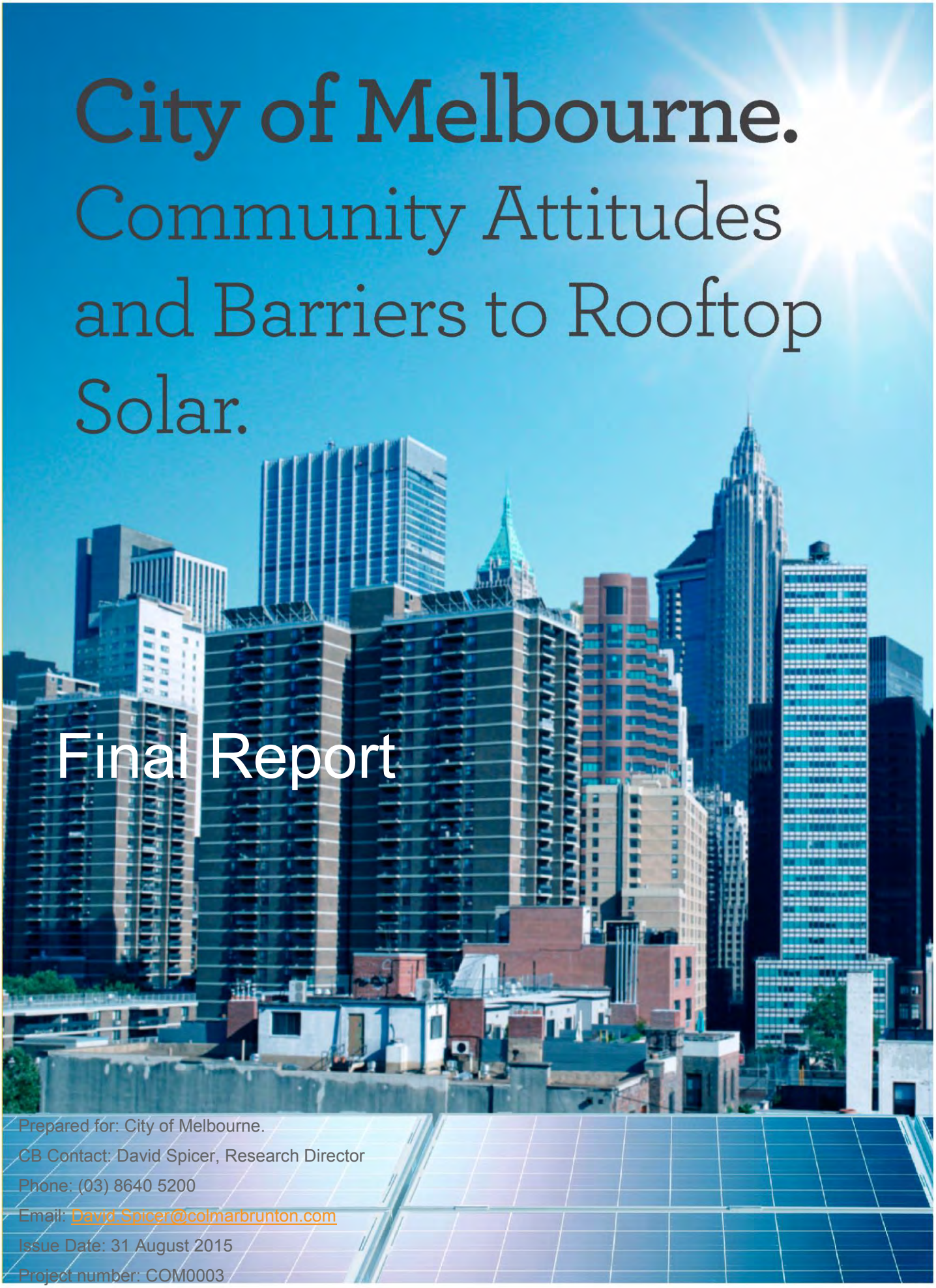
City of Melbourne.
Community Attitudes and Barriers to Rooftop Solar.



Final Report

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Executive Summary

Background

City of Melbourne is aiming to shift the source of its stationary energy supply towards renewables in order to contribute to the goal of zero net greenhouse emissions for the municipality by 2020 as outlined in the zero net emission strategy. The Council has set an objective to obtain 25% of its electricity from renewable resources by 2018. Council has been taking a number of initiatives to encourage rooftop solar including investigating changes to Melbourne planning scheme to provide certainty and clarity to building owners and trialling a number of initiatives to assist organisations and residences to install rooftop solar. For example, commercial solar rebates and the residential solar blitz/bulk buy campaign.

Eight existing research reports relevant to this study, conducted for or on behalf of City of Melbourne have been reviewed as part of this research. Similar to this research, these reports indicate that City of Melbourne residents and businesses are aware of and concerned about environmental sustainability and have developed behaviours such as recycling that go some way to conserving the environment. However, the research also highlights the need for ongoing awareness campaigns and opportunities for CoM residents and businesses to learn about solar energy systems. The Eco City and Solar Commercial Rebate Program research indicates that City of Melbourne is considered to be a trusted and accurate source of information about the environment, climate change and solar energy systems as does this research.

Research Objectives

This research focuses specifically on investigating awareness, attitudes, needs and barriers of City of Melbourne's residential and business communities relating to Rooftop Solar Energy Systems.

Findings from this research will provide insight to support the development of programs which will promote and encourage the uptake of solar energy systems and changes to Melbourne planning scheme to provide certainty and clarity to building owners.

Methodology

This research was conducted in three stages. The first stage, project scoping involved confirming the research objectives and methodology.

Stage two involved the conduct of two focus groups one with CoM residents and one with SMEs located in CoM and 10 depth interviews with representatives of organisations based in CoM and stakeholder organisations. Interviews and focus groups guided the development of a survey tool used to measure attitudes among a larger sample size of City of Melbourne residents and representatives of organisations within the City of Melbourne and a small number of organisations outside the municipality (stage three).

Stage three involved a survey of n=212 residents of CoM and 208 organisations (including 181 organisations located in CoM and 27 outside CoM). Note n=100 of the organisations surveyed were interviewed by telephone. The remaining organisational and all resident interviews were conducted online.

Detailed Findings

Understanding and Implementation of Sustainability Measures.

When considering their understanding of sustainability CoM residents and organisations discussed concepts such as low impact on the environment, long term security and being able to sustain something for a period of time. Furthermore, organisations may tend to approach sustainability from one of a number of perspectives including an environmentally focussed perspective, efficiency (cost savings through reduced consumption) or a purely financial perspective, whereby financial sustainability is the priority. Energy efficiency generally relates to reduction and measurability of energy usage, for example, switching to LED lights. Compared to larger organisations, SMEs and not-for-profits may not have a good understanding of what being energy efficient would entail.

Participation in Sustainability Activities

Organisations and residents within CoM participate in a number of sustainability activities the most common being recycling, in which 91% of CoM organisations and 74% of CoM residents participate. Organisations located in the CBD are less likely to recycle (88%) compared to those in the CoM but outside the CBD (97%). Almost two thirds of CoM organisations and half of CoM residents also use energy efficient equipment or appliances while about half have reduced their use of plastics and other nonorganic materials. Although most residents and organisations were involved in a number of sustainability measures, 10% of residents and 3% of CoM organisations surveyed had not implemented any sustainability measures.

A similar proportion of organisations within and outside CoM, indicated that sustainability considerations or criteria formed part of their procurement decisions; (46% and 52% respectively). One in five residents (18%) and representatives of organisations (20%) indicate they purchase green power. This is significantly higher than the actual proportion, for example between 1-2% of businesses in CoM purchase green power.

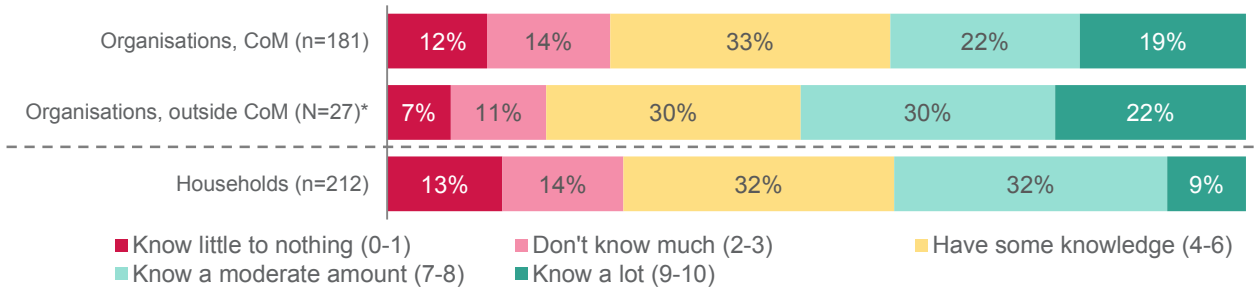
Knowledge of Rooftop Solar Energy Systems

Level of knowledge varies significantly among representatives of organisations ranging from none or very little to highly technical expert knowledge among representatives of organisations in the sustainability, or engineering fields or sustainability experts from very large organisations.

Four in ten organisations and residents within CoM (both 41%) feel they have at least a moderate amount of knowledge about rooftop solar energy systems. However, few representatives of organisations or residents feel they know a lot about rooftop solar energy systems (19% and 9% respectively). Representatives of organisations that received an email from CoM requesting participation in the survey were more likely to know a lot (38%) compared to 5% of SMEs contacted by Colmar Brunton by telephone. Furthermore, 33 of the 208 representatives of organisations surveyed also indicated they work in a sustainability related field. Those in a related field were more likely to indicate they know a lot about solar (48%) compared to those not working in a related field (14%).

However, about a quarter of CoM organisations (26%) and residents (27%) know little to nothing or don't know much about rooftop solar energy systems, and just under one third have only some knowledge. Overall, close to two thirds (59%) have less than a moderate knowledge of solar energy systems. Limited knowledge of rooftop solar energy systems is a significant barrier to installation for organisations and residents.

Figure 1 Knowledge of rooftop solar energy systems



* Small sample size treat as indicative only.

The lack of knowledge of rooftop solar rooftop energy systems reinforces the need for organisations such as Positive Charge and other independent consultants to help guide both residents and organisations through the process of deciding whether to have a rooftop solar energy system installed and if so, the specifications for that system.

Sources of Awareness about Rooftop Solar Energy Systems

Residents and organisations within CoM heard about rooftop solar systems from a broad range of sources with the most common sources being traditional news media, solar panel provider advertising and family and friends. More than half (56%) of CoM organisations heard about rooftop solar from traditional news media (print/television radio) compared to 36% of residents. Solar panel provider advertising was a source of awareness for almost half of residents (46%) and CoM organisations (44%). Family, friends and word of mouth was mentioned by about one third of CoM organisations (36%) and residents (34%) and just under one third of organisations outside CoM (30%). Social media was mentioned by 25% of City of Melbourne residents as a source of awareness of rooftop solar energy systems. Only a small proportion of CoM residents and organisations heard about rooftop solar systems from the CoM website (8% and 6% respectively).

Residents who have solar are significantly more likely to have heard about rooftop solar systems from a workplace seminar (31%) or the CoM website (23%) compared to residents who don't (4% and 3% respectively). Similarly, organisations that have (21%) or are considering solar (29%) are more likely to have heard about rooftop solar energy systems through renewable energy expos than those who have never considered solar (9%).

Financial Return

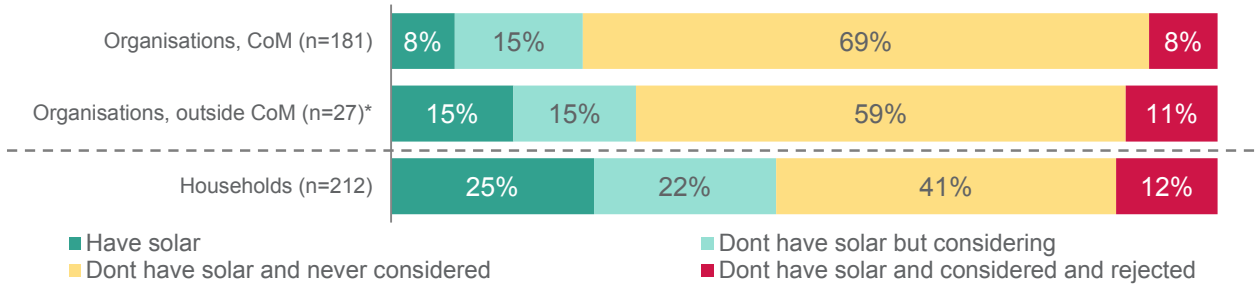
More than half of CoM organisations (55%) correctly understood the payback period for a rooftop solar energy system to be 5 to 10 years. One in five (18%) thought that the payback period was less than 5 years and 9% expected it to be more than 10 years. The remaining 18% did not know what the payback period would be.

Residents were less informed compared to organisations with only 43% expecting it would take 5 to 10 years for a solar energy system to pay for itself. One quarter (25%) thought that the payback period was less than 5 years while 21% expected the payback period to be more than 10 years and 11% did not know.

Adoption and Consideration of Rooftop Solar Energy Systems

CoM residents and representatives of organisations outside CoM are more likely compared to representatives of organisations in CoM to already have or be considering a solar energy system. Almost half of the CoM residents surveyed indicated they already have a rooftop solar energy system (25%) or are currently considering one (22%). Uptake and consideration of solar is similar for CoM residents living in the CBD compared to those outside the CBD area. Almost one quarter of representatives of CoM organisations surveyed indicated they already have a solar energy system (8%) or are currently considering one (15%). Organisations outside the CBD were more likely than those within the CBD to have solar (16% compared to 4%), be considering solar (21% compared to 12%).

Figure 2 Adoption of rooftop solar systems



* Small sample size treat as indicative only.

The path to deciding to purchase a solar energy system can be lengthy with about half of those currently considering a solar energy system expecting to make a decision within the next 18 months while the other half could take up to two or more years to decide.

Information Types & Channels Used

Types of Information Used

CoM organisations and residents valued similar types of information for deciding whether or not to install a rooftop solar system. Residents generally selected fewer types of information; therefore they were less likely to indicate they would or did use any particular type of information.

The most commonly indicated types of information included estimated reduction in electricity bills after installation of rooftop solar energy systems (70% of organisations and 41% residents), financial rebates from Council (60% of organisations and 39% residents), case studies showing how rooftop solar energy systems has been effective in reducing electricity bills (62% of organisations and 39% residents), financial investment required (55% of organisations and 36% residents), environmental benefits (reduced carbon emissions) (61% of organisations and 28% residents), availability and terms of warranties (45% of organisations and 41% residents), and service guarantees of rooftop solar energy system providers (55% of organisations and 31% residents) being nominated by at least half of organisations within CoM and at least one third of residents.

CoM organisations and residents were least likely to indicate they did or would use information about heritage listing status of building (27% of organisations and 7% of residents) and planning controls (38% of organisations and 17% of residents). However, as indicated by both residents, organisational representatives and industry experts, in the focus groups and interviews, heritage listing is an issue for residents and organisations of CoM and other inner city councils who wish to install a rooftop Solar System.

Port Phillip Council was provided as an example of a council that has taken steps to make the process of gaining council approval in a heritage listed area easier and to overcome the need to gain approval from two separate council departments through the implementation of a simplified process (one point of contact within the planning department) and the publication of a one-page fact sheet outlining considerations for those in a heritage overlay area.

Information Channels Used
For residents and organisations in CoM, online (including solar provider websites, online videos, council website and social media) is the channel of choice for information about solar energy followed by email (43% of CoM organisations and 27% of residents would like an email from council)

More than one third (36%) of CoM organisations would prefer or did get their information from a phone conversation with experts compared to only less than one in five (17%) residents. CoM residents and organisations were similarly likely to get information from friends and family (28% compared to 30%)

Credibility of Information Sources
For CoM organisations and residents, Independent engineering consultants, other users of rooftop solar, City of Melbourne, the State Government, and environmental not for profit organisations, are the most credible sources of information regarding rooftop solar energy systems. Additionally, organisations feel industry peak bodies such as VECCI are credible.

The least credible information sources are the Federal Government, accountants or financial advisors, solar retailers, gas or electricity providers, and one stop shops such as iSelect or Australian Solar Quotes.

Barriers to Consideration

Key Barriers
Key barriers to implementing a rooftop solar energy system for CoM residents and organisations include:

- Not owning the building (72% of organisations and 28% of residents),
- Financial cost (42% of organisations and 38% of residents), and
- Limited knowledge about rooftop solar energy systems (38% of organisations and 39% of residents).

Other barriers for CoM organisations included achieving access to the rooftop (41%), limited available roof space (39%), lack of financing options (30%) and planning controls and policy (30%).

CoM residents outside the CBD are more likely to mention particular barriers to consideration including the financial cost (48% compared to 27% of CBD residents), the belief that technology will improve significantly in the near future (18% compared to 4% of CBD residents), lack of financing options (14% compared to 4% of CBD residents), lack of information about rooftop solar (12% compared to 4% of CBD residents), and the possibility of selling the property/building (0% compared to 9% of CBD residents).

Representatives of organisations located only in the CBD were more likely than those located only outside the CBD to mention not owning the building (82% compared to 55%) and heritage listing status of building (28% compared to 15%) were barriers to consideration of solar.

Overcoming Barriers to Solar

City of Melbourne currently addresses a number of the barriers to consideration of solar through a number of initiatives such as Smart Blocks, seminars, and participation in programs such as bulk buys delivered by the Moreland Energy Foundation through Positive Charge.

The Positive Charge service by Moreland energy Foundation addresses the poor level of service from solar providers including issues related to quality of components used by suppliers, lack of information about rooftop solar, and financial cost through a residential information advice service and solar bulk buy projects. The bulk buy projects delivered with council enable CoM residents to access a quality solar energy system product from a reputable supplier, at a reasonable cost and with a suitable warranty thus removing a significant level of risk from the purchase of a rooftop solar system.

Positive Charge assists businesses, in particular SMEs by providing an assessment service which is paid for by the City of Melbourne so it is at no cost to the businesses. Through this service, Positive Charge acts as a consumer advocate helping businesses narrow down their short list of potential providers and assisting them to negotiate price.

Other difficulties mentioned by CoM organisations and residents that have solar include sourcing (reputable) suppliers, gaining approval from management/finance and determining the system that would best meet one's needs.

General Attitudes

When asked about the importance of a range of activities and outcomes related to sustainability, all of the activities and outcomes were at least somewhat important for most CoM organisations including:

- reducing carbon emissions (87%);
- reducing electricity bills (87%);
- rooftop solar contributing to Melbourne being a more sustainable city (82%);
- rooftop solar making the city more resilient (76%); and
- being able to install rooftop solar on their building (68%).

Organisations located outside the CBD placed greater importance on being able to install rooftop solar on their building.

For residents, the financial savings were foremost. While residents were slightly less likely to agree the possible outcomes from solar were important, at least half agreed with each statement as follows:

- reducing electricity bills (75%);
- reducing carbon emissions (66%);
- rooftop solar contributing to Melbourne being a more sustainable city (59%);
- rooftop solar making the city more resilient (59%); and
- being able to install rooftop solar on their building (53%).

Recommendations

Broadly recommendations focus around strategies to address barriers to uptake of solar and therefore increase consideration of rooftop solar energy systems (increasing the pipeline) while simultaneously increasing the speed and rate of conversion from consideration of rooftop solar energy to action.

Background

City of Melbourne is aiming to shift the source of its stationary energy supply towards renewables in order to contribute to the goal of zero net greenhouse emissions for the municipality by 2020 as outlined in the zero net emission strategy. The Council has set an objective to obtain 25% of its electricity from renewable resources by 2018. Council has been taking a number of initiatives to encourage rooftop solar including investigating changes to Melbourne planning scheme to provide certainty and clarity to building owners and trialling a number of initiatives to assist organisations and residences to install rooftop solar. For example, commercial solar rebates and the residential solar blitz/bulk buy campaign.

The following presents a summary of existing research relevant to this study, conducted for or on behalf of City of Melbourne including the following:

- The People's Panel recommendations on the 10 Year Financial Plan (2014);
- Climate Adaptation Community Attitudes Research (2014/15);
- Climate change community engagement research (2014);
- Eco-city Framework Community Attitude Research (2014);
- City of Melbourne 1200 Buildings Retrofit Survey (2013);
- Solar stakeholder Feedback (2014);
- Feedback from the Solar commercial rebate program (2015); and
- Positive Charge, Residential Blitz (2015).

Note this not an exhaustive list of research conducted into climate change and sustainability.

Climate Change

City of Melbourne Community Attitudes towards Climate Change

Climate Adaptation Community Attitudes Research conducted for the City of Melbourne in 2014 into business' and residents attitudes towards, and perceptions of, climate change indicated that residents were slightly more concerned that the climate was changing (91.7%) compared with organisations (87.7%). This difference became more pronounced when all participants were asked about the causes of climate change; 49.6% of organisations thought that climate change was partly caused by natural processes and partly caused by human activity. In comparison, 43.7% of residents thought that climate change was mainly caused by human activity. All participants were asked to consider the extent to they had already experienced the effects of climate change. Results revealed a stark difference between the two groups with 45.9% of organisations stating that they were not affected at all whilst residents thought they had already experienced the effects of climate change a moderate amount (44.3%) or a little (33.8%). Most business and residents who believed in climate change had or might make some preparations for extreme weather events.

Sustainability and Climate Change

The People's Panel recommendations on the 10 Year Financial Plan recommended that CoM should, as a matter of priority, allocate increased funding towards its plans to protect the environment, and address sustainability and climate change. In particular, the panel recommended that CoM be creative, innovative and bold in terms of solar panels, tree coverage, drainage, vertical, community and nature strip gardens, new technologies, strategies for waste management and recycling and educational programs. The panel indicated that existing assets should be protected, there should be a reduction in the carbon footprint (pro-rata), the liveability of the city should be maintained and leadership on the issue of climate change be provided.

Community Engagement with Climate Change

Climate change community engagement research conducted in 2014 into residents, organisations and visitors in order to better understand awareness of climate change and changes in behaviour. The research found that although there were positive changes in behaviour around recycling and low energy lighting, there was *'a significant amount of confusion and scepticism in relation to climate change'* in the focus groups. In addition, there was a lack of awareness around measures that could reduce human impacts on the environment. The research recommended that the City of Melbourne could play a significant role in sharing information, driving communication and acting as a broker to bring different groups together.

Eco City Research

The Eco City Research (2014) sought to better understand how to frame the Eco City 'offering' for the City of Melbourne. The research found climate change matters to residents and businesses and there were positive attitudes towards the environment with most participants recycling, saving water and reducing use of plastic bags, however, many were not aware that there were other actions they could take. The research proposed linking environmental behaviours to lifestyle behaviours and embedding messages about this in the physical landscape. However, participants were partisan in their reaction to 'carbon messages' and as such would need to be carefully framed. In line with the Commercial Solar Rebate Program research, the City of Melbourne is considered to be a credible voice in relation to providing businesses and residents with accurate information.

