

Planning Proposal – Performance Standards for Net Zero Energy Buildings



Contents

Introduction	3
Background	5
Part 1: Objectives and intended outcomes	7
Part 2: Explanation of provisions	8
Part 3: Associated DCP amendments	9
Part 4: Justification	10
Part 5: Mapping	21
Part 6: Community consultation	22
Part 7: Project Timeline	23
Attachment 1- Development Thresholds and Performance Standards	24
Attachment 2 - Performance Standards for Net Zero Energy Buildings Project Report	27
Attachment 3 - Planning for Net Zero Energy Buildings Briefing - Summary Report	28
Attachment 4 - Letters of Support for the Performance Standards	29
Attachment 5 - LEP example clause	30

Introduction

The Planning Proposal: Performance standards for net zero energy buildings (planning proposal) explains the intent of, and justification for, the amendment of Sydney Local Environmental Plan 2012 (the Sydney LEP) and other relevant City of Sydney Local Environmental Plans (LEPs).

Energy use in buildings is a significant contributor to greenhouse gas emissions in the City of Sydney local government area, as well as Greater Sydney. The purpose of this planning proposal is to reduce greenhouse gas emissions by improving the energy performance of buildings. This will be implemented through LEP amendments that will require new office, shopping centre and hotel developments, as well as major refurbishments and additions to existing buildings in these development types, to achieve net zero energy. The proposed amendments will introduce a new local provision that requires the consent authority to consider during their assessment of the development application if development is either highly efficient and reduces energy use through energy efficiency and the use of on-site renewables or is capable of achieving net zero energy prior to commencing use, depending on when the development application is lodged.

The planning proposal has been prepared in accordance with Section 55 of the Environmental Planning and Assessment Act 1979 (the Act) and the relevant Department of Planning Guidelines, including A Guide to Preparing Local Environmental Plans and A Guide to Preparing Planning Proposals.

To implement the performance standards and ensure the objectives and intended outcomes of this planning proposal are achieved, the City has also prepared a draft amendment to Sydney Development Control Plan 2012 and Green Square Town Centre Development Control Plan 2012 (the draft DCP). The City intends to publicly exhibit the draft DCP with this planning proposal.

The standards bring together energy efficiency, on-site renewables and off-site renewables and are to be implemented in stages through planning controls. They have been developed for new office, shopping centre and hotel developments, as well as major refurbishment of and additions of these development types.

Implementation of the planning proposal and the draft DCP will help us achieve the City's target for net zero emissions by 2035 and priorities and actions in Sustainable Sydney 2030, Environmental Action 2016-2021: Strategy and Action Plan and City Plan 2026, the City's local strategic planning statement. It will also contribute to the NSW Government's objective to achieve net zero emissions by 2050 and priorities in their plans and strategies, such as the NSW Electricity Strategy and the Greater Sydney Region Plan. Lastly, it will assist developers realise their corporate targets to achieve net zero emissions.

In addition to the environmental benefits of reducing emissions, the implementation of the planning proposal and the draft DCP will contribute to a positive and sustainable business recovery for Greater Sydney and improve building resilience. The staged implementation in the planning proposal and draft DCP amendments also provide industry with time to adjust and certainty when planning for net zero energy development.

Net zero development will reduce running costs for developers, owners and occupants of buildings and improve the comfort for occupants now and in the future when we expect further impacts from climate change. For example, annually office owners will save \$2,750 per 1000m² and hotel owners \$170 per hotel room. There are also additional public benefits and savings through avoided health, energy network and emissions costs. Implementation also supports the NSW Government's renewable energy zones through investment and job creation and creates demand for jobs and new skills in energy efficiency.

A robust independent evidence base informed the development of the performance standards and timing of their implementation. A consortium of consultants completed energy modelling, construction costing and a cost benefit analysis on a range of development types for office, shopping centre, hotel and mixed-use development. The analysis was based on typical development types and sizes in the city and Greater Sydney now and expected in the future to meet Greater Sydney Region Plan growth targets. A broader public benefits analysis was also completed.

Extensive engagement with industry and government stakeholders also informed the evidence base and the proposed performance standards. Engagement started with industry and government forums in 2018 and continued to this year with stakeholder workshops, an external advisory group, briefings with Greater Sydney councils and individual meetings with developers, NSW Government agencies and peak bodies. Engagement with other Greater Sydney councils also occurred in 2020 and 2021. In March 2021, a briefing of 185 industry and government stakeholders concluded the engagement and identified support for their implementation.

Background

There is an opportunity to reduce greenhouse gas emissions

Energy (electricity and gas) used in buildings is a significant contributor to greenhouse gas emissions in the city and in Greater Sydney. In the city, existing offices, hotels and apartments contribute to 68 per cent of building greenhouse gas emissions.

