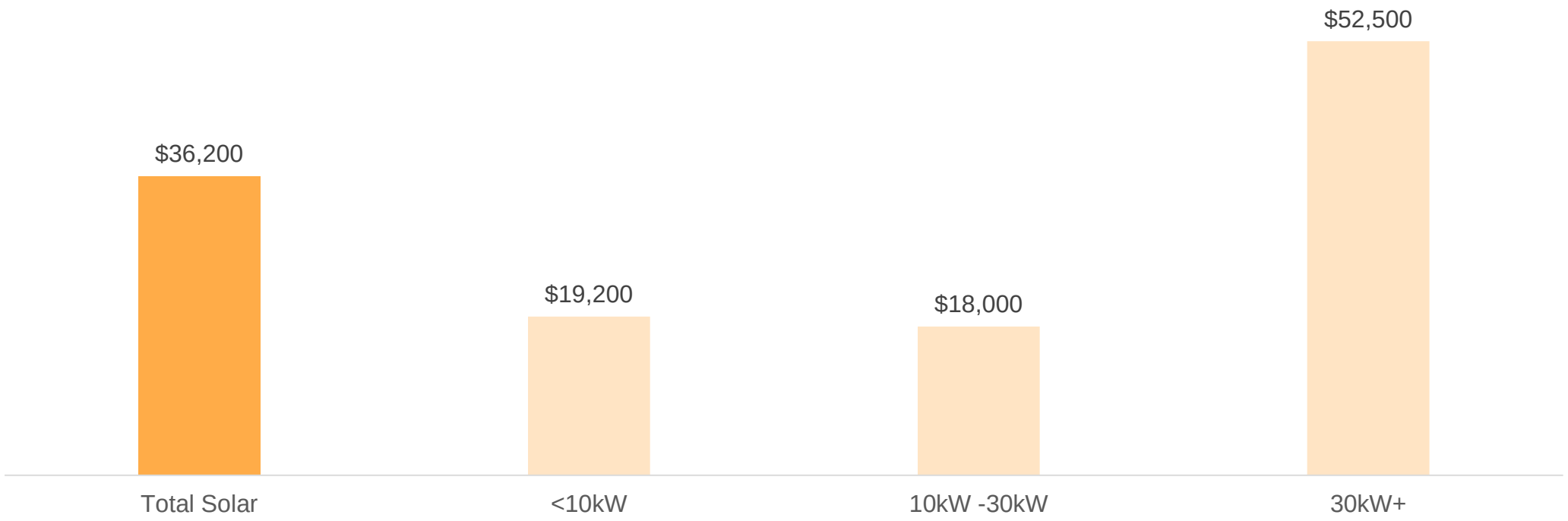


Other reasons to motivate purchase of battery storage:

- Cost
- Provide an alternative or emergency supply
- Demonstrate capacity benefits
- Aid demand management

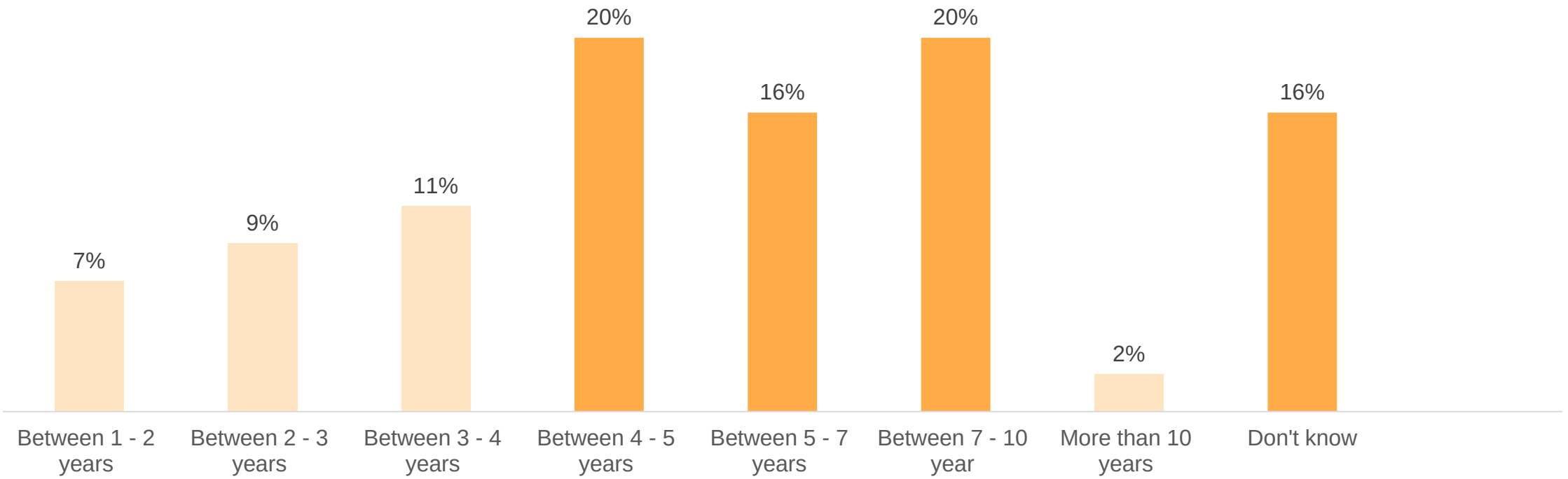
McNair yellowSquares Business Customer Survey October 2017
Total Solar own or considering battery storage n= 45
47. Below is a list of possible reasons for purchasing a battery system. How important would each of the of the following factors be for your business?
47a. Are there any other issues that you consider important for motivating you to purchase a battery system for your business?

Solar customers surveyed who would consider buying a battery said they expected to pay $36,200 on average for a battery storage system



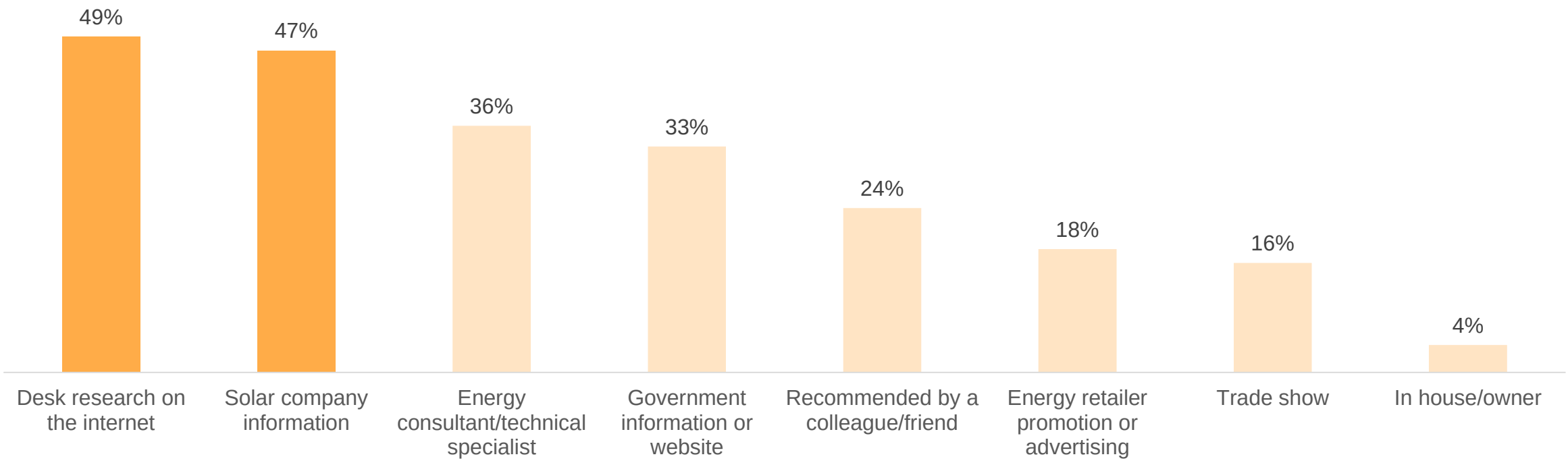
McNair yellowSquares Business Customer Survey October 2017
Total Solar own or considering battery storage n= 45
48. What is the maximum amount you would pay to purchase a battery storage system for your business?

Solar customers considering to buy a battery storage system expected a maximum payback period of 5.3 years



McNair yellowSquares Business Customer Survey October 2017
Total Solar own or considering battery storage n= 45
49. What would be the maximum payback period for you to buy a battery storage system?

