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15 April 2019

NEPP Secretariat
Energy Productivity Branch, Energy Division
Department of the Environment and Energy
GPO Box 787, CANBERRA, ACT 2601

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Dear Secretariat,

TRAJECTORY FOR LOW ENERGY EXISTING BUILDINGS

The Vinyl Council of Australia, particularly on behalf of its uPVC Window Alliance[1] members, is pleased to have the opportunity to consult on the Trajectory for Low Energy Existing Homes Discussion Paper, March 2019.

The Vinyl Council has around 100 member companies, many of which are local manufacturers and suppliers of building products such as pipe and conduit, cables, floorcoverings, windows and permanent formwork.

We support the Objectives as outlined in the Discussion Paper and believe the Paper identifies the key issues. Of particular concern to our industry is the fact that much of the existing housing stock has poor energy performance in part as a result of poor building envelope and the slowness of building codes to address and systematically improve the energy efficiency of the residential housing sector.

A result of this has been the rising use of air-conditioners leading to consumer expectation that housing *has* to be air-conditioned to be comfortable, in turn leading to peak energy demand in hot weather. Although air-conditioning is becoming more energy efficient, there is nevertheless a growing stock of increasingly inefficient, ageing air-conditioners now in use in the residential sector. There is a need to reduce the requirement for air-conditioning through improving the building envelope; that is, to improve year-round thermal comfort of homes so that the need for heating and cooling is minimal.

We agree that market failures and barriers lead to a need to make energy efficiency information more available to house purchasers and tenants. We support policy levers such as mandatory disclosure of energy efficiency and in due course, the setting of minimum standards for energy efficiency, windows and insulation.

Discussion Paper Attachment C is included at the end of this response.

[1] The uPVC Window Alliance is an initiative of members of the Vinyl Council of Australia. Supported by leading manufacturers of uPVC window profiles for the Australian and New Zealand markets, window fabricators, glass and hardware suppliers, the uPVC Windows Alliance shares information and resources on uPVC windows so that specifiers, architects, designers and home-owners can make fully-informed decisions about which type of window to install.

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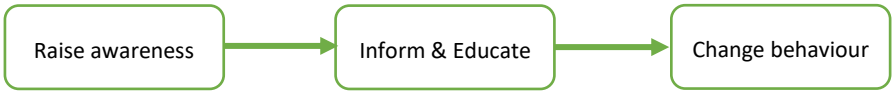
Building shell improvements are the starting point.

Consumers ought to know how the building they are about to rent or buy performs, just as they do for cars or appliances. We would support policies that encourage a mandatory disclosure of the thermal efficiency of a residence at the point of leasing or buying. For consistency for both consumers and product suppliers, a national disclosure scheme would be preferable to jurisdictional-based schemes and would minimise confusion in markets.

The first step in behaviour change is to raise awareness.



The process of undergoing existing-home energy ratings to meet mandatory disclosure requirements would raise consumer awareness about the significance of energy efficiency. It provides a means to inform and educate by leading to identification of improvement opportunities eg sealing gaps, replacing insulation and windows, upgrading lighting etc. The Victorian Residential Efficiency Scorecard is a good example as a process with straightforward, meaningful information for the homeowner or tenant. It sets an overall energy efficiency rating as well as a Hot Weather performance rating, indicating the extent of cooling needs, and offers a channel to provide educational information on improvement.

Informed people are more likely to change behaviour through changing buying decisions or taking action. Government has a key role to play in this education process, and it can be expected that the benefit to government is improved community health and well-being and greater productivity.

Other potential policy measures that would encourage, support or drive change are:

- Minimum energy efficiency standards being met before a house can be sold, such as an overall minimum number of 'stars' and a Hot Weather rating (to reduce need for cooling) in applicable climate zones. Ratings should be conducted within a specified period prior to sale so that the rating is current.
- Older properties – particularly in the rental market – may be very leaky. Measures to address and improve the standard of airtightness of existing homes would be relevant such as compulsory blower door testing for houses over a certain age. The process of undertaking such assessments identifies opportunities – often relatively low cost – to reduce draughts and improve the thermal efficiency of the home.
- Financial measures and support for energy efficiency upgrades through, for example, land taxes/rates.
- Setting minimum energy efficiency requirements to be met when renovating homes including maximum U values for replacement windows based on climate zones.

