



COUNCIL OF CAPITAL CITY LORD MAYORS

Submission to National Energy Performance strategy

17 February 2023



Introduction

The Council of Capital City Lord Mayors (CCCLM) appreciates the opportunity of providing the following comments on the National Energy Performance strategy consultation paper.

The CCCLM consists of the Lord Mayors of Adelaide, Brisbane, Darwin, Hobart, Melbourne, Perth and Sydney, and the Chief Minister of the ACT.

Australia's capital cities account for 70% of the GDP and are the place of employment for more than 9 million Australians, and 2.3 million Australian businesses. As one of the world's most urbanised nations, Australia's capital cities are instrumental to the implementation of climate, transport and energy reform.

Capital city governments have been at the forefront of climate action for many years, implementing innovative policies that have generated successful emission reduction outcomes.

Our submission focuses on initiatives that deliver emissions reductions, such as localised and distributed renewable energy generation and storage technologies, along with initiatives that support environmentally sustainable buildings and transport.

We would welcome the opportunity of discussing our submission further.

Sally Capp
Lord Mayor of Melbourne
Chair
Council of Capital City Lord Mayors

Summary of recommendations

Energy

- Greater collaboration and funding for capital city governments focused delivering initiatives that provide emissions reductions.
- Prioritise policy reform and investment to allow greater penetration of localised and distributed renewable energy generation close to demand and storage through innovative and new distribution and storage technologies. For example, virtual power stations, utility scale energy storage, community batteries and smart grids.
- Fund the accelerated electrification of households as outlined by the Castles and Cars¹ work by Rewiring Australia, which will save households more than \$4,000 per year whilst improving comfort, health, efficiency and fuel security.
- Provide funding to capital city governments to adequately resource cities to engage electrification experts to coordinate the various electrification opportunities with buildings and transportation in a consistent way.

Buildings

- Invest in the transition to best practice climate-ready and environmentally sustainable buildings, including retrofitting existing buildings to reduce energy consumption and improve thermal comfort.
- Establish a national commercial building retrofit investment fund with provision of a training and skills package to build capability and capacity within the construction sector.
- Implement changes to the Commercial Building Disclosure program by expanding disclosure to new sectors (through the Building Energy Efficiency Disclosure Act) and fast track changes to the National Construction Code to deliver zero carbon, climate ready buildings.
- Support increased efficiency and electrification of residential buildings with tailored investment for apartment buildings.
- Work with the property industry to invest in grid interactive buildings that use energy at times when renewable energy is abundant, reducing afternoon peaks.
- Provide funding to capital city governments to expand the roll out of the highly cost effective CitySwitch Green Office program² that assists commercial office tenants to monitor and reduce their energy consumption.

Transport

The CCCLM recently provided a detailed submission to the National Electric Vehicle strategy³, key recommendations included:

- the adoption of fuel efficiency standards that will:
 - reduce greenhouse gas (GHG) emissions, improve air quality, liveability and public health in Australian communities.
 - increase industry certainty about performance requirements in the Australian market, removing the disadvantage for manufacturers importing low and zero emission vehicles. In turn, this could increase consumer choice and quality.
- Australia immediately develops and implement emissions-reduction standards and policy regulations to increase fuel efficiency to reduce GHG emissions from all new on-road vehicles.

¹ <https://www.rewiringaustralia.org/#reports>

² <https://cityswitch.net.au/>

³ [CCCLM submission to National Electric Vehicle Strategy](#)

- CCCLM also recommends that goals and targets are set to underpin interrelated federal policies and strategies, such as setting interim national electric vehicle EV sales target.
- Introduction of fuel-efficiency standards should go together with noxious pollutant emission standards. Australia needs to harmonise with the Euro 6 and Euro VI standards for all emissions across all vehicle classes to mitigate health impacts, which is already 8–10 years behind its adoption in Europe. With recent improvements in fuel quality in Australia, there is no technology barrier to the introduction of Euro 6 and Euro VI standards.

1. Improving Energy Performance

1.1. The benefits of better energy performance

- a) Lowering energy consumer costs
- b) Reducing emissions
- c) Taking pressure off the system
- d) Improving health and comfort

1.2. Towards a national strategy

Cities are responsible for:

- 80% of the global economy in terms of GDP⁴
- 75% of global energy consumption
- 70%+ of annual global carbon emissions
- 70% of global waste
- 56%+ of the world's population (UN-Habitat, 2021)⁵ – and by 2050 it is anticipated that more than 70% of the world's population will live in cities.

Australian capital cities are taking the lead on strong climate action in Australia. Over 80% of Australians live in jurisdictions that are already committed to reaching net zero emissions by 2050 or earlier⁶. Cities are especially relevant in the Australian context, with Australia one of the most urbanised countries in the world. Our capital cities are extremely vulnerable to impacts of sea-level rise as coastal cities (except the ACT).

Capital city governments have established ambitious targets and actions as outlined in Appendix 1 of this submission and welcomes the opportunity of providing input into the development of a National Energy Performance strategy and framework as a relevant and necessary partner along with Federal and State/Territory government.