Customers considering battery storage have either used desk research or information from their solar company to support their decision to purchase a battery

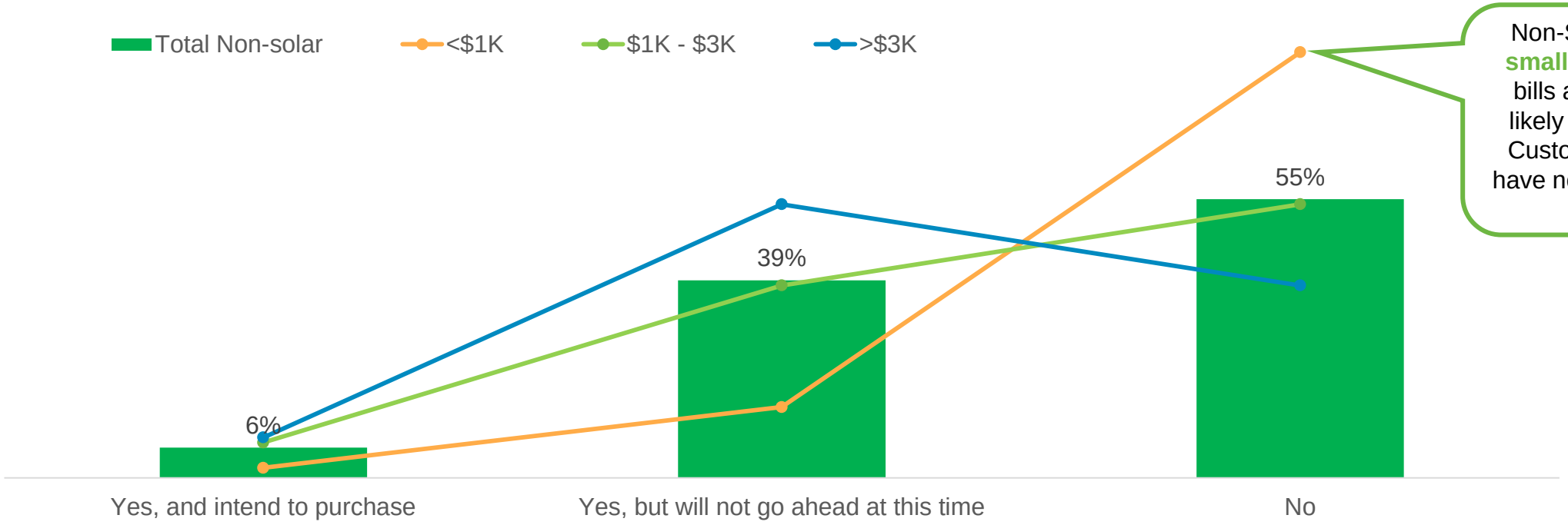


McNair yellowSquares Business Customer Survey October 2017
Total Solar own or considering battery storage n= 45
50. Which of the following information sources would you use to help decide whether to install a battery storage system?

Non-Solar Customers:

Intentions to Invest in Solar

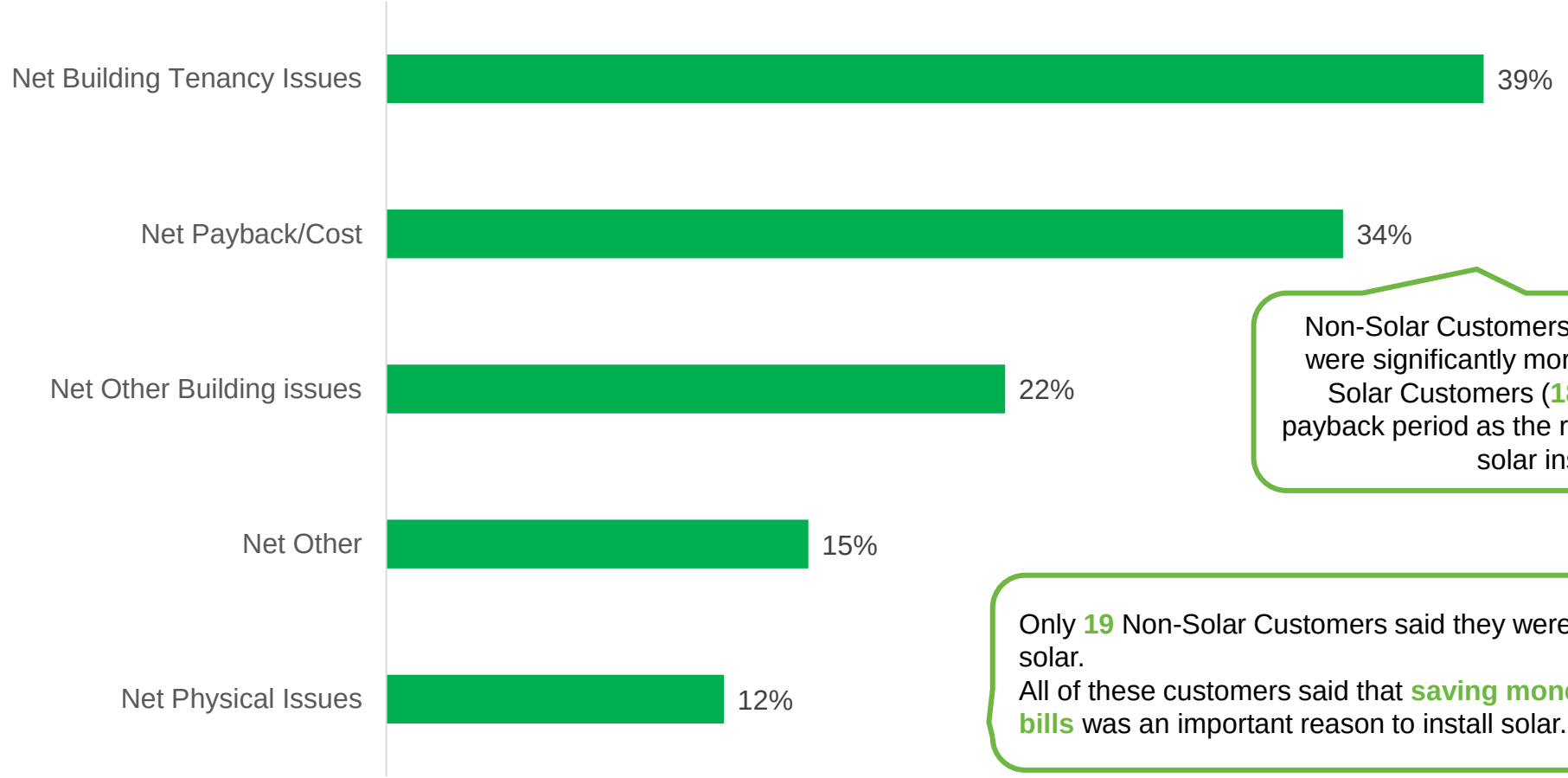
6% of Non-Solar customers intend to purchase solar whilst 39% have considered and decided not to proceed



Non-Solar Customers with **smaller** quarterly electricity bills are significantly more likely than other Non-Solar Customers to say that they have not considered installing solar.

McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar n=315; Small n= 91; Medium n= 68; Large n= 156
51. Has your business ever considered installing a solar system?

The main deterrents to investing in solar are tenancy, cost and building issues

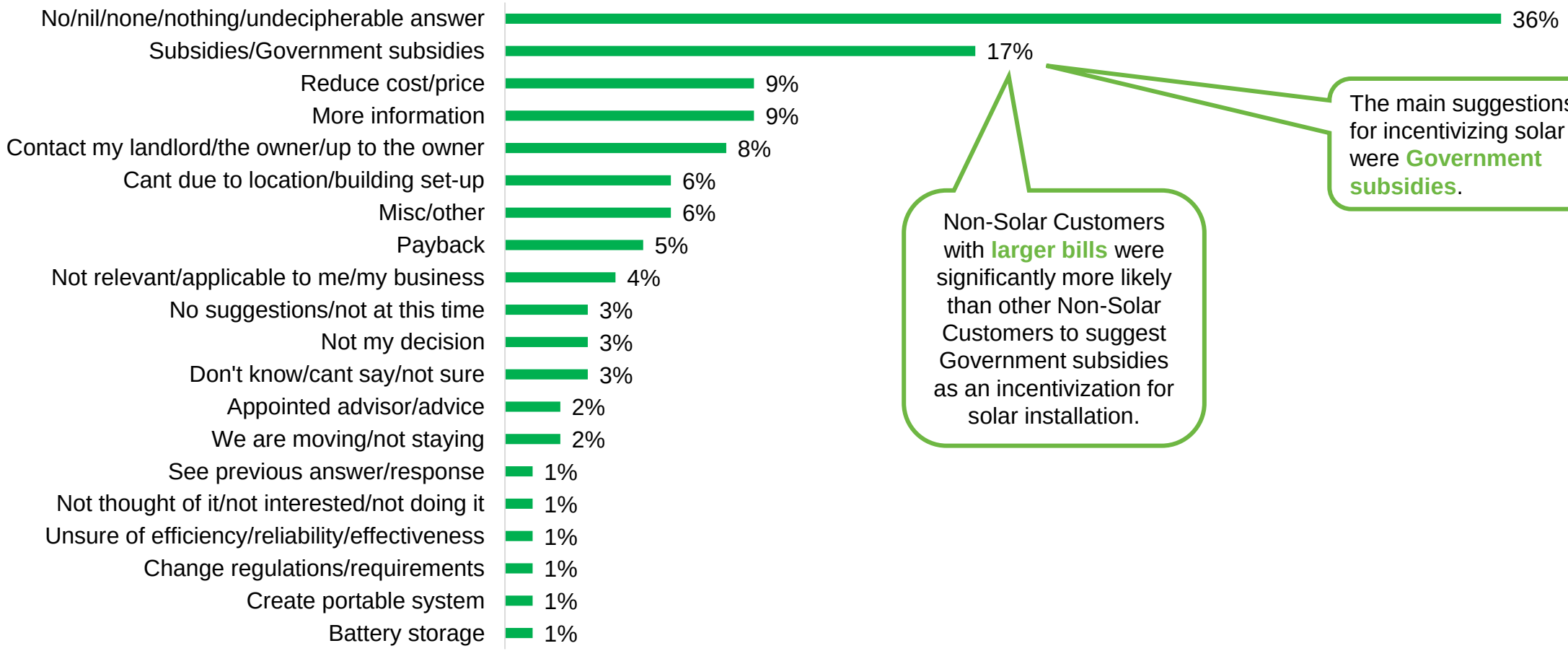


Non-Solar Customers with **larger bills (26%)** were significantly more likely than other Non-Solar Customers (**18%**) to give a too long payback period as the reason for not considering solar installation.

