

Home Energy Audit: Customer Feedback



Alice Solar City

Final report

Residential Home Energy Audit: Customer Feedback

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Acronyms

The following acronyms are used throughout the Alice Solar City reports:

Acronym	Meaning	Acronym	Meaning
ABS	Australian Bureau of Statistics	KRR	key results reporting
ADC	average daily consumption	kW	kilowatt
AS	Alice Springs	kWh	kilowatt hour
ASC	Alice Solar City	kWh/yr	kilowatt hour per year
ASTC	Alice Springs Town Council	LBEA	Large business energy audit
BMS	building management system	LBEEP	large business energy efficiency program
BP	BP Solar	LEDs	light emitting diodes
CAT	Centre for Appropriate Technology	LGA	Local Government
CEA	commercial energy audit	MER	monitoring, evaluation and reporting
CEC	Clean Energy Council	MWh	megawatt hour
CES	commercial energy survey	NB	new build
CFL	compact fluorescent lamp	NT	Northern Territory
CG	Control Group	OSB	one shot booster switch
CO ₂	carbon dioxide	OTP	over temperature protection
CRT	cost reflective trial	PTR	pressure and temperature Relief
DB	database	PV	photovoltaic
DCCEE	Department of Climate Change and Energy Efficiency	PWC	Power and Water Corporation
Deg C	degrees celsius	REC	Renewable Energy Certificate
EC	electricity consumption	RET	Renewable Energy Target
EEM	energy efficiency measure	SBEEP	small business energy efficiency program
EEV	energy efficiency voucher	SD	Sunny Design
FUS	follow up survey	SHW	solar hot water
GHG	green house gases	SHWS	solar hot water system
GIS	geographic information system	SLA	statistical local area
GSM	global system mobile communication	SLC	Smart Living Centre
HEA	home energy audit	SMA	SMA Pty LTD
HES	home energy survey	SME	small to medium enterprise
HVAC	heating, ventilation and air conditioning	SRES	Small Renewable Energy Scheme
HW	hot water	STC	Small Scale Technology Certificate
HWS	hot water system	V	volt
ID's	Identities	VFD	variable frequency drive
IGUs	insulated glass units	W	watt
IHD	in house display	WELS	water efficiency labelling and standards
KAB	knowledge attitude and behaviour		

1 Introduction

Household electricity use can be an intangible consumption for many individuals. Household members may have limited understanding of the relationship between their use of household appliances, their behaviours and electricity consumption. They may overlook or miscalculate the contribution that some household services, such as heating water or pool cleaning, make towards household electricity consumption.

For these reasons it is important to educate the community and create greater awareness around energy consumption and its impacts. This document reports on customer responses to the Alice Solar City Home Energy Audits which were, after registration, the major ASC customer engagement with a significant educative purpose.

1.1 Solar Cities

Initiated and largely sponsored by the Australian Government, the Solar Cities program aimed to explore how technology, behavioural change and new approaches to electricity pricing can combine to create a sustainable energy future in Australia. Alice Springs was selected as one of seven Solar Cities to trial this intent in collaboration with all levels of Government, the private sector and local communities.

The Solar Cities Program was managed by the then Department of Climate Change and Energy Efficiency (DCCEE) and its objectives were twofold:

- To demonstrate the economic and environmental impacts of integrating cost-reflective pricing with the concentrated uptake of solar, energy efficiency and smart metering technologies.
- To identify and implement options for addressing barriers to distributed solar generation, energy efficiency and electricity demand management for grid connected urban areas.

1.2 Alice Solar City

The Alice Solar City (ASC) project commenced in March 2008 and ceased operation in June 2013. To complement the grants received from the Australian Government, funding and in-kind support were provided by the ASC consortium members:

- Alice Springs Town Council (ASTC) - the lead proponent,
- Northern Territory Government (NTG),
- Power and Water Corporation (PWC),
- Arid Lands Environment Centre (ALEC),
- Tangentyere Council,
- Northern Territory Chamber of Commerce and Industry (NTCCI).

Although Alice Springs is an ideal location for the uptake of solar power (receiving on average, more than 9 hours of sunlight per day), the extreme year round climatic conditions also means there is high community energy consumption. Therefore, an aim of the ASC project was to encourage informed and intelligent electricity use within the local community. To support this goal, the ASC project operated within three key areas, and their components are outlined below in Table 1.