There is an opportunity to improve the environmental performance of buildings in cities beyond that required by the National Construction Code (NCC). Energy modelling that informed the NCC used development typologies that were reflective of average development across Australia, not necessarily that of higher density development or the range of development typical of Sydney. The city, like other cities across Australia has a high number of mid to high rise buildings compared to low and mid-rise buildings found in smaller cities and regional parts of Australia. As a result, the NCC energy modelling doesn't reflect the range of developments found in large cities. Increasing the energy performance requirements beyond that of the NCC for cities will see a greater reduction in greenhouse gas emissions and provide a greater contribution to achieving the City's and NSW Government's net zero emissions targets sooner.

The City's planning controls currently embed energy performance targets only for new office buildings, which now aligns with the 2019 update to the NCC. There are no targets for other emission intensive development types such as hotels and shopping centres.

The performance standards will deliver net zero energy buildings

Land use planning has a role to play in reducing greenhouse gas emissions and making buildings more resilient in NSW, as well as responding to local government and NSW Government plans and strategies. There is an opportunity to transition buildings to net zero energy across Greater Sydney through planning controls.

The City has developed performance standards for net zero energy buildings for use in local and state planning controls. The performance standards bring together energy efficiency, on-site renewables and off-site renewables. The increases in energy performance are implemented through two step changes, to transition to net zero energy buildings by 2026. They cover new office, shopping centre and hotel developments, as well as major refurbishment of and additions to existing buildings in these development types.

Off-site renewable energy use/procurement is a key part of the performance standards. It is extremely challenging for mid to high-rise developments to achieve net zero energy through energy efficiency and on-site renewables alone. Higher energy use in larger buildings, limited roof space and shading impacts the ability for these buildings to generate enough renewable energy on-site to offset operational energy use. Purchasing off-site renewable energy can offset the remaining energy.

The planning proposal and draft DCP will implement the performance standards for office, shopping centre and hotel developments. They will ensure the City's planning framework delivers on the strategic directions in Sustainable Sydney 2030, and implements actions in Environmental Action and in the City's planning statement. The proposed controls will help deliver environmental and economic benefits from development.

Part 1: Objectives and intended outcomes

The objective of this planning proposal is to reduce energy consumption and the associated greenhouse gas emissions of office, shopping centre and hotel developments, as well as improve the resilience of these developments to the impacts of climate change.

The intended outcome will be to facilitate net zero energy development by 2026 for development subject of this planning proposal. This will occur through amendments to the following:

- Sydney Local Environmental Plan 2012
- Sydney Local Environmental Plan (Green Square Town Centre) 2013
- Sydney Local Environmental Plan (Green Square Town Centre – Stage 2) 2013.

Part 2: Explanation of provisions

The proposed outcome will be achieved by including a new local provision in the Sydney LEP and the Green Square Town Centre LEPs, and which are supported by a draft DCP, that will:

1. set out the objective of the clause, which is to reduce greenhouse gas emissions and increase the resilience of buildings
2. identify the clause only applies to new developments of and refurbishment and additions to office, shopping centre and hotel developments of certain sizes
3. require the consent authority to be satisfied that development is either highly efficient and reduces energy use through energy efficiency and the use of on-site renewables or is capable of achieving net zero energy prior to commencing use, depending on when the development application is lodged
4. require consideration be given to the relevant performance standards in the supporting DCP when determining if a development is either highly efficient and reduces energy use through energy efficiency and the use of on-site renewables or is capable of achieving net zero energy prior to commencing use, depending on when the development application is lodged
5. include definitions specific to the local provision for net zero energy, net lettable area, refurbishment and shopping centre.

An example clause is included at Attachment 5.

Part 3: Associated DCP amendments

A draft development control plan has been prepared to support the intended outcomes of this planning proposal and the operation of the proposed LEP provisions. The proposed LEP provisions require consideration be given to the DCP.

The draft development control plan sets out the type of development, size thresholds, performance standards and application lodgement timing for development subject to the proposed LEP provision. The draft development control plan's development thresholds and performance standards are included at Attachment 1.

Part 4: Justification

Section A – Need for this planning proposal

There is strategic direction to reduce greenhouse gas emissions

The City has a target for zero emissions by 2040. The City's Community Strategic Plan, Sustainable Sydney 2030, includes objectives of "greenhouse gas emissions are reduced across the city" and "the city's buildings, infrastructure, emergency services and social systems are resilient to the likely impacts of climate change". In response to this, the City's Environmental Action includes an action to "develop a pathway for the City's current planning controls to be strengthened over time to deliver net zero building standards". The planning statement also includes an action to "reduce greenhouse gas emissions by implementing the performance standard pathways framework to achieve net zero energy buildings".

The NSW Government has an objective to achieve net zero emissions by 2050. The NSW Government's NSW Electricity Strategy and Net Zero Plan, Stage 1: 2020-2030 include priorities and actions that contribute to reducing greenhouse gas emissions. In addition, the Greater Sydney Region Plan includes a 'low carbon city' objective, which is given effect through the objectives of the district plans. The district plans include the objective of "A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change".

Many developers have net zero targets in their corporate strategies.

There is a need for the planning proposal as the current requirements in planning and the NCC will not deliver net zero energy buildings.

Q1. Is the planning proposal a result of an endorsed local strategic planning statement, strategic study or report?