⁴ [Empowering Cities for a Net Zero Future – Analysis - IEA](#)

⁵ [World Cities Report 2022 \(unhabitat.org\)](#)

⁶ UNAA, 2019a; DELWP, 2018

2. Strategy focus areas

2.1. Governance

a) Energy governance

<p>How can demand considerations be better integrated into Australian energy governance and what are the priorities for change?</p>	<p>Demand by its nature varies significantly depending on the type of consumer, with commercial business typically using energy during the day while peak residential demand occurs in the late afternoon. The residential peak is typically larger than the commercial business peak.</p> <p>A focus on the residential peak period has a huge potential impact on environmental savings as well as assisting in the long-term management of the grid. Perth for example regularly sees negative wholesale prices for electricity supply on a weekday morning which has led to discussions about “turning off rooftop solar”⁷ while significant wholesale prices in the afternoon residential peak, reflecting both higher demand and lower solar energy supply (AEMO WEM data dashboard). Although not as dramatic as Perth, the NEM shows similar patterns which are likely to increase as solar power becomes more prominent.</p> <p>There is also a major opportunity for commercial buildings to simply shift their loads from afternoon peaks by pre-cooling earlier in the day when there is typically abundant low-cost renewable energy in the grid. A recent discussion paper by Buildings Alive and the Australia Institute⁸ found that if buildings shifted one third of their peak electricity consumption to the middle of the day, this equates to 52% of Australia’s coal generation capacity. Energy Ministers must prioritise demand flexibility to lower the cost of the energy transition.</p> <p>A targeted approach to demand management is likely to have the largest overall impact. There also needs to be a clear focus on residential demand especially during afternoon and evening peaks.</p> <p>Part of the challenge is that there is a multitude of actors including governments, regulators, utilities, services, businesses and individuals. For apartment buildings there is an additional layer of strata decision making.</p> <p>The National Energy Performance Strategy should as a minimum document the various stakeholders and identify roles and opportunities. Ideally, it will lead to sector targets and a government led coordination to deliver effective demand management (see next section).</p> <p>Local governments can play an important role through implementing demand management within their own operations and helping the community through energy efficiency and behaviour change programs and urban planning mechanisms.</p>
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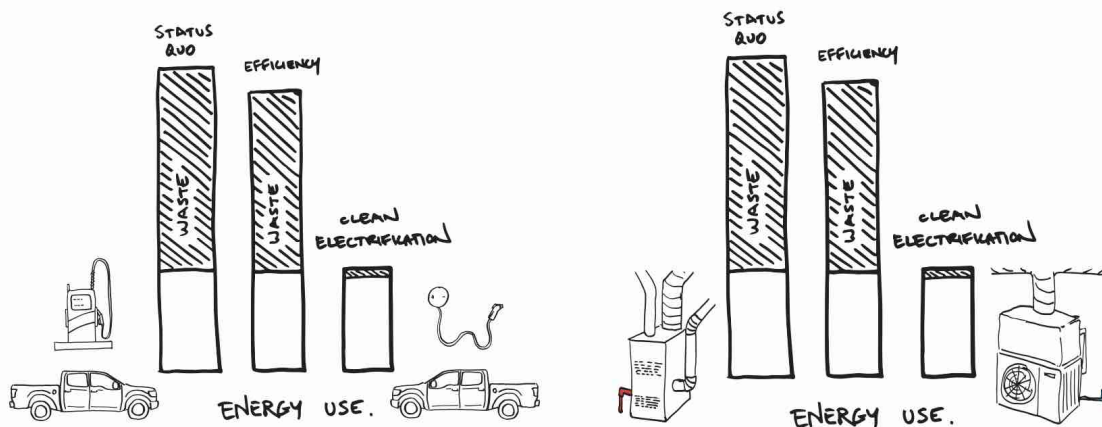
⁷ [Solar switch-off: WA becomes second state to reach for rooftop remote control | RenewEconomy](#)

⁸ <https://buildingsalive.com/efficiency-services/#utilities>

It is recommended that the Federal Government provide resources to Cities to run behaviour change education and communication programmes delivering incentives at sector and community/individual scale.

This should include bespoke programs and targeted information for apartment buildings, and incentives to purchase more efficient appliances. This could be part of a national communications campaign for energy efficiency as a cheap and effective solution (to complement communications about the value of renewables).

Electrification of buildings and transport is the single greatest energy efficiency and demand management opportunity for Australia. As depicted by the illustration below, electricity powered devices and vehicles are at least twice as energy efficient than using liquid fuels and gas.



The *Castles and Cars* work by Rewiring Australia identifies that \$12 billion of Federal funding to accelerate the electrification of Australian homes would result in cumulative energy bill savings of \$300 billion by 2035, mostly by improving efficiency, and not paying for unnecessary energy. This equates to annual energy bill savings of more than \$4,000 per household, in addition to myriad health and resilience benefits.

It is recommended that the Federal Government consider providing funding equivalent to that identified by Rewiring Australia to accelerate electrification given that this is the most significant energy efficiency opportunity of all and will reduce Australian businesses' and households' energy bills.

	<p>It is further recommended that the Federal Government provides funding to capital cities to engage suitably skilled and resourced professionals to facilitate the many facets of electrification at the local scale in a coordinated way.</p>
<p>What new or modified coordination mechanisms or institutional responsibilities would be appropriate to better drive energy performance action in the future?</p>	<p>There are many government and non-government bodies involved in energy (regulators, generators, retailers, users, industry bodies, advocates etc).</p> <p>The CCCLM recommends a review into the efficacy of these organisations to better understand the roles of the different entities. It would be helpful to clearly articulate the various roles, and how they are integrated.</p> <p>Coordination across multiple government, private sector and non-government bodies including research bodies like the CRCs (for example, Building 4.0, Race for 2030).</p> <p>Any coordination mechanism should include local government (particularly capital city governments) and national, state and territory governments.</p>

b) Targets

<p>Would an energy efficiency target or targets be suitable for Australia?</p>	<p>Energy efficiency and demand management are essential aspects to the energy transition. Targets provide certainty for key decisions by businesses, governments and households.</p> <p>Existing rating tools such as building energy efficiency targets and other mechanisms should be considered as a possible effective and efficient approach.</p>
<p>What is the most appropriate methodology for designing and implementing a target that effectively drives demand side action towards Australia’s overall net zero target?</p>	<ul style="list-style-type: none"> • Governance – National Emissions Reduction Target – 43% below 2005 levels by 2030 – Net-zero by 2050 - legislated targets in <i>Climate Change Act 2022</i>. • Alignment with Paris Agreement and Australia’s Nationally Determined Contribution (NDC) and Intergovernmental Panel on Climate Change (IPCC) Climate Change reports – setting science-based targets based on latest climate science. <ul style="list-style-type: none"> - Goal/aim/objective - Outcomes - Criteria - Target - Indicators. <p>Sectoral targets for different sectors involved with “energy” within the five focus areas. Key actors (government and non-government have goals/objectives) aligned to targets to measure progress towards indicators.</p> <ul style="list-style-type: none"> • Residential sector – buildings/homes – property development industry, construction industry. Note the definition of homes must include apartment buildings.

