RACE for 2030
RELIABLE AFFORDABLE CLEAN ENERGY

H2 Standard track

‘Renovate or Rebuild’ full series evaluation

Final report

Australian Government
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Final report

RACE for Homes Program
'Renovate or Rebuild' TV Series Research Evaluation
Final Report of Key Findings and Outcomes

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What is RACE for 2030?

Reliable, Affordable Clean Energy for 2030 (RACE for 2030) is an innovative collaborative research centre for energy and carbon transition. We were funded with $68.5 million of Commonwealth funds and commitments of $280 million of cash and in-kind contributions from our partners. Our aim is to deliver $3.8 billion of cumulative energy productivity benefits and 20 megatons of cumulative carbon emission savings by 2030.

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Executive Summary

Introduction

'*Renovate or Rebuild*' is an Australian lifestyle and reality television show about residential real estate that stems from an overarching goal to stimulate the nation's sustainable housing market. As part of a broader mass media campaign to promote and normalise sustainable homes, the show aims to be a source of education and entertainment (i.e. edutainment) for viewers. In addition, the show aims to encourage the uptake of sustainable house designs, as well as the use of building materials and other housing-related products that improve residential energy efficiency.

For the current research, CSIRO acted as a 'behavioural science advisor' to inform the effective design and evaluation of the '*Renovate or Rebuild*' pilot episode, as well as the first entire series of the TV show that was broadcast on commercial television in late 2021. According to the show's producer BlueTribe[1], the '*Renovate or Rebuild*' *TV Series* was the top-rated TV show on Channel 9Life for the Monday broadcast, reaching between ~300,000 and ~500,000 viewers per episode, accumulating a reach of over 3.2 million views across the 8 episodes. CSIRO's initial evaluation of the pilot episode helped establish the scope and depth of sustainability-related information that was subsequently included in the first full TV series. CSIRO also provided the show's production team with guidance on recommended behavioural science strategies to integrate into the show. For example, message framing to generate new social norms (e.g. portraying sustainable housing as the new 'normal', 'expected' and 'desired' behaviour when building or renovating a home), with the aim of optimising the impact of sustainability messages conveyed throughout the show. In parallel, it was also important for the show's production team to balance the use of strategies aimed at increasing consumers' awareness and desire for sustainable housing features with the show's entertainment value for the intended target audience.

The primary aim of the current research is to empirically evaluate the extent to which the '*Renovate or Rebuild*' TV series was successful in enhancing the awareness and desire for sustainable housing features and energy efficient homes among its audience of Australian viewers. By doing so, this research aims to identify strategies supported by behavioural science that can effectively influence consumers' self-reported awareness, desire, and/or behaviour towards residential energy efficiency. In addition, the study also aims to measure overall levels of audience interest and engagement in the TV series within a real-world setting to evaluate how the show was received by everyday Australians.

Approach

To achieve these aims, a mixed-method study (i.e. online surveys and focus groups) was conducted with a sample of 5,142 Australian adults to investigate the following key research questions:

1. What potential impact (if any) did exposure to the TV episodes/series have on:
    a) shifting viewers' desire for sustainable homes and sustainable housing features?
    b) motivating viewers to purchase products/services highlighted in the show?

[1] For more information please refer to https://bluetribe.qwilr.com/Renovate-or-Rebuild-Final-Report-puWCd4oiS1Wc

c) motivating viewers to purchase sustainability-related products not highlighted in the show?

d) motivating viewers to change their behaviour in other ways, e.g. actions related to sustainability, energy efficiency, pro-environmentalism, etc.?

2. What potential impact (if any) did the number of TV episodes watched by viewers have on self-reported attitudes, preferences, and behaviour?

3. What key messages from the TV episodes/series were least vs. most effective? That is, what type of content (if any) was most valued by viewers, and was this content significantly associated with any apparent change in viewers' attitudes, preferences, and/or behaviour?

4. To what extent did watching the TV episodes/series motivate viewers to engage with secondary content in the form of social media and online/web material?

Results

Based on an analysis of both quantitative and qualitative data, the findings of this study suggest that the *'Renovate or Rebuild'* TV series was generally well received by audiences, especially by those participants within the show's specific target market. This target market (i.e. females aged ≥35 years old) was confirmed prior to the full series airing, through an evaluation of the pilot episode. The series was primarily perceived as a 'renovation/design' show with an energy efficiency/sustainability theme. Across several focus groups, most viewers expressed a preference for some of the show's competition elements to be minimised in favour of including more detailed and nuanced information on the building process and final home reveals. Another consistent and strong piece of feedback from viewers was that the show could be strengthened by presenting more affordable and relatable options alongside a greater focus on cost-benefit analyses of such options.

Before conducting the current study, there was a concern that the term 'sustainability' might be considered a polarising word or theme. However, evidence for this notion was *not* found among the study's participants, despite past research and an initial hypothesis suggesting this to be the case. Rather, the topic and issue of sustainability was generally welcomed by participants and overall, greater information on this theme was also desired. In addition, the term 'sustainability' was both received with a similar sentiment and perceived as a similar concept to that of 'energy efficiency'.

One notable behavioural science strategy integrated into the *'Renovate or Rebuild'* TV series involved the reinforcement of a key sustainability message. This was an explanation of the Nationwide House Energy Rating Scheme (NatHERS) and the benefits of a high home energy star rating. CSIRO's evaluation found that the proportion of survey participants who reported watching the show were significantly more likely to consider having a 'home energy star rating above the minimum standards for Australia' as a 'must have feature' after the TV series was broadcast, compared to before watching the show. Results indicated an increase of 8 percentage points between the initial and final viewer surveys, which represents a 25.8% increase from the base rate.

Relatedly, there was a significant increase in the self-reported desire for home energy star ratings above the minimum standard as the amount of TV series content and/or number of episodes watched by participants increased. In contrast, there were no statistically significant differences in survey responses over time among the sub-sample of non-viewers. Together, these results suggest that watching the *'Renovate or Rebuild'* TV series is likely to have a positive influence on a proportion of viewers; that is, after watching the show, some viewers might be more likely to seek a home with an energy star rating above the minimum standards when choosing a new home to live in.

Another strategy used in the '*Renovate or Rebuild*' TV series involved showcasing energy efficiency products and brands throughout the show, with celebrities and trusted sources used to deliver this information to audiences. CSIRO's evaluation of the survey data found that compared to non-viewers, viewers of the show had a significantly higher level of awareness of the brands that appeared in the show. For instance, 31% of viewers reported having heard of Energy Matters, compared to only 15% of non-viewers. Similarly, 29% of viewers reported having heard of Sustainability Victoria who also featured in the show compared to only 15% of non-viewers. In addition, viewers reported being significantly more likely to seek information and/or express intentions to purchase and/or install products that were featured in the show compared to non-viewers. For instance, results of the survey suggested that compared to non-viewers, viewers were more likely to report engaging in several sustainability-related behaviours in the past two months. In particular, obtaining quotes for solar panels (57% of viewers compared to 39% of non-viewers) and/or battery storage (37% of viewers compared to 23% of non-viewers); intending to buy solar panels to generate electricity for current and/or future properties (63% of viewers compared to 43% of non-viewers); purchasing or intending to purchase uPVC windows (47% of viewers compared to 22% of non-viewers); and purchasing or intending to purchase insulation (53% of viewers compared to 28% of non-viewers).

These quantitative findings from the survey were further supported by qualitative data from the focus groups, which indicated some participants were seeking quotes for new products such as windows and enquiring about installing battery storage after watching the show. Together, these results suggest that the '*Renovate or Rebuild*' TV series is likely to have a positive impact by raising viewers' brand awareness of energy efficiency products and encouraging a proportion of viewers to buy such products. This is because behavioural intentions can often act as a predictor for actual behaviour.

Finally, a suite of associated social media content and other online/web material was developed to support the '*Renovate or Rebuild*' TV series. Results of the study suggested that although user engagement through the social media channels was low, the content published on the show's social media sites and website was still received quite positively by audiences across all platforms.

Recommendations

Based on CSIRO's analysis of quantitative and qualitative data, several recommendations are proposed for enhancing consumer-focused communication using mass media:

1. In terms of content, it is recommended to focus heavily on relaying a small number (i.e. 1-3) of key messages or themes that are likely to have the greatest impact on the intended sustainability outcome(s).

2. It is also recommended that key themes/messages are repeatedly and consistently communicated over time (e.g. delivering the same or similar message consistently across the full TV series) as it is unlikely that most viewers will watch all episodes. Therefore, repeated messaging is more likely to be effective in achieving optimal impact. However, this would need to be balanced with creative expression and engaging material to ensure the repeated messaging is not perceived as boring or too monotonous by viewers who choose to watch every episode in the series.

3. In terms of the *'Renovate or Rebuild'* TV series more specifically, consideration should be given to minimising some of the show's competitive elements in favour of including more detailed information about energy efficiency and sustainability, the home building/renovation process and showcasing the

final product (e.g. the rebuilt or renovated home). In addition, it is advisable that information provided includes affordable options for home renovation that specifies both the benefits and costs of each.

4. In terms of evaluating the impact of mass media, such as the '*Renovate or Rebu*ild' TV series, it is important to recruit a very large sample of participants upfront, due to high attrition rates when conducting longitudinal data collection and analysis over an extended period. In addition, alternative strategies to recruit and retain real-life audiences outside of social media is recommended, as recruiting and retaining survey respondents who were likely to watch the TV series through social media was ineffective in the current study.

Conclusions

Overall, this study has yielded a large body of insightful and informative findings that shed light on the key research questions under investigation. When interpreting the results and conclusions arising from CSIRO's evaluation, however, it is important to note that the study's non-experimental design as well as the challenges faced with recruiting the viewer sample, impact the generalisability of key findings to the broader Australian population. Despite these limitations, across the large body of results arising from the current research, several statistically significant findings emerged for the sub-sample of viewers which were not evident for non-viewers. This pattern of results can be considered a strong positive outcome, as it suggests and provides reassurance that some of the changes observed in the viewer sub-sample were likely to be associated with watching the *'Renovate or Rebuild'* TV show, rather than reflecting extraneous factors or random changes over time that influenced everyone.

The results of this study provide preliminary support for the '*Renovate or Rebuild'* TV series potential to positively drive and expand the sustainable housing market across Australia by increasing viewers' desire for more energy efficient and sustainability-related house designs, features, products, and services. The impact of the series is likely to extend beyond the research evaluation presented in this report due to events occurring outside of the research environment and the broader and highly collaborative mass media approach encompassing this TV series. For example, the production company, BlueTribe, has indicated that the Channel 9 network may re-screen Season 1 and filming of Season 2 has begun, which will generate further audience reach. While outside of the scope of this evaluation, the impact of the series is likely to influence not only consumers (i.e. the TV series viewers) but also communication and initiatives led by a range of industry and government bodies. For example, the *'Renovate or Rebuild'* TV series communication strategy has been presented at numerous industry conferences and was also the winner of the Communications for Impact category for the 33rd National Banksia Sustainability Awards, being recognised as a positive initiative to improve sustainability outcomes. In addition, as highlighted in BlueTribe's report, the *'Renovate or Rebuild'* TV series generated high mainstream media interest associated with its sustainability message.

In conclusion, the research presented in this evaluation and broader mass media campaign undertaken for *'Renovate or Rebuild'* has demonstrated an impactful, innovative and strategic communications approach to assist in accelerating Australia's sustainable housing market.

Contents

1 Introduction

1.1 Background

Australia's energy sector is currently undergoing a major transition, shifting towards a more secure, reliable, affordable, sustainable and clean energy future. The multiple benefits of these changes include improvements in the comfort, health and wellbeing of households (Edwards & Turrent, 2002; Mumovic & Santamouris, 2013; Prochorskaite & Maliene, 2013). There is widespread consensus among key stakeholders (i.e. industry, government, consumer advocates, researchers etc.) that one critically important aspect of Australia's energy transition involves providing consumers with more sustainable and energy efficient housing options, specifically through mainstream consumer engagement which is outlined as a key action in the CRC for Low Carbon Living (2019) industry roadmap report. Failing to address the social and behavioural aspects of transitioning towards more energy efficient housing has meant less-than-optimal success, thus limiting the reduction in carbon emissions from the entire building sector (e.g. Lorch, 2017).

Theory and empirical evidence from the international behavioural and social science literature have been identified as a potential mechanism to help drive the behaviour change required to facilitate the shift to a cleaner, more sustainable energy future (Enker & Morrison, 2019). One potentially powerful way to achieve this goal is through an approach that uses mass media as a platform for reaching people at scale and a vehicle to positively impact audiences by drawing on key principles, insights, and evidence from the field of behavioural science (Nilsson & Gardner, 2020). Reality television has been identified as a popular and valuable tool to reach the masses and influence viewers' behaviour, including purchasing decisions and actions (Fraser, 2007; Patino, Kaltcheva, & Smith, 2011).

'*Renovate or Rebuild*' is an Australian lifestyle and reality television show about residential real estate that stems from an overarching goal to stimulate the sustainable housing market in Australia. As part of a broader mass media campaign stemming from the CRC for Low Carbon Living (2019) industry roadmap report to promote and normalise sustainable homes, the show has been designed to be a source of entertainment and education (so-called 'edutainment') for viewers. More specifically, it aims to drive the uptake of more sustainable house designs among homeowners, as well as encourage the increased use of building materials and other housing-related products that improve residential energy efficiency and sustainability performance.

The current research presented herein builds from a preliminary investigation and analysis of this mass media approach with a pilot episode of the *'Renovate or Rebuild'* TV show (Brown, McGregor, Nilsson, & Gardner, 2019). CSIRO contributed to the design and evaluation of this pilot episode, with the formal evaluation of the pilot revealing promising results (Nilsson, Gardner, & Farr-Wharton, 2020). These early findings provided a strong foundation and evidence for developing a full TV series of *'Renovate or Rebuild'*, with the intention of broadcasting the show on commercial television to Australian audiences. CSIRO's evaluation of the pilot also helped to establish the scope and depth of sustainability information included in the show's first full series (Nilsson & Gardner, 2019).

Following evaluation of the pilot episode, CSIRO has continued to be involved in developing the first full TV series of *'Renovate or Rebuild'*, which comprised of eight episodes in total. CSIRO provided the show's production team with specific guidance on behavioural science strategies that could be integrated into the TV series. The aim was to optimise the impact of sustainability messages conveyed throughout the show, particularly the audience uptake of the messaging and its translation to energy efficient home renovation and/or building decisions. A full report was delivered that reviews the behavioural science literature to inform

influential reality TV to help drive Australia's sustainable housing market (Nilsson & Gardner, 2020). Further insights on how to create influential television that enhances viewers' desire and knowledge of sustainable homes (i.e. how to accurately read energy rating labels) have been gleaned from a similar but separate pilot TV program (Nilsson, Romanach, & Frederiks, 2021).

Some of the main behavioural strategies that were suggested and utilised in the TV series included:

- the use of 'edutainment' (e.g. delivering educational content and advice through an entertaining medium),
- social modelling (e.g. demonstrating the show's cast performing socially accepted and desirable behaviours),
- messenger effects (e.g. using celebrities and trusted sources of information to deliver key messages), and
- message framing (e.g. delivering messages in a way that portrays the desired behaviour as 'normal' and 'expected', therefore generating new social norms – that is, a social construct that sustainable housing is 'the new normal').

These strategies were derived from well-established theory and empirical evidence from the behavioural science literature, specifically research that pointed towards potentially powerful tools and techniques for increasing viewers' interest, desire, intentions and actions aligned with the uptake of more sustainable and energy efficient housing. At the same time, however, it was also important for the show's production team to balance the use of these behavioural strategies with the show's overall entertainment value for the intended target audience – namely female viewers aged 35 years and older.

1.2 'Renovate or Rebuild' TV series

'Renovate or Rebuild' is an Australian lifestyle-based reality TV show produced by The Blue Tribe Company and Northlight Productions. The show is designed to help homeowners decide on whether to renovate or rebuild their properties. The show draws on key principles from behavioural science and embeds strong themes of energy efficiency and sustainability. An overarching aim of the show is to improve homeowners' awareness of residential energy efficiency, and in turn, encourage greater investment in sustainable and energy efficient housing features, designs and products when renovating or building one's home.

The TV series is hosted by James Treble, a well-known Australian building and interior designer, and follows the home renovation/rebuilding journeys of six couples from Channel 9's 'The Block' – Australia's highest-rating reality TV show on real-estate). Across a total of eight ~60-minute episodes (inclusive of advertisements), the TV series has been purposely embedded with a range of behavioural science strategies. These strategies are designed to achieve increased impact, compared to creating a TV series *without* the scientifically backed guidance and knowledge to guide the best path to impact, as is often the approach when creating a TV series. The show also features a competitive element: in each episode, two teams compete against one another to persuade an Australian family to either renovate their existing home ('Team Renovate') or to knock down and rebuild their property ('Team Rebuild'). Each team also represents one of three Australian states (i.e. New South Wales, Victoria or Queensland), with each state having one 'Team Rebuild' and one 'Team Renovate'.

Across the 8-episode TV series, the six teams guide a number of Australian families/households through a range of home design and material options, alongside visiting inspiration homes that showcase the latest energy efficient/sustainable designs, features and products currently available to Australian homeowners. In each episode, a primary goal of the cast is to create a home that is energy efficient, healthy, and comfortable.

At the end of each episode, the two teams unveil their chosen designs to three expert judges (with backgrounds in real estate, building and interior design) who then rate the designs across various criteria such as style, cost, and sustainability. The family featured in each episode is subsequently presented with the judges' scores and asked to make a final decision on whether they would prefer to *'Renovate or Rebuild'* their property.

While the first full series of *'Renovate or Rebuild'* integrated a competitive element, it was also charity based in nature. In the final episode of the show, the winning team assisted the show's charity partner, 'Habitat for Humanity Australia', to rebuild a home for an Australian family impacted by bushfires.

'*Renovate or Rebuild'* premiered on channel 9Life on 4 October 2021. According to BlueTribe[2], the *TV Series* was the top-rated TV show on Channel 9Life for the Monday broadcast, reaching between ~300,000 and ~500,000 viewers per episode, accumulating a reach of over 3.2 million views across the 8 episodes.

1.3 Project aims and objectives

The primary aim of the current research is to empirically evaluate the extent to which the *'Renovate or Rebuild'* TV series was successful in enhancing the awareness and desire for sustainable housing features and energy efficient homes among its audience of Australian viewers. By doing so, this research aims to identify specific strategies – particularly evidence-based tools and techniques supported by behavioural science – that are effective for influencing consumers' awareness, desire, and/or behaviours towards residential energy efficiency. In addition, the study also aims to measure overall levels of audience interest and engagement in the TV series within a real-world setting in order to evaluate how the show was received by everyday Australians.

1.4 Key research questions

The key research questions underpinning the current research included:

1. What potential impact (if any) did exposure to the TV episodes/series have on:

   a) shifting viewers' desire for sustainable homes and sustainable housing features?

   b) motivating viewers to purchase products/services highlighted in the show?

   c) motivating viewers to purchase sustainability-related products not highlighted in the show?

   d) motivating viewers to change their behaviour in other ways, e.g. actions related to sustainability, energy efficiency, pro-environmentalism, etc.?

2. What potential impact (if any) did the number of TV episodes watched by viewers have on self-reported attitudes, preferences, and behaviour?

3. What key messages from the TV episodes/series were least vs. most effective? That is, what type of content (if any) was most valued by viewers, and was this content significantly associated with any apparent change in viewers' attitudes, preferences, and/or behaviour?

[2] For more information please refer to https://bluetribe.qwilr.com/Renovate-or-Rebuild-Final-Report-puWCd4oiS1Wc

4. To what extent did watching the TV episodes/series motivate viewers to engage with secondary content in the form of social media and online/web material?

2 Methodology

2.1 Research design and methods

The current research used mixed methods design to collect, analyse, and interpret both quantitative and qualitative data. By adopting this multifaceted approach, the research was simultaneously empirically focused and exploratory in nature, therefore yielding a large body of new data and evidence-based insights with sufficient depth and breadth of detail. This allowed the key research questions listed in Section 1.4 to be examined from several different angles concurrently.

As shown in Figure 1, the two main methodologies used to collect data from participants were: (1) online surveys, which primarily collected quantitative data; and (2) online focus groups, which primarily collected qualitative data. A longitudinal, repeated-measures research design was also adopted for the online survey component, with participants invited to complete multiple surveys over time (e.g. before, during, and after the TV series). Specifically, from mid-September 2021 to December 2021, a total of three online surveys were conducted with eligible and consenting participants: one before (survey 1), one during (survey 2), and one after (survey 3) the *'Renovate or Rebuild'* TV series was broadcast on commercial television in Australia.

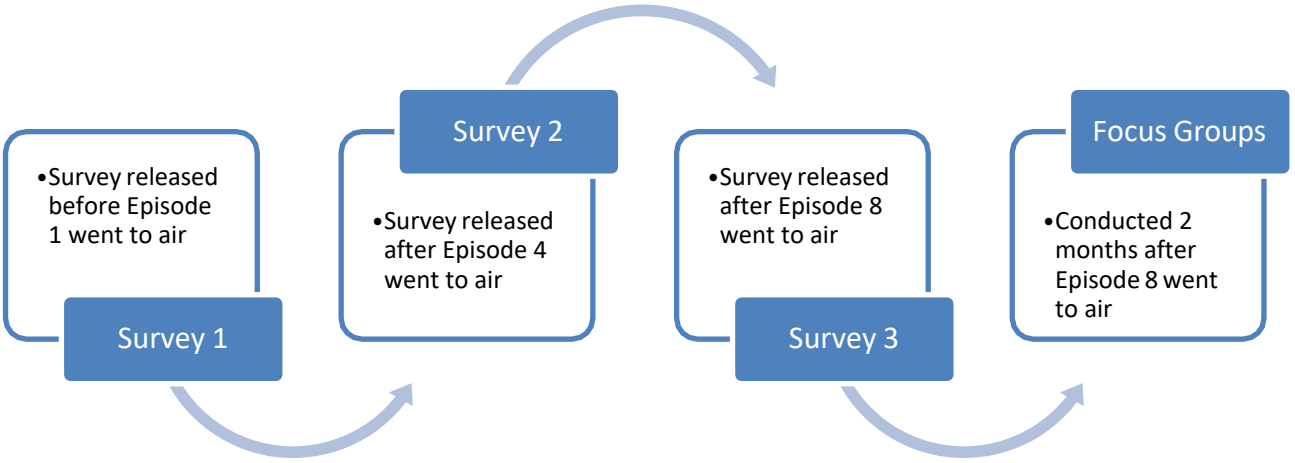


Figure 1 Overview of data collection activities

Before completing the surveys, all participants were required to give explicit informed consent to take part in the surveys (see Appendices A.1.1 and A.1.2 for participant information sheets and consent forms for 'viewer' and 'non-viewer' groups, respectively). A small number of 'screening questions' were also asked upfront (see Appendix A.1.3) to assess prospective participants against the study's eligibility criteria and assist with meeting quota targets. As shown in the Appendix A.1.4, the online surveys included a range of question types and formats – including Likert rating scales, categorical items (e.g. single-select and multi-select checklists), and numerical questions.

As shown in Figure 1, online focus groups were conducted after Survey 3 to collect qualitative data on the key research questions of interest. The online focus groups were conducted with a subset of participants from the viewer sub-sample who expressed an interest in taking part in a subsequent discussion with the CSIRO research team. To be eligible for the focus groups, participants must have reported watching at least one episode of the *'Renovate or Rebuild'* TV show.

The focus groups were purposely designed to complement the longitudinal online surveys by providing an opportunity to gain deeper, richer insights and a more holistic understanding of the thoughts, feelings,

perceptions, intentions, and behaviours of audiences. By asking a series of semi-structured questions, the focus groups specifically sought to explore how the show might have impacted the renovation/rebuilding choices, decisions and actions of viewers, alongside shedding light on how to strengthen the behavioural approach/strategies embedded in the show.

As shown in the Appendix 2.1, participants were also required to give explicit informed consent to take part in the focus groups. The focus group discussion centred around approximately four to six open-ended questions that were semi-structured in nature, with the first four questions covered in all focus groups. As outlined in Appendix 2.2, these four key questions asked to all focus group participants were as follows:

1. What did you think of the show? What did you like/dislike? What would you like to see more of/less of in the show?
2. How has the show increased your knowledge and preferences around buying, building and/or renovating a property?
3. How has the show influenced (or how do you think it might influence in the future) your choices, decision-making, and behaviour when it comes to buying, building and/or renovating your property?
4. How could the show be changed or adapted to better help you with buying, building and/or renovating your property?

The final number of questions covered in each focus group depended on how much time was remaining (from the 1-hour discussion) after participants were asked to discuss these first four questions. As these questions illustrate, the general content covered in each focus group was aimed at exploring participants' overall thoughts and feedback about the *'Renovate or Rebuild'* TV show; how the show may have impacted (or may impact in the future) viewers' preferences for sustainable and energy efficient housing features; what aspects of the show could be adapted, changed or enhanced to help facilitate viewers' decisions and behaviours to build, buy or renovate their own properties; and any other feedback, ideas or suggestions to improve overall audience interest and engagement in the show.

2.2 Participant recruitment and sampling

Two main recruitment modes/pathways were used to identify, recruit, screen, and sample prospective participants:

1) Open weblink: the Blue Tribe Company (BTC), the production company behind the '*Renovate or Rebuild*' TV series, was responsible for recruiting a sample of potential 'viewers', i.e. members of the general population who were likely to watch one or more episodes (either in full or part) of the show (akin to a 'treatment' group). The original recruitment target was to achieve a final sample size of 1,000 viewers to participate in the entire longitudinal study (i.e. successful completion of all three surveys). However, as a high attrition rate (e.g. 50% to 75%) was expected, it was important to recruit a much larger number of viewers at the study's outset. To maximise the sub-sample size, various recruitment strategies were designed and deployed by the BTC with support from the CSIRO to identify and encourage prospective participants to take part. This included online promotion and marketing strategies such as CSIRO social media posts, motivational message framing (e.g. content specifically designed to appeal to altruistic and prosocial motives), and extrinsic incentives and rewards (e.g. a prize draw). To be eligible for the study, prospective participants were required to pass two

'screening questions' at the start of the first survey to confirm that they were Australian residents and at least 18 years of age.

2) Online panel provider: A reputable Australian panel provider (Pureprofile) was contracted to recruit, screen, and administer the longitudinal online surveys to a sample of paid panellists, the vast majority of whom were not expected to watch the show (potential 'non-viewers'; akin to a 'comparison' or 'control' group). The invitation to participate in the research was sent via email to panellists who were representative of the broader Australian population in terms of age, gender and geographical location (i.e. state/territory of residence). Prospective participants were required to fulfil three criteria that were assessed via 'screening questions' at the start of the first survey. In particular, similar to participants recruited via the open weblink, they were required to report that they were: (a) Australian residents, and (b) at least 18 years of age. Furthermore, to target participants who were more likely to share the same or similar characteristics to the viewer sample, prospective participants also had to report that they (c) enjoyed watching lifestyle/reality TV shows about real estate. As an incentive to take part in the study, eligible participants received a financial reward (estimated value A$2.50-3.00) from Pureprofile for each survey they completed.

Two other aspects of participant recruitment via the online panel provider are important to note. First, shortly prior to undertaking the current research, the CSIRO had conducted another online survey with Pureprofile panel participants that also explored topics related to residential energy efficiency. To minimise any risk of potential bias that may otherwise arise from surveying the exact same panel participants twice, prospective participants for the current study were also asked about whether they had recently completed any other surveys for CSIRO in the past four weeks on the topics of residential housing and/or features of homes in Australia. Anyone who endorsed this question was deemed ineligible to participate and screened out of the current study.

Second, when recruiting eligible online panel participants via Pureprofile, it proved more difficult to recruit younger participants (i.e. persons aged between 18 and 24 years old) and older participants (i.e. persons aged over 75 years old). In turn, the recruitment quotas for these two age groups were relaxed for the final 15% of panel participants who were recruited through Pureprofile. Given that participants in these two age ranges were largely absent from the sub-sample of participants who were recruited through the open weblink, relaxing these age-based quotas was not expected to negatively impact (e.g. bias) the final sample's demographic profile.

As a result of the extremely low participation rates using the open weblink, a concerted effort was made to increase the size of the viewer sub-sample by designing and deploying various recruitment strategies. In particular, the sub-sample of participants who were recruited by the online panel provider was explicitly informed (during the surveying process itself) about the '*Renovate or Rebuild*' TV series and incentivised to watch past/future episodes of the show in an attempt to increase the size of the viewer sample[3]. This naturally meant that some panel participants who were initially recruited by the panel provider for the 'non-viewer group' were exposed to the TV show (i.e. they subsequently reported watching one or more episodes) and therefore became part of the 'viewer group' for data analysis purposes. Similarly, during the study, a few participants who were recruited via the weblink reported that they did not watch any episodes of *'Renovate or Rebuild'* and therefore became part of the 'non-viewer' group.

[3] Online panel participants were advised about the *'Renovate or Rebuild'* TV show at the end of Survey 1 or at the end of Survey 2. An additional reward/incentive (i.e. entry to a prize draw) was offered to participants in return for watching past/future episodes of the TV series.

Therefore, it became necessary to define the study's sub-samples[4] and related sample sizes in two different ways: (1) the recruitment mode (i.e. online panel provider vs. weblink); and (2) the final classification of participants for data analysis purposes (i.e. viewer vs. non-viewer groups). In terms of data analysis, as described in Table 1, the so-called 'viewers' of the TV show were survey participants who reported watching at least one episode of 'Renovate or Rebuild'; and the so-called 'non-viewers' of the show were survey participants who reported not watching any episodes.

As described in Table 1 and illustrated in Figure 2, a total of 5,142 participants commenced the study by completing Survey 1, with the vast majority (97%; n=5,005) recruited through the online panel provider. As expected, not all these participants completed all three surveys, with some 'dropping out' of the study over time. By the end of the longitudinal study, a total of 2,963 participants had completed Survey 3, representing an overall loss of 2,179 participants over the course of the study (i.e. final attrition rate of ~42%). Again, almost all the participants who completed the third and final survey (99%, n=2941) were recruited via the online panel provider, with very few sourced via the weblink (<1%, n=22).

The 'viewer' group included 432 participants, with 415 participants recruited via the online panel provider and 17 participants recruited via the weblink. As mentioned earlier, due to difficulties in recruiting viewers to participate in the study, the viewer sample size was lower than originally intended, however, was still large enough to yield statistically significant findings. The non-viewer group included 2,407 participants, with 2,402 participants recruited via the online panel provider and 5 participants recruited via the weblink. Thus, the final sample subjected to statistical analysis for this study included a total of 22 participants who were recruited via the weblink and 2,817 participants[5] who were recruited via the online panel provider.

[4] In terms of sample sizes for the sub-sample of participants recruited through the online panel provider, a small number of participants were removed from the study's final dataset due to poor data quality, e.g. concerns over speeding, invalid or inconsistent responding. In total, n=137 participants in Survey 1, n=109 participants in Survey 2, and n=124 participants in Survey 3 were excluded from the final analysis.

[5] Excludes n=124 participants who were removed from the study's dataset during the data cleaning process.

Table 1 Key features of the two recruitment modes (weblink and online panel) used to identify, screen, select and collect data from the study's participants

<table>
<tr><th></th><th>RECRUITMENT MODE 1: WEBLINK</th><th>RECRUITMENT MODE 2: ONLINE PANEL PROVIDER</th></tr>
<tr><td>Timeframe</td><td>Survey 1: 20th Sep to 25th Oct 2021 (n=137)
Survey 2: 25th Oct to 15th Nov 2021 (n=24)
Survey 3: 25th Nov to 9th Dec 2021 (n=22)
Focus groups: 16th Feb to 18th Feb 2022 (n=3)</td><td>Survey 1: 17th Sep to 18th Oct 2021 (n=5005)
Survey 2: 26th Oct to 9th Nov 2021 (n= 3320)
Survey 3: 23rd Nov to 13th Dec 2021 (n= 2941)
Focus groups: 16th Feb to 18th Feb 2022 (n=20)</td></tr>
<tr><td>Data analysis</td><td colspan="2">Survey participants were divided into two groups for data analysis purposes:
Viewer group: participants who completed surveys and reported watching at least 1 episode (either in part or in full) of the 'Renovate or Rebuild' TV show
Non-viewer group: participants who completed surveys and reported not watching any episodes (either in part or in full) of the 'Renovate or Rebuild' TV show</td></tr>
<tr><td>Sample sizes</td><td>
<table>
<tr><th></th><th>Viewer group</th><th>Non-viewer group</th><th>Total</th></tr>
<tr><td>Survey 2</td><td>n=19</td><td>n=5</td><td>n=24</td></tr>
<tr><td>Survey 3</td><td>n=17</td><td>n=5</td><td>n=22</td></tr>
<tr><td>Focus group</td><td>n=3</td><td>N/A</td><td>n=3</td></tr>
</table>
</td><td>
<table>
<tr><th></th><th>Viewer group</th><th>Non-viewer group</th><th>Total*</th></tr>
<tr><td>Survey 2</td><td>n=452</td><td>n=2,759</td><td>n=3,211*</td></tr>
<tr><td>Survey 3</td><td>n=415</td><td>n=2,402</td><td>n=2,817*</td></tr>
<tr><td>Focus group</td><td>n=20</td><td>N/A</td><td>n=20*</td></tr>
</table>
*Number of cases removed from dataset during data cleaning process: Survey 1 (n=137); Survey 2 (n=109); Survey 3 (n=124)
</td></tr>
</table>

Note: the sub-samples of participants who were sourced through the two different recruitment pathways did not align exactly with the sub-samples of participants who reported watching vs. not watching the show. This is because over the course of the study, some panel participants reported watching the show, thereby changing their classification from 'non-viewer' to 'viewer'.

