

12 May 2025

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Level 22, 456 Kent Street
Sydney NSW 2000

Via email: sydneyyoursay@cityofsydney.nsw.gov.au

Dear Angela

Re: All-electric new development

Green Building Council of Australia (GBCA) welcomes the opportunity to provide input to the consultation for City of Sydney's all-electric new developments.

GBCA commends City of Sydney for its focus on electrification to support achieving net zero emissions by 2035, promote healthier homes and tackle cost-of-living costs. The benefits of electrification are well documented and have been captured in detail in your Discussion Paper Electrification of new development (Discussion Paper). GBCA produced [A practical guide to electrification: For new buildings](#)¹ which outlines the steps involved in delivering an all-electric new building and the types of technologies that can be used today to replace natural gas systems with electric solutions.

GBCA is an industry association with more than 650 member organisations. GBCA's purpose is to lead the sustainable transformation of the built environment. We do this primarily through our core functions:

- We advocate policies and programs that support our vision and purpose.
- We educate industry, government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations.
- We collaborate with our members and other stakeholders to achieve our mission and strategic objectives.
- We rate the sustainability of buildings, fitouts and communities through Australia's largest national, voluntary, holistic rating system – Green Star.

Green Star is Australia's most widely used sustainability rating system for the design, construction and performance of buildings – including social infrastructure – fitouts and communities. Green Star aims to transform the built environment by:

- reducing the impact of climate change
- enhancing our health and quality of life
- restoring and protecting our planet's biodiversity and ecosystems

¹ <https://gbca-web.s3.amazonaws.com/media/documents/a-practical-guide-to-electrification.pdf>

- driving resilient outcomes for buildings, fitouts, and communities
- contributing to market transformation and a sustainable economy.

Climate change, health and wellbeing, natural resource depletion, consumer preferences, investor demand- these are key issues that are impacting how we develop new buildings in our cities. A key challenge across all of them is how we move away from traditional solutions to deliver more sustainable and higher performing buildings. Given the urgency of the climate change crisis and the size of the electrification transformation ahead of us, it is critically important that the transition to new building electrification regulations occurs as quickly as possible.

The Climate Positive Pathway within the Green Star Buildings rating tool requires that buildings must be fully electric, fossil fuel free and 100% powered by renewables. GBCA has called on all levels of government for increased support for households, businesses and industry to electrify homes and buildings, through awareness-raising, industry training, grants, incentives and other financial mechanisms.

The Australian Sustainable Built Environment Council (ASBEC) report, [Unlocking the pathway: Why electrification is the key to net zero buildings](#)² confirms 100% electrification is the lowest cost, fastest emissions reduction pathway for Australia's built environment. Electrification of Australia's built environment will not be achieved at the speed and scale we need without government action.

We applaud the steps already taken by the City of Sydney (CoS) to achieve long-term emissions reductions, such as electrifying your property portfolio and converting more of your fleet vehicles to electric. We also note the exhibition of the draft planning controls to improve indoor air quality in new residential development by preventing the installation of indoor gas appliances (cooktops, ovens and space heating) in late 2024 for which we provided feedback.

Beyond strong support for CoS's proposed pathway for most new developments to be all-electric, though we understand that electrification may be a complex and expensive process for some commercial buildings, GBCA has responded to the specific questions in the Discussion Paper in Appendix A.

GBCA welcomes the opportunity to discuss or provide further clarification on any of the points made above. To arrange a meeting, please contact Shay Singh, Senior Manager Policy and Government Relations, via email at shay.singh@gbca.org.au.

Yours sincerely

Andrew Fischer

Andrew Fischer
Head of Policy and Research
Green Building Council of Australia

² <https://www.asbec.asn.au/wordpress/wp-content/uploads/2022/12/ASBEC-Unlocking-the-pathway.pdf>

