

17 November 2021

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Hon Mick de Brenni  
Minister for Energy, Renewables and Hydrogen  
Minister for Public Works and Procurement  
1 William Street  
BRISBANE QLD 4001

VIA EMAIL: [epw@ministerial.qld.gov.au](mailto:epw@ministerial.qld.gov.au)

Dear Minister,

**RE: ENERGY EFFICIENCY & THE NATIONAL CONSTRUCTION CODE**

I am writing to you in relation to the proposed changes to the energy efficiency provisions of the National Construction Code (NCC).

Master Builders supports the long-term objective of net-zero ready in the building and construction industry where the risks are both quantified and mitigated. However, we have grave reservations about the proposed changes to the energy efficiency provisions in NCC 2022.

With the intended change for Class 1 and 2 buildings to increase from 6 stars to 7 stars and the requirement to meet a whole-of-house energy budget, the costs have been demonstrated to be considerably more than the benefits. The additional cost, just in Queensland, has been quantified as being in the order of \$201.9 million.<sup>1</sup> Builders who have sought to apply the new requirements on their own projects are reporting price increases in the order of \$20,000 per house.

The risks and problems have been detailed by our colleagues from Master Builders Australia in a letter to the federal Assistant Minister for Industry Development, Senator Jonathon Duniam [attached].


The NCC is proposing two options to meet the new 7 star requirement: NatHERS software and the Elemental tables. Both start from the assumption that a house is a “closed box” to be air-conditioned.

In Queensland, we are concerned that these new rules will force designers, architects and/or builders to move away from designs that connect to the outside (a key feature of most Queensland homes) and in doing so force those building or buying new homes to incur the unreasonable cost of double glazed and tinted glass windows. There will also be increased insulation requirements requiring some homes to expand the wall stud width from 90 mm to 140 mm, reducing the useable area of the house and increasing the cost to build.

The new regulations will lead to requirements for the sub-floor on platform houses (Queenslanders) to be enclosed and/or insulated. Queenslanders are built to allow cross ventilation to cool the house

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<sup>1</sup> ACIL Allen, [Consultation Regulation Impact Statement for a proposal to increase residential building energy efficiency requirement](#), 20 September 2021



overnight. Enclosing and insulating the subfloor prevents this and can also cause condensation issues and degradation of the subfloor structure. It will also leave these houses less resilient to flooding.

Increased requirements for eave overhangs will prevent many two-storey dwellings being sited on small lots with a knock effect on land affordability.

The new requirements will also limit consumer choice by restricting building design layouts and imposing restrictions on wall and roof colours across Queensland's climate zones.

In summary, adopting the narrow "closed box" approach of NatHERS and the Elemental tables will add costs without maximising the opportunity to reduce emissions and have a detrimental effect on traditional Queensland designs.


There are opportunities to consider a 'third pathway' to better achieve the goal of net zero and keep the desirable elements of designs that are quintessentially suited to our climate in Queensland. These can include:

- Maximising good passive design. A house that is well ventilated, appropriately shaded and orientated correctly will be more comfortable without needing to resort to extensive insulation, double glazing or air-conditioning. Having access to a block rating tool for residential developments will improve the interaction between the land development and building design and better enable good passive design.
- Empowering homeowners to make decisions on investments in renewable stored power (PV and batteries) to build a home that is not dependent on energy from the grid. A whole-of-house rating tool will help serve this purpose and is expected to be available for all climate zones by 2025.

Master Builders therefore urges the government to delay the introduction of any changes while these opportunities are explored. The energy efficiency changes should be delayed until NCC 2025 so they can be done right.

Failing that we would recommend a transition with any changes not to come into effect until NCC 2025, and a continuation in the Queensland Development Code (QDC) to exclude subfloor insulation for buildings in climate zones 1 and 2.

Energy saving and emissions reduction are essential as we progress towards a zero carbon future. The answer, however, is not increasing the building shell by requiring extra insulation and tinted or double glazing. The goal can be met by many different paths and our challenge now is to find the way forward that will result in liveable, affordable homes for all Queenslanders.