	<ul style="list-style-type: none"> • Commercial – buildings/business operations. • Industry – buildings/business operations – mining, manufacturing construction. • Supply chains. • Workforce. • Energy retailers, generators and distribution companies. <p>Aligning demand side mechanism (energy efficiency, load shifting, fuel switching, behaviour change) with the most appropriate sector and type of target. For example, an energy intensity efficiency target may be suited to sectors that contribute to Australia’s economy and GDP.</p> <p>Noting that targets for heavy industry have now been proposed through the Safeguard Mechanism reform package, where covered facilities will be required to reduce emissions by 28% by 2030, or 4.9% per year on emissions intensity baselines.</p> <p>Any new targets should not duplicate the reporting burdens on these facilities.</p>
<p>How should progress towards an energy efficiency target be measured?</p>	<ul style="list-style-type: none"> • Quantitative and qualitative indicators used to measure progress towards targets. • Establish a monitoring and reporting framework as part of governance arrangements.

2.2. Residential

a) General

<p>What are the key opportunities to improve the energy performance of new and existing residential buildings?</p>	<p>Integrated decision making is needed to ensure a systemic approach to residential energy performance within the context of accelerating climate risk. This means avoiding limited policy responses that focus only on buildings, transport and so on, and requiring a holistic, place-based approach for both existing and planned residential areas.</p> <p>A broad range of interventions should be leveraged to improve residential energy performance. For instance, high performance standards for residential buildings will be optimised by green and blue infrastructure, low albedo materials and so on in places exposed to extreme heat.</p> <p>Land use planning and infrastructure decisions must also be informed by high quality climate risk data to avoid placing residents in the pathway of increasing climate impacts. Risk mitigation and adaptation should be prioritised in existing residential areas.</p> <p>It is recommended that policy makers be informed by and support local government and trusted Not-for-Profits for guidance and examples of excellence in community engagement.</p> <p>Mandating high quality community engagement on all policy decisions regarding residential energy performance to ensure community expertise (i.e., people with lived experience of poor residential energy performance) needs to be harnessed, and communities involved in decisions that shape their homes and lives.</p>
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	<p>Enabling new technologies will be necessary to achieve net zero and efficiency targets.</p> <p>It is recommended that the Federal Government provide support that is targeted to different dwelling types, such as apartment buildings, to ensure no sector is left behind.</p> <p>Electrification in new housing and retrofitting existing housing should be prioritised, including enabling/reducing the barriers to electric vehicle charging in apartment buildings, in addition to virtual power stations, utility scale energy storage, community batteries and smart grids.</p> <p>For new buildings, most energy efficiency improvements will be guided by requirements of the National Construction Code. Many jurisdictions are setting energy performance standards that are based on cost effective opportunities that go well beyond the national code - for example see the City of Sydney net zero building standards⁹.</p> <p>It is recommended that the Federal Government works with the states and territories to set a clear pathway for the National Construction Code requirements to move toward net zero at a more rapid rate, to provide certainty for the property sector, investors and building users. Code requirements should also be adopted/mandated by all states and territories at the same time after any transition period required.</p> <p>Given that most of the energy is used by existing buildings, typically built to a low efficiency standard, there needs to be a major focus on improving the energy performance, comfort, safety, and resilience of existing buildings. It is also critical that programs be designed for apartment buildings, and not only standalone housing.</p> <p>For existing residential buildings, it is recommended that:</p> <ul style="list-style-type: none"> • The use of NABERS or other green star assessment on residential buildings be made mandatory together with Federal funding to develop energy action plans with recommended improvements. • Disclosure of environmental performance ratings for residential buildings be made mandatory, including apartment buildings. • NABERS ratings for apartment buildings (which assess common area energy performance) are integrated with tools for in-dwelling ratings (which assess the energy performance of individual apartments) such as the Residential Efficiency Scorecard assessment. • Federal funding and administration be provided to accelerate the electrification of households and residential buildings as outlined in the previous section. • The Federal Government assess the suitability of a mass scale retrofit program like <i>Energiesprong</i>¹⁰ being deployed in the Netherlands, UK and NYC to improve the thermal performance of existing buildings with costs recovered over time by energy bills savings.
<p>What opportunities are there to improve or streamline existing</p>	<ul style="list-style-type: none"> • High quality, trustworthy information on the baseline performance of residential assets is the essential first step. This is provided through environmental ratings such as NABERS, and mandatory disclosure would drive community action.