Appendix A

Question	GBCA Response
1. Do you agree with the benefits of all-electric buildings outlined in the paper, and do you see any other benefits? If not, what are the concerns?	GBCA agrees with the stated benefits of all-electric buildings outlined in the paper and provides the following summary of benefits from A practical guide to electrification - For new buildings: • Climate change: all-electric buildings powered by renewables are the preferred pathway to decarbonise our built environment. Removing fossil fuels from buildings is necessary to reduce our climate change impacts. Electrification is also the best enabler to deliver buildings fully powered by renewables today. • Investor benefits: investors are looking for assets that are on a clear decarbonisation pathway. All-electric buildings that use renewable energy will be able to access sustainable finance. • Resilience and risk reduction: as we move into a state of decarbonising the economy, there will be a need to retrofit assets and remove equipment using fossil fuels from service. An all-electric building is a step ahead, making it a more valuable and desirable asset, ready for the future. • Health and safety benefits: using natural gas in buildings generates toxic air pollutants. Occupants are exposed to these pollutants. These impacts can increase asthma and exacerbate respiratory illnesses. All-electric services eliminate these pollutants, improving the health and wellbeing of building occupants. • Tenant and consumer preferences: many organisations have clear aims to decarbonise and have public goals to do so before 2030. Natural gas and other fossil fuels are incompatible with these goals. An all-electric building will be more attractive to these organisations and consumers as well.
2. Do you agree with the challenges to electrifying new development and are there any others that we haven't mentioned? How might these challenges be overcome?	GBCA agrees with the challenges listed in the Discussion paper and ask that the following are also considered: Equity and affordability: low-income housing projects may struggle with higher upfront costs and need support to ensure equitable access to clean technology. Solutions may include added public funding, incentives, and inclusive policies that ensure affordable electrification. Industry capability and capacity: builders and subcontractors may be more familiar with gas systems and hesitant to adopt new electric technologies. Training and information packages will be essential for the professions and trades that support the electrification of

	the built environment, so that all parties understand the role they can play in the electrification transformation. Technology maturity & availability: issues with performance can still be a concern and some niche equipment (like commercial electric kitchen appliances or large-scale electric boilers) may have limited availability or require new design approaches. Resistance from industry: Gas utilities and some stakeholders may lobby against electrification, citing cost, reliability, or energy diversity. This could lead to policy pushback, delays in code changes, or misinformation campaigns. Solutions may include transparent policy discussions, data on safety/emissions, and coordinated energy transition planning.
3. How important do you think electrification of new development is to achieve our environmental targets?	ASBEC's Unlocking the Pathway report confirms 100% electrification with renewable electricity is the lowest cost, fastest emissions reduction pathway for buildings, with savings of \$49 billion between 2024 and 2050 over the 'business as usual' strategy of electrification, gas, and offsets. Electrifying new development is critical to hitting most environmental and climate targets—local, national, or global. • In many places, buildings account for 30-40% of total greenhouse gas emissions—from heating, cooling, hot water, and cooking. • Fossil fuels used in buildings (especially natural gas) are a major direct source of CO₂ and air pollution. • Electrifying new buildings means cutting emissions at the source—and it avoids locking in decades of future fossil fuel use. An all-electric building comes with many benefits – from easy access to renewable energy, to healthy spaces for occupants. As we move into a decarbonised world, all-electric buildings are future proofed from having to be refurbished to eliminate outdated technologies. They have less risk of becoming stranded assets. New construction = Long-term impact • Buildings last 50–100 years or more. If we build with gas today, we're locking in fossil fuel infrastructure far beyond 2050 climate deadlines. • Retrofitting later is much more expensive than building all-electric from the start. Quick action to electrify new buildings now is critical. Clean electricity is getting greener fast • The electricity grid is decarbonizing, utilizing solar, wind, hydro, and new storage technology.

	- That means every electric building becomes more emissions efficient over time as the decarbonisation process progresses. Electrification enables synergies - Electric buildings integrate easily with: - Solar panels (for zero-carbon energy onsite) - Batteries and smart systems (for energy efficiency and grid support) - EV chargers, helping to support emissions reductions in the transport sector as well. - This creates precinct scale structural change that leads to low-carbon, resilient, and self-sufficient communities. Timelines matter - Most climate models (for example those used by the Intergovernmental Panel on Climate Change and the International Energy Agency) say we need to: - Halve emissions by 2030 - Hit net-zero by 2050 - Electrifying all new development is one of the fastest, most cost-effective ways to reduce emissions in the near term.
4. Are there specific development types (residential, commercial, business, industries etc.) or gas end uses (domestic hot water, space heating, cooktops, ovens) that should be prioritised or deprioritised for electrification? Or are there any types of development that shouldn't be required to be all-electric? How can different approaches for development types be managed in mixed-use developments?	While other sectors will take time to decarbonise, the technology for electrifying buildings already exists and is proven. From hospitals to aquatic centres, to new and existing buildings, electrification is being demonstrated in buildings of all shapes and sizes. GBCA supports prioritizing residential and commercial buildings for transition while recognizing that heavy industries with high heating needs may need more time due to limited clean energy alternatives. Exemptions can be granted case-by-case, based on fossil fuel impact, technology availability, and clear plans with timelines for transitioning.
5. Which of the planning control options do you think should be implemented? Should any of these approaches be combined, excluded or modified and why?	GBCA recommends a combination of Options 4, 5 and 6. GBCA supports the above combination because together they provide a balanced, practical, and forward-looking approach to accelerating electrification while managing real-world constraints in existing buildings, specialized uses, and industry readiness. Supporting a mix of these measures ensures full electrification in new buildings, reduces retrofit costs later, accelerates emissions reductions, and provides regulatory certainty to developers and industry stakeholders.