Balancing Building Shell and Renewable Energy

We believe it is essential to balance very carefully incentives that encourage uptake of rooftop renewable energy with incentives encouraging building shell improvements such as reducing drafts, better insulation and better performing windows.

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By improving thermal comfort via the building shell, the need for heating and cooling is reduced, allowing smaller solar power systems to be utilised for carbon offset. Currently, financial incentives encourage uptake of solar power on homes without first addressing energy efficiency of those homes, despite solar PVs having a relatively short life span compared to some building envelope improvements (expected life time of solar panel: 25 years; expected life time of high performing windows: 45years).

If the effect of installing renewable energy such as solar photovoltaics overrides improving energy efficiency of the building, there may be little incentive to address poorly built, leaky homes. At periods of peak energy demand such as very hot weather, thermally inefficient homes requiring significant artificial cooling will continue to add stress to energy networks, even as the number of solar panels on residential homes rises. Currently, grid-connected solar power to residential homes are at risk of outages in hot weather, potentially leaving people to the mercy of their over-heating homes. To address this, renewable energy incentives could be tied to mandatory home energy ratings so that future energy demand is reduced as well as offset.

Information and Skills

The Victorian water saving campaign, Target 155, has been a successful community education campaign to raise awareness about water efficiency, educate consumers and change behaviour. It reportedly led to a 22 per cent fall in water consumption over the past decade and has seen water-saving products become commonplace in the market. It may provide a useful example of how to inform and educate the community in respect of energy use.

We also agree with the Discussion Paper that there is an industry skills gap, particularly in building shell improvements, and that education and training to lift the capabilities of all relevant professionals and trades is essential.

Yours sincerely

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Chief Executive

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Attachment C - Residential Buildings

Residential Buildings –SRG Meeting Feedback March 2019	
1. Is there anything missing from the summary of policy options for improving existing homes?	Measures to address and improve the standard of airtightness of existing homes would be relevant such as compulsory blower door testing for houses over a certain age at point of sale or lease. Tying mandatory energy efficiency ratings to solar power financial incentives
2. What policy options do you think present the greatest opportunities to improve the energy performance of existing homes, and what do you think the order of priority, or suite of options, should be?	Policy options: Disclosure requirements at point of sale/lease; assessment of air tightness for houses over a certain age at point of sale/lease; maximum U values for replacement windows linked to building work approvals. Order of Priority: A trajectory that first introduces voluntary, then mandatory energy efficiency disclosure at point of sale/lease under a national scheme reporting both an energy efficicency performance measure (that excludes renewable power) and, if relevant, overall carbon performance including renewable power. Then later introduce minimum standards of performance to be met for energy efficiency and carbon at point of sale/lease by climate zone.
3. What are the key considerations that need to be taken into account with the policy options identified?	Affordable testing services by accredited providers Provision of consistent consumer education and information Education and training to lift the capabilities of trades particularly in renovation sector With introduction of minimum standards, consideration of performance evidence eg initial testing (sub-performance) + remedial work, or whether a post-remediation test is required.
4. What research might assist in progressing this work?	Lifecycle cost-benefit of various remediations to improve energy efficiency of existing homes eg draught-proofing, insulation, higher performing windows, reduced size cooling/heating units etc The inter-relation between the cost of improving building envelope to reduce energy demand and the addition of renewable power to offset carbon demand.
5. Would you be interested in attending a workshop in person at some point during June/July/August? If so, what jurisdiction/s would be your preferences?	Yes, Victoria
6. Do you have any other comments or suggestions?	
List any research or data sources that is relevant to informing these questions or the project. • Built to Perform	