Yes. The planning proposal is in response to a strategic project required by an action in the City's planning statement to "Reduce greenhouse gas emissions by: ... b) implementing the performance standard pathways framework to achieve net zero energy buildings".

The strategic project developed performance standards to achieve net zero energy buildings. While the planning proposal doesn't specifically include the performance standards, it requires the consent authority to be satisfied that the development is either highly efficient and reduces energy use through energy efficiency and the use of on-site renewables or is capable of achieving net zero energy prior to commencing use, depending on when the development application is lodged. If development achieves the performance standards, which will be located in the DCP, they will satisfy the LEP provision that is the subject of this planning proposal.

The performance standards are shown at Attachment 1 and the project report is shown at Attachment 2.

Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes, the planning proposal is the best means of achieving the objectives and intended outcomes in Part 1.

There are no state planning policies that achieve the outcome of net zero energy buildings, which is the objective of the planning proposal. In the absence of a state planning policy, implementation of the planning proposal is the best approach to achieve net zero energy buildings for key development types.

A new local provision in the Sydney LEP and other relevant LEPs will ensure the implementation of the performance standards. The requirement for development to either reduce energy use through energy efficiency and the use of on-site renewables or be capable of achieving net zero energy prior to commencing use, depending on when the development application is lodged is proposed to be included in the LEPs. The detail of the performance standards is to be in the DCPs. It is proposed that compliance with the DCP controls will satisfy the requirements of the Sydney LEP and other relevant LEPs.

The draft DCP accompanying the planning proposal includes more detailed planning controls to implement the performance standards. It identifies the development types and new development, addition and refurbishment thresholds that the performance standards apply to. They set out the performance standards, for steps one and two, and the future dates for implementation. They also set out submission requirements for development applications.

The controls also identify options for demonstrating compliance with the performance standards through recognised planning and design tools such as NABERS and Green Star, as well as an energy intensity target. These options all require third party verification to ensure the design intent is met and simplify the development application assessment process. These options include meeting an identified energy intensity target, a NABERS rating or a Green Star Buildings rating achieving a certain level of performance in the Energy Use credit or equivalent.

The performance standards are supported by a robust evidence base

The performance standards and timing of the step changes are informed by a robust evidence base. A consortium of consultants completed energy modelling, construction costing and a cost benefit analysis for development which is characteristic of the city and Greater Sydney. See Attachment 2 for the project report.

Energy use was modelled for each land use and a corresponding baseline was established, being Section J of the NCC. For each land use, three typologies representative of typical developments in the city and Greater Sydney were analysed. Energy reduction measures were applied to each building typology to identify the maximum potential on-site energy improvement. Energy reduction measures were selected based on current technologies and practices. The increased capital expenditure associated with each measure was individually costed for each typology.

A cost benefit analysis was completed for each of the energy efficiency measures identified through the energy modelling and the off-site measures. This determined the potential profitability of the investment in the measures over 15 and 25 years. The analysis also forecast the change in costs and benefits over time, identifying when efficiency measures will become more cost effective.

Using an iterative energy modelling and cost benefit analysis process, the performance standards and timeframes were developed, determining the most energy efficient and cost-effective steps for each typology. The most conservative result for the three typologies analysed was selected for each land use ensuring all development for that land use could achieve the performance standards.

In the project, energy includes gas, electricity and thermal energy, and excludes diesel used for emergency back-up generation. Other emissions, such as those from refrigerants and embodied energy, are not included.

The cost benefit analysis demonstrates a positive financial return

The cost benefit analysis identified development could achieve a positive financial return at for each step change as shown in table 1 below. A positive internal rate of return (IRR) for each energy efficiency measure and a very small capital expenditure (CapEx) increase were identified. An IRR above zero makes a profit. A CapEx increase is the additional cost to meet the performance standard as a percentage of the full cost of development. The CapEx increase ranges from 0.11% to 1.56%.

For further information see the project report at Attachment 2.

Table 1. IRR and CapEx results

Asset class	Step	IRR	CapEx increase
Office	first	10-37%	0.11%-0.58%
Office	second	16-28%	0.16%-0.52%
Shopping centre	first	2-23%	0.16%-0.42%
Shopping centre	second	9-11%	0.95%-1.28%
Hotel	first	17-20%	0.15%-0.35%
Hotel	second	9-10%	0.24%-0.86%

Extensive stakeholder engagement has informed the performance standards

Extensive engagement with industry and government stakeholders informed the evidence base that supports the performance standards.

In May and November 2018, two forums were held that started the conversation with industry and government to identify issues and opportunities to transition to net zero energy developments through land use planning.