Residential	<ul style="list-style-type: none"> • free energy advice and home energy audits (HEA), with the opportunity for follow-up survey (FUS) • financial incentives for undertaking a wide range of energy efficiency measures (EEMs) • trials of a cost reflective tariff (CRT), smart metering and in-house displays (IHD) • an elevated buyback tariff for households who chose to install an ASC sponsored BP photovoltaic (PV) system and sell electricity back to the grid • rewards for households that made significant reductions in electricity use compared to their previous usage.
Commercial	<ul style="list-style-type: none"> • free energy advice and commercial energy audits (CEA) for small businesses • subsidised energy audits for larger businesses requiring specialised advice • financial rebates for undertaking a wide range of energy efficiency measures and solar energy installation.
Iconic	<ul style="list-style-type: none"> • a number of large-scale, key iconic solar energy installations in and around Alice Springs, which aim to showcase cutting edge solar applications and their potential.

Table 1: Three key elements of the Alice Solar City program

This report focuses on the Residential element, specifically on the Customer Feedback Survey provided to participants at the completion of their Home Energy Audit.

1.3 Customer Feedback about the Home Energy Audit

The first step for potential residential participants to become involved in the ASC project was to register their household with ASC. Once a household had signed on to the ASC project, one or more members were required to participate in a Home Energy Audit (HEA) with an ASC auditor. The ASC auditor used historical electricity consumption data (where available), characteristics of the house and number/type of devices/appliances, to assess both the current energy consumption and its distribution among electricity services (cooling, heating, lighting etc). A further discussion with householders about their needs, preferences and financial capabilities assisted the auditor to focus on priorities, and possible recommendations, for the participating household. Once the audit information had been reviewed by the ASC auditor, the household would receive a report providing the following information:

- a breakdown of the household’s energy consumption,
- comparisons with average Alice Springs household energy use and that of an energy efficient household,
- recommendations to reduce energy consumption,
- a list of Energy Efficient Measures (EEMs) for the household to implement on their property.

As part of a household’s involvement in ASC, financial incentives were offered for a number of EEMs. This was typically 35% of the total cost, up to a specified cap. For EEMs with financial incentives, households were provided vouchers to use as part payment to suppliers registered with the ASC. The householder was expected to obtain quotes and contract any work to be done on their property.

The HEA determined the priorities and subsequent recommendations for participating households, and therefore was the foundation for the residential element of the ASC project. At the conclusion of the HEA, participants received a Customer Feedback Survey. The objective of the HEA survey was to obtain feedback from participating households about:

- the conduct and quality of the HEA
- expectations of involvement in the ASC program
- level of confidence with program participation
- likelihood of reducing energy consumption
- barriers the household identifies to reducing energy consumption
- level of motivation for carrying out recommended actions

This report provides a description of the methods and an analysis of the results from the HEA Customer Feedback Survey.

2 Methodology

2.1 Survey Development and Distribution

The ASC program commenced in March 2008, and the HEA Feedback Survey was not developed until after the Monitoring Evaluation and Reporting (MER) plan was finalised in late 2009. As part of the implementation of the MER plan, some program adjustments and initiatives were undertaken. These involved modifying registration questions, establishing a Follow-up Support Consultation option for participants and instituting a Knowledge-Attitude-Behaviour (KAB) Survey, all of which required significant upgrades to the ASC process and database. These changes commenced in late 2010 and were implemented from May 2011. The database changes were not considered to be an impediment to instituting the HEA Customer Feedback Survey and the first version (Version 1) commenced in November 2010. It was used until May 2011, when the new MER initiatives were introduced and the ASC staff reviewed Version 1 of the HEA Customer Feedback Survey. Based on this review and the implementation of new MER tools, a second version of the HEA Customer Feedback Survey (Version 2) was introduced in May 2011. Version 2 was shorter than Version 1 as a number of Version 1 questions were incorporated into the new MER tools, and others modified or omitted (see section 2.3). Refer to Appendices 1 and 2 for Versions 1 and 2 respectively. Version 2 was conducted with participants until the final date for households to register and participate in an audit that offered financial incentives. The final sign-up/registration date to obtain incentives was 31 August 2012, and the last audit for these sign-ups was conducted in early November 2012. As customers had to post completed surveys to ASC, surveys for this report were accepted until 30 November.