⁹ <https://news.cityofsydney.nsw.gov.au/articles/new-net-zero-targets-for-development-approvals>

¹⁰ [Energiesprong](#)

policies aimed at empowering consumers to undertake energy performance improvements in their homes?	<p>NABERS ratings are optimised when combined with an energy action plan with recommendations for how building owners can improve their ratings.</p> <ul style="list-style-type: none"> Encouraging and supporting the uptake of the Residential Efficiency Scorecard (RES) and providing support for home improvements. Such support could be implemented through local governments. For example, the City of Adelaide has included a rebate of 50% of resident out-of-pocket costs, up to \$200, for the RES in its Sustainability Incentives Scheme.¹¹
<p>What are key financial and non-financial barriers to the uptake of energy performance improvement opportunities? How can these barriers be overcome?</p>	<ul style="list-style-type: none"> A lack of high quality, trustworthy, tailored information on existing performance has hampered the ability of strata communities to take action to improve apartment buildings. Complex governance structures and collective decision making processes within strata buildings. Lack of information about current electricity capacity, there can be limited data sharing on these issues. Star ratings and energy consumption stickers on electronic devices has been highly effective. Consideration should be given to providing information / tools to allow consumers to estimate cost of operations (use of apps with QR codes). Price mechanisms are typically the most powerful. Split incentives for rental properties (as noted below) are also barriers. <p>In 2019 and 2022 the City of Adelaide undertook a review of its Sustainability Incentives Scheme and investigated what the barriers were to residents up taking the rebates provided. The reviews found that barriers existed for multi-storey and strata/community titles, due to increased complexities in decision-making and benefit sharing, and higher construction and installation costs. The City of Adelaide also hosted a forum for strata body corporate committee members and stakeholders. Feedback indicated modelled solutions that multi-storey and strata/community titles could replicate would be valuable, as well as targeted financial support.</p> <p>Electric vehicle charging is an area where Councils are increasingly being approached by their communities to support installation and overcome barriers to access. Challenges for strata and multi-unit dwellings are the lack of capacity of existing electricity distribution boards to support anticipated charging demand, the challenge of retrofitting new infrastructure, and the equitable sharing of charging capacity, parking space and cost. Future electric vehicle charging demand should be a mandatory consideration in all new builds, financial support should be provided for retrofitting additional capacity, and models developed for cost and benefit sharing in multi-unit dwellings.</p>
How can demand management and electrification support lowering energy bills and emissions?	Renewable energy sources to supply electricity will help reduce greenhouse gas emissions.
How does poor energy performance impact on disadvantaged communities	Poor energy performance increases costs and financial hardship for communities in vulnerable circumstances. Renters are unable to make changes to their dwellings, and the upfront costs of improvements can be prohibitive for people on low incomes. These issues become additional burdens and exacerbate existing hardship for communities.

¹¹ <https://www.cityofadelaide.com.au/about-council/grants-sponsorship-incentives/sustainability-incentives-scheme/>

	<p>Poor energy performance also exposes communities to the health impacts of climate risks. The disproportionate impacts on communities in vulnerable circumstances is well documented and understood, including the ways in which they interact with, and exacerbate existing health issues.</p> <p>The Climate Council has done extensive work in this area, e.g., see a report released in 2022: “Tents to Castles: Building Energy Efficiency, Cost-Saving Aussie Homes”¹².</p>
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b) Low-income households

<p>What are the opportunities to improve the energy performance of residential buildings for low-income households?</p>	<p>Integrated decision making is needed to ensure a systemic approach to residential energy performance within the context of accelerating climate risk as outlined in the previous section. It requires a holistic, place-based perspective for both existing and planned residential settlements.</p> <p>This would involve comprehensive data on the location of low-income households, and their current and future exposure to climate risk. This data should inform land use planning and infrastructure decisions to avoid placing low-income residents in the pathway of increasing climate risk.</p> <p>In addition, planning should leverage all interventions that improve residential energy performance for communities including blue green infrastructure, passive design, consideration of climate risk in materials selection for public infrastructure. This will optimise changes to residential building policy.</p> <p>Comprehensive, high quality community consultation should also be required on all policy and legislative decisions regarding residential energy performance to ensure community expertise (i.e., low-income communities with lived experience of poor residential energy performance) is harnessed, and communities are involved in decisions that shape their homes and lives.</p> <p>It is recommended that the following interventions should be prioritised:</p> <ul style="list-style-type: none"> • Raising minimum standards for new housing. • Implementing minimum standards for all rental housing. • Mandatory disclosure of energy performance for existing housing, along with an energy action plan with recommended improvements. The recommendations should identify who is responsible (i.e., owner or renter). • Prioritising and funding retrofitting and electrification of existing homes for low-income households. • Providing financial relief and bill support for households on low incomes. <p>There are many existing state government led programs, resources and services that can be supported to increase uptake and level of support provided to low-income households. For example, the South Australian Retailer Energy Productivity Scheme (REPS).</p>
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¹² <https://www.climatecouncil.org.au/resources/tents-castles-building-energy-efficient-cost-saving-aussie-homes>

	<p>The objective of the REPS is to ‘improve energy productivity for households, businesses and the broader energy system, with a focus on low-income households. This will reduce energy costs and greenhouse gas emissions.’ The REPS achieves its objectives through setting of energy productivity targets (EPTs) for electricity and gas retailers, who offer incentives to households and businesses to deliver energy productivity activities in homes and business premises. Retailers also have the flexibility to design and offer individual incentive programs to customers¹³.</p> <p>See the aforementioned report by the Climate Council in 2022: “<i>Tents to Castles: Building Energy Efficiency, Cost-Saving Aussie Homes</i>”.</p>
What are the financial and non-financial barriers to uptake of energy efficiency upgrades for low-income households, and what can be done to overcome them?	<ul style="list-style-type: none"> • There is a need for clear, accessible, tailored and trustworthy information on the baseline performance of homes and which improvements should be prioritised, and how to go about making the improvements. • There remains a split incentive/lack of control over dwellings, including inability to make substantial improvements (beyond behaviour change) – e.g., for renters and those living in social housing • There is a lack of funding and financial capacity to cover upfront costs of improvements.
What actions should be priorities to assist low-income households to improve energy efficiency in their homes?	As above.
What delivery mechanism would be most effective to provide targeted support?	Working with trusted industry and community partners (and relevant government bodies) is essential to co-design and deliver targeted support for low-income communities. Focus on well-being and bill reduction is essential.

