

Have real estate agents' perceptions on the importance of sustainability in housing changed?

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Abstract

Energy used in housing is a major contributor to Australia's energy consumption and associated environmental impacts. As market facilitators and influencers, real estate agents are expected to play an active role in motivating home buyers in purchasing energy efficient housing through advertising. This research aims to examine whether real estate agents effectively incorporate sustainability features in their advertisements and if their perceptions of the importance of advertising sustainability features have changed over the last five years. Mixed method research was employed to determine whether environmental issues were considered to be a major factor by real estate agents when advertising detached dwellings. The first set of in-depth interviews was conducted with 10 real estate agents in 2013, followed by the second set of interviews with another 10 agents in 2017. This was followed by an analysis of actual housing advertisements in Melbourne metropolitan and regional areas.

It was found that the attitudes of real estate agents on the importance of advertising sustainability in residential properties have not changed significantly even though they have become more aware of the climate change debate over the years. They would only emphasise sustainability characteristics in their marketing campaigns if those features would have noticeable financial implications. The findings suggest the free market strategy is likely to imbue sustainability into housing markets, but market facilitators, buyers and sellers have not yet reached a critical mass in terms of them being considered a norm. The necessity of reviewing the current legislative mechanisms in order to align the intent of the legislation with the actual outcomes is highlighted.

Keywords: sustainability; advertising; real estate agents; housing; marketing

Introduction

Housing is the world's most common form of land use. It meets fundamental human need and has the potential to significantly impact the global struggle to reduce fossil fuel consumption. Through bespoke energy efficient measures, embodied and in-use carbon release can be reduced to mitigate climate change, the potential effects of which have been extensively examined. Within Australia environmental issues have been the subject of intense political debate, largely emanating from political ideologies (Diesendorf 2014). Some observers believe the combative attitudes of politicians have “interfered” with societal engagement with this important global issue (Tjernström, and Tietenberg 2008). Social attitudes resulting from such intense, sometimes hostile, debates are very likely to affect markets and market perceptions of the importance and engagement with mitigating the effects of climate change, including housing markets.

In many countries, particularly those considered developed, housing is commonly exchanged and has become a ‘market’ in itself. Housing markets have developed to become complex in nature and due to their high exchange value participants may enter such markets only a few occasions in their life. Therefore, real estate agents, also known as brokers or realtors in some countries, have emerged to become a critical component of the house market exchange process. They play a critical role in the provision of expertise and knowledge to sellers and buyers and act as intermediary within the process. Consequently, they are in a unique position to influence housing markets and potentially, the imbue of energy efficient consciousness into the minds of house market participants. If this were to occur it would provide a significant structural change in housing markets as sellers would no doubt seek to maximise the attractiveness of their house by installing and highlighting such technologies.

Within Victoria, Australia's second populous state, very little has been done to “disrupt” housing markets with regulated frameworks regarding house energy efficiency. New houses and those undertaking extensions greater than 50% of the original floor area are required to bring the entire house to a minimum 6-star energy performance (Victorian Building Authority 2017) but nothing exists outside this criterion. Existing dwellings do not require any form of energy performance measurement or standard. In Victoria, like many parts of the world, the majority of

existing dwellings were built prior to any form of energy performance standards being introduced. Therefore, for this substantial house market segment, “natural” market forces must drive change and for this to happen market participants must understand and engage with drivers of such change. One of the participants of interest here are real estate agents.

This research examines individual attitudes and practices of real estate agents with particular regard to house energy efficient characteristics when promoting the property for sale. Specifically, this research aims to address two primary research questions. The first being “What perceptions do real estate agents possess in regard to of energy efficient housing?” and secondly, “Are these perceptions changing over time?” Due to their potential influence in the market process it is important to understand the perceptions held by real estate agents if fundamental engagement with the reduction of carbon emissions is to be achieved. Although only one part of the housing sector collage, they are nonetheless significant.

The study is longitudinal and includes agents from metropolitan Melbourne, the state’s capital, and three major regional cities. The study is intentionally holistic in its approach and aims to elucidate real estate agents’ attitudes and perceptions of energy efficient housing to set a research agenda for future exploration.