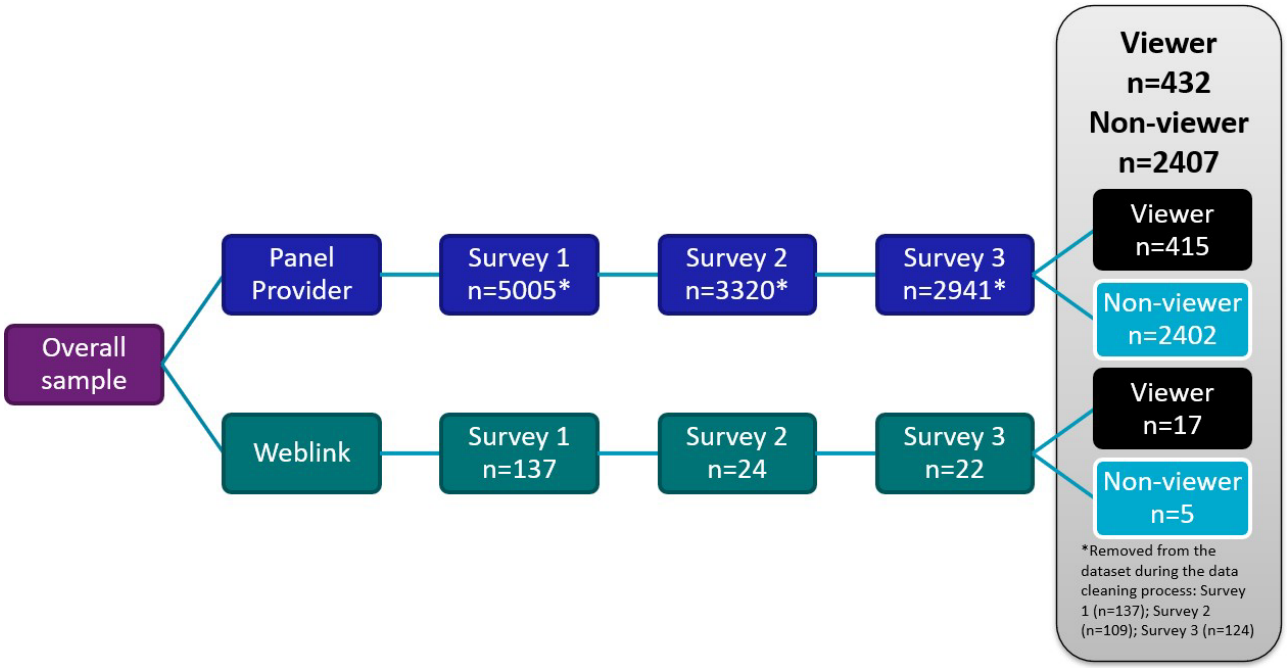


Figure 2 Final sample sizes for each recruitment mode and viewer/non-viewer group classification

2.3 Ethics and privacy

This study underwent an initial ethics review and risk assessment with the CSIRO's Social Science Human Research Ethics Committee (CSSHREC) and was assessed against the requirements of the *National Statement on Ethical Conduct in Human Research (2007) – Updated 2018*. Ethics approval was granted on 17 June 2021 for the overall evaluation study (ethics clearance #089/21) and on 29 November 2021 for the focus group discussions (ethics clearance #191/21). The research was also subjected to a Privacy Threshold Assessment (PTA) by the CSIRO Privacy Office.

2.4 Data analyses

2.4.1 Statistical analysis of quantitative data

Statistical software, namely *Stata* and *R* packages, were used to conduct quantitative data analysis of the study's survey data. More specifically, *Stata* software was used to compile the following statistics:

- Standard descriptive analysis (e.g. frequency counts, percentages, measures of central tendency and variability); and
- Cross-tabulation analyses, chi-square tests and/or paired-sample t-tests were conducted to explore sub-sample differences in results, e.g. comparing responses for viewers vs. non-viewers and/or before and after the TV series was broadcast on television.

More specifically, participants' survey responses before Episode 1 (Survey 1) were compared/contrasted with their responses after Episode 8 (Survey 3). In turn, the results of these analyses are based on data from the subset of participants who successfully completed *both* Survey 1 and Survey 3. Participants who only completed one of the two surveys were excluded from data analyses that compared pre- vs. post-TV series responses.

R software was used to conduct the longitudinal analyses to estimate changes among the viewer sub-sample over time, i.e. by comparing survey responses before vs. after watching the show.

2.4.2 Thematic coding of qualitative data

A total of four focus groups were conducted for the current study. Approximately 4-6 open-ended and semi-structured questions were discussed per session, depending on the group dynamics. The focus group questions centred around viewers' thoughts on the *'Renovate or Rebuild'* TV show, as well as how watching the show might have impacted (or might impact in the future) the journey that viewers undergo when renovating, building, or buying a home. Qualitative data from the focus groups was analysed using thematic and content analysis based on the 4-6 semi-structured questions that were asked per session, as well as additional themes that naturally emerged during the discussions. The questions asked in the focus groups were purposely designed to explore and ultimately answer those key research questions for the study that would benefit from a more qualitative, in-depth exploration. Throughout the analysis, the focus group data was explored as a comparison between groups and demographics e.g. males compared to females, older compared to younger participants.

2.5 Sample composition

2.5.1 Online surveys

This section of the report describes the sample's composition and representativeness across key demographic variables by the final grouping (i.e. 'viewer' vs. 'non-viewer' sub-samples of participants).

Age

The mean age of participants was 47 years (SD = 16 years) and ranged from 18 to 90 years old. As shown in Figure 3, compared to the broader Australian population based on ABS 2016 Census data, it appears that the study's sample was under-represented by individuals aged 18-29 years old (13% for the overall study sample vs 21% for ABS 2016 Census) and ≥70 years old (10% for the overall study sample vs 14% for ABS 2016 Census), but conversely over-represented mainly by individuals aged 30-39 years old (24% for the overall study sample vs 18% for ABS 2016 Census).

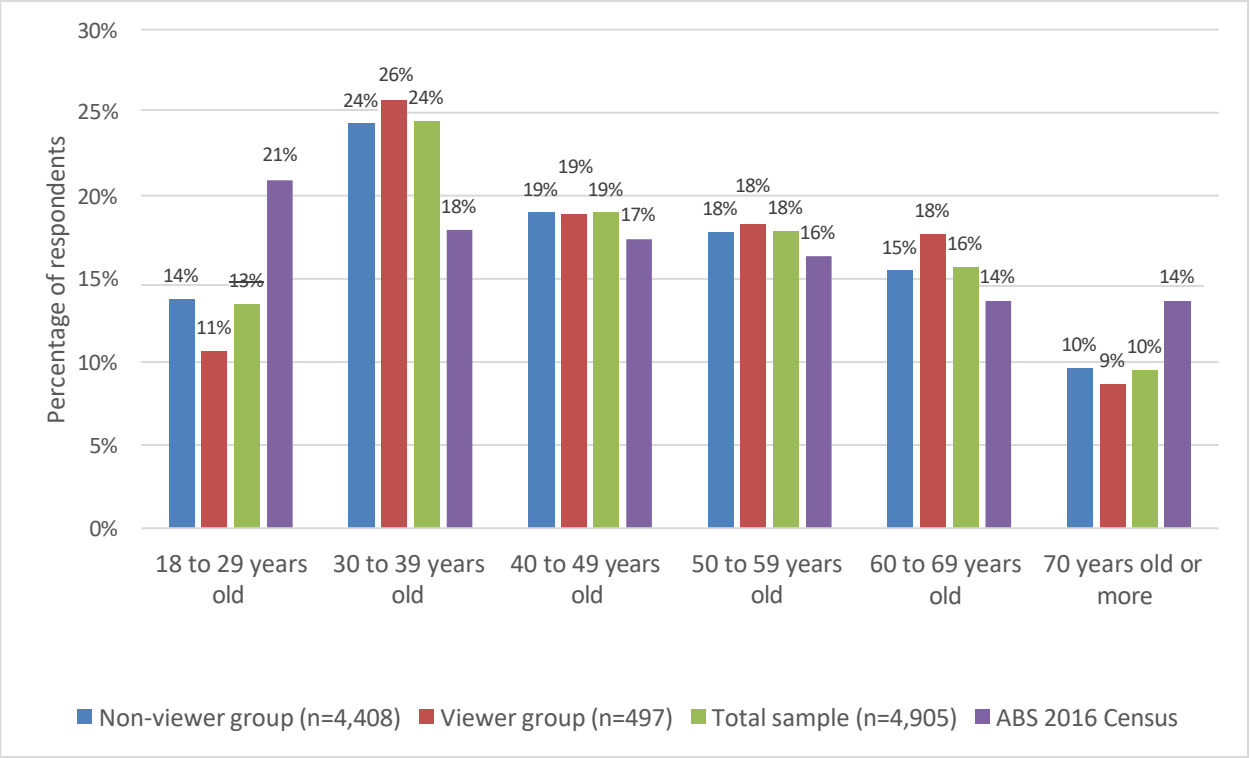


Figure 3 Age distribution of study participants compared to the Australian population (aged 18+)

Gender

As shown in Figure 4, compared to the broader Australian population based on data from the ABS 2016 Census, the sample was over-represented by females (76% of total sample, 76% of non-viewer group and 72% of viewer group as opposed to 49% of Australian population aged 18 years old and above). This skew was expected, as females were more likely to report that they enjoyed watching lifestyle/reality TV shows about real estate, meeting the study eligibility criteria.

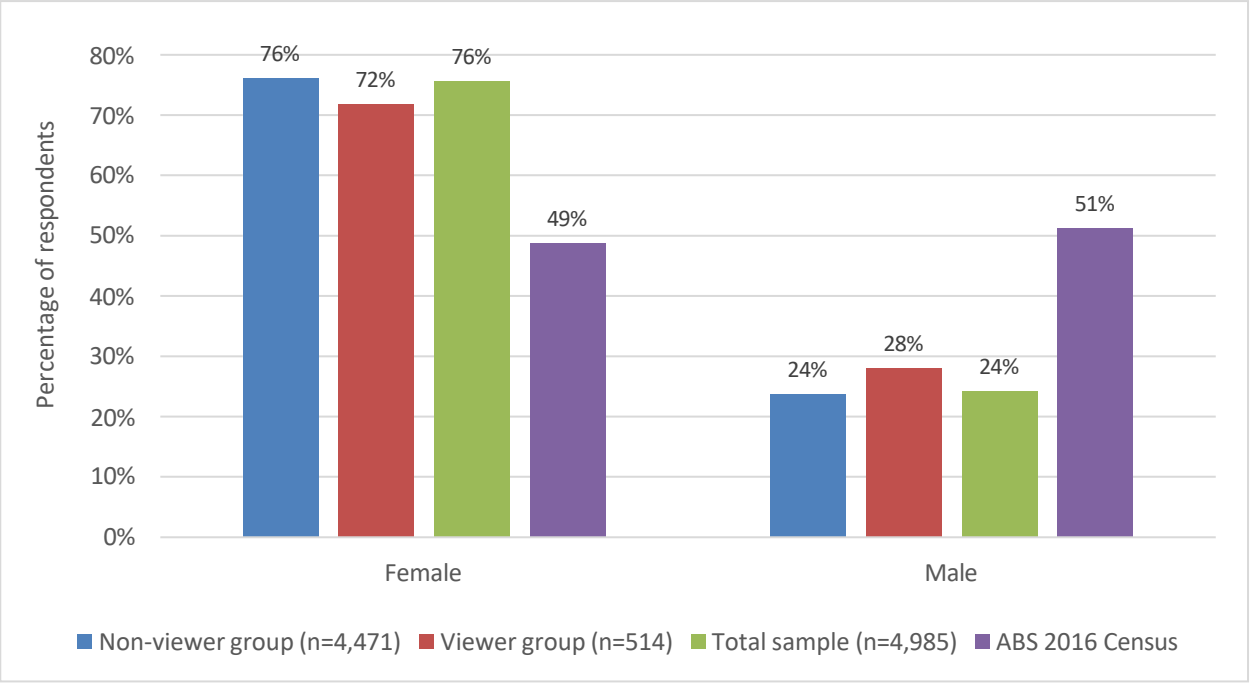


Figure 4 Gender breakdown of study participants compared to the Australian population (aged 18+)

Geographical location

In terms of geographical location, the distribution of the sample across different states and territories was somewhat representative of the broader Australian population based on ABS 2016 Census data. As shown in Figure 5, more participants reported living in the country's most populated states of New South Wales (31%), Victoria (28%) and Queensland (21%). Conversely, comparatively fewer participants reported living in the less populated states/territories of South Australia (7%), Western Australia (9%), Tasmania (2%), the Australian Capital Territory (2%) and the Northern Territory (1%).

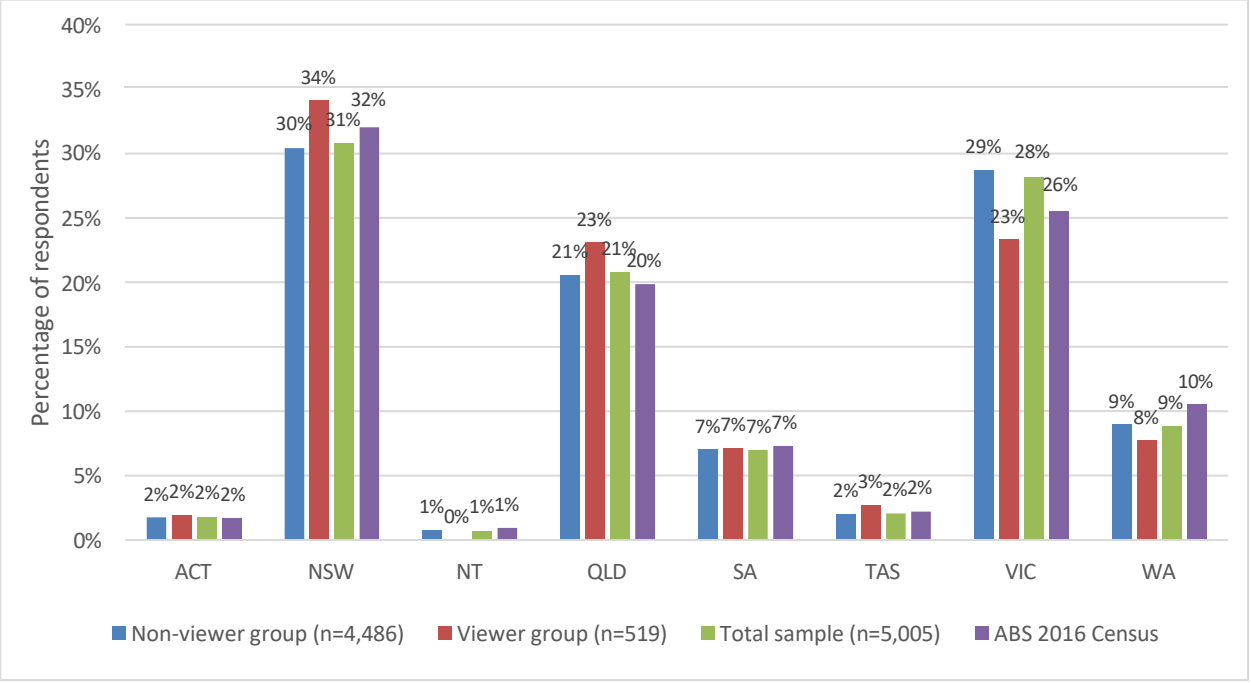


Figure 5 Geographical location of study participants compared to the Australian population (aged 18+)

Household type

In terms of household type or composition, the majority of the study's sample described themselves as either couples with or without children (34% and 29%, respectively), with about one-sixth (17%) describing themselves as lone person households. Comparatively fewer participants described themselves as one-parent families with children (11%), group households (4%), multiple family households (3%), or other household types (2%). As shown in Figure 6, compared with the broader Australian population based on ABS 2016 Census data, the survey's final sample was over-represented by couples with children (34% of the overall study sample vs 30% for ABS 2016 Census) and couples without children (29% of the overall study sample vs 25% for ABS 2016 Census), but conversely under-represented by lone person households (17% of the overall study sample vs 23% for ABS 2016 Census) and household types classified as 'other' (2% of the overall study sample vs 6% for ABS 2016 Census).

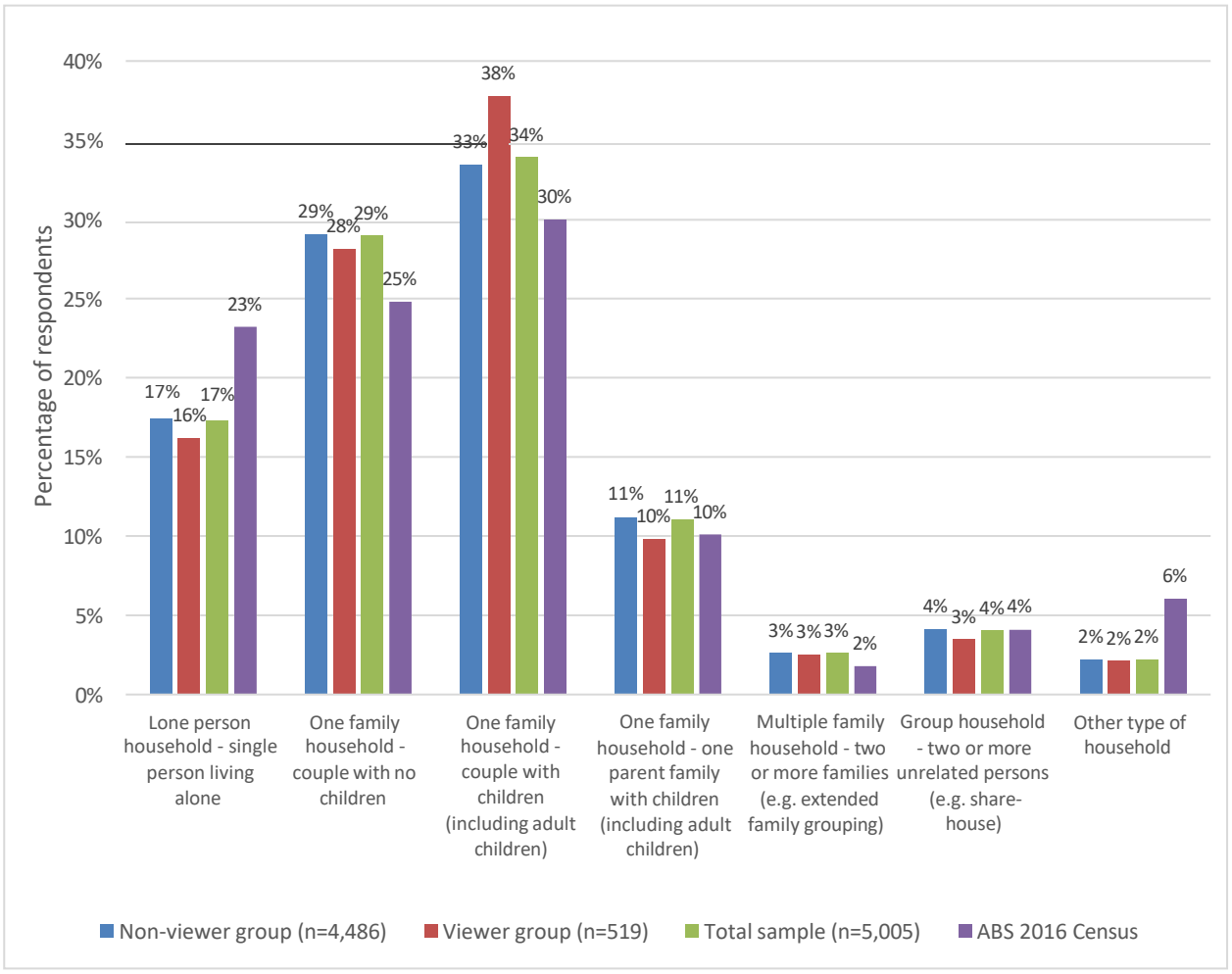


Figure 6 Household size of study participants compared to the Australian population

Labour force status

As shown in Figure 7, compared with the broader Australian population based on ABS 2016 Census data, the study's final sample was over-represented by individuals working full time (44% of the overall study sample vs 36% for ABS 2016 Census) or part-time (22% of the overall study sample vs 18% for ABS 2016 Census), but conversely under-represented by individuals not in the labour force (28% of the overall study sample vs 32% for ABS 2016 Census).

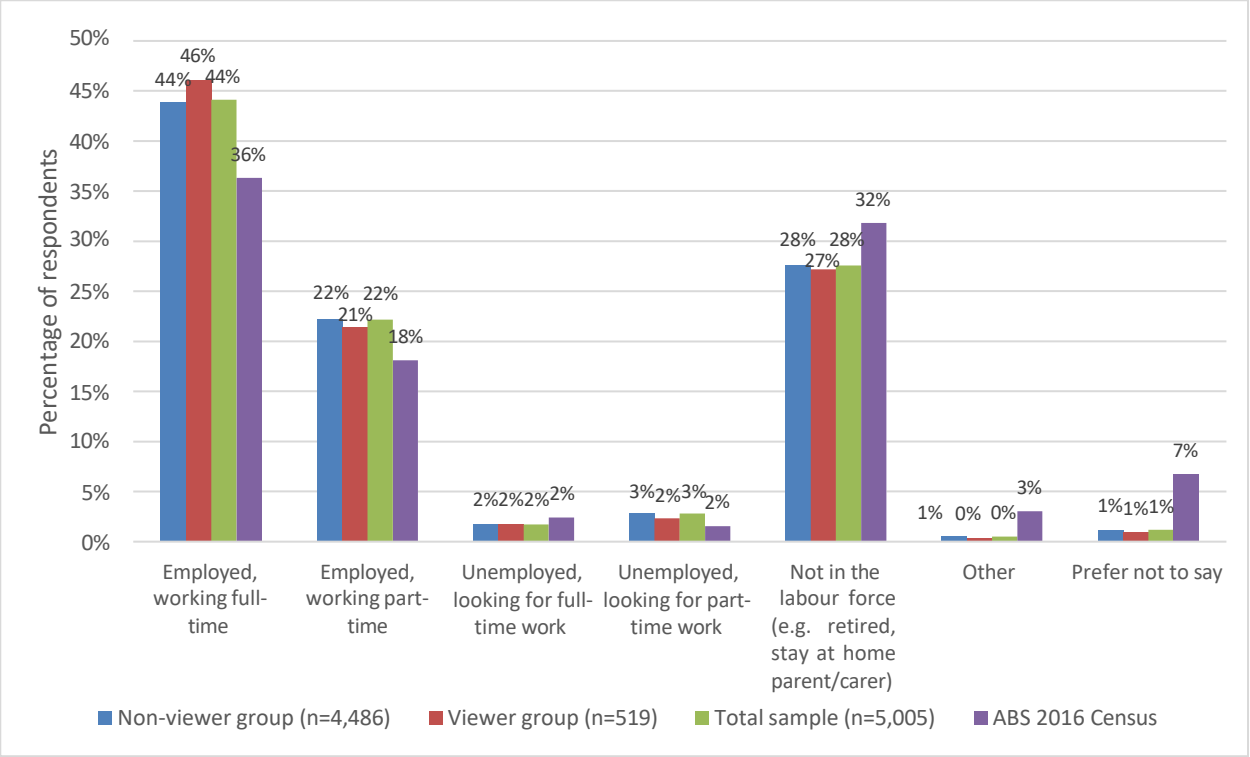


Figure 7 Labour force status of study participants compared to the Australian population (aged 18+)

Highest level of educational attainment

In terms of educational attainment, 41% of the total sample reported having a university qualification as their highest level of attainment – for example, 23% had a Bachelor degree, 9% had a Bachelor Honours Degree or Graduate Certificate/Diploma, and 9% had a Masters or Doctoral Degree. On the other hand, about one-in-four participants had a school-level education as their highest level (e.g. 9% had Year 10 or below, 24% had Year 11 or 12). The remainder reported that their highest level of educational attainment was either a Certificate I or II (3%), a Certificate III or IV (16%), or a Diploma, Advanced Diploma or Associate Degree (16%). As shown in Figure 8, compared with the broader Australian population based on ABS 2016 Census data, the study's final sample was over-represented by individuals with university-level qualifications (e.g. Bachelor degree or higher; 41% of the overall study sample vs 26% for ABS 2016 Census but conversely under-represented by individuals with school-level education. It is important to highlight that 'viewers' were also more likely to have a university degree (49%) compared to 'non-viewers' (40%).

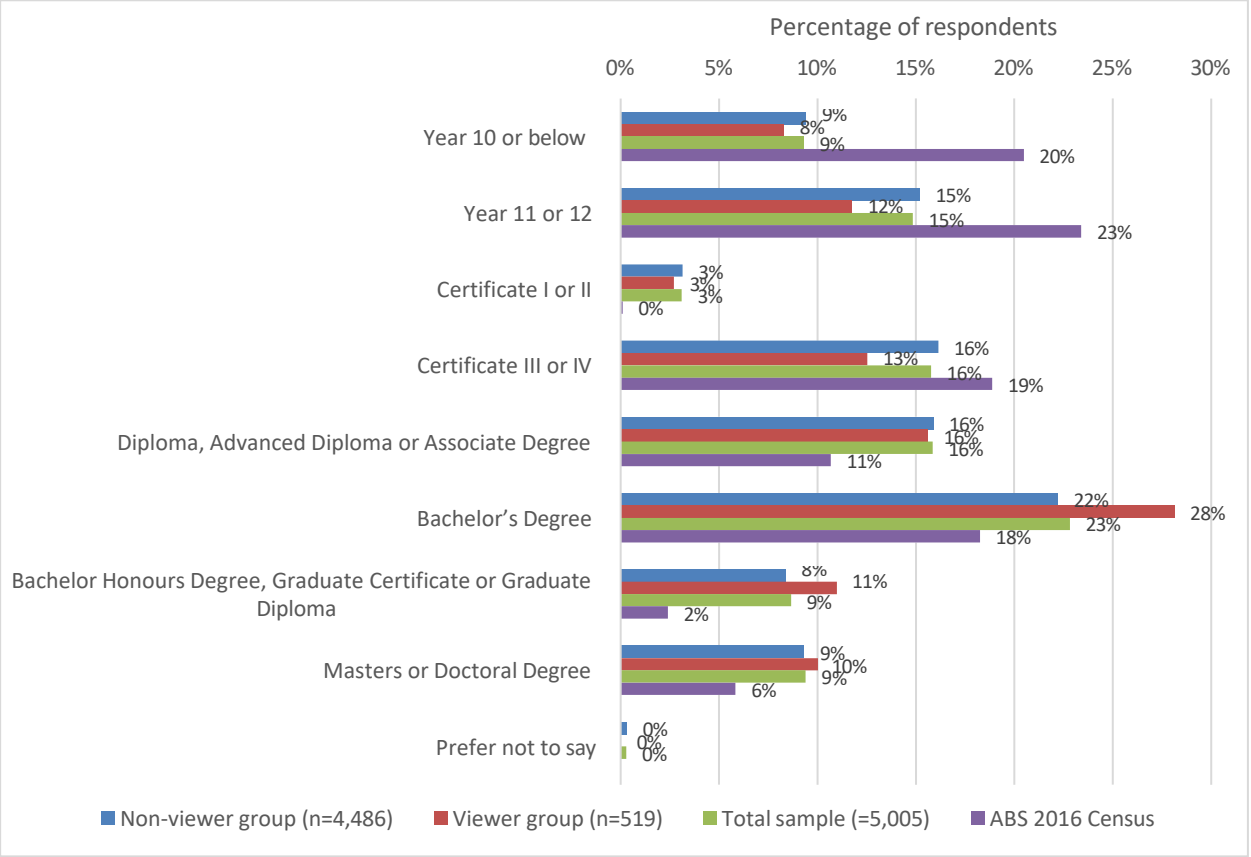


Figure 8 Educational attainment level of study participants compared to the Australian population (aged 18+)

Dwelling structure

In terms of dwelling structure, most participants reported living in separate houses (71%) rather than semi-detached dwellings (11%), flats, units or apartments (18%), or other dwelling types (1%). As shown in Figure 9, these results were relatively similar to the broader Australian population based on ABS 2016 Census data, although the sample was slightly over-represented by people living in flats, units and apartments.

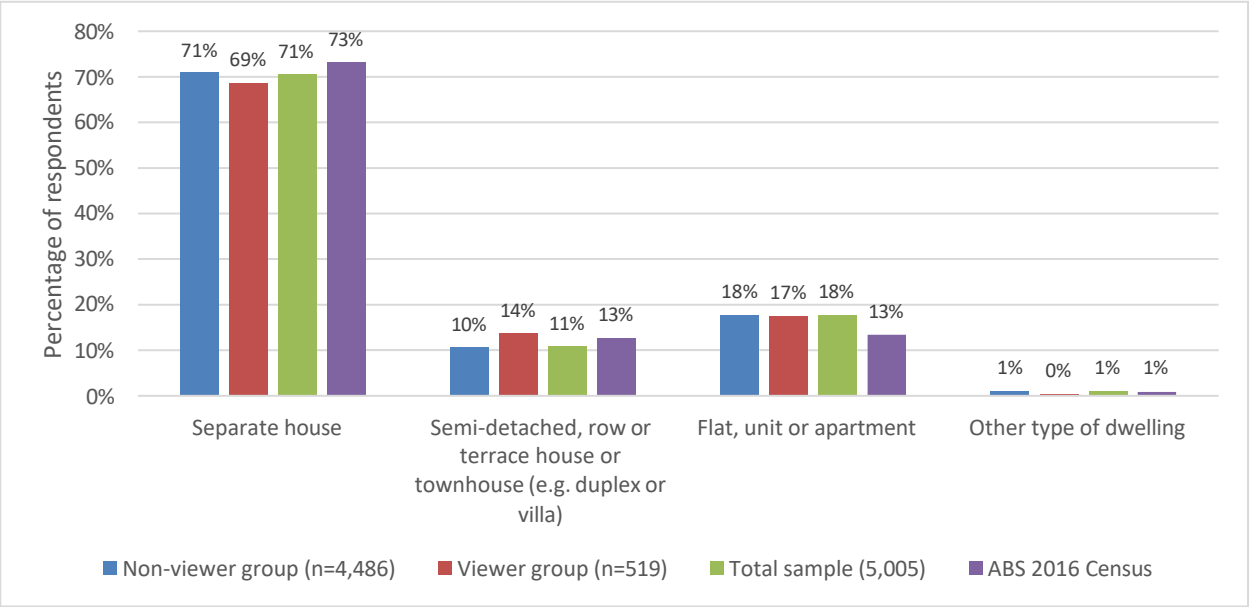


Figure 9 Dwelling type of study participants compared to the Australian population

Housing tenure

In terms of home ownership, most participants (70%) reported living in properties that were owned or partly owned by someone in the household as opposed to being rented (28%) or under another tenure arrangement (2%). As shown in Figure 10, these results were reasonably aligned with the broader Australian population based on ABS 2016 Census data, despite a slight under-representation of renters.

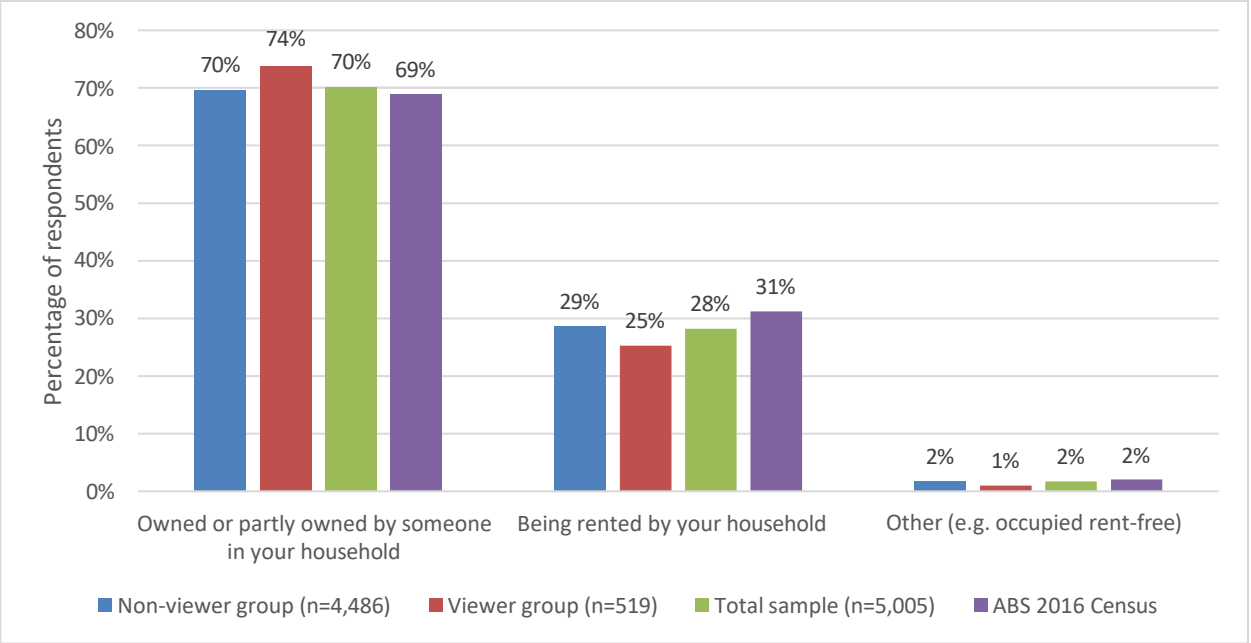


Figure 10 Housing tenure of study participants compared to the Australian population

Comparing the profiles of 'viewers' vs. 'non-viewers'

Before presenting the main findings for each of the study's research questions, it is important to assess whether the key characteristics of the viewer and non-viewer sub-samples differed at the outset of the research. As summarised in Figure 11, an analysis of data from Survey 1 found some statistically significant ($p < 0.05$) differences at baseline (i.e. before any participants had the opportunity to watch any episodes of the '*Renovate or Rebuild*' TV show) between the viewer and non-viewer sub-samples. For more detailed data and results relating to these significant sub-sample differences at baseline, see Appendix A.1.5. Viewers (vs. non-viewers) were significantly more likely to report that they:

- Had a university degree as their highest level of education;
- Were thinking about buying, building, or renovating a home in the future;
- Were living in a home with solar and/or battery storage installed;
- Intended to purchase solar and/or battery storage in the future;
- Had a general awareness of home/building energy rating schemes, as well as specific familiarity with NatHERS; and
- Placed greater value on certain energy efficiency home features, such as home energy star ratings, solar panels, north-facing rooms, and double glazing.

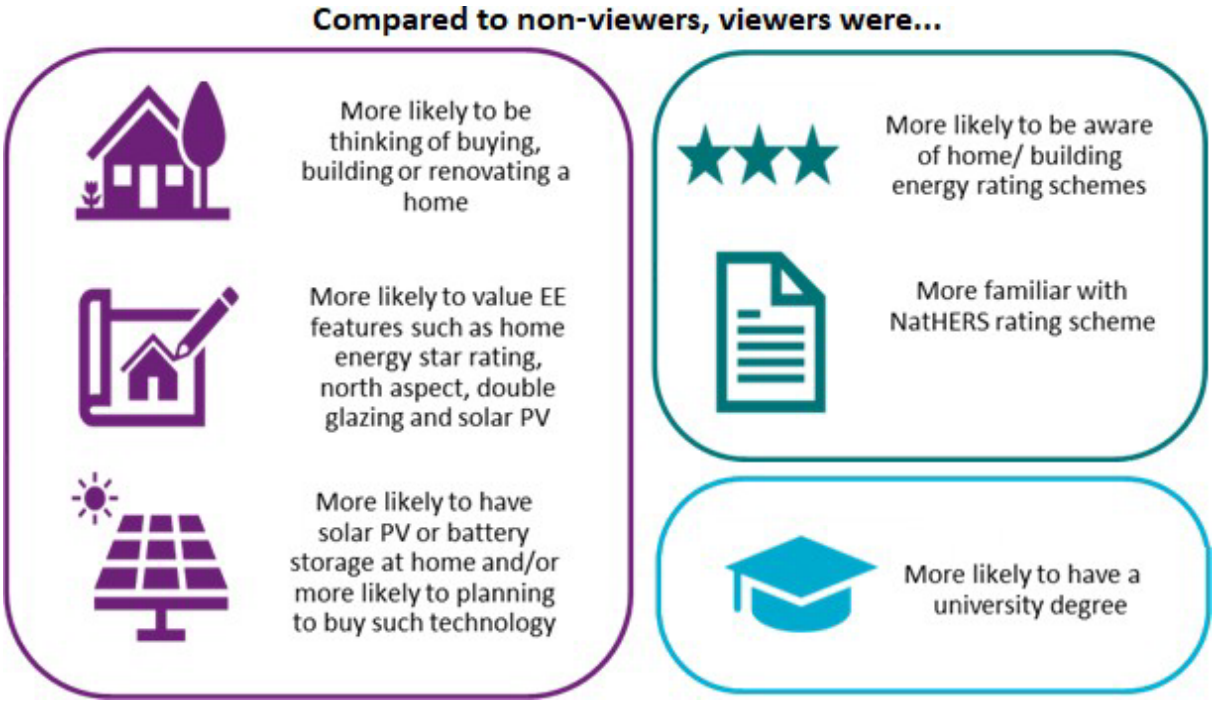


Figure 11 Baseline profile of viewers (vs. non-viewers) in terms of self-reported awareness, values, intentions, demographics and other characteristics

While most participants reported enjoying lifestyle/reality TV shows about real estate due to the initial screening/eligibility criteria imposed via the online panel provider recruitment[6], differences between the viewer and non-viewer sub-samples were still found. As shown in Figure 12, an analysis of data from Survey 3 indicated that compared to non-viewers, viewers of *'Renovate or Rebuild'* were significantly more likely to report that they had recently watched a range of lifestyle/reality TV shows about real estate compared to non-viewers[7]. More specifically, a higher proportion of viewers reported watching '*The Block'* (66% of viewers vs to 50% of non-viewers), '*Grand Designs'* (50% of viewers vs to 28% of non-viewers), '*House Hunters'* (52% of viewers vs 20% of non-viewers), '*House Hunters International'* (48% of viewers vs 21% of non-viewers), and '*Selling Houses Australia'* (46% of viewers vs 22% of non-viewers).

