NCC 2019 Energy Efficiency Provisions

Rationale and scope

Key Points

The focus of changes being considered for the 2019 version of the National Construction Code include:

- increasing the stringency of the requirements for commercial buildings;
- recognising NABERS Energy and Green Star as compliance options;
- generally improving the provisions for residential buildings; and
- ensuring residential buildings perform well year-round.

Rationale

The Australian Building Codes Board (ABCB) is now over twelve months into a project to update the energy efficiency provisions in the National Construction Code (NCC). Planning for this work commenced over 18 months ago when it was foreshadowed in Measure 31 of the National Energy Productivity Plan (NEPP). The NEPP was agreed to by the Council of Australian Governments (COAG) Energy Council in December 2015.

The NEPP envisages that there is likely to be strong productivity and emissions reduction benefits from revising the NCC's energy efficiency provisions for residential and commercial buildings. However, it also recognises that there is a need to gather more evidence on the effectiveness of the existing provisions, particularly for residential buildings.

The NEPP was informed by research commissioned by the former Department of Climate Change and Energy Efficiency in 2012[1]. This research was updated in 2016 by the Department of the Environment and Energy[2]. The updated research found that changes to the NCC could achieve energy savings of up to 53 per cent for commercial buildings, but only up to 18 per cent for residential buildings[3].

On this basis, the ABCB's project has been focussed on increasing the stringency of the energy efficiency provisions for commercial buildings in NCC 2019. For residential buildings, the aim is to improve interpretation and compliance with the current provisions.

Significant changes beyond NCC 2019 will depend upon whether the ABCB is asked to carry out further work by Building and Energy Ministers from all jurisdictions.

1 Pitt & Sherry, *Pathway to 2020 for Increased Stringency in New Building Energy Efficiency Standards: Benefit Cost Analysis, January 2012.*
2 Pitt & Sherry, *Pathway to 2020 for Increased Stringency in New Building Energy Efficiency Standards: Benefit Cost Analysis: Commercial Buildings: 2016 Update*, 10 May 2016;
Pitt & Sherry, *Pathway to 2020 for Increased Stringency in New Building Energy Efficiency Standards: Benefit Cost Analysis: 2016 Update for Residential Buildings*, 13 May 2016.
3 Assuming a learning rate of 3 per cent per annum for 10 years.

Scope

Commercial buildings

(Class 2 common areas, Class 3 buildings and Class 5 to 9 buildings)

The planned changes for commercial buildings include:

- increasing the stringency to a point where the value of energy saved outweighs the increased cost of construction;
- improving the current reference building Verification Method (JV3);
- formally recognising NABERS Energy[4] and Green Star as alternative Verification Methods;
- simplifying the Deemed-to-Satisfy Provisions; and
- introducing basic comfort levels for building occupants.

These changes will result in more efficient and comfortable buildings, while also simplifying compliance options. The changes will also play an important part in Australia meeting its greenhouse gas reduction and energy productivity targets.

Residential buildings

(Class 1 buildings, Class 2 SOUs[5] and Class 4 parts of buildings)

The planned changes for residential buildings include generally improving the interpretation and application of the provisions, without increasing stringency.

Importantly, as part of this work, the ABCB is investigating whether heating and cooling load limits should be strengthened. This would have the effect of improving the performance of dwellings throughout the year by eliminating those designs that perform particularly poorly in either summer or winter. Measures to improve building sealing and reduce condensation risk are also being considered.

Consultation and analysis

Importantly, all of the changes that the ABCB is considering will be subject to extensive industry consultation and economic analysis. Working groups, with both government and industry members, are already being regularly consulted on technical matters. Full public consultation on the draft changes for NCC 2019 will also be carried out in early 2018.

The draft changes will be accompanied by impact analyses carried out in accordance with the requirements of the Office of Best Practice Regulation. This is likely to include an assessment of unintended consequences, such as any fire safety and structural implications arising from the proposed new provisions.

4 National Australian Built Environment Rating System for Energy
5 Sole Occupancy Units