Only **19** Non-Solar Customers said they were considering installation of solar.
All of these customers said that **saving money on their electricity bills** was an important reason to install solar.

McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar n=315
52. What were the reasons why you have not considered solar or did not go ahead with solar?

Suggestions for Incentivizing Solar Installation

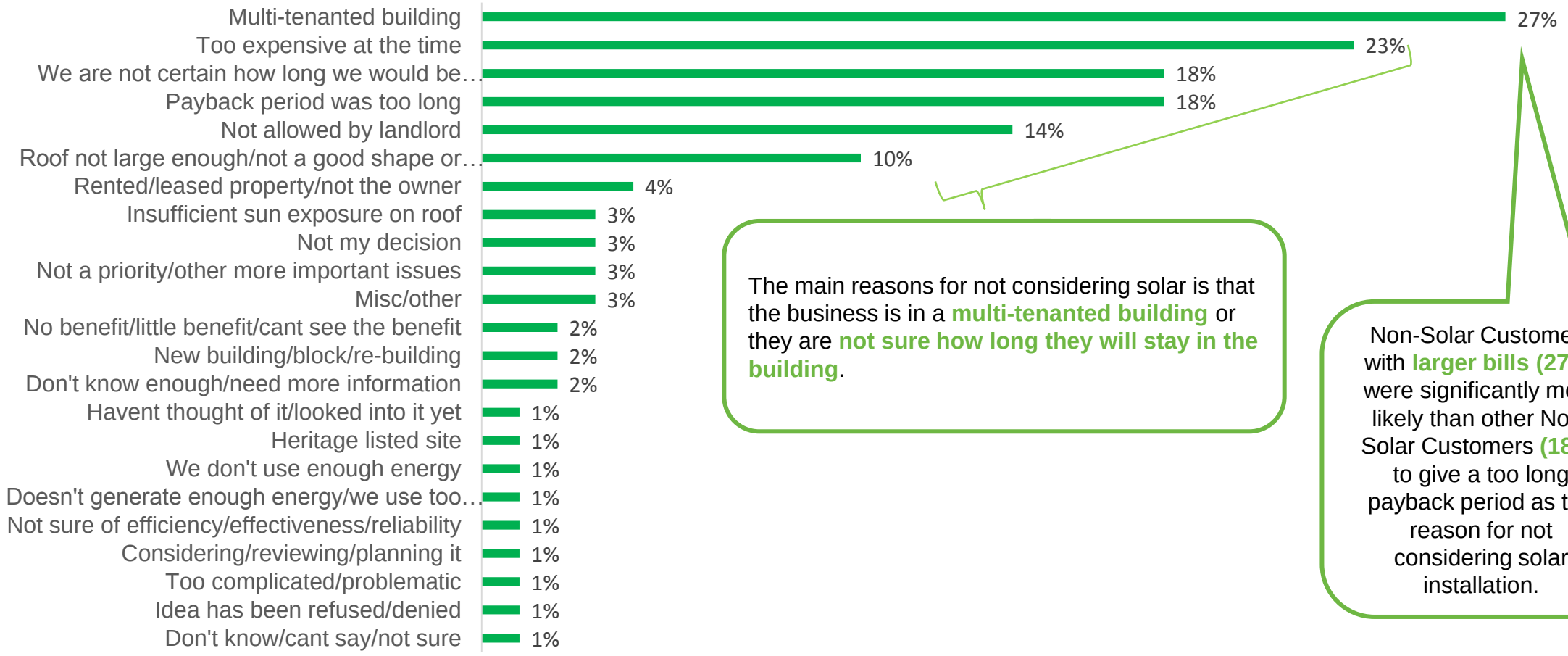


The main suggestions for incentivizing solar were **Government subsidies**.

Non-Solar Customers with **larger bills** were significantly more likely than other Non-Solar Customers to suggest Government subsidies as an incentivization for solar installation.

McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar n=315
53. Do you have any suggestions about what could be done to assist or incentivise your business to install solar, either as subsidies or as assistance or information for your business ?

Reasons for Not Considering Solar

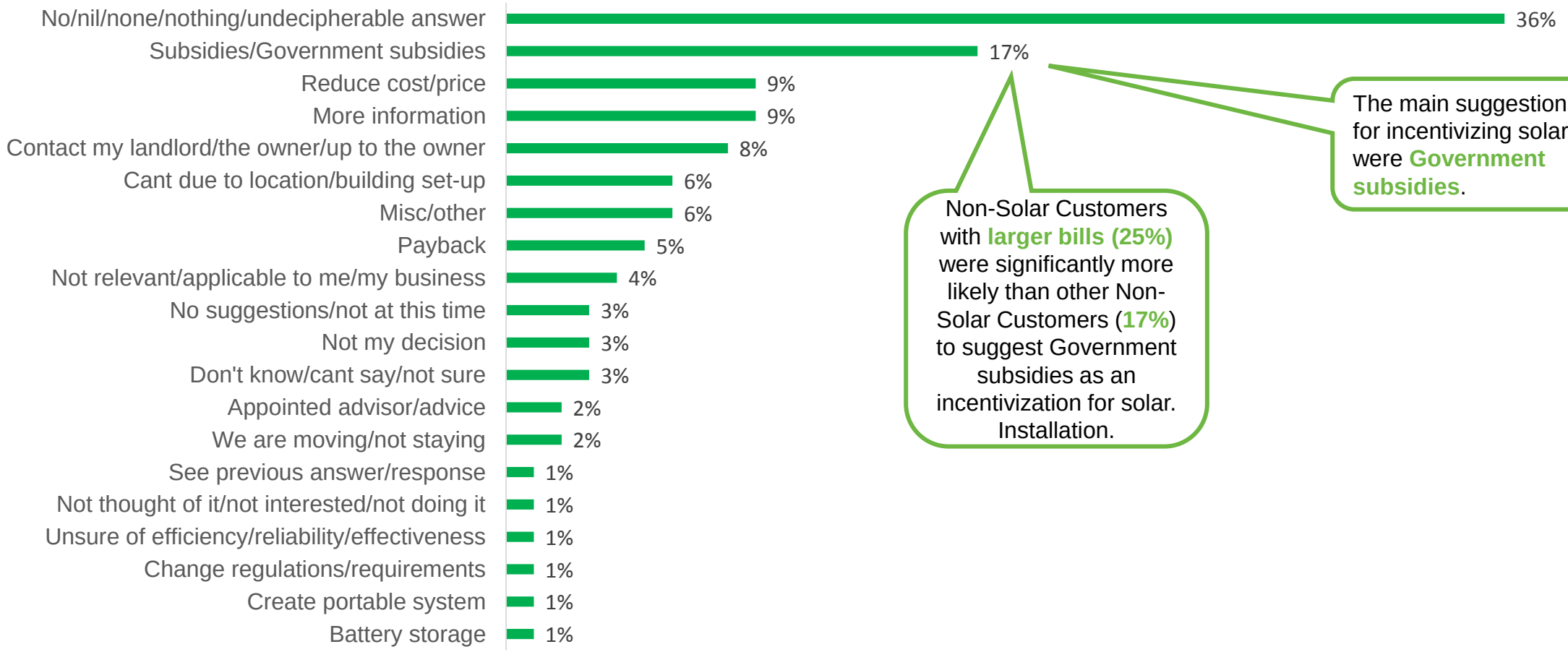


The main reasons for not considering solar is that the business is in a **multi-tenanted building** or they are **not sure how long they will stay in the building**.

Non-Solar Customers with **larger bills (27%)** were significantly more likely than other Non-Solar Customers **(18%)** to give a too long payback period as the reason for not considering solar installation.

McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar n=315
52. What were the reasons why you have not considered solar or did not go ahead with solar?