At the completion of HEA, auditors gave the householder a copy of the HEA Customer Feedback Survey, with a cover letter explaining the survey, and a reply paid envelope. Customers were requested to complete the survey and post it to ASC. When auditors omitted to give the customer a feedback survey, and this was confirmed, surveys were posted to such customers.

2.2 Comparison of Survey Versions

There were 13 questions in Version 1, and 8 questions in Version 2 of the Customer Feedback Survey. The table below summarises the relationship between the two survey versions. (Refer to Appendices 1 and 2 for versions of the surveys)

Version 1 Question Number	Version 1 Question in Version 2	Version 2 Question Number	New Questions and Numbers in Version 2
1	Omitted		
2	Retained	1	
3	Retained	2a-e	
4	Omitted		
5	Retained	2f	
6	Omitted		3 (To use Vouchers)
7	Omitted		4 (To change behaviour)
8	Retained	6	
9	Retained	5	
10	Omitted		7 (Intention to act)
11	Omitted		
12	Retained	8 (combined with Q13)	
13	Retained	8	

Table 2: Comparison of survey versions 1 and 2

2.3 Additional ASC Program Research

McGregor Tan Research was commissioned by ASC in May 2012 to undertake survey work to address a range of questions about the ASC program in Alice Springs. Telephone surveys were conducted from June 15th to June 25th 2012. The main target group for the McGregor Tan Research study was registered ASC customers. However Alice Springs households that had not registered with ASC were also contacted. For non-participating households there were 251 respondents, and 337 respondent households that were ASC participants. Where they are relevant, the results from this McGregor Tan research study are referenced in this report.

3. Results and Interpretation

The results presented in this section are based on the questions in the Version 2 survey, as these questions are regarded as being the most relevant for the HEA itself, and as some questions from Version 1 were incorporated elsewhere. Where the questions in versions 1 and 2 are the same (Questions 1, 2, 5, 6, 8 of version 2), the responses are combined. For questions that were only in Versions 2, there are no Version 1 responses, and the response numbers are lower than for combined responses. In creating Version 2, questions that were removed from Version 1 are not reported upon here.

'No Response' (recorded as NR) to a question is recorded as a category in presenting results, and percentage responses for survey defined response options are shown as valid percentages i.e. they exclude the no response total.

3.1 Response Rates

The table below provides the total number of HEAs conducted, the number of completed surveys returned to ASC, and response rates for versions 1, 2 and overall.

Period	Survey Type	Surveys provided at HEA	Surveys Returned	Response Rate
Nov 2010 – May 2011	Version 1	190	60	31.6%
May 2011 – Nov 2012	Version 2	526	145	27.6%
Sub-total		716	205	28.6%
McGregor Tan	Phone	Surveys completed		
		337		

Table 3: Response rates for HEA feedback surveys

From the 716 surveys distributed in the period November 2010 – November 2012 there were 205 responses, which is a response rate of 28.6%. This is a satisfactory response rate that enables the results to be regarded with confidence.

3.2 Home Energy Audit Expectations

The following table provides the responses to question 1 which asked how well the HEA met expectations.

Q1.How well did the Home Energy Audit meet your expectations?								
Rating (1 = not at all well to 5 = very well)	1	2	3	4	5	Total valid	NR	TOTAL
Number of responses	0	0	4	60	108	172	33	205
Percentage (%) - Total	0.0%	0.0%	2.0%	29.3%	52.7%	83.9%	16.1%	100%
Percentage (%) - Valid	0.0%	0.0%	2.3%	34.9%	62.8%	100%	-	-