[6] Participants recruited via the open weblink were not screened for their self-reported interest in watching lifestyle/reality TV shows about real estate. However, it was assumed that these participants were interested in these types of shows as they were primarily recruited via the *'Renovate or Rebuild'* TV show's marketing/promotion and social media campaign.

[7] In terms of data from Survey 3, for a small number of participants, responses to questions in Survey 3 were inconsistent with responses to questions in Surveys 1 and/or 2, these cases were not removed from the analysis as they were not expected to impact the substantive interpretation of results.

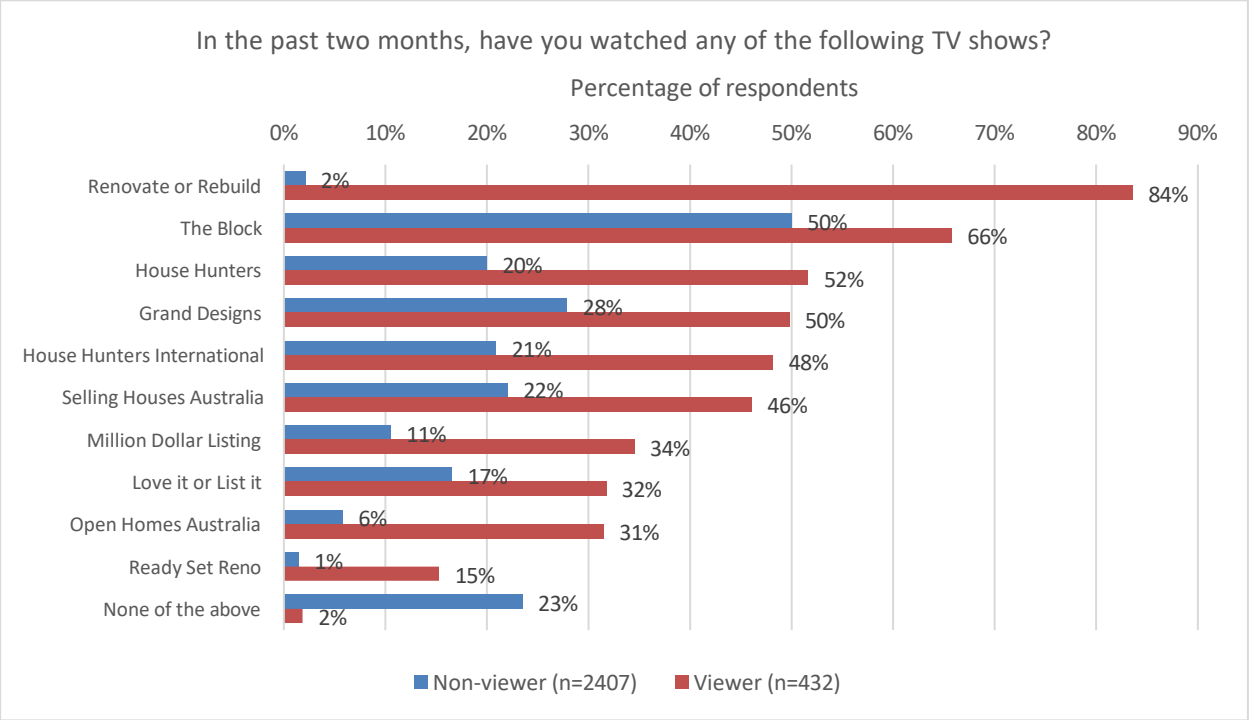


Figure 12 Profile of viewers vs. non-viewers in relation to watching lifestyle/reality TV shows about real estate (based on Survey 3 data)

2.5.2 Focus groups

As outlined earlier, a total of four online focus groups were conducted over the course of the study. The specific number of participants in each group ranged from 3 to 8 people, with a total of 25 participants across all the focus groups discussions. As shown in Figure 13, the composition of each focus group was designed to target a specific type of individual in an effort to ascertain the varying responses of each demographic. However, this needed to be balanced with the logistics of organising the availability of interested viewers, and in turn, not all participants who expressed interest in partaking in the focus groups were able to participate due to being unavailable on the allocated dates/time slots.

The first two focus groups targeted viewers who were looking to renovate, build and/or buy a home within next 12 months, with Group 1 specifically recruiting females aged between 30 and 45 years old (i.e. the show's target audience) and Group 2 including individuals with a mix of ages and genders. In contrast, Group 3 specifically targeted females aged 40 years old and above, while Group 4 specifically targeted males. When asked about past exposure to the '*Renovate or Rebuild*' TV series, focus group participants reporting watching between 1 and 5 episodes in total (median number = 3 episodes).

Group 1	Group 2	Group 3	Group 4
• N = 3 participants	• N = 8 participants	• N = 6 participants	• N = 6 participants
• Females	• Mixed genders	• Females	• Males
• ~30-45 years old	• Mixed ages	• 40+ years old	• ~30-65 years old
• Intending to buy, build, and/or renovate a home in the next 12 months	• Mixed intentions to buy, build and/or renovate a home in next 12 months	• Panel viewers	• Panel viewers
• Recruitment mode: open weblink	• Recruitement mode: online panel provider		

Figure 13 Breakdown of sample sizes and participant demographics for the four focus group discussions

3 Results

The current study explored a wide range and depth of research questions, therefore collecting a large amount of data and uncovering many results, both statistically significant and non-significant. To achieve the overarching aims of this research and for the purpose of keeping this report as succinct as possible, this section focuses largely on the results that emerged as statistically significant.

3.1 Viewers' desire for sustainable homes and sustainable housing features

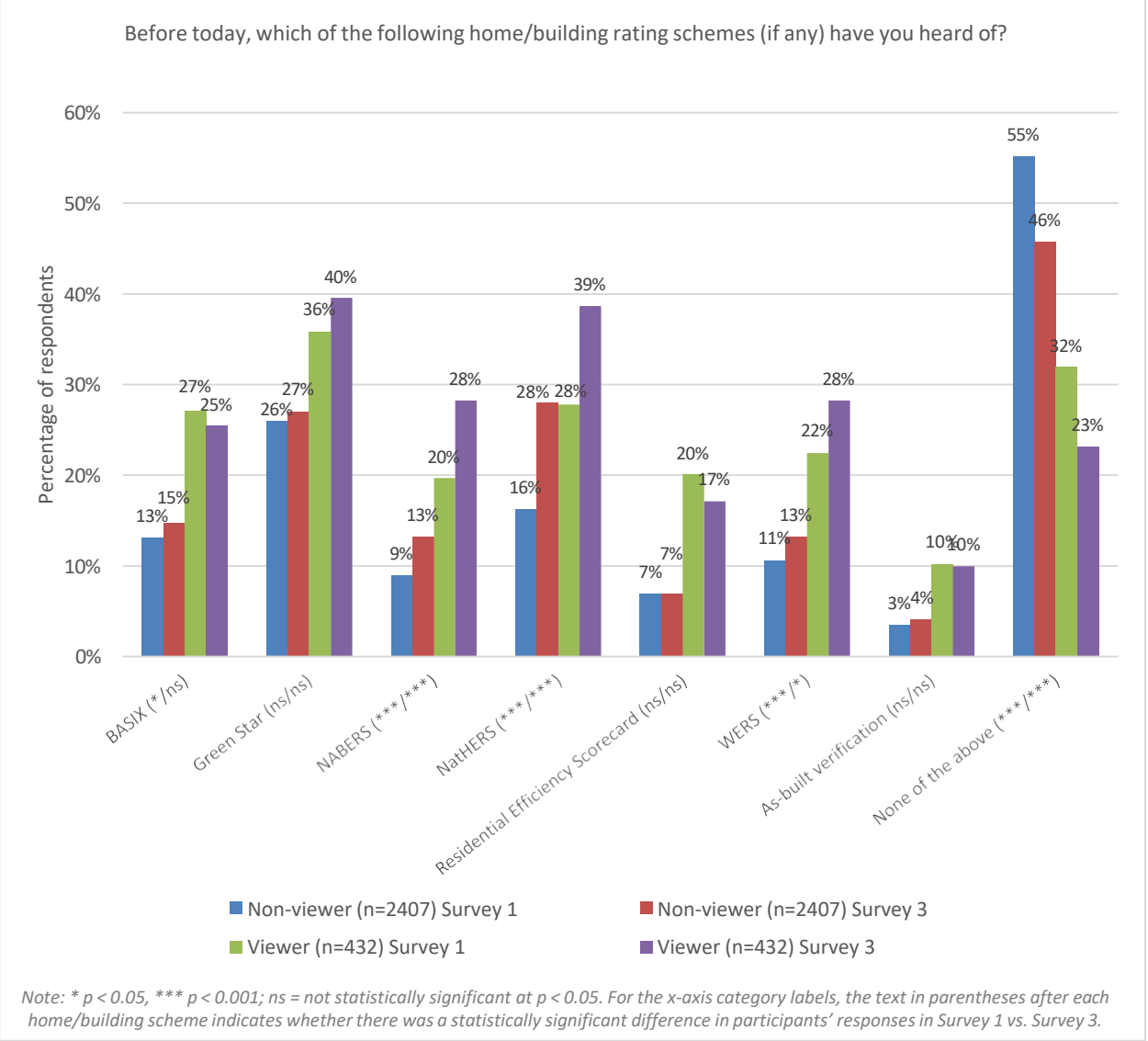
The first research question investigated whether exposure to the '*Renovate or Rebuild*' TV series was associated with any observable change(s) in the self-reported desire of viewers for sustainable homes, sustainable housing features, and other aspects of residential energy efficiency. To answer this question, quantitative analyses were conducted to compare the responses of participants pre- vs. post-exposure to the show – that is, by comparing/contrasting survey data collected *before* Episode 1 (Survey 1) with data collected *after* Episode 8 (Survey 3). We specifically sought to test whether any statistically significant ($p < 0.05$) differences emerged between the responses of participants who did vs. did not watch the show. In turn, only participants who completed both Survey 1 (before Episode 1) and Survey 3 (after Episode 8) were included in these pre- vs. post-show comparisons.

3.1.1 Awareness of home/building rating schemes

In both Survey 1 and Survey 3, participants were asked about whether they had previously heard of a range of home/building energy rating schemes. For each sub-sample of participants (i.e. viewers and non-viewers), analyses were conducted to compare how participants responded to this question in Survey 1 (i.e. before the show went to air) versus Survey 3 (i.e. after all eight episodes of '*Renovate or Rebuild*' went to air). As shown in Figure 14, the results of these analyses revealed statistically significant ($p < 0.05$) differences over time in the proportion of survey participants who reported they had previously heard of four of the seven home/building energy rating schemes that were listed in the survey, namely:

1. Building Sustainability Index (BASIX):
    a. Non- Viewers: Survey 1 (13% of participants) vs. Survey 3 (15% of participants)
    b. Viewers: no statistically significant difference was observed
2. National Australian Built Environment Rating System (NABERS)
    a. Non-Viewers: Survey 1 (9% of participants) vs. Survey 3 (13% of participants)
    b. Viewers: Survey 1 (20% of participants) vs. Survey 3 (28% of participants)
3. Nationwide House Energy Rating Scheme (NatHERS)
    a. Non-Viewers: Survey 1 (16% of participants) vs. Survey 3 (28% of participants)
    b. Viewers: Survey 1 (28% of participants) vs. Survey 3 (39% of participants)
4. Window Energy Rating Scheme (WERS)
    a. Non-Viewers: Survey 1 (11% of participants) vs. Survey 3 (13% of participants)
    b. Viewers: Survey 1 (22% of participants) vs. Survey 3 (28% of participants)

For both the viewer and non-viewer sub-samples, the largest difference was observed for awareness of NatHERS. No statistically significant differences in responses were found for three of the schemes for either viewers or non-viewers: GreenStar, the Residential Efficiency Scorecard and As-built verification schemes.



*Note: * $p < 0.05$, *** $p < 0.001$; ns = not statistically significant at $p < 0.05$. For the x-axis category labels, the text in parentheses after each home/building scheme indicates whether there was a statistically significant difference in participants' responses in Survey 1 vs. Survey 3.*

Figure 14 Participants' self-reported awareness of various home/building rating schemes in Survey 1 vs. Survey 3: Results for viewers vs. non-viewers

In both Surveys 1 and 3, participants were also asked about how familiar they were with the NatHERS rating scheme. Again, for each sub-sample of participants, statistical analyses were conducted to compare how participants responded to this question in Survey 1 (before '*Renovate or Rebuild*' went to air) versus Survey 3 (after all eight episodes of '*Renovate or Rebuild*' went to air).

As shown in Figure 15, participants' self-reported familiarity of NatHERS was examined on a five-point rating scale (ranging from 1 = 'not at all familiar' to '5 = extremely familiar'). Among respondents who completed both Survey 1 and Survey 3, the viewer sub-sample reported an average (mean) familiarity of 2.95 in Survey 1 and 3.27 in Survey 3. In contrast, the non-viewer sub-sample reported an average (mean) score of 2.44 in Survey 1 and 2.58 in Survey 3. For both sub-samples, the difference between participants' responses in Survey 1 versus Survey 3 was statistically significant at $p < 0.01$.

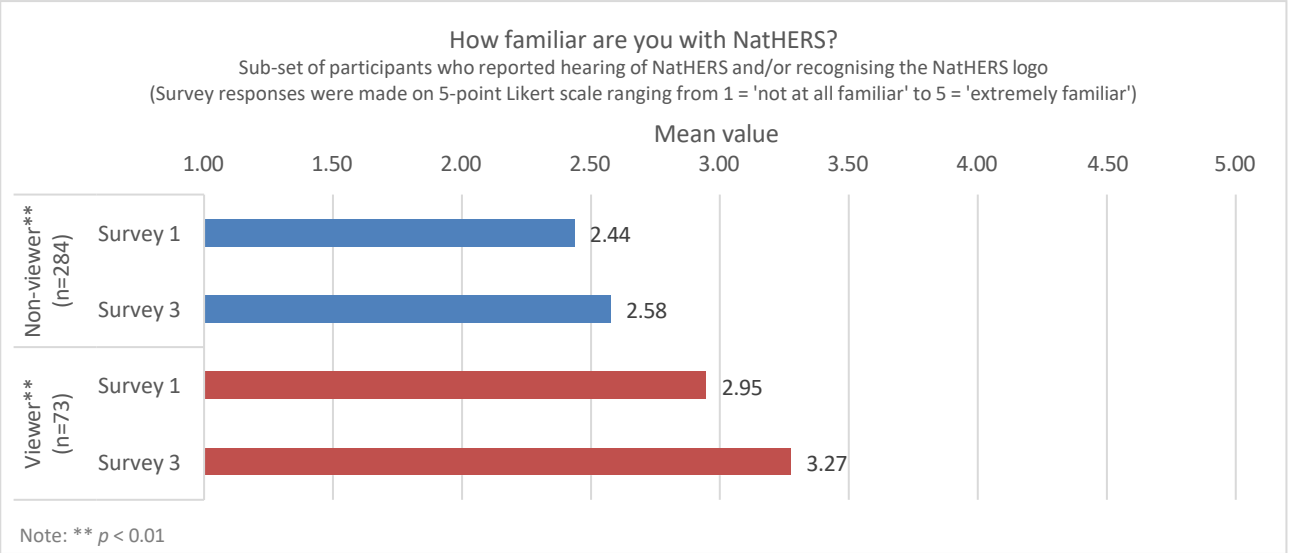


Figure 15 Participants' self-reported familiarity with NatHERS in Survey 1 vs. Survey 3: Results for viewers vs. non-viewers.

3.1.2 Knowledge of minimum energy star ratings for homes

Surveys 1 and 3 also included a question that was specifically designed to test participants' knowledge of minimum energy star ratings for homes in their state/territory. To draw inferences about the potential impact of watching the *'Renovate or Rebuild'* TV show on such knowledge over time, quantitative analyses were conducted to compare the responses of participants in Survey 1 vs. Survey 3 for both viewers and non-viewers. As shown in Figure 16, for both the viewer and non-viewer sub-samples, there were low levels of knowledge both before and after the show, with results revealing no statistically significant differences in the survey responses of participants over time. However, viewers were significantly ($p < 0.001$) less likely to answer 'don't know' to the knowledge question than non-viewers in both Survey 1 (i.e. before watching *'Renovate or Rebuild'*) and Survey 3 (i.e. after watching *'Renovate or Rebuild'*).

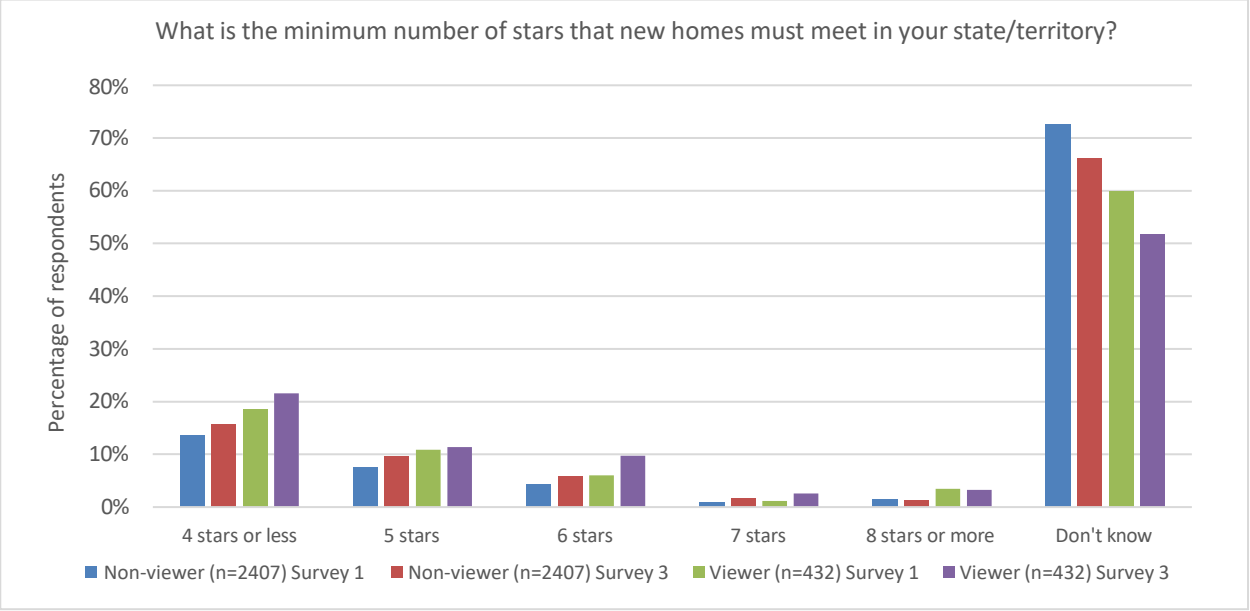


Figure 16 Participants' self-reported knowledge of minimum energy star ratings for homes in Survey 1 vs. Survey 3: Results for viewers vs. non-viewers

3.1.3 Overall home characteristics

The surveys also explored the perceived importance of living in a home with a range of characteristics, including specific features such as: stylish, healthy, efficient, sustainable, comfortable, affordable, and resilient. Analyses were conducted to compare the responses of participants (for both viewers and non-viewers) in Surveys 1 vs. 3 to explore whether viewing the *'Renovate or Rebuild'* TV series may have influenced self-reported preferences for any of these characteristics. Results revealed that for most these characteristics, there was no statistically significant difference in participants' responses before vs. after watching the show. The sole exception was for 'healthy (e.g. good airflow, ventilation and natural light)'. As shown in Figure 17, among the sub-sample of viewers, the proportion of participants who rated this characteristic as 'extremely important' was significantly higher ($p < 0.05$) in Survey 1 (41% of sub-sample) compared to Survey 3 (34% of sub-sample). However, no statistically significant difference in participants' survey responses over time (Surveys 1 vs. 3) was found among the sample of non-viewers.

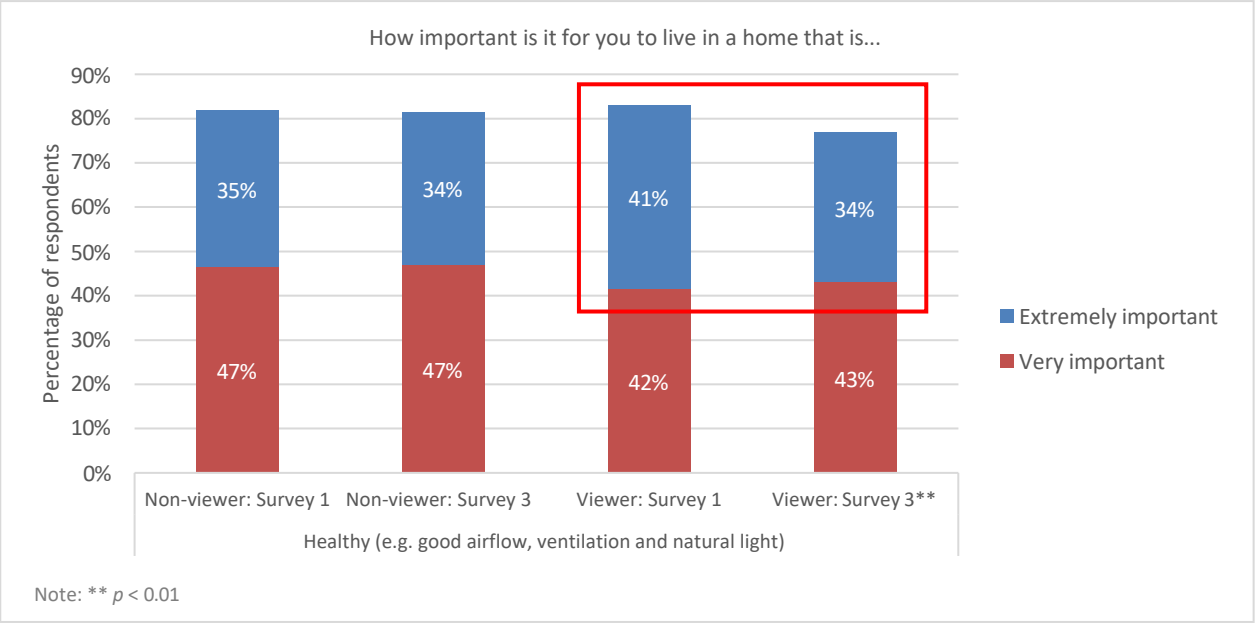


Figure 17 Participants' perceived importance of living in a 'healthy' home in Survey 1 vs. Survey 3: Results for viewers vs. non-viewers

3.1.4 Specific housing features

The surveys also asked participants to prioritise a wide range of home features, including energy efficiency and sustainability features. While many features were examined in the study, a comparison of participants' responses in Survey 1 vs. Survey 3 revealed very few significant differences over time for both viewers and non-viewers[8]. One exception was for the feature described as 'home energy rating above the minimum standard for Australia'. As shown in Figure 18, the results revealed that among the sub-sample of viewers, there was a statistically significant ($p < 0.01$) difference in participants' responses to this particular home feature in Survey 1 vs. Survey 3; that is, before vs. after watching the *'Renovate or Rebuild'* TV show.

More specifically, the results showed that the proportion of viewers who rated 'home energy rating above the minimum standard for Australia' as a 'must have' feature was significantly higher in Survey 3 (39% of the sub-sample) compared to Survey 1 (31% of the sub-sample). This increase of 8 percentage points between the

[8] To have greater confidence in the validity and reliability of results, only differences that are statistically significant at a confidence interval of ≥99% are reported herein due to the small sample sizes and the high number of comparisons that were analysed.

initial and final surveys represents a 25.8% increase from the base rate. However, this difference in survey responses over time was not observed among the non-viewer sub-sample, suggesting that watching the *'Renovate or Rebuild'* TV series may have positively influenced a proportion of viewers; that is, it supports the hypothesis that as a result of watching the show, some viewers might be more likely to seek a home with an energy star rating above the minimum standards when choosing a new home to live in.

Among the sub-sample of non-viewers, statistically significant ($p < 0.05$) differences in survey responses over time (i.e. Survey 1 vs. Survey 3) were found for the following four home features only (see Figure 18):

- Windows/doors that allow natural breezes and ventilation: the proportion of non-viewers who rated this home feature as a 'must have' was significantly higher in Survey 1 (62% of sub-sample) than Survey 3 (58% of sub-sample).
- Insulation above the minimum requirements: the proportion of non-viewers who rated this home feature as a 'must have' was significantly higher in Survey 1 (63% of sub-sample) than Survey 3 (58% of sub-sample).
- Ceiling fans: the proportion of non-viewers who rated this home feature as a 'must have' was significantly lower in Survey 1 (33% of sub-sample) than Survey 3 (35% of sub-sample).
- Battery storage system: the proportion of non-viewers who rated this home feature as a 'must have' was significantly lower in Survey 1 (7% of sub-sample) than Survey 3 (9% of sub-sample).

Other features investigated in the survey that did not yield statistically significant differences over time within either the viewer or non-viewer sub-samples included: energy efficient appliances (e.g. above average energy efficiency or 4 or more stars for kitchen and laundry appliances); energy efficient air conditioning (e.g. above average energy efficiency or 4.5 or more stars), energy efficient heating system (e.g. above average energy efficiency or 4.5 or more stars), double glazed windows and/or doors, tinted or Low-E glass windows and/or doors, energy efficient lighting (e.g. LED or CFL bulbs), energy efficient hot water system (e.g. solar, heat pump), solar photovoltaic (PV) panels, and water tank.

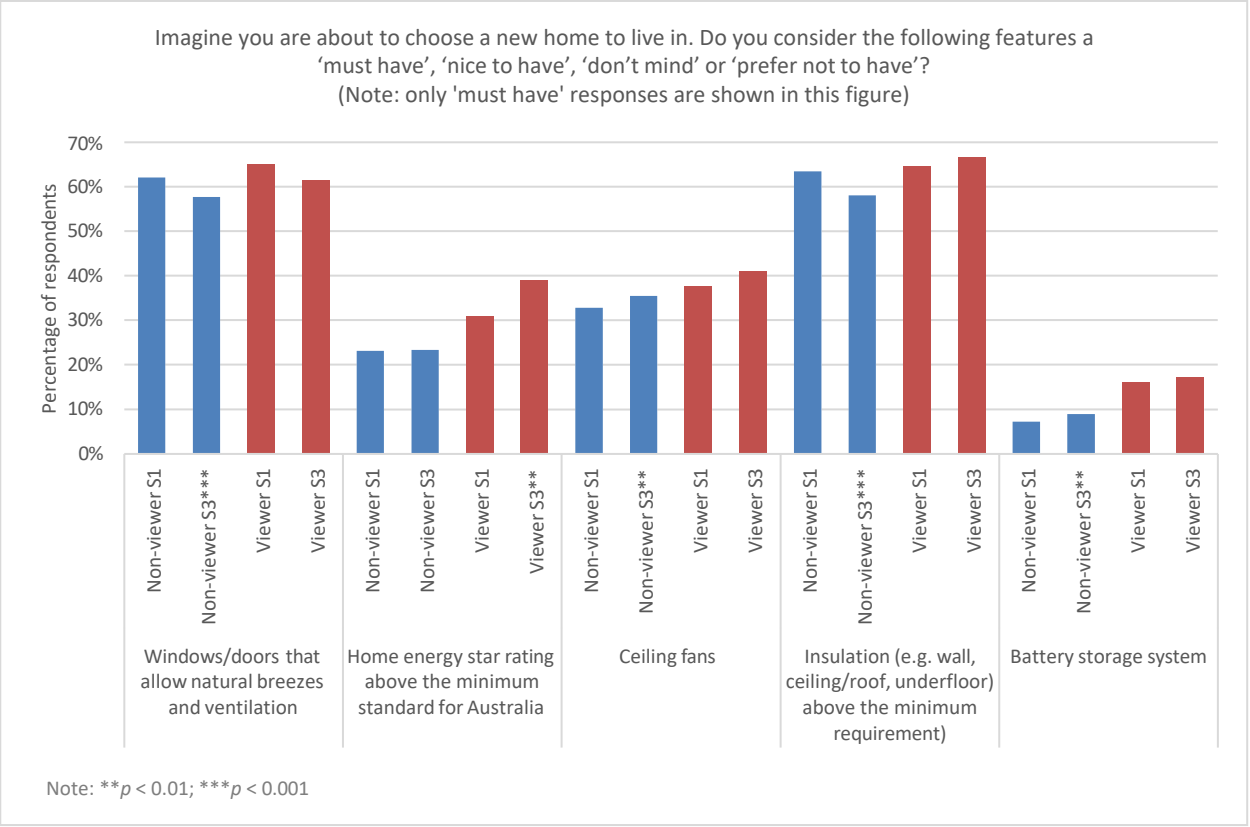


Figure 18 Participants' self-reported perceptions of different home features in Survey 1 (S1) vs. Survey 3 (S3): Results for viewers vs. non-viewers.

3.1.5 Focus group feedback: Desire for sustainable homes and sustainable housing features

Qualitative results from the focus groups lend some support to the aforementioned survey findings in a number of ways. For example, several participants in the focus groups expressed that they intended to pay greater attention to energy star ratings and similar housing/building rating systems as a result of watching the *'Renovate or Rebuild'* TV show, with some even reporting a desire for achieving the highest possible energy rating they could afford. At the same time, however, some participants also voiced concerns over potentially higher financial/monetary costs associated with achieving higher energy ratings. In terms of specific housing features, participants in the focus groups also noted that they were more likely to enquire about battery installations after watching the show. Some participants also felt that the show helped to raise their awareness and generated ideas/thoughts around sustainability-related topics, such as natural light and home orientation. As reflected in the quotes below, watching the *'Renovate or Rebuild'* TV show seemed to have a positive influence on some viewers:

"Now people are considering what are the best ways to cool a place and warm a place and do it effectively and environmentally and those weren't concerns that people had before so it makes any idea for renovating quite different for the future."

"It made me aware if I were to buy an established house what to look for – like north facing and being aware that heat rises and bringing the indoor and the outdoor together and just being more aware. Our house before was south facing and it was stinking hot in summer, and so cold in winter. The windows had draught all the time coming in. I didn't know about double glazed windows and different surrounds around the windows and things like that."

3.2 Purchases of housing- and building-related products/services

One primary aim of the *'Renovate or Rebuild'* TV series was to stimulate interest and growth in Australian consumers' purchasing patterns for specific products/services related to residential energy efficiency and sustainable housing. In turn, Survey 3 included questions that were designed to explore participants' self-reported brand awareness for various home and building materials, as well as their intentions and decision-making behaviour in regard to buying some of the products/services related to (and featured in) the show. To explore the show's potential impact on such intentions and behaviour, a set of quantitative analyses were conducted to compare the survey responses of viewers and non-viewers. Some key results of these analyses are presented below.

3.2.1 Brand awareness for specific products/services

First, participants were asked about their awareness of specific products and services related to housing, building, and construction. To reduce the risk of bias and avoid inadvertently priming participants in early stages of the research, these brand-related questions were only asked at the end of the study, specifically in Survey 3. To strengthen the quantitative analysis of results, questions were included in the final survey to assess participants' self-reported awareness of brand names that were both *mentioned* in the show (e.g. NatHERS, Energy Matters, Ultimate Windows, Integra Windows, Bondor, Sustainability Victoria, Deceuninck) and *not mentioned* in the show (e.g. Dulux, Colorbond Steel, James Hardie Australia, Laminex).

As shown in Figure 19, results revealed that the sub-sample of viewers tended to report a higher level of brand awareness for products/services that featured in the show compared to non-viewers. In addition, these observed differences between sub-samples were smaller or not apparent (i.e. not statistically significant) for other well-known brands of products and services that did not appear in the show.

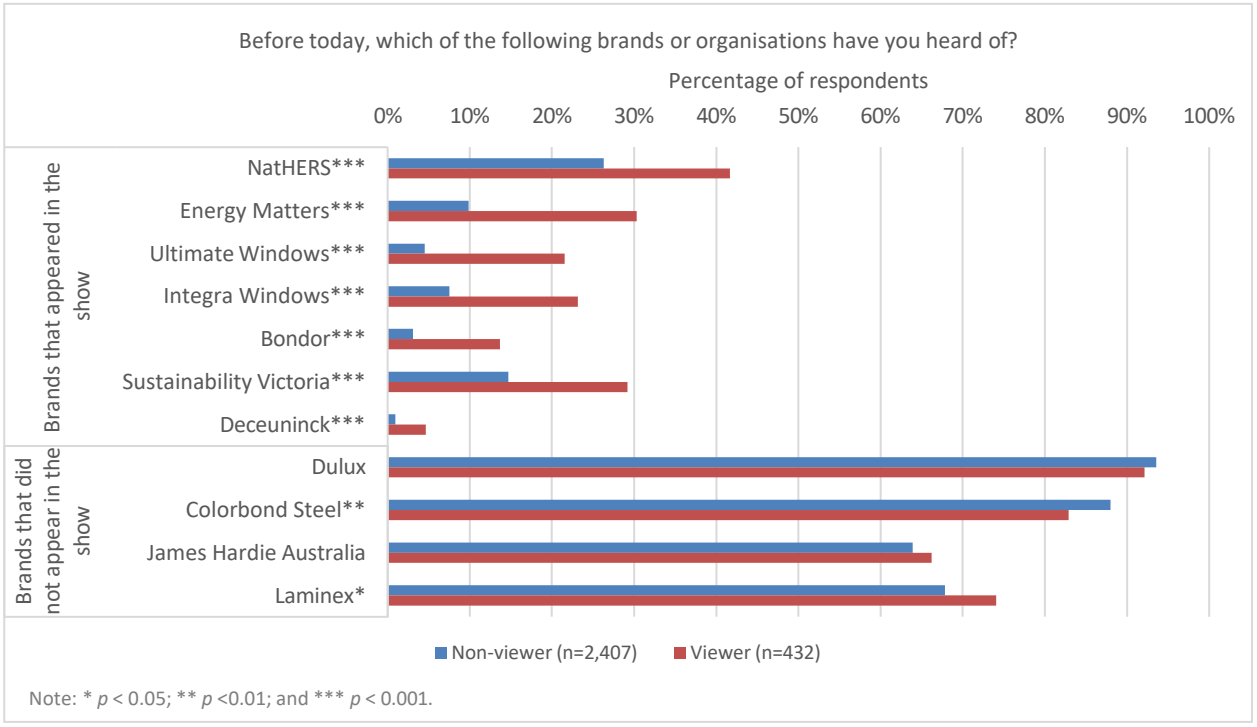


Figure 19 Self-reported brand awareness of various housing/building-related products and services for viewers and non-viewers in Survey 3.