Suggestions for Incentivizing Solar Installation

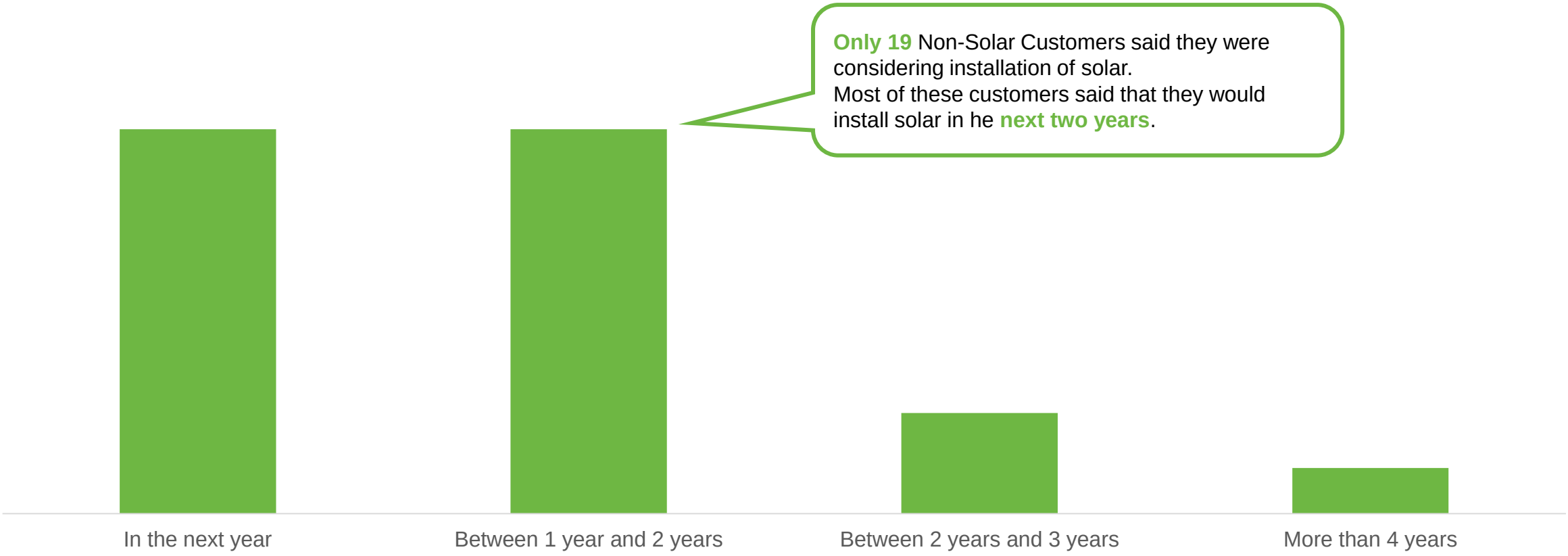


The main suggestions for incentivizing solar were **Government subsidies**.

Non-Solar Customers with **larger bills (25%)** were significantly more likely than other Non-Solar Customers (**17%**) to suggest Government subsidies as an incentivization for solar. Installation.

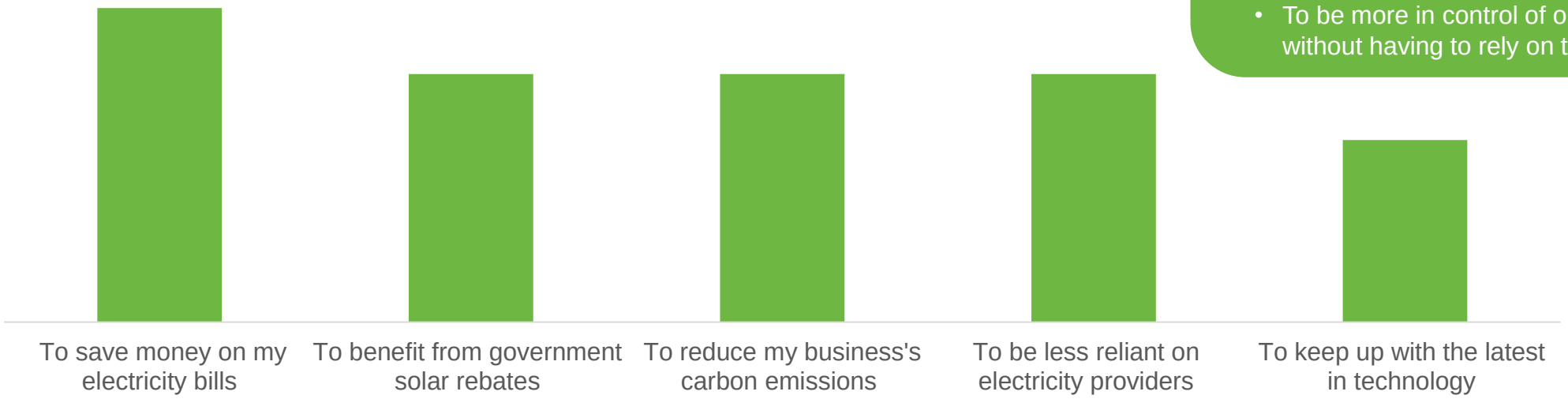
McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar n=315
53. Do you have any suggestions about what could be done to assist or incentivise your business to install solar, either as subsidies or as assistance or information for your business ?

Timeline for Planning Solar Installation



McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar considering Solar n= 19
54. When are you planning to purchase a solar system?

Saving money on electricity bills was the most important reason to install solar

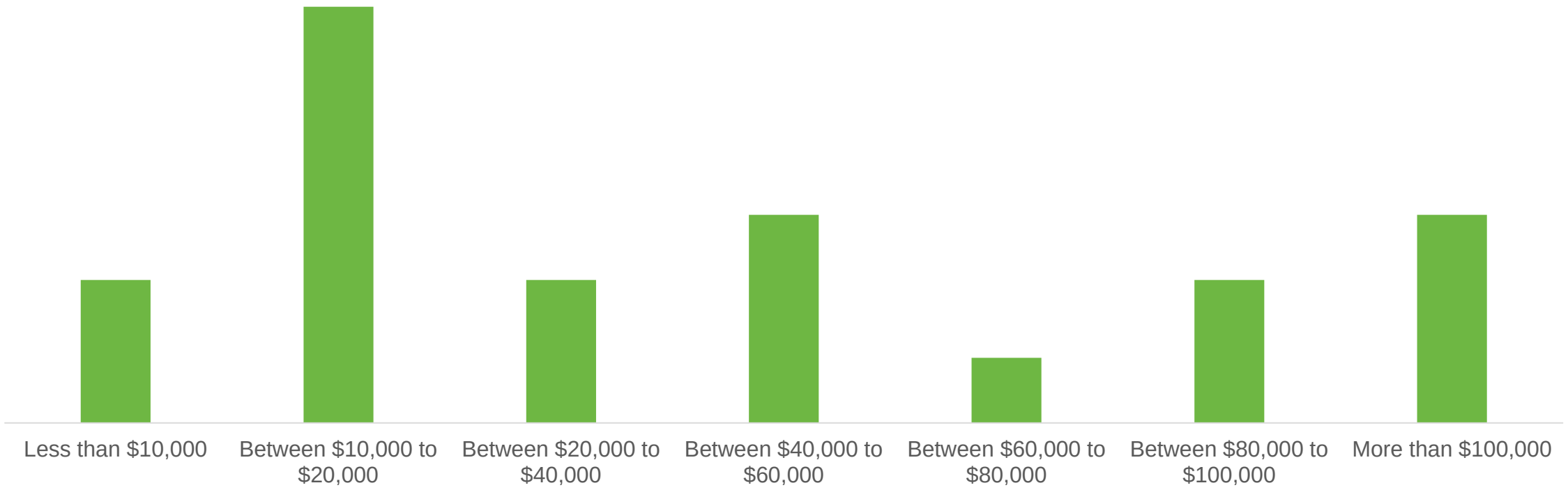


Additional important factors

- Carbon savings
- Cost in energy
- Environment
- I have contracted to put in a Solar System.
- Price
- Sales opportunity for green producer
- To be more in control of our consumption without having to rely on the grid

