



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Transitioning to Net-zero Commercial Buildings in Australia

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Department of Climate Change, Energy, the Environment and Water

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[DCCEEW.gov.au](https://www.dcceew.gov.au)

Acknowledgement of Country

Our department recognises the First Peoples of this nation and their ongoing connection to culture and country. We acknowledge First Nations Peoples as the Traditional Owners, Custodians and Lore Keepers of the world's oldest living culture and pay respects to their Elders past, present and emerging.

International Context

The commercial building sector is responsible for around 25% of overall electricity use and **10% of total carbon emissions** in Australia. (energy.gov.au)

Paris Agreement

43% below 2005 levels by 2030

Australia is committed to achieving net zero emissions by 2050

National Energy Performance Strategy

Paris Agreement Means all Sectors are Changing

The Australian Government is committed to reducing domestic emissions by 43% below 2005 levels by 2030.



Investments to Reach Net-zero

The Australian Government will invest AUD \$3 billion for renewables and low-emissions technologies under the National Reconstruction Fund.



A Framework for Demand-side Action

An AUD \$15.2 million investment in a forward plan framework for demand-side action to help deliver a least-cost path through Australia's energy position.



Overview of National Drivers Toward Net-zero Buildings

The Trajectory for Low Energy Buildings

Australia's national plan to achieve zero energy and carbon-ready commercial and residential buildings in Australia.

The National Construction Code (NCC)

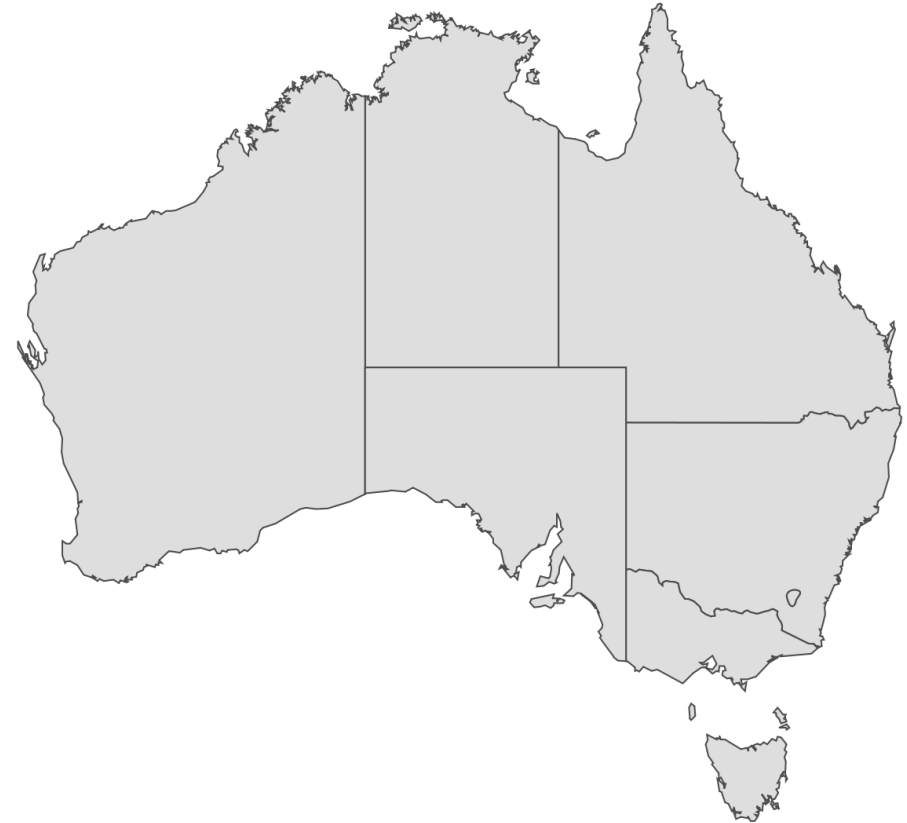
Australia's primary set of technical design and construction provisions for new and existing commercial and residential buildings.

The Commercial Building Disclosure (CBD) Program

Mandatory disclosure of energy rating for buildings being leased or sold on the Australian market.

The National Australian Built Environment Rating Scheme (NABERS)

Australia's leading building performance rating tool for the built environment covering ten building sectors.