c) Renters

What are the key opportunities to improve energy performance of residential buildings for renters?	<p>Support for property owners and private landlords of residential buildings could be required to facilitate the disclosure of standard of energy performance prior to being leased, and improve minimum standards for rental properties.</p> <p>Costs of improving energy performance should not lead to increased rents.</p>
What options are available to overcome the split incentive for renters and landlords?	
What options are available to support public and community housing tenants?	<p>Government owners must have a mandated responsibility to guarantee a high-level of energy performance in public housing. For example, public housing authorities could be required to ensure that properties have the minimum requirements for energy efficiency, including roof insulation levels and electrification or solar options.</p> <p>HousingACT will continue to ensure its properties will have the minimum level of insulation by 2026 through appropriate legislation and is working with tenants to encourage electrification and the removal of gas products.</p>

¹³ <https://www.escosa.sa.gov.au/industry/reps/overview>

<p>How can the energy performance of rental homes be made more transparent to prospective tenants?</p>	<p>Regulations could be implemented to require rental properties to meet certain energy efficiency standards, and for this information to be available to prospective tenants and disclosed as part of a lease agreement.</p> <p>The ACT has a minimum energy efficiency standard for ceiling insulation in rental homes commencing on 1 April 2023.</p>
<p>How can governments and private sector support renters to improve energy performance?</p>	<p>Support through rebates for renters to upgrade inefficient appliances that are not fixtures.</p>

d) Apartments

<p>How can governments support better energy performance in apartments and similar dwellings?</p>	<ul style="list-style-type: none"> • Public disclosure of energy performance (and overall environmental performance) of apartments and similar dwellings. Mandatory disclosure of NABERS ratings is the most suitable and established metric. Ratings should be accompanied by an energy action plan with recommended improvements. • Integration of NABERS ratings for apartment buildings (which assess common area energy performance) with tools for in-dwelling ratings (which assess the energy performance of individual apartments) such as the Residential Efficiency Scorecard assessment. • Suitable building design standards via the National Construction Code. • Training for residential building managers to run efficient and sustainable building assets is required. • Focused funding for apartment buildings to implement energy efficiency, electrification and support for onsite renewables and EV charging is required. • Requirement that strata organisations not unreasonably withhold approval of energy efficiency measures for individual apartments.
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e) Regional, remote and First Nations

<p>How are communities in different geographic locations impacted by poor energy performance and what needs to be done to ensure access to improvements?</p>	<p>Some communities experience disproportionate hardships, for instance those on pre-payment meters.</p>
<p>What are the key opportunities to ensure the benefits of improve energy performance are available to First Nations Australians, and Australians located in remote communities?</p>	<p>Not addressed in this submission.</p>

2.3. Commercial

<p>What are the key opportunities to improve the energy performance of new and existing commercial buildings and operations?</p>	<p>Commercial building owners see substantial benefit in improving energy efficiency, particularly where NABERS ratings are used to compare options for potential tenants. For example, the benefits of high performing buildings are outlined at Sydney Better Buildings¹⁴.</p> <p>Implementing a requirement for building owners to detail specifically the energy use of clients, rather than distributing the cost across the building (i.e., metering each tenant) may incentivise tenants to also participate in reducing energy demand and shift to voluntary use of NABERS for office tenancies for continuous measurement and improvement.</p> <p>One of the key opportunities is to support improvements in commercial buildings through implementing changes to the Commercial Building Disclosure Act.</p> <p>Another opportunity is for the federal government to support participation in CitySwitch to build ambition, capacity and knowledge across commercial building tenants and businesses.</p> <p>It is recommended that the Federal Government expands the Commercial Building Disclosure to include NABERS Energy for office tenancies for tenants to take up the measurement and management of energy to run their business. Disclosure should be expanded across all rateable sectors with engagement support provided through Local Government partnerships (e.g., CitySwitch).</p> <p>The Federal Government should support and work with state and territory governments to improve state-based planning support for energy performance and building compliance against Section J - Energy Efficiency of the National Construction Code.</p>
<p>What are the most costs-effective private interventions businesses, including small businesses, can make to improve the energy performance of their buildings and operations?</p>	<p>The Energy Efficiency Council's 2021 work on Determining Office Tenancy Energy End Use identified energy saving opportunities for business tenants is through upgrades in lighting, computers and monitors, servers and printers and supplementary HVAC.</p> <p>It is recommended that programs and incentives be developed to accelerate the uptake of these interventions.</p>
<p>What are the barriers to investment in better energy efficiency for commercial businesses?</p>	<p>Barriers are around capacity and resourcing. Many businesses, especially SMEs, do not have dedicated experts nor capital to invest in expert advice to start measuring and managing their energy. They often also lack the networks to know who to ask for support.</p>
<p>How can government further empower and assist businesses to realise savings through energy performance measures?</p>	<p>It is recommended that the Federal Government:</p> <ul style="list-style-type: none"> • Expands the Commercial Building Disclosure program to include tenancies and other sectors. • Federal government funding be provided to local governments to scale the successful CitySwitch program as a cost-effective way to build capacity amongst businesses to undertake energy efficiency actions, connecting it to an increasing adoption of net zero targets amongst the business community, and build local networks to accelerate decarbonisation.