Retrofitting of City of Melbourne Buildings

The City of Melbourne 1200 Buildings Melbourne Retrofit Survey was conducted in 2013 to gain understanding of the levels and types of retrofitting being undertaken, and planning to be undertaken by building owners.

- In 2013 5%of the buildings surveyed were currently retrofitting and 16% claimed that they were intending to undertake a retrofit within the next five years.
- This represents a significant increase from 2011 where 10% of buildings indicated that they intended to undertake a retrofit within that timeframe.
- The level of retrofitting was significantly higher in corporate (institutional investor) owned buildings (21%) significantly less owner's corporations and privately owned buildings (4%) were currently retrofitting.

- The most common type of retrofit activity was lighting upgrades (83%) and there was a significant increase in buildings undertaking a retrofit program (10% in 2013 and 6% in 2011).
- The most common reasons to retrofit were replacing a broken asset (39%), minimising energy consumption (31%) and attracting tenants (21%).
- Just over half of respondents (52%) thought that retrofitting was an investment while almost one third (28%) thought retrofitting was a cost, with more than one third indicating that access to finance was a barrier to retrofitting.
- There was a significant increase in buildings planning to install solar panels in 2013 (18%) compared with just 3%in 2011.
- Views were polarised on respondents' willingness to install solar panels on rooftops:
    - 33% were quite or very willing; and
    - 33% were not at all willing to install rooftop solar panels.

Attitudes Towards and Take-up of Rooftop Solar Energy Systems

Solar PV promotion

A solar PV Residential Blitz was conducted by Positive Charge in 2015 to promote residential bulk-buy of solar panels in the City of Melbourne. The promotion motivated over 300 City of Melbourne residents to obtain a quote and around 100kW of solar PV was installed. According to the report, the conversion rate from lead generation to solar PV sales was 13%. A number of barriers to take up were identified; a significant proportion of households were unsuitable due to the constraints of the building, constraints further affected the ability to install solar PV which led to increased financial costs, the availability of roof space was thought to limit the size of systems and cost was also considered to be a barrier although this was not measured in the research.

City of Melbourne Solar Event

Stakeholder Feedback research was conducted for the City of Melbourne in 2014 into a solar information and networking event. The event was attended by a range of industry sectors including government and not for profit, solar provider professionals and sustainability consultants, and attendees who identified as 'other'.

- 73%of stakeholders thought that the event was valuable;
- Stakeholders were largely interested in solar energy because of environmental considerations (77%) and economic benefits (69%); and
- Around one third (34.6%) were interested in a carbon neutral strategy.

Stakeholders thought that the top three solar challenges that the City of Melbourne should address are:

- Access to finance (69%);
- Planning regulation (69%); and
- Making the business case work (62%).

Stakeholders who attended the event provided feedback about their interest in solar, key challenges to uptake of solar energy and how they would like to receive information about solar.

- The majority of stakeholders (88%) were interested in solar energy systems because of the economic benefits;

- Eight in ten (82%) were interested because of environmental considerations; and
- Two fifths (41% respectively) were interested in carbon neutral strategy and grant/rebate availability.

According to the research, the key challenges facing the uptake of solar energy are:

- Access to finance (75%);
- Around two thirds of stakeholders (62.5%) thought that accurate and reliable information and making the business case work were challenges; and
- Just 6% thought that location and overshadowing were key challenges.

Almost all stakeholders (93%) would like to receive information about CoM's solar program for business via email/e-newsletter, around two thirds (64%) wanted information seminars and half wanted to receive information about the solar program through 'Meet a solar provider' event or case studies.

Solar Commercial Rebate Program

Earlier this year, research was conducted into the Solar Commercial Rebate program and although the sample size was small, with sixteen businesses surveyed, the findings are of value in gaining an understanding, awareness, and consideration of cost and barriers of the solar rebate program.

- Two fifths of stakeholders had heard about the commercial rebate program in letter/brochure in the mail (44%);
- Around a third through a referral from a colleague (31%); and
- 13% had heard about the rebate program through the CoM website.

More than half had considered solar in the past (56%) with most considering solar for more than 24 months. Less than half of respondents (44%) had investigated solar for the first time because of CoM's solar rebate and half indicated that they would value being part of Melbourne Solar Leaders Alliance run by CoM, whilst the rest wanted more information.

The stakeholders indicated that they would most trust advice about solar from not for profits, other businesses with solar installed and local government.

- The majority (81%) thought that having solar panels installed would be expensive but that they would pay themselves back with savings in electricity. However, around two thirds (63%) thought that not having cash up front to pay for a solar system was a barrier to going solar at their company/organisation.
- More than four fifths (81%) agreed that if they could pay off a solar energy system over time then they would be more likely to get one installed,
- More than two fifths (44%) of businesses indicated that they would pay cash up front to pay for a solar energy system,
- Around a third (31%) would lease, and
- One quarter (25%) would use a business loan or redraw.
- Around a third of stakeholders nominated a payback period of between one and three years (31%) and three and five years (31%).
- The stakeholders were not familiar with a number of solar funding options including virtual net metering (88%), community solar with social dividend (81.3%) and three quarters were unfamiliar with power purchasing agreements and community solar (75% respectively).
- When considering installing solar, stakeholders indicated what is most important to their business; the top three nominated were payback period, environmental benefit and cash flow.

Summary of Findings from the Review

Overall, the reviewed research suggests that City of Melbourne residents and businesses are aware of and concerned about environmental sustainability and have developed behaviours such as recycling that go some way to conserving the environment. The People's Panel, in its recommendations, also demonstrated concern about climate change and a desire for CoM to invest in measures to address the impact of climate change. According to the Climate Change Adaptation Survey 2014, there was considerably less concern about climate change from businesses and they were less likely to believe they had already been affected by climate change compared with residents. However, the Climate change community engagement research found that focus groups demonstrated a considerable amount of confusion and scepticism about climate change. Key drivers for installing solar included the environmental considerations, and economic and reputational benefits.

However, whilst there was a significant increase in businesses considering or planning to install solar, having the cash up front and access to finance are considerable barriers to installing rooftop solar, and residents, as there is a perception that they are expensive, there is an expectation that solar energy systems will pay for themselves in electricity savings. In terms of who undertakes retrofitting activities, corporate owners were significantly more likely to undertake retrofitting than other types of building owners, although access to finance was again considered a barrier to undertaking retrofitting activities. The Solar Commercial Rebate program study indicated that trusted sources of information about solar are not for profits, businesses that already have solar installed and local government. Overall, from the research reviewed, it appears that there is typically a low level of awareness about solar rebate programs and the range of solar funding programs.

The reviewed research highlights the need for ongoing awareness campaigns and opportunities for CoM residents and businesses to learn about solar energy systems. The Eco City and Solar Commercial Rebate Program research shows that the City of Melbourne is considered to be a trusted and accurate source of information about the environment, climate change and solar energy systems.

Mapping Previous and Current Research

The following provides a comparison of relevant measures from the current study to those reviewed above.

The Commercial Solar Rebate Program, and 1200 Buildings Melbourne Retrofit Survey were utilised in the development of the current CoM Community Attitudes and Barriers to Rooftop Solar research.

- The question from the current survey '*which would be your preferred way to access information on solar energy'* maps well onto the CoM Solar Rebate study question '*where did you hear about the Commercial Solar Rebate'.* For example, 16% of residents and 30% of businesses indicated they preferred information from the City of Melbourne website whilst 13% of participants in the Solar Rebate study got their information from the CoM website.
- The *question 'when do you think you will make the final decision about installing a rooftop solar energy system'* maps well onto the Commercial Solar Rebate survey question *'how long has your company/organisation been considering solar'* with the current finding of 50% 12 months or more and 51% for the same time period from the Solar Rebate study.
- In terms of businesses and residents considering installing solar, 15% of businesses and 22% of residents were considering this. This finding is similar to the 1200 Buildings Melbourne Retrofit Survey finding that 18% of building owners/representatives indicated their intention to install a rooftop solar system.
- The credibility of information sources about rooftop solar energy systems maps onto the Commercial Solar Rebate survey question *'how much would you trust the advice from the following [sources]'*. For example, very similar results were found in both studies for credibility/trust of local government/CoM; 69% in the Solar Rebate study and 70% in the current study.
- Findings for the payback period for rooftop solar systems were almost the same with 55% in the current study indicating this would be 5 to 10 years whilst the Commercial Solar Rebate survey found that 56% though this would be 5 to 10 years.
- The barriers to consideration of rooftop solar system question '*please indicate if you are aware of the following finance models for solar'* maps well onto the Commercial Solar rebate survey question *'which of the following solar funding options are you not familiar with'*. For example, 75% of the Solar Rebate participants were unaware of PPAs in contrast to 60% of organisations and 81% of residents in the current study. Furthermore, 89% of residents and 78% of businesses in the current study were not aware of on bill financing, significantly lower levels of awareness in comparison to the Solar rebate study at 69%.

Research Objectives

This research focuses specifically on investigating awareness, attitudes, needs and barriers of City of Melbourne's residential and business communities relating to Rooftop Solar Energy Systems.

Findings from this research will provide insight to support the development of programs which will promote and encourage the uptake of solar energy systems and changes to Melbourne planning scheme to provide certainty and clarity to building owners.

Methodology

This research was conducted in three stages. The first stage, project scoping involved confirming the research objectives and methodology, stage two involved focus groups and depth interviews with City of Melbourne residents, representatives of organisations based in City of Melbourne and stakeholder organisations. These interviews and focus groups guided the development of a survey tool used to measure attitudes among a larger sample size of City of Melbourne residents and representatives of organisations within the City of Melbourne and a small number of organisations outside the municipality (stage three). The flowchart below summarises our approach to the research.

Overview of Methodology

Stage 1: Project scoping

- Creating a shared vision for the research and engage the CoM project team in the process.
- Understand the ways in which it is envisaged the research results may be used.
- Undertake a review of data from current engagement programs as described in the RFQ.

Stage 2: Qualitative research

- Qualitative research among residential and business community members to inform the stage three quantitative research questionnaires.
- N=2 focus groups, one with CoM residents one with representatives of SMEs in CoM.
- N=10 depth interviews with representatives of organisations including stakeholder organisations, organisations involved in the solar industry and other businesses located in CoM.
- Output: A brief topline report of key findings.

Stage 3: Quantitative research

- An online survey of n=212 residents of CoM and 208 organisations (including 181 organisations located in CoM and 27 outside CoM).
- This survey aimed to collect robust data to quantify the residential and business community's attitudes, awareness, needs and barriers related to rooftop solar energy within City of Melbourne
- Output: A full report communicate the integrated qualitative and quantitative research findings. Raw data in excel.

Research Participants

Participants in this research included residents of City of Melbourne, organisations located in City of Melbourne and a smaller number of organisations outside City of Melbourne. Residents surveyed included both owner occupiers and renters in a variety of dwelling types and included buildings subject and not subject to heritage overlay. Organisations included a broad range of industries, organisation sizes and building ownership and occupancy situations. More detail about the demographic and firmographic profile of the research participants can be found in the appendix of this report.

Qualitative Research Sample

Table 1 Qualitative Research Sample

Target audience	Description	Methodology	Number of groups/ participants	Location
CoM residents	Including owner occupiers and renters	Focus group	1 group	CB Sth Melbourne
CoM Business community members (SMEs)	Including commercial building owners and tenants	Focus group	1 group	CB Sth Melbourne
Business community members (large bus)	Building/sustainability/ general managers	Depth interview	5 interviews	Respondent office
Communities of Interest	Strata management, resident and business groups	Depth interview	5 interviews	Respondent office

Colmar Brunton developed the recruitment protocols in consultation with the City of Melbourne project team. Participants were sourced from a research panel via our recruitment partner Cooper Symons and CoM contact lists. Participants were the main or joint decision maker for decisions relating to utilities.

Focus Groups were 1.5 hours in duration.
Individual interviews were conducted via face to face and were approximately 60 minutes in duration.

Residents received $80 to thank them for their time and contribution.
Organisational representatives received $100.

Quantitative Research Sample

We obtained survey responses from a robust sample of n=212 residents and n=208 organisations.

Our sample was obtained from a combination of online research panels (residents), telephone listings for CATI interviews (SMEs) and City of Melbourne email contact lists (other organisations).

The average length of time to complete the survey online was 9 minutes. A copy of the questionnaire can also be found in the Appendix of this report.

Data for residents was weighted to be representative of the population in regards to age and gender according to ABS data for City of Melbourne residents.

Table 2 Age

	Total Sample	
	Unweighted	Weighted
Male 18-34	27	65
Male 35-54	46	25
Male 55+	31	15
Female 18-34	48	68
Female 35-54	35	22
Female 55+	25	16
Total	212	212

QD1. Which of these age groups do you fall into?
Base: All CoM residents (n=212)

Table 3 Gender

	Total Sample	
	Unweighted	Weighted
Male	104	106
Female	108	106

QD2. Are you male or female?
Base: All CoM residents (n=212)

Fieldwork Dates

Qualitative fieldwork was conducted between: Thursday 4 June to Wednesday 10 June 2015
Quantitative fieldwork was conducted between: Wednesday 25 June 2015 to Monday 13 July 2015

Interpreting Quantitative Findings

Tests of Statistical Significance and Reliability

The residents who took part in this survey are only a sample of the total population, so we cannot be certain that the figures obtained are exactly those that would have been reached if the entire population had been surveyed (true value).

We can however, predict the variation between the sample results and the 'true value' by assessing the size of the samples on which the results to each question are based, and the number of times a particular answer is given.

Significance testing has been conducted and differences noted only where statistically significant at 95% confidence level (unless otherwise noted).

Where sample sizes are low (less than n=30), significance testing has not been conducted and these results should be interpreted with caution.

The following table depicts the sample size achieved and the associated confidence interval. The confidence interval represents the range in which we can be 95% confident the true value would lie.

	Sample size	95% Confidence interval (CI)	CI range for a 50% response rate
CoM Melbourne Residents	n=212	+/- 6.7%	43.3% - 56.7%
CoM organisations	n=181	+/- 7.3%	42.7% - 57.3%
Melb organisations (outside CoM)	n=27	+/- 18.9%	31.1% - 68.9%

For example, if 50% of CoM residents (n=212) indicated they are considering a rooftop solar energy system, we can be 95% confident that the true value lies within +/- 6.7% of this value, i.e. between 43.3% and 56.7%

Other Responses

Responses that did not fall into one of the existing response options for a question were coded into a new response. Any additional responses are included in the code 'other'.

In addition, throughout this report, unless specified otherwise, discussion of the findings for organisations relates to organisations within CoM. Due to the small number of organisations outside CoM surveyed the findings for this group are indicative only.

Detailed Findings.

Understanding and Implementation of Sustainability Measures.

When prompted to talk about their understanding of sustainability, residents and organisations discussed concepts such as low impact on the environment, long term security and being able to sustain something for a period of time. Furthermore, organisations may tend to approach sustainability from one of a number of perspectives including an environmentally focussed perspective, efficiency (cost savings through reduced consumption) or a purely financial perspective, whereby financial sustainability is the priority. For business passionate about the environment, sustainability means that whatever the business is doing or undertaking will run forever because all inputs and/or processes are sustainable.

"It's a moral obligation to the world at the end of the day, an obligation in reducing carbon emissions and carbon footprint. On how it impacts on the world, and Australia in particular." (Representative of CoM organisation based in CBD)

For those that focus on efficiency, sustainability is one aspect considered under the umbrella of efficiency.

"It's driven by a number of things but predominately driven by your environmental responsibility in the market place. You're always reducing the cost that goes along with it and providing a better service to the actual tenants using the system/building itself." (Representative of City of Melbourne located organisation based in CBD)

"Private businesses [tenants], again there would be their own policy that would determine whether they would come into the building. They also know what goes with that is a well-designed building, well run building, well managed building and some efficiencies both financial and environmental that go with it. It's a hand in hand approach for them." (Representative of City of Melbourne located organisation based in CBD)

For those with a purely financial focus, sustainability relates to financial cost reduction and the bottom line whereby the priority is financial sustainability.

"The dollars working out. That it's going to pay itself off and it would provide some other benefit. Obviously the rebate would come as part of the units paying themselves off, and being a good corporate citizen would play some part, and the brand reputation would play some part - but without the business case stacking up it would still never happen." (Representative of City of Melbourne located organisation based in CBD)

For organisations and residents, energy efficiency generally relates to reduction and measurability of energy usage, for example, switching to LED lights. Compared to larger organisations, SMEs and not-for-profits may not have a good understanding of what being energy efficient would entail. Furthermore, they may not have the systems required to enable them to "pinpoint and monitor" which parts of their operations may be more or less efficient in terms of costs – e.g. the relationship between specific areas of production or machine usage and energy usage. Large organisations have a better ability to "monitor" consumption at specific times, and to identify energy usage for specific

equipment/fittings. Monitoring and reporting energy efficiency measures are more important for publically listed companies and owners/managers of buildings tenanted by Government departments.

"Federal Government businesses won't look at buildings that are not sustainability focused and in particular, their NABERS rating has to be within their limits." (Representative of City of Melbourne located organisation based in CBD)

Participation in Sustainability Activities

Organisations and residents within CoM indicate they participate in a number of sustainability activities with similar uptake rates. The most common is recycling, in which 91% of CoM organisations participate; higher among organisations outside the CBD compared to those in the CBD (97% and 88% respectively). About three quarters (74%) of CoM residents participate in recycling. Almost two thirds of CoM organisations and half of CoM residents also use energy efficient equipment or appliances while about half have reduced their use of plastics and other nonorganic materials.

Approximately one in ten (9%) CoM organisations indicate they participate in solar panels with those having premises only in the CBD less likely than those having premises only outside the CBD to do so (4% compared to 19%). Similarly, about one in five (22%) organisations outside CoM participates in solar panels. About one in five (22%) of CoM residents surveyed participate in solar panels. CoM residents were equally likely to participate in solar panels if they lived within or outside the CBD.

The proportion participating in rooftop solar panels is not exactly the same as the rate of rooftop solar installation reported in the survey due to participants varying interpretation of participating in solar. For example, representatives of four CoM organisations and one resident considering solar indicated they were participating in solar panels installed on the building, while another participated through their work in a sustainability related role.

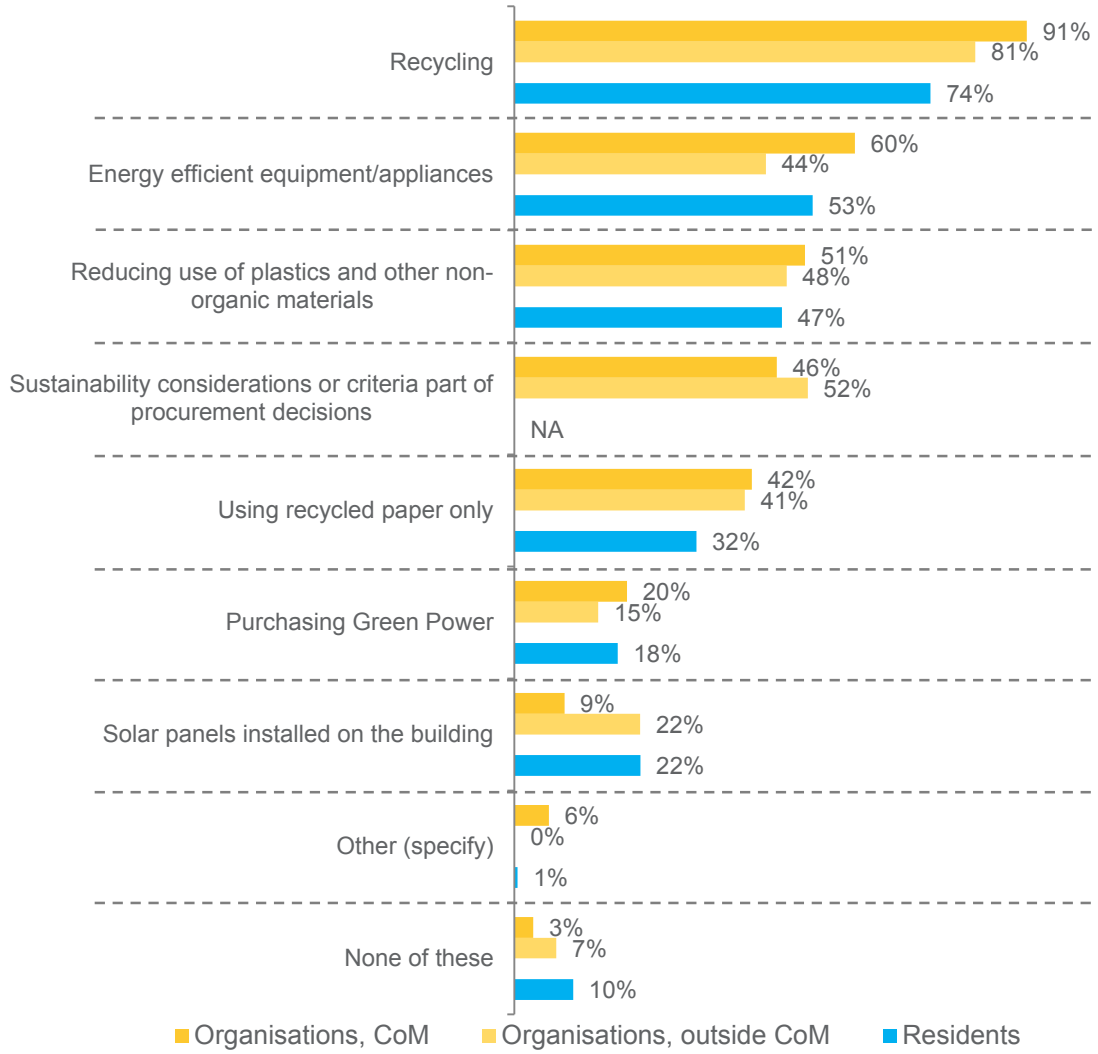
Although most residents and organisations were involved in a number of sustainability measures, 10% of residents and 3% of CoM organisations surveyed had not implemented any sustainability measures.

Among organisations inside CoM, 46% indicated that sustainability considerations or criteria formed part of their procurement decisions; a similar proportion (52%) of organisations outside of CoM considered sustainability considerations as part of their procurement process.

One in five residents (18%) and representatives of organisations (20%) indicate they or their organisation purchase green power. This is significantly higher than the 1-2% of businesses in CoM that purchase green power. Possible reasons for this difference include a misunderstanding of what green power is, tendency to incorrectly assume energy suppliers are providing green power, or difficulty interpreting one's energy accounts. It is also likely that the majority of representatives of larger organisations and at least some of the representatives of SMEs and residents interviewed would not be personally responsible for the organisation's or household's energy account.