The City engaged with industry and government on the energy reduction measures, initial energy modelling, cost-benefit analysis, the draft performance standards and timeframes, development thresholds and integration of off-site renewables. This happened through the following:

- a. July 2019 to February 2020 - three meetings with an external industry and government advisory group
- b. November 2019 and February 2020 - three stakeholder workshops with industry, government and shopping centre representatives
- c. September and October 2020 - individual meetings with nine developers. The nine developers were Mirvac, Stockland, Lendlease, Frasers, Aqualand, Greenland, Charter Hall, Dexu and Crown Group. The meetings also sought feedback on the implementation of the performance standards given the impacts of COVID. The feedback received at these meetings was extremely valuable and informed the final performance standards and the timing of their implementation
- d. November 2020 - a meeting with executive directors and directors from DPIE and commissioners and staff from the GSC. Feedback from the individual meetings with developers was also discussed
- e. November 2020 - a meeting with staff from the Government Architect NSW
- f. December 2020 and January 2021 - meetings with the Western Sydney Regional Organisation of Councils, Southern Sydney Regional Organisation of Councils and the Northern Planners, a subset of Northern Sydney Regional Organisation of Councils
- g. December 2020 to February 2021 - meetings with representatives of the Property Council of Australia committees, peak bodies and project partners.

Stakeholder feedback on the draft performance standards shaped the final performance standards. It identified that some of the draft performance standards, the development thresholds and implementation timing needed to be amended.

Developers recommended the implementation be delayed by 1-2 years to take into account the impact of COVID, particularly on the retail development market. As a result, the planning controls will be exhibited in 2021 and the implementation of step one delayed to 2023 and step two to 2026.

For office developments, developers identified that step 2, being 6 star NABERS Energy Commitment Agreement or equivalent, was too challenging. Industry feedback recommended the energy efficiency and onsite-renewable component of step 2 is reduced and the amount of off-site renewables procured is increased to still achieve net zero energy. As a result, the minimum energy efficiency and onsite renewables standards of second step were reduced.

For shopping centre developments, developers and the Shopping Centre Council of Australia identified that steps 1 and 2 were challenging as were refurbishments. The Shopping Centre Council of Australia also raised other issues including that shopping centres are heavily regulated, owners disclose energy costs to tenants and that some owners have portfolio-wide commitments to net zero. As a result, the first step for shopping centres was reduced to 4 star NABERS Energy Commitment Agreement or equivalent and the second step was reduced to 5 star NABERS Energy Commitment Agreement or equivalent. The refurbishment threshold was removed.

Industry and government have positively responded to the performance standards

Strong support for the implementation of the performance standards was identified at the industry and government briefing on 11 March 2021 when the final performance standards were presented. See Attachment 3 for a summary report from the briefing.

At the briefing, presentations and messages of support were given from:

- a. the Lord Mayor, Clover Moore
- b. the Honourable Rob Stokes, Minister for Planning and Public Spaces MP
- c. the GSC's Environment Commissioner
- d. Executive Development Director from Lendlease
- e. a development manager from Stockland.

185 people attended the briefing. This included:

- a. 86 representatives from the industry, including developers, industry groups, ecologically sustainable development and planning consultants
- b. 19 representatives from NSW and Victorian governments.
- c. 75 representatives from 24 of the 32 Greater Sydney councils
- d. four representatives from councils outside of NSW.

At the briefing attendees were asked to complete a survey which identified their support for the implementation of the performance standards. Of those that completed the survey, 76% supported the implementation of the performance standards without any changes.

Letters of support for the performance standards have been received from four developers that provided feedback on the draft performance standards. The letters are from Stockland, Frasers, Lendlease, Crown Group, Dexus and Mirvac and are shown at Attachment 4.

Section B – Relationship to strategic planning framework

Q3. Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

The Greater Sydney Region Plan and the district plans are used to shape strategic planning in metropolitan Sydney and align planning from regions down to the local area. The City's planning controls are required to give effect to these strategic plans.

The Greater Sydney Region Plan is the NSW Government's overarching strategic plan for growth and change in Sydney. The 20 year plan provides a 40 year vision that seeks to transform Greater Sydney into a metropolis of three cities being the Western Parkland City; the Central River City; and the Eastern Harbour City.

It identifies key challenges facing Greater Sydney, including a projected population increase of 1.7 million and associated requirements to deliver 725,000 new homes and create 1 million new jobs in NSW by 2036 to respond to the population increase.

The Eastern City District Plan (District Plan) sets out the NSW Government's vision, priorities and actions for the Eastern District, which includes the city. It establishes a 20 year vision for the Eastern District to be a global sustainability leader, managing growth while maintaining and enhancing liveability, productivity and attractiveness for residents and visitors. Planning priorities and associated actions for productivity, liveability and sustainability seek to deliver on this vision.