Table 4: Responses to question 1

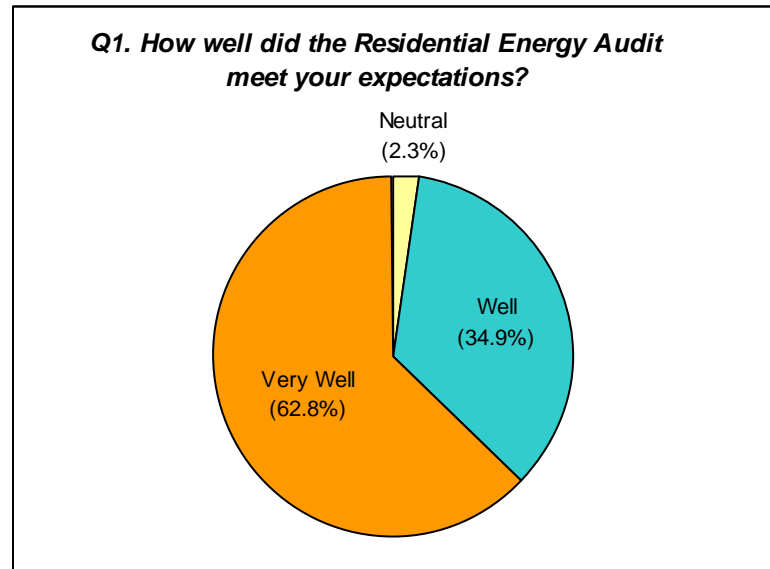


Figure 5: Responses to question 1

Note: The respondents that did not answer this question (16%) all went on to complete the remainder of the survey. It is likely that respondents either overlooked the question or mistook it for a 'sample' question as it was close to the introductory instruction immediately above it.

The McGregor Tan Research survey asked the following question of ASC customers, with three response options. Results are shown below:

Q2. Did the home energy audit meet your expectations?		
Response	Number	Percentage
Yes	316	93.8
No	8	2.4
Don't know /not sure	13	3.8
Total	337	100

Table 6: McGregor Tan survey question about expectations of HEA

Summary points:

- Of the valid responses, 97.7% indicated that expectations were met 'well' or 'very well' (62.8% very well). No negative responses were recorded for this question while the remaining 2% were neutral.
- The mean response of valid replies was 4.60, a high rating on the 1-5 scale, showing that respondents' expectations were well met.
- This response was supported by the McGregor Tan Research survey in which approximately 94% of ASC participant respondents stated the audit had met their expectations.
- The overall results indicate that the home energy audits successfully met participant expectations.

3.3 Specific Aspects of the Home Energy Audit

The following table provides the responses to question 2 which asked respondents to evaluate a range of specific aspects of the HEA.

Q2. In relation to your expectations, please evaluate the following aspects of your ASC Home Energy Audit:									
Rating (1 = poor to 5 = excellent)	1	2	3	4	5	Total valid	NR	Total	
a. The quality of discussion/verbal information									
Number of responses	0	0	3	61	139	203	2	205	
Percentage (%) - Total	0.0%	0.0%	1.5%	29.8%	67.8%	99.0%	1.0%	100%	
Percentage (%) - Valid	0.0%	0.0%	1.5%	30.0%	68.5%	100%	-	-	
b. The amount of information presented									
Number of responses	0	0	2	66	136	204	1	205	
Percentage (%) - Total	0.0%	0.0%	1.0%	32.2%	66.3%	99.5	0.5%	100%	
Percentage (%) - Valid	0.0%	0.0%	1.0%	32.4%	66.7%	100%	-	-	
c. The energy/appliance related knowledge of the ASC auditor									
Number of responses	0	0	3	50	151	204	1	205	
Percentage (%) - Total	0.0%	0.0%	1.5%	24.4%	73.7%	99.5	0.5%	100%	
Percentage (%) - Valid	0.0%	0.0%	1.5%	24.5%	74.0%	100%	-	-	
d. The conduct of the ASC auditor									
Number of responses	0	0	1	27	176	204	1	205	
Percentage (%) - Total	0.0%	0.0%	0.5%	13.2%	85.9%	99.5	0.5%	100%	
Percentage (%) - Valid	0.0%	0.0%	0.5%	13.2%	86.3%	100%	-	-	
e. The printed report provided upon completion of the audit									
Number of responses	0	0	3	72	128	203	2	205	
Percentage (%) - Total	0.0%	0.0%	1.5%	35.1%	62.4%	99.0%	1.0%	100%	
Percentage (%) - Valid	0.0%	0.0%	1.5%	35.5%	63.1%	100%	-	-	
f. The suitability of the recommended Energy Efficiency Measures for your situation *								V1	Total
Number of responses	0	0	4	54	86	144	1	60	205
Percentage (%) - Total	0.0%	0.0%	2.0%	26.3%	42.0%	70.2%	0.5%	29.3%	100%
Percentage (%) - Valid	0.0%	0.0%	2.8%	37.5%	59.7%	100%	-	-	-

