

## Non-residential building sustainability

This section focuses on the sustainability measures for non-residential buildings contained in the Sustainable Buildings SEPP Chapter 3 and Schedule 3, and Parts 10A, 35B, 35C, 35D and 79A of the EP&A Regulation.

### How and where does the non-residential component of the policy apply?

The Sustainable Buildings SEPP for non-residential development will apply across the state to development, other than development for the purposes of residential accommodation, that involves:

- the erection of a new building, if the development has a capital investment value of \$5 million or more, or
- alterations, enlargements or extensions of an existing building, if the development has a capital investment value of \$10 million or more.

Certain types of development and land use categories are excluded - including BASIX affected development, exempt and complying development, mining, residential care, boarding houses, the three ports of Botany, Newcastle and Kembla and development on land zoned Rural RU1-2-3, IN3 Heavy Industrial, Conservation C1-2-3 and Waterways 1-2-3-4.

Non-residential policy measures will be staged. From 1 October 2023:

- embodied emissions reporting will apply to all non-residential development that the policy applies to
- energy and water standards will apply to prescribed large commercial development (offices, hotels, motels and serviced apartments first)
- the Net Zero Statement will apply to prescribed large commercial development as well as certain State Significant Development particularly health, education and cultural buildings.

Other sectors will be brought on in future stages for most measures.

### Why have shopping centres and other retail been excluded from the large commercial requirements?

More work is required to establish a pathway for the retail sector. It is intended that certain retail premises will be incorporated under the large commercial requirements after 2024.

### How do the non-residential measures recognise and align with existing organisational commitments like Green Star or Climate Active Carbon Neutral Standards?

Applicants may choose to upload evidence of the Green Star accreditation process as a means of demonstrating compliance with the general sustainability provisions.

Onsite fossil fuel offsetting requirements can be met through having a Climate Active Carbon Neutral certification that covers the building.

### How will buildings be checked for compliance with the standards and measures included in the policy?

The operational performance standards for large commercial buildings will be checked at multiple stages. This will include a NABERS agreement required at development application, relevant energy efficiency reports at construction certificate, and a NABERS energy and water performance rating within 24 months of an occupation certificate being issued.

The NABERS assessment will identify any energy performance gap and onsite fossil fuel used and confirm that the required offsets have been purchased and surrendered by the owner. Consent authorities will be required to check that the owners have met the required obligations in line with the condition of consent.

### Why are we asking for non-residential buildings to be net zero ready by 2035?

Large commercial and certain State Significant Developments are expected to operate from 100% renewable energy by 2035, effectively net zero. The measures in the Sustainable Buildings SEPP will help ensure these types of buildings are designed to be capable of transitioning from fossil fuel dependence to all electric or all renewable energy by this time. Combined with the decarbonisation of the NSW electricity grid, most large buildings should be able to easily meet this requirement.

### Will the non-residential sustainability elements of this policy impact the cost of construction?

The department does not anticipate any impacts on the cost of construction for the non-residential policy. However, for prescribed offices, hotels, motels and serviced apartments there will be some nominal costs to the developer and building owner through fees to NABERS, such as entering into commitment agreements, certifying compliance with the energy and water standards and for any offsets purchased to meet their compliance obligations.

If these types of developments use fossil fuels for energy (except for backup generation) they will also be required to purchase offsets. If they do not comply with the required standard, they will also need to purchase large-scale generation certificates equivalent to the electricity used for any energy performance gap.

### How will the non-residential policy benefit NSW?

An independent cost-benefit analysis found the policy for non-residential buildings will result in a total Benefit Cost Ratio of 2.8 to 1. This includes a positive net economic benefit to the NSW economy of \$38 million including benefits from reduced greenhouse gas emissions and air quality improvements.

Other benefits include improved transparency of energy and water performance for building owners and tenants, incentives to reduce any energy performance gap and avoid fossil fuel use. The policy will help save owners and tenants money on their operating costs.