The Trajectory for Low Energy Buildings

Design features



The Trajectory is designed to:

- Provide national coordination
- Make incremental updates to the NCC
- Allow industry to plan ahead
- Be flexible and adaptable to change

Scope



The Trajectory scope includes:

- Building thermal shell, design, materials, orientation
- Interaction with fire and health and safety provisions
- Energy market impacts
- Fixed appliances
- EV and PV readiness
- Resilience

Beyond the NCC



The Trajectory includes a wide range of complementary measures:

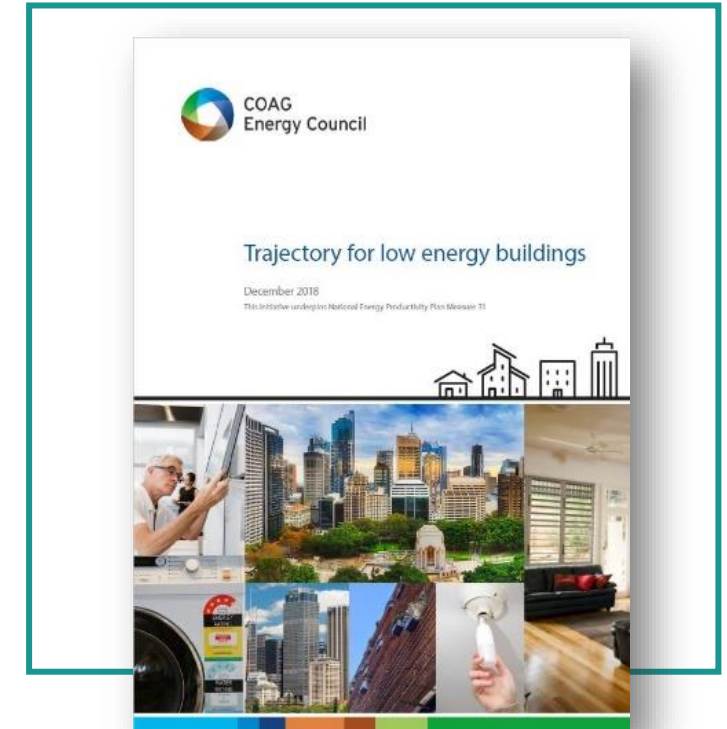
- Disclosure
- Updated tools and ratings
- Consumer guidance
- Minimum rental requirements

Benefits



The Trajectory has benefits beyond emissions reduction:

- Reduced energy bills
- Reducing peak demand and pressure on the grid
- Improve comfort and health
- Improve resilience



The Trajectory is a national plan developed closely with all states and territories to outline policies that **deliver cost effective energy efficiency improvements** to homes and commercial buildings.

energy.gov.au/trajectory-low-energy-buildings

The National Construction Code (NCC)



The NCC is a performance-based code that sets the minimum required level for the safety, health, amenity, accessibility and sustainability of certain buildings. Energy Efficiency requirements are set out explicitly in the code.

- Updates to the code occur triennially as set out under the *Trajectory for Low Energy Buildings*
- State and territory governments are responsible for enacting the code and its compliance
- Provisions were extensively revised in 2019 for commercial buildings, and again in 2022 for residential buildings
- NCC2025 updates for commercial buildings are underway

Modelling suggests updates to the Code in 2025 would deliver a net present value (NPV) of \$8.2 billion and a reduction of 70 Mt CO₂-e of cumulative greenhouse gas (GHG) emissions.

(NCC2025 Update to Achieving Low Energy Commercial Buildings in Australia, 2022)