¹⁴ [WhyChooseHighPerformanceBuildings.pdf \(sydneybetterbuildings.com.au\)](#)

	<p>A 2020 evaluation program determined a carbon yield of \$6.50/tonne of carbon. This is additional to the other benefits that have emerged from the program such as the networks, understanding and motivation to undertake energy efficiency action. With additional Federal funding support CitySwitch can scale across all cities and potentially across sectors to address not just office building efficiency but net zero emissions across the business community. CitySwitch recently launched its net zero framework and program expansion can be delivered with future federal funding.</p> <ul style="list-style-type: none"> • Investigate the applicability of replicating NYC Sustainable Buildings Local Law 97 which requires most large buildings to meet energy efficiency and greenhouse gas emissions limits by 2024, with stricter limits coming into effect in 2030. • Work with the Energy Efficiency Council and the Property Council of Australia to develop a program to accelerate electrification of commercial buildings and to cost effectively shift building loads away from afternoons (with pre cooling) to reduce peaks and maximise the utilisation of renewable energy to assist with the transition.
<p>How can government support businesses to better utilise digitalisation to improve energy performance?</p>	<p>Not addressed in this submission.</p>

2.4. Industry (not addressed in this submission)

2.5. Supply chains and workforce

<p>What support is needed for Australian manufacturing or other supply focused businesses to improve energy performance?</p>	<p>Clear market signals from customers would support improvements in energy performance in the supply chain, for instance if suppliers knew that they had to meet certain standards to contract with local government across the country. Finding the right standards and quantification of performance would be essential to ensuring effectiveness and transparency. This could be coordinated through a body such as the Australian Local Government Association.</p> <p>Appropriate training and certification of relevant workers (where it does not already exist) to ensure a supply of workers who can safely and effectively install energy efficiency measures (e.g., insulation).</p>
<p>What are the most critical supply issues hindering energy efficiency action?</p>	<p>It is challenging for customers to get clear, verified, and comparable data from their supply chains on energy efficiency and low carbon products and services. Without this data, it is difficult for customers to make decisions informed by environmental impact. The suppliers most able to provide this data are the large corporations with sustainability teams. This puts local governments in difficult positions where they cannot yet mandate certain environmental disclosures and support small and local businesses. This issue may be addressed through a national or state government platform to house embodied carbon and environmental performance information of suppliers and products, and support for small suppliers to increase environmental transparency. For example, providing support and rebates for Environmental Product Declarations (EPDs).</p>
<p>What is needed in the finance sector to help accelerate the uptake of energy performance investments?</p>	<p>Low interest loans, in an economic climate of rising interest rates, could support the uptake of energy performance investments.</p>

Appendix 1: Capital city energy performance actions

Adelaide

The City of Adelaide has an ambition to be one of the world's first carbon neutral cities and is recognised as a leading city on climate action and environmental performance through CDP reporting, a global reporting and disclosure system for greenhouse emissions reduction. Reporting to the CDP since 2016, the City of Adelaide has consistently scored in the leadership category. In addition, the City of Adelaide has been a carbon neutral organisation since 2019-20. In 2020-21 its organisational greenhouse gas emissions decreased significantly (~52%) due to a Power Purchase Agreement with Flow Power to procure renewable electricity for Council operations which commenced on 1 July 2020. The City runs a number of programs to support its residents and businesses to improve energy efficiency and reduce their carbon impact as summarised below.

Sustainability Incentives Scheme

The Sustainability Incentives Scheme is an award-winning program that has been running since 2015, with a wide range of rebates for residents, businesses, and groups for the installation of sustainable technologies in their home or building. The scheme has supported over 700 projects and leveraged over \$1.5 million of rebates to incentivise over \$12.7 million of investment.

Rebates supported by the City of Adelaide include:

- residential, business and commercial solar PV
- energy monitoring
- electric vehicle charging stations
- water saving devices
- home energy assessments (Residential Energy Scorecard or equivalent).

Energy Assessment Program

In 2021-2022 the City of Adelaide ran a pilot Energy Assessment Program as a support measure to assist in reducing energy costs for businesses in the City of Adelaide, while also reducing GHG emissions.

The program's objective was to provide 50 free energy assessments for businesses in the City of Adelaide and provide financial support via rebates for eligible energy and water efficiency initiatives implemented by the businesses to reduce operating costs. The program successfully completed the 50 energy assessments in line with the program's objectives and identified:

- approximately \$405,000 in energy improvement initiatives
- an estimated \$70,500 in reduced energy costs
- a simple payback of 5-6 years
- 231MWh in electricity consumption reductions
- an estimated emissions reduction of 83 tCO₂e.

Of the 50 businesses that participated in the program, 19 proceeded with implementing the identified initiatives worth a total of \$109,574, which is estimated to

reduce energy costs by \$26,579 per year. This equates to a 62MWh consumption reduction and an emissions reduction of 26 tCO_{2e}.

Carbon Neutral Adelaide

Carbon Neutral Adelaide is the community's shared ambition to work together to make the City of Adelaide one of the world's first carbon neutral cities¹⁵:

The program is designed to showcase the economic, social and environmental opportunities of responding to climate change, including the uptake of renewable energy and clean, smart technologies. There are currently over 220 Carbon Neutral Adelaide partners.

Every second year, the Carbon Neutral Adelaide Awards are held to celebrate the contributions by Carbon Neutral Adelaide Partners towards the shared aspiration for the City of Adelaide to become a carbon neutral city.

Brisbane

Brisbane City Council is committed to protecting Brisbane's enviable lifestyle, managing our growing population and helping create a clean, green, more sustainable future for our residents. Council's aspirations for our future are reflected in the United Nations (UN) Sustainable Development Goals (SDGs), which address the social, economic and environmental challenges that impact all humans on a global and local level. The [UN SDGs](#) are 17 transformational goals aiming to achieve a better and more sustainable future for all. Our residents highly value the ideals behind these goals which include fit-for-purpose infrastructure, services, economic growth, diversity, inclusion, and a clean and safe environment.

SDG Cities Global Initiative

We're continuing our path towards a cleaner, greener future, and have received Silver Certification in the [UN Habitat's SDGs Cities Global Initiative](#), making us the first Australian city to receive this accreditation.

