

## SUMMARY

# The Bottom Line

## The household impacts of delaying improved energy requirements in the Building Code / Interim Report

The National Construction Code is a ready-made policy instrument to influence the energy efficiency of new buildings and major renovations. Improved building energy efficiency presents a win-win-win solution, reducing stress on the electricity network and supporting a least-cost pathway to decarbonisation while also delivering cost savings and improved comfort to households and businesses. Improvements to the Code can have a large impact because new construction adds up fast: More than half of the buildings expected to be standing in 2050 will be built after the next update of the Code in 2019.

The Building Code Energy Performance Trajectory Project is an industry-led initiative seeking improvements to the energy requirements in the Code. This Interim Report presents preliminary results, focusing on short-term improvements to residential requirements. A Final Report will be published in mid-2018 focused on the establishment of a long-term trajectory for Code energy requirements for both residential and non-residential buildings.

### Results

- There are immediate and cost-effective opportunities to improve energy efficiency requirements in the Code. Reducing air leakage is a major opportunity for many building types assessed, along with ceiling fans and roof insulation in some cases. Across a range of climate zones and building types, these measures could individually deliver bill savings of up to \$150 per household per year, with savings more than offsetting additional capital costs.
- Combined, cost-effective measures could reduce energy consumption for heating and cooling by an estimated 28 to 51 per cent across a range of housing types and climates. This is equivalent to between 1 and 2.5 stars on the NatHERS scheme. In most jurisdictions, implementing these improvements would mean setting minimum requirements at the equivalent of 7 star NatHERS or higher.
- Implementing these opportunities across projected new buildings and renovations could save an estimated \$1.2 billion to 2050 through avoided and deferred network investments, and deliver an estimated 10.8 million tonnes of cumulative emissions reductions to 2050, more than the annual emissions of Victoria's Loy Yang B coal-fired power station.
- Just three years' delay could lock in an estimated \$1.1 billion in unnecessary energy bills for the projected half a million homes that will be built in the meantime, and 3 million tonnes of additional emissions to 2050.
- A high level assessment of rooftop solar PV indicates that it is now highly financially attractive at the household level, although it does not deliver a range of other benefits provided by energy efficiency.

### Recommendations

- **Recommendation 1:** States, Territories and the Commonwealth should commit to harmonised strengthening of residential energy requirements in the Code by 2022 at the latest, or sooner. Individual States, Territories or local governments could show leadership by piloting strengthening standards by at least the equivalent of 1 star NatHERS in the meantime.
- **Recommendation 2:** States, Territories and the Commonwealth should introduce market transformation initiatives to reduce the cost of key energy saving technologies identified in this report, and improve industry capability in best practice building design for energy efficiency.
- **Recommendation 3:** States, Territories and the Commonwealth should commit to introducing renewable energy requirements in the Code (alongside optimal minimum efficiency requirements) and develop an implementation strategy that addresses the issues highlighted in this report.
- **Recommendation 4:** States, Territories and the Commonwealth should commit to improving Code compliance through:
  - Funding significant upgrades to NatHERS, including upgrades to enable improved assessment of air tightness;
  - Reviewing residential compliance pathways, including investigating the potential to replace or limit the use of Deemed to Satisfy and Reference Building methods; and
  - Improved monitoring and enforcement, including compliance audits and nationally standardised post-construction measures to verify as-built compliance.

Full report is available at [www.asbec.asn.au/publications](http://www.asbec.asn.au/publications) or [www.climateworksaustralia.org/built-environment](http://www.climateworksaustralia.org/built-environment).

### CALL FOR FEEDBACK

ASBEC and ClimateWorks welcome feedback on the preliminary results presented in this Interim Report.

For any contributions, please contact:

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