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New homebuyers and the challenges of navigating sustainability and energy efficiency with Australian volume builders

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Abstract

The energy efficiency performance of new housing construction in Australia lags behind the developed world; with builders blaming homebuyers for their lack of interest and willingness-to-pay. This research investigates homebuyers' experience of building a new home to explore the barriers to implementation building a new home. Contrary to builders' perceptions and recent reports, the research found homebuyers want increased sustainability and energy efficiency; yet are not able to effectively achieve this due to lack of communication with the builder, poor information and limited options available. This study demonstrates that latent demand exists and volume builders should reconsider their communication and engagement with consumers.

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Keywords: Energy efficiency; residential construction; homebuyers; consumers

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1. Introduction

Typically today, new homebuyers are flooded with choice from what are now commonly known as 'volume builders' or 'project home builders' who offer a complete housing package in terms of end-to-end project management and delivery (Dowling [1]). This contemporary Australian approach to new housing construction has proven problematic in the adoption of sustainability, the implementation of mandatory energy efficiency requirements, and homebuyer engagement in sustainability for new homes (Pitt & Sherry [2]). Consequently, without further action to identify and change the behavior of the various stakeholders in the residential housing market, the sustainability of new housing will continue to be sub-optimal and continue to fall behind the developed world standards for sustainability implementation.

The new homebuyer is often the scapegoat for the poor adoption of sustainability, labelled with the blame for a lack of interest, adoption and willingness to pay, by various stakeholders in the construction supply chain, including: developers, builders, architects, planners, designers, surveyors and product suppliers (Pitt & Sherry, [2]). Unlike typical construction clients, homebuyers are generally a once off purchaser, and it's likely the largest single investment they will make in a lifetime. Consequently, they will bear the brunt of the social, economic and environmental costs of poorly performing housing over a long timeframe. Given new homebuyers' limited knowledge of the residential building process and sustainability opportunities in new homes; the ability of new homebuyers to know and ask for sustainability initiatives is constrained and perceived as a lack of awareness and interest by supply stakeholders. Warren-Myers et al. [3] found that there is limited information provided to consumers in standard provisions of new homes that indicate energy efficient inclusions, options or costs and benefits. As a result, can the consumers really be blamed when they are provided with limited information, discussion, guidance, options and encouragement from the volume builders? This research investigates homebuyers' experience of building a new home, what levels of energy efficiency information, marketing, guidance, discussion and verification volume builders provide during this process.

This paper reports on the project 'Advancing new home sustainability through demand-side empowerment', which is investigating the relationship between key demand-side stakeholders in the new housing sector. The results of the research conducted comprise a two-stage research design comprising semi-structured interviews and a subsequent online survey. Investigating the level of discussion, information, guidance homebuyers receive in regard to sustainability and energy efficiency in the building process; what initiatives were implemented; and whether current value perception and willingness-to-pay for sustainability and energy efficiency in new homes. The paper is structured to provide a background on the Australian housing market, followed by the research methods utilized and subsequent reporting of results, discussion and finally conclusion.

2. Operation of the sector – the Australian Volume Housing Market

New housing in Australia is dominated by industrialised mass production of standardised new homes by Volume Builders. Their competitive model and contractual power has effectively created an oligopoly in the housing market. This process is founded on a traditional design and construction procurement approach that has been industrialised to mass produce homes achieving construction efficiency throughout the residential construction processes, reducing costs and timeframes and maximize profit. Australia's residential construction sector is dominated by large scale Volume Builders like Metricon, BCG, Simmonds, Simonds, G.J. Gardner, Porter Davis, Burbank Homes and J.G. King. Sustainability implementation in new housing has been limited to mandatory requirements for new homes in the Building Code of Australia which specifies a modelled minimum energy efficiency rating. However, as evidenced by Pitt and Sherry [2], Burke [4] and Jewell [5], this has not necessarily produced and enhanced the designed level of sustainability and energy efficiency implementation in new housing.

In Australia, there are mandatory requirements for energy efficiency under the National Construction Code. Requiring all new dwellings to meet a 6-star rating under the Nationwide House Energy Rating Scheme (NatHERS). As part of the research is based in Victoria, a state of Australia, this is the only sustainability or energy efficiency