This green power discrepancy in one example of the gap between knowledge and perceptions of both householders and representatives of organisations within CoM with regards to sustainability related activities. This should be taken into account when reading this report.

Figure 3 Participation in Sustainability Activities



* Small sample size treat as indicative only.
QG1. Do you /Does your organisation participate in any of the following sustainability activities? (MR)
Base: All respondents. Organisations CoM n=181, Organisations outside CoM n= 27*, Residents n=212

Organisations

Most of the organisations surveyed participate in recycling (100% of those that have a rooftop solar energy system and 90% of those that do not). Organisations located in the CBD are less likely to recycle (88%) compared to those in the CoM but outside the CBD (97%). The majority (86%) of organisations that have a rooftop solar energy system also have energy efficient equipment/appliances. However, only 58% of those that do not have a rooftop solar energy system have energy efficient equipment/appliances.

"Five years ago, if you were doing it in terms of payback period or just absolute cost it was quite prohibitive. Yes it [reduction in cost] was a significant factor in why it became viable to do it now, but was also because we had achieved a lot of the other goals we wanted to. So this was the next thing to do to achieve the next goal, and also our owners are [supportive] owners. They have quite a strong commitment to improving the efficiency of the property and providing the funds to do that, putting the

investment in." (Representative of City of Melbourne located organisation building manager, building with rooftop solar panels)

Organisations that have solar are more likely than those that don't to have sustainability considerations or criteria as part of their procurement decisions (79% compared to 44%), have reduced use of plastics and other non-organic materials (64% compared to 50%), or to use recycled paper only (50% compared to 41%). Due to the small number of organisations surveyed that have solar (n=14) are considering solar (n=28), or have previously considered but rejected solar (n=15), the findings for these groups are indicative.

An organisation occupying a building it owns is more likely to have solar (23%) compared to an organisation that is a tenant (5%). However uptake of energy efficient equipment/appliances, incorporation of sustainability considerations or criteria into procurement decisions, reduced use of plastics and other non-organic materials, use of only recycled paper, and uptake green power does not differ according to whether or not the building is owned or leased.

No differences in uptake of solar energy systems or other sustainability measures were observed based on building height. Sample sizes were too small to identify any differences due to nature of occupancy (part or all of building, single or multiple floors) or industry.

Figure 4 Implementation of Sustainability Measures: CoM Organisations

	Have Solar (n=14)*	Don't Have Solar (n=167)			
		Total (n=167)	Considering Solar (n=28)*	Have Never Considered Solar (n=124)	Previously Considered but Rejected Solar (n=15)*
Recycling	100%	90%	100%	86%	100%
Solar panels installed on the building**	86%	2%	11%	1%	0%
Energy efficient equipment/appliances	86%	58%	64%	53%	87%
Sustainability considerations or criteria part of procurement decisions	79%	44%	57%	37%	73%
Reducing use of plastics and other non-organic materials	64%	50%	57%	48%	60%
Using recycled paper only	50%	41%	50%	40%	33%
Purchasing Green Power	36%	19%	18%	18%	27%
Other (specify)	29%	4%	0%	5%	7%
None of these	0%	4%	0%	5%	0%

* Small sample size treat as indicative only.
QG1. Does your organisation participate in any of the following sustainability activities? (MR) Please select any that apply.
** Refer to discussion above about participation in solar panels

Residents

Overall, CoM residents who have solar are more likely to participate in one or more of the sustainability related activities we asked about, with all CoM residents who have solar participating in at least one of these activities. In contrast, one in seven (14%) of CoM residents who do not have a solar energy system do not participate in any of these sustainability related activities.

About three quarters (74%) of CoM residents recycle and about half (47%) have reduced their use of plastics and non-organic materials. Participation in these sustainability related activities does not significantly differ whether the resident has a solar energy system or does not. However, when asked about use of energy efficient equipment and appliances, use of only recycled paper and the purchase of green power, CoM residents who have solar energy systems, or in some cases who are considering solar energy systems are more likely to indicate they participate in these activities than those who do not.

Sixty four percent of those who have solar and 66% of those who are considering solar use energy efficient equipment and/or appliances. Those who have never considered solar or who have previously considered but rejected solar are less likely to use energy efficient equipment and/or appliances (both 42%). CoM residents who have solar (49%) or are considering solar (53%) are significantly more likely to use recycled paper only compared to residents who have never considered solar energy systems (11%). Almost half of residents who have solar (46%) purchased green power compared with around one tenth of residents who don't have solar (9%).

Figure 5 Implementation of Sustainability Measures: CoM Residents

	Have Solar (n=44)	Don't Have Solar (n=168)			
		Total (n=168)	Considering Solar (n=45)	Have Never Considered Solar (n=86)	Previously Considered but Rejected Solar (n=37)
Solar panels installed on the building	85%	2%	1%	3%	0%
Recycling	74%	73%	81%	67%	80%
Energy efficient equipment/appliances	64%	49%	66%	42%	42%
Using recycled paper only	49%	27%[d]	53%	11%	31%
Purchasing Green Power	46%	9%	19%	5%	5%
Reducing use of plastics and other non-organic materials	39%	50%	60%	42%	58%
Other (specify)	1%	0%	1%	0%	0%
None of these	0%	14%	5%	19%	12%

QG1. Do you participate in any of the following sustainability activities? (MR) Please select any that apply.
Base: All CoM residents

Knowledge of Rooftop Solar Energy Systems

Level of knowledge varies significantly among representatives of organisations ranging from none or very little to highly technical expert knowledge among representatives of organisations in the sustainability, or engineering fields or sustainability experts from very large organisations.

Four in ten organisations and residents within CoM (both 41%) feel they have at least a moderate amount of knowledge about rooftop solar energy systems. However, few representatives of organisations or residents feel they know a lot about rooftop solar energy systems (19% and 9% respectively). Representatives of organisations that received an email from CoM requesting participation in the survey were more likely to know a lot (38%) compared to 5% of SMEs contacted by Colmar Brunton by telephone. Indicating those who more actively opted into the survey may have done so due to an interest in the topic, therefore creating bias in the data. Furthermore, 33 of the 208 representatives of organisations surveyed (equating to 16%) also indicated they work in a sustainability related field. Those in a related field were more likely to indicate they know a lot about solar (48%) compared to those not working in a related field (14%).

Some of the things residents mention about rooftop solar include the need for a north facing roof, average number of panels, how the rooftop solar systems work, credits, advances in technology such as batteries and the possibility of financing options.

"I think they are silicon based and when a photon hits the silicon plate an electron flies off and then that is collected one way or another via the brilliance of our engineers so we get free photons - which is electricity." (CoM Householder with a solar panel system)

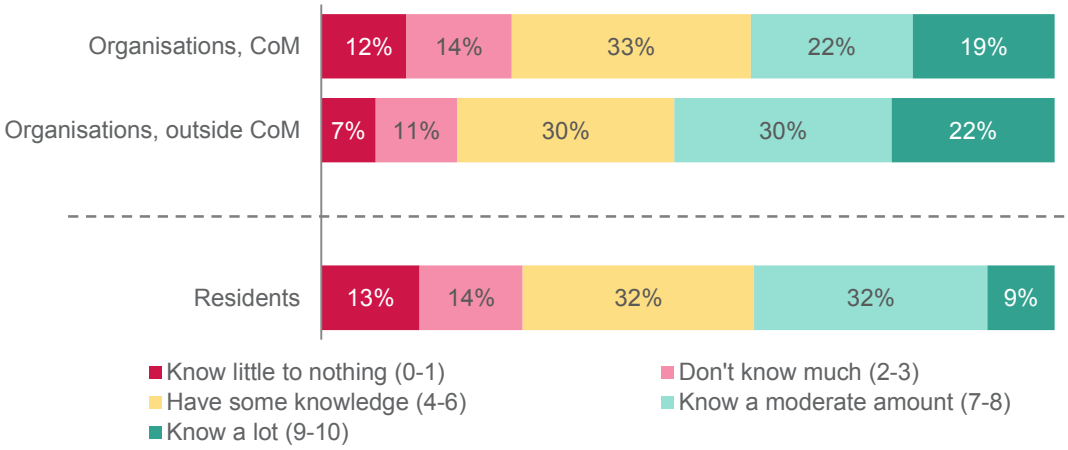
However, about a quarter of CoM organisations (26%) and residents (27%) know little to nothing or don't know much about rooftop solar energy systems, and just under one third have only some knowledge. Overall, close to two thirds (59%) have less than a moderate knowledge of solar energy systems.

As discussed further below (ref Barriers to Consideration), limited knowledge of rooftop solar energy systems is a significant barrier to installation for organisations and residents. The lack of knowledge reinforces the need for organisations such as Positive Charge and other independent consultants to help guide both residents and organisations through the process of deciding whether to have a rooftop solar energy system installed and if so, the specifications for that system.

"One of the biggest things for us was that they offered an independent assessment through the city of Moreland. The City of Melbourne has an arrangement with City of Moreland who have a company or subsidiary called Positive Charge. That was quite interesting to us because it gave us a feeling that it was an independent honest broker in a way, time will tell. The people who came did seem to be [reputable]. One guy was an environmental engineer, and they have a panel or group of companies that they consider to be ethical companies. Because that was the other issue I think, we looked at it previously and the companies [we spoke to then] were sort of touting it, they seemed like touts." (Representative of City of Melbourne located SME)

"…that recommended or trusted list of vendors you could use that are reputable would make me more inclined. And maybe a list of people that are dodgy." (CoM resident)

Figure 6 Knowledge of rooftop solar energy systems



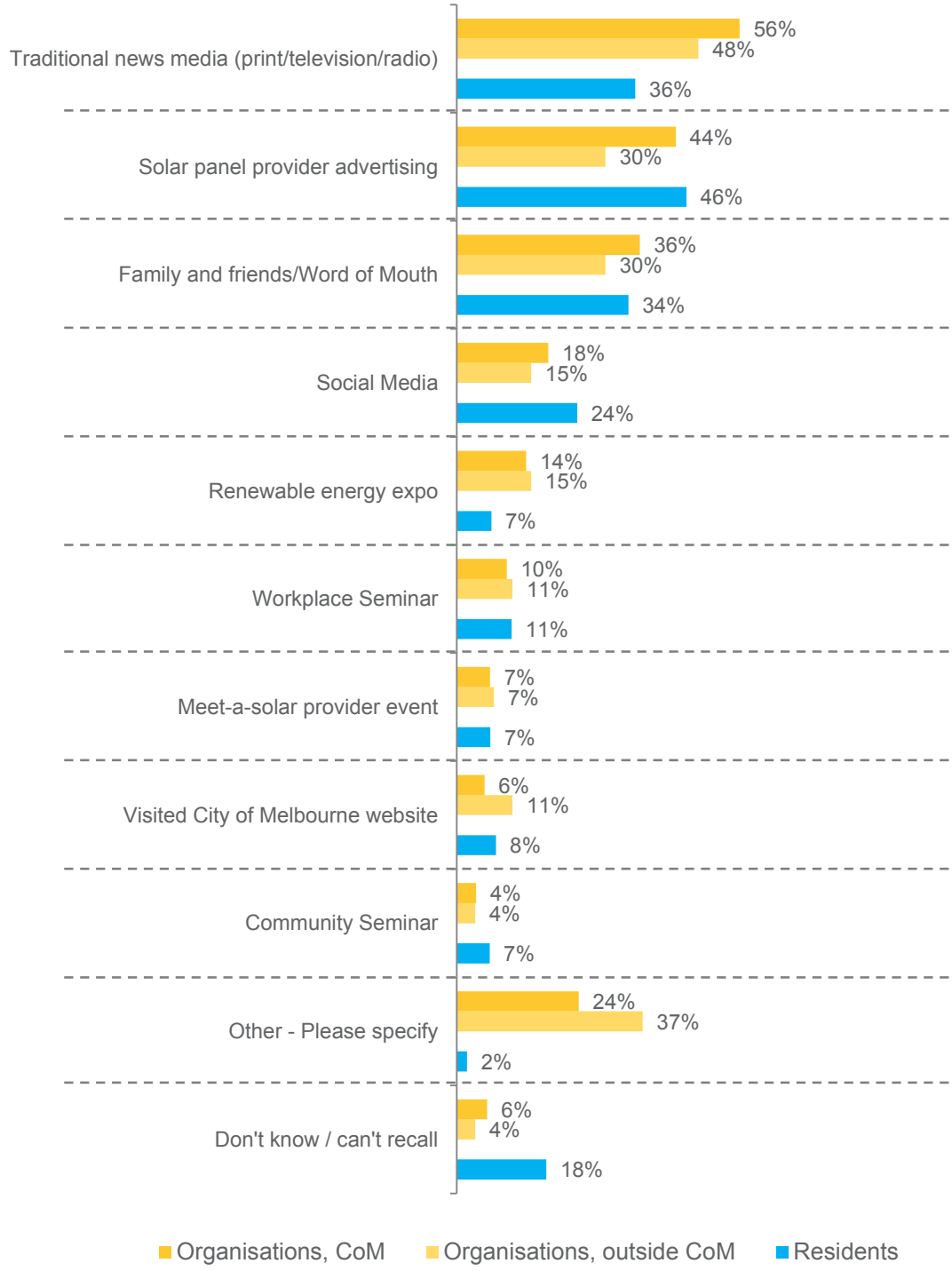
* Small sample size treat as indicative only.
QH1. How much do you know about rooftop solar energy systems?
Base: All respondents. Organisations CoM n=181, Organisations outside CoM n= 27*, Residents n=212

Sources of Awareness about Rooftop Solar Energy Systems

Residents and organisations within CoM heard about rooftop solar systems from a broad range of sources with the most common being traditional news media, solar panel provider advertising and family and friends. More than half (56%) of CoM organisations heard about rooftop solar from traditional news media (print/television/radio) compared to 36% of residents. Solar panel provider advertising was a source of awareness for almost half of residents (46%) and CoM organisations (44%). In contrast with CoM organisations, only one third of organisations outside CoM (30%) heard about solar rooftop systems from solar panel provider advertising. Family, friends and word of mouth was mentioned by about one third of CoM organisations (36%) and residents (34%) and just under one third of organisations outside CoM (30%). Social media was mentioned by 24% of City of Melbourne residents as a source of awareness of rooftop solar energy systems.

Only a small proportion of CoM residents and organisations heard about rooftop solar systems from the CoM website (8% and 6% respectively). Almost one fifth of residents (18%) either didn't know or couldn't recall how they heard about rooftop solar.

Figure 7 Sources of Awareness about Rooftop Solar Systems



* Small sample size treat as indicative only.
QH3. How did you hear about rooftop solar energy systems? (MR)
Base: All respondents. Organisations CoM n=181, Organisations outside CoM n= 27*, Residents n=212

Among organisations within CoM, solar panel provider advertising is a common source of awareness of rooftop solar energy systems whether or not the organisation has solar (43% of those with solar and 44% of those that do not have solar mentioned solar panel provider advertising).

However, for organisations that do not have solar, traditional news media (59%) and family and friends (38%) were more commonly noted as a source of awareness. This was a much higher rate in comparison to organisations that do have solar, of which only 29% indicate traditional news media and 14% indicate family and friends were a source of awareness preferring other more targeted or expert sources.

Organisations that have (21%) or are considering solar (29%) are more likely to have heard about rooftop solar energy systems through renewable energy expos than those who have never considered solar (9%).

Table 4 Sources of Awareness about Rooftop Solar Systems Used: CoM Organisations

	Have Solar (n=14)*	Don't Have Solar (n=167)			
		Total (n=167)	Considering Solar (n=28)*	Have Never Considered Solar (n=124)	Previously Considered but Rejected Solar (n=15)*
Solar panel provider advertising	43%	44%	54%	40%	53%
Traditional news media (print/television/radio)	29%	59%	50%	61%	53%
Renewable energy expo	21%	13%	29%	9%	20%
Workplace Seminar	14%	10%	21%	6%	20%
Family and friends/Word of Mouth	14%	38%	32%	41%	27%
Meet-a-solar provider event	7%	7%	4%	6%	20%
Social Media	7%	19%	7%	23%	13%
Community Seminar	0%	4%	4%	4%	7%
Visited City of Melbourne website	0%	6%	4%	6%	7%
Other	36%	23%	32%	23%	13%
Don't know / can't recall	7%	6%	4%	6%	7%

* Small sample size treat as indicative only.
QH3. How did you hear about rooftop solar energy systems? (MR)

Residents who have solar and those who do not have solar were similarly likely to have heard about rooftop solar energy systems from the main sources (solar panel providers, traditional news media and family and friends).

Around two thirds (60%) of residents who have solar, heard about rooftop solar energy systems from solar panel provider advertising compared to 41% of residents who do not have solar. However, those who have never considered solar were less likely to mention solar panel provider advertising as a source of awareness of solar (32%). Traditional news media is a common source of awareness of rooftop solar energy systems irrespective of whether the resident has solar (36%) or not (35%). Similarly, information via word of mouth reached an equal proportion of residents with solar (34%) and without solar (34%).

Residents who have solar are significantly more likely to have heard about rooftop solar systems from a workplace seminar (31%) or the CoM website (23%) compared to residents who don't (4% and 3% respectively).

Table 5 Sources of Awareness about Rooftop Solar Systems: CoM Residents

	Have Solar (n=41)	Don't Have Solar (n=168)			
		Total (n=168)	Considering Solar (n=45)	Have Never Considered Solar (n=86)	Previously Considered but Rejected Solar (n=37)
Solar panel provider advertising	60%	41%	56%	32%	45%
Traditional news media (print/television/radio)	36%	35%	41%	35%	27%
Family and friends/Word of Mouth	34%	34%	51%	25%	36%
Social Media	34%	21%	30%	18%	11%
Workplace Seminar	31%	4%	7%	3%	2%
Visited City of Melbourne website	23%	3%	7%	1%	2%
Meet-a-solar provider event	17%	3%	4%	4%	0%
Community Seminar	14%	4%	4%	5%	0%
Renewable energy expo	13%	5%	10%	4%	0%
Other	1%	2%	0%	3%	4%
Don't know / can't recall	10%	20%	8%	32%[ce]	5%

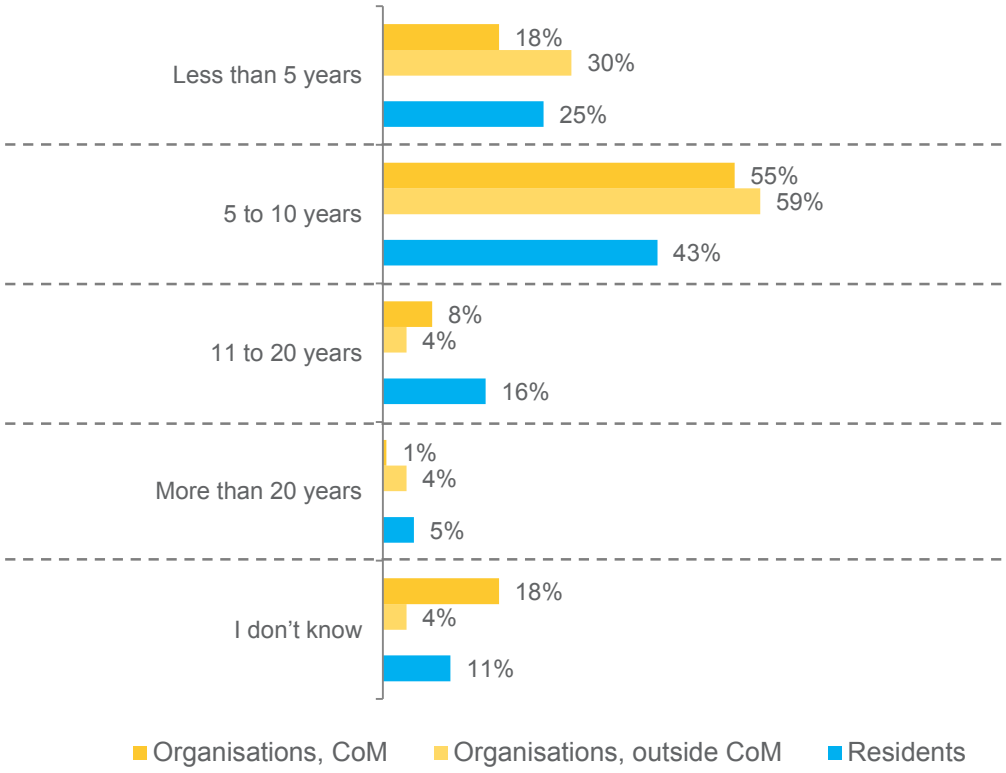
QH3. How did you hear about rooftop solar energy systems? (MR)

Financial Return

More than half of CoM organisations (55%) correctly understood the payback period for a rooftop solar energy system to be 5 to 10 years. One in five (18%) thought that the payback period was less than 5 years. This was higher among organisations in the CBD, of which 25% thought the payback period was less than five years compared to 9% of organisations outside the CBD. Only 9% of CoM organisations expected the payback period to be more than 10 years. The remaining one in five (18%) organisations did not know what the payback period would be.

Residents were less likely to be accurately informed compared to organisations, with only four out of ten (43%) correctly expecting it would take 5 to 10 years for a solar energy system to pay for itself. One in four (25%) thought that the payback period was less than 5 years while one in five (21%) expected the payback period to be more than 10 years. One in ten (11%) residents did not know what the payback period would be.

Figure 8 Payback Period for Rooftop Solar Systems



* Small sample size treat as indicative only.
QI1. What do you think the payback period is for rooftop solar energy systems? (ORGANISATIONS) (SR)
QI1.How long would you expect it to take for a solar energy system to pay for itself? (RESIDENTS) (SR)
Base: All respondents. Organisations CoM n=181, Organisations outside CoM n= 27*, Residents n=212

Adoption and Consideration of Rooftop Solar Energy Systems

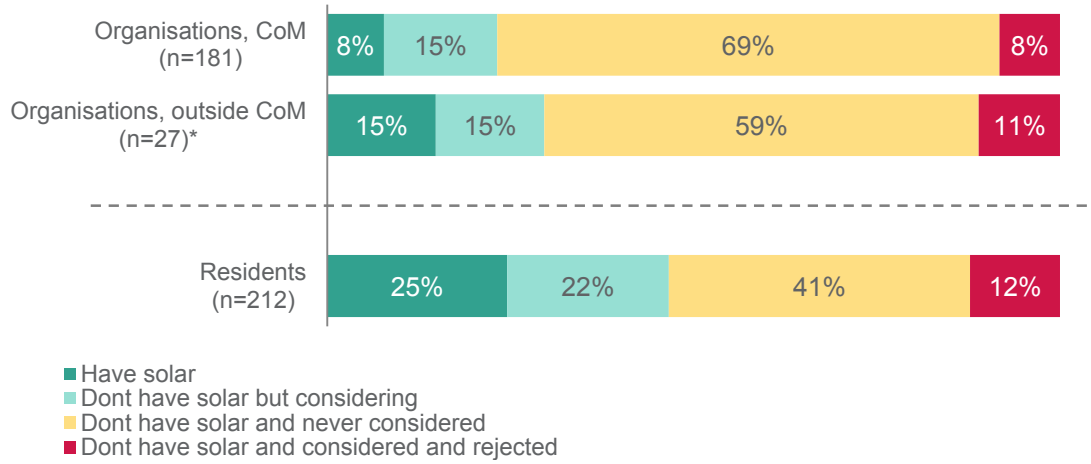
CoM residents are more likely than representatives of organisations in CoM to already have or be considering a solar energy system.