Table 7: Responses to question 2 – evaluation of aspects of the HEA

*Note: for question 2f the 60 responses from version 1 of the survey can not be merged with 2f responses from version 2 as the rating scales varied. In version 1 this was a separate question that required a yes or no answer, not the rating 1 – 5 as in version 2. Thus for 2f Total = 144

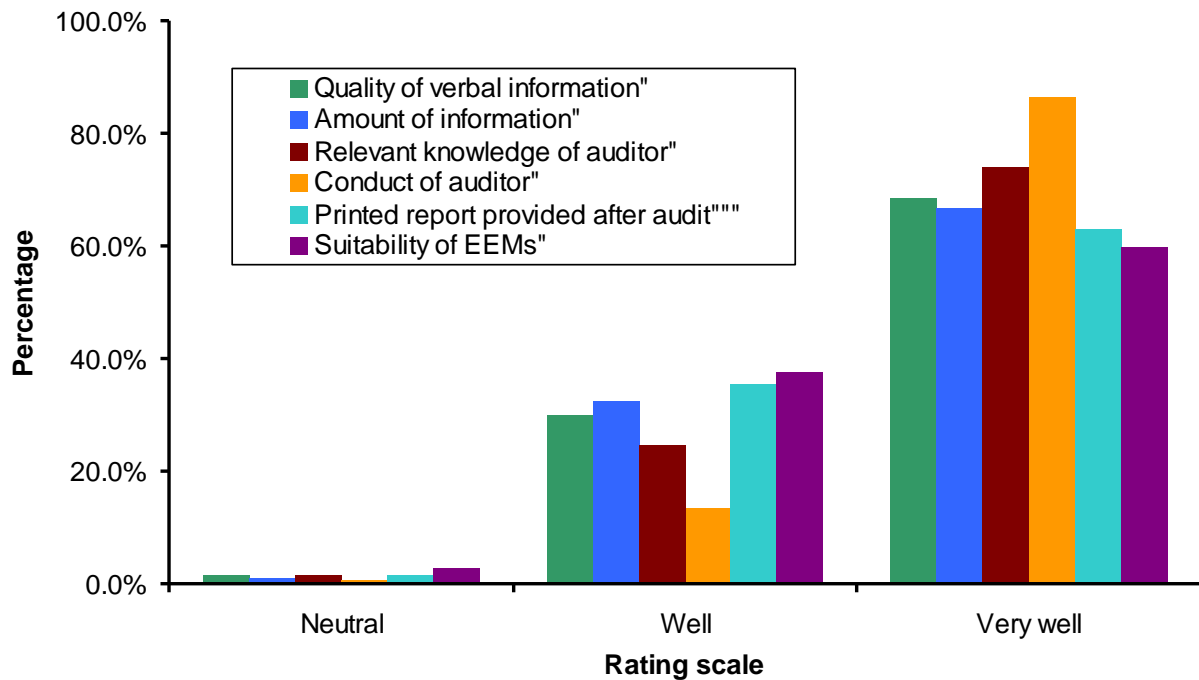


Figure 8: Participant's evaluation of their expectation for the Residential Energy Audits (Question 2)

In the McGregor Tan telephone survey, participants were asked whether they learned anything (in relation to energy use/conservation) by participating in the HEA; 85.2% said they did, which suggests the HEA had positive outcomes for them.

For Q2g (other) there were eight responses. Of these, six were positive and were essentially covered in Q2a-f, one was negative and related to no information being provided to a customer regarding solar heating of a spa, and the last was a neutral reference to the auditor's appearance;

Summary points:

- For all questions (Q2a- f) responses were either one of 3, 4 or 5 indicating a positive response to the HEA; there were no negative responses.
- For each question the majority of respondents gave a rating of 5, with the percentage varying from 59.7% (Q2f) to 86.5% (Q2d).
- The questions about the auditor's knowledge (Q2c) and conduct (Q2d) received the most positive responses - 98.5% positively rated (response 4 or 5) the auditor's energy and appliance knowledge, and 99.5% the auditor's conduct.
- The mean values of the responses (using the 1-5 scale) ranged from 4.57 (Q2f) to 4.86 (Q2d).
- A related question in the McGregor Tan survey confirmed the generally positive responses of the feedback survey data.