This initiative facilitates global collaboration to improve quality of life for everyone by helping cities achieve social, economic and environmental sustainability. Our certification means continuing improvements to our residents' quality of life in areas such as accessibility and inclusivity, connectivity, community safety and resilience, as well as environmental improvements both in the lead up to the Brisbane 2032 Olympic and Paralympic Games and beyond.

Council initiatives that are helping us achieve a sustainable future

Council is demonstrating leadership and responding to climate change by achieving and maintaining carbon neutral status for its operations since 2017. Council is the largest carbon neutral certified government organisation in Australia, negating around 600,000 tonnes of carbon dioxide emissions annually. As part of its carbon neutral commitment, Brisbane City Council is taking positive steps to improve its energy and emissions performance through a range of measures, including:

- using 100% renewable energy to power Council operated buildings and facilities.
- Council has led the Green Building Incentive Policy to encourage the design and greener and more energy efficient buildings.

¹⁵ <https://www.carbonneutraladelaide.com.au>

- retrofitting more than 25,000 streetlights with energy efficient lamps and ensuring all new and replacement lamps in street and other public lighting applications are LEDs, where possible.
- adopting international emission standards for bus engines, exceeding Australian requirements, and starting the transition to zero emission public transport through the trial of four electric buses, introduction of the turn-up-and-go fully electric Metro and working with the Queensland Government to implement their Zero Emission Vehicle Strategy¹⁶ where new buses added to the fleet will be zero emission from 2025.

In addition, Council has a target to reduce Brisbane household greenhouse gas emissions from home energy use, transport and waste to six tonnes on average by 2031 and delivers a range of initiatives that support city-wide reductions in emissions. The Brisbane Carbon Challenge is helping residents to understand their household carbon footprint and actions they can take to reduce emissions and costs through an online carbon calculator, tools and resources, and case studies following the journey of 18 champion households.

Canberra

Energy efficiency in rental homes

The ACT already requires that properties which have an Energy Efficient Rating must disclose it when advertised for rent.

The ACT Residential Tenancies Act provides for a variety of minimum standards to be set for rental homes, including for energy efficiency.

The ACT is introducing a regulation for a minimum energy efficiency standard for ceiling insulation in rental homes to commence on 1 April 2023 and be phased in over several years. Unless they have a valid exemption, rental homes will need to have insulation with a rating of R2 – if they currently have none or below R2 they will need to install or upgrade to R5.

Also under the regulation, rental providers will be required to disclose whether they meet the standard or not (or have a valid exemption) in rental ads and in lease documentation.

Darwin

City of Darwin is the first municipality in tropical Australia to declare a climate emergency in response to the predicted impacts from the effects of climate change. Since declaring a climate emergency in 2019, City of Darwin has committed to achieving net-zero Council controlled emissions by 2030 and has undertaken an evidence-based process to develop the 2030 Climate Emergency Strategy for achieving this commitment.

The Strategy includes strategic actions relating to governance, resilience and adaption, energy efficiency and renewable energy, circular economy and sustainable transport. Key strategic actions that are relevant to energy performance include:

¹⁶ [Queensland's new Zero Emission Vehicle Strategy | Transport and motoring | Queensland Government \(www.qld.gov.au\)](https://www.qld.gov.au/transport/motoring/zero-emission-vehicle-strategy)

- Developing resources for and implementing a behavioural based community program to facilitate consumers making energy-efficient decision making.
- Implement an energy efficiency policy for City of Darwin with ambitious minimum standards for Council owned and leased buildings.
- Adopt energy rating consistent with existing standards and schemes such as National Construction Code (NCC) Section J, Green Star and NABERS energy rating system for Council owned and leased buildings.
- Support education programs aimed at informing residents on the benefits of Green Star.
- Advocate for NT Government and the Australian Government to strengthen existing energy efficiency codes and regulations and to include tropical-appropriate building codes.
- Advocate for the NT Government to adopt NCC Section J.
- Partner with key stakeholders to facilitate the introduction of locally appropriate energy efficiency standards.
- Undertake energy audits of City of Darwin-owned and leased buildings.
- Retrofit City of Darwin-owned and leased buildings with energy-efficient technologies.
- Continue to install solar PV on more of City of Darwin-owned and leased buildings.
- Install smart meters on new and existing City of Darwin-owned buildings for live monitoring of energy usage.
- Optimise existing and future City of Darwin energy systems with smart technologies.
- Advocate for consumer adoption of smart technologies that optimise energy usage.
- Advocate for options to procure renewable energy from the grid.
- Advocate to government and industry partners to assess the viability of a large-scale solar PV farm to enhance the mix of renewable energy in the grid.

Key strategic actions relevant to sustainable transport include:

- Implement the recently developed City of Darwin Movement Strategy
- Undertake feasibility assessment to transition City of Darwin's fleet to electric vehicles, including for heavy vehicles and update relevant policies accordingly.
- Require that new City of Darwin car parks and buildings are designed to incorporate electric vehicle charging infrastructure.
- Provide reserved parking spaces for electric vehicles at City of Darwin facilities.
- Establish a community educational program to raise awareness of the benefits of electric vehicles.
- Advocate for the NT Government to incorporate requirements for electric vehicles charging in planning provisions for new commercial and residential developments.
- Promote and support public charging infrastructure installation.
- Advocate for the NT Government to transition Darwin's public bus service to electric vehicles.
- Advocate to the federal and NT governments to create positive policy, incentive and regulatory conditions that enhance the uptake of electric vehicles.

- Partner with key stakeholders to provide electric vehicles charging infrastructure at key locations.