Literature review

The effects of anthropological activities upon the climate and environment more broadly have had significant negative impact and are in need of radical correction (WCED 1987). Governments have implemented a range of interventions and in the case of Australia, have led to significant controversy (Morton 2015; Hudson 2017). With regard to housing markets, policies have ranged from direct intervention such as energy certificates, intended to inform potential buyers as to the energy performance of the building through to broader statements encouraging behavioural change rather than incentivising it. Measures in between have included forms of financial incentives and rebates (Department of the Environment and Energy 2017). These have had varying effect upon the consciousness of market participants when engaging in the house purchase process (Crabtree and Hes 2009; Morrissey et al 2015).

Globally climate change remains of concern to international bodies such as the United Nations and recent conferences have highlighted that it is the slow rate of change that remains the central issue (UN 2012). In order to achieve specific targets, set at the United Nations Conference of Sustainable Development held in Brazil in 2012 (UN 2012), it is necessary to engage all sectors of the community towards a more rapid uptake of sustainable behaviours globally. This includes market intermediaries, namely real estate agents.

The aim of the real estate agents is to promote property, in this case housing, to potential buyers through any legal means possible and negotiate a sale on behalf of their client, usually the seller. They do not possess any pecuniary or other interest in either the property or the buyer and are remunerated via success fee. It is the agent's ability to discern and align house characteristics to the nuances of market appetites to maximise the exchange price that clients pay for. This activity must be done in accordance within localised legal and ethical frameworks. Thus, the agent becomes skilled in understanding market reactions to specific house characteristics, how they can be legally promoted and presented to buyers, and in this process, the "value" house buyers are likely to place upon such characteristics relative to others. However, the first step in the process of seeking a buyer is marketing. This marketing, which includes advertising, not only aims to attract suitable buyers, but also those who are most likely to pay premium price (Allen et al., 2005; Almatarneh and Mansour 2013).

The role of intermediaries within house market processes has received some, but not extensive interest by researchers. For example, researchers have examined the influence of real estate agents on transfer price (Daneshvary and Claretie 2012), advertising rhetoric (Pryce and Oates 2008), effects of market cycles (Robertson and Doig 2010), influence upon participant perceptions (Arndt et al 2013) and impact upon houses' exhibiting environmental disamenities (Jauregui and Hite 2010). Much of this work pre-exists the increasing interest in how agents are engaging with house environmental discourse. It is the aim of this research to examine agent engagement with energy efficient house characteristics during the course of marketing.

House energy efficient characteristics are manifested in a variety of forms and appropriate technologies will vary from climate to climate (Dan et al 2016). These can

be low cost technologies such as draft seals, use of suitable landscaping through to more expensive technologies such double or triple glazed windows, solar panel arrays or somewhere in between such as passive design (it is acknowledged certain design types can be considered expensive) (Pellegrini-Masini 2010). As the selection of energy efficient technologies is contingent on the region in which the house exists, it is now appropriate to continue this discussion in the Australian context, the frame of this research.

The incumbent Australian government has chosen a neo-liberal policy of allowing “natural” market forces to infuse energy efficient technologies into house built form as a norm. This doctrine, whilst perhaps effective in the long term, is unlikely to assist Australia in meeting its agreed targets established at the 2012 UN conference held in Brazil. This is largely due to the inertia that exists within housing markets. House sellers are not likely to install energy efficient technologies unless they perceive doing so will lead to a higher sale price and therefore with regard to being incentivised by the market, sellers are unlikely to expend the necessary monies. Buyers are not likely to install such technologies post purchase because they usually expend their budget to gain maximum utility from the action (Koklifç and Vida 2009). Combined with these, houses are not exchanged regularly. Therefore, any action by house owners to retrofit energy efficient technologies would have to be a result of perceived benefits during the ownership period. Without government incentives, these benefits can be limited.

From this it can be seen that where energy efficient technologies are installed, the real estate agent plays a crucial role in terms of making them known to the buyer. The question now arises “What are real estate agent perceptions of energy efficient housing and do they promote them?”. Real estate agents in Victoria are paid via a success fee and this fee is an agreed percentage of the transfer price. As personal income is dependent upon sales success, agents have a strong incentive to maximise the house characteristics that have contemporary appeal to the prevailing market. Applying this principle to the research presented here, we posit that a real estate agent will, within legal and ethical limitations, include energy efficient technologies in advertising material if they perceive it will result in quicker sale, a higher price or both.

