Green Star Metering & Monitoring

Graham Agar

On behalf of

Green Building Council of Australia
Who is the GBCA?

GBCA is a world renowned organisation dedicated to transforming the built environment.

Since 2002, we have driven real change by creating market-based solutions that empower industry to embrace sustainable practices.
We’ve developed a bold strategic plan that looks forward to 2030 and sets the industry on a transformational journey.

Our new vision is for healthy, resilient and positive places for people and the natural environment.

And our new purpose is to lead the sustainable transformation of the built environment.
PLANET: Drive a carbon positive industry

Around a quarter of our emissions come from our buildings. But we know these can be eliminated entirely by 2050, using technologies that exist today. To keep global warming to within the 1.5°C target outlined in the Paris Agreement, we must accelerate our industry beyond carbon zero.

Direction
An industry roadmap and new products will move the market towards a carbon positive economy.

Impact
We will identify and report on measures of success as we work to transform our industry.

Advocacy
We will focus on government procurement, raising minimum standards and removing barriers to sustainable utility infrastructure.
PEOPLE: Foster liveable and sustainable communities and cities

By 2030, our biggest cities will almost double in size as our population swells to 30.5 million people. Our cities are the engine rooms of the economy – and so building places that are dynamic, inclusive, liveable and sustainable is essential for thriving societies and our future prosperity.

**Products**
Green Star updates and new products will address the challenges of the next decade as defined by the UN Sustainable Development Goals while creating much broader value for end users.

**New ideas**
New products, services and partnerships will accelerate industry leadership in health and wellbeing, resilience, inclusion and human rights, infrastructure, places, parks and more.

**Cities**
Our new cities policy platform will outline an industry-agreed definition of sustainable cities and the metrics necessary to measure them.
INDUSTRY: Broaden market transformation

Sustainability is no longer a premium product. Achieving our vision means engaging the built environment sectors with the greatest potential for change, building a broader skills base and creating consumer demand for places where people can thrive.

Residential
We will develop a strategy to drive change in the challenging residential sector.

Technology
Customer-focused and user-friendly solutions will help our industry with reporting.

Education
A new GBCA Academy will help our industry expand its professional capabilities.
REGION: Increase regional activity

We have the world’s most sustainable property market. In 2016, the Global Real Estate Sustainability Benchmark (GRESB) said Australia’s property industry had continued its “unbroken streak of global leadership”. It’s time to share our expertise and take a proactive role to partner within our region.

Leadership
Our new regional strategy will increase the activity of the GBCA within the Asia Pacific region while expanding our connections with other global partners.

Partnerships
Expanding existing partnerships and building new ones will enhance and leverage the strategic objectives of both the GBCA, our members and our colleagues in the region.

Promotion
Our work with the World Green Building Council and other Asia Pacific GBCs will create opportunities to accelerate the pace of change in this significant geographical zone.
What is Green Star?

Green Star is an internationally recognised sustainability rating system.

From individual buildings to entire communities, Green Star is transforming our built environment to create sustainable places for everyone.
Green Star is universal, relevant, rigorous

Communities
Design & As Built
Interiors
Performance

Available
Available
Available
Available

Developed by the Green Building Council of Australia
1.3 million people visit a Green Star shopping centre every day

34,000 people live in Green Star apartments

150,000 people will live in Green Star precincts and neighbourhoods

1,380 Green Star projects have been certified since 2004

5% of our workforce operates from Green Star offices

66,000 people have been trained to deliver Green Star outcomes

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Why chose green star?

Our landmark 2013 *Value of Green Star* report found, when compared with average Australian buildings, **green star buildings are predicted to deliver:**

- **62% FEWER** greenhouse gas emissions
- **66% LESS** energy consumption
- **51% LESS** water consumption

*Developed by the Green Building Council of Australia*
Certification
Relevant, flexible, outcomes-based

Certifying is easier than ever
Flexible documentation relevant to your project’s achievements
Certification
Relevant, flexible, outcomes-based

Our users agree
Satisfaction with flexibility, cost, and value for a rating has increased by 25%
Green Star & metering
Green Star helps manage your metering strategies to meet your sustainability goals.
Green Star is driving efficiency

Design & As Built

Interiors

Performance
Measure your existing building’s operational performance

Identify opportunities for improvement

Realise the many benefits of sustainable building operations

Developed by the Green Building Council of Australia
• Green Star Accredited Professional
• Building Information
• Metering and Monitoring
• Tuning and Commissioning
• Environmental Management
• Green Cleaning
• Commitment to Performance

• Indoor Air Quality
• Hazardous Materials
• Lighting Comfort
• Daylight & Views
• Thermal Comfort
• Acoustic Comfort
• Occupant Satisfaction

• Greenhouse Gas Emissions
• Peak Electricity Demand

• Procurement and Purchasing
• Waste from Operations
• Waste from Refurbishments

• Ecological value
• Groundskeeping

• Stormwater
• Light Pollution
• Refrigerant Impacts
• Microbial Control

• Innovation

Developed by the Green Building Council of Australia
METERING AND MONITORING

To recognise the implementation of effective energy and water metering and monitoring systems.

Credit criteria
- Metering
- Monitoring strategy
METERING

- Energy & Water common and major uses
- Provided on all relevant areas or functions of the project
- Any items exceeding 5% of total energy use or 100kW are independently metered
- Meters required to meet National Measurement Regulations

MONITORING STRATEGY

- Developed in line with CIBSE TM39
- Must include schedule of estimated loads
- Address the location and type of meter
- Automatic Monitoring System
How TM39 links to Green Star

- Design and install a metering system which can:
  - Allow building managers to monitor consumption
  - Fine tune operation procedures
  - Detect operational problems early
- Verify the operational practices which facilitate the building energy and water consumption
- Quality metering information
- Scale up to volume certification
- Allow use of consumption data to drive efficiency, reduce resource use.
Additional requirements are being introduced for non-office buildings:

- Ensure metering network accuracy is maintained over the buildings lifetime
- Continue to have validated & commissioned metering network; including NABERS protocol & NMI Standards.
- Ability for continuous metering.
- Feedback loops for where faults have been identified – the network has been corrected and validated.
Future updates
The next decade transforming the industry, again.

Introducing Roadmaps
Setting the stage for the next evolution of a sustainable built environment
Four key priorities

- **Promoting energy efficiency** through passive design and efficient systems.
- **Driving investment** in renewable energy.
- **Boosting markets** for carbon positive products, materials and services.
- **Promoting offsets** as a ‘last resort’.

[Image of four icons representing each priority]
The next decade transforming the industry, again.

New buildings must be carbon neutral

- World Leadership
- Australian Excellence
- Best Practice

Existing buildings must be carbon neutral

- World Leadership
- Australian Excellence
- Best Practice

Developed by the Green Building Council of Australia
Thank You

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