This planning proposal is consistent with and responds to the following priorities from the Greater Sydney Region Plan and District Plan as detailed below:

- a. Infrastructure - The procurement of off-site renewables in step two of the performance standards will support investment in the NSW Government's renewable energy zones. This gives effect to infrastructure objectives, particularly:
 - i. Region Plan objectives:
 - a. 1 – Infrastructure supports the three cities
 - ii. District Plan priorities:
 - a. E1 - Planning for a city supported by infrastructure
- b. Productivity - The results identified that net zero energy buildings will contribute to a positive and sustainable business recovery for Greater Sydney, creating demand for new skills and jobs in energy efficiency and renewables. This gives effect to productivity objectives, particularly:
 - i. Region Plan objectives:
 - a. 24 – Economic sectors are targets for success
 - ii. District Plan priorities:
 - a. E13 - Supporting growth of targeted industry sectors
- c. Sustainability - The implementation of the performance standards will reduce greenhouse gas emissions through improving energy efficiency, use of on-site renewables and the procurement of off-site renewables to transition buildings to net zero energy. It will also improve the resilience of buildings, improving the comfort for occupants now and in the future when we expect further impacts from climate change. This gives effect to sustainability objectives, particularly:
 - i. Region Plan objectives:
 - a. 33 - A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change
 - b. 36 - People and places adapt to climate change and future shocks and stresses
 - ii. District Plan priorities:
 - a. E19 - Reducing carbon emissions and managing energy, water and waste efficiently
 - b. E20 - Adapting to the impacts of urban and natural hazards and climate change

Q4. Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Sustainable Sydney 2030 outlines the vision for the sustainable development of the city to 2030 and beyond. It includes 10 strategic directions to guide the future of the city. This planning proposal is aligned with the following strategic directions:

- a. Direction 2 - A Leading Environmental Performer - the planning proposal and draft DCP amendments deliver staged energy performance standards for future development which will reduce greenhouse gas emissions. It will also ensure that buildings are resilient now and, in the future, when we expect further impacts from climate change. The development of the performance standards also demonstrates leadership in environmental performance.
- b. Direction 9 - Sustainable Development, Renewal and Design - the planning proposal and draft DCP will support more ecologically sustainable development by transitioning key development types to net zero energy. The City will also lead by example, sharing the results and evidence base with the NSW Government and other Greater Sydney councils, helping to deliver sustainable places. The performance standards will also provide for economic growth and innovation, fostering a culture of continual improvement and going beyond 'business as usual'.
- c. Direction 10 - Implementation through Effective Governance and Partnerships – the project makes a positive contribution to the governance of metropolitan Sydney as the City is leading the way for other councils to implement similar requirements, using the results or a similar project methodology.

The City's endorsed planning statement sets out the land use planning context, 20-year vision and planning priorities to positively guide change towards the City's vision in Sustainable Sydney 2030 for a green, global and connected city. The planning statement explains how the planning system will manage change to achieve the desired outcomes and guides future changes to controls, including those sought by proponents through planning proposals. This planning proposal gives effect to the following planning statement priorities:

- a. I2 (Infrastructure) - Align development and growth with supporting infrastructure - The procurement of off-site renewables in step two of the performance standards supports investment in the NSW Government's renewable energy zones. This will result in infrastructure that creates a sustainable city being delivered with development.
- b. S2 (Sustainability) - Creating better buildings and places to reduce emissions and waste and use water efficiently – The planning proposal will result in net zero energy buildings, which will reduce greenhouse gas emissions.
- c. S3 (Sustainability) - Increasing resilience of people and infrastructure against natural and urban hazards – Requiring net zero energy buildings will improve the resilience of buildings, improving the comfort for occupants now and in the future when we expect further impacts from climate change.

Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies (SEPPs)?

This planning proposal's consistency with applicable SEPPs and deemed SEPPs [formerly known as Regional Environmental Plans (REPs)] is shown at table 2. In this table, 'consistent' means that the planning proposal does not contradict or hinder the application of the relevant SEPP or REP.

Table 2. Planning proposal's consistency with applicable SEPPs and deemed SEPPs

Planning proposal alignment	Applicable SEPPs and REPs
SEPPs with which this planning proposal is consistent	SEPP (Building Sustainability Index: BASIX) 2004; SEPP (Housing for Seniors or People with a Disability) 2004; SEPP (Infrastructure) 2007; SEPP (State Significant Precincts) 2005; SEPP 65—Design Quality of Residential
SEPPs that are not applicable to this planning proposal	SEPP 1 – Development Standards; SEPP 19—Bushland in Urban Areas; SEPP 21—Caravan Parks; SEPP 30—Intensive Agriculture; SEPP 33—Hazardous and Offensive Development; SEPP 36—Manufactured Home Estates; SEPP 44—Koala Habitat Protection; SEPP 47—Moore Park Showground; SEPP 50—Canal Estate Development; SEPP 52—Farm Dams and Other Works in Land and Water Management Plan Areas; SEPP 55—Remediation of Land; SEPP 62—Sustainable Aquaculture; SEPP 64—Advertising and Signage; SEPP 70—Affordable Housing (Revised Schemes); SEPP (Affordable Rental Housing) 2009; SEPP (Coastal Management) 2018; SEPP (Educational Establishments and Child Care Facilities) 2017; SEPP (Exempt and Complying Development Codes) 2008; SEPP (Integration and Repeals) 2016; SEPP (Kosciuszko National Park—Alpine Resorts) 2007; SEPP (Kurnell Peninsula) 1989; SEPP (Mining, Petroleum Production and Extractive Industries) 2007; SEPP (Miscellaneous Consent Provisions) 2007; SEPP (Penrith Lakes Scheme) 1989; SEPP (Rural Lands) 2008; SEPP (Sydney Drinking Water Catchment) 2011; SEPP (Sydney Region Growth Centres) 2006; SEPP (State and Regional Development) 2011; SEPP (Three Ports) 2013; SEPP (Urban Renewal) 2010; SEPP (Vegetation in Non-Rural Areas) 2017; SEPP (Western Sydney Employment Area) 2009; SEPP (Western Sydney Parklands) 2009
REPs that are not applicable to this planning proposal	Sydney REP (Sydney Harbour Catchment) 2005; Sydney REP 8—(Central Coast Plateau Areas); Sydney REP 9—Extractive Industry (No 2—1995); Sydney REP 16—Walsh Bay; Sydney REP 20—Hawkesbury- Nepean River (No 2—1997); Sydney REP 24—Homebush Bay Area; Sydney REP 26—City West; Sydney REP 30—