This is important because previous research has shown that real estate agents play an important role in the transfer of information to purchasers through their house search (Levy et al., 2008). In order to convey the advantages of house energy efficient technologies real estate agents must first understand their function and purpose and benefits derived from them. Agent attitudes are also likely to play a role. The extent to which a real estate agent engages with and promotes energy efficient technologies is likely to be led by market appetites for such technologies and therefore understanding how agents engage with house energy efficient technologies are, a priori, likely to provide an insight to the market in this regard.

This discussion now proceeds to present the methodology adopted for this research.

Methodology

As indicated earlier, the current state of knowledge of the research problem offers little support in answering the research question addressed in this study. A two-stage, multi-method research design consisting of quantitative and qualitative approaches was adopted (Creswell, 2003; Carson et al., 2001; Tashakkori and Teddlie, 1998). The first stage employed in-depth interviews with 20 real estate agents followed by a quantitative analysis of actual housing advertisements. As the objective of the research is to examine whether real estate agents effectively incorporate energy efficiency features in their advertisements and if their perceptions of the importance of advertising such features have changed over the years, a longitudinal research design was employed. Semi-structured, one-to-one, in-depth interviews with real estate agents were regarded as the most effective qualitative data collection method as they enabled to collect in-depth information on real estate agents' perceptions, experiences and advertising strategies related to energy efficiency. The first set of in-depth interviews was conducted with 10 real estate agents in 2013, followed by the second set of interviews with another 10 real estate agents in 2017. The number of key informants interviewed was determined by saturation, when the themes emerged became repetitive and no new information relevant to the study was revealed (Kumar, 2005; Strauss and Corbin, 1998). The study focused on the metropolitan Melbourne, the state's capital, and three other major regional cities – Ballarat, Echuca and Warrnambool. Interview participants were

selected based on their relevant expertise, experience and the ability to provide the information that was sought.

Several topics were covered in the interview protocol including; their professional background, awareness of energy efficiency features and associated benefits, reasons to promote/ not to promote energy efficiency features, common energy efficiency features advertised, awareness of energy related government regulations, experiences related to buyer and seller perceptions on energy efficiency in housing, and their perceptions on effective strategies to enhance the demand for environmentally sustainable housing. Data collected were analysed using within-case analysis together with across-case analysis between the two periods which provided in-depth understanding as to how real estate agents viewed the importance of energy efficiency in residential property advertising and whether their perceptions had changed over the years.

The second stage of data collection involved actual real estate agent advertisements that were used to promote detached residential properties within the Melbourne metropolitan area and other regional cities between the period of July 2008 to March 2015. These advertisements were provided by the Real Estate Institute of Victoria (REIV); the REIV represent approximately 70% of all real estate agents in Victoria. The dataset used in the study consisted of 155,780 advertisements. The use of quantitative and qualitative methods in this research thus provided richer and more inclusive outputs than may have been obtained by utilising a single method approach.

Results and discussion

The interviews first examined real agents' understanding of environmental sustainable technologies in residential properties, whether their understanding had changed over the years, and how they engaged with the diffusion of such technologies into the marketing process. Despite the increasing legislative frameworks encouraging energy efficiency in housing, findings suggest that energy efficiency technologies were not considered to be a major factor by real estate agents when advertising detached dwellings. The interviewees suggested that it was difficult to know which energy efficient technologies maximise householder benefits and quantify their benefits without professional assistance. Furthermore, they emphasised that "*it was difficult to conduct rational*

calculations as there was no hard quantitative evidence available on the costs and benefits of having energy efficient technologies” in residential properties. The interviewees shared a common view that energy efficiency features were rarely considered to be a major factor in residential house purchase decisions suggesting buyers’ views on such features would be *‘if it’s got it, it’s got it, if it doesn’t, it doesn’t’*. However, interviewees perceived that buyers who are more educated and affluent and buyers from older aged groups who are more concerned about their energy bills are more likely to adopt energy efficient behaviours and are willing to pay for such technologies. This therefore suggests that markets exhibiting such demographic profiles would have a greater prevalence of energy efficient language appearing in the advertisements.