Almost half of the CoM residents surveyed indicated they already have a rooftop solar energy system (25%) or are currently considering one (22%). Two fifths (41%) have never considered installing a solar energy system while the remaining 12% have considered but decided against a solar energy system. Uptake and consideration of solar is similar for CoM residents living in the CBD compared to those outside the CBD area.

Almost one quarter of representatives of CoM organisations surveyed indicated they already have a solar energy system (8%) or are currently considering one (15%). Over two thirds (69%) have never considered installing a solar energy system while the remaining 8% have considered but decided against a solar energy system. Organisations outside the CBD were more likely than those within the CBD to have solar (16% compared to 4%), be considering solar (21% compared to 12%) and have considered and rejected solar (12% compared to 5%).

Representatives of organisations outside CoM are also more likely than organisations within CoM to already have or be considering a rooftop solar energy system.

Figure 9 Adoption of Rooftop Solar Systems



* Small sample size treat as indicative only.
Q I2. Does your home /Does your building/s have rooftop solar energy systems installed? (SR)
Base: All respondents

Only residents and representatives of organisations with solar energy systems who were aware of or had been involved in the decision were asked subsequent questions related to the decision and process. This included 86% of residents living in a building with a solar energy system, 57% of representatives of organisations in CoM, and 75% of representatives of organisations outside CoM with a solar energy system.

The path to deciding to purchase a solar energy system can be lengthy with about half of those currently considering a solar energy system expecting to make a decision within the next 18 months while the other half could take up to two or more years to decide. Almost half of the CoM residents considering solar thought they would make the decision by the end of next year, either in the next few months (13%) or sometime next year (32%). A similar proportion (45%) felt it would be one to two years or more than 2 years before they decided and 11% did not know. Similar to residents, almost half of the CoM organisations considering solar thought they would make the decision by the end of next year either in the next few months (18%) or sometime next year (25%). However, one in four (25%) felt it would be one to two years or more than 2 years before they decided and one third (32%) did not know.

The significant time period and high level of uncertainty about time frames for the decision to install a rooftop solar system is consistent with limited knowledge of rooftop solar systems among both organisations and residents as explained by a representative of the Sustainable Melbourne Fund.

"… it typically takes 6 months to get a commercial solar install job done - from the initial phone call to the day the ink is on the page. During that period, and in that process, you'll get all the basic questions – what's a kilowatt, what's solar, why will it work, does it point north - Really basic questions, all the way through. Then all of the sudden they're at the end and then you graduate very quickly into pragmatic business conversation – what's the NPV, what's the rate of return, where can this money better go, can I spend it as cash, whatever it is… In comparison, for example, if they were going to lease a car, they've already got an understanding of what the car is, they know what a good car is, what a bad car is, they have personal experience. Solar they don't, so they're going all the way through in an education curve." (Sustainable Melbourne Fund)

Table 6 Timeframe for Rooftop Solar Systems

	Organisations, CoM (n=28)*	Organisations, outside CoM (n=4)*	Residents (n=45)
In a few months	18%	25%	13%
Sometime next year	25%	0%	32%
In 1 to 2 years	14%	50%	29%
More than 2 years from now	11%	0%	15%
I don't know	32%	25%	11%

* Small sample size treat as indicative only.

J2. When do you think you will make the final decision about installing a rooftop solar energy system? (SR)
Base: Those who do not have a rooftop solar system but are currently considering a rooftop solar energy system

Information Types & Channels Used

Types of Information Used

Participants who had not previously considered or who were currently considering solar were asked in the survey and face to face discussions about the types of information that they felt would help them decide whether or not to install a rooftop solar energy system. Those who already have solar or had previously considered and rejected solar were asked about the types of information they had used when considering a rooftop solar energy system.

Organisations and residents valued similar types of information for deciding whether or not to install a rooftop solar system with the most commonly indicated types of information including estimated reduction on electricity bills, financial rebates from Council , case studies showing how rooftop solar energy systems has been effective in reducing electricity bills, financial investment required, environmental benefits (reduced carbon emissions), availability and terms of warranties, and service guarantees of rooftop solar energy system providers being nominated by at least half of organisations within CoM and at least one third of residents.

Residents generally selected fewer types of information; therefore they were less likely to indicate they would or did use any particular type of information.

Close to three quarters of CoM organisations (72%) indicated that they had or would use estimated reduction in electricity bills after installation of rooftop solar energy systems, 62% would use Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills, 61% would use Environmental benefits (reduced carbon emissions), 60% thought that financial rebates from councils would help them to decide on whether or not to install a rooftop solar system or had used this type of information. A similar proportion would or did use service guarantees of rooftop solar energy system providers or availability and terms of warranties and financing options (both 55%) while close to half (47%) of CoM organisations would or did consider energy ratings and/or Green building ratings (e.g. NABERS).

Estimated reduction in electricity bills after installation of rooftop solar energy systems and availability and terms of warranties would be or were each used by 41% of residents. Financial rebates from Council, case studies showing how rooftop solar energy systems has been effective in reducing electricity bills, and Financing options were or would each be used by 39% of CoM residents.

CoM organisations and residents were least likely to indicate they did or would use information about heritage listing status of building (27% of organisations and 7% of residents) and planning controls (38% of organisations and 17% of residents).

Whilst heritage listing was not a top of mind issue for residents who had not gone through the consideration process for a rooftop solar system, as indicated by a representative of Positive Charge, heritage listing is an issue for residents of CoM and other inner city councils who wish to install a rooftop Solar System.

"A barrier for residential property within the inner city is heritage overlay. Depending on which Council area you're in, those regulations might be stricter, for example you might have to get a planning permit or your panels might not be able to face the street. If you have north facing street access, you have to think about east west or not at all, and you still need to go through planning regulations. When we ran the bulk buy for City of Melbourne the number one issue for Residents interested and would've gone ahead with installation, but didn't, was the fact that they couldn't – it's too hard." (Positive Charge Representative)

Those who have gone through the process of investigating solar rooftop systems also agree that being in a heritage listed property creates a barrier to uptake.

"Did a tiny bit [of investigation], my daughter did most of it. But once the council said no you can't have it where you want it there was no point in going any further." (CoM resident who had researched rooftop solar systems)

Port Phillip Council was provided as an example of a council that has taken steps to make the process of gaining council approval in a heritage listed area easier and removed the need to gain approval from two separate council departments.

"That's something that the City of Port Philip has tried to actively find a solution for. They've got a simplified process and a one-page fact sheet saying "Thinking about Solar" and "This is what you need to think about if your house is in a heritage overlay area". It's quite straightforward and there is one point of contact within the planning department which also makes it easier." (Positive Charge Representative)

Table 7 Types of information for deciding whether to install a rooftop solar system

	Organisations, CoM (n=175)	Organisations, outside CoM (n=26)*	Residents (n=205)
Estimated reduction in electricity bills after installation of rooftop solar energy systems	72%	69%	41%
Financial rebates from Council	60%	58%	39%
Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills	62%	42%	39%
Financial investment required	55%	50%	36%
Environmental benefits (reduced carbon emissions)	61%	54%	28%
Availability and terms of warranties	45%	54%	41%
Service guarantees of rooftop solar energy system providers	55%	50%	31%
Financing options	43%	35%	39%
Energy ratings and/or Green building ratings (e.g. NABERS)	47%	54%	18%
Information about planning controls and policy	38%	42%	17%
Heritage listing status of building	27%	19%	7%
Other (please specify)	15%	23%	6%

* Small sample size treat as indicative only.
QJ3. Which of the following types of information would help you decide whether or not to install a rooftop solar energy system? (MR)
QJ3. Which of the following types of information did you use when considering a rooftop solar energy system? (MR)
QL2. Which of the following did you use when searching for information about rooftop solar energy systems? (MR)
Base: All

Due to the small number of organisations with solar surveyed, it is difficult to make comparisons between information sources used by those organisations that have solar and those that do not. However, it is noted that of the eight CoM organisations surveyed that have solar, only one (13%[1]) used information about financial rebates from council and/or planning controls and policy. However, representatives of organisations that do not have solar are quite likely to indicate this type of information would help them decide whether to install solar (62% and 40% respectively), indicating these are important information sources.

Table 8 Types of information for deciding whether to install a rooftop solar system: CoM organisations

	Have Solar (n=8)*	Don't Have Solar (n=167)			
		Total (n=167)	Considering Solar (n=28)	Have Never Considered Solar (n=124)	Previously Considered but Rejected Solar (n=15)*
Estimated reduction in electricity bills after installation of rooftop solar energy systems	75%	72%	79%	69%	80%
Financial investment required	63%	54%	50%	52%	80%
Environmental benefits (reduced carbon emissions)	50%	61%	54%	61%	73%
Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills	38%	63%	64%	63%	60%
Availability and terms of warranties	38%	46%	46%	49%	13%
Service guarantees of rooftop solar energy system providers	38%	56%	57%	60%	20%
Financing options	38%	43%	39%	46%	27%
Energy ratings and/or Green building ratings (e.g. NABERS)	38%	48%	21%	53%	53%
Financial rebates from Council	13%	62%	61%	65%	47%
Information about planning controls and policy	13%	40%	43%	41%	20%
Heritage listing status of building	0%	29%	21%	32%	13%
Other	13%	15%	14%	15%	13%

* Small sample size treat as indicative only.
QJ3. Which of the following types of information would help you decide whether or not to install a rooftop solar energy system? (MR)
QJ3. Which of the following types of information did you use when considering a rooftop solar energy system? (MR)
QL2. Which of the following did you use when searching for information about rooftop solar energy systems? (MR)

Almost two thirds of residents who have solar (59%) used case studies showing how rooftop solar energy systems have been effective in reducing electricity bills compared with about one third of organisations who don't have solar (34%). Similarly, almost two thirds of residents who have solar (58%) would or did use information about availability and terms of warranties compared with a third who do not have solar (36%).

[1] Small sample size treat as indicative only.

Those who do not have solar were however more likely than those who do have solar to indicate that information about financial rebates from council would help them decide whether or not to install a rooftop solar energy system (45% compared to 21%).

Residents considering solar, are the most likely to indicate that information about service guarantees of rooftop solar energy system providers would help them decide whether or not to install a rooftop solar energy system (49% compared to 26% of those who have never considered solar and 15% of those who previously considered but rejected solar). Those considering solar are also more likely to consider energy ratings and/or green building ratings (34% compared to 9% of those who have never considered solar and 14% of those who previously considered but rejected solar).

Table 9 Types of information for deciding whether to install a rooftop solar system: CoM Residents

	Have Solar (n=37)	Don't Have Solar (n=168)			
		Total (n=168)	Considering Solar (n=45)	Have Never Considered Solar (n=86)	Previously Considered but Rejected Solar (n=37)
Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills	59%	34%	36%	34%	30%
Availability and terms of warranties system'	58%	36%	49%	30%	32%
Financial investment required system'	41%	34%	42%	25%	47%
Estimated reduction in electricity bills after installation of rooftop solar energy systems	37%	43%	45%	40%	48%
Financing options system'	34%	40%	43%	44%	22%
Service guarantees of rooftop solar energy system providers system'	32%	31%	49%	26%	15%
Financial rebates from Council	21%	45%	45%	48%	33%
Energy ratings and/or Green building ratings (e.g. NABERS)	20%	17%	34%	9%	14%
Environmental benefits (reduced carbon emissions)	19%	30%	43%	22%	37%
Heritage listing status of building	3%	9%	6%	11%	6%
Information about planning controls and policy	21%	15%	14%	18%	9%
Other (please specify)	0%	7%	1%	12%	2%

QJ3. Which of the following types of information would help you decide whether or not to install a rooftop solar energy system? (MR)
QJ3. Which of the following types of information did you use when considering a rooftop solar energy system? (MR)
QL2. Which of the following did you use when searching for information about rooftop solar energy systems? (MR)

Information Channels Used

For residents and organisations in CoM, online is the channel of choice for information about solar energy followed by email. Friends and family are also an important source.

About half of CoM organisations would do an online search (54%) or go to a solar provider website (45%). One third would look at an online video (30%) or council website (30%) and about one in four would use social media (23%). Close to half of CoM organisations would like an email from council (43%) with organisations in the CBD being more likely than those outside the CBD to want an email from Council (57% compared to 29%).

Similarly, almost half of CoM residents would do an online search (47%), while about one third would go to a solar provider website (34%). One in five residents would look at an online video (18%), council website (16%) or use social media (20%). About one quarter of residents would like an email from council (27%).

More than one third (36%) of CoM organisations would prefer or did get their information from a phone conversation with experts compared to less than one in five (17%) residents. CoM residents and organisations were similarly likely to get information from friends and family (28% compared to 30%)

Table 10 Information channels for deciding whether to install a rooftop solar system

	Organisations, CoM (n=175)	Organisations, outside CoM (n=26)*	Residents (n=205)
Phone conversation with experts	36%	15%	17%
Solar provider website	45%	42%	34%
Online search	54%	54%	47%
Friends and family	30%	19%	28%
Meet-a-solar provider event	20%	8%	25%
Workplace seminar	21%	12%	15%
Renewable energy expo	25%	38%	11%
Online videos	30%	27%	18%
Council website	30%	27%	16%
Community seminar	17%	19%	11%
Social Media	23%	23%	20%
Email from council	43%	23%	27%
Webinars	17%	27%	3%
Magazines	20%	27%	10%
Direct contact with council planning department	27%	15%	12%
Other, please specify	10%	15%	2%

* Small sample size treat as indicative only.
J4. What would be your preferred way to access information on solar energy? (MR)
J5. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)
L3. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)
Base: All respondents

Two thirds (63%) of the eight CoM organisations surveyed that have solar would or did access information in a phone conversation with experts in order to decide whether to install about rooftop solar. In contrast one third (35%) of CoM organisations that do not have solar indicate they would or did use this information channel.

Among CoM organisations that do not have solar, those currently considering solar are less likely to indicate they would use friends and family or social media (18% and 7% respectively) compared to those who have never considered solar (35% and 30% respectively would use family and friends or social media).

Table 11 Information channels for deciding whether to install a rooftop solar system: CoM organisations

	Have Solar (n=8)*	Don't Have Solar (n=167)			
		Total (n=167)	Considering Solar (n=28)*	Have Never Considered Solar (n=124)	Previously Considered but Rejected Solar (n=15)
Phone conversation with experts	63%	35%	46%	30%	53%
Solar provider website	38%	54%	46%	57%	47%
Online search	38%	45%	32%	49%	33%
Friends and family	25%	31%	18%	35%	20%
Meet-a-solar provider event	13%	20%	29%	19%	20%
Workplace Seminar	13%	22%	18%	24%	7%
Renewable energy expo	13%	25%	25%	25%	27%
Online videos	13%	31%	14%	37%	7%
Council website	13%	31%	21%	36%	7%
Community Seminar	0%	17%	25%	17%	7%
Social Media	0%	25%	7%	30%	13%
Email from Council	0%	46%	43%	50%	13%
Webinars	0%	18%	14%	21%	0%
Magazines	0%	21%	7%	24%	20%
Direct contact with council planning department	0%	29%	43%	29%	0%
Other	13%	10%	4%	9%	27%

* Small sample size treat as indicative only.
J4. What would be your preferred way to access information on solar energy? (MR)
J5. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)
L3. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)

While CoM residents who do not have solar are as likely to search online for information as those who do have solar (47% and 46% respectively), they are less likely to indicate they would use a phone conversation with experts (11% compared to 39% of those who have solar), met-a-solar provider event (21% compared to 39% of those who have solar), or workplace seminar (12% compared to 28% of those who have solar). Those currently considering solar were as likely as those who have solar to prefer to access information through a meet-a-solar provider event (37% and 39% respectively.

Residents who have previously considered but rejected solar are less likely to prefer to access information through an email from council (8%) compared to those who have never considered solar (29%), are currently considering solar (31%) or have solar (29%). Instead, residents who have previously considered but rejected solar are more likely to access information through friends and family (43%) compared to those who have never considered solar (26%), are currently considering solar (27%) or have solar (24%).

Table 12 Information channels for deciding whether to install a rooftop solar system: CoM residents

	Have Solar (n=37)	Don't Have Solar (n=168)			
		Total (n=168)	Considering Solar (n=45)	Have Never Considered Solar (n=86)	Previously Considered but Rejected Solar (n=37)
Online search	46%	47%	45%	47%	51%
Phone conversation with experts	39%	11%	12%	7%	21%
Meet-a-solar provider event	39%	21%	37%	16%	10%
Solar provider website	34%	35%	40%	33%	30%
Email from Council	29%	26%	31%	29%	8%
Workplace Seminar	28%	12%	16%	12%	5%
Friends and family	24%	29%	27%	26%	43%
Social Media	21%	19%	24%	20%	9%
Council website	16%	16%	17%	18%	6%
Online videos	14%	19%	16%	24%	6%
Community Seminar	10%	11%	20%	9%	2%
Direct contact with council planning department	9%	13%	13%	15%	5%
Renewable energy expo	7%	12%	20%	10%	2%
Webinars	5%	3%	4%	2%	2%
Magazines	5%	12%	15%	11%	9%
Other, please specify	5%	1%	1%	1%	2%

J4. What would be your preferred way to access information on solar energy? (MR)
J5. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)
L3. Which of the following sources did you use or attend when considering a rooftop solar energy system? (MR)

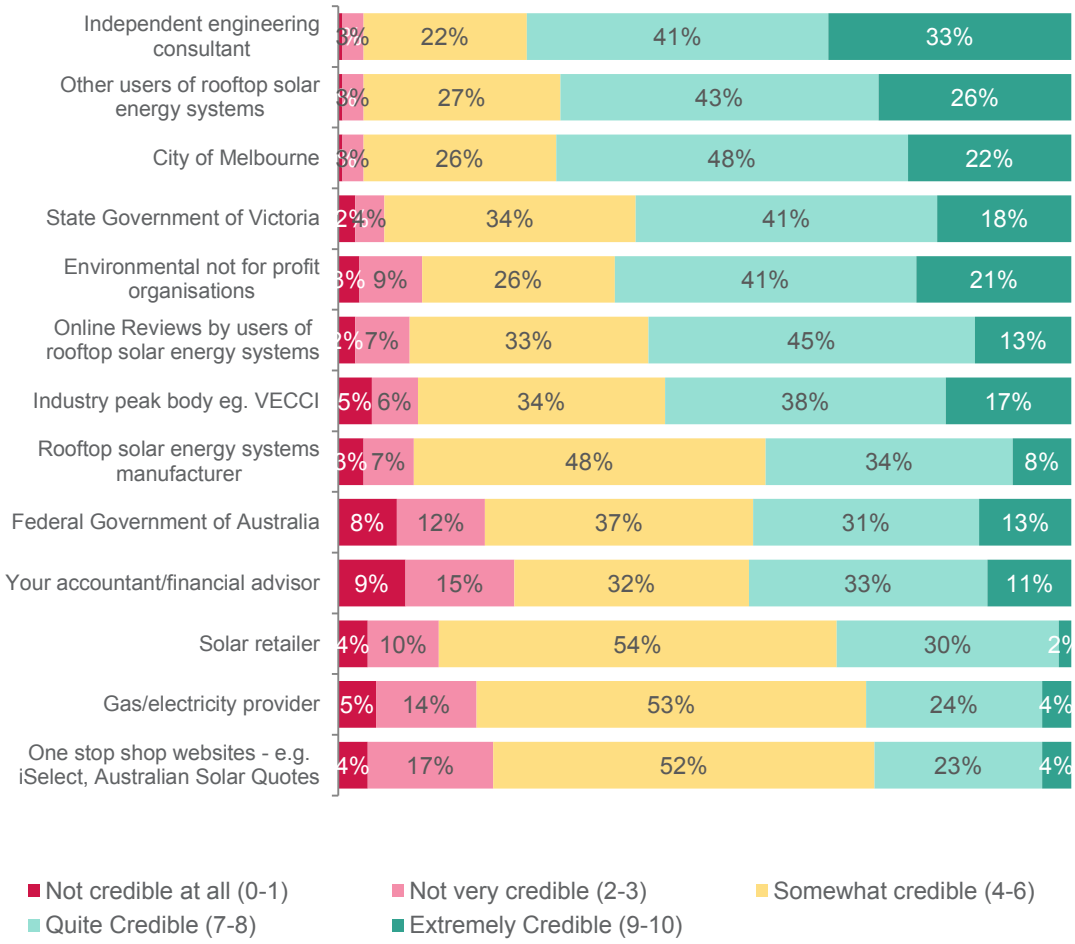
Credibility of Information Sources

Independent engineering consultants, other users of rooftop solar, City of Melbourne, the State Government, environmental not for profit organisations, and industry peak bodies such as VECCI are considered by organisations to be the most credible sources of information regarding rooftop solar energy systems with approximately one in five or more of all CoM organisations surveyed considering these sources very credible and at least half regarding them as at least quite credible. Few CoM organisations regarded these sources as not at all or not very credible sources of information.

"We had done quite a bit of internal research over the years ourselves, attended quite a number of seminars, presentations, industry forums which talked about different energy reduction strategies solar being within them and then we engaged external consultants as well." (Representative of City of Melbourne located organisation, building manager, building with rooftop solar panels)

In contrast, few organisations regard the Federal Government, their accountant or financial advisor, solar retailers, gas or electricity providers, and one stop shops such as iSelect or Australian Solar Quotes to be credible sources of information about solar.

