

Pathways Call for Evidence Submission

18 July – 14 August 2026

Submission type	Upload
Submitter	Australian Sustainable Built Environment Council (ASBEC)
Response ID	383219

Disclaimer

This document is a submission to the Net Zero Commission’s 2026 Pathways Call for Evidence. As part of the consultation process, the commission has committed to publishing the submissions it receives. Submissions do not represent the views of the commission.

30 July 2026

NSW Net Zero Commission
Decarbonisation Pathways Team

Via email: [REDACTED]

Via online portal: <https://www.netzerocommission.nsw.gov.au/engagement-consultation/decarbonisation-pathways-call-evidence>

Dear NSW Net Zero Commission Decarbonisation Pathways team,

ASBEC Submission – Decarbonisation Pathways Call for Evidence

The Australian Sustainable Built Environment Council (ASBEC) welcomes the opportunity to provide input to the NSW Net Zero Commission's Decarbonisation Pathways project.

ASBEC is a forum of peak bodies in the Australian built environment that collaborates for impact in pursuit of sustainable, productive and resilient buildings, infrastructure, communities and cities. Our [membership](#) brings together 40+ industry members including industry associations, professional bodies, and not-for-profit organisations, and 20+ government and academic observer organisations. Collectively, our members are involved in the planning, design, delivery and operation of Australia's built environment.

[ASBEC's 2026–2030 Strategic Plan](#) is anchored around three interrelated objectives for the built environment:

- Accelerating decarbonisation
- Enhancing resilience and adaptation to climate change risk
- Transitioning towards a circular economy.

ASBEC strongly supports the direction being taken by the Commission. New South Wales has already identified many of the policy settings required to achieve its legislated emissions reduction targets. The greatest challenge is no longer identifying what needs to be done, but implementing proven measures at the pace and scale required. The Decarbonisation Pathways project provides an important opportunity to identify the implementation pathways, investment signals and cross-sector coordination needed to accelerate emissions reductions across the economy.

The built environment is central to the Commission's work because it is both one of NSW's largest opportunities for cost-effective emissions reduction and a foundational enabler of economy-wide decarbonisation. Improvements to building performance reduce overall energy consumption, while better demand management and efficiency help to smooth and reduce peak electricity demand, improve energy affordability and support the efficient electrification of homes and businesses. At the same time, reducing embodied emissions from construction materials and building processes will become increasingly important as operational emissions decline. Decisions about planning, buildings and infrastructure also influence electricity generation and networks, transport systems and industrial energy demand. The Decarbonisation Pathways therefore have an opportunity to recognise the built environment not simply as an emissions source, but as a foundational enabling system that supports emissions reductions across the economy.

In this submission ASBEC does not seek to duplicate the substantial body of work already undertaken by governments, industry and researchers on built environment decarbonisation. Instead, this submission focuses on four key modelling considerations that we believe will strengthen the Commission's pathways and help identify practical, least-cost opportunities to accelerate emissions reductions. We also draw the



Commission's attention to a range of existing publications from ASBEC and our member organisations that provide detailed evidence, technical analysis and implementation guidance. Collectively, these resources demonstrate that the evidence base is well established; the challenge now is to accelerate implementation at the pace and scale required to achieve NSW's emissions reduction targets. A number of ASBEC member organisations are also making submissions that address issues specific to their sectors and areas of expertise.

The four key modelling considerations discussed in this submission are:

1. **Accelerated deployment of proven decarbonisation measures**, including energy efficiency, electrification and demand flexibility
2. **The built environment as an enabling system**, recognising the broader role that high-performing buildings play in supporting economy-wide emissions reductions and reducing pressure on energy infrastructure
3. **A whole-of-life approach to emissions**, encompassing operational and embodied carbon, refrigerants, and opportunities to improve material efficiency and circularity
4. **Planning for changing electricity demand**, including the implications of efficient electrification, growing cooling demand and major new loads such as data centres.

❖ **Consideration 1 - Accelerated deployment of proven decarbonisation measures**

The built environment offers some of the most immediate and cost-effective opportunities to reduce emissions. ASBEC supports the Commission's focus on identifying practical pathways to accelerate decarbonisation. The technologies and practices needed to significantly reduce emissions from buildings are already commercially available and well understood. Rather than relying on the emergence of new technologies, the greatest opportunity lies in accelerating the deployment of proven measures such as building energy efficiency, efficient electrification, demand flexibility, rooftop solar and battery storage.

These measures deliver multiple benefits beyond emissions reduction. Improving the thermal performance of buildings reduces energy demand, lowers energy bills, improves occupant health and comfort, and reduces pressure on electricity networks. Efficient electrification, combined with improved building performance, enables households and businesses to take advantage of an increasingly renewable electricity system while reducing exposure to future fossil fuel price volatility.