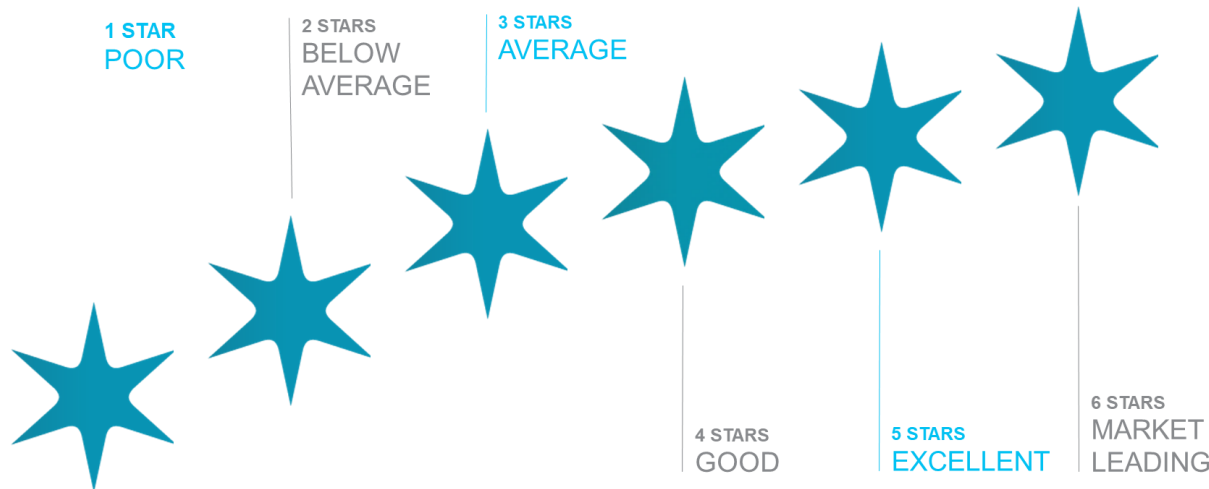
ncc.abcb.gov.au



NABERS

NABERS is a voluntary rating system with design standards to measure a commercial building's energy efficiency, established in 1998.

- The system **rates buildings from 0 to 6 stars**, with 6 representing exceptional greenhouse performance and efficiency.
- The rating assesses four areas: energy, water, waste, and indoor environment.
- NABERS customers have saved an average of 30-40% on energy over 10 years



Carbon Neutral Certification

NABERS Carbon Neutral certification certifies carbon neutral buildings in partnership with **Climate Active.**

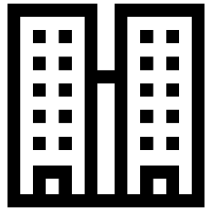
- The Climate Active Building Standard is a voluntary standard to manage greenhouse gas emissions and achieve carbon neutrality status
- NABERS certification is awarded to buildings that achieve a 4-star NABERS Energy rating + use carbon offsets to cancel the building's emissions

www.climateactive.org.au
www.nabers.gov.au

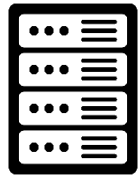
Sectors Covered by NABERS Energy

New

In development



Apartment Buildings



Data centres



Hotels



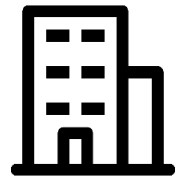
Residential aged care



Warehouses



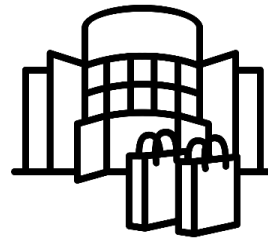
Standalone Retail



Offices



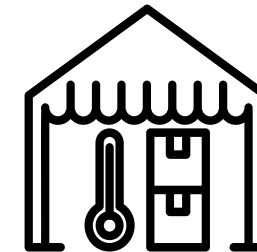
Public Hospitals



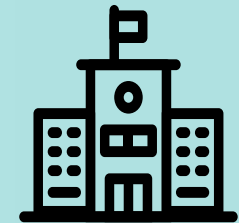
Shopping centres



Retirement living



Cold stores



Schools

Commercial Building Disclosure (CBD) Program

BUILDING ENERGY EFFICIENCY CERTIFICATE

BUILDING DETAILS

Building name	Certificate no.	B0529-2021/111
Owner's name	Current from	31 Jul 2021
ABACUS PROPERTY SERVICES PTY LIMITED	Current to	30 Jul 2022
Building address	CBD assessor name	Timothy Leske
51 Allara Street, City, ACT, 2601	CBD assessor no.	CBDA0377
Net Lettable Area of the building 12,288.0 m ²		

PART 1 - NABERS ENERGY RATING

This building has achieved **5.0-Star NABERS Energy rating** (including GreenPower)

HOW DOES YOUR BUILDING COMPARE?
The highlighted building on the adjacent graph compares the NABERS Star rating of your building to other buildings that were issued a BEEC nationally in 2019.

PART 2 - TENANCY LIGHTING ENERGY EFFICIENCY ASSESSMENT

Smith-Jones Real Estate

Now Leasing

→ 2.5-star NABERS Energy rating

Phone John Smith 0012 345 678

The CBD program was introduced in 2010 under the *Building Energy Efficiency Disclosure Act* to mandate disclosure of energy efficiency information.