Figure 10 Credibility of rooftop solar energy information sources: CoM organisations

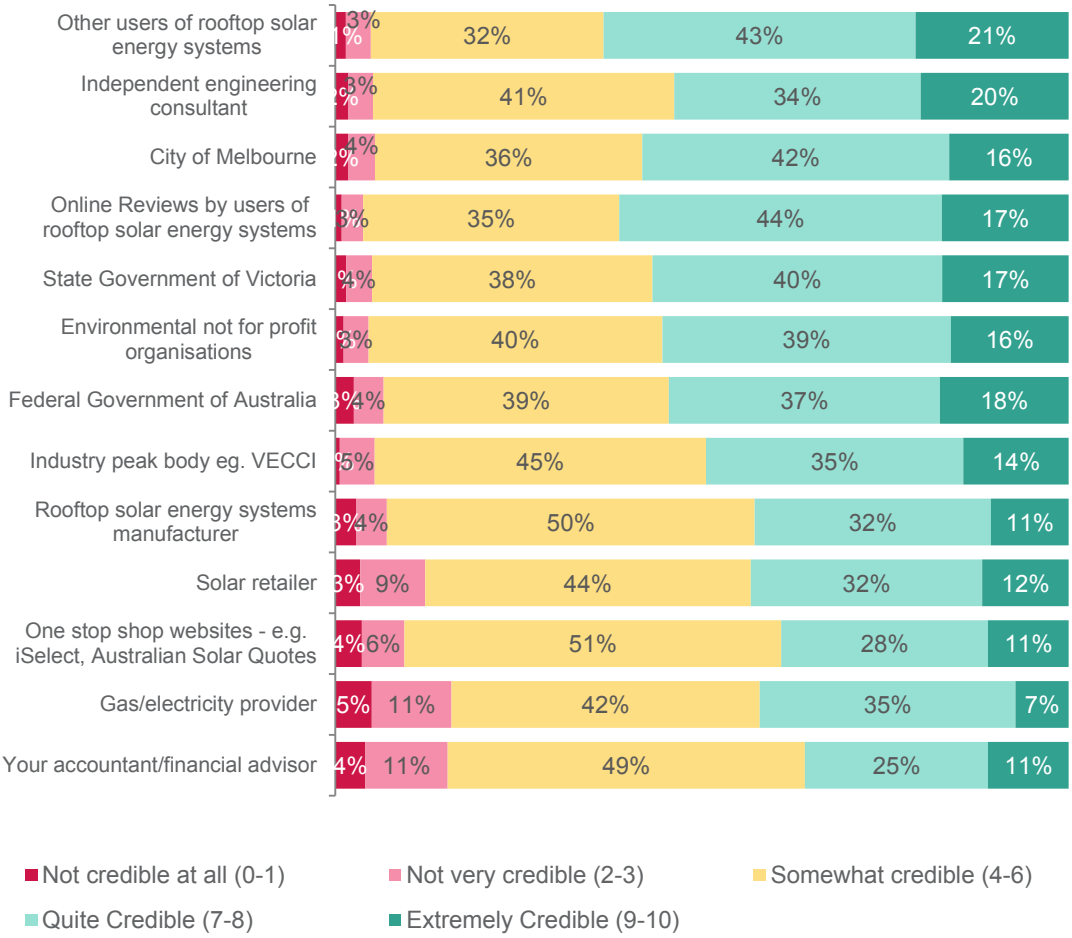


J6. How credible are each of the following possible sources of information regarding rooftop solar energy systems? (SR)
Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)
L4. How credible are each of the following possible sources of information regarding rooftop solar energy systems? (SR)
Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)
Base: Total Sample (n=181)

Other users of rooftop solar energy systems were considered by two thirds (64%) of CoM residents to be a credible source of information about rooftop solar systems including 21% who consider other users to be extremely credible and 43% who consider them to be quite credible. Independent engineering consultants, City of Melbourne, online reviews by users of rooftop solar energy, the State Government, environmental not for profit organisations, and the Federal Government are all considered to be credible sources of information about rooftop solar systems by at least half of CoM residents surveyed.

Sources considered by at least one in ten CoM residents to be not very credible or not at all credible included gas or electricity providers (16%), their accountants or financial advisors (15%), solar retailers (12%), and one stop shops such as iSelect or Australian Solar Quotes (10%).

Figure 11 Credibility of rooftop solar energy information sources: CoM residents



J6. How credible are each of the following possible sources of information regarding rooftop solar energy systems? (SR)
Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)
L4. L4. How credible are each of the following possible sources of information regarding rooftop solar energy systems? (SR)
Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)
Base: Total Sample (n=205)

Barriers to Consideration

The most commonly mentioned barrier to preventing CoM organisations from installing rooftop solar is not owning the building (72%). In contrast, not owning the building was a barrier for less than one third (28%) of residents. Financial cost was a commonly mentioned barrier for residents with more than two fifths (42%) indicating this to be the case. Similarly, almost two fifths of CoM organisations (38%) indicated that financial cost was a barrier to installing a rooftop solar system. Almost four out of 10 CoM organisations (38%) and residents (39%) indicated their limited knowledge about rooftop solar energy systems was a barrier to installing rooftop solar. Other barriers for CoM organisations included achieving access to the rooftop (41%), limited available roof space (39%), lack of financing options (30%) and planning controls and policy (30%).

Table 13 Barriers to consideration of rooftop solar systems

	Organisations, CoM (n=175)	Organisations, outside CoM (n=26)*	Residents (n=205)
I don't/my company doesn't own the building	72%	65%	28%
The financial cost	38%	31%	42%
My limited knowledge about rooftop solar energy systems	38%	35%	39%
Limited available roof space	39%	31%	23%
Achieving access to rooftop	41%	35%	13%
The implementation was difficult	29%	23%	16%
The possibility of moving to a different building/house	26%	12%	20%
Technology will improve significantly in the near future	27%	23%	14%
Limited time available	26%	23%	14%
Lack of financing options	30%	15%	11%
Planning controls and policy	30%	19%	8%
Overshadowing from taller buildings	27%	15%	8%
Availability of alternative options to save on energy bill	29%	12%	6%
Heritage listing status of building	23%	4%	7%
Poor level of service from solar providers	21%	12%	8%
Foreseeable construction of taller buildings	26%	8%	4%
Availability and terms of warranties	22%	15%	5%
Lack of information about rooftop solar	17%	8%	10%
Asbestos on rooftop	19%	4%	7%
The possibility of selling the property/building	18%	4%	6%
Strength of building	18%	4%	5%
Other (please specify)	3%	12%	3%

* Small sample size treat as indicative only.
J7. Which, if any, of the following could prevent you from considering a rooftop solar energy system. (MR)
J7. Which, if any, of the following influenced you not to install a rooftop solar energy system. (MR)
L5. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar energy system? (MR)
Base: Total Sample

Residents who already have solar are more likely to have had to consider or overcome a number of issues that people who do not have solar do not expect to be a barrier to solar. These include the time required to undertake the process (27% compared to 10%), a lack of available roof space (33% compared to 20%), asbestos on rooftop (18% compared to 4%), strength of the building (19% compared to 1%), and planning controls and policy (14% compared to 6%).

Those currently considering a rooftop solar system are more likely than those who have a rooftop solar system to indicate particular issues could prevent them from having one installed; these include overshadowing from taller buildings (15% of those considering compared to 6% of those who have solar), waiting for technology to get better (20% of those considering compared to 7% of those who have solar), heritage listing status of building (19% of those considering compared to 3% of those who have solar), and poor level of service from solar providers (23% of those considering compared to 1% of those who have solar).

Table 14 Barriers to consideration of rooftop solar systems: CoM residents

	Have Solar (n=37)	Don't Have Solar (n=168)			
		Total (n=168)	Considering Solar (n=45)	Have Never Considered Solar (n=86)	Previously Considered but Rejected Solar (n=37)
I don't know enough about it	39%	39%	43%	45%	14%
I don't have the time	27%	10%	15%	11%	0%
The process is too difficult	11%	17%	20%	17%	12%
Lack of available roof space	33%	20%	18%	22%	16%
Asbestos on rooftop	18%	4%	9%	2%	0%
Don't have access to rooftop	18%	12%	5%	15%	14%
Building is not strong enough	19%	1%	3%	0%	0%
I don't own the building	3%	35%	18%	48%	20%
Possibly moving elsewhere	21%	19%	13%	26%	11%
Possibly selling my property	0%	8%	14%	5%	6%
Too expensive	51%	39%	50%	35%	36%
Lack of financing options	5%	13%	14%	16%	2%
Overshadowing from taller buildings	6%	8%	15%	6%	4%
Foreseeable construction of taller buildings	7%	3%	4%	2%	2%
Use other options to save energy bill	5%	6%	3%	6%	9%
Waiting for technology to get better	7%	16%	20%	14%	18%
Poor level of service from solar providers	1%	9%	23%	4%	4%
Can't find enough information about rooftop solar	7%	11%	17%	10%	2%
Heritage listing status of building	3%	8%	19%	4%	2%
Planning controls and policy	14%	6%	8%	4%	8%
Availability and terms of warranties	8%	5%	4%	7%	0%
Other (please specify)	0%	4%	2%	2%	11%

J7. Which, if any, of the following could prevent you from considering a rooftop solar energy system. (MR)
J7. Which, if any, of the following influenced you not to install a rooftop solar energy system. (MR)
L5. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar energy system? (MR)
Base: Total Sample

CoM organisations that do not have solar are most likely to indicate not owning the building is a barrier to installation of solar (75%), this increases to 85% among organisations that have not considered solar. Compared to residents who do not have solar, other barriers to installation of a rooftop solar system were more likely to be mentioned by organisations that do not have solar. Those most frequently mentioned include lack of access to rooftop (41%), a lack of available roof space (39%), lack of knowledge (37%), and cost (36%).

Table 15 Barriers to consideration of rooftop solar systems: CoM organisations

	Have Solar (n=8)*	Don't Have Solar (n=168)			
		Total (n=167)	Considering Solar (n=28)*	Have Never Considered Solar (n=124)	Previously Considered but Rejected Solar (n=15)
I don't know enough about it	50%	37%	21%	43%	20%
I don't have the time	13%	26%	18%	31%	7%
The process is too difficult	38%	29%	29%	30%	20%
Lack of available roof space	50%	39%	39%	37%	53%
Asbestos on rooftop	0%	20%	7%	24%	7%
Don't have access to rooftop	50%	41%	18%	48%	20%
Building is not strong enough	38%	17%	14%	19%	7%
I don't own the building	0%	75%	50%	85%	40%
Possibly moving elsewhere	25%	26%	7%	31%	20%
Possibly selling my property	13%	19%	0%	24%	7%
Too expensive	88%	36%	29%	40%	20%
Lack of financing options	13%	31%	25%	33%	20%
Overshadowing from taller buildings	38%	26%	18%	29%	20%
Foreseeable construction of taller buildings	38%	26%	11%	29%	27%
Use other options to save energy bill	38%	29%	21%	31%	20%
Waiting for technology to get better	38%	27%	29%	27%	20%
Poor level of service from solar providers	25%	21%	21%	23%	0%
Can't find enough information about rooftop solar	25%	17%	11%	20%	0%
Heritage listing status of building	13%	24%	14%	28%	7%
Planning controls and policy	25%	31%	18%	35%	13%
Availability and terms of warranties	0%	24%	18%	27%	14%
Other (please specify)	0%	4%	11%	2%	0%

* Small sample size treat as indicative only.
J7. Which, if any, of the following could prevent you from considering a rooftop solar energy system. (MR)
J7. Which, if any, of the following influenced you not to install a rooftop solar energy system. (MR)
L5. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar energy system? (MR)
Base: All organisations

Among CoM residents, barriers to consideration of rooftop solar systems differed somewhat between those in the CBD and those outside the CBD in spite of the same rate of solar uptake among residents surveyed in the CBD and outside the CBD.

CoM residents outside the CBD were more likely to mention a number of barriers to consideration of rooftop solar systems including the financial cost (48% compared to 27% of CBD residents), the belief that technology will improve significantly in the near future (18% compared to 4% of CBD residents), lack of financing options (14% compared to 4% of CBD residents), Lack of information about rooftop solar (12% compared to 4% of CBD residents), and the possibility of selling the property/building (0% compared to 9% of CBD residents). Other barriers were equally likely to be mentioned by residents in and outside the CBD.

Representatives of organisations located only in the CBD were more likely than those located only outside the CBD to mention not owning the building (82% compared to 55%) and heritage listing status of building (28% compared to 15%) were barriers to consideration of solar. Other barriers were equally likely to be mentioned by representatives of CoM organisations in and outside the CBD.

Financial cost and financing

Representatives of organisations talk about the financial cost barrier in terms of the payback period, as opposed to the dollar value of the financial investment required. When the payback period exceeds business planning cycles (normally 3-5 years), this barrier is heightened.

"Over the last few years we have been considering whether to go down the path of solar as an option to try and reduce our base load requirement from the electricity suppliers. So we have been looking at it and our Western Australian laboratory. They already have a system in place over there but their electricity charges are six times the cost that we pay so it made sense for them. But so far the economics of it are not stacking up that well here in Melbourne, partly because of the construction costs on our roof. It's a little bit of a different roof design in that it's not completely flat. This makes it a little bit more difficult to get the space on it. And the second part is that it is a 20 year plus pay back before we are starting to get any money." (Representative of City of Melbourne located organisation, outside CBD)

Almost one third (30%) of representatives of organisations within CoM surveyed indicate a lack of financing options as a barrier to consideration of a rooftop solar system while an even greater proportion (52%) are not aware of any of the finance models presented. Similarly, even though only one in ten (11%) CoM residents indicate lack of financing options is a barrier to consideration of rooftop solar system a much greater proportion (62%) are not aware of any of the finance models presented. Awareness of finance models is low among both those who indicate financing options as a barrier to considering a rooftop solar energy system and those who do not see lack of financing options as a barrier.

Power Purchasing Agreements (PPAs) are the most commonly recognised financing options (31% of CoM organisation representatives' surveyed and 19% of residents aware of PPAs). Representatives of organisations outside CoM surveyed were more likely to be aware of PPAs (48%).

Representatives of CoM organisations were similarly likely to be aware of Leasing (30%), and Environmental Upgrade Agreements (EUAs) and on bill financing (both 22%). CoM residents were less likely compared to organisations to be aware of leasing (14%) and bill financing (11%). Awareness of Virtual Net Metering was lower than for other financing models with 11% of organisations and 7% of residents aware of this model.

Table 16 Awareness of finance models

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)*	Residents (n=212)
Environmental Upgrade Agreements (EUAs)	22%	52%	-
Power Purchasing Agreements (PPAs)	31%	48%	19%
Leasing	30%	48%	14%
Virtual Net Metering	11%	11%	7%
On bill financing	22%	30%	11%
None of these	52%	37%	62%

* Small sample size treat as indicative only.
M2. Please indicate, if you are aware of any of the following finance models for solar. (MR)
Base: Total Sample

Level of Knowledge and Availability of Information and Time

While some larger organisations and organisations operating in related industries (i.e. engineering, electrical and sustainability consultants) employ personnel with the technical skills to evaluate decisions related to rooftop solar systems and may have one or more individuals dedicated to the implementation and monitoring or sustainability related activities, other organisations such as SMEs can find the process of deciding whether to purchase a rooftop solar system and which provider and system to select involves a steep learning curve and can be very confusing. Thus, one in four representatives of CoM organisations indicate their limited knowledge about rooftop solar energy systems is a barrier to consideration (38%) and one quarter indicate limited time available is a barrier (26%).

Residents are similarly likely to indicate their limited knowledge about rooftop solar energy systems is a barrier to consideration (39%) but less likely to indicate time is an issue with only 14% indicating limited time available is a barrier.

"I am no expert on it, but I think you have solar panels that charge batteries that hold energy for use. So it doesn't have to be a sunny day to get benefits from it because the energy is stored in batteries elsewhere. So that's what my basic understanding of it is - You use the solar panels to charge the batteries and use the batteries to power the building. Or you can put excess energy back into the grid and they charge on sunny days and they don't when it's not sunny." (Representative of City of Melbourne located organisation that has not considered a rooftop solar system)

Residents, even if they happen to have some relevant technical knowledge through the course of their employment or education can also find the process confusing and at times stressful and ultimately go ahead with a purchase by making the decision to trust a provider.

"I reckon you need somebody to help you through. My first qualification is an electrical engineering degree but it took a guy to get me moving and answer the questions and explain to me what was going on. He spent a lot of time saying "when you have Chinese panels, German panels or whatever panels" there were five different sorts of panels and in the end I took his word for what he thought was the best value for money long term, because goodness knows how else would you know." (CoM resident with Solar)

Implementation Issues

Issues related to implementation that have or would prevent consideration of a rooftop solar system are more likely to be identified by representatives of organisations than residents. The most frequently nominated include lack of access to rooftop (41% of CoM organisations and 13% of CoM Residents), limited availability of rooftop space (39% of CoM organisations and 23% of CoM Residents), and difficult implementation (29% of CoM organisations and 16% of CoM Residents). To a lesser degree asbestos on the rooftop (19% of CoM organisations and 7% of CoM Residents) and issues or concerns related to strength of the building (18% of CoM organisations and 5% of CoM Residents) were nominated as issues.

"… was it feasible to put solar panels on a building that is tall and thin, where do you put them for the best energy penetration or collection. There is a lot of engineering that needs to go around this project and that's probably the main delay we have at the moment - getting the engineering solution correct. Because these panels are going to be up on level 56 we can't have solar panels blowing off the side of an office tower." (Representative of City of Melbourne located organisation in CBD, currently implementing a rooftop solar system)

"There was an initial concern that the footings of the building would not be strong enough to hold the extra weight." (Representative of City of Melbourne located organisation, not in CBD, not currently considering a rooftop solar system)

Relocation / Sale of Building

The possibility of moving to a different building or home is a potential barrier to consideration of a rooftop solar energy system for CoM organisations (26%) and residents (20%). Those currently considering a rooftop solar energy system are however less likely to nominate this as a consideration with only 7% of organisations and 13% of residents currently considering a rooftop solar energy system nominating this as a consideration.

Representatives of CoM organisations and CoM residents are less likely to consider the possibility of selling the property/building as a potential barrier to consideration of a rooftop solar energy system (18% and 6% respectively).

Considering the payback period for a rooftop solar system is a similar length of time to the average commercial tenancy and as long or longer than the average length of time people stay in one home, this supports the finding that the decision to implement a rooftop solar system is not a purely commercial one; if it was, we would expect this barrier to be nominated by more people.

"If you wear a clear economics hat, the business case isn't great because if it goes over 7 years it means you're not going to be living in the house that you've installed solar in. It doesn't make straight economic sense but a lot of people are doing it because there is a dual [financial and environmental] advantage." (Positive Charge representative)

"Most tenants won't consider solar because their planning and strategic vision is usually 2 to 3 years. Anything that goes beyond the 2 to 3 year period isn't something they consider immediately. Tenancies vary. There are businesses that do 3 years plus 3 years plus 3 years and then they do 5 plus 5 plus 5. But most of them have the option of getting out at any stage after 2 years. They have a clause where they can get out of the lease. That makes it a little harder to try and forecast what the uptake will be like. They don't forecast beyond 18, 24 months. It's tricky for them to try and understand what a 5-year payback might look like on their balance sheets." (Positive Charge representative)

Future Improvements in Technology

Whilst mentioned by only 29% of organisations and 14% of residents surveyed the issue of future improvements in technology was raised by most of those we conducted depth interviews with. There is an expectation among some that technology is continuing to improve and significant improvements may not be far away; this perception makes delaying installing solar until technology improves feel prudent. Related to this are concerns that solar system components sourced from China may be poorer quality compared to those sourced from Germany which is perceived to be of superior quality but more expensive.

Similarly, while the issue of implementation difficulties was mentioned by only 29% of organisations and 16% of residents, this too was mentioned in most of the in-depth interviews conducted. Areas of interest in relation to technology include battery storage, panels that are effective in non-north facing orientations and advances in solar materials i.e. solar paint and films.

"Unfortunately, the building design doesn't allow for solar panels. We've got to wait for newer technology to come through such as using maybe glass film as solar energy because we're such a large glass façade. (Representative of City of Melbourne located organisation in CBD)

"Technology is going ahead at a great rate, fantastic. The research into batteries and the progress there is really good." (CoM, resident advocate)

"… I think the technology has moved on. You used to have them on the north facing part of your roof, with the sunlight. I think now the technology has moved on a bit so that's not a great requirement anymore." (CoM, resident advocate)

Planning Controls

Awareness of planning controls is greater among organisations than residents and therefore more likely to be nominated as a barrier for organisations in CoM (30%) than CoM residents (8%). CoM residents who have a rooftop solar energy system are more likely to have had to overcome issues related to planning controls and policy than those who do not (14% compared to 6%). However organisations in CoM are similarly likely to have encountered or expect to encounter this issue whether or not they have a rooftop solar energy system (31% of CoM organisations with a rooftop solar system compared to 25% of those without).

Issues related to planning controls may be identified by a solar energy system provider even before Council is approached.

"Yes it was the company that said we couldn't do it. We didn't actually go through the council." (CoM resident who has previously considered a rooftop solar energy system)

Representatives of organisations may also be more likely to consider future changes to planning controls and policy.

"I don't think any council could guarantee that given the state government could just come in over the top and say no we are going to do x." (Representative of CoM organisation outside CBD)

Current and Future Overshadowing

Approximately one quarter (27%) of CoM organisations but only 8% of CoM residents identified overshadowing from taller buildings as a barrier to the installation of rooftop solar. As indicated in the table below, a greater proportion of representatives of organisation in the CBD and residents in the CBD nominated overshadowing as an issue compared to those outside the CBD. However, this difference is not statistically significant. Overshadowing may be more of an issue for organisations based in CoM compared to those outside CoM (15%*).

Table 17 Overshadowing as a barrier to consideration of rooftop solar systems

Organisations, CoM			Organisations, outside CoM (n=26)*	Residents		
Total** (n=175)	In CBD (n=110)	Outside CBD (n=55)		Total (n=205)	In CBD (n=55)	Outside CBD (n=150)
27%	31%	22%	15%	8%	10%	7%

** Includes 10 organisations with sites in and outside the CBD.
* Small sample size treat as indicative only.
J7. Which, if any, of the following could prevent you from considering a rooftop solar energy system. (MR)
J7. Which, if any, of the following influenced you not to install a rooftop solar energy system. (MR)
L5. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar energy system? (MR)
Base: Total sample

Representatives of CoM organisations with a rooftop solar energy system are more likely to identify overshadowing as an issue compared to representatives of organisations without a rooftop solar energy system (38% compared to 26%). Conversely, residents currently considering a rooftop solar energy system are more likely to identify overshadowing as an issue compared to residents that have a rooftop solar energy system, have never considered one, or have considered and rejected on (15% compared to 6%, 6% and 4% respectively).

An instance of a CoM resident unsuccessfully challenging their neighbour's planning permit due to overshadowing was raised by a CoM resident wishing to install a rooftop solar system on one of his properties within CoM.

"I went to the council with it, did no good … Well the place built alongside me three stories, he only takes the morning sun but he takes the sun and I got nowhere..." (CoM resident, has solar at one of three properties owned in CoM)

"The other limitation that we have here is that they keep changing what this area is designated as. The consolidation overlay or whatever they call it. This site looked like being re-zoned medium density housing. Well, if that came about maybe we would move from here." (Representative of City of Melbourne located organisation outside CBD)

The majority (71%) of CoM organisations indicated that it is extremely important that their solar investment is protected from overshadowing by future development while an additional 14% indicated this was somewhat important. Lack of clarity on future development can lead to uncertainty and increase the impact of overshadowing as a barrier.