Please let me know if there is any more information that we can provide. We look forward to your response.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Grant Galvin', with a long horizontal stroke extending to the right.

**Grant Galvin**  
**CEO**

*Enc. Letter to Senator the Hon Jonathon Duniam, Assistant Minister for Industry Development*



**MASTER BUILDERS**  
A U S T R A L I A

19 October 2021

Senator the Hon Jonathon Duniam  
Assistant Minister for Industry Development  
Chair Building Ministers Meeting  
Parliament House  
CANBERRA ACT 2600

Dear Minister

Master Builders Australia (Master Builders) has made a submission to the Australian Building Codes Board (ABCB) public consultation process on the 2022 NCC update with particular regard to residential energy efficiency and condensation management changes.

Master Builders supports the long-term objective of net-zero ready in the building and construction industry but only on the basis that risks are quantified and mitigated. In consideration of that position, we have significant concerns with the ABCB work.

To this end, we note the COAG Energy Ministers Trajectory for Low Energy Buildings Report made initial policy recommendations to government that was broadly supported by industry with a more flexible model for increases between 6.5 to 7 Star NatHERS equivalent ratings across climate zones than the 7-star average developed by the ABCB for the 2022 NCC update.

Regarding the *NCC 2022 Public Comment draft (Stage 2)*, energy efficiency and condensation management proposals, Master Builders is of the strong view that the work undertaken has not sufficiently addressed and mitigated associated risks and problems with the proposed changes. These relate to the points below that need to be managed concurrently with the introduction of Code changes to ensure an effective and workable shift in energy stringency for new housing construction and to facilitate cultural change within the building industry.

As a consequence, we urge the ABCB to delay the introduction of any changes, or if not a delay, at least a transition, with any changes not to come into effect, at the very earliest, until NCC 2025.

### **Risks and Problems**

Matters (risk and problems) for further consideration:

- Condensation risk requires more research, evaluation and development of education tools to be clear on the defect risk emerging from existing energy stringency requirements, to ensure any changes introduced to Australia are fit for purpose and are understood by consumers and the supply chain.

- Cost implications and impacts that outweigh societal benefits were identified in the Consultation Regulation Impact Statement (CRIS). The current policy should be reviewed as noted by the COAG Energy Council trajectory for Low Energy Buildings report that identified if improvements were not found to be cost effective in 2022, they should be reconsidered again in NCC 2025. In regard to the outcomes of the CRIS:
  - A reconsidered proposal for 2025 might be based on the COAG energy council trajectory report that did not recommend a 7 star average for all climate zones, instead it proposed a 6.5 and 7 star range across climate zones, including cool climate zones (6,7 and 8).
  - CRIS findings are conservative without condensation risks being assessed in this CRIS.
- To raise stringency from 6 to 7 stars with NatHERS and simultaneously update climate files within the backend of NatHERS has the potential to create huge problems and costs for industry. An example of the impact of this is:
  - If a project home builder has upgraded their design suite to meet 7-stars today, this may not be sufficient to meet the 7-star threshold tomorrow, because overnight the settings in backend of NatHERS have been modified. This is a challenge when using a 'black box' threshold tool for policy and in turn influence technical regulation of building work. When the backend changes within NatHERS there should be a regulation transition period of at least 12 Months for industry to catch up.
  - Master Builders is not opposed to climate file updates within NatHERS. However, these changes need to be widely communicated to industry when they will effect regulatory thresholds.
- Preparation time to enable capacity for the sector to change/roll-out design and business models. In particular, this applies to volume builders that will need sufficient time for the market to shift, to adapt and implement design change.
- Supply chain adaptability and supply chain capacity will be difficult to bring about in an already constrained environment that is experiencing for the next 12 months unprecedented product supply delays. For example, four months for timber framing and roof trusses.
- The need for time to develop and deliver education for the sector and regulators before changes take effect.
- Better interaction between development and building approval stages where design obligations, such as NatHERS or alternative energy efficient design requirements are required at development approval stage.
- Zoning needs, including the development of a block rating tool to assist consumers to better understand how the urban block geometry, orientation, street frontage access and size impacts energy efficient housing. For example:
  - A long north-south oriented boundary will perform better than an East-West oriented boundary in the ACT.