3.2.2 Changes in purchasing behaviour for specific products/services

Survey 3 also asked participants whether they had contacted, made enquiries with, or sought information from some of the brands and organisations that featured in the *'Renovate or Rebuild'* TV series. As shown in Figure 20, participants in the viewer sub-sample were more likely to report these behaviours compared to non-viewers, with these sub-sample differences reaching statistical significance ($p < 0.05$) for almost all of the brands and organisations that participants were asked about.

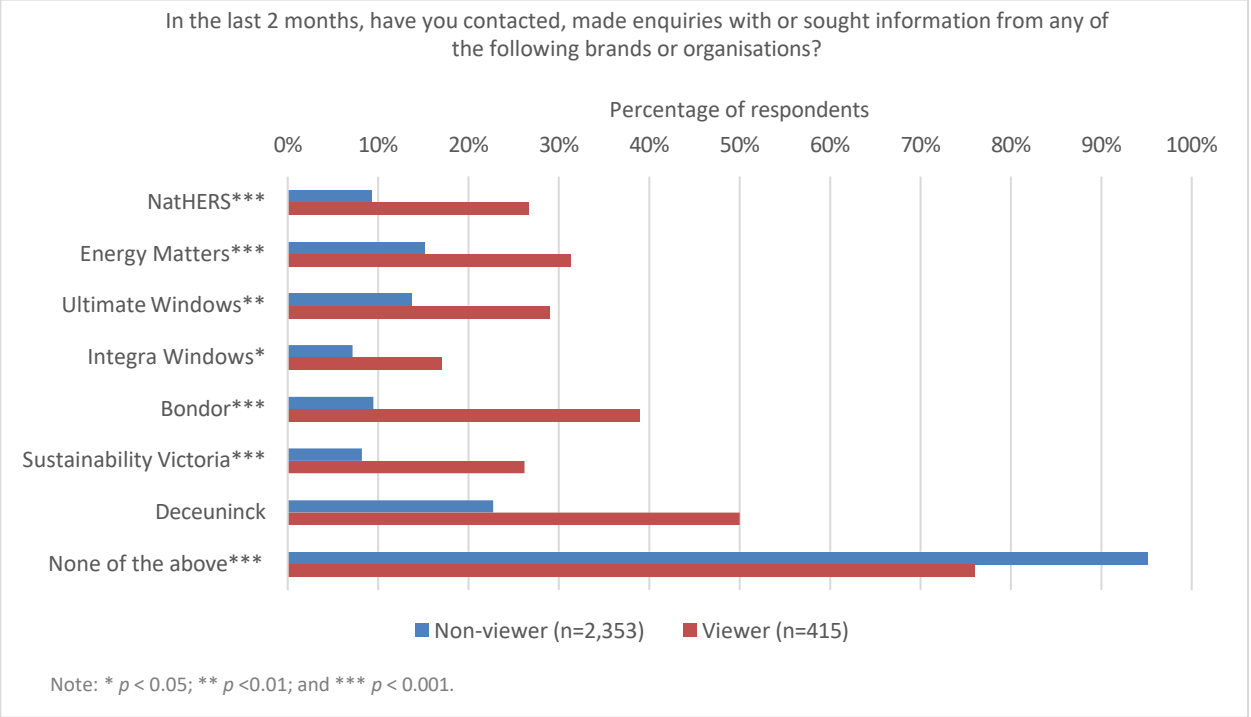


Figure 20 Self-reported purchasing behaviour (e.g. contacting, making enquiries, seeking information) for viewers and non-viewers in Survey 3

Results also revealed that compared to the sub-sample of non-viewers, viewers of the *'Renovate or Rebuild'* TV series were more likely to report engaging in several sustainability-related behaviours in the past two months, including: (a) obtaining quotes for solar panels and/or battery storage (see Figure 21); (b) intending to buy solar panels to generate electricity for current and/or future properties (see Figure 22); (c) purchasing or intending to purchase uPVC windows (see Figure 23); and (d) purchasing or intending to purchase insulation (see Figure 24).

Importantly, these quantitative results of the online survey were generally supported by the qualitative data collected from participants during the focus group discussions. For example, some participants in the focus groups indicated that they were thinking about using new products in their homes as a result of watching the show, e.g. by seeking quotes for windows and verandas.

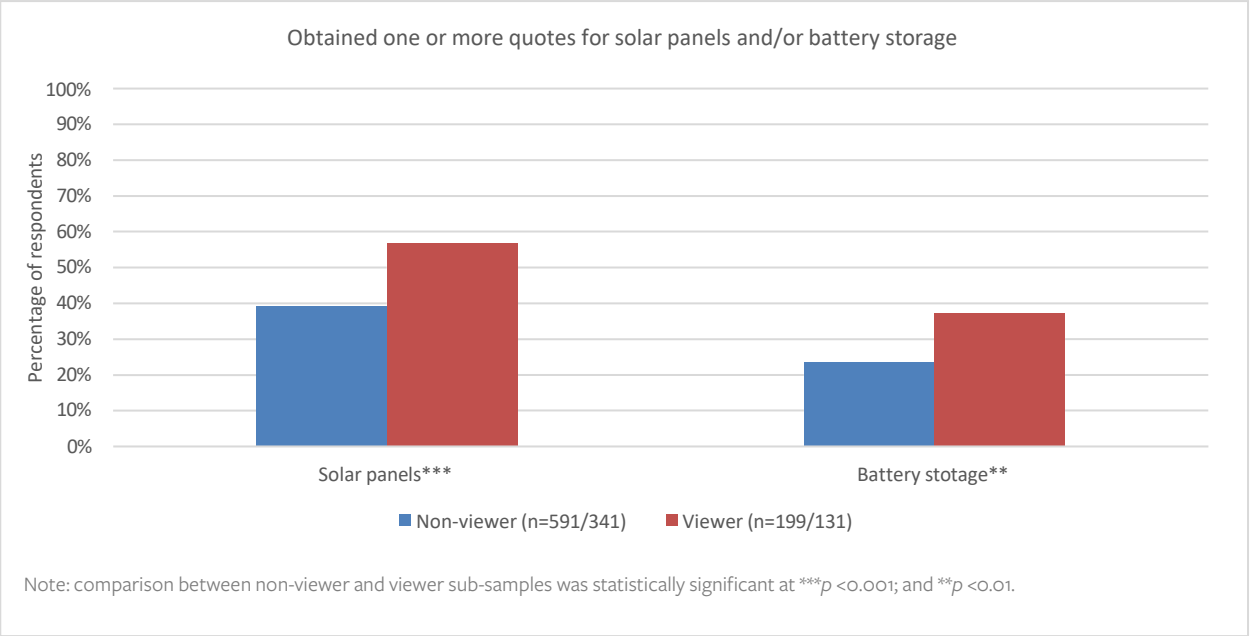


Figure 21 Self-reported behaviour of non-viewers and viewers regarding obtaining solar panels and battery storage quotes: Survey 3 results

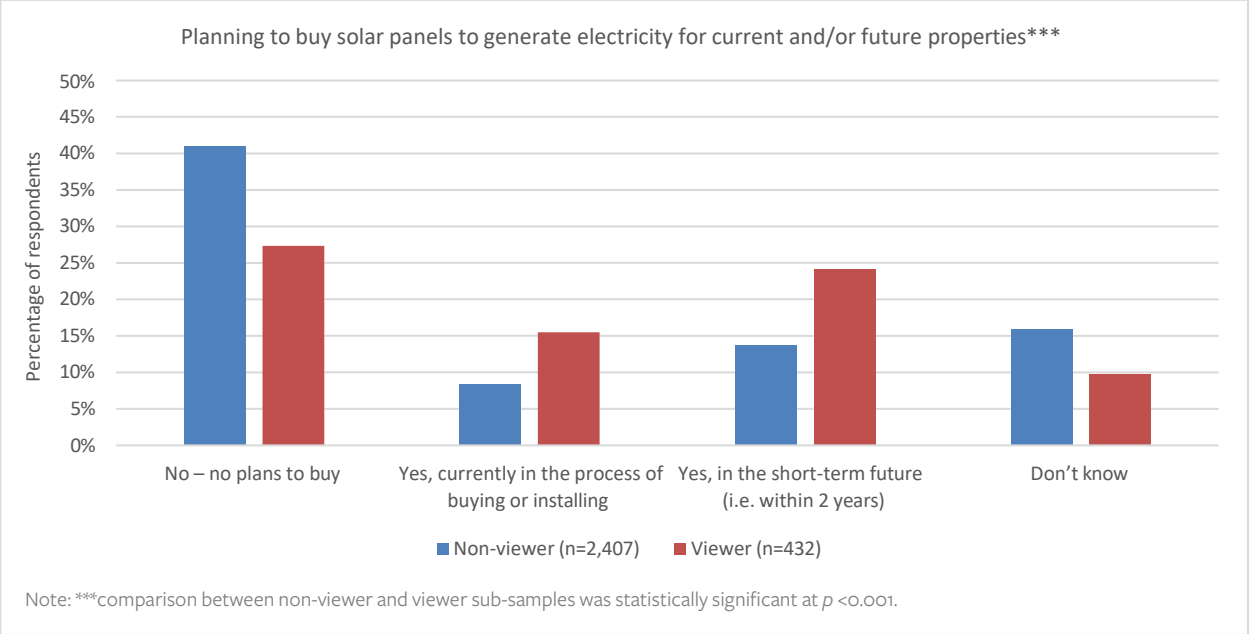


Figure 22 Self-reported intentions and behaviour of non-viewers vs. viewers regarding purchasing solar panels: Survey 3 results

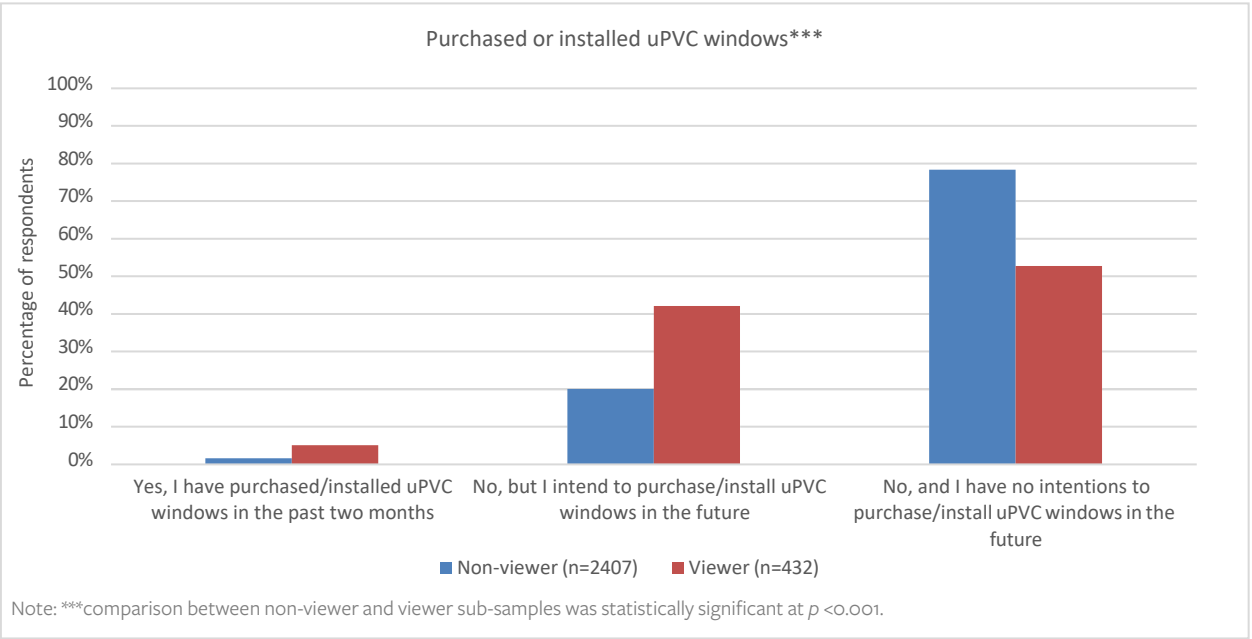


Figure 23 Self-reported intentions and behaviour of non-viewers vs. viewers regarding purchasing/installing uPVC windows: Survey 3 results

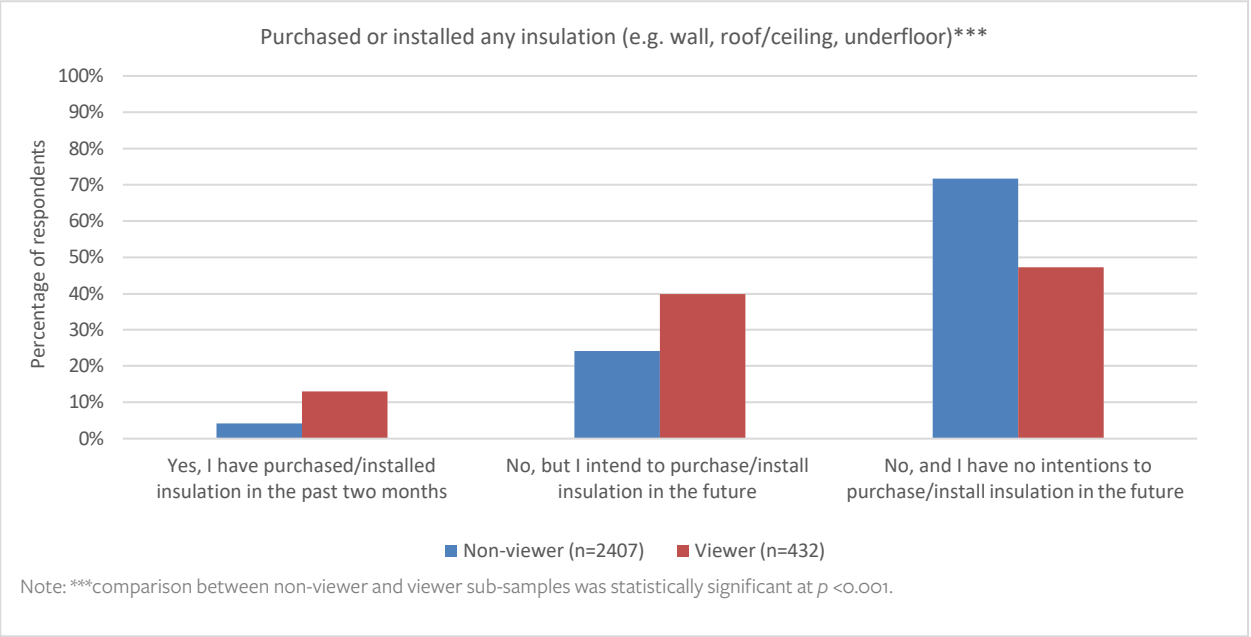


Figure 24 Self-reported intentions and behaviour of non-viewers vs. viewers regarding purchasing/installing insulation: Survey 3 results

3.3 Purchases of other sustainability-related products

Alongside exploring participants' self-reported intentions and behaviour in regard to purchasing products and services highlighted in the *'Renovate or Rebuild'* TV series, Survey 3 also included a question to explore whether watching the show may have influenced the self-reported intentions of participants in regard to buying other sustainability-related products that were *not* highlighted in the show – namely battery storage and electric vehicles (EVs). As shown in Figure 25 and Figure 26, respectively, a comparative analysis of the results of Survey 3 revealed that the sub-sample of viewers were more likely to report plans to buy battery storage systems and/or EVs compared to the sub-sample of non-viewers.

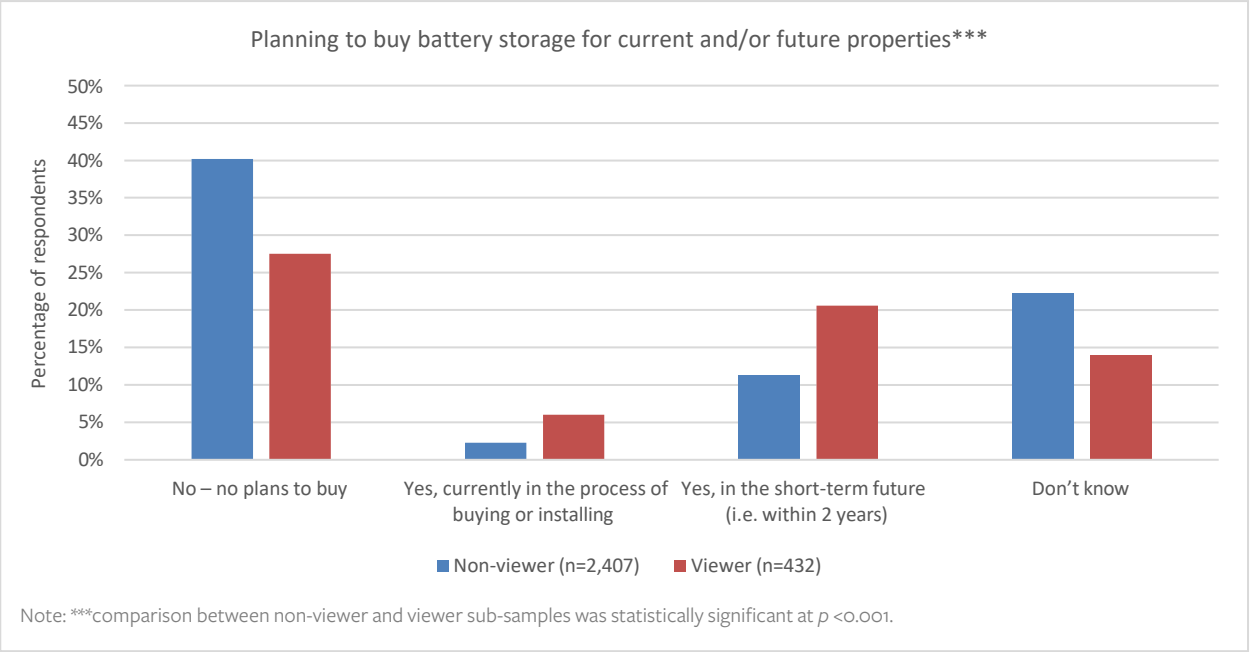


Figure 25 Self-reported intentions of non-viewers vs. viewers regarding purchasing battery storage: Survey 3 results.

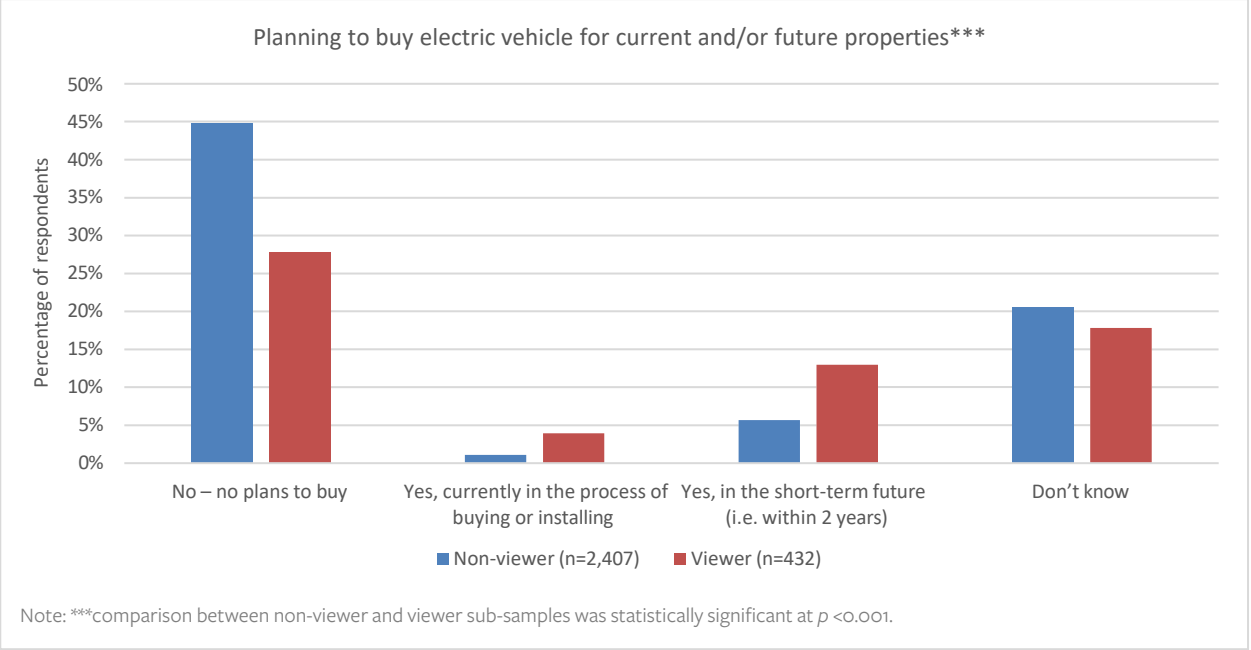


Figure 26 Self-reported intentions of non-viewers vs. viewers regarding purchasing electric vehicles: Survey 3 results.

3.4 Other pro-environmental behaviour

Another key aim of the current research was to explore whether exposure to the sustainability-related content featured throughout the *'Renovate or Rebuild'* TV series would have any 'flow-on' or spill over effects for the sub-sample of viewers who were exposed to the show, specifically in terms of the likelihood of performing other pro-environmental actions or sustainability behaviours that were not directly discussed or explicitly featured in the show. To investigate this, survey respondents were asked about how frequently they engaged in a wide range of sustainability-related behaviours, both in Survey 1 (i.e. before *'Renovate or Rebuild'* went to air) and again in Survey 3 (i.e. after all eight episodes of *'Renovate or Rebuild'* went to air).

As shown in Table 2, a comparative analysis of participants' self-report data from Survey 1 revealed that at the very outset of the study – that is, at baseline (i.e. before the full 8-part *'Renovate or Rebuild'* TV series was broadcast) – the sub-sample of viewers already tended to perform a range of environmentally friendly behaviours more frequently than non-viewers. More specifically, when completing Survey 1, those in the viewer sub-sample were statistically more likely to report more frequently engaging in the following pro-environmental and sustainability-related behaviours than non-viewers:

- Waiting until dishwasher is full before use
- Using a reusable bottle/cup rather than disposable options
- Composting kitchen waste
- Taking shorter showers (e.g. 4 minutes or less)
- Reducing the use of air-conditioning and/or heating
- Buying products with less packaging
- Reducing the amount of meat and dairy products consumed
- Walking or cycling instead of using a motor vehicle (e.g. car, bus, motorbike)
- Using public transport or carpooling rather than driving a private vehicle by oneself
- Buying second hand goods (i.e. clothes/furniture from op shops and/or online marketplaces such as eBay, Gumtree, Facebook Marketplace)

However, in Survey 1, non-viewers were statistically more likely to report recycling plastics (e.g. bottles, containers) than viewers. Together, these results suggest that before the full series of *'Renovate or Rebuild'* went to air, there were marked systematic differences in the self-reported behaviour of viewers and non-viewers across a range of pro-environmental actions and practices.

Table 2 Self-reported frequency of performing various environmentally friendly behaviours: Survey 1 results for viewers and non-viewers

PRO-ENVIRONMENTAL BEHAVIOUR	SUB-SAMPLE	NOT APPLICABLE	NEVER	RARELY	SOMETIMES	OFTEN	ALWAYS
Recycle plastics (e.g. bottles, containers) **	Non-viewer	0%	1%	1%	4%	11%	83%
	Viewer	1%	1%	1%	6%	13%	78%
Recycle paper and cardboard products	Non-viewer	0%	1%	1%	4%	12%	82%
	Viewer	0%	1%	1%	6%	14%	76%
Recycle glass products/containers	Non-viewer	1%	1%	1%	5%	12%	81%
	Viewer	2%	1%	1%	7%	14%	75%
Recycle aluminium products (e.g. cans, tins)	Non-viewer	1%	1%	2%	5%	11%	80%
	Viewer	1%	1%	2%	6%	13%	76%
Line dry the laundry	Non-viewer	1%	3%	3%	7%	17%	70%
	Viewer	1%	2%	3%	6%	16%	72%
Turn off the tap while brushing teeth	Non-viewer	1%	2%	4%	10%	14%	69%
	Viewer	1%	2%	2%	9%	15%	72%
Use cold wash/rinse setting for washing machine	Non-viewer	1%	2%	5%	11%	15%	65%
	Viewer	0%	1%	3%	11%	18%	66%
Wait until clothes washing machine is full before use	Non-viewer	1%	1%	2%	9%	24%	63%
	Viewer	0%	1%	3%	7%	25%	63%
Wait until dishwasher is full before use**	Non-viewer	34%	1%	0%	3%	10%	52%
	Viewer	25%	1%	1%	5%	14%	54%
Use a reusable bottle/cup rather than disposable options***	Non-viewer	5%	5%	6%	18%	32%	34%
	Viewer	3%	3%	3%	18%	35%	38%
Compost kitchen waste**	Non-viewer	12%	22%	11%	11%	11%	32%
	Viewer	10%	14%	7%	11%	18%	40%
Take shorter showers (e.g. 4 minutes or less) **	Non-viewer	1%	4%	11%	23%	31%	32%
	Viewer	0%	2%	5%	20%	33%	40%
Reduce the use of air-conditioning and/or heating***	Non-viewer	5%	2%	5%	27%	36%	25%
	Viewer	4%	3%	4%	23%	35%	32%
Buy products with less packaging***	Non-viewer	2%	1%	8%	33%	40%	16%
	Viewer	0%	2%	3%	25%	44%	25%
Reduce the amount of meat and dairy products consumed ***	Non-viewer	2%	19%	19%	28%	20%	12%
	Viewer	3%	10%	18%	26%	28%	16%
Walk or cycle instead of using a motor vehicle (e.g. car, bus, motorbike) ***	Non-viewer	11%	21%	16%	23%	17%	11%
	Viewer	7%	15%	13%	24%	24%	17%
Using public transport or carpooling rather than driving a private vehicle by yourself***	Non-viewer	22%	31%	15%	12%	10%	10%
	Viewer	14%	19%	17%	18%	15%	17%
Buy second hand goods (e.g. clothes/ furniture from op shops and/or online marketplaces such as eBay, Gumtree, Facebook Marketplace) ***	Non-viewer	7%	18%	18%	27%	20%	10%
	Viewer	3%	12%	14%	27%	29%	15%

Note: ***statistically significant differences between viewers and non-viewers at $p < 0.001$; ** statistically significant differences between viewers and non-viewers at $p < 0.01$.

In addition to comparing the pro-environmental behaviours reported by viewers vs. non-viewers in Survey 1 alone, a set of quantitative analyses were conducted to compare participants' responses in Survey 1 (i.e. before *'Renovate or Rebuild'* went to air) vs. Survey 3 (i.e. after all eight episodes of *'Renovate or Rebuild'* went to air). These comparative analyses aimed to explore whether the environmentally friendly actions and sustainability practices reported by participants may have changed over time.

Generally speaking, the results of these comparative analyses revealed no statistically significant ($p < 0.01$) differences in participants' responses over time (i.e. between Surveys 1 and 3) for either the viewer or non-viewer sub-samples. However, exceptions to this general trend were observed among non-viewers for two pro-environmental behaviours – namely the use of reusable shopping bags and taking shorter showers. In particular, the non-viewer sub-sample tended to report using reusable shopping bags more frequently in Survey 1 (vs. Survey 3) and taking shorter showers more frequently in Survey 3 (vs. Survey 1). However, caution must be exercised when interpreting these results due to the large number of comparisons that were

conducted, as well as the small number of statistically significant differences that were identified. It is possible, for example, that these two results may be random effects and due to chance alone.

3.5 Amount of exposure to the show

The current research also aimed to explore what potential impact (if any) the amount of exposure to the *'Renovate or Rebuild'* TV series had on the self-reported preferences of viewers. Before addressing this research question, it is important to firstly examine which episodes in the full TV series were watched by participants over the course of the longitudinal study – not only in terms of the *overall number* of episodes that were watched, but also the *specific episode*(*s*) that were watched most vs. least by participants.

As shown in Figure 27, an analysis of data collected in Survey 3 revealed that most viewers reported watching no more than three episodes of the *'Renovate or Rebuild'* TV series, either in part or in full. Only about one-fifth of the viewer sub-sample reported watching four or more episodes in total, with the proportion of viewers who watched part vs. full episodes being relatively comparable in size.

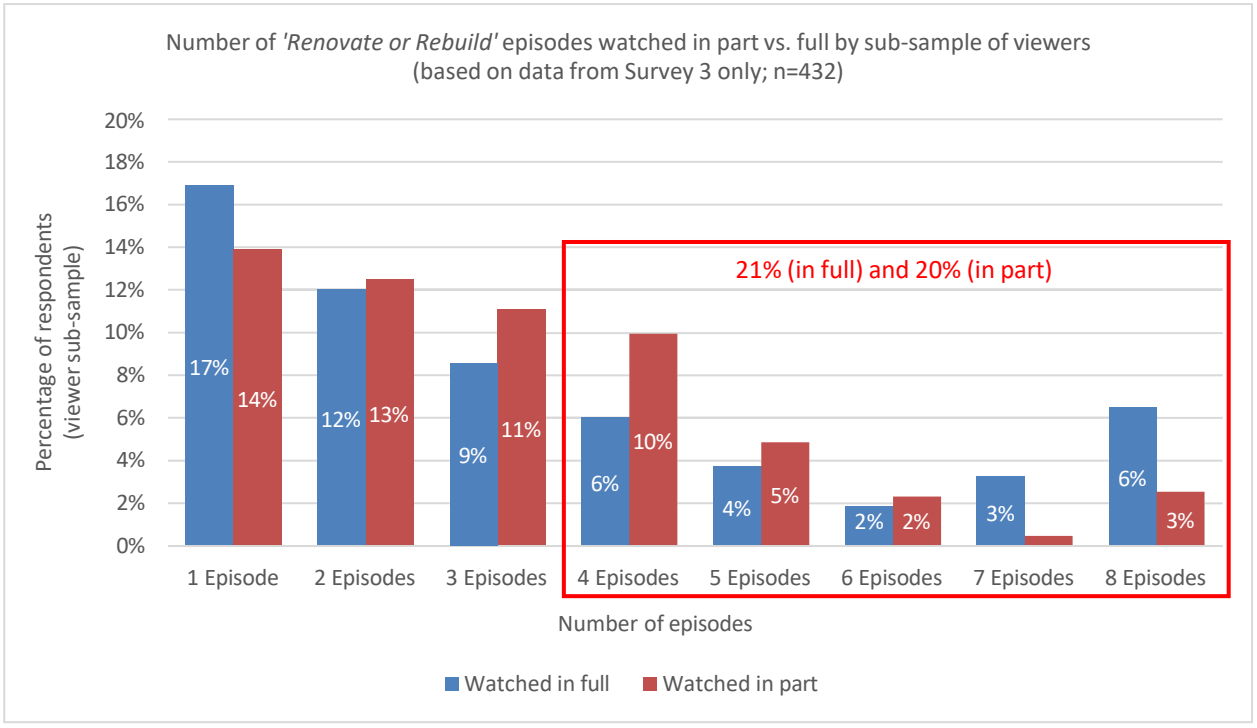


Figure 27 Number of *'Renovate or Rebuild'* episodes watched in part or full by sub-sample of viewers (based on Survey 3 data)

Results also revealed that on average, each episode of the *'Renovate or Rebuild'* TV series was watched in full by about one-quarter to one-fifth of the viewer sub-sample, except for the very first episode that was watched in full by approximately one-third of all viewers. As shown in Figure 28, Episode 1 was the most watched episode in the full series (59% of viewers reported watching either in part or full) whereas the least watched episode was Episode 8 (35% of viewers reported watching either in part or full).

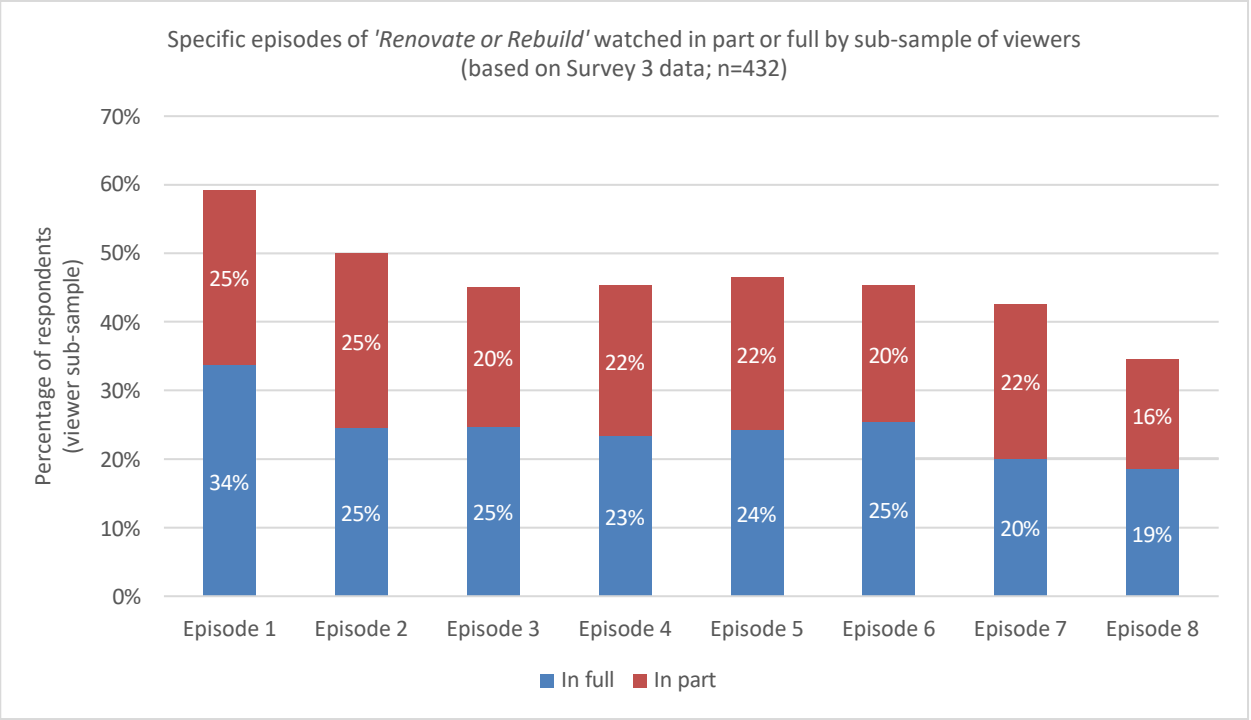


Figure 28 Specific *'Renovate or Rebuild'* episodes watched in part or full by sub-sample of viewers (based on Survey 3 data)

Overall, these results demonstrate how the data analysis may have been impacted by small sample sizes for the viewer sub-sample. While there was noticeable variability in the total number of episodes that viewers reported watching over the course of the full TV series, only about 20% of viewers reported watching at least four episodes in total.