In Victoria, real estate agents operate within a regulatory framework that necessitates open dialogue with clients and claims made need to be verifiable. Alleged performance of energy efficient technologies can be problematic in this regard. The interviewees emphasised that occupant behaviours affect actual energy conserved/expended and an energy efficient house with poor occupant behaviour can be no better in terms of energy consumption than a comparable house without such technologies. Therefore, it is difficult for a real estate agent to make specific claims about the ability of a house exhibiting energy efficient technologies without prior knowledge of the buyer’s understanding and attitudes towards such technologies (Gil et al 2010). The agent may claim high performance from the technologies but poor occupant behaviour may lead to subsequent legal action from the buyer alleging that such claims have not been met. Aware of the legal requirements of the environment in which they work, the interviewees emphasised that real estate agents were somewhat reticent to highlight the benefits of such technologies, potentially further inhibiting market awareness and engagement.

Since they did not perceive a market demand for energy efficient technologies real estate agents were unlikely to promote such characteristics as main features in advertisements due to the cost of advertising space and the advertising creed of highlighting house features most likely to attract suitable buyers. It was their view that buyers are more concerned about the price of the property, its location and number of bedrooms, than the energy efficiency or green rating of the property. As a result, the

agents tend to follow standard wording when describing such features and put more emphasis of typical housing characteristics such as number of bedrooms in their advertisements. The interview participants shared a common view that “*if the market is seeking energy efficient technologies as part of their nominated search criteria*”, they would include such characteristics in the advertisements. The longitudinal interviews identified that the attitudes of real estate agents on the importance of advertising sustainability in residential properties have not changed significantly even though they have become more aware of the climate change debate over the years.

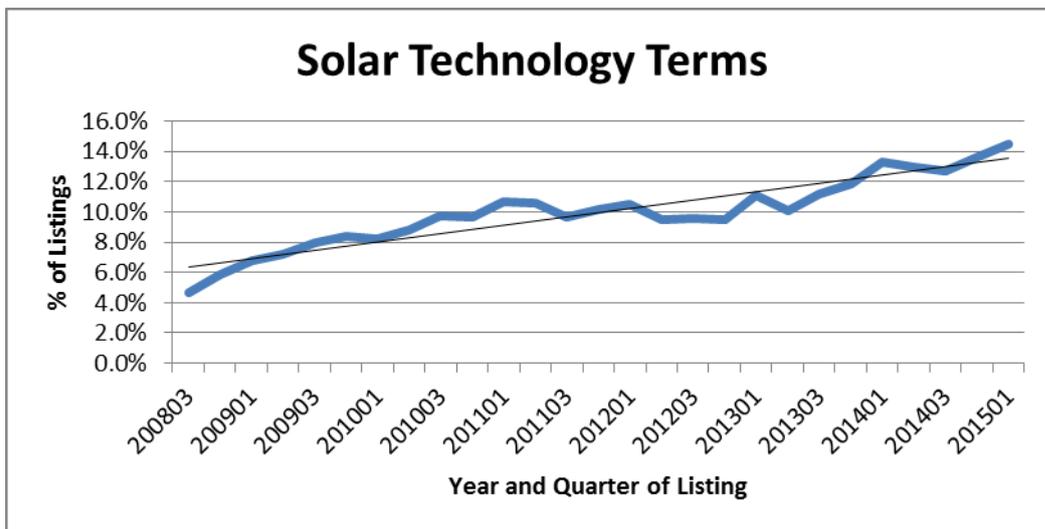
All interviewees highlighted that ‘solar technologies’ were the most commonly advertised energy efficient building technology due to the most widely available and effective financial incentives available for those technologies such as solar hot water rebate. Solar technology related terms such as ‘*solar panel*’, ‘*solar power*’, ‘*solar energy*’, ‘*solar system*’, ‘*solar hot water system*’, ‘*solar electricity*’ and ‘*solar boosted*’ were considered as energy efficient terms that would have more attraction to potential buyers. Therefore in the next step of research, the focus was placed on examining whether the appearance of solar related words and phrases in the actual advertisements for dwellings for sale varied over the years. Results are shown in Table 1 and Figure 1.