ASBEC's previous work (referenced at the end of this submission) has consistently demonstrated that energy efficiency and electrification are complementary strategies that should be pursued together. Electrification without improvements to building performance increases energy demand and network costs, while energy efficiency alone cannot deliver the emissions reductions required as long as buildings continue to rely on fossil fuels. The greatest emissions reductions and lowest system costs are achieved when both are implemented in parallel.

Why this matters

Modelling that assumes the accelerated deployment of proven technologies will produce more practical and actionable decarbonisation pathways than one that relies heavily on emerging technologies or future policy development. Recognising the complementary relationship between energy efficiency, efficient electrification and demand flexibility will also better reflect the lowest-cost pathway to reducing emissions while supporting a more affordable, reliable and resilient energy system.

❖ **Consideration 2 - The built environment as an enabling system**

The Commission's economy-wide focus provides an important opportunity to recognise the built environment as more than simply a source of emissions. While reducing emissions from buildings is

essential, this perspective understates the broader role that the built environment plays in enabling economy-wide decarbonisation. Buildings, precincts and supporting infrastructure influence how much energy is required, when it is used, and how effectively renewable electricity can be integrated into the energy system. They also shape transport demand, infrastructure investment, productivity and household energy costs.

High-performing buildings reduce overall energy consumption while also reducing and shifting peak demand. This lowers pressure on electricity networks, improves the efficiency of renewable energy generation and storage, and reduces the need for costly network augmentation. At the household and business level, better-performing buildings also improve affordability by reducing energy bills and increasing resilience to future energy price volatility. Improving the performance of buildings is not simply about reducing emissions from the built environment. It is about reducing the amount of energy the economy needs to generate, transport and pay for.

Recognising the built environment as an enabling system also highlights the importance of integrated policy development. Decisions relating to planning, housing, energy, transport and infrastructure are highly interdependent, and pathways that consider these systems in isolation risk overlooking opportunities to reduce costs and improve outcomes. Conversely, coordinated action across these sectors can accelerate emissions reductions while delivering broader economic, social and productivity benefits.

Why this matters

Recognising the built environment as an enabling system will allow the pathways to better reflect the interactions between buildings, energy, transport and infrastructure, and the system-wide benefits of investing in high-performing buildings. This will provide a more complete picture of the lowest-cost opportunities for economy-wide emissions reduction and help identify where coordinated policy action can deliver multiple benefits.

❖ Consideration 3 - A whole-of-life approach to emissions

ASBEC supports the Commission taking a whole-of-life view of emissions across the built environment. The emissions associated with the built environment extend well beyond the energy used to operate buildings. As electricity generation continues to decarbonise and operational emissions decline, emissions associated with construction materials, building products, refrigerants and end-of-life processes will represent an increasing proportion of the built environment's carbon footprint. Reflecting these changing emissions profiles within the pathways will become increasingly important over time. We also stress the importance of acting faster – because CO₂ accumulates, early abatement delivers significantly more climate benefits than the same abatement delivered later.

Reducing whole-of-life emissions presents opportunities to improve resource efficiency, reduce waste and encourage innovation in the design, construction and operation of buildings and infrastructure. This includes improving material efficiency, increasing the reuse and recovery of existing assets and construction materials, transitioning to fossil fuel free transport and construction processes, and addressing emissions associated with refrigerants. These measures complement operational energy improvements and ensure that emissions are reduced across the full lifecycle of the built environment – from concept through to re-life.

A whole-of-life perspective also provides a more complete understanding of the trade-offs and opportunities associated with different decarbonisation pathways. Decisions that reduce operational emissions but increase embodied emissions - or vice versa - may not deliver the greatest long-term emissions reductions. Emissions saved now are worth more than emissions saved later. Early design decisions – such as building smaller, using prefabricated, modular, flexible layouts and designing for

longevity, reuse, decommissioning and repair – can dramatically lower the need for new resources, cut emissions and reduce waste.

Why this matters

Accounting for whole-of-life emissions will enable the pathways to reflect how the contribution of different emissions sources are both time-dependent and will change over time. This will support more durable, least-cost pathways that capture the full emissions reduction potential of the built environment while avoiding unintended emissions shifting between lifecycle stages.

❖ Consideration 4 - Planning for changing electricity demand

The transition to a net zero economy will fundamentally reshape patterns of electricity demand. ASBEC supports modelling that captures the interacting effects of increased electrification, changing patterns of occupancy and technology adoption, and the growing impacts of climate change on when and where electricity is needed. At the same time, improvements in energy efficiency, demand flexibility and distributed energy resources have the potential to moderate growth in demand and reduce pressure on the electricity system. These trends need to be considered together rather than treating demand growth in isolation.