To address some of the sample size limitations, a longitudinal data analysis using multilevel modelling was conducted to estimate participants' self-reported preferences for a home with an energy star rating above the minimum standard for Australia. One key advantage of multilevel longitudinal modelling is the ability to include in the analysis all participants who responded to at least one survey, while also considering the completion time difference between surveys when multiple surveys were completed by the respondent (Hox, Moerbeek, & van de Schoot, 2018). In turn, the multilevel modelling analysis included survey data for 4,286 participants in the non-viewer sub-sample and 626 participants in the viewer sub-sample, with the latter sub-sample including 491 participants who were recruited through the online panel provider and 135 participants who were recruited through the open weblink.

The longitudinal data analysis revealed that before watching the *'Renovate or Rebuild'* TV episodes, all sub-samples appeared to have similar self-reported preferences for homes with an energy star rating above the minimum standard for Australia. For example, results indicated that there was a 10% to 15% chance of participants rating this home feature as a 'must have' and an 80% chance of participants rating this home feature as a 'nice to have' at the outset of the study (i.e. in Survey 1). However, the longitudinal analysis revealed that for the viewer sub-sample, an increase in the number of hours spent watching the TV series was correlated with a higher probability of rating this home feature as a 'must have' (see Figure 29). More specifically, compared to the non-viewer sub-sample, the chance of a respondent rating an 'energy rating above the minimum standard for Australia' as a 'must have' feature was 19% higher for those in the viewer sub-sample who were recruited through the online panel provider and 53% higher for those in the viewer sub-sample who were recruited through the open weblink. This finding is supported by the earlier results presented in section 3.1.4.

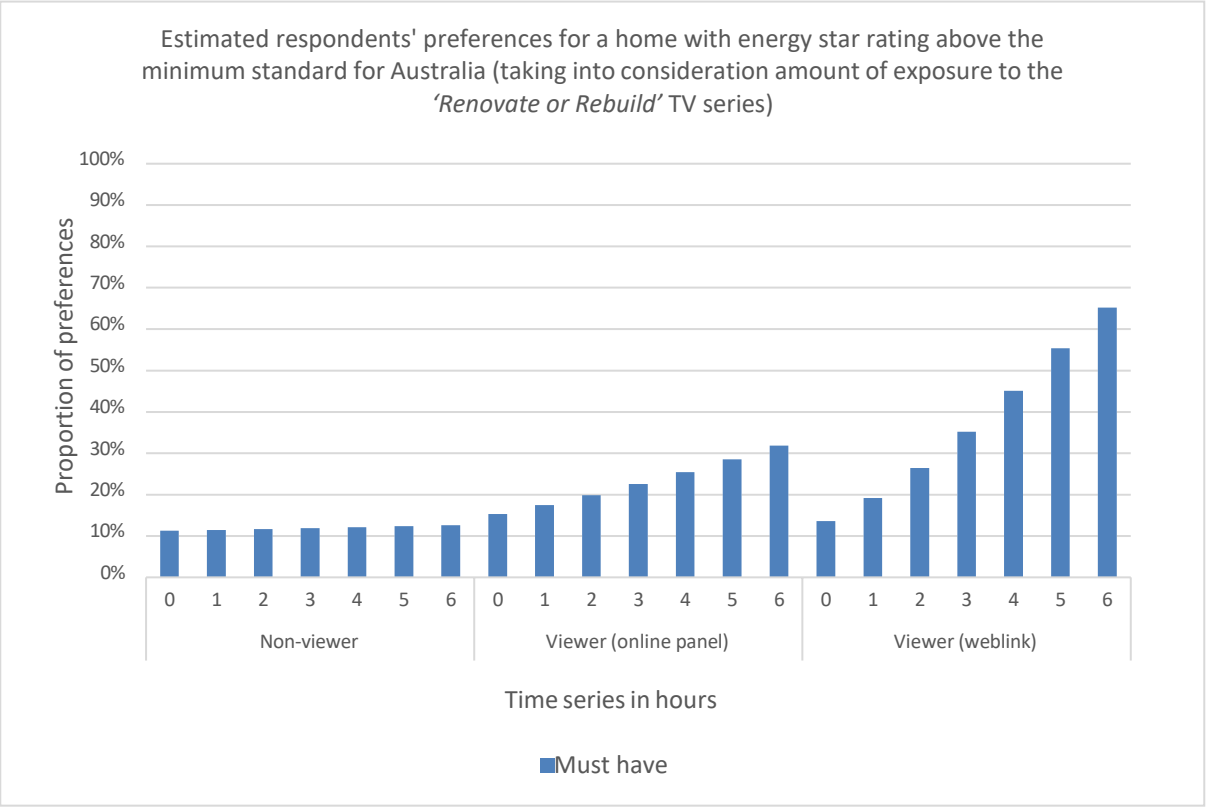


Figure 29 Self-reported preferences of non-viewers vs. viewers (both recruited through online panel and weblink) for a home with energy star rating above the minimum standard for Australia as a function of the length of exposure to the *'Renovate or Rebuild'* TV series

3.6 Effectiveness of key messages

3.6.1 Home energy star rating

In terms of the behavioural science strategies embedded in the *'Renovate or Rebuild'* TV series, one strategy involved reinforcing a key message related to the Nationwide House Energy Rating Scheme (NatHERS) – which is widely used across Australia to measure a home's energy efficiency and generate a star rating – and the benefits of achieving a higher NatHERS star rating. As reported in Section 3.1.4, results of the current study revealed that the proportion of participants in the viewer sub-sample who reported that they consider 'a home energy star rating above the minimum standards for Australia' to be a 'must have' housing feature was significantly higher in Survey 3 (i.e. at the end of the TV series) compared to Survey 1 (i.e. at the start of the TV series). In contrast, no statistically significant difference in participants' responses to this question over time (i.e. Survey 1 vs. Survey 3) was found for the non-viewer sub-sample.

Relatedly, as reported in Section 3.5, among participants in the viewer sub-sample, there appeared to be a significant increase in the self-reported desire for a home energy star rating above the minimum standard as the amount of *'Renovate or Rebuild'* content and/or number of episodes watched by viewers increased. Together, these results provide preliminary and tentative support for the conclusion that the use of repeated messaging for NatHERS energy ratings throughout the TV series was likely to be an effective strategy by positively influencing a proportion of viewers; that is, at the end of the *'Renovate or Rebuild'* TV series (and

therefore after potential exposure to the repeated messaging strategy), some viewers might be more likely to seek a home with an energy star rating above the minimum standards.

3.6.2 'Energy efficient' vs. 'Sustainable' terminology

When communicating key messages, information and material to consumers, it is very important to use the correct terminology and language, namely because this may influence how the communication is received, its credibility and persuasiveness, and the subsequent potential impact(s) on people's decision-making and behaviour. In the residential energy efficiency and sustainable housing domains, as well as in the *'Renovate or Rebuild'* TV series, the terms 'energy efficient' and 'sustainable' are often used interchangeably – even though consumers may perceive or interpret the meaning of these terms differently. In light of this, the current study aimed to explore whether the terms 'sustainable' and 'energy efficient' are viewed similarly or differently by participants, and whether one term is preferred over the other. Better understanding how specific terminology is received and interpreted by consumers is also important for informing the effective design and delivery of future communication strategies.

To explore people's perceptions of these two terms and explore whether they are interpreted in a similar or different way, one of the questions in Surveys 1 and 3 asked respondents to rate the importance of living in a home that is 'sustainable (e.g. low energy and water usage, low environmental impact)' or 'efficient (e.g. low energy and water usage)'. As shown in Figure 30, in both surveys, the sub-samples of viewers and non-viewers answered this question by assigning higher importance ratings to the term 'efficient' than 'sustainable'. However, the difference between participants' ratings of these two terms tended to be smaller for viewers.

Moreover, the proportion of survey participants who rated 'sustainable' as very or extremely important was higher for viewers (e.g. 70% and 66% of the sub-sample in Surveys 1 and 3, respectively) than non-viewers (e.g. 62% and 63% of the sub-sample in Surveys 1 and 3, respectively). However, there were no statistically significant differences in participants' self-reported ratings over time; that is, on average, the responses of participants did not meaningfully vary between Surveys 1 and 3. For the viewer sub-sample, these results suggest that watching the *'Renovate or Rebuild'* TV series had little to no effect on participants' self-reported preferences for the two terms.

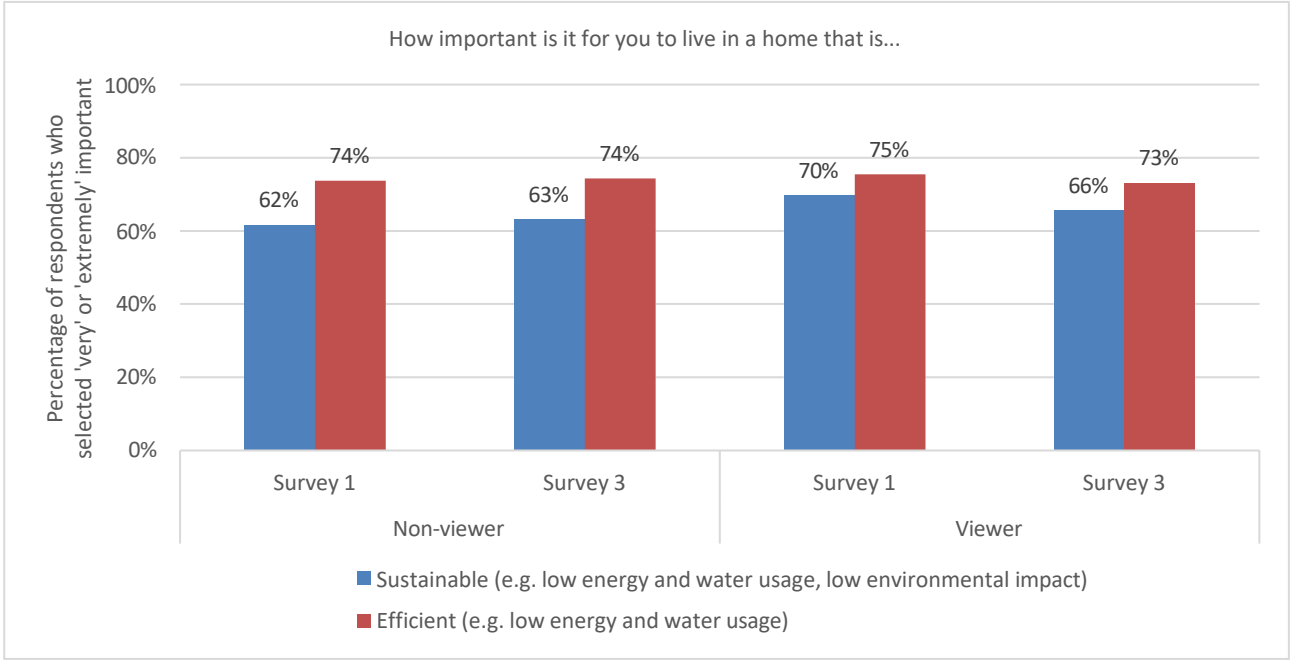


Figure 30 Proportion of participants who rated living in an 'energy efficient' and 'sustainable' home as very or extremely important: Results for Surveys 1 vs. 3 for the non-viewer and viewer sub-samples.

To further compare and contrast how the terms 'energy efficiency' and 'sustainability' are perceived by participants, the current research also analysed the results of several survey questions that used the two terms interchangeably. The two terms were randomly assigned to survey participants; that is, some participants were asked questions with the term 'energy efficient' whereas other participants were asked the same questions with the term 'sustainable'. The specific term that was randomly assigned to each participant remained consistent across the course of the study – for example, if a participant was assigned the term 'energy efficient' for questions in Survey 1, the same term was assigned in Surveys 2 and 3.

One of the survey questions asked participants about specific housing characteristics they might associate with a 'sustainable' or 'energy efficient' home. More specifically, some participants were asked to indicate the extent to which they agreed that a '*sustainable*' home was 'stylish', 'healthy', '*efficient*', 'comfortable', affordable' and 'resilient', whereas others were asked to indicate the extent to which they agreed that an '*energy efficient*' home was 'stylish', 'healthy', '*sustainable*', 'comfortable', affordable' and 'resilient'. An analysis of data from this survey question revealed no statistically significant differences between the responses of viewers and non-viewers; thus, the results reported below are for the total combined sample of all survey participants (i.e. both viewers and non-viewers analysed together).

As shown in Figure 31, statistically significant differences between the two terms only emerged for one characteristic: 'resilience'. Participants who were randomly assigned a question using the term 'sustainable' were more likely to perceive a 'sustainable' home as being resilient (e.g. 80% of the sub-sample agreed or strongly agreed) compared to respondents who were randomly assigned a question using the term 'energy efficient' (e.g. 71% of the sub-sample agreed or strongly agreed). In addition, it seems that participants were more likely to perceive the term 'sustainable' as encompassing 'energy efficiency' than the other way around. For example, in Survey 3, while 49% of participants 'strongly agreed' that a sustainable home was energy efficient, only 42% of participants 'strongly agreed' that an energy efficient home was sustainable.

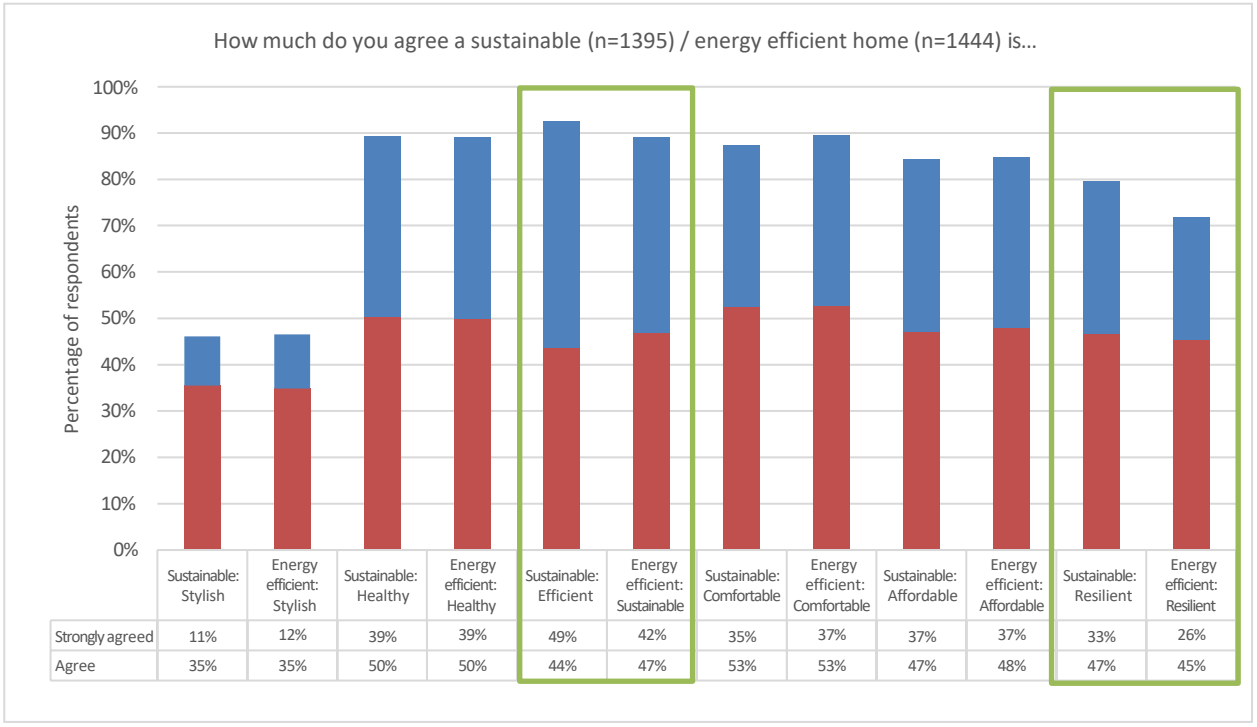


Figure 31 Participants' self-reported association of different descriptors with an 'energy efficient' vs. 'sustainable' home: Results for total sample (viewers and non-viewers combined) from Survey 3.

In another survey question, participants were asked to indicate which housing features (from a pre-defined checklist) they associated with homes that are described as 'sustainable' or 'energy efficient'. As shown in Figure 32, participants who were assigned the question using the term 'energy efficient' were slightly more likely to associate this type of home with technologies related to thermal performance (e.g. energy efficient air-conditioning and heating systems, double glazed and tinted windows/doors, airtightness), as well as battery storage systems. On the other hand, participants who were assigned the question using the term 'sustainable' were more likely to associate this type of home with features such as rainwater tanks, recycled construction materials, and low volatile organic compound (VOC) products.

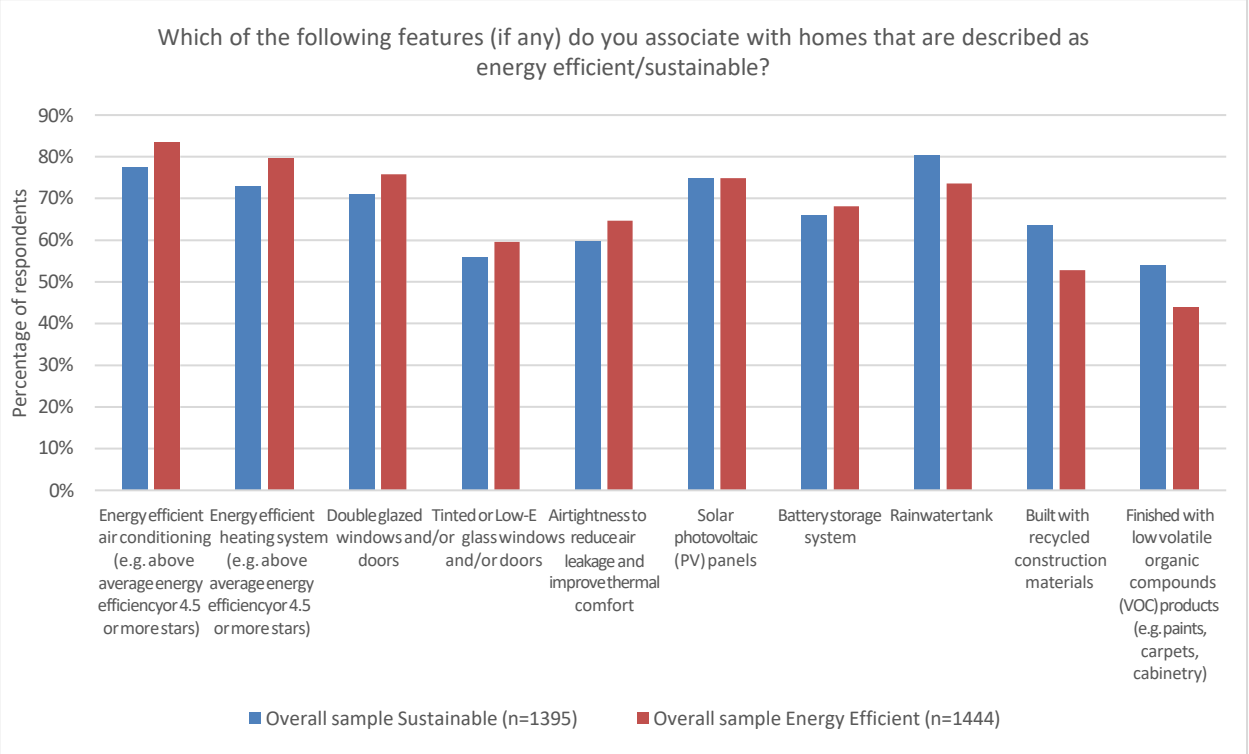


Figure 32 Overall participants responses regarding housing features associated with 'energy efficient' and 'sustainable.'

3.6.3 Perceptions of terminology among focus groups participants

The focus group discussions also explored participants' perceptions and reactions to different terminology. In general, the two terms/themes of 'energy efficiency' and 'sustainability' were both well-received by focus group participants. Furthermore, about four-fifths of participants (~80%) indicated they would like the *'Renovate or Rebuild'* TV series to include more content and have a greater focus on these two topics, whereas the remainder (~20%) thought that the current level of focus was sitting at the right level.

In addition, the majority of focus group participants reported that they enjoyed the show's educational aspect and did not perceive the terms 'energy efficiency' or 'sustainability' to be polarising. This finding is illustrated by the quotes below:

> *"Not polarising. I think it's really engaging because we've never had to look at the environment so carefully and ponder what's going to happen in future years for people and everything that you can do to make a place more environmentally friendly, sustainable, more affordable to run, more cost effective for energy and heating and all those things – they're really, really valid now I think more than before."*

> *"The planet relies on us becoming more efficient in using less energy – so the more that this show can reinforce that, the better from my point of view."*

3.7 Engagement and evaluation of *'Renovate or Rebuild'*, including social media and web content

As part of the broader communications strategy for the *'Renovate or Rebuild'* TV series, a suite of online material and social media content was designed and deployed in the field. This material/content served two distinct yet complementary purposes that were bi-directional in nature – firstly to provide information to audiences, and secondly to collect information from audiences. For example, the show's producers (the Blue Tribe Company) created a dedicated website for the show to publicly promote and advertise the TV series, including 'recap' summaries of each individual episode. In addition, a range of social media content was developed to further promote the show and engage with potential viewers, including a Facebook page and an Instagram page.

One final goal of the current research was to explore whether watching the *'Renovate or Rebuild'* TV series motivated viewers to engage with this secondary content (i.e. social media and online/web material), and if so, the extent to which this occurred over the course of the study. Before presenting results relating to viewers' engagement with the social media/web content, however, it is important to explore how the show was generally received by audiences more broadly. Because questions about the show itself are only relevant and applicable to participants who watched at least one episode of the *'Renovate or Rebuild'* TV series, these questions were not asked to those who reported not watching the show.

3.7.1 Audiences' overall evaluation of *'Renovate or Rebuild'*: Quantitative survey data

A quantitative analysis of data from Survey 3 (i.e. after Episode 8) demonstrated that overall, viewers of *'Renovate or Rebuild'* evaluated the TV show positively. As shown in Figure 33, the vast majority of survey respondents who reported watching the show either agreed or strongly agreed that the show was informative (82% of viewers), they enjoyed watching the show (82% of viewers), and they found the show entertaining (80% of viewers). Most participants in the viewer sub-sample also agreed or strongly agreed that the show's content was credible and trustworthy (75% of viewers), it offered something different to other reality/lifestyle real-estate shows (73% of viewers), and the show's cast were authentic and relatable (71% of viewers). Comparatively smaller proportions of viewers agreed or strongly agreed that they would recommend the show to family or friends (68% of viewers), felt excited to see the next episode (66% of viewers), and felt the show was relevant to them (62% of viewers).

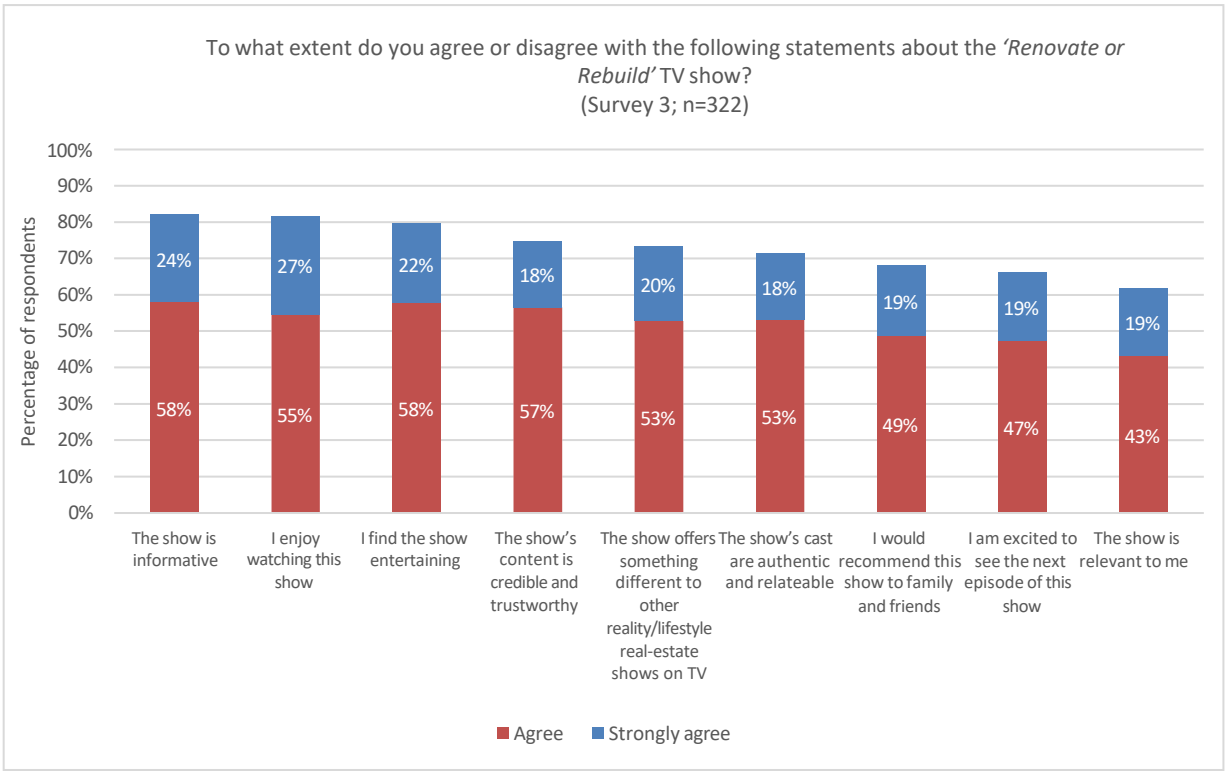


Figure 33 Participants' overall perceptions of the *'Renovate or Rebuild'* TV series: Results from Survey 3 for the viewer sub-sample

3.7.2 Audiences' overall evaluation of *'Renovate or Rebuild'*: Qualitative focus group data

Generally speaking, qualitative data collected through the focus group discussions supported the results of the online survey when it came to participants' overall perceptions of the *'Renovate or Rebuild'* TV series. The general feedback received from focus group participants was mostly positive, especially for the show's specific target audience that was identified by the producer and confirmed in pilot research to be the ideal target market (i.e. females, 35-55 years old). When less positive feedback was provided, most of the criticism was expressed by male participants and was focused on perceptions of the show having an 'infotainment' vibe or feel, with some participants expressing a desire for more detail and education within the show itself. Despite this, most focus group participants perceived the show's content as educational and informative, with some reporting that they learnt something new as a result of watching the show.

Qualitative insights from the focus groups also suggested that for some viewers, watching the show helped to increase their enthusiasm for property renovation. In general, focus group participants expressed a desire for the show to include more detail and information on the building/construction process, including the reveal of finished homes to audiences (i.e. after the properties are either rebuilt or renovated). Some participants suggested breaking down the home building/construction process into stages, to make the show more relevant to the average or typical homeowner who may be unable to do it all at once.

Focus group participants also expressed positive views around the concepts and topics of environmental sustainability and energy efficiency that featured heavily throughout the *'Renovate or Rebuild'* TV series, as well as enthusiasm for applying the new knowledge they gained from the show. For instance, some quotes that conveyed this notion included:

> *"I think if you were to buy again, you'd take a lot of that into consideration. A lot of the things they said about the aspect and that because that was very interesting, where you face, the higher ceilings and the flow and everything, that was really good."*

"One day hopefully I'll be in a position where maybe I can consider building – I will take that information on board."

However, focus group participants also asked for the inclusion of broader and more detailed information on sustainability and energy efficiency topics, especially information on the cost-benefit ratio, more relatable build and renovation budgets, and other cost-related material. Some specific suggestions for the show's design/content raised by participants in relation to costs included showcasing: more homeowners/families with lower budgets, a wider range of budget options, and more creative solutions to renovation/rebuilding (e.g. 'on the smallest budget, what could you achieve?').

In terms of the specific brands and organisations that featured in the *'Renovate or Rebuild'* TV series, some focus group participants felt that these were tokenistic sponsors and/or expressed uncertainty around the trustworthiness and credibility of information being delivered. Participants also reported a desire for more neutral and balanced content throughout the show, including information on the 'pros' and 'cons' of each brand or product. Other suggestions for the show's design/content that were raised during the focus group discussions included providing more information and a stronger justification for energy efficiency choices, adding an energy efficient 'expert' into the show's cast to provide their expertise, and including a score for environmental impact and energy efficiency as part of the judging criteria when the final renovation or rebuilding plans are revealed.

Finally, focus group participants were generally positive when evaluating the show's banter, cast and crew. While some considered the show to be 'a little overdone', one distinct and positive point of difference was the show having 'less drama' than other lifestyle/reality TV shows about real-estate (e.g. The Block, House Rules). Participants also expressed positive feedback on the show's light-hearted competition element, but at the same time, there was also a general sense of overall agreement that this aspect could be paired back in favour of including more detail. For example, some participants felt the show could have less 'chit-chat', a greater focus on the decision-making process driving the choice to renovate or rebuild, and content that was more relatable to audiences. In terms of the latter, one specific suggestion was to add an interactive aspect to the show whereby viewers could submit questions about their own renovation/rebuilding issues, experiences, or problems that need to be solved.

3.7.3 Social media usage

In Survey 3, the sub-sample of viewers was asked a series of questions about social media usage. Among those participants who reported using social media, the survey results revealed that Facebook was the most frequently used social media platform. As shown in Figure 34, approximately three-quarters of participants (76%) reported using Facebook either every day or a few days a week.

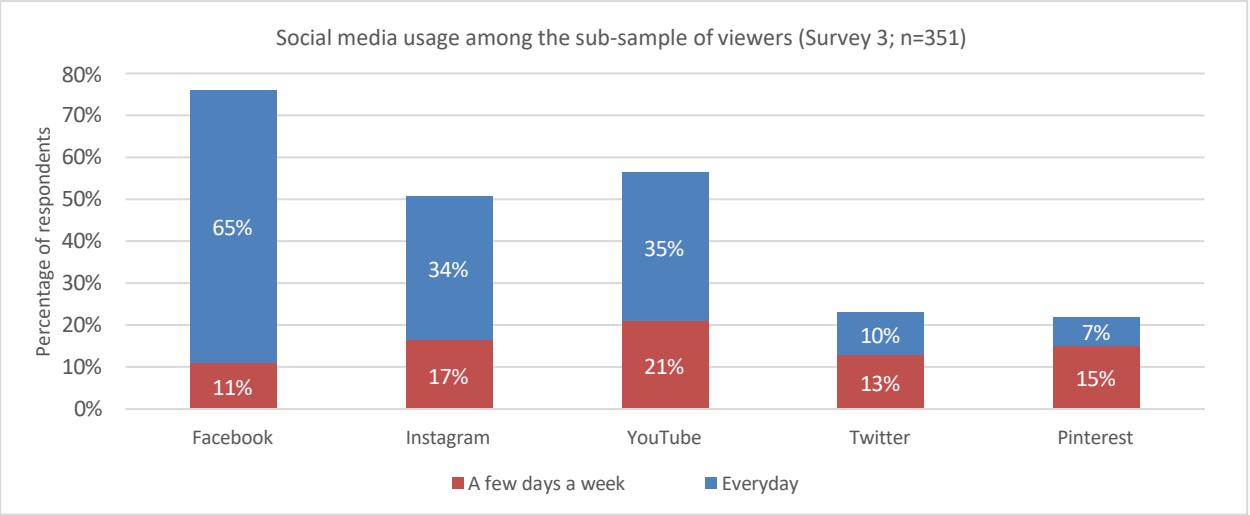


Figure 34 Participants' self-reported frequency of social media usage: Results from Survey 3 for the sub-sample of viewers

3.7.4 Social media engagement

In terms of the degree of viewers' interaction with the *'Renovate or Rebuild'* website and other social media sites (e.g. Facebook, Instagram, YouTube), an analysis of data from Survey 3 revealed very low engagement levels (see Figure 35). This pattern of results is likely to explain why recruiting participants through social media was very challenging, as reported earlier in Section 2.2.

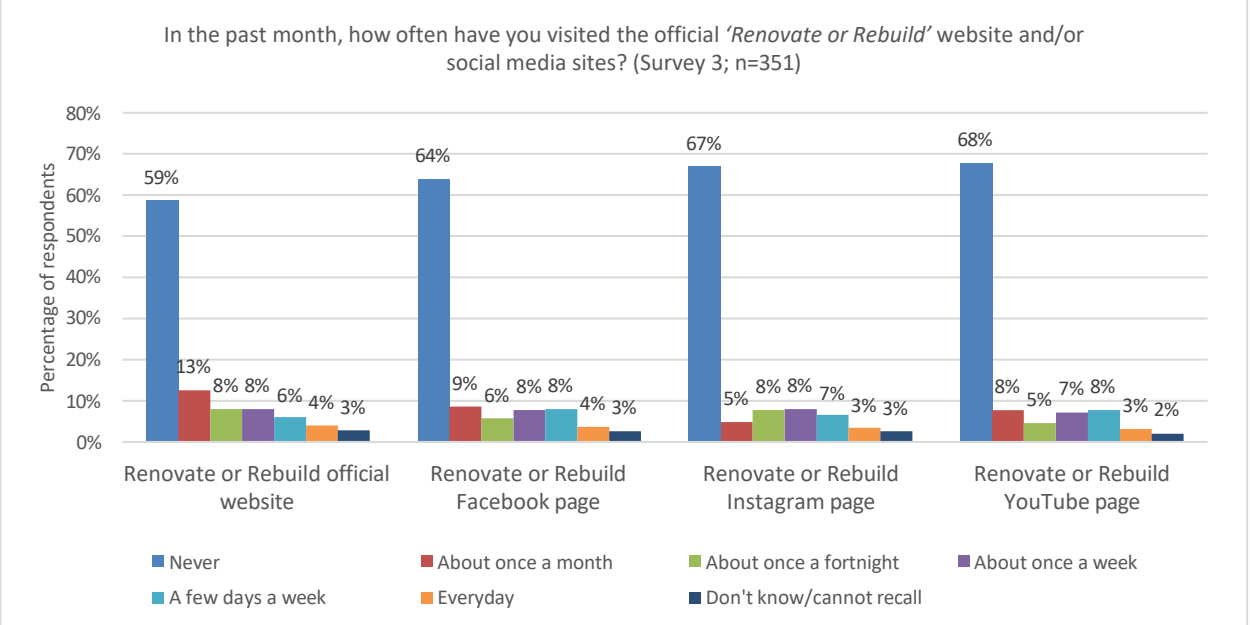


Figure 35 Participants' self-reported levels of engagement with the *'Renovate or Rebuild'* website and social media: Results from Survey 3 for the sub-sample of viewers

Survey 3 also asked the sub-sample of viewers whether they 'follow' any of the *'Renovate or Rebuild'* social media sites. As shown in Figure 36, most survey participants – almost two-thirds (65%) of the sub-sample – indicated that they did not follow any of these sites. Among the minority who did endorse this question, it appeared that Facebook was the most followed platform. Overall, about one-fifth (21%) of participants in the viewer sub-sample reported following the *'Renovate or Rebuild'* Facebook page, with comparatively fewer participants following the show's Instagram and YouTube pages (17% and 15%, respectively).

