

Australian householders' interest in the solar distributed energy market

Results from focus groups

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The aim of this research was to understand public perceptions of participating in the solar distributed energy market and to inform stakeholders in the electricity industry and the solar photovoltaic (PV) market about those consumer preferred options. This fact sheet provides a summary of some of the key findings from six focus groups conducted on this topic with members of the Australian public in Brisbane, Melbourne and Sydney during October 2012.

The focus groups included:

1. Facilitated discussion to understand existing knowledge, particularly in relation to electricity prices and experience with solar PV systems.
2. An expert presentation on distributed energy options, including:
 - ♦ solar water heaters
 - ♦ grid connected solar PV systems
 - ♦ grid connected solar PV systems with battery backup
 - ♦ battery alone systems
 - ♦ community solar PV systems, and
 - ♦ solar PV off-grid systems.
3. Responses to a hypothetical exercise around contract sign-up options.

Participants' profile – 61 participants attended the focus group meetings, of which:

- ♦ 52% were male, 48% were female
- ♦ Participants' age ranged between 23 and 74 years of age, with an average of 45 years
- ♦ 47% of participants completed a university degree; the level of education varied from secondary schooling to postgraduate degree
- ♦ 59% were employed either full-time or part-time, while 20% were self-employed and 10% were retired, and
- ♦ 77% were homeowners and 21% were tenants, with only one person reporting living in shared accommodation.

Self-assessed knowledge about distributed energy

Participants' self-assessment of their individual knowledge at the beginning and end of each meeting highlighted significant increases in their understanding about distributed solar energy. This knowledge increase can be attributed to assimilation of new information provided to participants during the focus groups, but may also reflect participants' own expectation to have learnt something new from the focus groups. Given the level of detail involved in the discussion of the six solar hot water and solar PV technology options, it is reasonable to assert that the focus groups provided



Uptake of solar PV systems has increased in recent years in Australia

additional insights to participants about the topic. Initially, participants were familiar with only a few solar options, but following the expert presentation participants agreed or strongly agreed that they could easily explain solar energy and all six associated technologies.

Support for the distributed energy options

Across all groups, 11 participants already owned grid connected PV, while eight had a solar hot water system. Only one participant reported using an energy supplier to remotely control their energy use in household appliances and two stated they had already invested in community PV systems (information about community PV systems were only elicited in Sydney and Melbourne).

The most preferred options for future investment were grid connected solar PV panels (61%) and solar hot water systems (54%), followed by solar PV with battery back-up (28%), off-grid PV system (20%), allowing an energy supplier to remotely control appliances (13%), and installing a battery alone system (8%).

The most important factors influencing these preferences included:

- ♦ **Infrastructure related:** tenancy, housing type, and roof suitability
- ♦ **Lifestyle:** mobility, aesthetics, household energy use and current bill value, being home during the day and age group
- ♦ **Financial:** return on investment, competing priorities, quality and improvements
- ♦ **Information:** lack of clear information material and trust in source of information
- ♦ **Environmental benefits:** reduced GHG as the main environmental impact, and
- ♦ **Other benefits:** energy independence and/or self sufficiency.

Preferences for financing options

Participants were presented with three payment options for investing in solar technology, namely buying upfront, buying with finance and leasing from an energy supplier. Participants rated these options on a 5-point scale,

as shown in Figure 1. Across the group of participants, it was found that:

- ♦ 34 participants (56%) indicated that buying a solar device upfront would be appealing to them, with a further nine indicating they had already done so
- ♦ 26 participants (43%) indicated that buying a solar device with finance would suit them, with one participant having already done so, and
- ♦ Leasing a solar device was a less popular choice with only 19 participants (31%) rating this option as either appealing or very appealing.

Most participants expressed not having been aware of the different payment options available to them, in particular, leasing and contracting through Energy Service Providers (ESCOs). Key factors influencing their preferences for finance options included the availability of government incentives, rising electricity bills and affordability (the cost of solar PV systems relative to potential savings).

Other non-financial considerations for investing in a distributed energy option included the source of information, the reputation of the company supporting the financial services or ESCOs, quality of the product and the timeframe to make the investment decision.

Funding and further work

This work was funded by the Australian Solar Institute (ASI), now part of the Australian Renewable Energy Agency (ARENA), through the Australian Photovoltaic Association of Australia (APVA).

The findings from the focus groups were used to develop a national survey to understand community views on this topic. The online survey was conducted by CSIRO with 2,500 people Australia wide in March 2013. The researchers would also like to thank the members of the public who participated in the research.

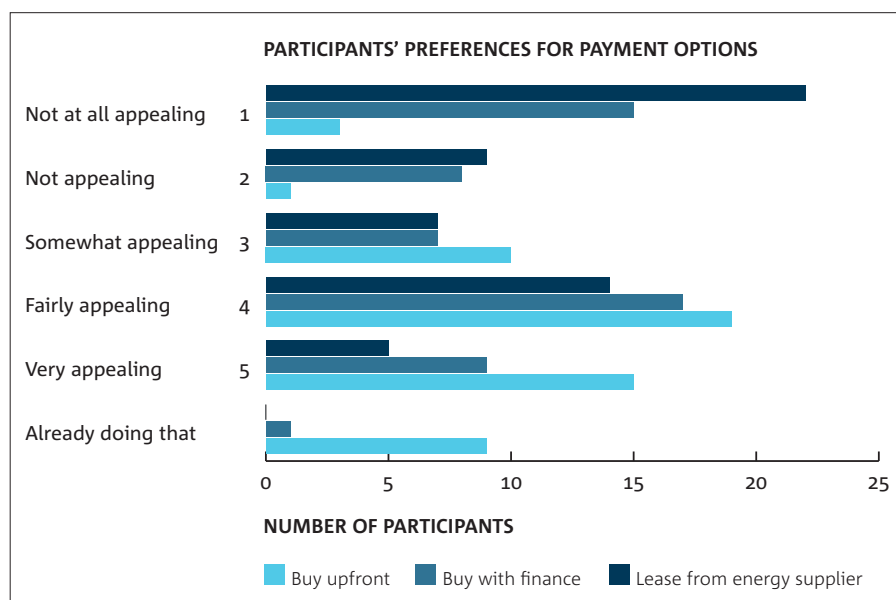


Figure 1. Participants' preferences for payment options for investing in solar technology

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