

ENVIRONMENTAL RATING SCHEMES FOR BUILDINGS

INTRODUCTION

There are national environmental rating schemes in place in Australia that can be used to understand how efficiently a building is operating as well as measure and reduce its impact on the environment.

NCC – BCA Volume One includes NABERS Energy and Green Star as Verification Methods for assessing conformance with its energy efficiency performance requirements. Both require certification by an accredited assessor.

National Australian Built Environment Rating System (NABERS)

NABERS measures an existing building's overall environmental performance during operation. A rating of one-to-six stars is determined, based on 12 months of a building's energy consumption. The system can be used by building owners, facility managers or tenants to rate greenhouse and energy performance of new and existing buildings. Ratings can be estimated through reverse calculators that show the maximum amounts of energy and water a building may use to achieve a certain star rating, available online at the NABERS website. This scheme is administered nationally by the NSW Department of Planning, Industry and Environment. Rated spaces include:

- Apartment buildings: Rates the energy and water efficiency of a building's common property areas including lift and lobby areas, car parks, gyms, pool and water features.
- Office: Rates the energy and water consumption, waste generation and indoor environment of the base office building, office tenancies, or both combined.
- Hotels: Rates the energy and water consumption of amenities and services within common areas of AAA-rated business hotels.
- Shopping centres: Rates the energy and water consumption of the common areas of shopping centres. It does not include tenancy energy use for light and power.
- Data centres: Rates the energy consumption for both the IT equipment and infrastructure of data centres.

Commercial Building Disclosure (CBD)

CBD is a mandatory national program managed by the Australian Government Department of Industry, Science, Energy and Resources, designed to improve the energy efficiency of Australia's large office buildings.

Under the program, most sellers or lessors of office space of 1,000 m² or more are required to obtain and disclose an up-to-date energy efficiency rating. Certain exceptions and exemptions apply.

A fully valid **Building Energy Efficiency Certificate (BEEC)**, prepared by an accredited assessor, must be disclosed and made publicly accessible on the online Building Energy Efficient Register. A BEEC is valid for up to 12 months and includes a NABERS Energy for Offices star rating and a tenancy lighting assessment of the relevant area of the building.

Standard energy efficiency information for building owners is provided online.

The NABERS Energy rating must also be included in any advertisement for the sale, lease or sublease of the office space.

Green Star

Green Star is a comprehensive rating system for evaluating the environmental design and performance of buildings based on a number of criteria, including management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovation. It is administered by the Green Building Council of Australia – a national not-for-profit, non-government organisation.

Current Green Star tools include *Green Star Buildings, Communities, Design & As Built, Interiors* and *Performance*. As Green Star evolves, legacy rating tools are no longer available for new projects. The status and details of each tool can be checked online at the Green Building Council of Australia website.

NATSPEC PROVISIONS

NATSPEC information can be used to assist specifiers attain environmental ratings by documenting design decisions, providing specification text for submissions and documenting contractor requirements for submissions of evidence.

Use 0171 *General requirements* document an environmental rating scheme and the project target rating. Document Submissions in 0171 *General requirements*, SELECTIONS - Schedule or a similar schedule in the relevant worksection.

Rating Schemes



National Australian Built Environment Rating System.



Green Star rating tools

Green Star – Communities
Green Star – Design & As Built
Green Star – Buildings
Green Star – Interiors
Green Star – Performance

Relevant websites

National Australian Built Environment Rating System (NABERS)
www.nabers.gov.au

Commercial Building Disclosure
www.cbd.gov.au

Green Star
www.gbca.org.au

Relevant documents

NCC
NATSPEC TECHreport TR01
Specifying ESD
NATSPEC TECHnote DES 013
NCC Energy efficiency protocol and software for housing.
NATSPEC TECHnote DES 015
NCC - BCA Volume One: Energy efficiency provisions.
NATSPEC TECHnote DES 016
NCC - BCA Volume Two: Energy efficiency provisions.
Energy Efficiency in Government Operations (EEO) Policy
www.energy.gov.au

Relevant worksections

0171 General requirements
042 Roofing subgroup
043 Cladding subgroup
045 Doors and windows subgroup
046 Glass subgroup
047 Insulation subgroup
07 Mechanical workgroup
08 Hydraulic workgroup
09 Electrical workgroup