Table 1: Advertisements with solar technology terms

Sale Quarter	Year	Sum of advertisements with solar technology words	Total number advertisements in the quarter	% of advertisement with solar technology words
200803		138	2947	4.7%
200804		274	4695	5.8%
200901		312	4611	6.8%
200902		440	6112	7.2%
200903		494	6227	7.9%
200904		585	6999	8.4%
201001		437	5308	8.2%
201002		550	6226	8.8%
201003		541	5556	9.7%
201004		583	6032	9.7%

201101	516	4843	10.7%
201102	461	4355	10.6%
201103	352	3638	9.7%
201104	381	3740	10.2%
201201	386	3668	10.5%
201202	361	3811	9.5%
201203	350	3658	9.6%
201204	440	4627	9.5%
201301	430	3874	11.1%
201302	423	4199	10.1%
201303	1026	9164	11.2%
201304	1209	10163	11.9%
201401	967	7264	13.3%
201402	1148	8847	13.0%
201403	982	7744	12.7%
201404	1413	10357	13.6%
201501	1030	7115	14.5%

Figure 1 – Solar technology terms in the advertisements



Despite real estate agents' lack of interest in promoting energy efficient technologies, the appearance of solar related energy efficient characteristics in housing advertisements show some noticeable increases over the years with the introduction of

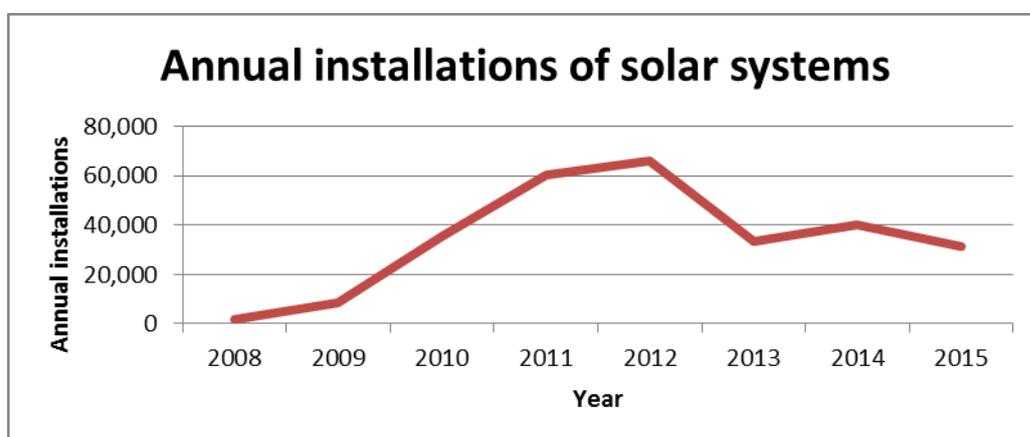
government policies related to solar and hot water systems in dwellings. The appearance of solar related words particularly witnessed a notable escalation during the period of 2009 – 2011. This period saw significant public debate about the need for carbon emission reduction with the then Prime Minister Kevin Rudd highlighting the urgency of climate change. However, the government’s financial incentives to promote the installation of solar hot water system were terminated in July 2012. Since then, the annual installations of solar systems in residential properties in Victoria have witnessed significant decreases (See Table 2 and Figure 2).

Table 2: Annual installations of solar systems

Year	Annual installations
2008	2,036
2009	8,429
2010	35,676
2011	60,214
2012	66,204
2013	33,332
2014	40,061
2015	31,263

(Source: Adapted Clean Energy Regulator 2016)

Table 2: Changes in annual installations of solar systems



(Source: Adapted Clean Energy Regulator 2016)

Despite the reduction of annual installations of solar systems after the termination of financial incentives related to solar technologies, it is evident that the appearance of solar related terms in advertisements continued to exhibit a consistent upward trend. This result suggests that markets and real estate agents appear to respond positively to external influences, albeit with considerable inertia. Direct government action and education programs are likely to assist in alleviating hurdles related to sustainability in housing, although these appear to be absent in the Australian context which will hinder future engagement by homebuyers and their market facilitators with such concepts in their house purchasing and marketing activities.