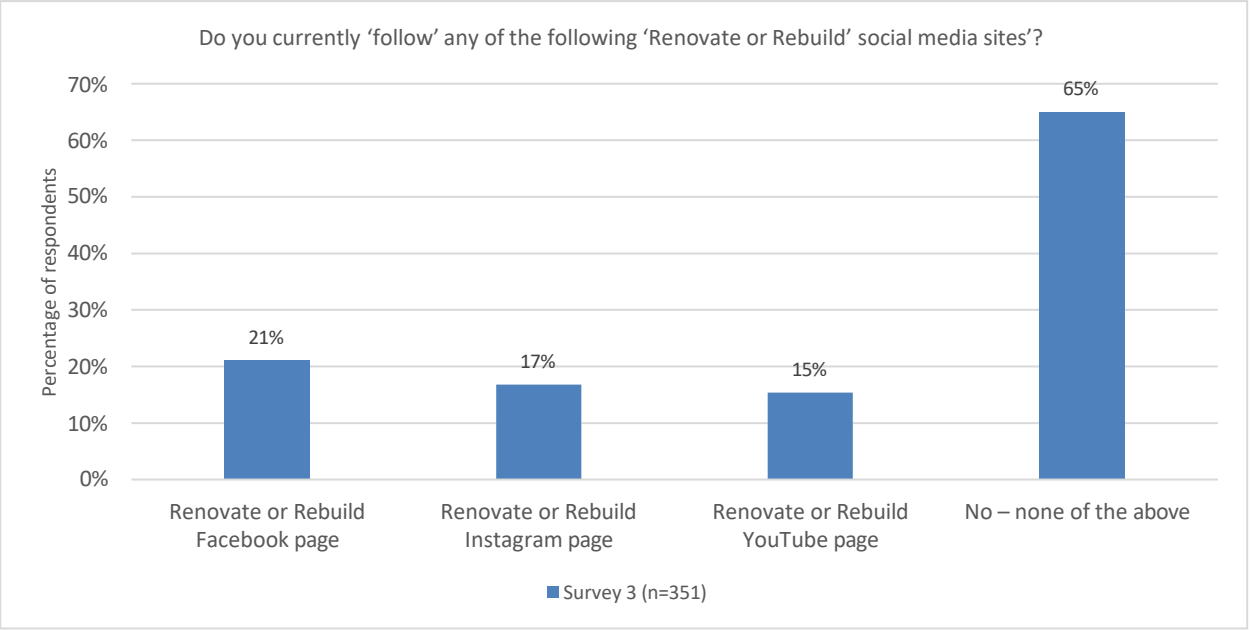


Figure 36 Percentage of viewers who reported that they 'follow' the various *'Renovate or Rebuild'* social media sites: Results from Survey 3

To identify and better understand the reasons why viewers may or may not engage with the *'Renovate or Rebuild'* TV show's social media sites and online/web content, the sub-sample of participants who reported 'following' one or more of the *'Renovate or Rebuild'* social media sites was asked about why they chose to do this. As shown in Figure 37, informational factors appeared to be the most important reason cited by participants, with just over half the sub-sample (56%) stating that they followed *'Renovate or Rebuild'* social media sites to get more information on building design ideas from the show.

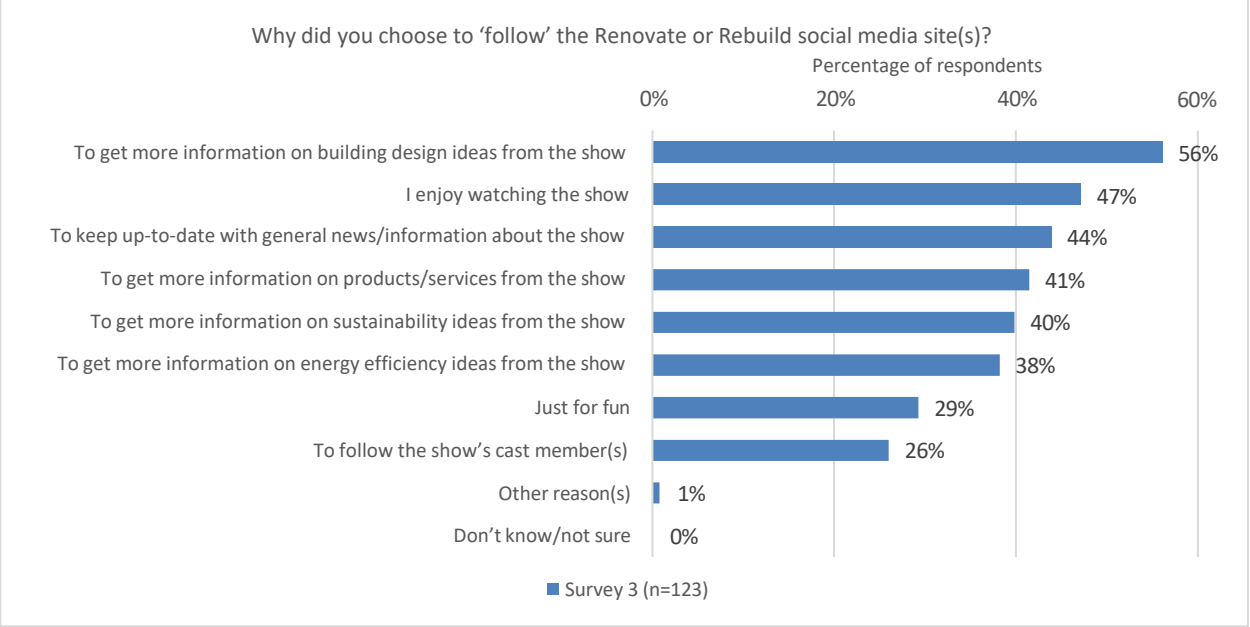


Figure 37 Self-reported reasons why participants follow *'Renovate or Rebuild'* social media: Results from Survey 3 for the sub-sample of viewers who reported 'following' the show's social media sites

While the results presented above indicate that the degree of audience engagement with the *'Renovate or Rebuild'* website and social media pages was low, participants who reported following the show's social media site(s) tended to perceive the content (e.g. posts, comments, information) published on these sites/pages positively. Moreover, this general pattern of results was relatively similar across all the sites/pages that these

participants were asked to rate. As shown in Figure 38, among the sub-sample of viewers who reported following the show's social media site(s), most participants indicated that they liked the content either 'a lot' or 'a little', with very few reporting that they disliked the content.

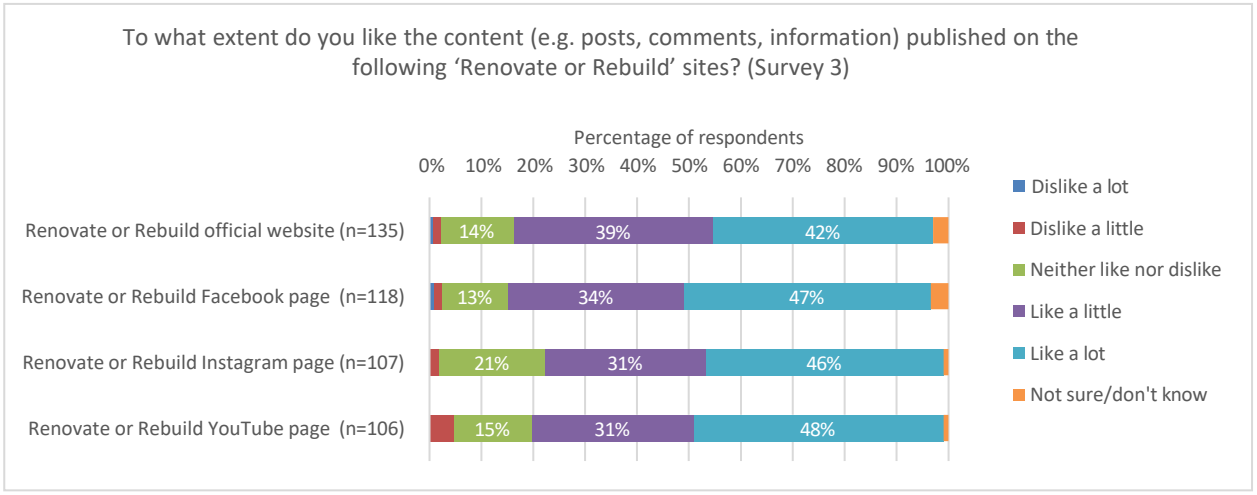


Figure 38 Participants' appraisal of the content published on the *'Renovate or Rebuild'* website and social media pages: Survey 3 results for the sub-sample of viewers who reported 'following' the show's social media sites

4 Discussion

4.1 Summary of key findings, lessons and insights

4.1.1 General audience perceptions and reactions to the *'Renovate or Rebuild'* TV series

Generally speaking, the *'Renovate or Rebuild'* TV series was well-received and perceived positively by audiences, especially among those viewers who fell within the show's target market (e.g. middle-aged females). Results suggest that it tended to be perceived primarily as a 'renovation/design' show with an energy efficiency and sustainability theme – something that was considered unique by those viewers who participated in the focus groups. It seems that this format was effective for capturing the attention of audiences and drawing in the typical renovation/rebuilding viewer, thus enticing them to watch the show.

In terms of key messages and terminology used throughout the show, the results of the current research suggest that the term 'sustainability' was *not* perceived, interpreted, or received by viewers as a polarising or divisive word/theme, despite initial hypotheses and previous research suggesting this may be the case. Rather, the general topic of sustainability seemed to be welcomed by participants.

Furthermore, qualitative data from the focus groups suggested that viewers primarily wanted the TV series to include more detailed information on the design and process of building/constructing the properties in the show, as well as 'reveals' or follow ups after the renovation/rebuilding process has been completed (e.g. so they can actually see the final outcomes). In the focus group discussions, most viewers also indicated that they would prefer some of the show's 'competition' element to be pulled back in favour of including more detailed, nuanced information on the building and construction processes that homeowners face when renovating or rebuilding a property. Another consistent and strong piece of feedback from viewers was the desire for more affordable and relatable options to be presented throughout the show, including a greater focus on cost-related information (e.g. a cost-benefit analysis).

4.1.2 Potential impact: Home energy star ratings

One key goal of the *'Renovate or Rebuild'* TV series was to drive and expand the nation's sustainable housing market – for example, by impacting consumer attitudes, perceptions, preferences and/or behaviours associated with residential energy efficiency and sustainable housing. In turn, the current research collected and analysed data via several measures and methods to draw tentative inferences and conclusions around the extent of this impact.

For example, a comparative analysis of quantitative data from Surveys 1 and 3 revealed a statistically significant difference over time (i.e. pre- vs. post-show) in the proportion of participants in the viewer sub-sample who indicated that a home energy star rating above the minimum standard for Australia was a 'must have' feature when choosing a new home to live in. More specifically, in Survey 1, just under one-third of the viewer sub-sample (31%) indicated that a home energy rating above the minimum standard for Australia was a 'must have' feature; however, this number increased to 39% of the sub-sample in Survey 3. In contrast, this statistically significant difference in survey responses over time was not observed among the non-viewer sub-sample.

Relatedly, quantitative analysis of the survey results revealed a significant increase in viewers' desire for home energy star ratings above the minimum standard for Australia as the amount of *'Renovate or Rebuild'* TV series content or number of episodes watched by viewers increased. These results suggest that the show may have positively influenced a proportion of viewers (e.g. by motiving them to seek homes with an energy star rating

above the minimum standard) compared to those who did not watch the show, therefore helping to facilitate the positive impact the show initially aimed to achieve.

4.1.3 Potential impact: Product branding and behavioural intentions

The *'Renovate or Rebuild'* TV series also aimed to encourage home builders, buyers, owners and renovators to purchase more sustainable housing products and features. The current study explored the self-reported behavioural intentions of viewers in order to gain preliminary insights and evidence of whether or not this goal was successfully achieved. Survey results revealed that on average, participants in the viewer sub-sample had a significantly higher level of self-reported awareness of the different brands that appeared in the show compared to non-viewers. Additionally, viewers were significantly more likely to report seeking information and intending to purchase/install products featured in the show compared to non-viewers. Taken together, these findings lend support to the conclusion that watching the *'Renovate or Rebuild'* TV series may positively impact the self-reported intentions, choices and decision-making of some viewers as intended.

4.1.4 Terminology and language

Across a range of settings and situations, the terms 'sustainable' and 'energy efficient' are often used interchangeably. Given this, the current study tested whether using one of the two terms was more effective for achieving the show's overarching objectives. Quantitative analysis of the survey data demonstrated similar results regardless of which term was used, although 'sustainability' seemed to be perceived by participants as a broader and more inclusive term. Qualitative insights from the focus groups also suggested no substantial difference in participants' preferences around the use of these two terms. Generally speaking, the term 'sustainability' was considered broader and more all-encompassing, whereas 'energy efficiency' was considered more concrete and concise. However, neither term was perceived by participants as polarising or divisive in nature. Rather, both terms were generally well received and elicited mostly positive responses. This result is important because previous evidence has suggested that the term 'sustainability' may be polarising among the general public.

In addition, the survey results suggest that there was confusion around the term 'healthy' when describing a home. The *'Renovate or Rebuild'* TV series used the term 'healthy home' on multiple occasions, and it was presented to audiences as encompassing two distinct but related concepts – natural ventilation and airtightness. Throughout the show, both concepts were discussed as being important for residential building energy efficiency; however, it could be argued that airtightness and natural ventilation also reflect competing or potentially opposing characteristics. Thus, it is possible that some people may misunderstand this term. In support of this notion, an analysis of quantitative survey data suggested that there may have been confusion among some participants around the specific meaning, interpretation and/or use of the term 'healthy', which was described in the survey as entailing 'good airflow, ventilation and natural light'.

More specifically, in Surveys 1 and 3, participants were asked about the perceived importance of living in a home with a range of characteristics, one of which was 'healthy'. To explore whether watching the *'Renovate or Rebuild'* TV series may have impacted participants' self-reported preferences for these different home characteristics, analyses were conducted to compare the survey responses of participants (for both viewers and non-viewers) over time. While no statistically significant differences in participants' responses over time (i.e. Survey 1 vs. 3) were observed for most of the characteristics, the sole exception was for the term 'healthy'. Among the sub-sample of viewers, the proportion of participants who rated this characteristic as 'extremely important' was significantly higher in Survey 1 than Survey 3; that is, the proportion of viewers who perceived a 'healthy' home as extremely important appeared to decrease over time. Given that 'healthy' was the only

characteristic to see a decrease in perceived importance, and such a decrease was only observed among the 'viewer' sub-sample, it is important for future research to further examine how people interpret the word 'healthy', and in parallel, better understand how this term relates to their desire for sustainable/energy efficient homes. Additionally, it would also be useful for subsequent communications to acknowledge and tease out the potential conflict between achieving good airflow and ventilation vs. airtightness.

4.2 Recommendations

Based on the quantitative and qualitative results of the current research, the following recommendations are proposed for enhancing consumer-focused communication using mass media:

1. Where possible, consumer-focused communication using mass media should focus heavily on relaying a small number (i.e. 1-3) of key messages or themes that are likely to have the greatest impact – e.g. within the residential energy efficiency and sustainable housing domain, focusing on specific topics such as home/building rating schemes and thermal performance.
2. While audience engagement will naturally vary from person to person, it seems unlikely that most viewers will watch all episodes of a TV series. Rather, some people may only watch a few episodes in total, whereas others may only watch part of each episode over the course of a full season. In light of this individual variability, communicating key themes/messages repeatedly and consistently over time (e.g. delivering the same or similar message consistently across the full TV series) is strongly encouraged, as this is more likely to be effective in achieving optimal impact. However, this would need to be balanced with creative expression and engaging material to ensure the repeated messaging is not perceived as boring, dull, bland or monotonous by viewers who choose to watch every episode in the series.
3. It would be advantageous to consider adapting future series of *'Renovate or Rebuild'* to increase its entertainment value, as per the specific feedback and suggestions provided by participants in the focus groups. Consideration should also be given to minimising some of the show's competitive elements in favour of including more detailed and nuanced information around the home building/renovation process, the show's themes of energy efficiency and sustainability, and the final reveal of homes once they are rebuilt or renovated. In addition, it is advisable to provide audiences with more affordable and relatable options and more cost-benefit analysis of such options throughout the show.
4. For highly applied research studies conducted in real-world settings, recruiting members of the general public outside of established recruitment channels (such as online panel providers) is often extremely challenging. In addition, caution should be exercised when aiming to recruit participants through social media channels, as this approach is unlikely to yield the high number of participants needed for longitudinal research (at least for those who are in the show's target market). In light of these considerations, it is recommended that any future evaluation studies carefully consider other effective and efficient recruitment methods that could be deployed to maximise participant recruitment and retention rates (and thus study sample sizes), with a specific focus on options that are both scientifically robust as well as practically and financially feasible.

4.3 Limitations

As with most applied research conducted in real-world settings, there are some limitations of the current study that should be considered when interpreting the results and drawing conclusions from the key findings presented in this report. As explained below, these limitations can be broadly placed into three main categories.

4.3.1 Research design

A noteworthy strength of the current research was its multi-method design that deployed two approaches (i.e. online surveys and semi-structured focus groups) to collect both quantitative and qualitative data on the key research questions of interest. Another advantage was the integration of longitudinal and cross-sectional components in a single study, thereby allowing before vs. after analyses (pre- vs. post-show comparisons) to be conducted. Given that a major goal of the study was to empirically investigate how exposure to the '*Renovate or Rebuild'* TV episodes/series might have impacted or shifted (directly or indirectly) key variables over time – including the preferences, intentions, and behaviours of real-world audiences – the longitudinal, repeated-measures nature of the research was a particular strength, as data-driven *inferences* could be drawn regarding *potential* changes in these key variables over time. This was the best practice, most feasible approach to conduct this research given the research questions being explored.

Despite these strengths, the highly applied nature of the current research also meant that a true experimental design in the form of a randomised controlled trial (RCT) was not strictly followed and was not feasibly possible. Although a concerted effort was made to recruit viewers through social media who would come across the TV show organically in real life, the low success rate of the social media recruitment meant that panel participants intended to form a comparison group (or pseudo control group) were eventually informed about the show and invited to watch it. In turn, the recruitment of participants using an online panel provider to form the large sub-sample of non-viewers who did not watch '*Renovate or Rebuild'* was compromised, affecting the composition of both the non-viewer and viewer sub-samples.

When systematic differences exist between sub-samples of participants at the very outset of a study, the so-called 'treatment' group and 'control' group (or in the case of the current study, 'comparison' group) are not equal-on-average at baseline, thereby increasing the risk of biased results, misleading estimates and/or inaccurate conclusions when trying to determine cause-and-effect relationships. In terms of participant recruitment and sampling, the current study did not include randomisation of participants (i.e. random assignment to viewer and non-viewer groups), so in turn, a pure/true control group did not exist. This meant that participants' exposure to treatment (i.e. viewing the TV show) and control/comparison (i.e. not viewing the TV show) conditions was likely impacted by factors outside the direct control of the research team. As such, the results of the current study cannot be used to draw conclusions regarding causality – i.e., it cannot be ascertained with confidence whether watching the *'Renovate or Rebuild'* TV series or episodes of the show *caused* any of the observed pre- vs. post-show changes in the knowledge, preferences, and/or behaviours of viewers. However, as mentioned, given the constraints of the applied research conditions, a randomised control trial was not feasibly possible in this scenario.

4.3.2 Recruitment and sampling

Recruitment and sampling of people in the 'real world' (i.e. non panel participants) is always challenging and many efforts were made throughout the entire research to maximise recruitment and manage attrition. While the total sample size of the current research included several thousand participants and was therefore quite

large, the sub-sample of viewers was quite small and there was considerable attrition over time. Small sample sizes have multiple drawbacks, all of which can limit the overall reliability and validity of observed results.

In the current study, the two sub-samples of participants were also self-selected (i.e. individuals exercised free choice to actively 'opt in' or 'opt out' of the research) and in turn, self-selection effects and volunteer bias may have impacted the research, thus limiting the external validity and generalisability of results[9]. The use of a paid panel provider to recruit participants may have also contributed to this, as the types of people who subscribe to paid panels are not necessarily representative of the study's target population (nor the wider Australian population). While the study's sampling methodology primarily aimed to recruit participants who best reflected the types of people who would watch '*Renovate or Rebuild*' in the real-world, the potential effects of sampling error and sampling bias must still be acknowledged. However, without significant resourcing (e.g. an extremely large marketing budget to help with recruiting/retaining participants), it is very challenging for real-world studies to overcome these limitations.

4.3.3 Data collection and self-report measures

Finally, the current study relied heavily on the collection and analysis of self-report data gathered directly from participants themselves. While this approach is very common for research that involves sampling human participants – and particularly studies that aim to measure subjective states and psychological variables like perceptions, preferences, intentions, etc. – there are some inevitable drawbacks of self-report data that must still be acknowledged. Due to its inherently subjective nature, self-report data may be prone to various response biases and measurement errors – including self-presentation effects, social desirability bias, memory errors, acquiescence bias, demand characteristics, and even auspices bias[10].

Regardless of whether it is unintentional or deliberate, or conscious or unconscious, the risk of participants answering inaccurately or untruthfully may lead to less reliable and less valid results. When it comes to assessing some of the study's desired outcomes around behaviour change, it is therefore difficult to ascertain whether the actions participants have purportedly taken are indeed factual and reflective of reality. It also remains to be seen whether the self-reported motives and intentions of participants (as measured via responses to the survey and focus group questions) translate to meaningful behaviour change in real-world settings. However, measuring actual real-world behavioural outcomes was beyond the scope of this current study.

4.4 Directions for future research

The limitations outlined in the previous section point towards several promising and fruitful avenues for further research, data collection, and analysis in the future. In particular, while the current study yielded a large body of data (both quantitative and qualitative) and valuable insights, there is considerable scope to expand on this initial research by addressing some of the caveats mentioned earlier – and in turn, generate more

[9] Self-selection occurs when participants have free choice and discretion over whether or not to participate in a study. If the types of people who volunteer or 'opt in' to the research systematically differ from the types of people who decline, refuse or 'opt out' (or who are not invited to participate at all), this may lead to sampling error and biased data – namely because the types of people who choose to participate are not representative of the broader target population of interest.

[10] Auspices bias is the tendency of responses to be influenced by the organisation conducting the study. For both the surveys and focus groups, participants in the current study received an information sheet and consent form upfront, as this was an essential step to ensure informed consent from an ethics perspective. However, it also meant that participants were fully aware that CSIRO was conducting the study, and this knowledge/awareness may have influenced how they subsequently responded when answering the survey and focus group questions.

scientifically valid, reliable and robust conclusions regarding the potential impact(s) of the *'Renovate or Rebuild'* TV series on Australian audiences. For example, there may be an opportunity to re-run a similar evaluation study if/when the TV series is broadcast again but with a larger expected viewership, with the potential to achieve a much larger sample of real-world viewers and therefore possibly more robust and generalisable empirical results.

In addition, there would be substantial value in measuring more objective, concrete and direct behavioural outcomes when trying to estimate the show's impact(s) on Australian audiences. However, this endeavour may be best conducted by identifying, collecting, and analysing third-party data – for example, sales data from building product/service sponsors and related organisations – in an effort to minimise or mitigate the limitations of subjective data and self-report measures/methods (e.g. surveys, focus groups, interviews). Relatedly, the show's potential impact(s) on viewers could also be evaluated by directly measuring or indirectly estimating some of the 'flow-on' effects in terms of public advertisements aired during the TV show (and even other marketing or promotional activities across traditional and social media channels) and possibly other TV shows that adopt similar strategies. Finally, further scientific investigation and analysis is warranted in terms of how the current study's mass media approach could be effectively adapted and more broadly implemented into other on-screen content and reach additional audiences (i.e., viewers who do not watch commercial or reality television but prefer other styles of entertainment/mass media).

5 Conclusion

'Renovate or Rebuild' is an Australian lifestyle and reality television show about residential real estate with an overarching goal to stimulate the sustainable housing market in Australia. The show has been purposely designed as a source of both education and entertainment ('edutainment') for viewers and aims to normalise, promote, and encourage the uptake and usage of more energy efficient and sustainable building solutions (e.g. designs, materials, products, services) in the specific context of residential housing in Australia.

The design and delivery of the *'Renovate or Rebuild'* TV series has been informed by behavioural science, with CSIRO providing the show's production company with tailored, evidence-based guidance, strategies, and recommendations aimed at making the show's content and episodes engaging for Australian audiences and successful in achieving the intended impact. Results show that repeated messaging of a key theme appears to be an effective strategy in communicating sustainability and energy efficiency through mass media. In particular, the TV series emphasis on the home energy star rating throughout every episode saw a significant increase in the desire for homes above the minimum standard among the viewer sample. More specifically, there was an increase of 8 percentage points between the initial and final viewer surveys, which represents a 25.8% increase from the base rate. Relatedly, the survey results also pointed to a significant increase in the self-reported desire for home energy star ratings above the minimum standard as the amount of TV series content and/or number of episodes watched by participants increased. Whilst in contrast, there were no statistically significant differences in survey responses over time among the sub-sample of non-viewers, which strengthens the confidence that these positive results are associated with watching *'Renovate or Rebuild'* rather than reflecting extraneous factors or random changes over time that influenced everyone.

In addition, survey results also show that compared to non-viewers, viewers had a significantly higher level of awareness of the brands that appeared in the show and reported being significantly more likely to seek information and/or express intentions to purchase and/or install products that were featured in the show compared to non-viewers. For instance, compared to non-viewers, viewers were more likely to report engaging in several sustainability-related behaviours in the past two months, including: obtaining quotes for solar panels and/or battery storage; intending to buy solar panels to generate electricity for current and/or future properties; purchasing or intending to purchase uPVC windows; and purchasing or intending to purchase insulation.

These results suggest that the *'Renovate or Rebuild'* TV series is likely to have a positive influence on a proportion of the viewers, who may be more likely to invest in residential energy efficiency, contributing to a higher demand for homes above the minimum standard. An increase in demand for energy efficient homes is key to reducing residential carbon emissions. Whilst the limitations encountered during this research do not allow for a quantitative estimate of the potential reduction in carbon emissions, future research such as a cost benefit analysis could help illuminate this impact more accurately.

This research was part of a highly collaborative mass media communications approach to mainstream sustainable housing and included a range of project partners. Therefore, it holds important lessons that could assist interventions run by government and industry to create demand for sustainable homes and support its uptake in Australia. First, the use of innovative communication approaches, is key to reaching and impacting a large audience. For example, by utilising targeted behavioural science strategies to communicate about sustainable homes through mass media, a large audience was reached in a short amount of time (between

~300,000 and ~500,000 viewers per episode, over 8 weeks and a total reach of over 3.2 million views). Second, the large audience reach of the *'Renovate or Rebuild'* TV series as well as the survey results suggest that the Australian public is eager for residential sustainability and energy efficiency information. Further government and industry initiatives in this space, including communication strategies aimed at increasing the public desirability for sustainable homes are likely to be well received by the public.

In addition, findings from this research suggest that is important to focus on a smaller number of high-impact messages than to divide the message across a broad range of low-impact energy efficiency features. For example, this research focused on the energy star rating of the home, an 'umbrella term' that encompasses multiple aspects of energy efficiency such as home orientation, insulation, and type of windows to generate high impact. Therefore, we recommend that future series *'Renovate or Rebuild'*, as well as other communication strategies developed by government and industry bodies use repeated messaging of 'high impact' behaviours when communicating with the public about residential energy efficiency.

These recommendations are intended to be further disseminated to industry by leveraging the highly collaborative nature of this broader mass media campaign and utilising project partner's networks. In particular, the government project partner for this research, NSW Office of Environment and Climate Change (OECC), have indicated that due to the success of '*Renovate of Rebuild',* leadership for the mass media communication strategy will be handed over to its industry partners to continue. The OECC have further indicated an intention to review its internal communications and, where appropriate, use more narrative based communication to engage audiences.

The key findings presented in this evaluation report have demonstrated the potential positive impacts of the first series of *'Renovate or Rebuild'* screened in late 2021. However, further impact is expected from the TV series as the production company, Blue Tribe, has indicated that Channel 9 may be re-screening Season 1 and filming of Season 2 of '*Renovate or Rebuild*' has begun. It is also expected that the 'Renovate or Rebuild' TV series will help mainstream energy efficiency conversations and influence other initiatives and programs in this area. For example, the 'Renovate or Rebuild' TV Series was the winner of the Communications for Impact category for the 33rd National Banksia Sustainability Awards, being recognised as a positive initiative to improve sustainability outcomes. In addition, as pointed to in BlueTribe's report, the 'Renovate or Rebuild' TV series generated high mainstream media interest associated with its sustainable message, and has been presented to a numerous industry conferences. These include: Green Building Council of Australia Transform 2021, Building Products Industry Council (BPIC) Annual Conference, Housing Industry Association Annual Conference, Australian Sustainable Built Environment Council AGM, and CSIRO's webinar series.

Overall, this research demonstrates an innovative communications approach and strategies that can assist to accelerate Australia's sustainable housing demand. In addition, this approach can also be applied more broadly to positively influence audience desires and behaviours for a range of issues requiring mass change globally.

Appendices

A.1 Online Surveys

A.1.1 Participant Information Sheet and Consent Form – Non-viewer sub-sample

Overview

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) – Australia's national science agency – invites you to take part in a Project where you can share your views and preference on the features of homes in Australia.

This Project is being conducted in partnership and co-funded by CSIRO, The Blue Tribe Company (BTC), the New South Wales Department of Planning Industry and Environment (DPIE), Sustainability Victoria, Renovate or Rebuild Pty Ltd, and the Reliable, Affordable, Clean Energy for 2030 Cooperative Research Centre (RACE CRC).

To be eligible to participate in the Project, you must be an Australian resident aged 18+ years old. In return for completing each survey, you will be rewarded by Pureprofile as per their standard incentive/reward system. If you withdraw part-way through the survey, you will not be eligible for this reward.

What will I be asked to do?

Participation in the Project will involve completing a series of short online surveys over the next three to six months. There will be up to five surveys in total, with each survey taking approximately 10-15 minutes to complete. All surveys are voluntary and you are free to withdraw at any time. While your participation in all surveys is strongly encouraged and preferred, you do not need to complete each and every survey in order to take part in this Project.

CSIRO has engaged a third-party service provider, Pureprofile, to undertake the surveys on our behalf. As part of this, Pureprofile will be collecting a range of information (including personal information) on CSIRO's behalf; however, this information will be de-identified by Pureprofile before it is provided to us.

Across the full set of surveys, you will be asked some questions about basic demographics and background characteristics, your perceptions and preferences around housing, as well as your choices and decision-making in regard to property-related matters. With your consent, Pureprofile will contact you over time to seek your participation in the Project's surveys.

What if I want to withdraw from the Project?

Participation in the Project is entirely voluntary, so you are under no obligation to take part. Your decision to participate will not affect your current or future relationship with the researchers, anyone else at CSIRO, or with the project partners or funders. While most survey questions require a response for you to proceed, you are free to withdraw from the surveys by stopping at any time.

If you decide to withdraw part-way through completing a survey, any responses you have provided up to that point will not be included in the final data analysis. Please note that once you have completed and submitted a survey, it may not be possible to remove your data from the final dataset. In the case of any re-identifiable data, however, you may withdraw your information from this Project up until the point of data aggregation or publication of the final outputs.

What are the risks associated with participating in the Project?

We have not identified any foreseeable risks associated with participating in the Project.

How will my information be handled?

The collection, use and disclosure of information collected throughout this Project will be in accordance with the *Privacy Act 1988* (*Cth*) and the *National Health and Medical Research Council's National Statement on Ethical Conduct in Human Research 2007* (*Updated 2018*) as amended from time to time, and as otherwise required by law. All personal information you provide is protected by the *Privacy Act 1988* (Cth).

Pureprofile has contacted you to invite you to participate in a short screening survey to see if you are eligible to participate in the Project. If you consent to take part, survey responses during this screening process (e.g. Australian residency, age, gender, postcode, TV channels and shows you watch) will be included in the study's dataset.

Information collected through the Project (e.g. survey data) will be used by CSIRO and the project partners for research and analysis purposes. Data will be retained indefinitely and may be used by CSIRO for future research. When presenting the Project's findings, data will be reported in way that protects your privacy and ensures that participants are not individually identifiable.

The Project's data and results will be aggregated and may be published/communicated in a range of forums and formats, including (but not limited to) scientific papers and journal articles, public reports, conference papers, oral presentations, media releases and via other mediums (e.g. websites). De-identified data in the form of verbatim quotes may also be published. However, your data will not be personally identifiable in any of these outputs. The Project's data may also be used in future research and analyses.

On completion of the Project, a de-identified summary of the research findings will also be made available to participants on request. Please email Danie.Nilsson@csiro.au if you would like to receive a copy of this summary report. If you request a copy of the summary report, you will be asked to share your email address so we can send you the report.

The CSIRO Privacy Policy available at https://www.csiro.au/en/about/Policies/Privacy outlines how your personal information will be handled, including details about how you can seek access or correction of the personal information we hold about you, how you can lodge a complaint about a breach of the Australian Privacy Principles (APPs) and how CSIRO will deal with the complaint. If you require further information on how your personal information will be handled, please contact privacy@csiro.au.

For information about how Pureprofile handles personal information, please refer to their privacy policy, which can be found online at: https://www.pureprofile.com/privacy-policy/

What if I have any questions about this Project?

If you have any questions about this Project, please contact the Project leader, Dr Danie Nilsson, via email at Danie.Nilsson@csiro.au or by phone on (07) 3833 5714.

This Project has been approved by CSIRO's Social Science Human Research Ethics Committee in accordance with the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). Any concerns or complaints about the conduct of this Project can be raised with the Executive Manager of Social Responsibility and Ethics on (07) 3833 5693 or by email at csshrec@csiro.au.

Do you agree to the conditions outlined above and consent to take part in this Project?

Please select one response

Agree [START SURVEY]

Do not agree [SCREEN OUT]

A.1.2 Participant Information Sheet and Consent Form – Viewer sub-sample

Overview

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) – Australia's national science agency – invites you to take part in the 'Renovate or Rebuild TV Series Evaluation' (the Project) where you can share your views and preferences on the features of homes in Australia, as well as your thoughts on a new television show related to this topic.

CSIRO is conducting this Project in partnership with the Blue Tribe Company (BTC) and the New South Wales Department of Planning Industry and Environment (DPIE). The project is being funded by CSIRO, BTC and DPIE in collaboration with Sustainability Victoria and the Reliable, Affordable, Clean Energy for 2030 Cooperative Research Centre (RACE CRC).