For more information see: <https://www.darwin.nt.gov.au/council/governance-strategy/strategic-and-municipal-planning/a-cool-clean-and-green-city-strategies>

Hobart

The City has been a leader on climate action for more than two decades, first committing to climate action in 1999. In June 2019, the City became the first Australian capital city to declare a Climate & Biodiversity Emergency. In November 2021, the Council endorsed the Sustainable Hobart Action Plan 2020-2025: towards zero emissions Hobart¹⁷.

In 2020, the City achieved its corporate energy and greenhouse gas emissions targets reducing energy use by 40.4% on 2010 levels, exceeding its 35% target. The City also reduced its greenhouse gas emissions by 19.9%, exceeding its 17% target. This build on its earlier target where it reduced its emission by 70% from 2000 levels by 2010.

These efforts have resulted in saving \$1.2 million annually on our energy bills, since 2016. Achieved by installing LED streetlights and close to a megawatt of solar PV on our roofs, along with increasing the efficiency of the City's buildings. The City heats the aquatic centre and the annexe with a heat exchange from the waste-water pipeline. The City has further transitioned close to two thirds of the fleet's passenger vehicles to EV or hybrid with transition to be complete by 2025.

The City of Hobart has achieved full compliance status from CDP and as an active signatory to Global Covenant of Mayors for Climate and Energy. The City of Hobart is developing a new Climate Strategy to continue strong leadership in shaping a zero emissions and climate safe future.

Melbourne

The City of Melbourne's Climate Change Mitigation Strategy¹⁸ (The City of Melbourne, 2018) and Response to the Climate and Biodiversity Emergency¹⁹ (The City of Melbourne, 2020) outlines the organisation's priorities for achieving zero emissions for Council operations and for the municipality. Through these strategies, Council has committed to a goal of a zero emissions city by 2040 powered by 100% renewable energy by 2030.

A large portion of energy performance improvements for the City of Melbourne, and Australia as a whole, will come through retrofits of existing buildings. Residential, commercial, and industrial structures account for 20% of Australia's annual greenhouse gas emissions (ClimateWorks, 2020). Energy performance retrofits can lower energy costs, reduce emissions and reduce pressure on electricity delivery infrastructure. Retrofits of existing buildings can come with a wide range of other benefits including increased resilience to the impacts of climate change; improved

¹⁷ The Sustainable Hobart Action Plan builds on previous climate strategies and is guided by the 'pillars' of "Hobart: A community vision for our island capital" and the Capital City Strategic Plan 2019-29. <https://www.hobartcity.com.au/Council/Strategies-and-plans/Sustainable-Hobart-Action-Plan>

¹⁸ <http://www.melbourne.vic.gov.au/about-council/vision-goals/eco-city/Pages/climate-change-mitigation-strategy.aspx>

¹⁹ <https://www.melbourne.vic.gov.au/about-council/vision-goals/Pages/climate-biodiversity-emergency.aspx#:~:text=Over%20the%20next%20four%20years,and%20adapts%20to%20climate%20change.>

occupant health and wellbeing; heat island effect mitigation; and generation of high-quality jobs.

The City of Melbourne has consulted broadly locally on Zero Carbon Buildings²⁰ (The City of Melbourne, 2022) and Power Melbourne²¹ (The City of Melbourne, 2022). It is informed by the over 70,000 words provided by our community, building owners, managers and tenants as well as the professional associations and organisation in the sector.

Based on what the City heard from its consultations, it makes the following recommendations for inclusion in the National Energy Performance Strategy:

1. Mandate periodic disclosure (not just during sale or leasing) of energy performance of buildings and support the expansion of energy performance disclosure schemes like NABERS to a wider range of building types.
2. Support mandatory disclosure with incentives for improving performance.
3. Provide consistency in energy regulation across federal, state and local levels of government. A regulatory framework should be coordinated nationally but able to be implemented locally, with local governments playing a key role in implementation. This should include a national definition for a “zero carbon ready” building. Energy performance regulation should include consideration of electrification, emissions intensity and emissions productivity, not just energy efficiency.
4. Increase federal government support for education, knowledge sharing, and collaboration schemes related to energy efficiency and emissions reduction such as the CitySwitch program run by capital city local governments. There is a desire from both residents and businesses within the City of Melbourne to have a ‘one stop shop’ for knowledge on emissions reduction.
5. Provide targeted subsidised access to decarbonisation technologies and especially for renters, owners’ corporations and small business who are least able to afford it.

Sydney

The City of Sydney has endorsed a target for net zero emissions across the local area by 2035. We also have targets to reduce emissions by 70% based on 2006 levels, and for at least half of the electricity used in our area to be from renewable sources by 2030.

Prior to the pandemic, emissions in our local area were 26% below 2006 levels - over which time there has been significant growth in the number of new buildings and infrastructure, employment, housing, and economic development - which clearly shows that energy and emissions can be decoupled from growth.

Energy efficiency is key to supporting the renewable energy transition and the electrification of buildings and transport.

Leading businesses who operate in our area are making a significant contribution, including members of our Better Buildings Partnership, Sustainable Destination

²⁰ <https://participate.melbourne.vic.gov.au/zero-carbon-buildings-melbourne>

²¹ <https://www.melbourne.vic.gov.au/about-melbourne/sustainability/power-melbourne/Pages/power-melbourne.aspx>

Partnership, and CitySwitch Green Office programs. Many have net zero commitments.

Most residents in our area live in apartment buildings, many are also renters. Our Smart Green Apartments program targets this sector and we are also running a campaign for people to switch to GreenPower.

For new developments and major refurbishments, the City recently endorsed new net zero planning controls. These will require minimum energy performance standards in 2023 and net zero energy use from 2026 by using renewable energy

As an organisation, the City of Sydney has been certified carbon neutral by the Federal Government since 2011. As of June 2022, our own emissions were 77% below 2006 levels, mainly through energy efficiency and purchasing 100% renewable electricity.