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Queensland Productivity Commission
Opportunities to Improve Construction Industry Productivity
PO Box 12078
George Street
Brisbane QLD 4003

By email: enquiry@qpc.qld.gov.au

27 August 2025

Dear Commissioners,

Re. Submission: Response to Interim Report – Preliminary Recommendations 11 and 12

Design Matters National is the largest peak body representing building designers, energy assessors, and other built environment professionals in Australia.

We welcome the opportunity to comment on the Interim Report: *Opportunities to Improve Productivity in the Construction Industry*.

Our submission addresses Preliminary Recommendations 11 and 12, which propose that Queensland consider opting out of recent National Construction Code (NCC) 2022 provisions on energy efficiency and accessibility.

While we acknowledge the importance of productivity in construction, we are deeply concerned that adopting these recommendations would undermine the long-term wellbeing of Queensland households and impose avoidable costs on the broader community.

Queensland's Commitment to Low Energy Buildings and the 2024 Queensland Building Plan Sustainability Report outline government initiatives to reduce electricity demand and support Australia's Paris Agreement targets for 2030 and 2050.

Adopting Recommendations 11 and 12 would not only undermine these commitments but also backpedal on promises made to Queenslanders.

The purpose of the NCC energy efficiency provisions

The NCC 2022 energy efficiency measures are not simply compliance requirements. Given that many Queensland families live in their homes for much of the 75-year average life span, they are essential safeguards to ensure that Queensland homes are:

- thermally comfortable and resilient, protecting residents from rising temperatures and extreme

weather events
- affordable to operate, by reducing the need for heating and cooling and insulating families against rising energy bills, and
- economically responsible, by limiting growth in peak energy demand and the costly network upgrades it necessitates—costs ultimately borne by all electricity consumers.

Evidence of benefits to Queenslanders

The evidence is clear: the NCC 2022 standards save Queenslanders money, protect health, and strengthen productivity.

- Household energy bill savings:
  The NCC 2022 Decision Regulation Impact Statement estimates average savings of $183 per household per year, with a benefit-to-cost ratio of 1.37, even after accounting for additional construction costs.
- Enhanced savings potential:
  Research by Renew Australia shows that 7 Star homes with solar and efficient appliances can save households more than $1,000 annually. In some all-electric scenarios, bills were reduced by up to 80%, significantly improving affordability and financial resilience.
- Wider economic and health benefits:
  A Deloitte report for ACOSS estimated that energy upgrades in low-income housing would save households $3,350 per year, boost GDP by $17 billion over seven years, create nearly 13,000 jobs annually, and reduce health burdens linked to extreme heat and inefficient housing (see Appendix I).
- Infrastructure cost avoidance:
  The Australian Energy Market Operator (AEMO) has confirmed that inefficient housing drives peak demand, requiring costly upgrades to electricity networks. Efficiency standards slow this demand growth, saving all Queenslanders from higher network costs.
- Productivity gains for industry:
  Consistent standards support long-term productivity across manufacturing, supply chains, and regulatory compliance (see Appendix II).

Equity and long-term productivity

Exemptions or optouts would create a two-tier housing market: some households in efficient, affordable homes, and others—often the most vulnerable—left in dwellings that are thermally unsafe and costly to live in.

By contrast, consistent application of energy efficiency standards ensures:

- lower economy-wide energy demand
- stronger community resilience to climate change, and
- long-term productivity gains through avoided health, social, and infrastructure costs.

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The interests at stake

Some building associations may argue in favour of Recommendations 11 and 12 on the grounds of reduced compliance costs. However, it is Queenslanders who will live in these homes for decades. Short-term savings for builders (who are not all Queensland-owned) must not come at the expense of households' financial security, health, and comfort.

Recent CSIRO data for Queensland climate zones 9 and 10 (where 75% of certificates are issued) show average star ratings above 7. This demonstrates that builders are already achieving compliance. The improvement from 6 to 7 stars reduces energy use by around 20%, which translates to estimated annual household savings of $100–200.

CSIRO spokesperson further expressed curiosity about where the building industry believes exponential cost increases are coming from. CSIRO and other industry bodies have seen very little evidence to support those claims of large cost increases caused by increased energy efficiency standards.