"Shadowing is really only a concern in the CBD and certain sections of the CBD. Up the spine of the City, up Swanston St, there is a mandatory height requirement of 8 floors and that's because no building can be taller than St Pauls Cathedral. That's the legislation. We had one project in North Melbourne early last year go through the process, they were very keen on getting solar. Then through a lack of clarity from the Council, they just pulled out." (Sustainable Melbourne Fund)

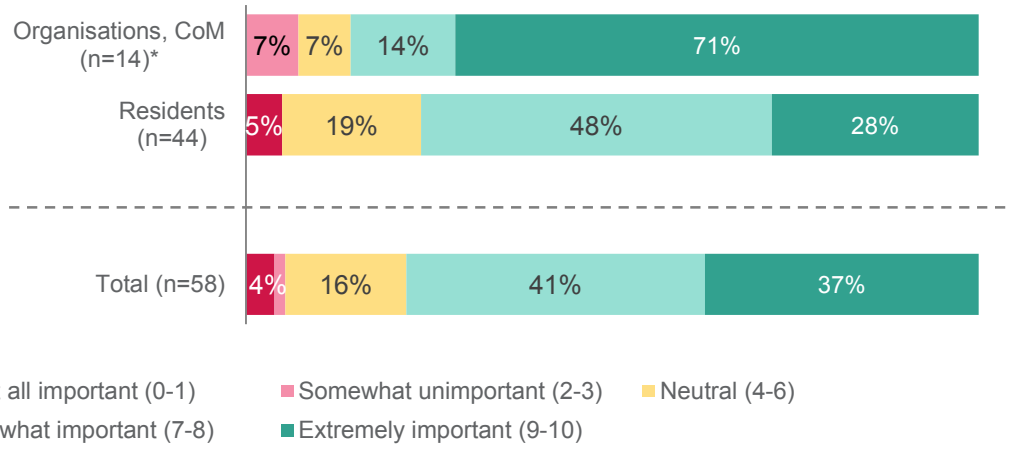
For some larger organisations outside the CBD with a significant footprint, future overshadowing may not be an issue.

"Not with the current buildings around us. We own all the buildings on this side of the road from the park that is just up there to the end of the road so they are not going to get any higher. We have got a large car park there that is going to remain a car park so there is no potential for overshadowing I don't think" (Representative of City of Melbourne located organisation outside CBD)

About three quarters (76%) of CoM residents with solar indicated it was important that their solar investment is protected from overshadowing from future development, either somewhat (48%) or extremely (28%).

This equates to 85% of all residents and businesses perceiving protection from overshadowing as somewhat (43%) or extremely (37%) important.

Figure 12 Importance of protection from overshadowing



* Small sample size treat as indicative only.
QL8. How important is it that your solar investment is protected from overshadowing from future development??
Base: Have solar.

Availability of Alternatives

Use of other options to save on one's energy bill is not a significant barrier for CoM residents with only 6% mentioning this as an issue. However, the implementation of alternative options to reduce energy consumption is nominated as an issue by almost one in three representatives of CoM based organisations (29%). Discussions with representatives of organisations based in CoM revealed that the use of alternative options appears to come before consideration of a rooftop solar system. Representatives of organisations we spoke to frequently mentioned changing to LED lighting and less frequently mentioned the application of other technologies to reduce consumption.

"The big users of energy in any typical building of this type that are base building related more so than tenant related are your typical air conditioning, your lifts, and then your line power. Of those three, they all have different areas where you can improve your efficiency. The use of variable speed drives on motors, has significantly changed a lot of usage. New chillers through the building, which have a massive impact. A lot of software strategies around what we call BMCS". (Representative of City of Melbourne located organisation in CBD)

" … might decide that, ok we are better off continuing down the LED replacement for lighting and looking at energy efficiency options in terms of cooling and heating and things like that."
(Representative of City of Melbourne located organisation outside CBD)

Heritage Listing Status

Heritage listing status is more likely to be a barrier to installation of a rooftop solar system for organisations located in CoM (23%) compared to organisations outside CoM (4%) or CoM residents (7%). However, CoM residents who do not have solar (8%) are more likely than those who do (3%) to consider heritage listing is a barrier. Residents are even more likely to consider heritage listing as an issue if they are currently considering a rooftop solar system (19%). Similarly, CoM organisations that do not have a rooftop solar energy system (24%) are more likely than those that do (13%) to consider heritage listing is a barrier.

Service Provided by Solar Providers

Within CoM, poor level of service from solar providers is more likely to be a barrier to installation of a rooftop solar system for organisations (21%) compared to residents (8%). Organisations are similarly likely to nominate service provided by solar providers as an issue whether or not they have considered or installed a rooftop solar system, while residents tend only to nominate this issue if they are currently considering a system (23% of residents currently considering a rooftop solar system compared to 8% of residents overall).

Warranties

Within CoM, availability and terms of warranties is more likely to be a barrier to installation of a rooftop solar system for organisations (22%) compared to residents (5%). Representative of organisations that have never considered solar are more likely to consider availability and terms of warranties to be something that would prevent them considering a rooftop solar system (27%) than those currently considering solar (18%) or those who have rejected solar (14%).

Addressing Barriers to Consideration of Solar

City of Melbourne already addresses a number of the barriers to consideration of solar through a number of initiatives such as Smart Blocks, seminars, and participation in programs such as bulk buys delivered by the Moreland Energy Foundation through Positive Charge.

"I have been along to a couple of seminars that have been hosted by Melbourne City Council and roof top solar was one of the items that were presented." (Representative of City of Melbourne located organisation in CBD, currently implementing a rooftop solar system)

The Positive Charge service by Moreland energy Foundation addresses the poor level of service from solar providers including issues related to quality of components used by suppliers, lack of information about rooftop solar, and financial cost through a residential information advice service and solar bulk buy projects. The bulk buy projects delivered with council enable CoM residents to access a quality solar energy system product from a reputable supplier, at a reasonable cost and with a suitable warranty thus removing a significant level of risk from the purchase of a rooftop solar system.

"What we've done, and we've run one in the City of Melbourne as well in the past 6 months, we kind of turned the concept of a bulk buy on its head by doing a reverse auction. We do an open tender to suppliers saying we will be reaching out to this many households, in these many municipalities and they submit a proposal to quality of system, cost, warranties and so on. On the basis of that, we pick one supplier and then we promote that to different municipalities. That uptake has been very, very encouraging in the past 6 months." (Positive Charge representative)

"With the residential buys, we typically negotiate a price that's about 5% to 8% lower than market prices." (Positive Charge representative)

Positive Charge assists businesses, in particular SMEs by providing an assessment service which is paid for by the City of Melbourne so it is at no cost to the businesses. Through this service, Positive Charge acts as a consumer advocate helping businesses narrow down their short list of potential providers and assisting them to negotiate price.

"What it usually means is they get a vetted list of suppliers to go to; they get an understanding of how they can negotiate better." (Positive Charge Solar)

Other difficulties mentioned by CoM organisations and residents that have solar include sourcing (reputable) suppliers, gaining approval from management/finance and determining the system that would best meet one's needs.

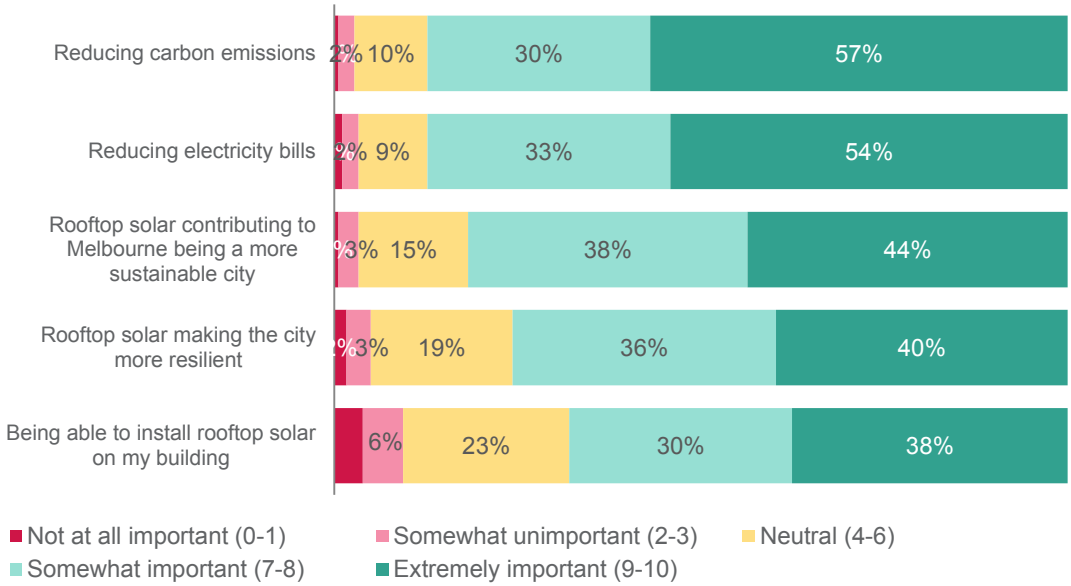
"Difficult to source reputable suppliers etc."
"People not returning calls or not turn up to quote."
"Convincing Senior Management."
"Convincing finance."

"Sorting out the optimum system for our needs."
"Comparing different quotes. Three quotes came back with very different options: system size, panels, inverters, cost etc."

General Attitudes

When asked about the importance of a range of activities and outcomes related to sustainability, all of the activities and outcomes were at least somewhat important for most CoM organisations. Almost nine in ten (87%) considered reducing carbon emissions to be important (30% somewhat important and 57% very important). Similarly, almost nine in ten (87%) considered reducing electricity bills to be important (33% somewhat important and 54% very important). Eight in ten (82%) thought that rooftop solar contributing to Melbourne being a more sustainable city was important (38% somewhat and 44% extremely important). Three quarters (76%) indicated rooftop solar making the city more resilient was at least somewhat important, and two thirds (68%) indicated being able to install rooftop solar on their building was at least somewhat important. Organisations located outside the CBD placed greater importance on being able to install rooftop solar on their building. The reason for the importance placed on these issues could be internally or externally driven.

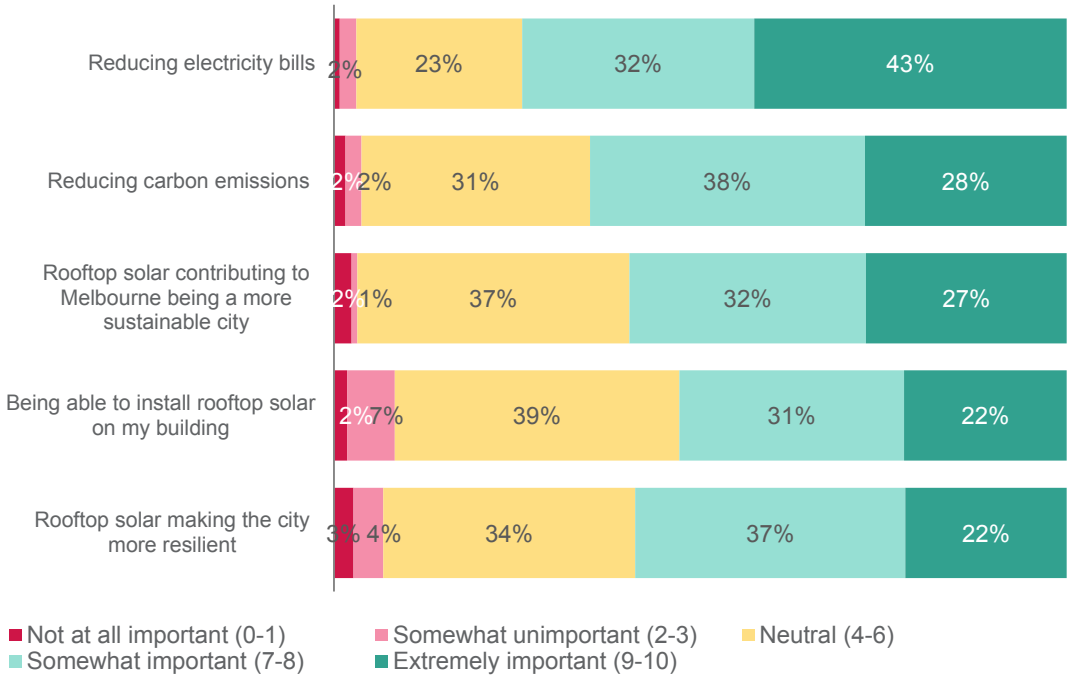
Figure 13 Importance of activities or outcomes: CoM organisations



M1. Please indicate how important the following are to you.
Base: Total Sample (n=181)

For residents, the financial savings were foremost. While residents were slightly less likely to agree the possible outcomes from solar were important, at least half agreed with each of the statements. Reduction of electricity bills was important to the greatest proportion of residents (75% including 32% who indicated this was somewhat important and 43% who indicated it was extremely important). More than two thirds of residents (66%) thought that reducing carbon emissions was important (38% somewhat and 28% extremely important). Almost two thirds (59%) indicated that rooftop solar contributing to Melbourne being a more sustainable city was important (32% somewhat and 27% extremely important) and rooftop solar making the city more resilient was important (37% somewhat and 22% extremely important).

Figure 14 Importance of activities or outcomes: CoM residents



M1. Please indicate how important the following are to you.
Base: Total Sample (n=212)

Recommendations

Move More People into Consideration

A large proportion of representatives of CoM organisations (69%) and to a lesser degree residents (41%) have not yet considered solar. Importantly, this segment consists of people who have not rejected solar. Therefore in order to increase uptake of rooftop solar systems in City of Melbourne, we recommend CoM invest in activities to increase interest in rooftop solar and prompt more people to start the process of investigating rooftop solar energy systems.

CoM should communicate with those who have not yet considered a rooftop solar energy system through traditional news media. Almost two thirds of representatives of organisations (61%) and about one third of residents (35%) that do not have a rooftop solar energy system heard about rooftop solar energy systems through traditional news media and are therefore currently open to this media. Messages to communicate include:

- Instances of successful rooftop solar installations in CoM (can form the basis for case studies);
- That more people are installing rooftop solar energy systems (to position the product as established technology);
- Where to go for more information (not knowing enough about it is a barrier for 45% of residents and 43% of organisations in this segment – second only to lack of building ownership and rooftop access);
- The financial benefits/cost savings likely to be achieved (35%of residents and 40% organisation representatives believe solar is too expensive); and
- The environmental benefits (investing in a rooftop solar energy system is not a purely financial decision).

Council and State Government are credible sources of information about rooftop solar energy systems for a high proportion of CoM residents and organisational representatives. Therefore CoM and Victorian Government branding for would be well received for advertising related to rooftop solar energy systems.

Word of mouth is a source of awareness of rooftop solar systems for 38% of CoM organisations and 34% of CoM residents that do not have solar. Furthermore, 69% of organisational representatives, and 64% of CoM residents, indicate other users of solar energy systems are a credible source of information. Therefore support media communications with more in-depth information such as case studies, in particular high profile residents or businesses to encourage discussion and word of mouth.

Use email for more targeted communications. Email from council is a preferred communication channel for 50% of organisations and 29% of residents who have never considered solar. Also take advantage of the preference for online search and ensure relevant Council information results from common search terms (49% of organisational representatives and 47% of residents who have never considered solar would like to access information via an online search when considering a rooftop solar energy system).

Move More People from Consideration to Action Faster

About half of those currently considering a solar energy system expect to make a decision within the next 18 months while the other half could take up to two or more years to decide. Uptake of solar in CoM could be increased by not only increasing the number of residents and organisations considering a rooftop solar energy system but also assisting and encouraging those already considering solar to make the decision to purchase more quickly by addressing the knowledge, planning approval and financial cost barriers.

Not knowing enough is a barrier to uptake of rooftop solar energy systems for 43% of residents and 28% of representatives of organisations considering solar. Therefore, continue to review and improve support and information services already provided by Council. Programs such as Smart Blocks and CoM seminars for businesses respond to this need as do programs such as bulk buys delivered by the Moreland Energy Foundation through Positive Charge whereby householders are offered systems from reputable providers at a fair price.

Heritage listing is a barrier for 19% of residents and 14% of organisations currently considering a rooftop solar energy system while planning controls and policy are a barrier for 8% of resident and 18% of organisation considerers. We recommend CoM review the process of gaining planning approval for rooftop solar installations and the assistance provided to residents and businesses throughout this process. Also, review programs and processes other councils have implemented, for example Port Phillip Council has taken steps to make the process of gaining council approval in a heritage listed area easier by removing the need to gain approval from two separate council departments.

Half of CoM residents and 29% of organisations currently considering a rooftop solar energy system indicate the financial cost is a barrier to uptake. Furthermore, 25% of CoM organisations indicate lack of financing options is a barrier. Awareness of finance models is low among representatives of CoM organisations and residents. Education regarding financing options is recommended to assist residents and organisations to overcome these financial barriers.

Given the decision timeline can be significant, help considerers maintain confidence that a rooftop solar energy system is a good idea through continued exposure to case studies i.e. via the CoM website, media, and for organisations email and telephone.

Demographics

Table 18 Location

	Organisations CoM (n=174)	Residents (n=212)
Melbourne CBD	70%	30%
Carlton	5%	9%
Docklands	4%	7%
East Melbourne	5%	17%
Kensington/Flemington	2%	4%
North Melbourne	6%	7%
Parkville	1%	1%
Port Melbourne	3%	4%
Southbank	7%	4%
South Yarra (West of Punt Road)	1%	5%
West Melbourne	2%	12%
In Greater Melbourne but outside City of Melbourne	8%	0%

QS2. Which of the following best describes the area in which you live? Which of the following best describes the area in which at least one of your business sites is located?
Base: All respondents

Table 19 Age

	Organisations CoM (n=181)	Organisations outside CoM (n=27)	Residents (n=212)
18 to 24	6%	4%	19%
25 to 39	32%	37%	50%
40 to 54	31%	22%	16%
55+	29%	37%	15%
Prefer not to answer	1%	0%	0%

QD1. Which of these age groups do you fall into?
Base: All respondents

Table 20 Gender

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)	Residents (n=212)
Male	69%	89%	50%
Female	31%	11%	50%

QD2. Are you male or female?
Base: All respondents

Table 21 Education

	Organisations CoM (n=181)	Organisations outside CoM (n=27)	Residents (n=212)
Some primary	0%	0%	1%
Finished primary	1%	0%	1%
Some secondary	5%	4%	4%
Some technical or commercial	1%	0%	4%
Passed 5th Form/Leaving Certificate	1%	0%	2%
Finished technical or commercial	0%	4%	3%
Finished secondary or now in HSC/VCE	6%	0%	8%
Some university	3%	0%	11%
Tertiary diploma (not university)	12%	19%	6%
Now at university	3%	0%	9%
Graduate degree	34%	22%	31%
Postgraduate degree	30%	48%	20%
Other (please specify	5%	4%	2%

QD3. What is the highest level of education you have attained?
Base: All respondents

Table 22 Income

	Residents (n=212)
Under $6,000	12%
$6,000 - 14,999	5%
$15,000-19,999	2%
$20,000-24,999	5%
$25,000-29,999	5%
$30,000-34,999	3%
$35,000-39,999	4%
$40,000-49,999	10%
$50,000-59,999	6%
$60,000-69,999	8%
$70,000-79,999	11%
$80,000-89,999	10%
$90,000-99,999	6%
$100,000 above	12%

QD4. Which range represents your annual personal income? This includes your wages, salaries, Government benefits, pensions, allowances and other income that YOU usually receive (Gross –before tax and superannuation deductions).
Base: All CoM residents

Table 23 Building type

	Residents (n=212)
Detached house / single house on a lot	37%
Townhouse	12%
Apartment or unit	45%
Semi-detached house	5%
Other (please specify)	1%

QD1. Which of these best describes the home you live in?
Base: All CoM residents

Table 24 Building Ownership

	Residents (n=212)
I own or am buying my home	58%
I rent my home	42%

QD1. Which of these best describes you?
Base: All CoM residents

Table 25 Heritage Overlay

	Residents (n=212)
Yes	14%
No	62%
Unsure	24%

QD1. Does your building have a Heritage Overlay?
Base: All CoM residents

Firmographics

Table 26 Type of organisation

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
For profit	87%	96%
Not for profit	13%	4%

QB2. Is your organisation for profit, or a not-for-profit?
Base: Organisations

Table 27 Size of organisation

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
Microbusinesses (1-4 employees)	22%	30%
small businesses (5-19 employees)	33%	37%
medium businesses (20-199 employees)	22%	7%
large businesses (200-500 employees)	6%	11%
enterprise with more than 500 employees	17%	15%

QB4. Which of the following best describes your organisation?
Base: Organisations

Table 28 Size of organisation

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
Individuals	53%	30%
Businesses	51%	74%
Australian Federal, State or Local Government	24%	15%
Overseas Government	4%	0%
Other	4%	0%

QB2. And which of the following best describes the clients or customers your organisation services?
Base: Organisations

Table 29 Industry

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
Accommodation and Food Services	10%	7%
Agriculture, Forestry and Fishing	2%	4%
Arts and Recreation Services	8%	0%
Community or institutions	3%	4%
Construction	11%	30%
Education and Training	6%	4%
Electricity, gas, water and waste services	10%	22%
Financial and Insurance Services	4%	7%
Government	7%	4%
Healthcare and Social Assistance	7%	7%
Information Media and Telecommunications	6%	11%
Manufacturing	7%	7%
Mining	2%	7%
Postal and Warehousing	1%	4%
Professional, Scientific and Technical Services	28%	19%
Public Administration and Safety	2%	0%
Rental hiring and Real Estate Services	9%	19%
Retail trade	14%	7%
Transport	3%	0%
Wholesale Trade	2%	4%
Other	0%	0%

QB5. Which industry or industries does your organisation operate in?
Base: Organisations

Table 30 Nature of Occupancy

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
The organisation owns the building	22%	30%
The organisation is a tenant	78%	70%

QB2. Which best describes your organisation?
Base: Organisations

Table 31 Building height

	Organisations, CoM (n=181)	Organisations, outside CoM (n=27)
The building is less than 4 storeys	40%	63%
The building is more than 4 storeys	60%	37%

QB2. How many storeys does your building have in total (including storeys that your business does not occupy)?
Base: Organisations

Table 32 Extent of Occupancy

	Organisations, CoM (n=39)	Organisations, outside CoM (n=8)
We occupy the whole building	62%	75%
We occupy only part/s of the building, and have tenants	36%	0%
We do not occupy the building, it is only occupied by tenants	3%	25%

QB2. Which best describes your occupancy of the building your organisation owns?
Base: Organisations occupying a building it owns

33 Tenants

	Organisations, CoM (n=15)	Organisations, outside CoM (n=2)
Commercial	93%	100%
Residential	7%	0%
Commercial and Residential	0%	0%

QB2. Are these tenants...?
Base: Organisations leasing part of building to another organisation

Table 34 Tenants

	Organisations, CoM (n=14)	Organisations, outside CoM (n=2)
Accommodation and Food Services	14%	0%
Community or institutions	7%	0%
Education and Training	7%	0%
Financial and Insurance Services	29%	50%
Government	21%	50%
Healthcare and Social Assistance	21%	0%
Information Media and Telecommunications	14%	0%
Professional, Scientific and Technical Services	29%	0%
Retail trade	29%	0%
Other - please specify	7%	50%

QB2. Which of the following best describe your commercial tenants?
Base: Organisations leasing part of building to another organisation

Table 35 Tenants

	Organisations, CoM (n=142)	Organisations, outside CoM (n=19)
We lease part of one floor of the building	40%	63%
We lease one floor of the building	25%	5%
We lease multiple floors of the building	18%	16%
We lease the whole building	16%	16%

QB2. Which one best describes your occupancy of the building your organisation leases?
Base: Organisations leasing the building they occupy

Appendix

A. Qualitative Discussion Guide

Focus group Discussion Flow

SECTION A: INTRODUCTION

TOPIC 1: Background & Privacy Act	Outcome/Objective
5 minutes	**(0-5 of 90 minutes)**
• Introduce interviewer's name and Colmar Brunton and thank participants Introduce moderator and Colmar Brunton; an independently owned market research company • Explain purpose of market research and role of facilitator and group participants • What we will be doing today is talking about rooftop solar energy, including what we know and think about rooftop solar. • Explain role of video recording and audio-recording (of the focus group session) and that will only be used for research purposes and their privacy/confidentiality is guaranteed • Free flowing discussion encouraged but do let people have their say (don't talk over each other). • There are no right or wrong answers, just your natural thoughts and feelings. • We will not be using your name them when we write our report – your opinions will remain anonymous. The information and opinions gathered will be used for research purposes only. • The discussion will last about an hour and a half. • Please mute mobile phones. • Any questions? **Respondent introduces themselves:** Before we begin, let's get to know each other a little better, we are going to take turns and go around the group. • FOR RESIDENTIAL: Let's introduce our name, describe our household. And since this discussion is about solar energy, tell me whether you own or rent your home, and whether rooftop solar is installed there or not. Tell us some of your key household concerns or issues are at the moment e.g.; new developments in your area, cost of living pressures (fuel, groceries, energy) etc. • FOR BUSINESS: Let's introduce our name and the name of our company, and describe what we do there. And since this	• Give background to the research • Advise respondent of Privacy Act details • Set expectations of the interview outcome

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discussion is about solar energy, tell me whether your company owns or rents your office building, and whether rooftop solar is installed there or not. I'd also be interested to hear what are the key challenges for your business at the moment, whether it be general profitability, staff turnover or energy costs.	