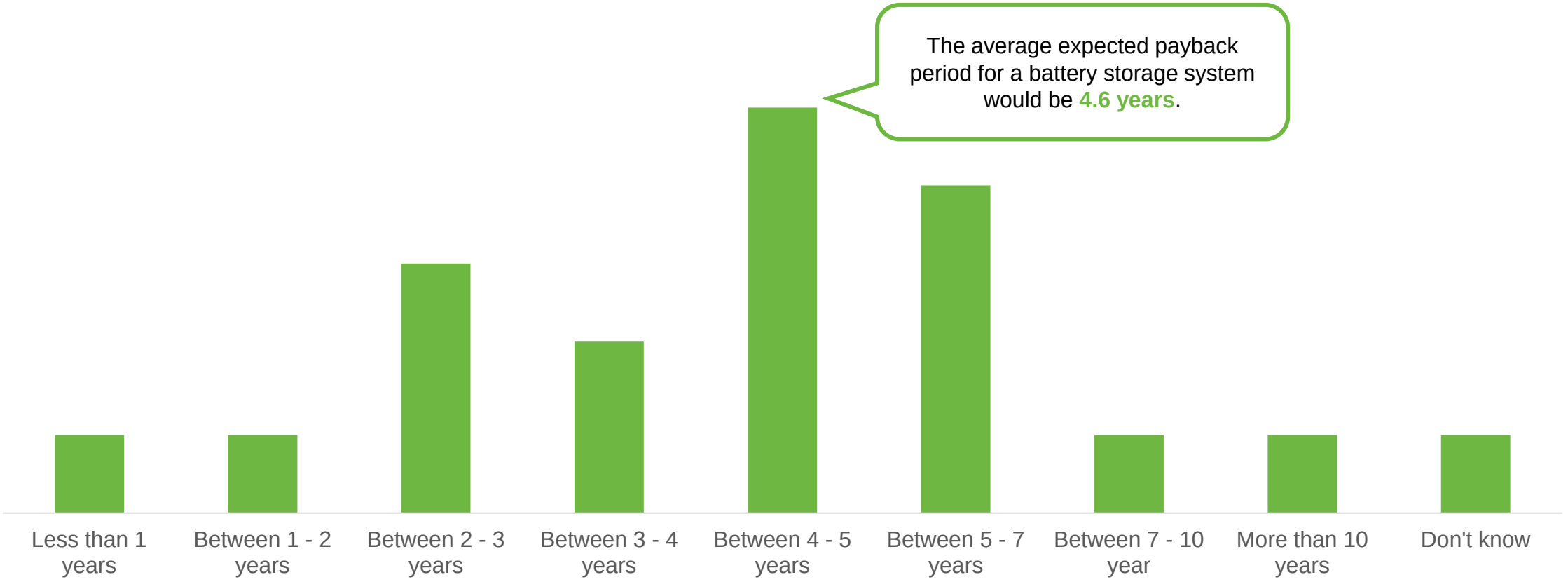
McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar considering Solar n= 19
55. How important would each of the following be to your business in considering purchasing a solar system?
55a. Are there any other issues that you consider important for motivating you to purchase a solar system for your business?

One third of non-solar customers who would consider installing a solar system selected the $10,000 - $20,000 range as the maximum amount they would pay for their system.



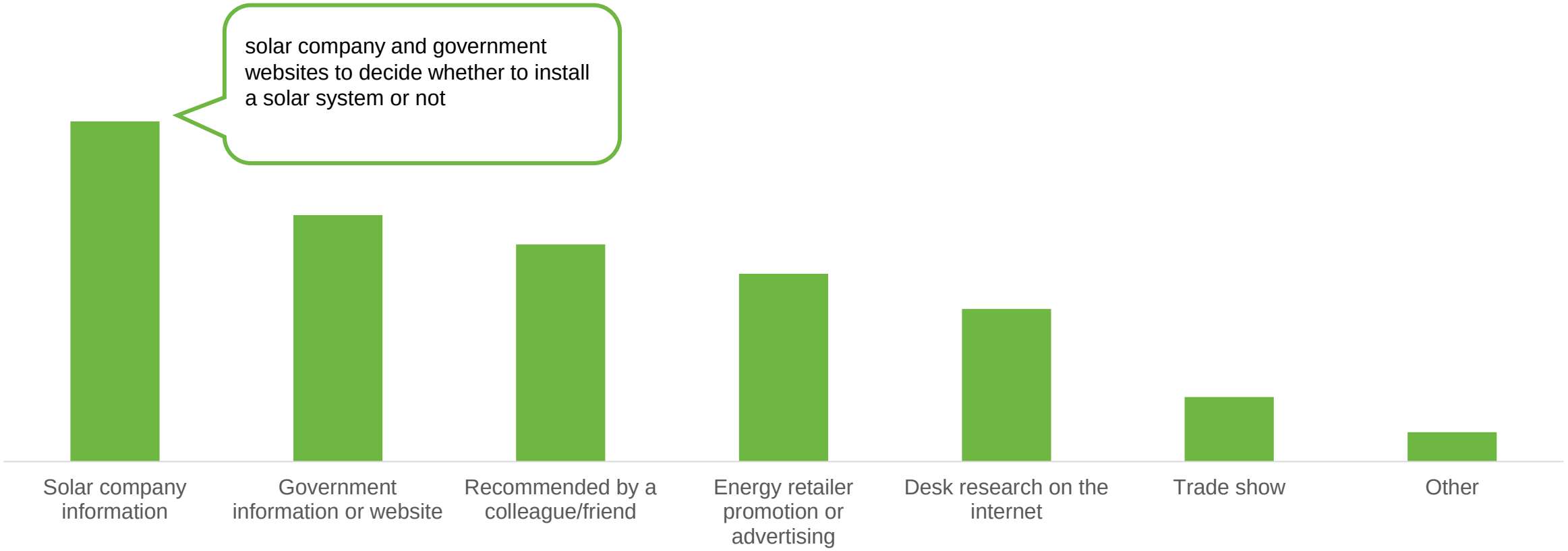
McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar considering solar n= 19
56. What is the maximum amount you would pay to purchase a solar power system for your business?

Non-Solar customers who would consider installing a solar system would expect a payback in 4.6 years



McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar considering solar n= 19
57. What would be the maximum payback period for you to buy a solar system?

The main sources of information that would be used would be solar company information.

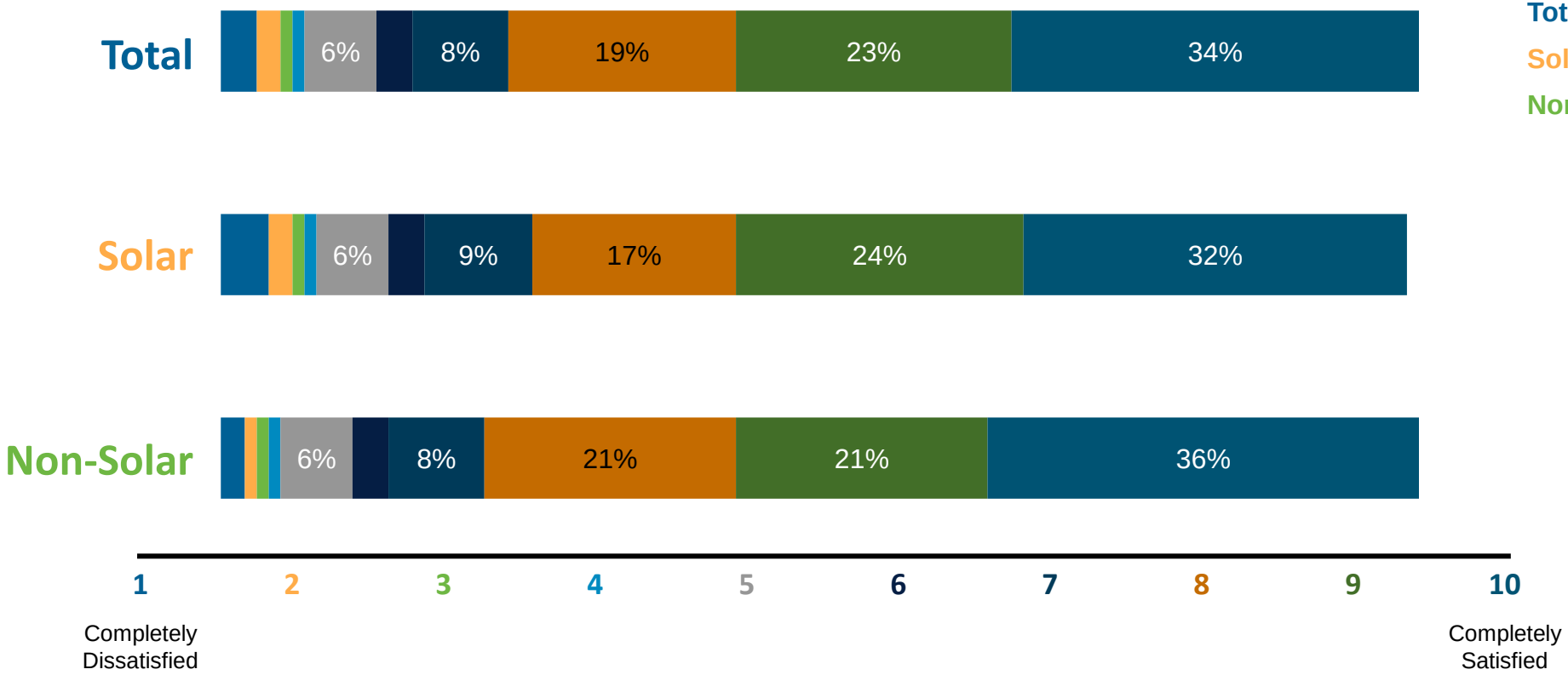


McNair yellowSquares Business Customer Survey October 2017
Total Non-Solar considering solar n= 19
58. Which of the following information sources would you use to help decide whether to install a solar power system?