Design Matters National Technical Advisory Committee Chair, Tim Adams affirms this sentiment. When appropriately educated and skilled Building Designers and Energy Assessors work together on building design and specification using sound solar passive principles, there appears no evidence that reaching 7 or even 8 star energy efficiency standards present elevated construction cost for new homes, as evidenced in the Net Zero Homes Case Studies. Such training is readily available via programs such as Net Zero Homes Training and The True Zero Carbon Challenge.

Recommendation

For these reasons, Design Matters National urges the Commission to reject Preliminary Recommendations 11 and 12. Instead, we encourage the Commission to affirm the value of the NCC 2022 energy efficiency provisions as essential to:

- protecting Queensland households from rising energy costs and heat-related health risks
- reducing infrastructure cost pressures
- ensuring equity across all households, and
- supporting long-term productivity and resilience in **Queensland's housing stock.**

Thank you for the opportunity to contribute to this important inquiry. We would be pleased to provide further information or evidence if required.

Yours sincerely,

[redacted]

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Appendix I

Health Statistics - Indoor climate exposure and health impacts in Australia

This report synthesises key statistics and insights regarding the impact of indoor climate exposure due to energy poverty and thermally inefficient housing. It covers both national data and Queensland-specific insights. The aim is to provide evidence to substantiate a response to the Queensland Productivity Commission Interim Report on Construction Productivity.

National data on deaths from indoor climate exposure

Cause of impact	National impact
Cold-Related Mortality	~6% of annual deaths (~3,000 deaths/year)
Heat-Related Mortality	0.5% of annual deaths (~200 deaths/year)
Other Health Impacts	Increased hospitalisations for cardiovascular and respiratory issues

Cold-related mortality is a leading contributor to health impacts, accounting for about 6% of annual deaths in Australia. Heat-related mortality is comparatively lower but still significant, with a mortality rate of 0.5% of all annual deaths. Additionally, exposure to extreme temperatures leads to increased hospitalisations, especially for vulnerable groups like the elderly and those with chronic health conditions.

Queensland-specific data on indoor climate exposure

Cause of impact	Queensland impact
Cold-Related Mortality in Queensland	Higher mortality rates during cold snaps (~5-10% increase in winter deaths)
Heat-Related Mortality in Queensland	5% increase in mortality on heatwave days
Excess Winter Hospital Admissions	~7,800 excess hospitalisations annually

In Queensland, cold snaps have a notable impact on mortality, with *winter deaths increasing by 5-10%* during colder periods. Additionally, heat-related mortality sees a 5% increase on heatwave days, and the state experiences about *7,800 excess* hospitalisations annually due to extreme temperatures.

Vulnerable populations

Certain populations are more vulnerable to the impacts of indoor climate exposure. These include elderly people, those with chronic illnesses, low-income households, and renters, especially those living in poorly insulated housing.

Group	Impact
Elderly	Increased risk of hypothermia and heat-related illness

Low-Income Households	Often cannot afford energy for heating/cooling
Renters	High likelihood of living in poorly insulated housing
Indigenous Communities	Remote areas with unreliable power and no AC

Vulnerable groups include the elderly, low-income households, renters, and Indigenous communities. These populations face higher risks due to poor housing quality, the inability to afford energy for heating/cooling, and living in areas with unreliable power.

Policy implications and NCC 2022 standards

The National Construction Code 2022 (NCC 2022) aims to improve energy efficiency in buildings, setting a minimum thermal performance rating for new homes. These standards are a step towards addressing the public health concerns of indoor climate exposure by ensuring homes are better insulated and more energy-efficient.

Standard	**Impact**
NCC 2022 Thermal Performance	7-Star Thermal Performance for new homes
Energy-Efficient Features	Insulation, efficient glazing, improved ventilation
Expected Benefits	Improved indoor climate, reduced health risks, lower energy costs

NCC 2022 sets a 7-star thermal performance rating for new homes, which will help to ensure better insulation, efficient glazing, and improved ventilation. The expected benefits include improved indoor climate, reduced health risks, and lower energy costs for Queensland residents.