SECTION B: INDIVIDUAL PROJECT REQUIREMENTS

TOPIC 2: SUSTAINABILITY AND ENERGY EFFICIENCY (10 MINS)	(5-15 of 90 minutes)

Now let's talk briefly about sustainability and energy efficiency.

- What does sustainability mean to you/your company? In general, what steps have you/your company taken, or plan to take, to be more sustainable? Probe for behaviours, processes, equipment, insulation, solar panels, windows, lighting, appliances, etc. as applicable
- And what about energy efficiency, what does that mean for you/your company? What steps have you/your company taken, or plan to take, to save energy? Probe for behaviours, processes, equipment, insulation, solar panels, windows, lighting, appliances, etc. as applicable

TOPIC 3: PERCEPTIONS AND KNOWLEDGE OF SOLAR ENERGY (10 MINS)	(15-25 of 90 minutes)

Now let's start talking about solar energy.

- What comes to mind when I say the word "solar"? Just toss out any words or phrases that come to mind.

MODERATOR TO USE WHITEBOARD TO RECORD RESPONSES
MODERATOR TO KEEP PROMPTING FOR MORE WORDS UNTIL EXHAUSTED
MODERATOR TO SUMMARISE KEY ASSOCIATIONS

Now let's talk about the technological side of solar energy. Pretend that I don't know anything about how it works. Please try to explain it to me.

MODERATOR TO USE WHITEBOARD TO RECORD RESPONSES

MODERATOR TO PROBE AS NEEDED:

- What's a kilowatt?
- How many panels would your average size house/business need?
- Does your property have to face north for it to work?
- What happens on a cloudy day, does your electricity cut out?
- How much money do you save on electricity?
- Are you still connected to the electricity grid if you have solar?
- Can you sell back extra electricity to the grid? How much do you get paid for that?
- How much does an installation cost?
- How can you finance the cost of the installation?

TOPIC 4: DRIVERS AND BARRIERS TO INSTALLING ROOFTOP SOLAR	
(30 MINS)	**(25-55 of 90 minutes)**

Now I'm going to divide you into 2 groups, those who have installed rooftop solar at home/whose company has installed rooftop solar, and those who have not.

MODERATOR TO DIVIDE THE ROOM INTO 2 GROUPS

I'm going to give you some butchers paper and some markers, and I want you to write a few things down for me. Those who have installed rooftop solar, please write down all the reasons why you/your company installed rooftop solar. Write down all the benefits, all of the good things about rooftop solar. I'm going to give you 10 minutes so please write down as many things as you can.

Those who have installed rooftop solar, please write down all the reasons why you/your company has NOT installed rooftop solar. Write down all the challenges, all of the things that are holding you back or put you off the idea. I'm going to give you 10 minutes so please write down as many things as you can.

AFTER 10 MINUTES....

Now please just take a minute, and in each of your groups I want you to come up with a "top 3" list. So for those of you who have installed rooftop solar, what are the top 3 reasons why you installed it? And for those of you who have not installed rooftop solar, what are the top 3 reasons why you haven't?

AFTER 1-2 MINUTES....

Now let's come back together as a group and share what we have done.

For those who have installed rooftop solar, please tell me the top 3 reasons why.

MODERATOR TO PROBE EACH REASON (FOR EXAMPLE, WHY THAT IS BENEFICIAL, HOW THEY KNEW THAT WOULD BE A BENEFIT, ETC.)

PROBE AS NEEDED FOR ECONOMIC AND ENVIRONMENTAL BENEFITS

And now for those who have not installed rooftop solar, please tell me the top 3 reasons why not.

MODERATOR TO PROBE EACH REASON (FOR EXAMPLE, WHY THAT IS HOLDING THEM BACK, WHERE THEY HEARD THAT, ETC.)

PROBE AS NEEDED FOR ECONOMIC AND SITUATIONAL BARRIERS

ALSO PROBE FOR PERCEPTUAL BARRIERS ("I think it will be expensive") AS OPPOSED TO ACTUAL BARRIERS ("I have done the research and rooftop solar is unaffordable for me").

TOPIC 5: ROOFTOP SOLAR PATH TO PURCHASE	
(25 MINS)	**(55-80 of 90 minutes)**

Now I want to talk about the process of purchasing and installing rooftop solar. I want to start at the very beginning, and talk through every step. Those of you who have installed rooftop solar will be able to tell me about your experiences and what you did, and those who have not installed rooftop solar can tell me what you know about the process or what you have heard other people say.

Okay, so let's start at the very beginning. You've started thinking about rooftop solar. What do you do first?

MODERATOR TO PROBE EACH STEP OF THE PURCHASE PROCESS
MODERATOR TO MAP OUT THE PROCESS ON WHITEBOARD
MODERATOR TO ASK:

- What information is needed
- Where information is sourced (both channel and company/agency that provided the information) and why that is a trusted source
    - Probe for any communications received, who from, what information was provided
- Who is involved in each stage, both influencers and decision makers
- Any challenges encountered at each stage
- What could happen at each stage to make the process easier, or more efficient
    - Probe as needed: council support and advice services. What could council do to make it easier? e.g.; Advice on building suitability, planning requirements, how much

it should cost, subsidies, finding reputable solar retailers, other considerations

- What made you keep going through the process
- If anyone has gotten to each stage and stopped the process, why, and what could have happened differently to make them continue along the process (information, advice, assistance from someone)

And after that stage, what do you do next?

REPEAT ABOVE QUESTIONS FOR EACH STAGE OF PROCESS

TOPIC 6 : ROOFTOP SOLAR IN THE FUTURE	
(5 MINS)	**(80-85 of 90 minutes)**

- Do you see any FUTURE potential disadvantages to installing rooftop solar now?

MODERATOR TO CAPTURE SPONTANEOUS RESPONSES AND THEN PROBE IF NOT MENTIONED

- Planning, building and heritage approvals
- Overshadowing (current or future)
- Changes in feed in tariff or grid electricity tariff structures\

SECTION C: CONCLUSION (MANDATORY QMS REQUIREMENTS)

TOPIC 7: SUMMING UP	
(5 MINS)	**(85-90 of 90 minutes)**

- Anything else that you'd like to mention about rooftop solar?
- Any advice for the City of Melbourne team who are trying to increase the uptake of rooftop solar?
- Any final thoughts?

That's the end of the session. Thanks so much for your time, it has been greatly appreciated!

- Inform respondents that the research is being conducted on behalf of City of Melbourne.
- State that as this is market research, it is carried out in compliance with the Privacy Act / information provided will only be used for research purposes.
- Remind them that you are from Colmar Brunton. Advise if any queries, call the Market Research Society's free Survey Line on 1300 364 830 or CBR on (Melb:1800 555 145/Syd:1800 888 683).
- Issue incentives - ensure respondents sign "Qual Validation Report & Acknowledgement of Reimbursement".

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In-depth Interview Discussion Flow

SECTION A: INTRODUCTION

TOPIC 1: Background & Privacy Act	Outcome/Objective
5 minutes	**(0-5 of 60 minutes)**
Introduce interviewer's name and Colmar Brunton and thank participants for their interest and involvement. PRIVACY ACT REQUIREMENTS • Our discussion topic today is broadly about rooftop solar and we are doing this research on behalf of City of Melbourne. • Assure respondents re anonymity/confidentiality and that as the moderator you are an independent/impartial party. Explain audio/video recording is used for research purposes so that we can recall what was said during the interview when reporting. Note: Communities of interest and some corporates will be known to CoM so they may be identifiable by their responses. Please let me know if there is anything that you say which would identify you and you would like us to make sure we keep confidential. • We are speaking to a broad range of individuals about their experience with and understanding of rooftop solar. This is intended to be a relaxed discussion, more like a conversation than a series of questions and answers. So sit back, relax and try to enjoy it! • Time about 60 minutes (one-on-one discussions), 90 minutes (focus groups).	• Give background to the research • Advise respondent of Privacy Act details • Set expectations of the interview outcome

SECTION B: INDIVIDUAL PROJECT REQUIREMENTS

TOPIC 2: Warm up and getting to know you	
5 minutes	**(5-10 of 60 minutes)**
Let's begin by first finding out a little bit about you. • Role in organisation • length of service • Size of business, number of sites within CoM, size of those sites, owned or leased? • Establish use of solar panels (Y/N) and involvement of individual in the process	In this section we will aim to: • relax the respondent and understand their background; and • get an understanding about their role and business.

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TOPIC 3: Usage of Rooftop Solar	
Establish their usage of Rooftop Solar (3 minutes)	**(10-15 of 60 minutes)**

For those who have rooftop solar panels:

- Did your organisation install rooftop solar panels or were they installed prior to purchasing / tenanting the building?
- When installed?
- Size of panels/capacity?

TOPIC 4: Consideration, Information search, Drivers, Barriers
(15-55 of 60 minutes)

CONSIDERATION OF ROOFTOP SOLAR (15-20 MINS)

IF DO NOT HAVE ROOFTOP SOLAR

- Has your organisation at any time considered rooftop solar?
  IF YES:
- Briefly, could you talk me through the process you went through
- Did you at any time seek advice or look for advice or information related to rooftop solar?
- IF NO:
- Why not? (Eg; Not aware of it as an option, not sure it is suitable for my building, tenant, not a business priority, generally not interested, electricity not a major cost/risk)

IF HAVE ROOFTOP SOLAR

Now let's talk about the process of deciding whether to have rooftop solar installed. Could you think back and talk me through the first steps your organisation/you went through when deciding to install solar panels

INFORMATION SEARCH (20-30 MINS)

The next few questions are about advice and/or information about solar that you searched for or received.

ASK ALL

- Where did you look for advice or information? Any others?
  - Which organisations did you trust most when looking for information? Why is that? Why are some other organisations less trust-worthy?
  - Could you find the information you were looking for
  - Was the advice/information you received helpful? Why/Why not?
- Have you ever received any communications from CoM regarding rooftop solar? What did you receive?
  IF NOT MENTIONED ASK ABOUT
  - Solar rebate programs
  - Solar town hall or BBQ events
  - Solar newsletter

  FOR EACH
  - Was this/were these helpful?
  - Why/Why not?

- What about information from other organisations? Have you ever received any communications from other organisations regarding rooftop solar? What did you receive?
  - Was this/were these helpful?
  - Why/Why not?

INFORMATION GAPS (30-40 MINS)

Now thinking about information you searched for or would have liked to receive but did not.

IF HAVE SOLAR

- Was there any information that you felt you needed but you could not find?
  - What?
  - Where did you look for this information?
    PROBE IF NOT MENTIONED:
    - Solar retailers/wholesalers
    - Sustainability consultants
    - City of Melbourne

IF DO NOT HAVE SOLAR BUT HAVE CONSIDERED IN THE PAST

- Is there any information that would have helped you decide whether or not to install rooftop solar?
- What information would have helped you to decide whether or not to install rooftop solar?
  - Where did you look for this information?
    PROBE IF NOT MENTIONED:
    - Solar retailers/wholesalers
    - Sustainability Consultants
    - City of Melbourne

IF DO NOT HAVE SOLAR AND HAVE NOT CONSIDERED

- Is there any information that would encourage you to consider whether or not to install rooftop solar?
- What information would encourage you to consider whether or not to install rooftop solar?
- PROBES: Business case/payback analysis, technical info (eg; which panels/inverter to select), models for overcoming split incentive (tenant/landlord) issues.
  - Where would you look for this information?
    PROBE IF NOT MENTIONED:
    - Solar retailers/wholesalers
    - Energy retailer (Eg; Origin, AGL)
    - Sustainability consultant
    - City of Melbourne
    - Industry peak bodies (Eg; Clean Energy Council, VECCI)
    - State or Federal Government

INFORMATION SOURCES AND COMMUNICATION METHODS (40-50 MINS)

ASK ALL

- Thinking about all of the possible sources of information about solar, which do you consider to be the most credible?
- If had engaged with City of Melbourne, how was this experience? Did you find it beneficial?
- Are any of these sources not credible? Which one/s?
  PROBE IF NOT MENTIONED:
  - Solar retailers/wholesalers
  - Energy retailer (Eg; Origin, AGL)

- Sustainability consultant
- City of Melbourne
- Industry peak bodies (Eg: Clean Energy Council, VECCI)
- State or Federal Government

- How would you like access information about solar?
  IF NOT MENTIONED PROBE:
  - Email/e-newsletter
  - Information seminars
  - 'Meet-a-solar provider' events
  - Case studies
  - Workshops
  - Online
  - Social media

DRIVERS / BENEFITS OF ROOFTOP SOLAR (50-55 MINS)

ASK ALL

- What did/would you expect the benefits of rooftop solar to be? Any others
  CAPTURE SPONTANEOUS RESPONSES AND THEN PROBE IF NOT MENTIONED
  - Economic benefits
  - Environmental considerations
  - Environmental benefits
  - Support a carbon neutral strategy
  - Achieve rating or meet planning requirements
  - Grant / rebate availability
  - Brand/reputation
  - Have more control over power/electricity supply
  - Future proof - protect against future uncertainty in cost and others

  IF RELEVANT: Did your research or any information you received confirm these benefits? Why/why not?

BARRIERS TO ROOFTOP SOLAR (55-60 MINS)

ASK ALL

- What makes it harder to install rooftop solar? Anything else?
  CAPTURE SPONTANEOUS RESPONSES AND THEN PROBE IF NOT MENTIONED
  - Not aware that solar is an option for my building
  - Lack of accurate or reliable information
  - Don't understand the process
  - Understanding technology
  - Physical building constraints – heritage, structural issues, roof type, roof area, access to roof
  - Difficulty connecting to grid
  - Exporting (power) across title boundary
  - Planning, building and heritage approvals
  - Overshadowing (current or future)
  - Uncertainty about the future plans for my building or business
  - Budget / financing (probe on awareness of financing options including leasing and other options)
  - Split incentives (do not own building)

Are you aware of the current and future plans for development for your building and surrounding buildings? By that I mean Council and State Government plans for growth in developments, heights, and planning requirements?

Probe about:

- Their understanding about where to get this information
- Uncertainty about impact of strategic plans for my building or areas (Council or state government plans to develop, restructure and others).
- Knowledge about the impact of proposed developments/growth plans for their area

ASK ALL

- Do you see any FUTURE potential disadvantages to installing rooftop solar?
  CAPTURE SPONTANEOUS RESPONSES AND THEN PROBE IF NOT MENTIONED
  - Planning, building and heritage approvals
  - Overshadowing (current or future)
- Would you like to see solar access protected in future planning regulations?

ASK ALL

- What would make it easier to install rooftop solar?

SECTION C: CONCLUSION (MANDATORY QMS REQUIREMENTS)

TOPIC 8: CLOSING AND THANK YOU (2 minutes)

- Inform respondents that it is the end of the discussion and thank them for their time and opinions.
- State that as this is market research, it is carried out in compliance with the Privacy Act / information provided will only be used for research purposes.
- Reveal Client Identity if not revealed during intro [unless there is a valid reason not to do so. Should not be done without the client's permission].
- Remind them that you are from Colmar Brunton. Advise if any queries, call the Market Research Society's free Survey Line on 1300 364 830 or CBR on (Melb:1800 555 145).
- Ask for any final comments?
- Issue incentives - ensure respondent signs "Qual Validation Report & Acknowledgement of Reimbursement".
- Complete comments section of "Qual Validation Report & Acknowledgement of Reimbursement".

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B. Quantitative Questionnaire

QMS ONLINE FIELD REQUIREMENTS
FIELD BRIEFING NOTES & QUESTIONNAIRE

Project No.: COM0003	**Project Name**: Community attitudes and barriers to rooftop solar
Client: City of Melbourne	
Client Service Contacts: Belinda Rogerson and Carolyn Taig	
Issue Date: 24-06-2015	

1. *Background Information*

Colmar Brunton has been commissioned by City of Melbourne to gain insights about the residential and business communities' attitudes, awareness, needs and barriers related to rooftop solar energy within the City of Melbourne. This survey tool will be used to measure attitudes among a sample size of residents and businesses community members within the City of Melbourne.

Objectives of the research

As outlined in the brief, Colmar Brunton understands the objective of the research is to understand the residential and business community's attitudes, awareness, needs and barriers related to rooftop solar energy within City of Melbourne to inform future program design.

2. *Schedule/Timing*

TASK	TIMING
1st Draft of questionnaire delivered	Thursday 11 June 2015 (COB)
Feedback on questionnaire	Monday 15 June 2015
Final Q submitted	Tuesday 16 June 2015
Questionnaire approved	Wednesday 17 June 2015
Questionnaire scripting and testing	Thursday 18 to Monday 22 June 2015
Pilot testing	Monday 22 June 2015
Fieldwork	Monday 22- Mon 29 June 2015
Download quantitative data	Monday 29 June 2015

3. *Sample Size & Quotas*

Total sample size:
n=200 Residents (panel)
est n=200 business (client sample and generic link on client website)

4. *Sample/Recruiting Specification*

Participants will be sourced via online panels and client provided sample. A link to the survey will also be placed on the client's website

All respondents must be 18 years +

5. *Interview Length*

15 minutes

6. *Reminders*

As per normal process for panel.

7. *Incentive/Thank You*

As per normal process for panel.

None for client sample / link on website

8. *Other Specific Fieldwork Instructions*

None.

9. *Questionnaire Instructions – Dealing With Overall Project Questions From Respondent*

10. *General Questionnaire Instructions*

None

QMS ONLINE QUESTIONNAIRE

SURVEY INTRODUCTION

Intro letter to be written by CB

SECTION A – BUSINESS/ORGANISATION VS RESIDENTS STATUS

hSAMPLE
S1 BUSINESS VS INDIVIDUALS
S1. AUTOFILL FROM SAMPLE

1	Business (client sample)
2	Household (panel)
3	Generic link (CoM website)

SECTION 1 – SCREENER

INFO NODE
First, we have a few questions to ensure we include a broad representation of households and businesses in this survey.

IF GENERIC LINK ASK ASK ALL
SC
S1. This survey is about rooftop solar energy systems. City of Melbourne would like to hear from any business owners/representatives responsible or involved in the implementation of sustainability measures for their organisation and any City of Melbourne householders whether or not they have a rooftop solar energy system. Which of the following best applies to you?

1	I am an employee or owner/director of an organisation in City of Melbourne	BUSINESS
2	I am an employee or owner/director of an organisation in Melbourne but OUTSIDE City of Melbourne	BUSINESS
3	I live in City of Melbourne	HOUSEHOLD
4	I live in Melbourne but OUTSIDE City of Melbourne	HOUSEHOLD
99	None of these	TERMINATE

IF 1 OR 2 (BUSINESS) AND 3 OR 4 (HOUSEHOLD) ALLOCATE TO BUSINESS.
IF S1=99 TERMINATE

hTYPE
1. **BUSINESS=[S1=1 OR2]**
2. **HOUSEHOLD=[S1= (3 OR 4) NOT (1 OR 2)]**

[ASK ALL]
S2 LOCATION

BUSINESS WORDING (S1=1 OR 2) – hTYPE = 1
[MC]
S2. Which of the following best describes the area in which at least one of your business sites is located? If your organisation has sites within and outside City of Melbourne, please keep your site/s within the City of Melbourne in mind when completing this survey.

HOUSEHOLD WORDING (S1=3 OR 4) hTYPE = 2
[SC]
S2. Which of the following best describes the area in which you live? (SR)

(MR)

1	Melbourne CBD	
2	Carlton	
3	Docklands	
4	East Melbourne	
5	Kensington/Flemington	
6	North Melbourne	
7	Parkville	
8	Port Melbourne	
9	Southbank	
10	South Yarra (West of Punt Road)	
11	West Melbourne	
12	In Greater Melbourne but outside City of Melbourne (please specify)[OE CHA][INSERT TEXT BOX]	
99	None of the above [EXCLUSI VE]	TERMINATE

[IF CODE 12 AT S2] [OPEN-ENDED, 4 DIGIT NUMERIC RESPONSE ONLY]
S3 POSTCODE
BUSINESS WORDING (S1=1 OR 2) i.e. Htype = 1
S3. What is the postcode of your organisation's head office?

HOUSEHOLD WORDING (S1=3 OR 4) i.e. hTYPE = 2
S3. What is your postcode?

IF UNSUCCESSFUL [TERMINATION MESSAGE]
Unfortunately for this particular survey, we need responses from people who reside or own or represent a business located in Melbourne.