In the next steps of interviews, the interviewees were asked to discuss the strategies that they believed would assist in creating a market demand for environmentally sustainable housing. They were provided with a list of such strategies and asked to identify their relative importance in promoting energy efficiency in housing where 1 being the most effective strategy to 8 being the least effective strategy. The results obtained during the interviews in 2013 and 2017 are shown in Table 3 below.

Table 1: Strategies to improve the market demand for energy efficient housing

	2013	2017
Description of environmental sustainable characteristics in advertisements	8	8
A scaled reduction of stamp duty aligned to environmental sustainable housing at point of purchase	1	2
Disclosure of house environmental sustainable performance in the Vendor's Statement (Sec 32)	7	7
Government awareness campaign	6	6
Reduction in ongoing council rates scaled towards more environmental sustainable housing	2	3
Annual energy billing rebates on a sliding scale for more environmental sustainable housing	4	5
Green mortgages where the interest rate is aligned to the environmental sustainable performance of the house	5	4

Reduction in income tax for owners of environmental sustainable houses	3	1
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The results clearly emphasise the importance of introducing financial incentives to promote environmental sustainability in the residential sector. Reduction of income tax for owners of environmental sustainable houses, reduction of stamp duty aligned to environmental sustainable housing purchases, reduction in ongoing council rates for environmental sustainable housing, annual energy billing rebates on environmental sustainable housing and green mortgages with lower interest rates for sustainable house purchasing were identified by real estate agents as the major strategies to promote market demand for sustainable housing. These results highlight that national and local governments should play a major role in enhancing sustainability by initiating various fiscal measures and financial incentives. The interviewees emphasised that the market would be motivated to engage more often with sustainable technologies if they are able to notice clear financial benefits associated with them. However, it is important to note that such financial incentives can be costly to put in place, and without adequate acceptance, such effort may be redundant. Therefore, it is important to ensure that the financial incentives offered not only meet the sustainable goals of the initiative, but also relates to a need within the community in general.

Furthermore, interviewees identified the importance of education related to sustainability in housing through government awareness campaigns and better disclosure of sustainable performance in vendor's statement and advertisements. At an informative level, national and local governments can encourage sustainability in the residential sector by offering more focused education, advisory services and technical assistance. They can also use national and local government policies to promote the uptake of sustainability, for example, through the use of ratings systems for sustainability features and urban design initiatives. Furthermore, local governments can offer flexibility within local planning provisions, fast track consents and use regulation to encourage sustainability through bylaws and other regulations. The results also demonstrate that real estate agents' perceptions on the importance of those strategies have not changed over the period suggesting that direct government intervention is required. Inability or reluctance on the part of real estate agents to actively promote

house energy efficient characteristics could consequently act as a hindrance to long-term market acceptance of energy efficient technologies thereby jeopardizing the Australian government's policy of allowing market forces to lead the way more efficient housing. Overall, the research emphasise the importance of enhancing the public awareness of the importance of the need for energy reduction and housing sustainability through efficient house construction and design, as well as the promotion of such housing features to develop a more environmentally sustainable housing stock.

Conclusions

The intent of this research was to gain a greater understanding of changing perceptions and engagement by real estate agents in the quest for more energy efficient housing. Real estate agents play a critical role in the housing transaction process and are therefore in a unique position to influence buyer choice. The findings presented here suggest that little had changed of the past four years and buyers, in the view of agents, are not including energy efficiency to any significant extent when making their house choice. The imbuelement of energy efficient housing into every day housing is therefore at a cross road. On one hand governments, can maintain their focus for energy efficient technology intervention for new and substantially renovated houses, thus in sense "drifting" along until the proportion of energy enhanced stock overtakes and becomes the significant component of housing stock. Or on the other hand, they can adopt policies for more direct intervention and in doing so stimulate housing markets into action with regard energy efficient technologies. Education also has a role to play here. The authors advocate the latter.

Whilst this research was intended to evaluate attitudes of real estate agents holistically opportunities for future research has been identified. These lay in the area of investigating training for agents and modelling potential financial incentives to encourage greater engagement from buyers.

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