	GBCA has also produced A practical guide to electrification: For existing buildings³ which outlines the steps involved in retrofitting existing buildings to be all-electric and the types of technologies that can be used today to replace natural gas systems with electric solutions.
6. If the controls apply to alterations and additions, what should the threshold be? For example, for new houses and residential flat buildings, the threshold could be a construction/refurbishment cost of \$50,000, \$100,000 or more. For refurbishments to existing non-residential developments and which affect building services, the threshold could be where the works affect at least 50 percent of the total volume of the building where there is no increase in the gross floor area. Alternatively, the threshold for both development types could be where there is a creation of new additional floor space. Could other planning controls or regulations be used to establish a threshold of 50% or another figure?	GBCA does not have a view on thresholds. In 2023 GBCA released the Sustainable Home Renovations Guide⁴ in partnership with Allianz Australia to help Australians navigate more sustainable home renovations and to reduce emissions. The guide is designed to provide improved options for industry professionals and homeowners throughout their renovation and follows the principles of the Green Star Homes standard to make homes more energy efficient, healthy and resilient. Major and minor refurbishments are defined in the Green Star Buildings eligibility criteria.
7. If the planning controls are implemented, should they come into effect right away? Or should the implementation of planning controls be phased in with warning? If so, how? Should there be a different approach to phasing across the range of development types?	GBCA recommends a transition period for implementation, with the timeframe for transition to commencement to be developed in consultation with stakeholders. The planning controls should be made and then communicated to stakeholders, clearly setting out, what the changes are and what action different stakeholder cohorts will be required to undertake by the time they come into effect. This communication should be accompanied with clear guidelines that set out what electrification options are available to pursue in different building scenarios. The timeframe between notifying stakeholders of the new requirements, and requiring their implementation by stakeholders, should be guided by what the COS has experienced as a reasonable timeframe for effective

³ <https://gbca-web.s3.amazonaws.com/media/documents/electrification-guide---existing-buildings-final.pdf>

⁴ <https://gbca-web.s3.amazonaws.com/media/documents/a-guide-to-sustainable-home-renovations.pdf>

	implementation with previous planning reforms. Looking to other jurisdictions such as the ACT for a guide as to the time required to ensure effective implementation would also be beneficial. This transition will be a critical element for the CoS to achieve its net zero emissions target and will require changes to the ways we construct and operate buildings. The commencement of the regulation should be as early as practicable, giving industry and markets sufficient time to build capacity and capability to meet demand.
8. Are there certain business types or industries that should be allowed to continue to connect to the fossil fuel gas network in new buildings? If so, why? For these business types or industries, should there be a requirement for the building to be electric ready for a future transition?	See Q4 response
9. What would the impacts for builders and developers be if the planning controls came into force soon? For example, could it create challenges in sourcing and managing the necessary materials, electric appliances and systems, equipment, and labour needed to meet all-electric development requirements? Would there be greater space requirements if instantaneous gas heaters were phased out? Are alternatives cost neutral or cost effective?	Material and Equipment Supply Challenges High Demand, Limited Supply: A sudden shift toward all-electric developments could strain the supply chain for electric appliances (e.g. heat pumps, electric water heaters, induction cooktops, EV chargers), especially if manufacturers can't scale production quickly. Lead Times: Developers may face delays due to longer lead times for specialized equipment not previously used at scale in gas-based builds. Imported Components: Many electric systems rely on imported parts. Tariffs, geopolitical factors, and shipping issues could impact availability and costs. Labour and Skills Gaps Electrician Demand Surge: A transition away from gas increases reliance on qualified electricians, who are already in short supply in many regions. Training Needs: Workers (including plumbers and heating, ventilation, and air conditioning technicians) may need retraining to install and service new technologies like heat pumps and electric hot water systems. Installation Complexity: Some all-electric systems, especially high-efficiency ones, require more precision or integrated planning, increasing installation time and risk of errors. Design and Space Impacts

	Hot Water Systems: Replacing instantaneous gas heaters (which are compact) with electric alternatives like heat pump water heaters or storage systems often requires: • More physical space (for tanks or outdoor units). • Appropriate ventilation and thermal clearance zones. Retrofit Constraints: In high-density or small-lot developments, finding space for electric hot water systems, switchboards, and battery systems can be a challenge without compromising liveable or rentable space.
10. What industry support is needed for all-electric new development? How would any suggested measures help?	Construction & Real Estate Industry Support Needs: • Training for builders, contractors, and electricians on electric technologies (for example heat pumps, induction stoves). • Incentives favouring all-electric designs. • Collaboration between developers and utility companies early in the planning process. How it helps: • Ensures buildings are designed efficiently for electric systems. • Reduces construction delays and retrofitting costs. • Increases builder confidence in offering electric homes.