Thank you for your participation. **(CLIENT SAMPLE/GENERIC LINK) SHOW IF hSAMPLE = 1 OR 3**
Thank you for your participation and we will contact you again shortly for another survey! **(PANEL) SHOW IF hSAMPLE = 2**

Regards
~~OpinionsPaid.com (PANEL)~~
Colmar Brunton (CLIENT SAMPLE/GENERIC LINK)

IF SUCCESSFUL, CONTINUE

SECTION B –BUSINESS RESPONDENTS ONLY [ASK ONLY IF S1 = 3 OR 4]

[ASK ONLY IF BUSINESS]
[ASK ONLY IF S1 = 3 OR 4] – ASK IF Htype = 1
B1 BUSINESS TYPE
[SC]
B1. Which of the following best describes your organisation?

1	Sole trader
2	Partnership
3	Trust
4	Company
5	Corporation
6	Government Entity
96	Other, please specify [OE CHA][INSERT TEXT BOX]

[ASK ONLY IF S1 = 3 OR 4] ASK IF Htype = 1
B2 PROFIT STATUS
[SC]
B2. Is your organisation for profit, or a not-for-profit?

1	For profit
2	Not for profit

[ASK ONLY IF S1 = 3 OR 4] ASK IF Htype = 1
B3 BUSINESS SIZE
[SC]
B3. Which of the following best describes your organisation?

1	Microbusinesses (1–4 employees)
2	small businesses (5–19 employees)
3	medium businesses (20–199 employees)
4	large businesses (200–500 employees)
5	enterprise with more than 500 employees

[ASK ONLY IF S1 = 3 OR 4] ASK IF Htype = 1
B4 CLIENTELE
[SC]
B4. And which of the following best describes the clients or customers your organisation services? (MR) (SR)

1	Individuals
2	Businesses
4	Australian Federal, State or Local Government
5	Overseas Government
96	Other (please specify) [OE CHA][INSERT TEXT BOX]

[ASK ONLY IF S1 = 3 OR 4] ASK IF Htype = 1B5 INDUSTRY
[MC]
B5. Which industry or industries does your organisation operate in? (MR)

1	Accommodation and Food Services
2	Agriculture, Forestry and Fishing
3	Arts and Recreation Services
4	Community or institutions
5	Construction
6	Education and Training
7	Electricity, gas, water and waste services
8	Financial and Insurance Services
9	Government
10	Healthcare and Social Assistance
11	Information Media and Telecommunications
12	Manufacturing
13	Mining
14	Postal and Warehousing
15	Professional, Scientific and Technical Services
16	Public Administration and Safety
17	Rental hiring and Real Estate Services
18	Retail trade
19	Transport
20	Wholesale Trade
96	Other – please specify[OE CHA][INSERT TEXT BOX]

[ASK ONLY IF S1 = 3 OR 4] ASK IF Htype = 1
B6 BUSINESS OCCUPANCY OF BUILDING
[SC]
B6. Which best describes the organisation you own or work for. (SR)

1	The organisation/business owns the building
2	The organisation/business is a tenant

[ASK ONLY IF ~~S1 = 3 OR 4~~] ASK IF Htype = 1

B7 NUMBER OF STOREYS

[SC]

B7. How many storeys does your building have in total (including storeys that your business does not occupy)? (SR)

1	The building is less than 4 storeys
2	The building is more than 4 storeys

IF B6=1 [ORGANISATION OWNS THE BUILDING] CONTINUE TO C1
IF B6=2 [ORGANISATION IS A TENANT] SKIP TO CC1
hORGANIZATIONTYPE

1. OWNER=[B6=1]
2. TENANT=[B6=2]

SECTION C –BUSINESS RESPONDENTS ONLY THAT OWN BUILDING [B6=1]

[ASK IF B6=1]

C1 BUILDING OWNER OCCUPANCY

[SC]

C1. Which best describes your occupancy of the building your organisation owns? (SR)

1	We occupy the whole building [SKIP TO G1]
2	We occupy only part/s of the building, and have tenants [CONTINUE TO C2]
3	We do not occupy the building, it is only occupied by tenants [CONTINUE TO C2]

IF C1=2 OR 3 ASK C2

C2 TYPE OF TENANTS

[SC]

C2. Are these tenants ... (SR)

1	Commercial [CONTINUE TO C3]
2	Residential [SKIP TO G1]
3	Commercial and Residential [CONTINUE TO C3]

[ASK ONLY IF C2 = 1 OR 3]

C3 CATEGORIES OF TENANTS

[MC]

C3. Which of the following best describe your commercial tenants? (MR)

1	Accommodation and Food Services
2	Agriculture, Forestry and Fishing
3	Arts and Recreation Services
4	Community or institutions
5	Construction
6	Education and Training
7	Electricity, gas, water and waste services
8	Financial and Insurance Services
9	Government

10	Healthcare and Social Assistance
11	Information Media and Telecommunications
12	Manufacturing
13	Mining
14	Postal and Warehousing
15	Professional, Scientific and Technical Services
16	Public Administration and Safety
17	Rental hiring and Real Estate Services
18	Retail trade
19	Transport
20	Wholesale Trade
96	Other – please specify[OE CHA][INSERT TEXT BOX]

SKIP TO G1

SECTION CC – BUSINESS RESPONDENTS ONLY THAT RENT BUILDING [B6=2]

[ASK ONLY IF B6 = 2]
CC1 BUSINESS TENANTS ONLY
[SC]
CC1. Which one best describes your occupancy of the building your organisation leases? (SR)

1	We lease part of one floor of the building
2	We lease one floor of the building
3	We lease multiple floors of the building
4	We lease the whole building

SKIP TO G1

SECTION D – RESIDENTIALS ONLY [ASK ONLY IF S1 = 3 OR 4]

[ASK ONLY IF S1=3 OR 4] i.e. Htype = 2

D1 NATURE OF RESIDENCE
[SC]
D1. Which of these best describes the home you live in.

1	Detached house / single house on a lot
2	Townhouse
3	Apartment or unit
4	Semi-detached house
96	Other (please specify) [OE CHA][INSERT TEXT BOX]

[ASK ONLY IF S1=3 OR 4 i.e. Htype = 2]
D2 RESIDENTIAL OWNER V TENANT
[SC]
D2. Which of these best describes you?

1	I own or am buying my home
2	I rent my home

[ASK ONLY IF S1=3 OR 4 i.e. Htype = 2]
D3 HERITAGE LISTING
[SC]
D3. Does your building have a Heritage Overlay?

1	Yes
2	No
3	Unsure

CONTINUE

SECTION G – ACTIONS TOWARDS REDUCING CARBON EMISSIONS

ASK ALL

G1. ACTIONS TO REDUCE CARBON EMISSIONS

[MC]

G1. Do you [IF RESIDENTIAL i.e. hType = 2 PIPE IN] /Does your organisation [IF BUSINESS i.e. hType = 1 PIPE IN] participate in any of the following sustainability activities? (MR)

Please select any that apply.

1	Recycling
2	Solar panels installed on the building
3	Energy efficient equipment/appliances
4	Purchasing Green Power
5	Using recycled paper only
6	Reducing use of plastics and other non-organic materials
7	Sustainability considerations or criteria part of procurement decisions
96	Other (specify) [OE CHA][INSERT TEXT BOX]
99	None of these[EXCLUSIVE]

SECTION H – SOLAR ROOFTOP SYSTEMS AWARENESS

ASK ALL

H1. AWARENESS OF ROOFTOP SOLAR

[SC]

H1. How much do you know about rooftop solar energy systems?

I don't know anything about Rooftop Solar Energy Systems										I know a lot about Rooftop Solar Energy Systems
0	1	2	3	4	5	6	7	8	9	10

ASK ALL

[MC]

H3. SOURCES OF INFORMATION ABOUT ROOFTOP SOLAR SYSTEMS

H3. How did you hear about rooftop solar energy systems? Please select one or more of the following. (MR)

Solar panel provider advertising	1
Community Seminar	2
Workplace Seminar	3
Meet-a-solar provider event	4
Renewable energy expo	5
Social Media	6
Traditional news media (print/television/radio)	7
Visited City of Melbourne website	8
Family and friends/WoM Word of Mouth	9
Other – Please specify [OE CHA][INSERT TEXT BOX]	96
Don't know / can't recall[EXCLUSIVE]	99

SECTION I – KNOWLEDGE AND EXPERIENCE WITH ROOFTOP SOLAR

ASK ALL

I1. FINANCIAL RETURN

[SC]

I1. What do you think the payback period is for rooftop solar energy systems? (BUSINESS)
How long would you expect it to take for a solar energy system to pay for itself? (HOUSEHOLDS)

Less than 5 years	1
5 to 10 years	2
11 to 20 years	3
More than 20 years	4
I don't know	99

ASK ALL

I2. PRESENCE OF ROOFTOP SOLAR SYSTEM

[SC]

I2. Does your home **(IF RESIDENTS i.e. hType = 2 PIPE IN)** /Does your building/s **(IF BUSINESS i.e. hType = 1PIPE IN)** have rooftop solar energy systems installed?

1	Yes **(CONTINUE TO I3)**
2	No **(SKIP TO J1)**

ASK IF I2=1

INVOLVEMENT IN INSTALLATION

I3. Were you aware of or involved in the decision to install the rooftop solar energy system?

1	Yes **(SKIP TO L1)**
2	No **(SKIP TO L8)**

SECTION J – ASK ONLY IF NO ROOFTOP SOLAR – [I2 = 2]

ASK ONLY IF I2 = 2

J1. CONSIDERATION OF ROOFTOP SOLAR SYSTEM

[SC]

J1. Are you considering installing a rooftop solar energy system on your current building?

1	Yes **(CONTINUE TO J2)**
2	No and have never previously considered solar **(SKIP TO J3)**
3	No, have previously considered solar and decided against it **(SKIP TO J3)**

ASK ONLY IF CONSIDERING SOLAR, J1 = 1

J2. FORESEEABLE INSTALLATIONS

[SC]

J2. When do you think you will make the final decision about installing a rooftop solar energy system?

1	In a few months
2	Sometime next year
3	In 1 to 2 years
4	More than 2 years from now
99	I don't know

ASK IF DON'T HAVE SOLAR I2=2

J3. TYPES OF INFORMATION THAT INFLUENCE DECISION (NOTE: SAME CODEFRAME AS L2)

[MC]

WORDING IF CONSIDERING [J1=1] OR NEVER CONSIDERED SOLAR (J1=2).

J3. Which of the following types of information would help you decide whether or not to install a rooftop solar energy system? Please select all that apply.

WORDING IF PREVIOUSLY CONSIDERED AND REJECTED [J1=3]

J3. Which of the following types of information did you use when considering a rooftop solar energy system?

Please select all that apply.

Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills	1
Availability and terms of warranties	2
Service guarantees of rooftop solar energy system providers	3
Financial rebates from Council	4
Financial investment required	5
Financing options	6
Estimated reduction in electricity bills after installation of rooftop solar energy systems	7
Environmental benefits (reduced carbon emissions)	8
Energy ratings and/or Green building ratings (e.g. NABERS)	9
Heritage listing status of building	10
Information about planning controls and policy	11
Other (please specify) **[OE CHA][INSERT TEXT BOX]**	96

CONTINUE TO INSTRUCTION BEFORE J4

ASK J4 IF CONSIDERING SOLAR [J1=1] OR NEVER CONSIDERED SOLAR (J1=2).
SKIP TO J5 IF PREVIOUSLY CONSIDERED AND REJECTED SOLAR [J1=3]

J4. INFORMATION CHANNELS CONSIDERED (SAME CODEFRAME AS J5 AND L3)
[MC]
J4. What would be your preferred way to access information on solar energy?

Meet-a-solar provider event	1
Community Seminar	2
Workplace Seminar	3
Renewable energy expo	4
Phone conversation with experts	5
Social Media	6
Email from Council	7
Solar provider website	8
Online search	9
Online videos	10
Webinars	11
Magazines	12
Direct contact with council planning department	13
Council website	14
Friends and family	15
Other, please specify [OE CHA][INSERT TEXT BOX]	96

ASK IF PREVIOUSLY CONSIDERED AND REJECTED SOLAR [J1=3]
[MC]
J5. INFORMATION CHANNELS USED (SAME CODEFRAME AS J4 AND L3)
J5. Which of the following sources did you use or attend when considering a rooftop solar energy system?

1	Meet-a-solar provider event
2	Community Seminar
3	Workplace Seminar
4	Renewable energy expo
5	Phone conversation with experts
6	Social Media
7	Email from Council
8	Solar provider website
9	Online search
10	Online videos
11	Webinars
12	Magazines
13	Direct contact with council planning department
14	Council website
13	Friends and family

96	Other, please specify [OE CHA][INSERT TEXT BOX]

ASK IF DON'T HAVE SOLAR I2=2
[GRID SC PRE ROW]
J6 CREDIBLE SOURCES OF INFORMATION (NOTE: CODEFRAME SAME AS L4)

J6. How credible are each of the following possible sources of information regarding rooftop solar energy systems.
Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)

		Not Credible at all									Extremely Credible
		0	1	2	3	4	5	6	7	8	9	10
1	Rooftop solar energy systems manufacturer											
2	Solar retailer											
3	Gas/electricity provider											
4	Industry peak body eg. VECCI											
5	City of Melbourne											
6	State Government of Victoria											
7	Environmental not for profit organisations											
8	Your accountant/financial advisor											
	Independent engineering consultant											
9	Federal Government of Australia											
10	Online Reviews by users of rooftop solar energy systems											
11	One stop shop websites – e.g. iSelect, Australian Solar Quotes											
12	Other users of rooftop solar energy systems											

ASK IF DON'T HAVE SOLAR I2= 2

J7. BARRIERS TO CONSIDERATION OF ROOFTOP SOLAR (CODEFRAME SAME AS L5)

[MC]

WORDING IF CURRENTLY OR HAVE NEVER CONSIDERED SOLAR [J1=1 OR 2]

J7. Which, if any, of the following could prevent you from considering a rooftop solar energy system. (MR)

WORDING IF PREVIOUSLY CONSIDERED AND REJECTED SOLAR [J1=3]

J7. Which, if any, of the following influenced you not to install a rooftop solar energy system. (MR)

		Yes
1	I don't know enough about it	
2	I don't have the time	
3	The process is too difficult	
4	Lack of available roof space	
5	Asbestos on rooftop	
6	Don't have access to rooftop	
7	Building is not strong enough	
8	I don't own the building	
9	Possibly moving elsewhere	
10	Possibly selling my property	
11	Too expensive	
13	Lack of financing options	
14	Overshadowing from taller buildings	
15	Foreseeable construction of taller buildings	
16	Use other options to save energy bill	
17	Waiting for technology to get better	
18	Poor level of service from solar providers	
19	Can't find enough information about rooftop solar	
20	Heritage listing status of building	
21	Planning controls (other than Heritage listing)	
96	Other (please specify) **[OE CHA][INSERT TEXT BOX]**	
99	None of these (SR)**[EXCLUSIVE]**	

SKIP TO M1

SECTION L - YES TO SOLAR, AND INVOLVED IN DECISION - ASK ONLY IF I3 = 1

ASK ONLY IF I3 = 1, HAVE SOLAR AND INVOLVED IN DECISION

L1 TIME TO MAKE DECISION

[SC]

L1. How long did it take to make the final decision to install a rooftop solar energy system from the time it was first considered?

1	Within a few months
2	About 1 year
3	1 to 2 years
4	2 to 5 years
5	More than 5 years
99	I don't know

ASK ONLY IF I3 = 1

L2 TYPES OF INFORMATION THAT INFLUENCED DECISION (NOTE: CODEFRAME SAME AS J3)

[MC]

L2. Which of the following did you use when searching for information about rooftop solar energy systems?

Case studies showing how rooftop solar energy systems has been effective in reducing electricity bills	1
Warranties	2
Service guarantees of rooftop solar energy system providers	3
Financial rebates from Council	4
Financial investment required	5
Financing options	6
Estimated reduction in electricity bills after installation of rooftop solar energy systems	7
Environmental benefits (reduced carbon emissions)	8
Energy ratings and/or Green building ratings (e.g. NABERS)	9
Heritage listing status of building	10
Planning controls (other than Heritage listing)	11
Other (please specify) [OE CHA][INSERT TEXT BOX]	96

ASK ONLY IF I3 = 1

L3 USEFULNESS OF INFORMATION CHANNELS (SAME CODEFRAME AS J4 AND J5)

[MC]

L3. Which of the following sources did you use or attend when considering a rooftop solar energy system?

Engaging with solar provider event	1
Community Seminar	2

Workplace Seminar	3
Renewable energy expo	4
Conversation with solar expert	5
Social Media	6
Email or newsletter from Council	7
Solar provider website	8
Online search	9
Online videos	10
Webinars	11
Magazines	12
Direct contact with council planning department	13
Council website	14
Friends and family	15
Other (please specify) [OE CHA][INSERT TEXT BOX]	96

ASK ONLY IF I3 = 1

L4 CREDIBLE SOURCES OF INFORMATION (NOTE: SAME CODEFRAME AS J6)

[GRID SC PER ROW]

L4. How credible are each of the following possible sources of information regarding rooftop solar energy systems.

Please rate each information source on a scale of 0 (not credible at all) to 10 (extremely credible)

		Not Credible at all									Extremely Credible
		0	1	2	3	4	5	6	7	8	9	10
1	Rooftop solar energy systems manufacturer											
2	Solar retailer											
3	Gas/electricity provider											
4	Industry peak body eg. VECCI											
5	City of Melbourne											
6	State Government of Victoria											
7	Environmental not for profit organisations											
8	Your accountant/financial advisor											
9	Independent engineering consultant											
~~9~~ 10	Federal Government of Australia											
~~10~~ 11	Online Reviews by users of rooftop solar energy systems											
~~11~~ 12	One stop shop websites – e.g. iSelect, Australian Solar Quotes											
~~12~~ 13	Other users of rooftop solar energy systems											

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ASK ONLY IF I3 = 1, HAVE SOLAR AND INVOLVED IN DECISION (SAME CODEFRAME AS J7)
L5 BARRIERS OF ROOFTOP SOLAR
[MC]
L5. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar energy system? (MR)

My limited knowledge about rooftop solar energy systems	1
Limited time available	2
The implementation was difficult	3
Limited available roof space	4
Asbestos on rooftop	5
Achieving access to rooftop	6
Strength of building	7
I don't/my company doesn't own the building	8
The possibility of moving to a different building (pipe in if hType = 1)/ house(pipe in if hType = 2) [BUSINESS/RESIDENT]	9
The possibility of selling the property/building	10
The financial cost	11
Lack of financing options	12
Overshadowing from taller buildings	13
Foreseeable construction of taller buildings	14
Availability of alternative options to save on energy bill	15
Technology will improve significantly in the near future	16
Poor level of service from solar providers	17
Lack of information about rooftop solar	18
Heritage listing status of building	19
Planning controls (other than Heritage listing)	20

ASK ONLY IF I3 = 1
[OE CHA][INSERT LARGE TEXT BOX]
L6 OTHER REASONS
L6. What other factors influenced you to install a rooftop solar energy system? (OE)

ASK ONLY IF I3 = 1
[OE CHA][INSERT LARGE TEXT BOX]
L7 OTHER DIFFICULTIES
L7. What, if any, difficulties did you experience in the process of making the decision to install a rooftop solar energy system? (OE)

ASK ONLY IF ~~I3 = 1 should it be~~ I3 = 1 or 2
[SC]
L8. How important is it that your solar investment is protected from overshadowing from future development? (1-10 scale)

Not important at all										Extremely important
0	1	2	3	4	5	6	7	8	9	10

SECTION M – GENERAL ATTITUDE TOWARDS ROOFTOP SOLAR

ASK ALL
M1 GENERAL ATTITUDES
[GRID SC PER ROW]
M1. Please indicate how important the following are to you.

	Not important at all									Extremely important
	0	1	2	3	4	5	6	7	8	9	10
Reducing carbon emissions											
Being able to install rooftop solar on my building											
Rooftop solar contributing to Melbourne being a more sustainable city											
Rooftop solar making the city more resilient											
Reducing electricity bills											

ASK ALL
M2 FINANCE MODELS
[MC]
M2. Please indicate, if you are aware of any of the following finance models for solar.

1. Environmental Upgrade Agreements (EUAs) **[BUSINESS ONLY i.e. if hType = 1]**
2. Power Purchasing Agreements (PPAs)
3. Leasing
4. Virtual Net Metering
5. On bill financing
99. None of these**[EXCLUSIVE]**

SECTION N – DEMOGRAPHICS

[ASK ALL] [SR]
QD1 AGE
QD1. Which of these age groups do you fall into?

Under 18 years	1
18-24 years	2
25-29 years	3
30-34 years	4
35-39 years	5
40-44 years	6
45-49 years	7
50-54 years	8
55-59 years	9
60-69 years	10
70 + years	11
Prefer not to answer	99

[ASK ALL] [SR]
QD2 GENDER
QD2. Are you male or female?

Male	1
Female	2

[ASK ALL] [SR]
QD3 EDUCATION
QD3. What is the highest level of education you have attained?

Some primary	1
Finished primary	2
Some secondary	3
Some technical or commercial	4
Passed 5th Form/ Leaving Certificate	5
Finished technical or commercial	6
Finished secondary or now in HSC/ VCE	7
Some university	8
Tertiary diploma (not university)	9
Now at university	10
Graduate degree	11
Postgraduate degree	12
Other (please specify) [OE CHA][INSERT TEXT BOX]	96

ASK RESIDENTS ONLY i.e. hType = 2 [SR]
QD4 INCOME
QD4. Which range represents your annual personal income? This includes your wages, salaries, Government benefits, pensions, allowances and other income that YOU usually receive (Gross – before tax and superannuation deductions).

Under $6,000	1
$6,000 - 14,999	2
$15,000-19,999	3
$20,000-24,999	4
$25,000-29,999	5
$30,000-34,999	6
$35,000-39,999	7
$40,000-49,999	8
$50,000-59,999	9
$60,000-69,999	10
$70,000-79,999	11
$80,000-89,999	12
$90,000-99,999	13
$100,000 above	14

[ASK BUSINESS ONLY i.e. hType = 1] [SR]
QD6 EMPLOYMENT
[OE CHA][INSERT TEXT BOX]
QD6. What is your job title? (OE)

_____

MANDATORY QMS REQUIREMENTS

FINAL CLOSE/TERMINATION

Thank you, you have completed the survey. As this is market research, it is carried out in compliance with the Privacy Act and the information you provided will be used only for research purposes. The research project is being conducted on behalf of the City of Melbourne.

Again, thank you for your patience in answering these questions. For questions about the Market Research Industry as a whole, you can call the Market and Social Research Society's Survey Line on 1300 364 830.

Thank you for your opinions. Please click "SUBMIT" to send your responses.