3.4 Confidence in Implementation of HEA Follow-up Actions

The following table provides the responses to questions 3 and 4 which asked about confidence in implementation. These questions were new in version 2 of the survey so the number of responses is 145, as no relevant information was contained in the 60 responses to version 1.

Q3. My/our level of confidence in using the vouchers we receive to undertake incentivised Energy Efficiency Measures (i.e. contacting suppliers, getting quotes, organising the work) is:

Rating (1 = very low to 5 = very high)	1	2	3	4	5	Total valid	NR	Total
Number of responses	0	0	15	66	63	144	1	145
Percentage (%) - Total	0.0%	0.0%	10.3%	45.5%	43.4%	99.3%	0.7%	100%
Percentage (%) - Valid	0.0%	0.0%	10.4%	45.8%	43.8%	100%	-	-

Q3. My/our level of confidence in carrying out the behavioural changes recommended is:

Rating (1 = very low to 5 = very high)	1	2	3	4	5	Total valid	NR	Total
Number of responses	0	2	15	76	51	144	1	145
Percentage (%) - Total	0.0%	1.4%	10.3%	52.4%	35.2%	99.3%	0.7%	100%
Percentage (%) - Valid	0.0%	1.4%	10.4%	52.8%	35.4%	100%	-	-

Table 9: Responses to Questions 3 and 4 – confidence in undertaking changes

Summary points:

- Respondents showed a high level of confidence for implementing the EEMs vouchers and changing household behaviour, with 88-89% in the high or very high categories;
- Mean responses were 4.33 for voucher use and 4.22 for behavioural change;
- Each question received 10% neutral responses;
- Very few respondents (1.4%) indicated a low confidence level for undertaking behavioural changes.

3.5 Ability to Reduce Household Electricity Consumption

The following table provides the responses to question 5, which asked about possible reductions in electricity consumption.

Q5. To what extent do you believe you will be able to reduce household electricity consumption as a result of undertaking the recommendations discussed at audit?

Rating (1 = not at all to 5 = a great deal)	1	2	3	4	5	Total valid	NR	Total
Number of responses	1	6	50	94	53	204	1	205
Percentage (%) - Total	0.5%	2.9%	24.4%	45.9%	25.9%	99.5%	0.5%	100%
Percentage (%) - Valid	0.5%	2.9%	24.5%	46.1%	26.0%	100%	-	-

Table 10: Responses to question 5 – ability to reduce electricity consumption

Summary points:

- The majority of respondents were positive, with 72.1% stating they believed they would be able to reduce household electricity consumption – 46% expecting a conservative reduction (response 4) and 26% anticipating a significant reduction (response 5).
- A significant proportion of respondents (25%) gave a neutral answer to this question and 3.4% gave a negative response.
- The mean response was 3.94 and while high, is lower in comparison to previous questions.

3.6 Barriers to Proceeding with EEMs

The following table provides the responses to question 6, which asked about possible barriers to implementation.

Q6. Do you foresee any barriers that may hinder you from proceeding with the recommended Energy Efficiency Measures?					
Rating (1 = yes, 2 = no)	1 Yes	2 No	Total valid	NR	Total
Number of responses	87	116	203	2	205
Percentage (%) – Total	42.4%	56.6%	99.0%	1.0%	100%
Percentage (%) - Valid	42.9%	57.1%	100.0%	-	-

Table 11: Responses to question 6 – perception of barriers

If customers responded ‘Yes’ to this question, they were asked to specify the barrier or barriers in the accompanying text box. Of these, 76 respondents nominated one barrier and 11 nominated two. The nominated barriers fell into the categories below in table 11.

