SolarCitizens

A community voice for cleaner energy and transport

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Queensland Productivity Commission

Solar Citizens' Submission: 'Opportunities to Improve Productivity of the Construction Industry' Consultation

Introduction

Solar Citizens is an independent, community-based organisation working to grow renewable energy and clean transport in Australia to bring down bills and reduce household emissions. Since our launch in 2013 we have grown to have more than 200,000 supporters across the nation - many of whom are early adopters of consumer energy resources (CER) including rooftop solar, home batteries, virtual power plants (VPPs) and electric vehicles (EVs). Solar Citizens' mission is to empower everyone to access the cost-saving and environmental benefits of renewable energy and clean transport.

The interim report titled 'Opportunities to Improve Productivity of the Construction Industry' states that "recent changes to the National Construction Code (NCC) have been adopted without a case being established that they would provide a net benefit to the community". Specifically, this is regarding "recent changes to energy efficiency and accessibility standards" adopted as part of the 2022 NCC by the Queensland Government. It is further noted that the new energy efficiency provisions for residential buildings could have net social costs of $547 million nationally.

This submission aims to provide evidence to counter 'Preliminary Recommendation 11' - outlined in the interim report as: "*Unless it is demonstrated through consultation that energy efficiency and accessibility standards made as part of the NCC 2022 provide a net benefit to the Queensland community, the Queensland Government should amend the Queensland Development Code to opt-out of these provisions (that is, make them voluntary)".*

Energy Efficiency: Cost to the Construction Industry

On page 184 of the interim report, an online opinion piece written by Daniel Lia[1] is cited as evidence to a claim that energy efficiency requirements only increase construction costs. However this article has been misrepresented in the interim report, and in fact Lia writes in strong favour of new energy efficiency requirements in the 2022 NCC. Quotes from his article include:

[1] Will NCC 2022 Worsen Housing Affordability? (2022) Sourceable

"The price of dwellings across Australia would only increase **between 0.1 and 1.7%** to compensate for built inclusions to uplift dwellings from 6 to 7 stars."

"The value case for buyers is clear: whilst the proposed changes to the NCC may require a small, additional up-front investment, the economic benefits of lower energy consumption associated with greater energy efficiency and improved building thermal performance accrue over time."

"Assuming the increased disposable income is used towards a mortgage, **the savings arising from reduced energy bills is predicted to be more than enough to offset the projected increase in property prices**, in the form of annual repayments."

"The timeframe to realise this net benefit is expected to vary between houses (Class 1) and apartments (Class 2). Energy cost savings of all houses and some apartments across Australia are expected to be able to offset any increase in annual mortgage associated with compliance cost uplift **within the first year of occupancy**, while it is expected to take longer for owners of most apartments."

"Additionally, as it is likely that residential property will in the coming years need to disclose its energy performance at point of sale or lease, **building better performing homes now is the best way to ensure a buyer's investment remains relevant and valuable in the future property market.**"

Developer Case Study: Norwest Precinct

Lia's estimation of the 2022 NCC increasing construction costs by between 0.1 and 1.7% (from 6 to 7 NatHERS) is consistent with costing data provided to Solar Citizens in July 2025 by Mulpha, the property investors behind 'Norwest Quarter' - a new high-rise apartment development in Sydney.

The two buildings (including 196 residences and common property areas) are powered by 100% renewable electricity, achieving an impressive **8.1 NatHERS star rating** with top tier thermal efficiency and comfort, efficient water use, and CER including rooftop solar, on-site EV charging and smart electric appliances. Apartments consume over 50% less energy and 20% less water from the grid, and **save residents ~28% less each year in water, energy and strata bills**.

Based on a $206 million construction value, these **electrification and efficiency upgrades added approximately $1.7 million, or around 1% of total cost**, with negligible impact on construction or approval timelines, if any[2]. The developers worked with an embedded network operator (ENO) to provide the majority of these upgrades - which meant that less than half of the $1.7m was covered by the developer with the rest paid for by the ENO.

The cost of the equipment will then be depreciated over ten years after which the owners corporations (OCs) and residents will begin seeing savings. It's worth highlighting that if the ENO installed a gas hot water system rather than an efficient heat pump electric hot water system, the

[2] All information is verified by Jan Van Der Bergh, Senior Development Manager at Mulpha

costs would still be passed on to the OC and residents. **The difference is that CER produces a return on investment after the ten year period, whereas a gas system does not.**

After the ten year ENO period, residents are expected to save a total of $171,000 from heat pump hot water and $81,000 from rooftop solar. This is in addition to the immediate savings provided (with no ten year ENO period) by:

a) efficient lighting, appliances, and heating, ventilation and cooling (HVAC) systems: together providing a total of $108,000 in savings to residents;
b) insulation and air tightness: $40,000 savings to residents; and
c) efficient car park lighting, appliances, lifts and pool heating: $150,000 savings to OC.