Planning proposal alignment	Applicable SEPPs and REPs
	St Marys; Sydney REP 33—Cooks Cove; Greater Metropolitan REP No 2— Georges River Catchment; Darling Harbour Development Plan No. 1; Sydney Cove Redevelopment Authority Scheme

Q6. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

This planning proposal has no applicable Ministerial Directions as shown at table 3.

Table 3. Planning proposal's consistency with Ministerial Directions

Planning proposal alignment	Applicable Ministerial Directions
Ministerial Directions that are not applicable to this planning proposal	1.1 Business and Industrial Zones; 1.2 Rural Zones; 1.3 Mining, Petroleum Production and Extractive Industries; 1.4 Oyster Aquaculture; 1.5 Rural Lands; 2.1 Environment Protection Zones; 2.2 Coastal Management; 2.3 Heritage Conservation; 2.4 Recreation Vehicle Areas; 2.5 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs; 2.6 Remediation of Contaminated Land; 3.1 Residential Zones; 3.2 Caravan Parks and Manufactured Home Estates; 3.3 Home Occupations (Revoked 9 November 2020); 3.4 Integrating Land Use and Transport; 3.5 Development Near Regulated Airports and Defence Airfields 3.6 Shooting Ranges; 3.7 Reduction in non-hosted short term rental accommodation period; 4.1 Acid Sulphate Soils; 4.2 Mine Subsidence and Unstable Land; 4.3 Flood Prone Land; 4.4 Planning for Bushfire Protection; 5.1 Implementation of Regional Strategies (Revoked 17 October 2017); 5.2 Sydney Drinking Water Catchments; 5.3 Farmland of State and Regional Significance on the NSW Far North Coast; 5.4 Commercial and Retail Development along the Pacific Highway, North Coast; 5.9 North West Rail Link Corridor Strategy; 5.10 Implementation of Regional Plans; 5.11 Development of Aboriginal Land Council land; 6.1 Approval and Referral Requirements; 6.2 Reserving Land for Public Purposes; 6.3 Site Specific Provisions; 7.3 Parramatta Road Corridor Urban Transformation Strategy; 7.4 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan; 7.5 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan; 7.6 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan; 7.7 Implementation of Glenfield to Macarthur Urban Renewal Corridor; 7.8 Implementation of the Western

Planning proposal alignment	Applicable Ministerial Directions
	Sydney Aerotropolis Plan; 7.9 Implementation of Bayside West Precincts 2036 Plan; 7.10 Implementation of Planning Principles for the Cooks Cove Precinct; 7.11 Implementation of St Leonards and Crows Nest 2036 Plan; 7.12 Implementation of Greater Macarthur 2040; 7.13 Implementation of the Pyrmont Peninsula Place Strategy.

Section C – Environmental, social and economic impact

Q7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

This planning proposal will not adversely affect any critical habitat or threatened species, populations or ecological communities, or their habitats.

Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

There will be no other detrimental environmental impacts as a result of this planning proposal.

The proposed amendments will reduce greenhouse gas emissions resulting in a positive environmental impact.

Q9. Has the planning proposal adequately addressed any social and economic effects?

This planning proposal facilitates resilient, net zero energy buildings. The key benefits are:

- reduced greenhouse gas emissions equating to 21% of the City of Sydney's 2030 target
- reduced running costs for developers, owners and occupants of buildings and improved comfort for occupants now and in the future when we expect further impacts from climate change
- savings in avoided health, energy network and emissions costs
- contribution to a positive and sustainable business recovery for Greater Sydney
- demand for new skills and jobs in energy efficiency
- support for investment and jobs in the NSW Government's renewable energy zones.

A broader cost benefit analysis was completed that considered the costs and benefits to direct participants such as developers and owners of buildings, and indirect public benefits of health, energy network and emissions savings.

From development that occurs in Greater Sydney, the broader analysis identified that the performance standards will save investors, business and occupants \$1.341 billion between their implementation in 2023 and 2050. This is the result of energy bill savings minus the cost to implement the performance standards.

The broader analysis also identified savings to the public of \$1.811 billion between 2023 and 2050. This is through savings to NSW energy consumers of \$842 million from avoided power generation from traditional sources such as coal and \$618 million from avoided additional network infrastructure for traditional power generation. The community in Sydney, the Hunter Valley, and NSW taxpayers will also save \$35 million from avoided health costs resulting from better air quality. Lastly, the public in general will save \$316 million attributed to avoided emission costs. For further information see the project report at Attachment 2.