Ausgrid Interactions:

Power Outages and Solar Connection Process

Satisfaction with Reliability of Electricity Supply



Mean Satisfaction ratings:

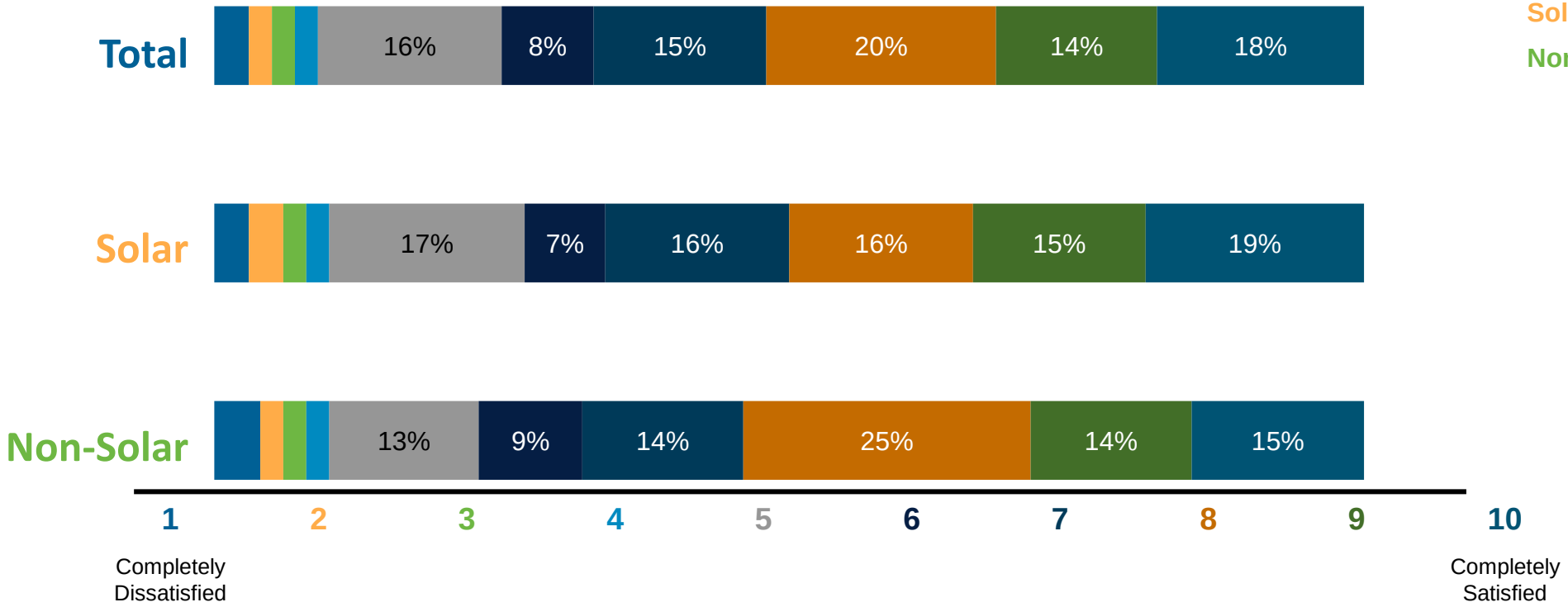
Total customers= 8.2

Solar Customers = 8.0

Non-solar customers = 8.3

McNair yellowSquares Business Customer Survey October 2017
Total n= 617; Solar n=302Non-Solar n=315
59. On a scale of 1 to 10, where 1 is completely dissatisfied and 10 is completely satisfied, how would you rate your level of satisfaction with the reliability of your electricity supply over the last 12 months or so? (eg. number of outages)

Satisfaction with Ausgrid's Response to Power Outage



Mean Satisfaction ratings:

Total Customers= 7.2

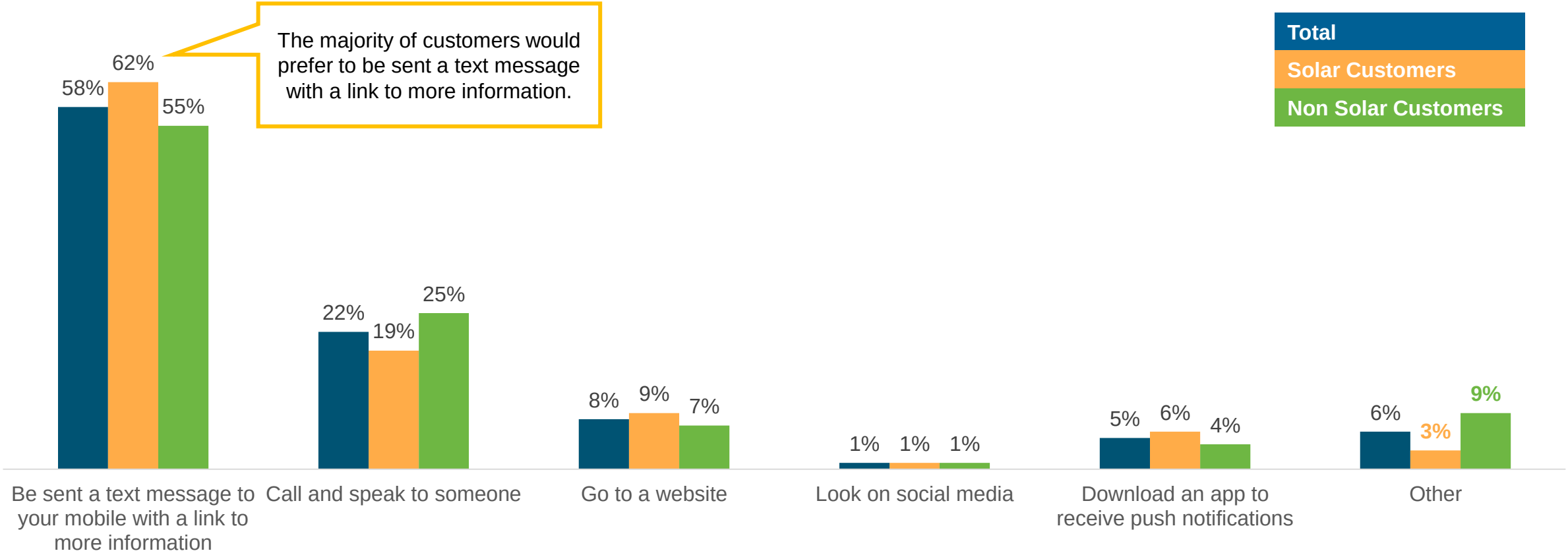
Solar Customers = 7.1

Non-Solar Customers = 7.2

McNair yellowSquares Business Customer Survey October 2017
Total n=449; Solar n=254; Non-Solar n=195
62. On a scale of 1 to 10, where 1 is completely dissatisfied and 10 is completely satisfied, how would you rate your satisfaction with Ausgrid's overall response to the most recent outage?

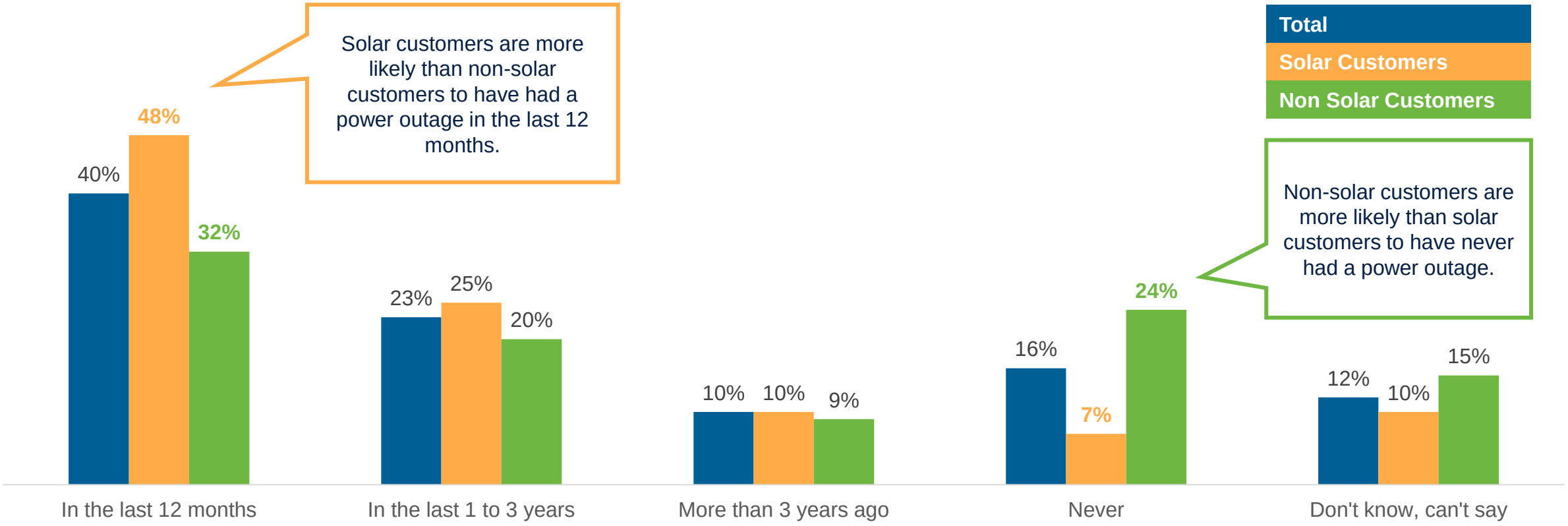
Informing about Power Outages

The majority of customers would prefer to be sent a text message with a link to more information.