### Why is NABERS the preferred pathway for verifying the energy and water standards?

NABERS is a national program endorsed and funded by the Commonwealth and NSW Government. The NSW Government has a strong existing partnership with NABERS that has helped develop the

standards. NABERS is a well-established national scheme that already provides a clear framework for design intent to be translated into energy efficiency performance during operation.

The NABERS Commitment Agreements and Agreement to Rate will be tailored to accommodate the NSW planning system and this process can extend to align with the requirements of the Sustainable Buildings SEPP. Buildings across NSW can be fairly compared using the NABERS scheme. NABERS also connects with other rating systems such as Green Star and Climate Active Carbon Neutral and an established verification performance solution in the NCC2019.

### [Will the policy limit which Section J pathway can be used for energy verification?](#)

No, buildings can apply any verification pathway relevant to their building class in Section J of the National Construction Code 2022.

Prescribed large commercial developments are required to submit the Section J report with the construction certificate and to demonstrate that the energy standard (NABERS rating) has been achieved 24 months after occupation. Although there is a post-occupancy requirement to use NABERS this does not prohibit the use of other Section J pathways to meet the National Construction Code.

### [What has informed the star ratings for the energy and water standards?](#)

The star ratings have been developed to align with the National Construction Code 2022. For energy, an analysis by NABERS in collaboration with the Australian Building Codes Board has determined that the 5.5-star rating for prescribed offices, and 4-star rating for prescribed hotels, are equivalent to, or greater than, a development that uses the deemed-to-satisfy provisions of the National Construction Code.

For water, an analysis of NABERS data shows that 92% of hotels and 93% of offices rated in 2021 achieved a rating of 3-star NABERS water or over. Industry consultation has also confirmed that this is achievable for the prescribed developments to which the water standard applies.

The policy has introduced a requirement for verification of actual energy and water use post-occupancy, removing the requirement for building modelling and disclosure of predicted emissions at the development application stage.

### [How do the energy and water use standards and net zero apply for refurbishments?](#)

The policy does not apply to refurbishments with a capital investment value (CIV) of less than \$10 million. This means that large commercial refurbishments with a CIV of \$10 million or more will need to meet the energy and water standards, and net zero requirements if they are in the prescribed categories of offices with a net lettable area of at least 1,000m<sup>2</sup> and hotel, motel or serviced apartments (with at least 100 rooms/apartments).

If a heritage building meets this criteria then the same provisions apply. Any project specific challenges with meeting the targets will need to be addressed on a case by case basis with NABERS and with the consent authority.

### Will I have to enter into a full Commitment Agreement with NABERS under the policy for energy and water?

No, proponents can opt to select a Commitment Agreement for energy with NABERS as per the JV1 pathway of the National Construction Code 2019 or use the Agreement to Rate. The Agreement to Rate has been developed by NABERS to commit the building to undertake an energy and water rating within 24 months of the Occupation Certificate being issued. The Agreement to Rate also includes an option embodied emissions rating for developments seeking to demonstrate leadership in embodied emissions.

The NABERS Commitment Agreement process is a well-established pathway that has a proven track record of providing assurance that the development will meet its energy obligations. The Agreement to Rate has been adapted from this existing system and is a lower cost process for applicants.

### What is required in the Net Zero Statement?

From 1 October 2023, a Net Zero Statement is required for prescribed offices, hotels, motels, serviced apartments and certain state significant developments (including health, education and cultural buildings). The statement must explain whether the building is all-electric or, if not, how by 1 January 2035 it will be capable of operating with all energy from renewable sources (excluding back-up generation). Details of any renewable energy generation and storage infrastructure, and any passive and technical design features must also be included.

Any member of the design team can prepare the net zero however, the statement must be certified by a mechanical or electrical engineer. The statement must be uploaded at the development application stage.

A [net zero technical note](#) has been prepared to guide applicants on how to prepare their net zero statement.

### How will offsets for large commercial development be measured and checked?

Offsets for prescribed large commercial developments must be calculated using the [Performance Gap Assessment](#) form. By entering the energy consumption of the development for electricity, gas, and diesel the tool will automatically calculate any Large-scale Generation Certificates (LGCs) required to achieve the target NABERS star rating or Australian Carbon Credit units (ACCUs) to achieve Carbon Neutrality. If the development already achieves the target NABERS star rating and Carbon Neutrality, then the purchase of LGC and ACCU offsets will not be required.