For further reading and to substantiate the information provided, please refer to the following sources:

- Australian Bureau of Statistics (ABS) - Energy and Housing Data: https://www.abs.gov.au
- Queensland Health - Climate and Health: https://www.health.qld.gov.au
- Australian Energy Regulator (AER) - Energy Affordability Reports: https://www.aer.gov.au
- World Health Organization (WHO) - Housing and Health Guidelines: https://www.who.int

Australian Energy Council - Energy Efficiency and Public Health: https://www.energycouncil.com.au

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Appendix II

Productivity costs to the construction materials sector when meeting two-tier specification standards

The productivity costs to the construction materials sector when meeting two-tier specification standards can be quite significant, and they depend on several factors, including the complexity of the specifications, the level of compliance required, and the nature of the materials being produced.

Here's a breakdown of how these costs manifest:

1. Increased Production Costs

- **Material Sourcing & Quality Control**: Meeting two-tier specification standards often means that suppliers need to source higher-quality raw materials or more specialised materials, which can be more expensive. The need for additional quality checks and compliance processes adds to costs.
- **Testing & Certification**: Multiple tiers of standards typically require more extensive testing, certifications, and approvals. These processes can involve third-party testing, quality inspections, and documentation, all of which add costs.
- **Waste Reduction**: To meet stricter standards, more attention may need to be given to minimising defects or errors, which could lead to greater material waste or higher costs in material management and recycling.

2. Operational Costs

- **Skilled Labor Requirements**: Two-tier specifications may demand more skilled labour, including specialised technicians or engineers, to ensure compliance with the specifications. This can lead to higher labour costs due to the need for training, certification, and higher wages for qualified staff.
- **Training and Upgrades**: Manufacturers may need to invest in additional training programs for workers, as well as potentially upgrading or modifying their existing equipment to accommodate the higher standards.
- **Production Time**: The time to manufacture products to meet two-tier specifications could increase due to added processes for quality assurance, testing, and the need for extra precision in production. This leads to slower turnaround times, which might impact delivery schedules.

3. Supply Chain Impact

- **Supplier Compliance**: Suppliers of raw materials may need to meet stricter quality standards, which can increase their costs. These higher supplier costs may be passed on to manufacturers and, ultimately, to customers.
- **Logistical Costs**: If the materials needed to meet the two-tier specifications are sourced from multiple suppliers, the complexity of logistics and transportation increases. This can drive up costs for storage, delivery, and handling.

4. Regulatory Compliance Costs

- **Adherence to Regulations**: Meeting two-tier specifications typically means complying with government regulations or industry standards. Regulatory bodies might impose additional documentation requirements, inspection procedures, and penalties for non-compliance, all of which incur costs.
- **Liability & Risk Management**: Higher standards often mean greater liability for manufacturers, as failing to meet specifications could lead to costly lawsuits or reputational damage. This can necessitate additional insurance coverage or risk management measures.

5. Productivity Trade-Offs

- **Productivity vs. Quality**: One of the key productivity costs is the trade-off between speed and quality. To meet two-tier standards, manufacturers might need to slow down production to ensure that every unit complies with the specification, which directly reduces overall productivity.**Cost-Benefit Analysis**: Companies often conduct a cost-benefit analysis to assess if the two-tier standards result in greater sales or marketability of their products. If the benefits of meeting these standards (like increased demand or higher pricing) outweigh the additional costs, companies might be willing to absorb the productivity losses.

6. Market Impact

- **Price Premium**: Construction materials that meet higher standards can often command a price premium. However, this may not always be sufficient to cover the increased production and operational costs. This creates the need to balance product pricing with production costs.
- **Competitive Landscape**: In some cases, manufacturers might lose out to competitors who can produce similar materials at a lower cost, even if they don't meet the full two-tier specifications.

In Conclusion:

The productivity costs to the construction materials sector when meeting two-tier specification standards are multifaceted and can significantly affect margins. These costs can manifest through higher production expenses, operational inefficiencies, logistical challenges, regulatory compliance, and labour investments. However, the impact can vary widely depending on the specific materials involved, the type of standards in place, and the ability of the company to absorb or offset these costs.

The long-term benefits, such as increased product reliability, higher market demand, and compliance with environmental or safety regulations, may offset these immediate productivity challenges, but it’s a balancing act.