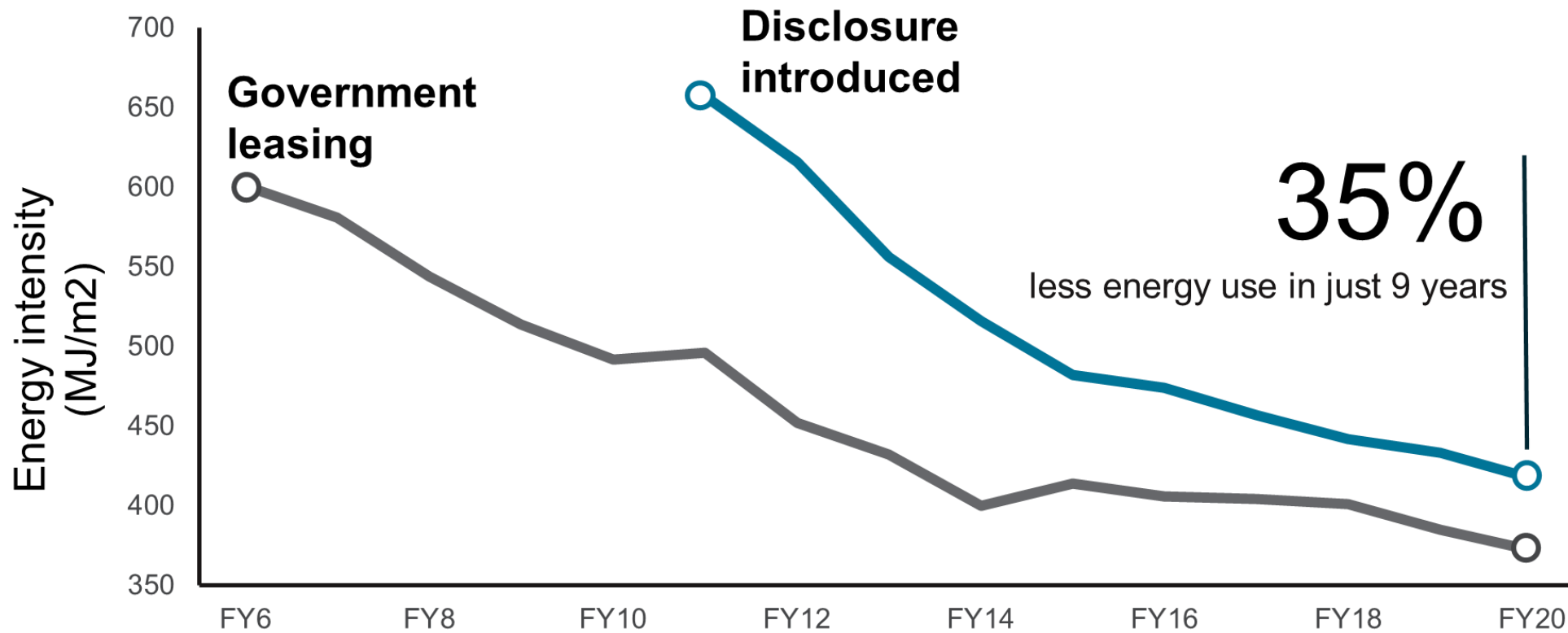
- Required when >1,000m² office space is offered for sale or lease
- Requires obtaining a NABERS energy rating and a Tenancy Lighting Assessment (TLA) to obtain a Building Energy Efficiency Certificate (BEEC) – valid for 1 year
- NABERS energy rating 0-6 Stars required on all advertising
- Compliance and monitoring mechanisms in place - fines for non-compliance and auditing procedures

Required on all advertising

cbd.gov.au

Energy Savings from the CBD Program

The Commercial Building Disclosure program is driving improvements in offices over time.