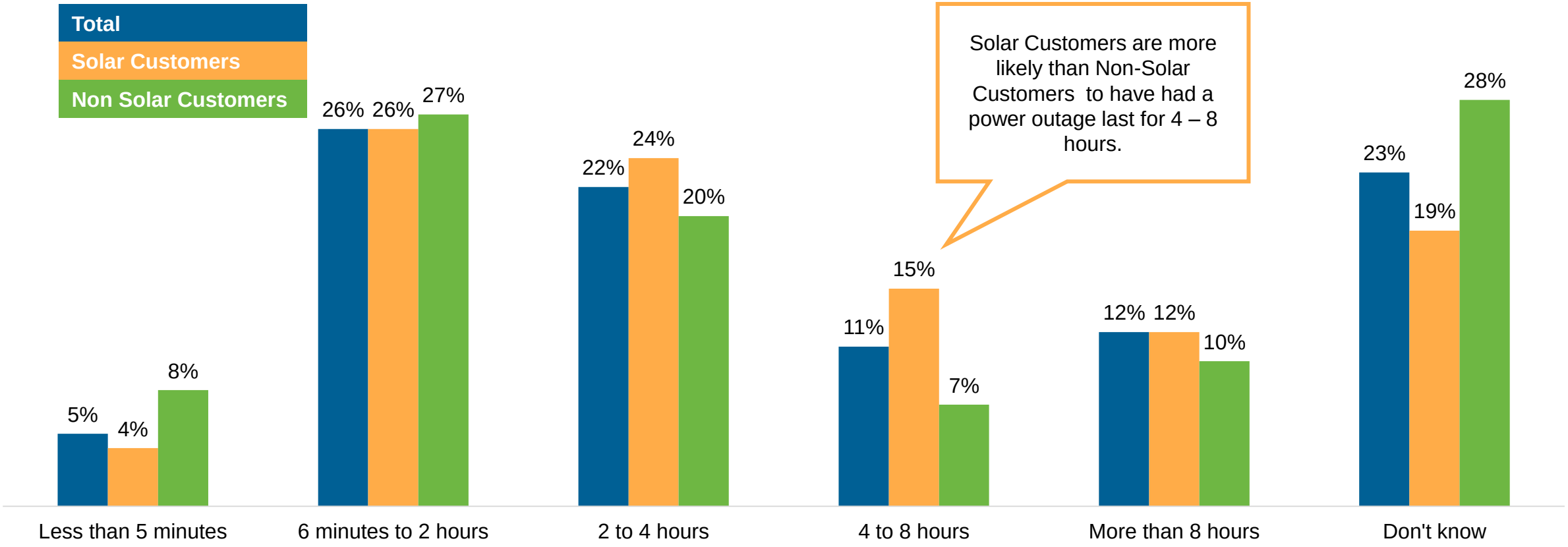
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
63. If you had an unplanned outage (eg. power was cut due to a storm), how would you most prefer to be kept informed by Ausgrid?

Last Power Outage



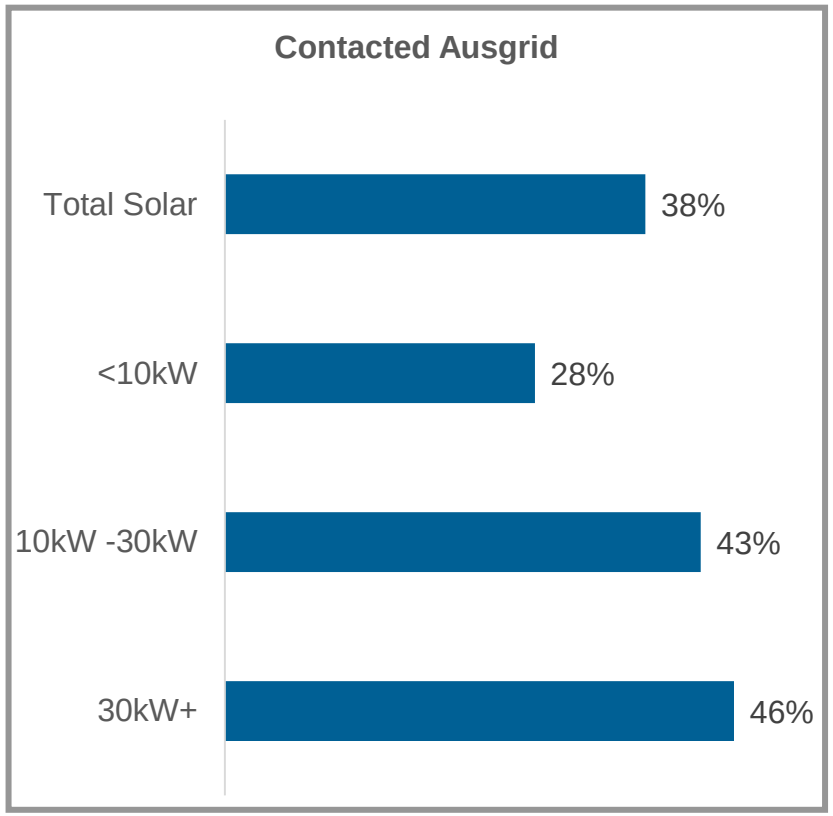
McNair yellowSquares Business Customer Survey October 2017
Total n=617; Solar n= 302; Non-solar n=315
60. When did your business last experience a power outage?

Last Power Outage



McNair yellowSquares Business Customer Survey October 2017
Total n=521; Solar n= 282; Non-solar n=239
61. Can you remember how long the power was off?

The majority of customers who interacted with Ausgrid during the connection process were satisfied with their interactions

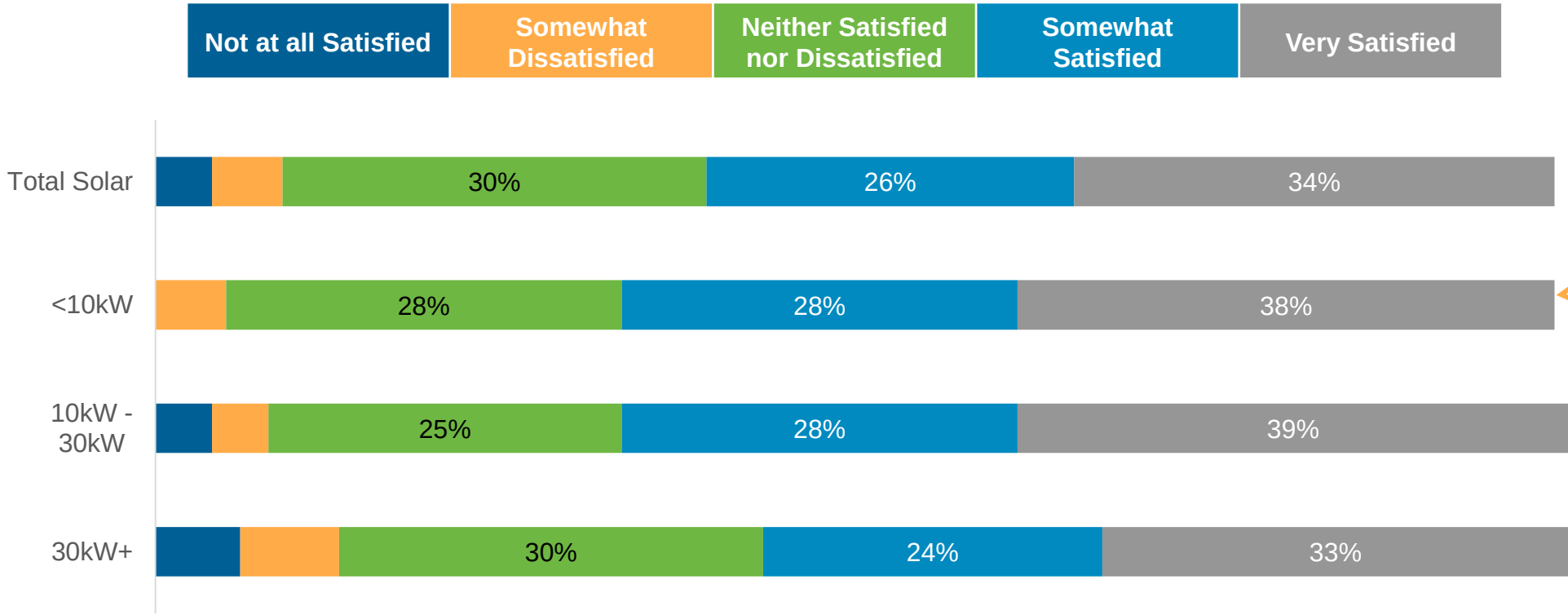


84% of the customers who contacted Ausgrid during the connection process were satisfied (43%) or were neither satisfied nor dissatisfied (41%).

