

Power Shift Project One Report: EXECUTIVE SUMMARY



Final Report

Driving Change
Identifying what Caused Low-Income Consumers to
Change Behaviour



GEER Australia
Group of Energy Efficiency Researchers

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About GEER Australia

The Group of Energy Efficiency Researchers (GEER) Australia comprises researchers and industry partners from across Australia who are committed to driving change in the energy sector towards improved outcomes for vulnerable Australians. Its purpose is to improve the energy-related wellbeing in households and communities in Australia, through collaborative research which achieves practical outcomes and informs future practice and policies. GEER's research and activities thus focus on energy efficiency as it relates to quality of life, affordability and environmental sustainability.

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Executive Summary

During 2013–2016 the Commonwealth Government established a Low-Income Energy Efficiency Program (LIEEP) which funded 20 consortia across Australia to trial various initiatives to support low-income households to reduce their energy use and associated bills. Each LIEEP project completed a final report as part of its contract. The Group of Energy Efficiency Researchers (GEER) Australia, commissioned by Energy Consumers Australia as part of the Power Shift project, examined and synthesised the results of these reports in order to conduct a ‘deep-dive’ and extract key findings and learnings to help inform future actions. This step is vital to ensure that the collective learnings of LIEEP projects can be gathered and used to inform future policy, advocacy support and energy industry strategies. This may help support the rising hardship faced by many low-income households with respect to their consumption, bills, management and consequences of home energy use. In addition, this report describes the development of a segmentation framework, and revolves its insights and recommendations around the segments of people it identified.

Overview of LIEEP Projects

A total of 44 initiatives were designed by 20 consortia which represented 15 unique initiatives for LIEEP. These were targeted to nine distinct cohorts of residents in Australia, including the aged, disabled, young adults, new parents, those on social benefits, Aboriginal peoples, and culturally and linguistically diverse (CALD) peoples. Some projects targeted a more general population profile. One project covered a sample of the nation, and 19 were state/territory based.

LIEEP took place across all states and territories in Australia, except for the ACT. Combined, 20 projects involved 32,498 people, reported on 18,886 people, and potentially reached 59,992. The dominance of project locations largely reflects the dominance of population locations: the eastern seaboard of Australia, except for Victoria which dominated with seven projects. Each project designed a way of supporting low-income households by installing retrofits to the home and/or providing a service to the household to increase their knowledge and behaviours regarding energy efficiency. For some, this extended to advocacy and helping the householder to access financial aid and utility-bill support products.

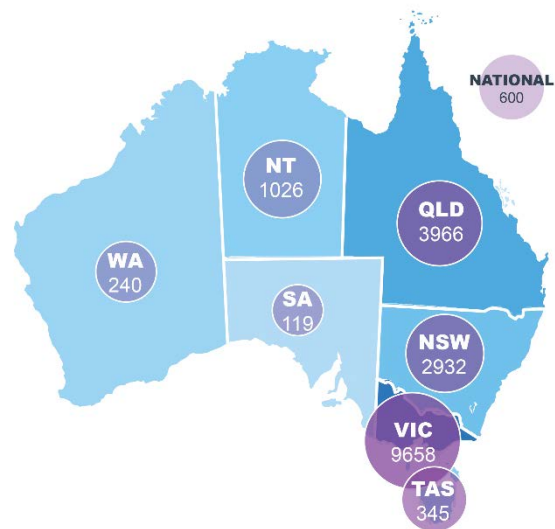
Recruitment of these diverse cohorts to participate in a LIEEP project required a variety of methods. Upon synthesising the recruitment methods described in each report it is evident that snowballing (a household referred by another household or community organisation) was the most frequently used recruitment method, followed by holding community information

sessions and drawing upon local community organisations. These were considered ‘trusted’ sources, which was an extremely important factor when trying to reach people experiencing vulnerability and, in some cases, disadvantage. More traditional recruitment methods such as print media and advertising were used less frequently. With 18 projects using snowballing from a known source it is assumed it was a successful recruitment method. Further, it suggests that once a household gains trust in the provider and experiences the benefit of the initiative, they are quite willing to recommend others they know who could also benefit from receiving the initiative.

This result has an important implication for future projects and strategies for a national rollout of energy efficiency support. Firstly, it suggests that a personalised, nuanced aspect to the project is needed to reach low-income consumers. Secondly, it suggests that strategies to reach people *en masse*, which may draw upon financially more appealing mechanisms (e.g., SMS), may struggle to actually reach and engage the people they are most trying to reach. Thirdly, with 18 projects out of 20 using more than a single recruitment method it would appear that multiple recruitment methods, particularly from trusted sources, is more viable in reaching low-income households.