An increasingly important consideration is the emergence of large new electricity loads, particularly data centres. The rapid growth of artificial intelligence, cloud computing and digital services is expected to drive substantial increases in electricity demand over coming decades. While data centres will play an important role in supporting the digital economy, their energy requirements have significant implications for electricity generation, network capacity, infrastructure planning and the achievement of emissions reduction targets. Their impact should therefore be explicitly recognised within the pathways.

Planning for future electricity demand also requires a coordinated approach across the energy, planning and built environment sectors. Improving the energy performance of buildings and encouraging demand flexibility can reduce the scale and cost of future network investment while helping to accommodate growing electricity demand from new technologies and industries. Reducing the amount of electricity that needs to be supplied is one of the most cost-effective ways of supporting the transition to a net zero energy system.

Why this matters

Recognising how electricity demand is likely to evolve will provide a more realistic basis for modelling future energy requirements and infrastructure needs. Considering both emerging sources of demand, such as data centres, and opportunities to reduce or better manage demand through high-performing buildings and assets will help identify more resilient, affordable and least-cost pathways to decarbonisation.

Building on the existing evidence base

ASBEC welcomes the Commission's evidence-based approach and encourages it to draw on the substantial body of work already undertaken by governments, industry and researchers on built environment decarbonisation. Collectively, this work demonstrates that many of the technologies, policy settings and implementation pathways needed to reduce emissions are already well understood. The challenge is now to accelerate their deployment at the pace and scale required to meet NSW's legislated emissions reduction targets. The publications below provide a strong foundation for many of the modelling assumptions that will underpin the Decarbonisation Pathways and illustrate the breadth of evidence already available to support implementation.

ASBEC's own work, together with research undertaken by our member organisations, provides detailed technical analysis and practical guidance across each of the modelling considerations outlined in this submission. We encourage the Commission to draw on these resources as it develops the Decarbonisation Pathways.

We also note that [Every Building Counts \(2023\)](#) provides an overarching policy platform (and evidence/data reference points) for addressing emissions in buildings, targeted at federal, state/territory and local government levels. [A solid foundation: A common definition for net zero infrastructure and how to get there \(ASBEC, 2025\)](#) provides guidance on how Australia's infrastructure industry can track, manage, and reduce emissions while enhancing resilience to climate change; including how state/territory policies can drive action.

Consideration 1 - Accelerated deployment of proven decarbonisation measures

- [Unlocking the Pathway: Why electrification is the key to net zero buildings \(ASBEC, 2022\)](#), together with its supporting [technical report](#) and [economic modelling](#), demonstrates practical, least-cost pathways for improving the energy performance and electrification of Australia's existing housing stock.
- ASBEC's submission to the [NSW Consumer Energy Strategy \(2024\)](#) highlights the importance of integrating energy efficiency, electrification and consumer protections to support an equitable transition.

Consideration 2 - The built environment as an enabling system

- The [Commercial Buildings Electrification Roadmap \(Energy Efficiency Council and Property Council of Australia, 2025\)](#) demonstrates how coordinated electrification of commercial buildings can reduce emissions while improving productivity, energy performance and system outcomes.
- [Unlocking Finance and Investment for the Decarbonisation of Commercial Buildings \(Department of Climate Change, Energy, the Environment and Water, 2025\)](#) identifies practical mechanisms to accelerate investment in commercial building upgrades.

Consideration 3 - A whole-of-life approach to emissions

- [Our Upfront Opportunity \(ASBEC, 2025\)](#) and accompanying [Issues Paper](#) sets out practical and time-bound actions to reduce upfront embodied carbon across Australia's built environment. It also highlights the emissions benefits of transitioning the built environment towards circular economy practices.
- [Freeze Frame: Refrigerants as Long-term Building Infrastructure \(Green Building Council of Australia \(GBCA\) and the Australian Institute of Refrigeration, Air Conditioning and Heating \(AIRAH\) 2025\)](#) highlights the growing importance of refrigerants as a source of built environment emissions and opportunities to reduce their long-term climate impact.

Consideration 4 - Planning for changing electricity demand

- ASBEC's submission to the [NSW Parliamentary Inquiry into the Net Zero Commission's 2024 Annual Report \(2025\)](#) highlights the importance of coordinated planning across buildings, energy and infrastructure to support the transition to net zero.
- ASBEC's submission on [NSW data centres \(2026\)](#) discusses the implications of rapidly growing electricity demand from data centres and the importance of integrating these trends into energy system planning.

The built environment represents a significant opportunity to achieve cost-effective, economy-wide emissions reductions. Improving the performance of the built environment not only reduces emissions, but also the amount of energy the economy needs to generate, transport and pay for.

ASBEC looks forward to continuing to work with the Commission to ensure the Decarbonisation Pathways reflect both the strength of the existing evidence base and the practical implementation pathways needed to accelerate the transition to net zero. Please do not hesitate to contact our [REDACTED] if you have any questions.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Alison Scotland', written in a cursive style.

Alison Scotland
Chief Executive Officer