If yes, specify:	Count	Valid%
Financial	65	66.3%
Behaviour	12	12.2%
Rental	5	5.1%
Supplier	5	5.1%
Time	5	5.1%
Process	4	4.1%
Renovations	1	1.0%
Health	1	1.0%
Total	98	100%

Table 12: Responses to question 6 – perceived barriers

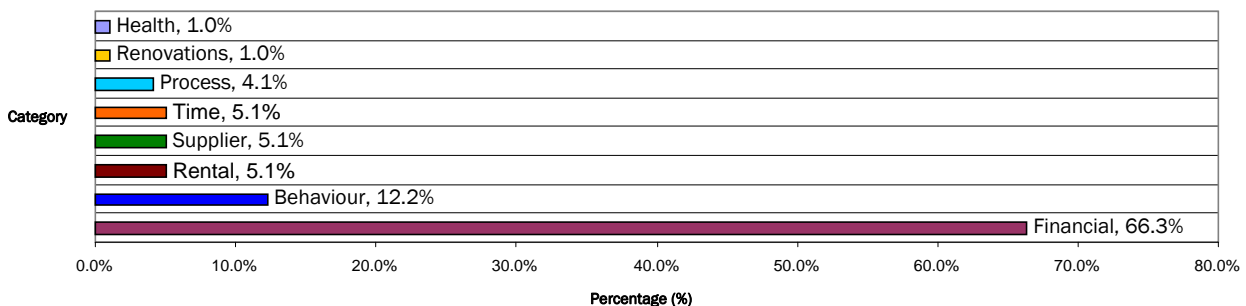


Figure 13: Barriers that may hinder adoption of Energy Efficiency Measures (Question 6)

Of the 42.4% who considered there would be a barrier, the factors they nominated fell into the following categories:

- Financial – EEM cost and available finance to undertake recommendations
- Behaviour – being able to encourage behavioural change in the household
- Process – the paperwork involved to participate in the program
- Time – the time and effort required to contact suppliers, obtain quotes, and commission work
- Supplier – obtaining responses/quotes from suppliers, and ensuring suppliers do the work
- Rental – relying on action by either landlord or tenant
- Renovations – restricted by what can be done while renovating
- Health – concerned with painting roof white and collecting rainwater for drinking

Summary points:

- A small majority of respondents (56.6%) stated they could not foresee any barriers to proceeding with the recommended EEMs.
- The most commonly identified barrier (66%) was financial pressures, a factor also identified in the McG-T study in which approximately 43% of ASC participants identified the upfront cost of EEMs as an impediment to using the vouchers provided.
- The second most identified barrier (12%) was the ability to change their household's behaviour.
- Of interest is that in the McGT study, to the question of what ASC could have done further to encourage the implementation of EEMs, 47% of ASC participants, responded 'nothing more'.

3.7 Motivation to Carry Out Recommendations from Audit

The following table provides the responses to question 7, which asked about intentions/motivation to undertake audit recommendations. This question was new in version 2 of the survey.

Q7. My/our intention/motivation to carry out recommendations from the audit is:								
Rating (1 = very low to 5 = very high)	1	2	3	4	5	Total valid	NR	Total
Number of responses	0	0	11	71	62	144	1	145
Percentage (%) - Total	0.0%	0.0%	7.6%	49.0%	42.8%	99.3%	0.7%	100%
Percentage (%) - Valid	0.0%	0.0%	7.6%	49.3%	43.1%	100%	-	-

Table 14: Responses to question 7 - motivations

Summary points:

- Most respondents 91.8% stated they were positive (responses 4 and 5) about their intention and motivation to undertake the recommendations made as a result of the audit.
- A further 7.6% were neutral on this question, and no negative responses were recorded.

3.8 Additional Comments from Respondents

The final question asked for any further comments or improvements in relation to the HEA. There were 86 respondents (42%) who provided additional comments, of which 81% were positive, 8% were negative and further 10% were suggestions for the HEA and/or the ASC program.

Total comments:	86	42%
Positive	70	81%
Negative	7	8%
Suggestions	9	10%

Table 15: Responses to question 8 – additional comments

4. Overall Summary

Overall the results of this survey indicate that the HEA was a positive, meaningful and fruitful experience for ASC customers and that it formed a solid foundation for ongoing interaction with ASC.