Owners will have up to 24 months, post occupation certificate, to allow time for an initial rating and operational performance improvements to be made. A pdf report can be generated from the Performance Gap Assessment tool which must be uploaded on the NSW Planning Portal as proof of compliance. A 1 year extension may be requested if there is a sound reason why the rating cannot be achieved within 24 months, such as delay in staged construction or a change of owner.

Consent authorities will check the number of offsets shown in the Performance Gap Assessment have been purchased and surrendered to ensure the building owner has complied with the condition of development consent relating to offsets.

### **Will the embodied emissions disclosure align with the NABERS emissions framework?**

Yes, it is the policy intent to align with the NABERS Emissions Framework when it becomes available in mid-2024. As part of the framework NABERS are working on a new Embodied Emissions Tool to calculate emissions from materials used within the building that will be publicly available in 2024 and will incorporate a comprehensive set of embodied emissions factors. In the interim, material quantities only must be disclosed using the [NABERS Embodied Emissions Materials Form](#).

When the NABERS emissions framework becomes available large commercial developments seeking to demonstrate good as built performance for embodied emissions can opt to enter a NABERS Agreement to Rate relating to embodied emissions.

### **What is the scope of embodied emissions reporting?**

Embodied emissions reporting for non-residential development encompasses the whole building. At a minimum, 80% of materials must be quantified for substructure, superstructure, envelope, permanent internal walls and doors, and certain external works.

In addition, cost material amounts (excluding labour, plant, equipment, margins and taxes) must be entered for fit-out for items delivered as part of the primary contract and core services (mechanical, electrical, plumbing etc) required to run the core building services.

Material quantities (and later embodied emissions) must be reported at the development application stage using the [NABERS Embodied Emissions Materials Form](#) (and when available the NABERS Embodied Emissions Tool). The form will need to be revised at the construction certificate stage to capture any changes in materials selection between development approval and construction. Material quantities must be determined through an itemised list of building materials (such as a bill of quantities) prepared by a quantity surveyor.

For further guidance on how to report on embodied emissions and what's included refer to the [Embodied Emissions Technical Note](#).

### **Why are there no targets for embodied emissions in non-residential buildings?**

The NSW Government does not currently have adequate data and information to inform the establishment of targets for non-residential building types. As with the BASIX material index for residential buildings, the policy for non-residential buildings will enable important data to be captured on quantities of materials and construction practices. This data will help inform benchmarks and future targets as the market for low emissions materials matures in NSW.

### **Since the study of embodied emissions is an emerging field, is it premature to require disclosure of emissions for all non-residential building types?**

The policy provides basic settings for new developments to move towards low or net zero embodied emissions. Reducing embodied emissions is emerging to become the most significant opportunity to decarbonise the built sector. Whole-of-life embodied emissions are expected to be responsible for 85% of total embodied emissions from Australia's building stock in 2050<sup>1</sup>.

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<sup>1</sup> [Green Building Council of Australia, 2021, Embodied Carbon & Embodied Energy in Australia's Buildings, p3](#)

The objective of this policy is to encourage early action to reduce embodied emissions. The design stage of a building provides the greatest opportunity to reduce embodied emissions because this is where materials are specified or when opportunities to reuse existing structures or materials on site are realised.

The NSW government however needs more data to inform future benchmarks and targets as the market for low emissions materials matures in NSW. The upcoming NABERS framework will support this process by providing consistent metrics while this policy provides an opportunity to gather critical information on key materials that would otherwise not be available.

### **Why doesn't the policy address electric vehicles?**

While electric vehicle provisions were considered in earlier drafts of this policy, these have since been removed to avoid duplication with the anticipated update to the National Construction Code which is anticipated to include electric vehicle provisions.

### **Does the policy address commercial and operational waste from buildings?**

No, while waste provisions were considered in earlier drafts of this policy, these have since been removed as these provisions are typically dealt with at a local government level.