McNair yellowsquares Business customer Survey October 2017
Total Solar n=302; <10kWn=39; 10kW-30kW n=79; >30kw n= 123 .
38. Did your business need to contact Ausgrid when applying to connect your solar system to the network?

McNair yellowSquares Business Customer Survey October 2017
Total Contacted Ausgrid Solar n=193; <10kWn=25; 10kW-30kW n=45; >30kw n= 79.
39. How satisfied or dissatisfied were you with your interactions with Ausgrid?

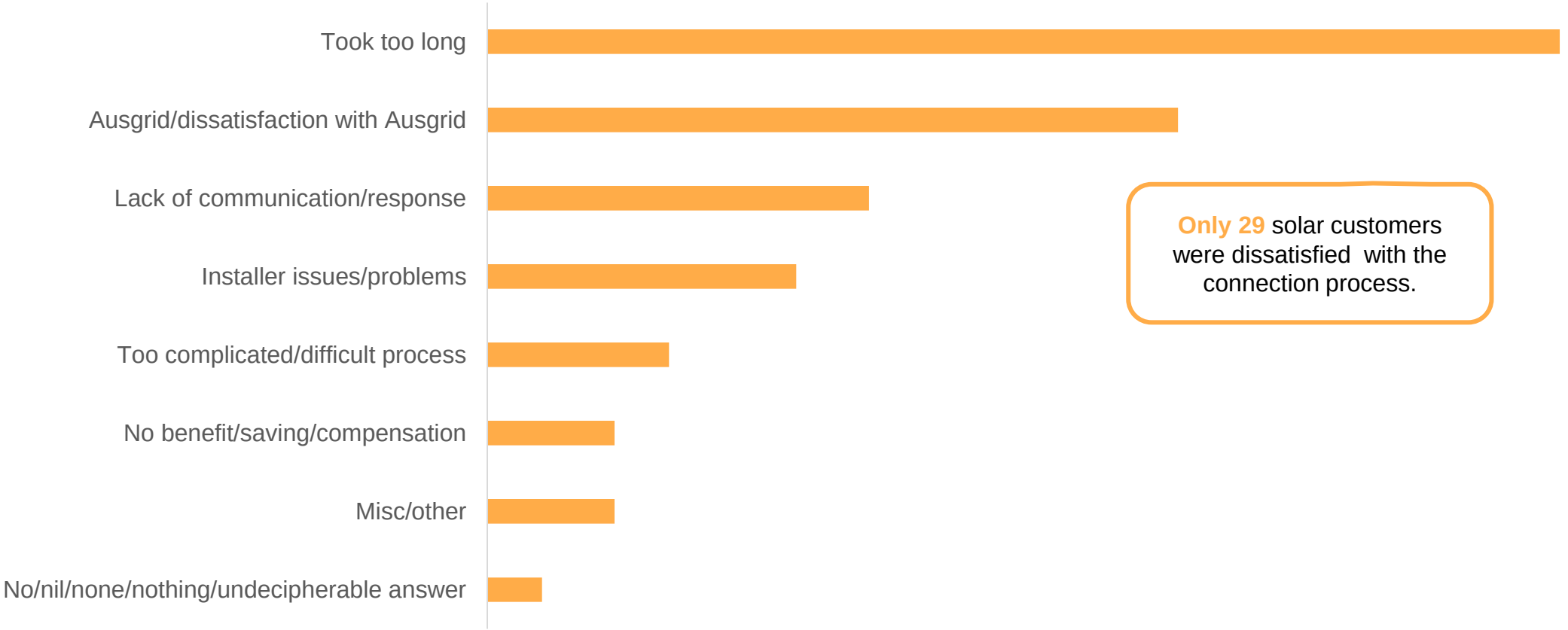
6 in 10 customers were satisfied with the connection process



60% of customers were satisfied with the connection process, and a further **30%** were neither satisfied or dissatisfied.

McNair yellowSquares Business Customer Survey October 2017
Total Contacted Ausgrid Solar n=193; <10kWn=25; 10kW-30kW n=45; >30kw n= 79.
40. How satisfied or dissatisfied were you with the connection process when you were applying to have the solar system connected to the network?

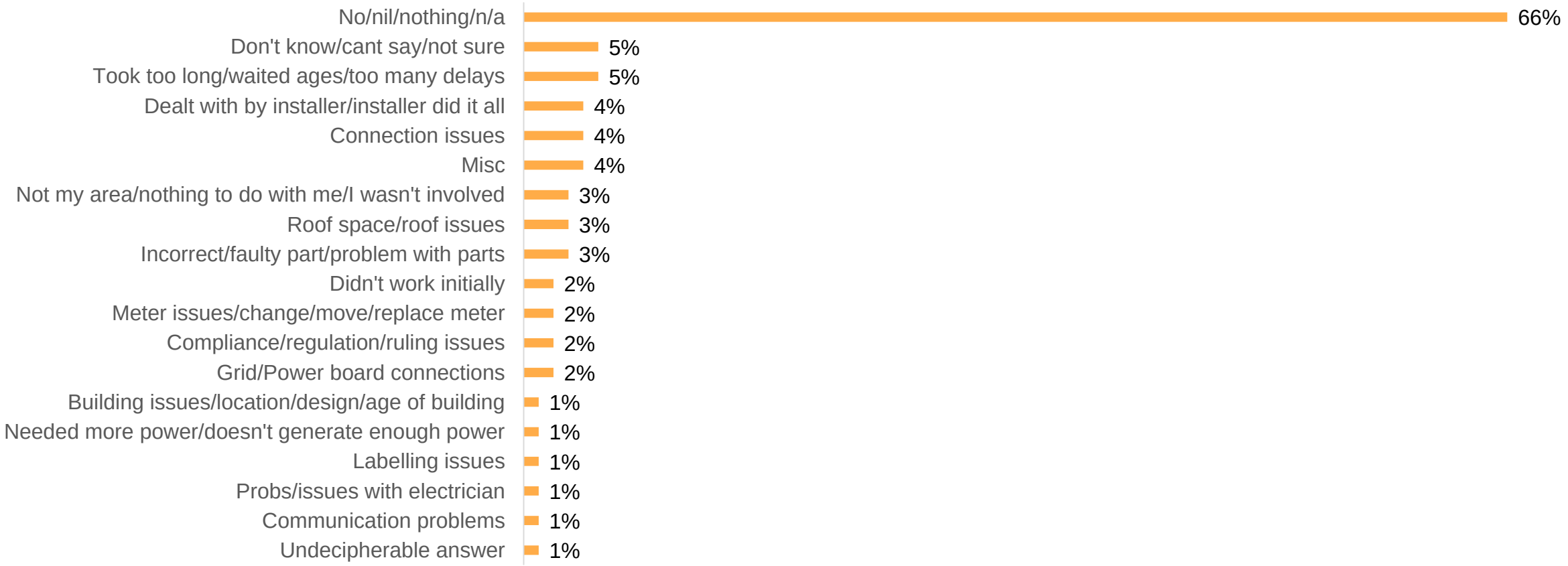
The main reason for dissatisfaction was the time the connection process took



Only 29 solar customers were dissatisfied with the connection process.

McNair yellowSquares Business Customer Survey October 2017
Total Solar Dissatisfied with connection process n= 29
41. Please explain why you were dissatisfied with the connection process when you were applying for the solar system.

The majority of customers were not aware of any technical design or connection issues



McNair yellowSquares Business Customer Survey October 2017
Total Solar n= 302
42. Were there any technical, design or connection issues that you were aware of? Please explain your understanding of these issues and the effects they had on the installation/operation/cost of your system.

Next Steps

The results and insights of this survey has informed the development of projects and further potential research about solar and energy and efficiency for the following current and planned activities:

Demand Management for Replacement Needs Project:

In November 2017 we launched the DM for Replacement Needs project which explores whether new solar and energy efficiency investments by customers can reduce demand for grid electricity sufficiently to defer investment related to the replacement/retirement of aging assets on our network. Key objectives will be to examine the installation activity the incentives stimulate in addition to what would have occurred without them and assess whether the scale and cost of the additional activity offers a competitive alternative to other network or non-network options.

For full details about the project visit https://www.ausgrid.com.au/Common/Industry/Demand-management/Replacement-Needs-Project

Residential Battery Demand Response Trial:

The increasing number of residential customers installing battery storage systems offers an opportunity to verify the demand reductions offered by these systems and the customer's willingness to offer network support. Ausgrid will be issuing an Expression of Interest in early 2018 seeking market partners able to offer the ability to aggregate demand response using battery storage systems.

Further Research:

We are also interested in partnering with research organisations to explore how more detailed analysis of survey and customer meter data might build upon the research findings. If you are a research organisation within a university or equivalent and have an in interest partnering with Ausgrid, we welcome your feedback or further enquiries at demandmanagement@ausgrid.com.au.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