- As the feedback survey was left with residents and completed privately sometime after the HEA (i.e. the auditor was not present), the results can be considered genuine and a valid representation of customer response.
- Despite the possible range of customer expectations for the HEA (if they held expectations), the HEA satisfactorily met these expectations; i.e. customers were definitely not disappointed with their HEA.
- Consistent with meeting expectations, the key aspects of the HEA were also regarded very positively by customers. These aspects were:
 - The quality and amount of information provided in print and through discussion
 - The knowledge and conduct of the auditor
 - The nature/content of the printed report and the suitability of the recommended measures.
- Customers were generally very confident about their ability to implement the physical measures for which vouchers were supplied, but somewhat less confident (although still positive) about modifying behaviour of household members.
- Approximately 25% of respondents were ambivalent about making a reduction in household electricity consumption; of the 72% that considered they could make some reductions, 46% considered that only a conservative reduction was achievable.
- Nearly half of the respondents (43%) anticipated there may be a barrier(s) to EEM implementation, and, of the barriers specified, 66% were financial and 12% behavioural. The perceived barriers can depend on the nature of the recommended EEMs.
- In spite of foreseeable barriers, customers expressed high levels of intent/motivation to undertake EEMs, which would include some for which barriers were minimal.
- The majority of additional comments about the HEA were positive.

Appendices

1 Home Energy Audit – Customer Feedback Version 1

Alice Solar City, Residential Energy Audit: Customer Feedback



We appreciate your answering the questions thoughtfully and honestly – where relevant, please **circle the number** next to the answer of your choice e.g. 3. We value highly your comments and views.

1. For the following statements, please select and then rank 1-3 (with 1 as the highest) your motivations for signing up with Alice Solar City/receiving an Alice Solar City Energy Audit:

Reason for ASC sign-up/Energy Audit

- a. To lower household electricity use, reducing Power & Water electricity bills
- b. To obtain discounts on the installation of energy efficiency measures
- c. To improve understanding of household electricity use, efficiency & conservation
- d. To improve the value of your property
- e. To contribute to Alice Springs community action toward climate change
- f. Other, please list:

Rank

2. How well did the Residential Energy Audit **meet your expectations**? – please circle one number.

1
2
3
4
5
 Not at all well Extremely well

3. In relation to your expectations, please evaluate the following aspects of your ASC Residential Energy Audit:

	Poor	Below Average	Average	Good	Excellent
a. The quality of discussion/verbal information	1	2	3	4	5
b. The amount of information presented	1	2	3	4	5
c. The energy/appliance related knowledge of the ASC auditor	1	2	3	4	5
d. The conduct of the ASC auditor	1	2	3	4	5
e. The printed report provided upon completion of the audit	1	2	3	4	5
f. Other, please list:	1	2	3	4	5

4. For the following items, please select and then rank 1-3 (with the 1 as the highest) what you believe the three largest consumers of electricity in Alice Springs households are:

	1. Hot Water System		5. Television(s)
	2. Oven		6. Pool-pump
	3. Lighting		7. Air-conditioner(s)
	4. Space Heater(s)		8. Refrigeration

5. Did you find the recommended energy efficiency measures (EEMs) suitable for your household circumstances?
1. Yes
2. No

Why or why not?

6. Please name one or two of the recommended measures/incentives that you are **particularly keen** to complete:

1.	OR 3. Would like to complete all measures recommended
2.	

Please Turn Over..

7. What is your level of interest in setting some type of **target** for reducing your household electricity consumption:

- 1. None
- 2. Low
- 3. Moderate
- 4. High
- 5. Already Set Targets

Any Comment?

8. Do you foresee any barriers that may hinder you from proceeding with the recommended Energy Efficiency Measures?

- 1. Yes
- 2. No

If yes, please specify:

9. To what extent do you believe you will be able to reduce household electricity use as a result of undertaking the recommendations discussed at audit?

- | | | | | |
|------------|---|---|---|--------------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all | | | | A great deal |

10. Do members of your household have any routine daily habits that help you reduce your household electricity consumption?

- 1. Yes
- 2. No

If yes, please list:

11. At this stage, do you think a follow up audit would be valuable sometime in the future?

- 1. Yes, at months after the initial audit
- 2. No

12. Please list one or two things that we can do to **improve** the ASC Residential Energy Audit:

1.
2.

13. Please add any further comments in relation to the ASC Residential Energy Audit:

If you would like an Alice Solar City staff member to contact you to discuss any of your comments within this survey, please provide your name and phone number:

► **THANK YOU FOR YOUR TIME and INTEREST.** Please return the completed survey in the envelope provided.