A separate City analysis on the procurement of off-site renewables in step two of the performance standards is estimated to generate \$13 million for renewable energy producers from development in the city alone. This supports investment and jobs in the NSW Government's renewable energy zones.

Section D – State and Commonwealth interests

Q10. Is there adequate public infrastructure for the planning proposal?

Yes, the proposed amendments do not increase the need for public infrastructure.

The associated broader cost benefit found the implementation of the performance standards will reduce the need for additional power supply network infrastructure going forwards.

Q11. What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?

The Gateway determination will advise the public authorities to be consulted, as part of this planning proposal process. Any issues raised will be incorporated into this planning proposal following consultation in the public exhibition period.

In November 2020, a meeting occurred with key DPIE executive directors, directors and staff (Eastern District Regional Unit, Resource Policy and Reform Implementation, BASIX, NABERS, Climate Resilience and Net Zero Emissions, Sustainability Programs teams) and GSC commissioners and staff on the draft performance standards, implementation timeframes, development thresholds and the integration of off-site renewables. Individual developer feedback was also discussed. At that meeting it was recommended that these performance standards had potential for use in the draft Design and Place SEPP.

In November 2020, a meeting with staff from the Government Architect NSW discussed the draft performance standards and the cost benefit analysis. No view was provided by the staff at that meeting.

Greater Sydney Commission are a project partner and the Environment Commissioner spoke in support of the performance standards at the 11 March 2021 briefing to 185 industry and government stakeholders. The Environment Commissioner also encouraged all other councils in Greater Sydney to use the evidence base to implement the performance standards.

At the briefing industry and government attendees were asked to complete a survey which identified their support for the implementation of the performance standards. Of those that completed the survey, 76% supported the implementation of the performance standards without any changes.

Part 5: Mapping

This planning proposal does not require any maps.

Part 6: Community consultation

This planning proposal is to be exhibited in accordance with the Gateway determination once issued by DPIE and the City's Community Participation Plan.

It is anticipated the Gateway determination will require public exhibition for a period of not less than 28 days in accordance with of the Environmental Planning and Assessment Act 1979 and section 4.5 of A Guide to preparing Local Environmental Plans.

Exhibition material will be made available on the City's website.

Consultation with relevant NSW agencies, authorities and other relevant organisations will be undertaken in accordance with the Gateway determination.

Part 7: Project Timeline

The anticipated timeframe for the completion of the planning proposal is as follows:

It is to be noted that the proposed LEP provisions are intended to take effect on 1 January 2023.

Tasks and timeframe	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22
Receive Gateway determination	Yes	-	-	-	-	-	-
Public Exhibition of Planning Proposal	-	Yes	-	-	-	-	-
Government agency consultation	-	Yes	-	-	-	-	-
Consideration of submissions	-	-	Yes	Yes	Yes	-	-
Post exhibition consideration of Planning Proposal	-	-	-	-	-	Yes	-
Draft and finalise LEP	-	-	-	-	-	-	Yes
LEP made	-	-	-	-	-	-	Yes

Attachment 1

Development Thresholds and Performance Standards

Development	Development thresholds for performance standards	Performance standards Applications submitted between 1 January 2023 – 31 December 2025 (Step 1)	Performance standards Applications submitted from 1 January 2026 onwards (Step 2)
Office (base building)	<p>a new office building containing a net lettable area (NLA) of 1,000m² or more</p> <p>a refurbishment* to an existing office building that contains a NLA of 1,000m² or more</p> <p>an existing office building of 1,000m² NLA or more with an addition of 50% or more NLA</p>	<ul style="list-style-type: none"> – maximum 45 kWh/yr/m² of Gross Floor Area (GFA), or – 5.5 Star NABERS Energy Commitment Agreement (CA) + 25%, or – certified Green Star Buildings rating with a “credit achievement” in Credit 22: Energy Use, or – equivalent 	<ul style="list-style-type: none"> – maximum 45 kWh/yr/m² of GFA, or – 5.5 Star NABERS Energy CA + 25%, or – certified Green Star Buildings rating with a “credit achievement” in Credit 22: Energy Use, or – equivalent and – renewable energy procurement equivalent to “net zero energy” or a maximum of 45 kWh/yr/m² of GFA

