

# Do houses sell for more if they have a better energy rating?



## Objectives of this rapid review

The energy usage of a home is often an important factor for people when considering renting or buying. Using an energy performance rating is one way to show how “energy hungry” a home could be. In some countries, it is mandatory for the seller to obtain, and disclose, a home’s energy rating. For countries in the European Union, this has been the case for 10 years. In the ACT a disclosure scheme has been operating for 20 years. Disclosing energy ratings is common practice in the commercial building sector in Australia, where it has been found to have a positive effect on the value of buildings with higher energy ratings (a price premium). Researchers are now looking to see if a similar effect exists in the residential sector.

If a rating scheme can influence residential property values, it is important to understand how consistent the effect is, and what else policy makers need to consider in developing and justifying such a scheme. The main objective of the current review was to explore the relevant body of academic literature to answer the question: What are the effects of residential building energy performance disclosure policies on property values?



## Key findings of this rapid review

Do houses sell for more if they have a green energy rating? The majority of the 27 relevant international primary academic publications reviewed for this project agree that a price premium does exist for more energy efficient homes, typically in the order of 5% to 10%.

There are two ways at looking at potential price effects. Firstly, by comparing rated versus not rated residences, and secondly, by comparing a higher rated residence with a lower rated one. To generalise, previous research studies based in the EU looked at high vs. low rated dwellings, and studies in Japan, Singapore and the USA looked at rated vs. non-rated dwellings. In both cases, a price premium was found.

The reported price premium varied by study, country, and real estate market. One study, in Belfast, found a 27% price premium for high rated buildings, while another in the Netherlands, found a price premium of 2.7% for similarly rated dwellings.

Only four studies, out of the 27, found that lower building energy ratings were associated with higher property prices. Three of these studies were conducted in Sweden, and one small study in Japan (a subsequent study in Japan, looking at a larger number of residences, found a price premium for green rated homes). For the Swedish studies, it is not clear whether the contrary results are related to the slightly different method of calculating the energy ratings in Sweden, local market conditions and purchasers, or limitations of the model used to calculate the price premium.

The observed price effects were not just related to the energy efficiency of the building, but also to a range of local factors, such as housing supply and demand, and how much prospective buyers were willing to pay for energy efficient homes. These factors, which vary by location, need to be taken into account when assessing the effects of residential building energy performance disclosure policies on price premiums.

## Methods, limitations and future research

The findings are based on a rapid systematic review of academic literature. We searched academic databases for all research on the topic and then whittled the list down to 27 most relevant research studies. These studies were published between 2011 and 2019, covered 14 countries, and 10 energy performance rating schemes. Most of the studies (18) considered the European Union's Energy Performance Certificate (EPC). Although there are differences in how the EPCs are defined and managed in each EU country, they are broadly comparable, in that they use a standard A (high) to G (low) grade.

Comparing findings between studies was difficult because each used its own economic model for analysis, taking into account property specific items (like property size or views), location specific details (like proximity to a train station or town centre) and local demographic information (like average household income, and measures of sentiment towards environmental issues).

Despite the best efforts of the researchers, it can still be difficult to tell if an observed price premium is solely due to the energy rating, or something that was not included in the evaluation model (typically due to a lack of data). For instance, homes with higher ratings may also look nicer, or have more modern kitchens. This highlights the need for policy makers to ensure that the evaluation of an energy rating scheme is based on a model that includes appropriate factors that are relevant to the local market; for instance whether a house had a sauna might be very important in Helsinki, but not so much in Cairns.

Two important points for the future work might be:

- More time is required for an in-depth look at other factors that play a part in property values, and to assess to what extent the models which underpin the various studies are accurately incorporating all the relevant parameters.
- Given this is a relatively new policy area, there is limited relevant academic literature on this topic published between 2011 and 2019. Non-academic literature and data were not included in this review. These data sources should be included in future analyses.

## Conclusion

A rapid systematic review of international academic literature suggests that home buyers typically value a more energy efficient home, and when presented with easily accessible information in the form of an energy performance rating, are willing to pay more to live in one. Therefore, a disclosure policy of a building's energy rating can assist consumers in making a more energy efficient choice, which may result in lower energy bills and a healthier home. Homeowners, agents and policy makers should consider the way that the rating scheme is calculated, the local context, and the associated evaluation model.



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## Full Report

Daly D, Kokogiannakis G, Zwagerman M, Burton C, Cooper P, Lagisz M (2019) What are the effects of residential building energy performance disclosure policies on property values? Rapid review of comparative evidence. CRCLCL, Sydney, Australia.