The effectiveness of each initiative trialled was determined by changes in energy consumption, energy bills and numerous co-benefits experienced by the household. Hence, a

significant amount of data were collected from each household, including information about the housing structure, householders, fixed and mobile appliances, energy consumption (in some cases, this was collected for a period of up to two years for a home: energy use 12 months before and 12 months after the initiative was received), energy efficiency behaviours and a range of other variables. Each LIEEP project was designed to be unique and data collected for each project were similarly unique. One consistency is that every project evaluated the impact of the initiatives it trialled in some way and improvements in one or more areas was achieved by all projects. Generally, households were found to experience lower bills, lower consumption of energy, and improved quality-of-home-life conditions.



Specifically, the average reduction in energy use, captured by measures of household electricity use, were between 2–12%. Given these figures are ‘averages’, some households experienced much greater reductions of electricity use and undetected savings on gas, while others increased their electricity consumption. This does not mean that the initiative trialled was unsuccessful. The LIEEP reports contain numerous anecdotal stories offering reasons for that increase, including that, for some, energy usage was already so low that they were unable to reduce it any further. For others, energy use increased slightly to facilitate an improvement of their health and wellbeing.

Complementing this finding is the measured adoption of energy efficiency behaviours in the home, indicating an average behavioural change between 30–80%. This reveals that electricity consumption declined at a much lower rate than the uptake of more energy efficient behaviours. An important aspect revealed through LIEEP was that some households were in an ideal state to reduce energy use, while others were not. If a home did not have insulation, or had energy-hungry appliances, then efforts to reduce consumption would result in a non-commensurate effect. It may also mean that better information resulted in the household maintaining its level of consumption, but enjoying improved thermal comfort or improved productivity (e.g., appliances used more frequently without overly increasing consumption).

In addition to measuring changes in energy usage and costs, most LIEEP projects reported that participants experienced other benefits as a result of the initiative trialled. For example, the householder may have learned more about how to become more energy efficient; feel more empowered and competent in managing their energy use, bills and providers; feel less stressed about their energy use and having to pay high bills; and/or feel more comfortable in the home as a result of improved thermal conditions or appliance use (e.g., updated lighting may allow the home to use lights more at night, and increase the study time possible for children in the family). The importance of future work around co-benefits is paramount in Australia due to the risk of serious health consequences in sub-optimal thermal conditions.

This report provides a guideline on how to reach various low-income groups in the future, by identifying the common needs of a broader group of low-income consumers, thus extrapolating LIEEP findings beyond those who directly participated. The baseline data (where it was available) indicated that participants generally had positive attitudes towards energy efficiency. This high benchmark explains the low maximum level of attitude improvement (9%). There were mixed levels of energy efficiency knowledge and competency improvements, with medium to high levels of comfort, stress reduction and self-efficacy improvements across the participant groups.

A Multi-Level Approach to Behaviour Change

The result of the deep dive into the LIEEP reports has resulted in the development of a three-level approach that represents the insights gained from the reports for influencing behaviour change. The three levels represent the following insights gained in the analysis:

1. Customer level: reaching low-income segments for energy efficiency.
2. Program level: developing effective programs for energy efficiency.
3. Stakeholder level: co-ordinating stakeholders of energy efficiency programs.



Customer-Level Insights

The key motivators and barriers for energy efficiency improvements reflect the low-income nature of the LIEEP programs, with cost and incentives being important as both motivators and barriers. The top five motivators were awareness, low perceived cost, incentives and rebates, comfort and improved health/wellness/stress. The top five barriers were high perceived costs, knowledge gaps, lack of trust, split incentives and low literacy/cultural barriers. The findings indicate that these motivations and barriers did not vary based on age group or cohort.

Three market segments have been qualitatively interpreted as arising from the analysis in the report. These market segments are the:

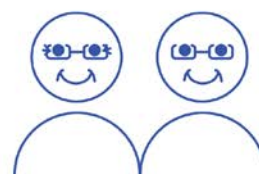
- **'New to Energy'** segment is largely determined by cultural background (e.g., CALD and aboriginal cohorts) and geographic location (for example, extreme climate zones and regional/remote areas)
- **'Energy Without Effort'** segment is largely determined by age group (e.g., representing young adults and young families) and psychographic variables (for example, high confidence, positive attitudes and high need for comfort)
- **'Stressed About Energy'** segment is largely comprised of mature consumers who have a high tolerance for discomfort, are price-sensitive, habitual in their behaviours and have low self-efficacy and competency.