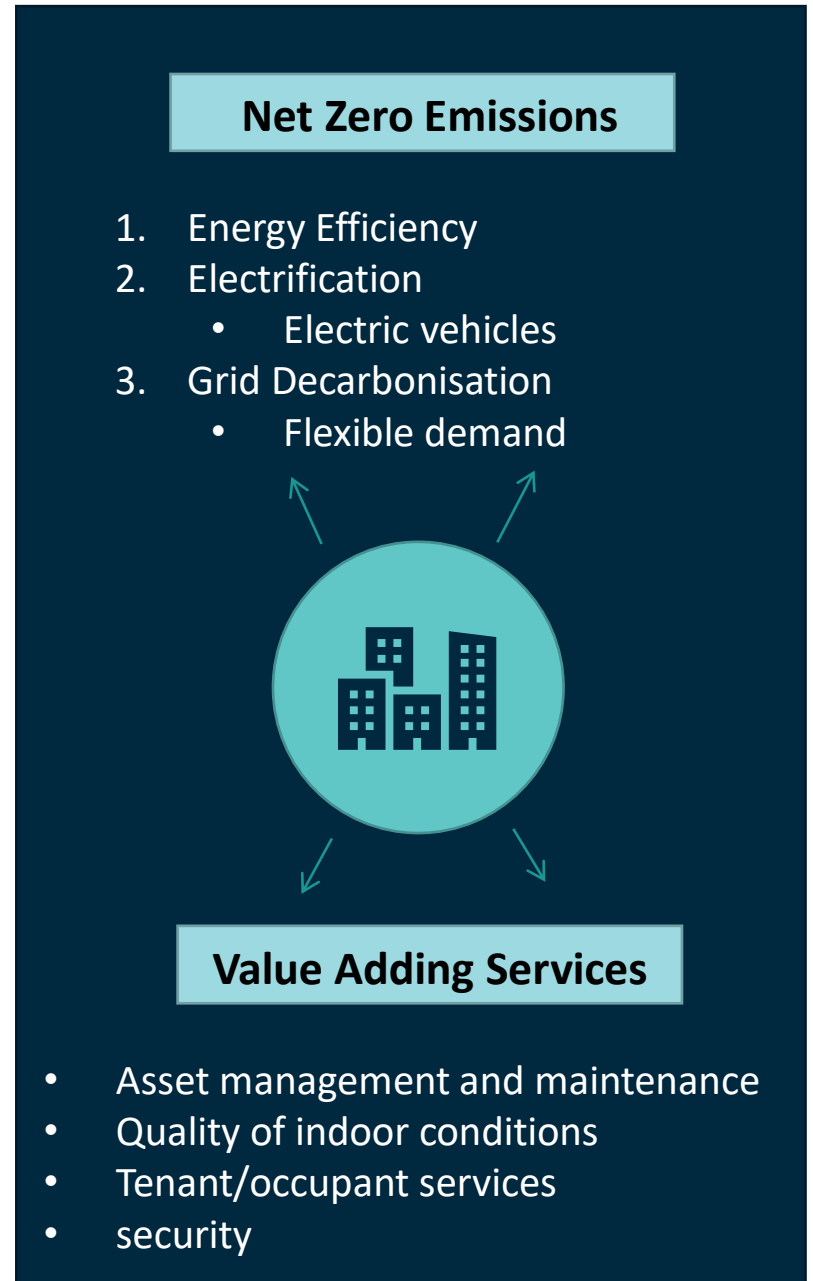
Progress to date

- **All buildings constructed or renovated since 2006 have been subject to energy efficiency standards** in the National Construction Code (NCC), and represent a growing proportion of the building stock. (The Trajectory for Low Energy Buildings, 2019)
- In 2022, for the eleventh year running, Australian property companies dominated the GRESB (Global Real Estate Sustainability Benchmark) confirming **Australia's leading market suppliers as global leaders in real estate sustainability**. (Property Council of Australia, 2022)
- **More than AUD \$1 billion in energy costs have been cut** from bottom lines since NABERS started assessing building energy efficiency in 1999. (NABERS.gov.au, 2021)
- Public consultation is underway for a **NABERS embodied emissions tool**, and a trial of the new Renewable Energy Indicator (REI) to recognise and reward on-site generation and purchase of renewable energy. (NABERS Annual Report, 2021-22)

Digitalisation Opportunities

Digitalisation in buildings is a priority for Australia and we are engaging domestically and internationally in this area.

- We engage with the IEA's Energy Efficiency Hub Digitalisation Working Group.
- We lead the IEA's Annex 81 project, which focuses on using buildings as energy resources to support increased use of renewables.
- Australian Government funded research found **significant potential of digitalisation to create energy performance improvements** that could save 6.6 megatonnes/year of CO2 emissions over 10 years at negative abatement cost. (Scoping the Digital Innovation Opportunity for Energy Productivity in Non-Residential Buildings, CSIRO)



Contact us

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[DCCEEW.gov.au](https://www.dcceew.gov.au)