Development	Development thresholds for performance standards	Performance standards Applications submitted between 1 January 2023 – 31 December 2025 (Step 1)	Performance standards Applications submitted from 1 January 2026 onwards (Step 2)
Retail (applies to shopping centre base building only)	a new shopping centre containing a gross lettable area – retail (GLAR) of 5,000m ² or more	<ul style="list-style-type: none"> – maximum 55 kWh/yr/m² of GFA, or – 4 star NABERS Energy CA, or – certified Green Star Buildings rating achieving the “minimum expectation” in Credit 22: Energy Use, or – equivalent 	<ul style="list-style-type: none"> – maximum 45 kWh/yr/m² of GFA, or – 5 Star NABERS Energy CA, or – certified Green Star Buildings rating with “exceptional performance” in Credit 22: Energy Use, or – equivalent and – renewable energy procurement equivalent to “net zero energy” or a maximum of 45 kWh/yr/m² of GFA
	an existing shopping centre of 5,000m ² GLAR or more with an addition of 50% or more GLAR		
Hotel (whole building)	a new hotel of 100 rooms or more	<ul style="list-style-type: none"> – maximum 245 kWh/yr/m² of GFA, or – 4 star NABERS Energy CA, or – certified Green Star Buildings rating achieving the “minimum 	<ul style="list-style-type: none"> – maximum 240 kWh/yr/m² of GFA, or – 4 star NABERS Energy CA + 10%, or – certified Green Star Buildings rating with a “credit
	a refurbishment* to an existing hotel that contains 100 rooms or more		

Development	Development thresholds for performance standards	Performance standards Applications submitted between 1 January 2023 – 31 December 2025 (Step 1)	Performance standards Applications submitted from 1 January 2026 onwards (Step 2)
	an existing hotel of 100 rooms or more with an addition of 50% or more hotel rooms	expectation” in Credit 22: Energy Use, or – equivalent	achievement” in Credit 22: Energy Use, or – equivalent and – renewable energy procurement equivalent to “net zero energy” or a maximum of 240 kWh/yr/m ² of GFA
Mixed use	the above thresholds for each proposed use apply	– the above performance standards apply for each proposed use	– the above performance standards apply for each proposed use

***Refurbishment** means carrying out of works to an existing building where the works affect at least half the total volume of the building measured over its external roof and walls and where there is no increase in the gross floor area. In calculating the extent of the building’s volume that is being changed, the proposed works and all other building work completed or authorised within the previous three years is to be included.

The office and shopping centre performance standards are for base building only. This means only the energy used in central services and common areas such as heating and cooling systems, lifts and lobby lighting is considered. For hotel and multi-unit residential development, the performance standards cover the entire building, which includes the base building, the individual hotel rooms and apartments, and other amenities like bars, cafes and pools.

Attachment 2

Performance Standards for Net Zero Energy Buildings Project Report

Attachment 3

Planning for Net Zero Energy Buildings Briefing - Summary Report

Attachment 4

Letters of Support for the Performance Standards

Attachment 5

LEP example clause

X.XX Net zero energy emissions development

1. The objective of this clause is to reduce the production of greenhouse gas emissions from development and contribute to the resilience of development to climate change.
2. This clause applies to the following development:

Development	Development thresholds for performance standards
office (base building)	<p>a new office building containing a net lettable area (NLA) of 1,000m² or more</p> <p>a refurbishment* to an existing office building that contains an NLA of 1,000m² or more</p> <p>an existing office building of 1,000m² NLA or more with an addition of 50% or more NLA</p>
retail (applies to shopping centre base building only)	<p>a new shopping centre containing a gross lettable area – retail (GLAR) of 5,000m² or more</p> <p>an existing shopping centre of 5,000m² GLAR or more with an addition of 50% or more GLAR</p>
hotel (whole of building)	<p>a new hotel of 100 rooms or more</p> <p>a refurbishment* to an existing hotel that contains 100 rooms or more</p> <p>an existing hotel of 100 rooms or more with an addition of 50% or more hotel rooms</p>
mixed use	where one or more of the above thresholds for each proposed use apply

3. Development consent must not be granted to development to which this clause applies unless the consent authority is satisfied that:
 - a. for applications lodged on and between 1 January 2023 and 31 December 2025 the development is highly efficient and reduces energy use through energy efficiency and the use of on-site renewables, and
 - b. for applications lodged on or after 1 January 2026 that the development is capable of achieving net zero energy.

4. The consent authority must have regard to the extent to which the development will achieve any relevant standards identified in a development control plan made by the Council in respect of the land when considering whether development:
 - a. is highly efficient and reduces energy use through energy efficiency and the use of on-site renewables, and
 - b. is capable of achieving net zero energy.

5. In this clause—

Net lettable area means the area of the building as set out in the Property Council of Australia Method of Measurement.

Net zero energy means the development consumes no more energy than is provided by a combination of:

- c. renewable energy generated on-site, or
- d. renewable energy sourced/procured from off-site sources for a period of at least five years.

In this definition, energy includes gas, electricity and thermal energy, and excludes diesel used for emergency back-up generation. Other emissions, such as those from refrigerants, are not included.

Shopping centre means two or more retail premises within a building that has shared plant and services which are managed by a single person or entity. This does not include specialised retail premises, garden centres, hardware and building supplies, landscaping material supplies, plant nurseries, roadside stalls, rural supplies, timber yards or vehicle sales or hire premises.

Refurbishment means carrying out of works to an existing building where the works affect at least half the total volume of the building measured over its external roof and walls and where there is no increase in the gross floor area. In calculating the extent of the building's volume that is being changed, the proposed works and all other building work completed or authorised within the previous three years is to be included.