New to Energy



Energy Without Effort



Stressed About Energy

Analysis undertaken assists industry and policy-makers to understand what mechanisms and approaches within LIEEP were effective in improving energy efficiency through changing the behaviour of low-income energy consumers. This approach avoids the misstep of assuming a one-size-fits-all approach by providing

guidelines to recruiting, engaging, educating and shifting the behaviour of distinctly different low-income energy consumer segments. Given the multifaceted nature of program delivery, it should be acknowledged that programs could be implemented by a variety of entities, such as government, community organisations or the electricity industry. A comprehensive summary of LIEEP project descriptions can be found in Appendix 1.

In identifying what caused low-income consumers to change their energy behaviours, it was clear that the pathway to consumer empowerment is different for each of these segments. For the ‘New to Energy’ segment, improvements in energy knowledge builds confidence and opens the possibilities to other opportunities to improve health and social welfare. For the ‘Energy Without Effort’ segment, ease and convenience are key to supporting existing knowledge into action to reduce energy consumption within their busy lives. For the ‘Stressed About Energy’ segment empowerment occurs through building knowledge and confidence to reduce wasteful energy usage, enabling the financial capacity to use electricity for thermal comfort to support health and welfare when needed.

‘New to Energy’ Segment Recommendations

The following factors are critical for reaching the ‘New to Energy’ market segment:

1. Use established community links to build legitimacy.
2. Contextualise any information to the participant’s education level and cultural lens.
3. Position energy efficiency as an important life skill for the improvement of wellbeing.
4. Focus on capacity building of the community not the individual.



‘Energy Without Effort’ Segment Recommendations

The following factors are critical for reaching the ‘Energy Without Effort’ market segment:

1. Employ digital platforms for program delivery.
2. Engagement should be both convenient and responsive.
3. Position energy efficiency as fun and interesting.
4. Connect participants with each other.



'Stressed About Energy' Segment Recommendations

The following factors are critical for reaching the 'Stressed About Energy' segment:

1. Invest in building ongoing relationships with the participants.
2. Communication should be primarily face-to-face and in-home.
3. Provide graduated levels of support (i.e. filter information only as required).
4. Position energy efficiency as a low-cost solution that can build confidence.
5. Draw on established, trusted organisations to overcome worry.



Program-Level Insights

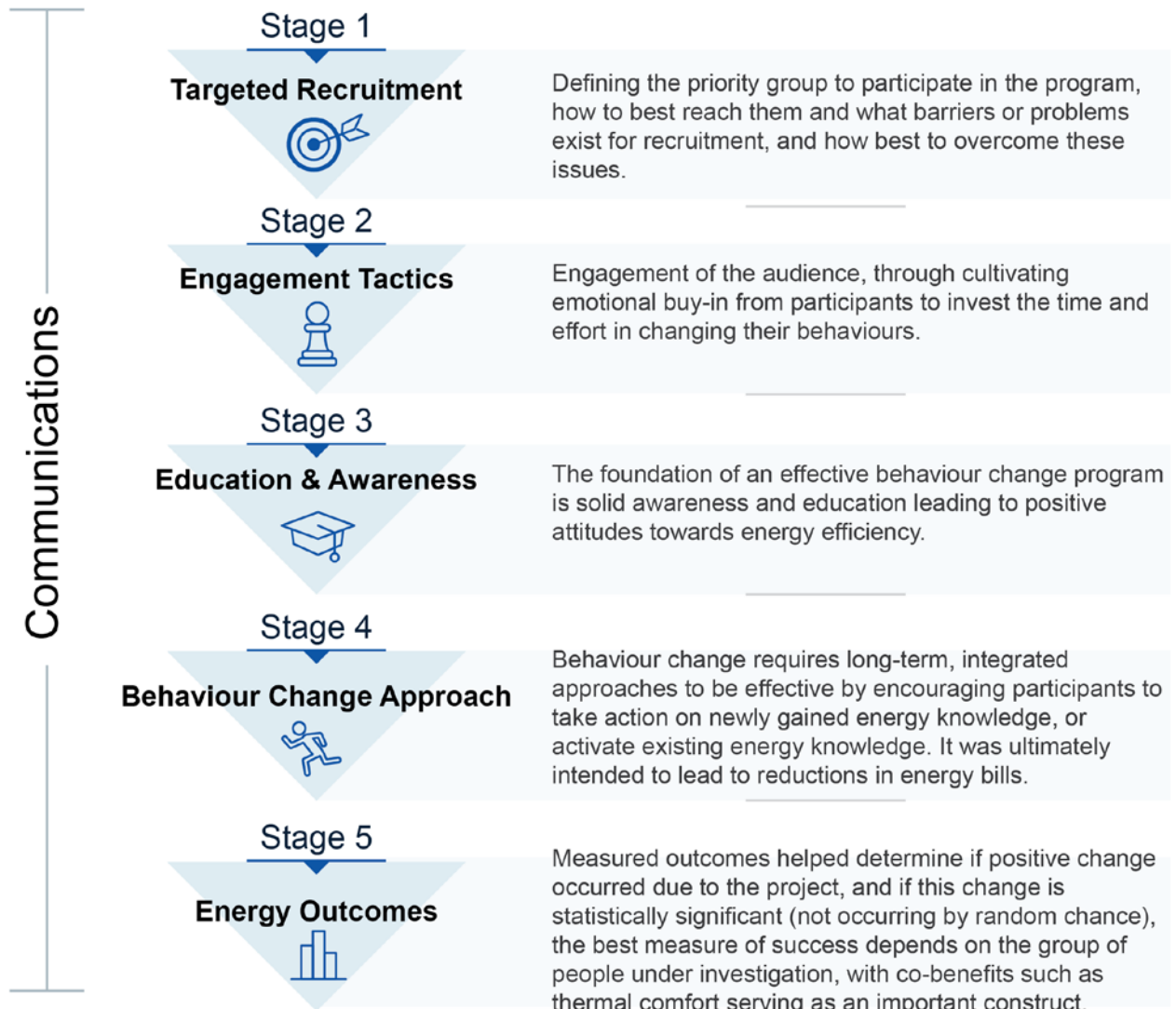
The analysis undertaken has identified the following overall critical success factors for the successful implementation of future energy efficiency programs that aim to support low-income households:

1. Contextualise and tailor projects to fit the lifestyles and values of the target market.
2. Develop trusting relationships to build legitimacy.
3. Draw from an evidence-base.
4. Balance project needs with participant needs.
5. Resource projects appropriately across the entire delivery process.



Stakeholder-Level Insights

A program delivery framework was developed out of the analysis to understand how the LIEEP programs achieved the outcomes and to drive outcomes in future programs for low-income households. This framework consists of five stages: recruitment, engagement, education, behaviour change approach and outcomes (see next page for illustration).



This framework was then used to understand how stakeholders such as industry, policy-makers, community and government can have a co-ordinated approach to energy efficiency programs. There are seven insights for co-ordinating stakeholders that arise from analysis of the LIEEP program reports and the broader social change evidence base:

1. Evidence-based design
2. A customer-centric approach
3. Data collection and administration
4. Framework specific to energy efficiency
5. Governance across initiative elements
6. Technology to underpin program initiative
7. Behaviour change as a focus

The deep dive into LIEEP reports has revealed broader issues and challenges which lead to numerous conclusions. First, the need for a unified effort to support the variety of low-income households is paramount. Major, recurring issues of energy affordability, ongoing disadvantage, fear and a real incapacity to make the changes needed in their lives means that most low-income households face a dire future as it relates to energy. Reported levels of ‘co-benefits’ indicate that factors of stress, thermal comfort,

confidence, control and self-efficacy as they relate to energy will become worse unless low-income householders receive assistance. There is no margin for these factors to worsen as they have already reached untenable levels for many.

In the short-term, efforts should be directed towards ensuring that those who are eligible are placed immediately on a payment plan and provided access to financial support by energy providers. We found that most low-income households were unaware that there were support options available to them from energy providers, and that when dealing with their providers some found it to be an unsavoury experience. This needs to be turned around so that the low-income household is seen as a viable and important segment of the market. Also requiring immediate action is reform for landlords and the obligations they have to their tenants. Ensuring that their rented properties meet minimum requirements, and stimulating their motivation to work 'with' tenants, rather than from a place of disinterest, is urgently needed.

In the longer term, low-priced energy supply options need to be available, so that people can choose the level of service with which they receive energy, and thus the price they pay. Just like flying a plane, safety is paramount, but the extra services can differentiate providers and provide cheap and affordable options to those with limited disposable income. Also vital is a reform of regulation such that housing stock across Australia is reviewed in terms of meeting minimum energy efficiency standards. There is an opportunity for government to lead the way here, and refit all social housing homes to a high energy efficiency level, which would not only set the standard, but provide much more affordable housing, of decent quality, to those most in need. We believe that joining forces to provide an eco-system of support to Australians experiencing vulnerability in their lives is a viable solution; one that would also improve the household energy experiences of all Australians.