The Mulpha Property Investor group reported that the high NatHERS rating and promise of lower bills was a major selling point for buyers, helping them to reach their 60% pre-sale target within 18 months. An additional benefit is that hopeful buyers are able to access discounted green home loans, **only available for properties that score highly on energy efficiency and sustainability.**

Energy Efficiency: Economic Benefits to Society

Rooftop solar remains the cheapest form of electricity generation in Australia and this is especially the case when paired with behind-the-meter battery storage. As of 1 July 2025, there were 4,154,426 small-scale (<100kW) solar systems installed across the nation[3], equivalent to 38% of households (although some installations are on commercial and public buildings). This includes 1,127,258 solar PV systems installed in Queensland - **the highest uptake of any state** despite it being only the third largest in population.

Solar Citizens is advocating for all new homes and apartment developments to be built with **rooftop solar, battery storage, EV charging, electric appliances and features to facilitate a high degree of thermal comfort and whole-of-home efficiency**. Homes with higher energy efficiency ratings and less reliance on fossil fuels can expect to see annual energy bill savings of more than $3,000 per year, according to analysis from Springmount Advisory[4], which produced the following findings:

Thermal and electrification upgrades:

- Energy bill savings of $1,579 per household, per annum, on average
- Total annual saving of $14.5 billion nationally

Installing rooftop solar:

- Savings of $1,052 per household, per annum
- Savings of $5.5 billion collectively per annum

[3] Small-scale installation postcode data (2025) Clean Energy Regulator
[4] Analysis: Household energy upgrades would slash the cost of living by billions per annum (2025) Springmount Advisory

Upgrading to solar and batteries:

- Savings of $1,459 per household, per annum
- Savings of $9.1 billion collectively per annum

The analysis shows that upgrading to solar and batteries plus 'quick fix' thermal upgrades, including efficient electric HVAC could result in annual savings of $3,039 per household and **annual savings of $23.6 billion nationally** - providing enormous economic and productivity benefits to society as a whole.

Energy Efficiency: Additional Benefits

Energy efficient homes are more resilient to the negative impacts of climate change compared to those with lower energy efficiency ratings. Features such as draughtproofing, insulation, double glazing and efficient heating and cooling make a home more resilient to extreme weather events such as heatwaves, heavy rain and floods. Rooftop solar, batteries and efficient electric appliances ensure that a home can be powered in the event of a blackout - which may be caused by an extreme weather event such as a tropical cyclone.

Solar Citizens therefore recommends that all preliminary and final recommendations made by the Queensland Productivity Commission to the Queensland Government **must take into account the outcomes of the National Climate Risk Assessment** which is due to be published imminently. Specifically, the Commission should factor in the economic risk of climate impacts to productivity and the need for future-proof, safe and resilient homes and businesses as a defence against rising temperatures and extreme weather events.

Conclusion

It has been well established that energy-efficient, all-electric homes with rooftop solar and batteries don't just cut emissions - they're healthier, more climate-resilient, and cheaper to heat, cool, and cook in. In fact, efficient electric homes with consumer energy resources save residents hundreds, even thousands, of dollars every year on energy bills. **They're good for people and good for the economy.**

Policy support such as rebates and government incentives have made CER installations financially appealing, leading to widespread uptake. However, hundreds of thousands of Queenslanders are locked out of CER like rooftop solar, battery storage, EV charging and efficient electric appliances. It's incredibly difficult and often prohibitively expensive to make these upgrades in strata-titled apartments, rental properties and community housing, and this is why they need to be included from the time of construction[5].

The energy efficiency requirements in both the 2022 and the 2025 NCC are crucial to helping locked out households access the cost of living and emissions reduction benefits of clean, cheap energy and efficient homes. This is especially critical given the Crisafulli Government's plans to

[5] Electrify Wolli Creek Report (2024) Solar Citizens

build one million homes by 2040, which will include a significant proportion of strata properties and high-density apartments, many of which will be rented. **Without better building standards, these new homes will continue to lock residents into high energy bills and increased retrofit costs, increasing inequality and energy poverty, while putting them at risk of the negative impacts of climate change.**

Urgent, ambitious action is required from all levels of government to ensure that everyone can access the benefits of cleaner, more affordable energy and transport, as soon as possible. This includes the future occupants of new homes.

Solar Citizens thanks the Commission for the opportunity to make a submission, and we look forward to further engagement and consultation opportunities in the near future. Please don't hesitate to reach out should you have any questions about the content of this submission, or wish to further discuss the above recommendations.

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