To be eligible to participate in the Project, you must be an Australian resident aged 18+ years old. In return for participating in this Project, Blue Tribe invites you to enter a prize draw. Blue Tribe is offering the opportunity for the prize winner to have a 1-hour online home design consultation with one of the 'Renovate or Rebuild' Teams or be a guest producer for a day if there is a production of 'Renovate or Rebuild' Season 2. To be eligible for the prize draw you must complete the first three online surveys. The winner will be drawn at the end of Season 1. If you choose to participate in the prize draw, your email address may be shared with the production company, Blue Tribe, who will contact the winner of the prize draw.

What will I be asked to do?

Participation in the Project will involve completing a series of short online surveys over the next three to six months. There will be four to five surveys in total, with each survey taking approximately 10-15 minutes to complete. All surveys are voluntary and you are free to withdraw at any time. While your participation in all surveys is strongly encouraged and preferred, you do not need to complete each and every survey in order to take part in this Project.

CSIRO has engaged a third-party service provider, Pureprofile, to undertake the surveys on our behalf. As part of this, Pureprofile will be collecting a range of information (including personal information) on CSIRO's behalf; however, this information will be de-identified by Pureprofile before it is provided to us.

Across the full set of surveys, you will be asked some questions about basic demographics and background characteristics, your perceptions and preferences around housing, choices and decision-making in regard to

property-related matters, as well as your thoughts about a new television show 'Renovate or Rebuild'. To participate in the entire Project, you will need to provide a valid email address so that we can maintain contact over time and send you the survey links (URLs). The surveys will be hosted by Pure Profile who will collect the email addresses and send the surveys via email.

You will also be asked if you wish to partake in future focus groups or interviews associated with this Project. This is entirely voluntary. If you consent to being contacted about this, your email address will be shared with CSIRO who will contact you if you are eligible. Eligible participants will be provided with another Participant Information Sheet at the time of that study. Your email address will only be used for the purposes of this Project. At the end of the Project, once all data collection has been finalised and all prize winners contacted, your email address will be deleted. No personal information will be retained in the Project' final dataset. Moreover, throughout the course of the Project, you will not be asked to provide any other personally identifying or sensitive information.

What if I want to withdraw from the Project?

Participation in the Project is entirely voluntary, so you are under no obligation to take part. Your decision to participate will not affect your current or future relationship with the researchers, anyone else at CSIRO, or with the project partners or funders. While most survey questions require a response for you to proceed, you are free to withdraw from the surveys by stopping at any time.

If you decide to withdraw part-way through completing a survey, any responses you have provided up to that point will not be included in the final data analysis. Please note that once you have completed and submitted a survey, it may not be possible to remove your data from the final dataset. In the case of any re-identifiable data, however, you may withdraw your information from this Project up until the point of data aggregation or publication of the final outputs.

What are the risks associated with participating in the Project?

We have not identified any foreseeable risks associated with participating in the Project.

How will my information be handled?

The collection, use and disclosure of information collected throughout this Project will be in accordance with the *Privacy Act 1988* (*Cth*) and the *National Health and Medical Research Council's National Statement on Ethical Conduct in Human Research 2007* (*Updated 2018*) as amended from time to time, and as otherwise required by law. All personal information you provide is protected by the *Privacy Act 1988* (Cth).

Information collected through the Project (e.g. survey data) will be used by CSIRO and the project partners for research and analysis purposes. Data will be retained indefinitely and may be used by CSIRO for future research. When presenting the Project's findings, data will be reported in way that protects your privacy and ensures that participants are not individually identifiable.

The Project's data and results will be aggregated and may be published/communicated in a range of forums and formats, including (but not limited to) scientific papers and journal articles, public reports, conference papers, oral presentations, media releases and via other mediums (e.g. websites). De-identified data in the form of verbatim quotes may also be published. However, your data will not be personally identifiable in any of these outputs. The Project's data may also be used in future research and analyses.

On completion of the Project, a de-identified summary of the research findings will also be made available to participants on request. Please email Danie.Nilsson@csiro.au if you would like to receive a copy of this

summary report. If you request a copy of the summary report, the email address you provide at the start of the Project may be used to send you the report.

The CSIRO Privacy Policy available at https://www.csiro.au/en/about/Policies/Privacy outlines how your personal information will be handled, including details about how you can seek access or correction of the personal information we hold about you, how you can lodge a complaint about a breach of the Australian Privacy Principles (APPs) and how CSIRO will deal with the complaint. If you require further information on how your personal information will be handled, please contact privacy@csiro.au.

For information about how Pureprofile handles personal information, please refer to their privacy policy, which can be found online at: https://www.pureprofile.com/privacy-policy/

What if I have any questions about this Project?

If you have any questions about this Project, please contact the Project leader, Dr Danie Nilsson, via email at Danie.Nilsson@csiro.au or by phone on (07) 3833 5714.

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> If you agree to the conditions outlined above and consent to take part in this Project, please click 'Next' below to begin.
>
> If you do not agree to the conditions outlined above and do not wish to take part in this Project, please click 'Exit survey' below to exit.

A.1.3 Survey screening questions

Question	Response options	Question Format
In the past 4 weeks, have you competed any other surveys for the CSIRO on the topic of residential housing and/or features of homes in Australia?	1. Yes [Screen out] 2. No	Single-select checklist
Are you an Australian resident?	1. Yes 2. No [Screen out]	Single-select checklist
What is your age?	[Screen out under 18 years old]	Numerical responses only
Which of the following types of TV shows do you enjoy watching? (Select all that apply)	1. News and current affairs 2. Sports and sporting events 3. Lifestyle or reality shows about real estate (e.g. The Block, Selling Homes Australia, Grand Designs) [Screen in for online panel] 4. Lifestyle or reality shows about cooking (e.g. MasterChef, My Kitchen Rules, The Great British Bake Off) 5. Dramas (e.g. Home and Away, Grey's Anatomy, Neighbours) 6. Sitcoms and comedies (e.g. How I Met Your Mother, Big Bang Theory, Friends) 7. Travel or holiday shows (e.g. Getaway, The Great Outdoors, Postcards) 99. None of the above	Multi-select checklist

A.1.4 Survey questions

Survey Question	Response options	Question Format	Survey 1	Survey 2	Survey 3	Non-viewer	Viewer
How frequently do you watch the following TV channels?	1. ABC (e.g. ABC TV, ABC Kids, ABC News, ABC Me) 2. SBS (e.g. SBS, SBS Food, SBS World Movies, NITV) 3. Seven Network (e.g. Channel 7, 7two, 7mate, 7flix) 4. Nine Network (e.g. Channel 9, 9Life, 9Gem, 9Go!) 5. Network 10 (e.g. Channel 10, 10 Bold, 10 Peach) 6. Steaming services (e.g. Netflix, Stan)	Matrix-table question, with response options: 1. Never 2. Less than once a month 3. About once a month 4. About once a fortnight 5. About once a week 6. A few days a week 7. Daily	YES	N/A	N/A	YES	YES
What is your gender?	1. Female 2. Male 3. Other 4. Prefer Not to say	Single-select checklist	YES	N/A	YES	YES	YES
Where do you currently live? Please type your postcode in the box below.		Numerical	YES	N/A	N/A	YES	YES
Which of the following best describes your household?	1. Lone person household - single person living alone 2. One family household - couple with no children 3. One family household - couple with children (including adult children) 4. One family household - one parent family with children (including adult children) 5. Multiple family household - two or more families (e.g. extended family grouping) 6. Group household - two or more unrelated persons (e.g. share-house) 7. Other type of household	Single-select checklist	YES	N/A	N/A	YES	YES
How would you describe your current employment status? ***For the purpose of this question, please consider 'full-time' as usually working 35 or more hours per week, and 'part-time' as usually working 1 to 34 hours per week.***	1. Employed, working full-time 2. Employed, working part-time 3. Unemployed, looking for full-time work 4. Unemployed, looking for part-time work 5. Not in the labour force (e.g. retired, stay at home parent/carer)	Single-select checklist	YES	N/A	N/A	YES	YES

	6. Other (please specify) 7. Prefer not to say						
What is the highest level of education you have completed?	1. Year 10 or below 2. Year 11 or 12 3. Certificate I or II 4. Certificate III or IV 5. Diploma, Advanced Diploma or Associate Degree 6. Bachelor's Degree 7. Bachelor Honours Degree, Graduate Certificate or Graduate Diploma 8. Masters or Doctoral Degree 9. Prefer not to say	Single-select checklist	YES	N/A	N/A	YES	YES
What type of dwelling do you currently live in?	1. Separate house 2. Semi-detached, row or terrace house or townhouse (e.g. duplex or villa) 3. Flat, unit or apartment 4. Other type of dwelling	Single-select checklist	YES	N/A	N/A	YES	YES
In terms of home ownership, is your dwelling:	1. Owned or partly owned by someone in your household 2. Being rented by your household 3. Other (e.g. occupied rent-free)	Single-select checklist	YES	N/A	N/A	YES	YES
Are you currently planning to buy, build or renovate a residential property in Australia? *Please respond in terms of homes to live in and/or investment properties.*	[ROWS] 1. As a home to live in 2. As an investment property [COLUMNS] 1. I am currently buying, building or renovating a property 2. Yes, I am planning to buy, build or renovate in the next 12 months 3. Yes, I am planning to buy, build or renovate in 1 year to less than 3 years 4. Yes, I am planning to buy, build or renovate in 3 years or more 5. No, I am not planning to buy, build or renovate	Matrix table question, with single-select checklist for each row	YES	N/A	N/A	YES	YES
Which of the following are you currently planning to do? If you are planning to buy, build and/or renovate <u>multiple</u> properties, please select all that apply.	1. Buy a home 2. Build a new home (i.e. constructing from scratch) 3. Rebuild a home (i.e. knock down and rebuild) 4. Renovate an existing home	Multi-select checklist	YES	N/A	N/A	YES	YES

	98. Don't know / undecided 99. None of the above						
Thinking of the home you live in, does it have any of the following? (Please select all that apply)	1. Solar panels to generate electricity 2. Battery storage connected to solar panels 98. Don't know 99. None of the above	Multi-select checklist	YES	N/A	N/A	YES	YES
Do you plan to buy any of the following for your current and/or future properties? Please select one response per row below.	[ROWS] 1. Solar panels to generate electricity 2. Battery storage system 3. Electric vehicle [COLUMNS] 1. No – no plans to buy 2. Yes, in the short-term future (i.e. within 2 years) 3. Yes, in the medium-term future (i.e. 3-5 years) 4. Yes, in the long-term future (i.e. more than 5 years) 5. Don't know	Matrix table	YES	N/A	YES	YES	YES
Have you watched any episodes of the 'Renovate or Rebuild' TV show?	Yes No	Single select	YES	N/A	N/A	N/A	YES
In the past four weeks, have you watched any of the following TV shows? (please select all that apply)	1. Renovate or Rebuild [BRANCH TO VIEWER SURVEY] 2. Grand Designs 3. The Block 4. Love it or List it 5. Open Homes Australia 6. Ready Set Reno 7. Million Dollar Listing 8. House Hunters 9. House Hunters International 10. Selling Houses Australia 99. None of the above [Randomise order of items, except for the final 'None of the above' response option]	Multi-select checklist, with final response option being exclusive	N/A	YES	YES	YES	YES
Which episodes of Renovate or Rebuild have you watched? This question is very important for the quality of this research – we appreciate you responding carefully.	[ROWS] Episode 1. Burleigh Heads, QLD Episode 2. Croydon, VIC Episode 3. Malabar, NSW Episode 4. Currimundi, QLD Episode 5. Phillip Island, VIC Episode 6. Newcastle, NSW	Open-ended numerical, with a 'Don't know' response option that is exclusive	YES	YES	YES	N/A	YES

	Episode 7. Black Rock, VIC Episode 8. Deep Dive and Giveaway [COLUMNS] Watched in full Watched in part Don't know/cannot recall Have not watched						
For the remaining questions, we are interested to know your views about a range of home features and aspects.			YES	YES	YES	YES	YES
Imagine you are about to choose a new home to live in. Do you consider the following features a 'must have', 'nice to have', 'don't mind' or 'prefer not to have'? *To sort, move a card into a group by clicking the card and selecting the desired group from a list. You can also drag cards directly into groups.*	1. A new or renovated kitchen 2. A new or renovated bathroom 3. Master bedroom with ensuite 4. Outdoor living area (e.g. deck, balcony, patio, veranda) 5. Garden/green space/yard 6. Swimming pool 7. Garage/undercover parking 8. Windows/doors that allow natural breezes and ventilation 9. North-facing living areas that capture winter sun and block summer sun 10. Comfortable indoor temperature in summer (i.e. generally cool without the use of air conditioning) 11. Comfortable indoor temperature in winter (i.e. generally warm without the use of heating) 12. Rooms or areas in the home that can be separately cooled or heated when required (e.g. zoning) 13. External shade structures (e.g. awnings, shutters, vegetation) to block unwanted direct sunlight in summer 14. Home energy star rating above the minimum standard for Australia 15. Home energy rating certificate	Sort question, with four response options: 1. Must have 2. Nice to have 3. Don't mind 4. Prefer not to have	YES	YES	YES	YES	YES
Imagine you are about to choose a new home to live in. Do you consider the following features a 'must have', 'nice to have', 'don't mind' or 'prefer not to have'? *To sort, move a card into a group by clicking the card and selecting the desired group from a list. You can also drag cards directly into groups.*	1. Ceiling fans 2. Energy efficient appliances (e.g. above average energy efficiency or 4 or more stars for kitchen and laundry appliances) 3. Energy efficient air conditioning (e.g. above average energy efficiency or 4.5 or more stars)	Sort question, with four response options: 1. Must have 2. Nice to have 3. Don't mind 4. Prefer not to have	YES	YES	YES	YES	YES

	4. Energy efficient heating system (e.g. above average energy efficiency or 4.5 or more stars) 5. Insulation (e.g. wall, ceiling/roof, underfloor) above the minimum requirement) 6. Double glazed windows and/or doors 7. Tinted or Low-E glass windows and/or doors 8. Energy efficient lighting (e.g. LED or CFL bulbs) 9. Energy efficient hot water system (e.g. solar, heat pump) 10. Solar photovoltaic (PV) panels 11. Battery storage system 12. Water tank						
If you were buying a new appliance for your home (e.g. new fridge, air-conditioner, washing machine), which factors would be most important in shaping your decision about what appliance to buy? Please select up to three responses below.	1. Purchase price of the appliance (i.e. initial upfront cost) 2. Discounts, rebates, bonuses or other promotional conditions that apply to the initial purchase 3. Warranty period 4. Aesthetics (i.e. visual appearance) 5. Size/capacity/dimensions 6. Features and settings 7. Energy efficiency (i.e. number of stars and kWh energy consumption) 8. Customer ratings/reviews 9. Recommendation from family/friend 10. Brand name 11. Other	Multi-select checklist, with a maximum of three responses only	YES	YES	YES	YES	YES
How important is it for you to live in a home that is...	1. Sustainable (e.g. low energy and water usage, low environmental impact) 2. Stylish (e.g. attractive design and aesthetics) 3. Healthy (e.g. good airflow, ventilation and natural light) 4. Efficient (e.g. low energy and water usage) 5. Comfortable (e.g. naturally cool in summer and warm in winter) 6. Affordable to run (e.g. low electricity, gas and water bills) 7. Resilient (e.g. flood/cyclone/bushfire proof) [Randomise order of response options]	Matrix table question, with Likert scale response options: 1. Not at all important 2. Slightly important 3. Moderately important 4. Very important 5. Extremely important	YES	YES	YES	YES	YES

How much do you agree with the following statements about a "<u>sustainable</u>" home.	1. Stylish (e.g. attractive design and aesthetics) 2. Healthy (e.g. good airflow, ventilation and natural light) 3. Efficient (e.g. low energy and water usage) 4. Comfortable (e.g. cool in summer and warm in winter) 5. Affordable to live in (e.g. low electricity, gas and water bills) 6. Resilient (e.g. flood, cyclone, heatwave, bushfire proof)	Matrix table question, with Likert scale response options: 1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	YES	YES	YES	YES	YES
How much do you agree with the following statements about an "<u>energy efficient</u>" home.	1. Stylish (e.g. attractive design and aesthetics) 2. Healthy (e.g. good airflow, ventilation and natural light) 3. Sustainable (e.g. low energy and water usage, low environmental impact) 4. Comfortable (e.g. cool in summer and warm in winter) 5. Affordable to live in (e.g. low electricity, gas and water bills) 6. Resilient (e.g. flood, cyclone, heatwave, bushfire proof)	Matrix table question, with Likert scale response options: 1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	YES	YES	YES	YES	YES
Below is a list of word pairs, each consisting of two opposing terms. For each word pair, select the point on the scale that best reflects how you perceive a "<u>sustainable</u>" home.	[ROWS ON THE LEFT 1. Uncomfortable 2. Undesirable 3. Expensive 4. Outdated 5. Plain 6. Unhealthy 7. Unliveable 8. Unwelcoming 9. Dysfunctional 10. Cramped 11. Energy inefficient [ROWS ON THE RIGHT] 1. Comfortable 2. Desirable 3. Affordable 4. Way of the future 5. Stylish 6. Healthy 7. Liveable	Word-pair question [COLUMNS] 1 2 3 4 5	YES	YES	YES	YES	YES

	8. Welcoming 9. Functional 10. Spacious 11. Energy efficient						
Below is a list of word pairs, each consisting of two opposing terms. For each word pair, select the point on the scale that best reflects how you perceive an "<u>energy efficient</u>" home.	[ROWS ON THE LEFT] 1. Uncomfortable 2. Undesirable 3. Expensive 4. Outdated 5. Plain 6. Unhealthy 7. Unliveable 8. Unwelcoming 9. Dysfunctional 10. Cramped 11. Unsustainable [ROWS ON THE RIGHT] 1. Comfortable 2. Desirable 3. Affordable 4. Way of the future 5. Stylish 6. Healthy 7. Liveable 8. Welcoming 9. Functional 10. Spacious 11. Sustainable	Word-pair question [COLUMNS] 1 2 3 4 5	YES	YES	YES	YES	YES
Which of the following features (if any) do you associate with homes that are described as "<u>sustainable</u>"?	1. Windows/doors that allow natural breezes and ventilation 2. Windows/doors that allow natural light 3. North-facing living area(s) 4. South-facing living area(s) 5. Comfortable indoor temperature in summer (i.e. generally cool without the use of air conditioning) 6. Comfortable indoor temperature in winter (i.e. generally warm without the use of heating) 7. External shade structures (e.g. awnings, shutters, vegetation) 8. Rooms or areas in the home that can be separately cooled or heated 9. Garden/green space/yard	Multi-select checklist	YES	YES	YES	YES	YES

	98. Don't know 99. None of the above						
Which of the following features (if any) do you associate with homes that are described as "<u>sustainable</u>"?	1. Energy efficient air conditioning (e.g. above average energy efficiency or 4.5 or more stars) 2. Energy efficient heating system (e.g. above average energy efficiency or 4.5 or more stars) 3. Double glazed windows and/or doors 4.. Tinted or Low-E glass windows and/or doors 5. Solar photovoltaic (PV) panels 6. Battery storage system 7. Rainwater tank 8. Built with recycled construction materials 9. Finished with low volatile organic compounds (VOC) products (e.g. paints, carpets, cabinetry) 10. Airtightness to reduce air leakage and improve thermal comfort 97. Other (please specify): N22A_97OE 98. Don't know 99. None of the above	Multi-select checklist	YES	YES	YES	YES	YES
Which of the following features (if any) do you associate with homes that are described as "<u>energy efficient</u>"?	1. Windows/doors that allow natural breezes and ventilation 2. Windows/doors that allow natural light 3. North-facing living area(s) 4. South-facing living area(s) 5. Comfortable indoor temperature in summer (i.e. generally cool without the use of air conditioning) 6. Comfortable indoor temperature in winter (i.e. generally warm without the use of heating) 7. External shade structures (e.g. awnings, shutters, vegetation) 8. Rooms or areas in the home that can be separately cooled or heated 9. Garden/green space/yard 98. Don't know 99. None of the above	Multi-select checklist	YES	YES	YES	YES	YES
Which of the following features (if any) do you associate with homes that are described as "<u>energy efficient</u>"?	1. Energy efficient air conditioning (e.g. above average energy efficiency or 4.5 or more stars) 2. Energy efficient heating system (e.g. above average energy efficiency or 4.5 or more stars) 3. Double glazed windows and/or doors 4.. Tinted or Low-E glass windows and/or doors	Multi-select checklist	YES	YES	YES	YES	YES

	5. Solar photovoltaic (PV) panels 6. Battery storage system 7. Rainwater tank 8. Built with recycled construction materials 9. Finished with low volatile organic compounds (VOC) products (e.g. paints, carpets, cabinetry) 10. Airtightness to reduce air leakage and improve thermal comfort 97. Other (please specify): N22B_97OE 98. Don't know 99. None of the above						
To what extent do you agree or disagree with the following statement?	If I was buying, building, or renovating a property, I would be willing to pay extra money upfront in order to live in a "**sustainable"** home	Likert scale response options: 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree	YES	YES	YES	YES	YES
To what extent do you agree or disagree with the following statement?	If I was buying, building, or renovating a property, I would be willing to pay extra money upfront in order to live in an "**energy efficient**" home	Likert scale response options: 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree	YES	YES	YES	YES	YES
[If respondents select 3=neither agree nor disagree; 4=agree; 5=strongly agree in Q22_A2] **Imagine you were buying, building or renovating a property to live in. How much extra money would you be willing to pay upfront to live in a "sustainable" home?**	1. 0% – not willing to pay any extra money upfront 2. 1-2% extra money upfront 3. 3-5% extra money upfront 4. 6-10% extra money upfront 5. 11-20% extra money upfront 6. More than 20% or extra money upfront 98. Don't know	Single-select checklist	YES	YES	YES	YES	YES
[If respondents select 3=neither agree nor disagree; 4=agree; 5=strongly agree in Q22_B2] **Imagine you were buying, building or renovating a property to live in. How much extra money would you be willing to pay upfront to live in an "energy efficient" home?**	1. 0% – not willing to pay any extra money upfront 2. 1-2% extra money upfront 3. 3-5% extra money upfront 4. 6-10% extra money upfront 5. 11-20% extra money upfront 6. More than 20% or extra money upfront 98. Don't know	Single-select checklist	YES	YES	YES	YES	YES

Before today, which of the following home/building rating or testing schemes (if any) have you heard of? Please select all that apply.	1. Building Sustainability Index (BASIX) 2. Green Star 3. National Australian Built Environment Rating System (NABERS) 4. Nationwide House Energy Rating Scheme (NatHERS) 5. Residential Efficiency Scorecard 6. Window Energy Rating Scheme (WERS) 7. As-built verification 99. None of the above	Multi-select checklist	YES	YES	YES	YES	YES
The Nationwide House Energy Rating Scheme, also known as NatHERS, assesses the energy efficiency of homes in Australia using a star rating system. **How familiar are you with the Nationwide House Energy Rating Scheme (NatHERS)?**	1. Not at all familiar 2. Slightly familiar 3. Moderate familiar 4. Very familiar 5. Extremely familiar	Likert rating scale	YES	YES	YES	YES	YES
The Nationwide House Energy Rating Scheme, also known as NatHERS, assesses the energy efficiency of homes in Australia using a star rating system. **To the best of your knowledge, what is the NatHERS star rating scale?** **If you are unfamiliar with the NatHERS star rating system or don't know the answer, please select the final 'don't know' option.**	1. 0 to 5 stars 2. 1 to 5 stars 3. 0 to 10 stars 4. 1 to 10 stars 5. 0 to 100 stars 6. 1 to 100 stars 97. Other. Please specify: 98. Don't know	Single-select checklist [If any response option but 'not at all familiar' was selected in previous question 24]	YES	YES	YES	YES	YES
In Australia, one way to demonstrate a new home's compliance with the National Construction Code is to achieve a minimum NatHERS star rating. **To the best of your knowledge, what is the minimum number of stars that new homes must meet in your state/territory?**	1. Minimum star rating for new homes is: 98. Don't know/unsure	Numerical – allow 0 to 100 to be entered.	YES	YES	YES	YES	YES
In the last month, how often did you do each of the following actions?	1. Use reusable shopping bags 2. Buy products with less packaging 3. Line dry the laundry 4. Take shorter showers (e.g. 4 minutes or less) 5. Turn off the tap while brushing teeth 6. Use cold wash/rinse setting for washing machine 7. Wait until clothes washing machine is full before use 8. Wait until dishwasher is full before use 9. Compost kitchen waste	Matrix-table question, with response options: 1. Never 2. Rarely 3. Sometimes 4. Often 5. Always 6. Not applicable	YES	YES	YES	YES	YES

In the last month, how often did you do each of the following actions?	1. Recycle glass products/containers 2. Recycle paper and cardboard products 3. Recycle plastics (e.g. bottles, containers) 4. Recycle aluminium products (e.g. cans, tins) 5. Using public transport or carpooling rather than driving a private vehicle by yourself 6. Walk or cycle instead of using a motor vehicle (e.g. car, bus, motorbike) 7. Reduce the amount of meat and dairy products consumed 8. Buy second hand goods (i.e. clothes/furniture from op shops and/or online marketplaces such as eBay, Gumtree, Facebook Marketplace) 9. Use a reusable bottle/cup rather than disposable options 10. Reduce the use of air-conditioning and/or heating	Matrix-table question, with response options: 1. Never 2. Rarely 3. Sometimes 4. Often 5. Always 6. Not applicable	YES	YES	YES	YES	YES
In the following questions we are interested to learn what you think about the Renovate or Rebuild TV show and related social media channels.			N/A	YES	YES	N/A	YES
[Only display Q3-Q8 if respondent indicates in Q2 that they have watched at least one episode in full or in part] **To what extent do you agree or disagree with the following statements about the 'Renovate or Rebuild' TV show?**	1. I enjoy watching this show 2. I would recommend this show to family and friends 3. I am excited to see the next episode of this show 4. I find the show entertaining 5. The show is relevant to me 6. The show is informative 7. The show's content is credible and trustworthy 8. The show's cast are authentic and relatable 9. The show offers something different to other reality/lifestyle real-estate shows on TV [Randomise order of statements]	Matrix table question, with Likert scale response options: 1-Strongly disagree 2-Disagree 3-Neither agree nor disagree 4-Agree 5-Strongly agree	N/A	YES	YES	N/A	YES
In the past month, how often have you used the following social media platforms? Please select one response per row.	1. Facebook 2. Instagram 3. YouTube 4. Twitter 5. Pinterest	Matrix table question, with response options: 1. Never 2. About once a month 3 About once a fortnight 4. About once a week 5. A few days a week	N/A	YES	YES	N/A	YES

		6. Everyday 7. Don't know/cannot recall					
In the past month, how often have you visited the official 'Renovate or Rebuild' website and/or social media sites? Please select one response per row.	1. Renovate or Rebuild official website 2. Renovate or Rebuild Facebook page 3. Renovate or Rebuild Instagram page 4. Renovate or Rebuild YouTube page	Matrix table question, with response options: 1. Never 2. About once a month 3 About once a fortnight 4. About once a week 5. A few days a week 6. Everyday 7. Don't know/cannot recall	N/A	YES	YES	N/A	YES
Do you currently 'follow' any of the following 'Renovate or Rebuild' social media sites'? **Please select all that apply.**	1. Renovate or Rebuild Facebook page 2. Renovate or Rebuild Instagram page 3. Renovate or Rebuild YouTube page 99. No – none of the above	Multi-select checklist, with the final response option being exclusive	N/A	YES	YES	N/A	YES
[Display if respondent selects any except 'No-none of the above' in Question 06] **Why did you choose to 'follow' the Renovate or Rebuild social media site(s)?**	1. I enjoy watching the show 2. To follow the show's cast member(s) 3. To keep up-to-date with general news/information about the show 4. To get more information on building design ideas from the show 5. To get more information on products/services from the show 6. To get more information on energy efficiency ideas from the show 7. To get more information on sustainability ideas from the show 8. Just for fun 97. Other reason(s). Please specify: 99. Don't know/not sure [Randomise order of response options]	Multi-select checklist, with the final response option being exclusive	N/A	YES	YES	N/A	YES
[Display each response line only, if in Q5 they select having visited the corresponding social media site at least once a month or more…] **To what extent do you like the content (e.g. posts, comments, information) published on the following 'Renovate or Rebuild' sites?**	1. Renovate or Rebuild official website 2. Renovate or Rebuild Facebook page 3. Renovate or Rebuild Instagram page 4. Renovate or Rebuld YouTube page	Matrix table question, with Likert scale response options: Dislike a lot Dislike a little Neither like nor dislike Like a little Like a lot Not sure/don't know	N/A	YES	YES	N/A	YES

Before today, which of the following brands or organisations have you heard of? **Please select all that apply.**	1. Nationwide House Energy Rating Scheme (NatHERS) 2. Energy Matters 3. Ultimate Windows 4. Integra Windows 5. Bondor 6. Sustainability Victoria 7. Deceuninck 8. Dulux 9. Colorbond Steel 10. James Hardie Australia 11. Laminex 99. None of the above	Multi-select checklist	N/A	N/A	YES	N/A	YES
In the last 2 months, have you contacted, made enquiries with or sought information from any of the following brands or organisations? Please select all that apply.	1. Nationwide House Energy Rating Scheme (NatHERS) 2. Energy Matters 3. Ultimate Windows 4. Integra Windows 5. Bondor 6. Sustainability Victoria 7. Deceuninck 99. None of the above	Multi-select checklist	N/A	N/A	YES	N/A	YES
To the best of your knowledge, what product(s) does Bondor offer or sell to customers?	Include open text as well as a 'don't know' box if possible	Open ended text	N/A	N/A	YES	N/A	YES
To the best of your knowledge, what product(s) does Deceuninck offer or sell to customers?	Include open text as well as a 'don't know' box if possible	Open ended text	N/A	N/A	YES	N/A	YES
In the past two months, has your household bought or installed any of the following?	Solar panels to generate electricity Battery storage connected to solar panels Electric vehicle None of the above	Multi-select checklist	N/A	N/A	YES	N/A	YES
Branch if respondents select 'yes currently' or 'yes in the short term' for solar panels or battery storage in question above to this question. **In the past two months, have you obtained one or more quotes for any of the following? Please select all that apply.**	[ROWS] Yes, I have obtained quotes(s) No, I have not obtained quote(s) [COLUMNS] Solar panels Battery stotage	Matrix table question	N/A	N/A	YES	N/A	YES
[If Yes to previous question] **In terms of the quote(s) you have recently obtained, who have you contacted in the past eight weeks? Please give the names of any**	Include open text as well as a 'don't know' box if possible	Open ended text	N/A	N/A	YES	N/A	YES

solar/battery providers, suppliers, brands or companies that you have contacted to seek quotes.							
In the past two months, have you purchased or installed uPVC windows?	Yes, I have purchased/installed uPVC windows in the past two months No, but I intend to purchase/install uPVC windows in the future No, and I have no intentions to purchase/install uPVC windows in the future	Single-select checklist	N/A	N/A	YES	N/A	YES
[If Yes to previous question] **What brand of uPV windows did you purchase/install?**	Include open text as well as a 'don't know' box if possible	Open ended text	N/A	N/A	YES	N/A	YES
In the past two months, have you purchased or installed any insulation (e.g. wall, roof/ceiling, underfloor)?	Yes, I have purchased/installed insulation in the past two months No, but I intend to purchase/install insulation in the future No, and I have no intentions to purchase/install insulation in the future	Single-select checklist	N/A	N/A	YES	N/A	YES
[If Yes to previous question] **What brand of insulation did you purchase/install?**	Include open text as well as a 'don't know' box if possible	Open ended text	N/A	N/A	YES	N/A	YES
Thank you for taking part in Survey 1! **We would love for you to continue in the Renovate or Rebuild journey with us by taking part in our future surveys.** **You will have a chance to participate in at least 3 more surveys. Survey 2 will be released shortly after episode 4 airs on 25th October 2021. Survey 3 will be released shortly after episode 8 airs on 22nd November 2021. Survey 4 will be released 3 months after the final episode goes to air. Each survey will be 10-15 minutes in length. It is completely voluntary to participate in these future surveys. If you wish to participate, we will send the survey link to your email address. PRIZE DRAW: In return for completing the first three surveys, you will be eligible to enter the prize draw offered by Renovate or Rebuild Pty Ltd to win one of eight 1 hour virtual meetings with one of the 'Renovate or Rebuild' teams/cast to talk through your own renovate or rebuild plans. For further details on the prize draw Terms and Conditions, please visit: https://renovateorrebuild.com.au/competition2021terms/** **Would you like to participate in our future surveys?**	1. Yes [Continue] 2. No [Finish survey, mark as complete]	Single-select checklist	YES	N/A	N/A	N/A	YES
To participate in future surveys, you will need to provide your email address so the panel provider, Pureprofile, can email you 'Renovate or Rebuild' surveys on behalf of CSIRO. Do you agree?	Yes, I agree to share my email address in order to receive future survey links from Pureprofile. [Continue]	Single-select checklist	YES	N/A	N/A	N/A	YES

	No, I do not agree to share my email address in order to receive future survey links from Pureprofile [Finish survey, mark as complete]						
Please enter your email address is: _____ **Please confirm you email address: _____**		Open ended text [Survey programmed to check that both email fields match]	YES	N/A	N/A	N/A	YES
Would you like to enter the prize draw offered by the Project Partner, Renovate or Rebuild Pty Ltd? For further details on the prize draw Terms and Conditions, please visit: https://renovateorrebuild.com.au/competition2021terms/ **If you are the winner, Pureprofile will need to share your email address with Renovate or Rebuild Pty Ltd. Do you agree?**	Yes, I would like to enter the prize draw and give consent for my email address to be shared with Renovate or Rebuild Pty Ltd. No, I would not like to enter the prize draw and/or do not consent for my email address to be shared withRenovate or Rebuild Pty Ltd	Single-select checklist	YES	YES	N/A	N/A	YES
To finish the survey, we would like to ask you one final question. Please note that your answer to this question will not disqualify you from this survey (or any future surveys for this Project), nor will it impact the reward/incentive you are eligible to receive from Pureprofile. So please answer this question honestly and truthfully. **In the past 4 weeks, have you competed any other surveys for the CSIRO on the topic of residential housing and/or features of homes in Australia?**	1. Yes 2. No	Single-select checklist	YES	N/A	N/A	YES	YES
Thank you for taking part in this survey! **We would love for you to continue in this Project with us by taking part in our future surveys. You will have a chance to participate in 3 more surveys linked to this research. Each survey will be 10-15 minutes in length. In return for completing each survey, you will be rewarded by Pureprofile as per their standard incentive/reward system.** **Please keep an eye out in your email for these future surveys!**			YES	N/A	N/A	YES	YES
Thank you for taking part in Survey 2! **We would love for you to continue taking part in our future surveys.** **You will have a chance to participate in at least 2 more surveys. Survey 3 will be released on 22nd November 2021. Survey 4 will be released in February 2022. Each survey will be 10-15 minutes in length. It is completely voluntary to participate in these future surveys.** **In order for your participation to be successfully recorded in this Project, please remember not to share this survey link with others as this link is unique to your participation.**			N/A	YES	N/A	YES	YES

[For online panel participants who answered 'Renovate or Rebuild' in Question 1 – do not show to client sample as they were already asked in Survey 1] **Would you like to enter the prize draw offered by the Project Partner, Renovate or Rebuild Pty Ltd? For further details on the prize draw Terms and Conditions, please visit: https://renovateorrebuild.com.au/competition2021terms/** **If you are the winner, Pureprofile will need to share your email address with Renovate or Rebuild Pty Ltd. Do you agree?**	Yes, I would like to enter the prize draw and give consent for my email address to be shared with Renovate or Rebuild Pty Ltd. No, I would not like to enter the prize draw and/or do not consent for my email address to be shared with Renovate or Rebuild Pty Ltd.		N/A	YES	N/A	N/A	YES
[If YES above – can the system ensure the email matches in the two entry boxes?] **Please enter your email address: _____** **Please confirm you email address: _____**		Open ended text [Survey programmed to check that both email fields match]	YES	YES	N/A	N/A	YES
[For online panel participants who DID NOT answer 'Renovate or Rebuild' in Question 1, please advise the following to all remaining participants in the panel group:] **As part of this Project, you also have the opportunity to provide feedback on an exciting new TV series 'Renovate or Rebuild' which premiered on Channel 9Life on Monday 4th October at 9pm. As each episode goes to air, they will also be available to watch online at https://www.9now.com.au/renovate-or-rebuild. If you choose to watch the 'Renovate or Rebuild' series, in addition to the Pureprofile incentive, you will be invited to go into the draw offered by Renovate or Rebuild Pty Ltd. Please only complete the surveys sent by Pureprofile as surveys completed through the Renovate or Rebuild website are not eligible for Pureprofile incentive. For further details on the 'Renovate or Rebuild' prize draw Terms and Conditions, please visit: https://renovateorrebuild.com.au/competition2021terms/.**		Single-select checklist	YES	YES	N/A	N/A	YES
In the next few months, our research team will run a series of online focus groups to obtain further feedback on the Renovate or Rebuild TV show from real-world viewers such as yourself. Would you be interested in participating in one of these focus group discussions? In return for taking part in the focus groups you will be rewarded with a gift card.	Yes, I am interested – please contact me to tell me more and see if I am eligible. No, I am not interested.		N/A	N/A	YES	N/A	YES
To participate in the focus group discussion, you will need to provide your email address so the panel provider, Pureprofile, can share your email with the CSIRO who will contact you. Do you agree? **[Apply branching – is 'yes' go to next question, If response is 'No'**	Yes, I agree [continue to email collection] No, I do not agree [skip email collection]		N/A	N/A	YES	N/A	YES

please do not disqualify, please mark as complete (i.e. finish survey)]						
[If YES above – can the system ensure the email matches in the two entry boxes?] **Please enter your email address: _____** **Please confirm you email address: _____**	Open ended text [Survey programmed to check that both email fields match]	N/A	N/A	YES	N/A	YES
Thank you for taking part in Survey 3! **We would love for you to continue taking part in our future surveys.** **You will have a chance to participate in one final survey. Survey 4 will be released in February 2022. It is completely voluntary to participate in these future surveys.** **For your participation to be successfully recorded in this Project, please remember not to share this survey link with anyone else as this link is unique to your participation.**	Single-select checklist	N/A	N/A	YES	YES	YES
Thank you for participating in this survey. CSIRO values your contribution to this research.		YES	YES	YES	YES	YES

A.1.5 Comparison of viewer vs. non-viewer sub-samples

As shown in Figure 39, a higher proportion of respondents within the viewer sub-sample reported currently planning to buy, build, rebuild or renovate a residential property (to live in or as an investment) in Australia sometime in the future compared to the non-viewer sub-sample. More specifically:

- 42% of viewers stated that they were planning to renovate an existing home, as opposed to 27% of non-viewers;
- 31% of viewers stated that they were planning to buy a new home, as opposed to 21% of non-viewers;
- 16% of viewers stated that they were planning to build a new home, as opposed to 9% of non-viewers; and
- 6% of viewers stated that they were planning to rebuild a home, as opposed to 2% of non-viewers.