Master Builders is mindful of the good work across government and industry to improve the quality of building and construction in response to the Shergold-Weir *Building Confidence* report and seeks to reflect on the concerns raised in this report. We do not want to see a situation where the will to tick a policy box undermines development of good technical and regulatory requirements for energy efficiency.

To this end, the COAG Energy Council Trajectory for Low Energy Buildings report acknowledges that the Shergold Weir Building Confidence Report found that jurisdictions and industry bodies have been facing growing challenges in ensuring effective compliance with, and enforcement of, the NCC. In particular, the report noted these challenges were attributed to a lack of training, mandatory accreditation and auditing/compliance checking by regulators and that the NCC itself was also considered to be excessive in its complexity.

### **Delay/Transition Period**

To enable time for risks and problems with the drafting of code changes to be managed effectively, Master Builders strongly urges there be a delay, or if not at least a transition with any changes not to come into effect, at the very earliest, until NCC 2025.

This is necessary to resolve outstanding issues and deliver a more workable and effective NCC and associated regulatory response from states and territories.

### **MBA submission to ABCB Consultation**

Master Builders has completed the ABCB submission process and responded with numerous suggestions to improve the drafting of the proposed technical requirements. The key issues responded to in the submission relate to the following:

- The objective and functional statements require more clarity, with simpler explanation of what these require to make the code more workable for practitioners. For example, remove references to greenhouse gas emissions and refer only to managing energy consumption which is what building methods are designed to achieve. Reducing greenhouse gas emissions is a higher order policy objective that is not needed in the technical code.
- Provisions for electric vehicle charging, renewable energy generation and storage ready buildings would benefit from further policy work to support development of accessible technical provisions that provide industry with clearly justified and specified building requirements.
- Poor drafting, convoluted compliance pathways and open-ended language will make the proposed draft difficult to apply in practice. Master Builders has therefore provided numerous suggestions for improving the drafting.
- There are some outstanding questions in relation to the following building fabric requirements that need to be clarified, including:
  - There is confusion about shading for walls of multi-level dwellings. Are the ground floor walls considered unshaded? Or do you use the eave/gutter from the upper level roof?
  - There is no allowance for EPS or other insulated wall claddings (the same wall batts are required for a 6mm FC cladding vs a 75mm foam EPS cladding)
- Concessions need to be considered for dwelling ratings that are disadvantaged by block orientation, for example:
  - Blocks on the Southern side of a road will be disadvantaged because they have the garage facing north and the living areas facing south. This is terrible passive design and can lose 1-2 stars, but clients do not have a choice because of the way blocks of land are developed.

- Class 2 units that face West or South, or those on the ground floor above a carpark, have significantly lower star ratings than the others. If they already have ceiling fans, maximum insulation, high performance glazing, how else are they supposed to get to 6 stars? This could result in every unit having completely separate requirements. Logistical nightmare.

MBA is concerned about the way the national technical building compliance code is being used to lead the policy implementation for emissions reduction outcomes.

This change is altering the intent of the code, from being a minimum standard for building regulation, to a best practice tool for the built environment. In doing so, it is making the code more complex, unworkable and difficult to regulate. The NCC is the wrong tool for the job and downstream legislation does not capture the right participants at the right time in the building regulation process to deliver the policy intention. A balance within the regulatory elements needs to be found, to ensure policy creep is not driving best practice standards into a minimum standard construction regulatory code and compromising the NCC functionality.

Master Builders believes that for the ABCB to address the issues raised would require significant policy work, research, and redrafting (minimum of 12 Months) as well as a second round of public comment. As such a delay is warranted until at least NCC 2025.

Attached is a copy of Master Builders response to the ABCB consultation template that accompanies this letter, which together constitute Master Builders full response to public consultation on the *NCC 2022 Public Comment Draft (stage 2)*.

Yours sincerely



**Denita Wawn**  
Chief Executive Officer

Cc: The Hon Angus Taylor MP, Minister for Industry, Energy and Emissions Reduction  
State and Territory Building Ministers