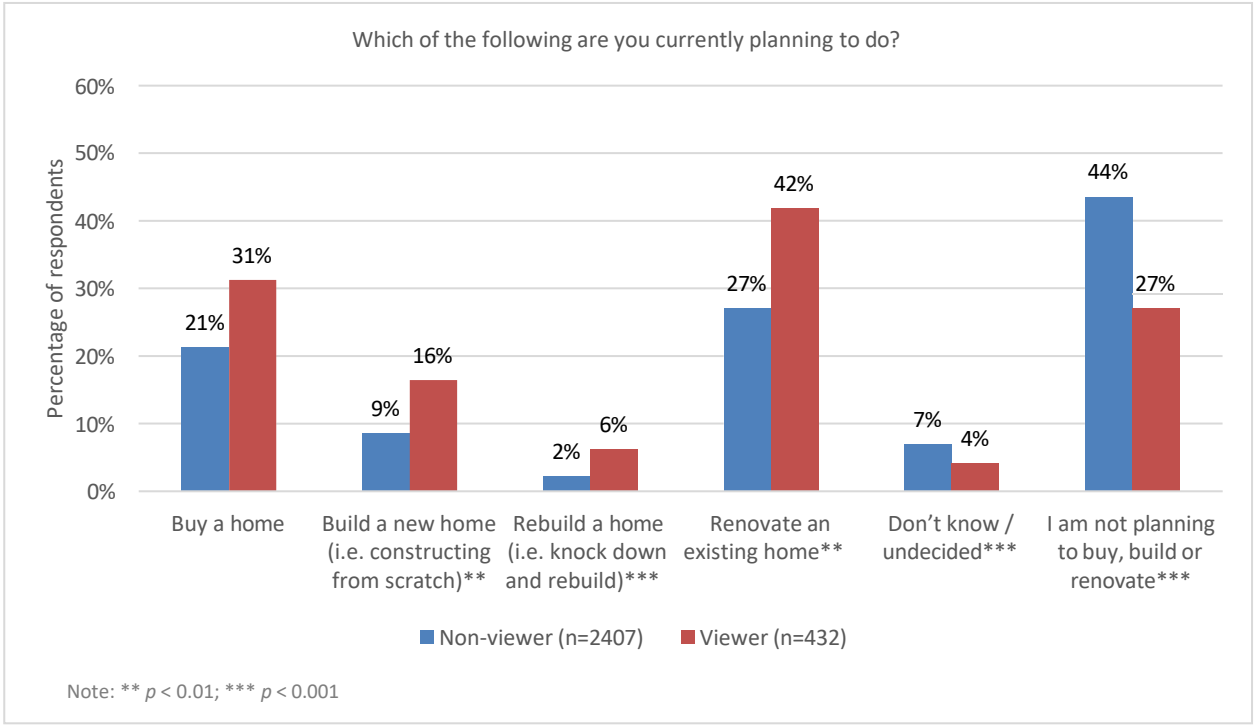

Figure 39 Survey participants' self-reported intentions to buy, build, rebuild or renovate a residential property: Viewer vs. non-viewer sub-samples

As shown in Figure 40, a higher proportion of respondents within the viewer sub-sample reported having solar photovoltaics (46%) and battery storage (12%) installed at home compared to the non-viewer sub-sample (35% and 5%, respectively).

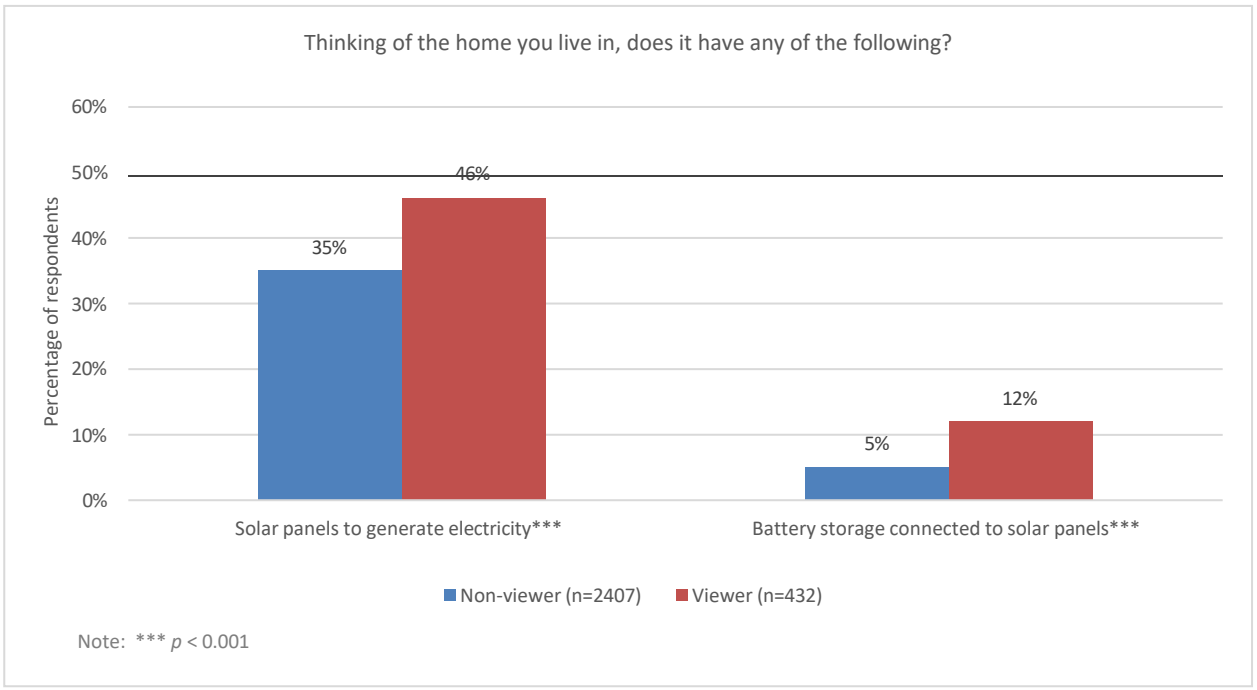

Figure 40 Participants' self-reported ownership of solar PV and battery storage at home: Viewer vs. non-viewer sub-samples

As shown in Figure 41, self-reported intentions to buy energy-related technology tended to be higher among respondents in the viewer sub-sample, with a higher proportion stating that they planned to buy solar panels (53%), battery storage (44%), or an electric vehicle (32%) for current and/or future properties in the short or medium-term future when compared to non-viewers (32%, 25% and 15% respectively).

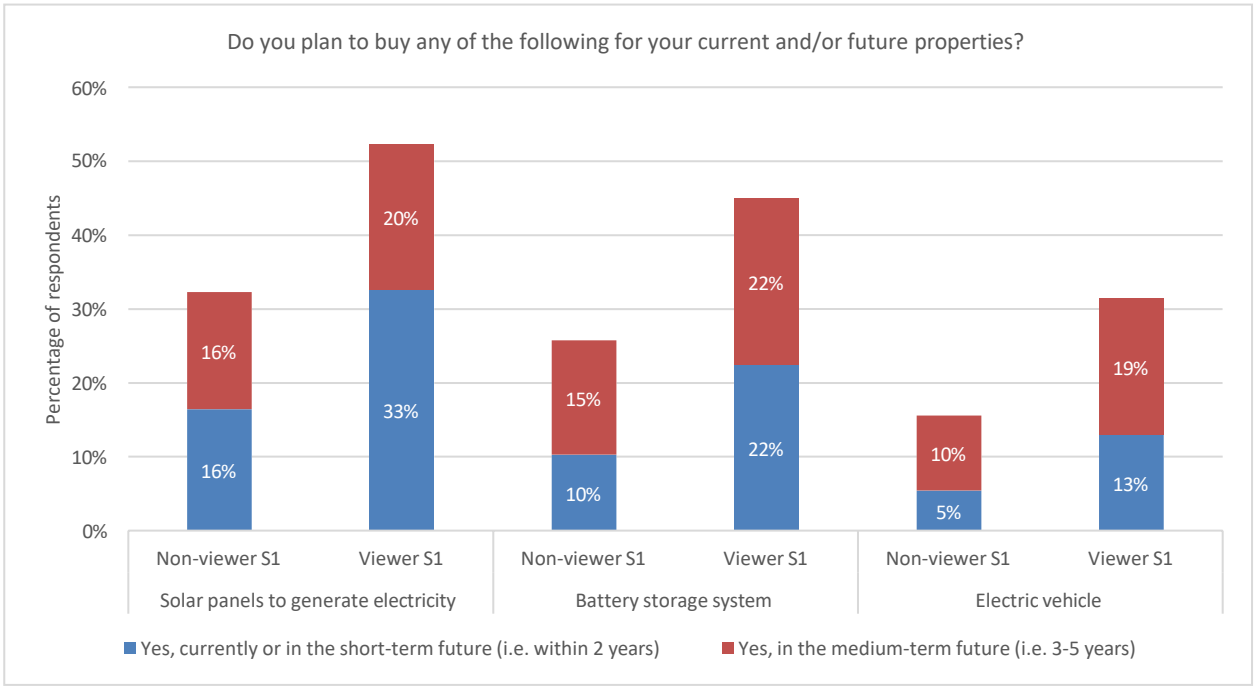

Figure 41 Participants' self-reported intentions to buy energy-related technology: Viewer vs. non-viewer sub-samples in Survey 1 (S1).

As shown in Figure 42, the sub-sample of viewers tended to report a higher level of awareness for all of the home/building rating schemes listed in the survey compared to non-viewers.

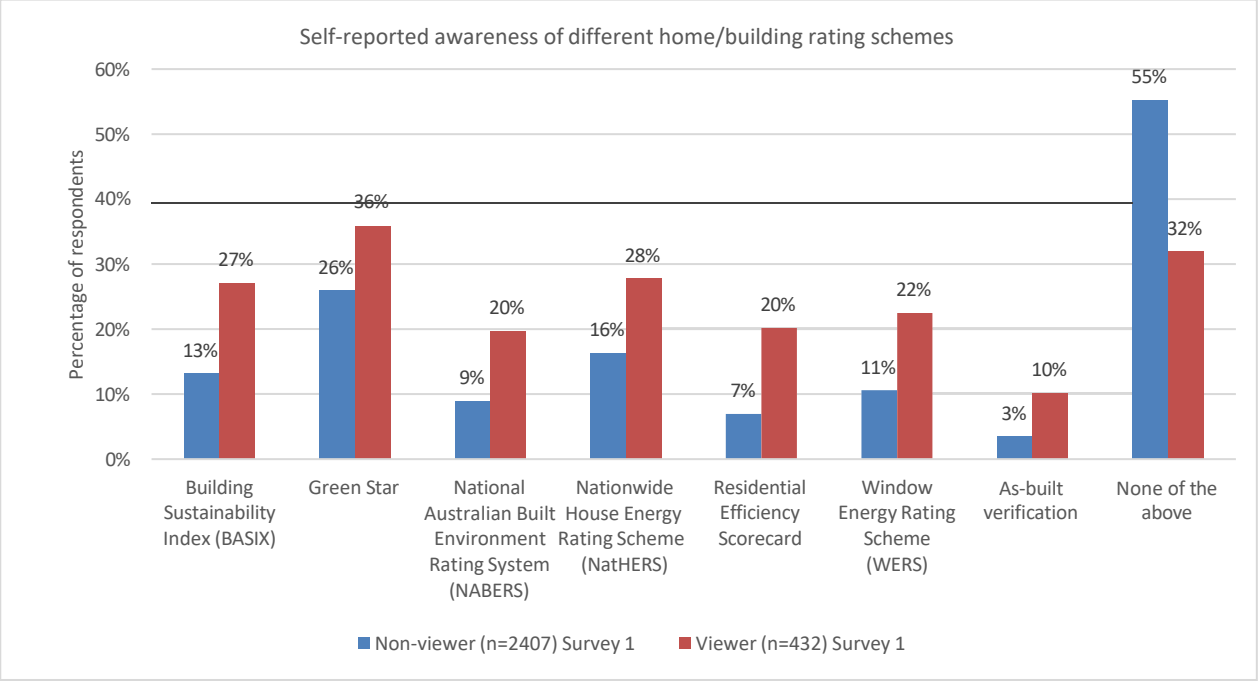

Figure 42 Participants' self-reported awareness of different home/building rating schemes: Viewer vs. non-viewer samples

As shown in Figure 43, the sub-sample of viewers also reported a higher level of familiarity with the NatHERS rating scheme compared to the sample of non-viewers. More specifically, 30% of viewers reported being 'very' or 'extremely' familiar with this scheme, as opposed to 13% of non-viewers.

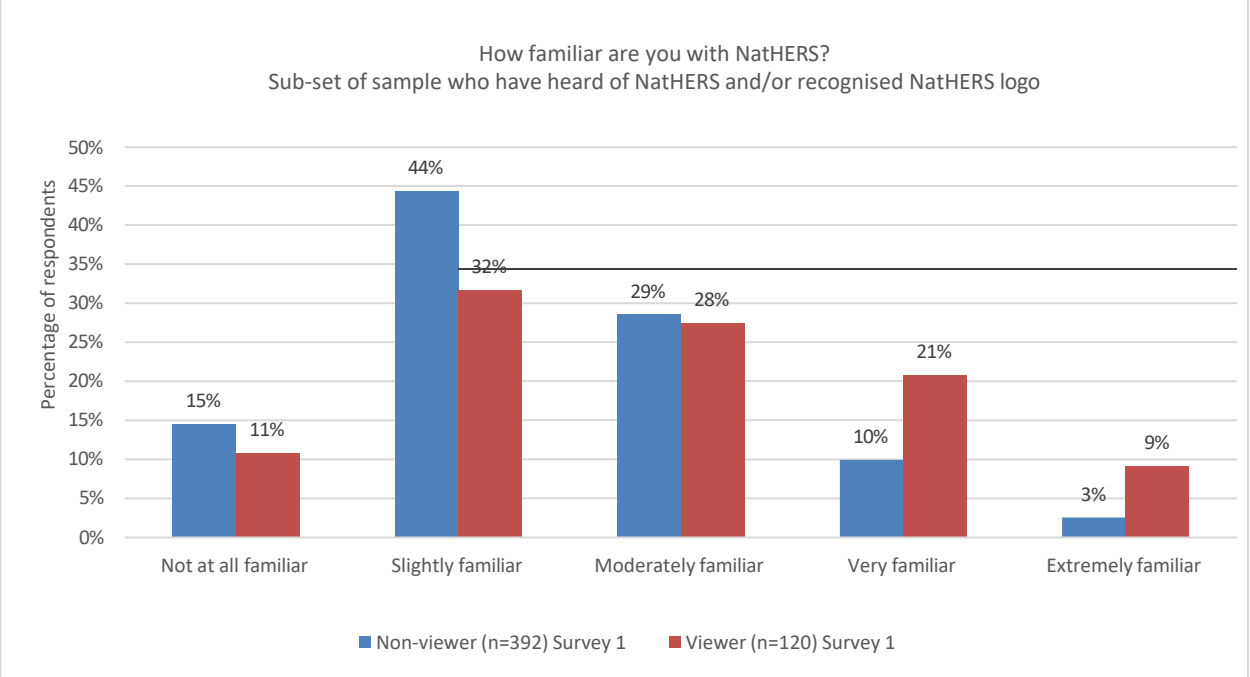

Figure 43 Participants' self-reported familiarity with the NatHERS rating scheme: Viewer vs. non-viewer samples

As shown in Figure 44, the sub-sample of viewers reported a greater desire for certain energy efficient home features compared to non-viewers. More specifically:

- 53% of viewers stated that a home 'must have' comfortable indoor temperature in summer, as opposed to 42% of non-viewers;
- 49% of viewers stated that a home 'must have' comfortable indoor temperature in winter, as opposed to 37% of non-viewers;
- 40% of viewers stated that a home 'must have' rooms or areas in the home that can be separately cooled or heated, as opposed to 33% of non-viewers;
- 35% of viewers stated that a home 'must have' north facing living areas, as opposed to 26% of non-viewers;
- 31% of viewers stated that a home 'must have' a home energy star rating above the minimum standards for Australia, as opposed to 23% of non-viewers;
- 28% of viewers stated that a home 'must have' double glazing windows and/or doors, as opposed to 19% of non-viewers;
- 28% of viewers stated that a home 'must have' solar PV panels, as opposed to 20% of non-viewers; and
- 16% of viewers stated that a home 'must have' battery storage, as opposed to 7% of non-viewers.

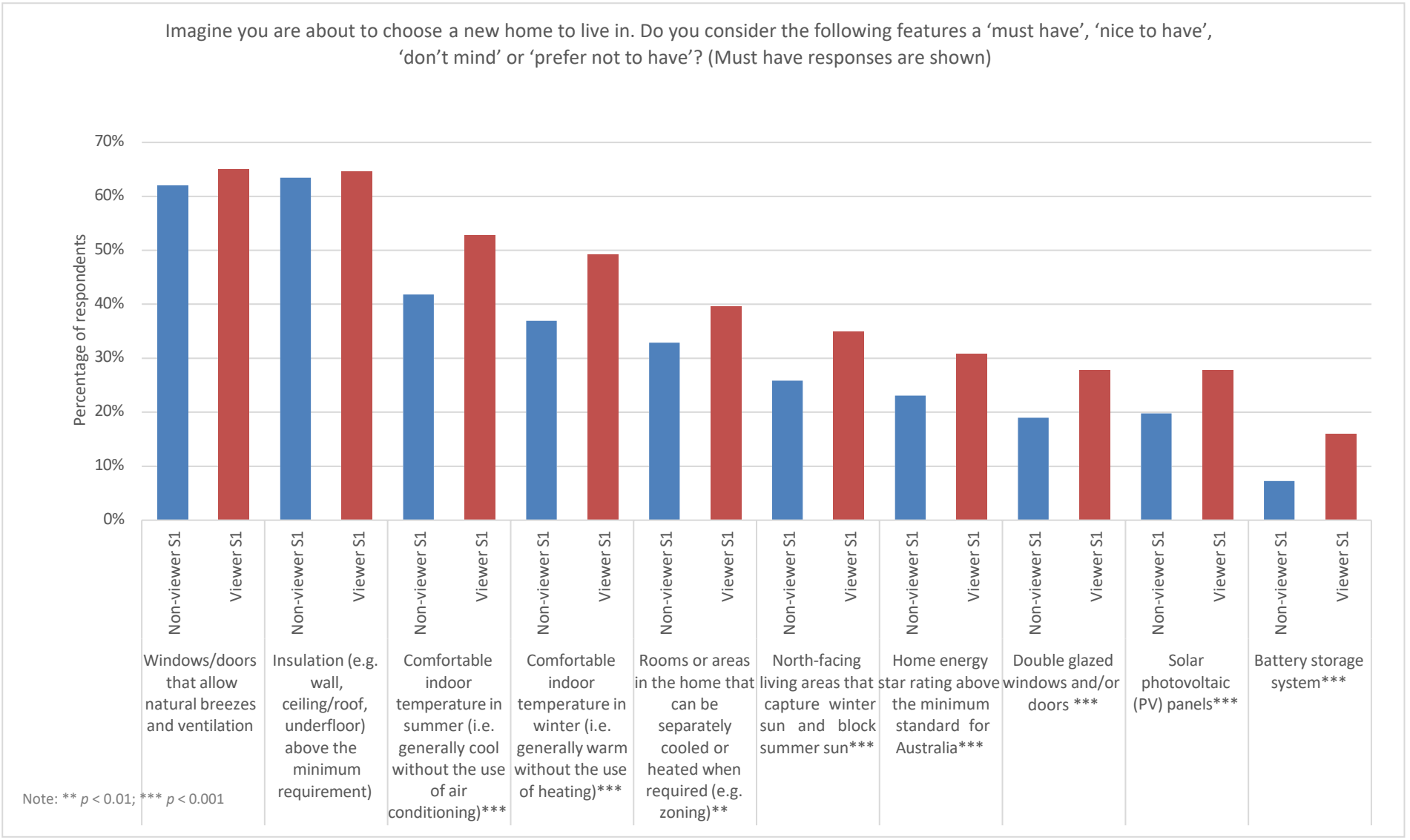

Figure 44 Participants' self-reported preferences for various housing features: Viewer vs. non-viewer sub-samples

As shown in Figure 45, the sub-sample of viewers was more likely to rate 'sustainable' (Mean=3.88) and 'stylish' (Mean=3.50) as important home characteristics compared to the sub-sample of non-viewers (Mean=3.72 and 3.66, respectively).

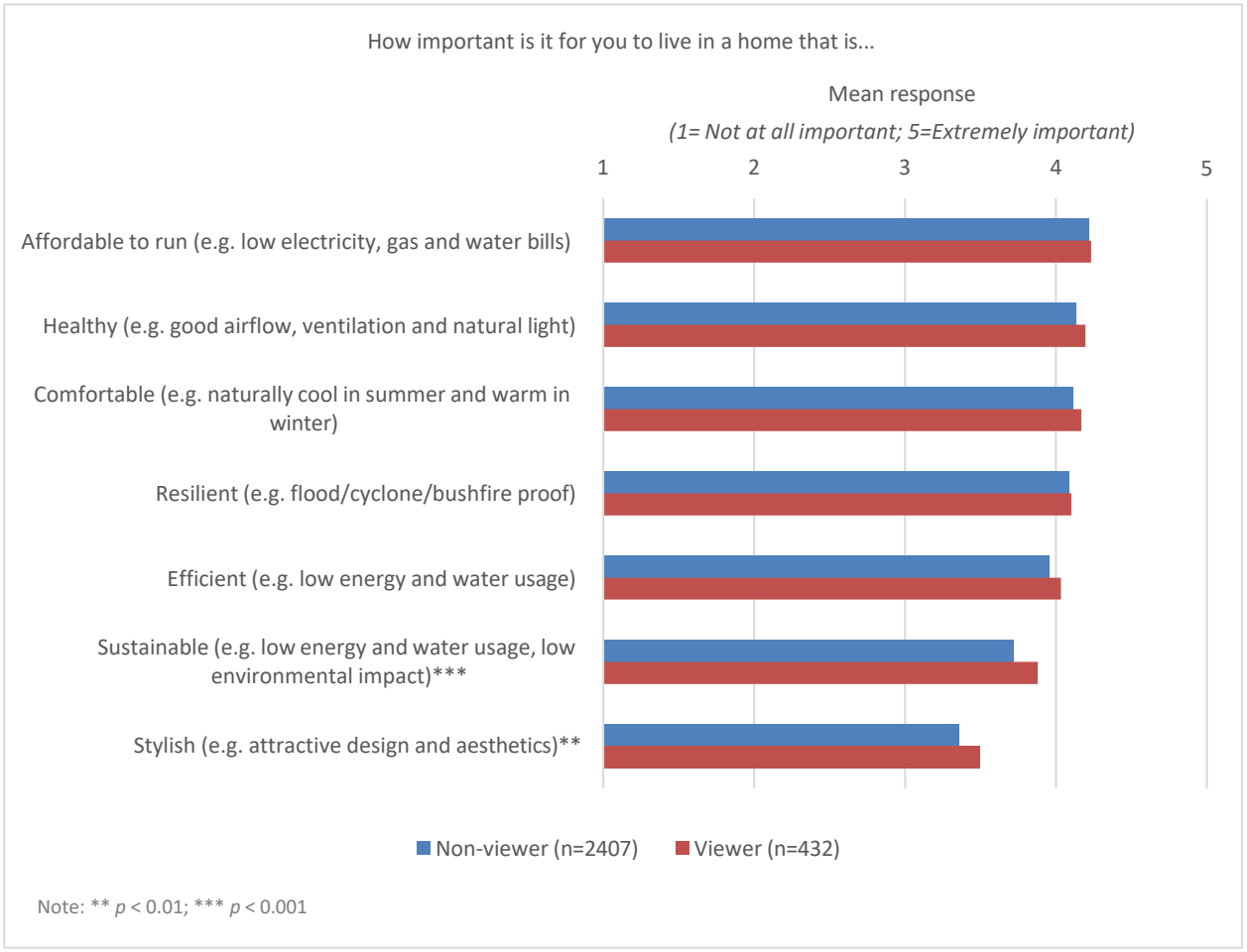

Figure 45 Participants' self-reported perceived importance for various home characteristics: Viewer vs. non-viewer sub-samples

A.2 Focus Groups

A.2.1 Participant Information Sheet and Consent Form

Participant Information and Consent Form – 'Renovate or Rebuild' TV Show Focus Groups

Overview

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) – Australia's national science agency – invites you to take part in the 'Renovate or Rebuild TV Series Evaluation' (the Project) where you can share your views and preferences on the features of homes in Australia, as well as your thoughts on a new television show related to this topic.

CSIRO is conducting this Project in partnership with the Blue Tribe Company (BTC) and the New South Wales Department of Planning Industry and Environment (DPIE). The project is being funded by CSIRO, BTC and DPIE in collaboration with Sustainability Victoria and the Reliable, Affordable, Clean Energy for 2030 Cooperative Research Centre (RACE CRC).

To be eligible to participate in the Project, you must be an Australian resident aged 18+ years old.

What will I be asked to do?

Participation in the Project will involve taking part in an online focus group discussion (~60 minutes in duration) with up to 8 participants in total. CSIRO will facilitate the discussion by videoconference using the Cisco WebEx (WebEx) platform (see https://www.webex.com/). To participate, you will need to consent to the focus group session being digitally recorded using WebEx's recording function. Audio (e.g. verbal comments) from the video recordings may also be transcribed by a contracted third-party transcription provider for data analysis purposes.

What will I get for participating?

In return for completing the entire Project, you will be rewarded in the form of an eGift card to the value of A$100 that can be used/redeemed at a range of stores or retailers. If you withdraw part-way through the focus group and therefore do not complete the entire Project, you will not be eligible for this reward.

What if I want to withdraw from the Project?

Participation in the Project is entirely voluntary, so you are under no obligation to take part. Your decision about whether to participate in the focus group will not affect your current or future relationship with the researchers, anyone else at CSIRO, or with the Project's partners. If any topic is raised during the focus group that you would prefer not to discuss, you do not need to contribute to this topic of discussion.

Similarly, you are free to withdraw from the Project at any time. If you wish to withdraw, simply notify the CSIRO facilitator and, subject to any applicable legislation, your information will be removed from the Project. It may not be possible to remove your data from recordings and/or transcriptions of the focus group discussion, however, as they will contain information about other participants. But if you choose to withdraw

from the Project, your information will not be used or published. You may withdraw your information from this Project up until publication of the final outputs.

How will my personal information be handled?

Your personal information is protected by the *Privacy Act 1988* (Cth). Throughout the course of the Project, CSIRO will handle your personal information in accordance with this Act and the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research (2007) – Updated 2018* as amended from time to time, and as otherwise required by law.

If you consent to take part in the Project, CSIRO will collect your personal information from you – including your name, contact details, demographic information including gender, age, and location (state), whether or not you are currently renovating or buying a home or looking to in the future, how many episodes of Renovate or Rebuild you watched, and your opinions and answers to the focus group questions – for the purposes of the Project.

CSIRO may also incidentally collect your sensitive information, including video images of you during the focus group, as part of conducting the video sessions. This information will not be used for any purpose outside of conducting the video session.

If you do not agree to having this personal information collected, you will be unable to participate in the Project.

Information that you provide during the Project may be disclosed to third parties, including WebEx, Pure Profile, Microsoft, a contracted third-party transcription provider, and the other participants who are present in your focus group, for the purposes outlined above. With your consent provided via this form, your responses to previous 'Renovate or Rebuild' online surveys will be linked to the data collected during the focus group. This will also involve Pure Profile sharing your personal information with CSIRO.

The registration forms for the focus groups forms are hosted on the Microsoft Forms platform, which uses servers in the United States (US). The focus groups will be hosted via the WebEx platform. Whilst most of the information collected via WebEx is stored on WebEx servers in Australia, there may be limited circumstances where information is transferred to WebEx servers based in the United States and Singapore. This means your personal information may be transferred to Microsoft servers and WebEx servers located outside Australia. By registering for and participating in a focus group session, you consent to the potential transfer of your personal information to Microsoft and WebEx servers located outside of Australia and you acknowledge that this information may not be subject to the requirements of the Privacy Act. For more information about how Microsoft and WebEx generally handle personal information, please refer to their privacy policies available at:

https://privacy.microsoft.com/en-ca/privacystatement.

https://www.cisco.com/c/en/us/about/legal/privacy-full.html.

Results from the Project will be de-identified and aggregated prior to publication. Findings and results may be published in a variety of forums including (but not limited to) scientific papers, public reports, media releases and industry websites, and also communicated publicly through conference presentations. With your consent, information in the form of verbatim quotes from the focus group discussion may also be published. De-identified information may also be used for future research and analyses purposes. On completion of the Project, a de-identified summary of the findings will be made available to participants on request. Please email the CSIRO Project leader Dr Danie Nilsson (Danie.Nilsson@csiro.au) if you would like to receive a copy of this summary report.

The CSIRO Privacy Policy – available at https://www.csiro.au/en/About/Access-to-information/Privacy – outlines how your personal information will be handled. This includes details about how you can seek access or correction of the personal information we hold about you, how you can lodge a complaint about a breach of the Australian Privacy Principles (APPs), and how CSIRO will deal with any complaints that are received. If you require further information on how your personal information will be handled, please contact privacy@csiro.au.

For information about how Pure Profile generally handles personal information, please refer to their general privacy policy available at: https://www.pureprofile.com/privacy-policy/.

What if I have any questions about this Project?

If you have any questions about this Project, please contact the Project leader, Dr Danie Nilsson via email (Danie.Nilsson@csiro.au) or by phone on (07) 3833 5714.

This Project has been approved by CSIRO's Social Science Human Research Ethics Committee in accordance with the National Statement on Ethical Conduct in Human Research (2007) – Updated 2018. Any concerns or complaints about the conduct of this Project can be raised with the Executive Manager of Social Responsibility and Ethics on (07) 3833 5693 or by email at csshrec@csiro.au.

Informed Consent

If you agree to the conditions outlined above and consent to take part in this Project, please register your interest in the polling link provided in the email as the preferred method for registration. Or you can also register by replying to the email sent to you with your preferred dates for participation.

By registering for and participating in the focus group session, you agree to the conditions outlined in this Participant Information Sheet, including the following:

- You agree to the collection, use and disclosure of your personal information, including your sensitive information, in the ways outlined above.
- You agree to the potential transfer of your personal information, including your sensitive information, to Microsoft and WebEx servers located outside of Australia, in the ways outlined above. You also acknowledge that this information may not be subject to the requirements of the *Privacy Act 1988* (Cth).
- You agree with verbatim quotes from your participation being used in project-related publications and presentations and understand that if other individuals are present in your interview, they may be able to re-identify you from these verbatim quotes if/when they are published/presented. (*This is not required for participation – however, if you wish to not have any personal verbatim quotes recorded you must advise the facilitator Danie Nilsson before beginning the focus group discussion*).

A.2.2 Focus group questions

1. What did you think of the show? What did you like/dislike? What would you like to see more of/less of in the show?

2. How has the show increased your knowledge and preferences around buying, building and/or renovating a property?

3. How has the show influenced (or how do you think it might influence in the future) your choices, decision-making, and behaviour when it comes to buying, building and/or renovating your property?

4. How could the show be changed or adapted to better help you with buying, building and/or renovating your property?

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