

The Australian Building Greenhouse Rating scheme

Presentation to IEA
Sydney 11th April 2003



Australian Building Greenhouse Rating scheme

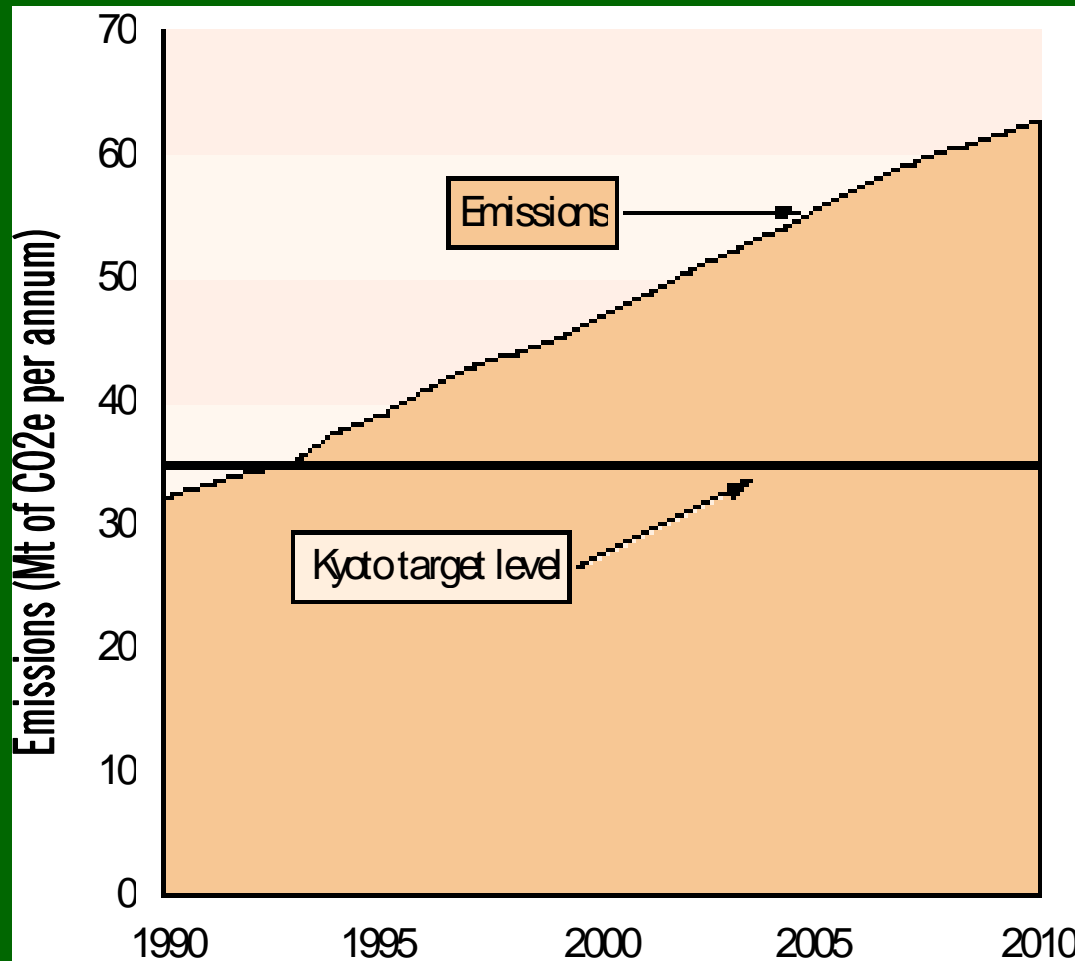
Content of Presentation

- **Australia CO2 emissions commercial sector**
- **Why office buildings initially?**
- **ABGR world first initiative**
 - Key attributes
 - How the benchmark was developed
- **Market Uptake**
- **How ABGR applies to new buildings**



Australian Building Greenhouse Rating scheme

Australian Commercial Buildings GHG emissions [ABARE 1997]



Australia CO₂ emissions commercial sector

Australian Building Greenhouse Rating scheme

Australian Greenhouse Gas emissions - trends

Greenhouse gas emissions from commercial sector:

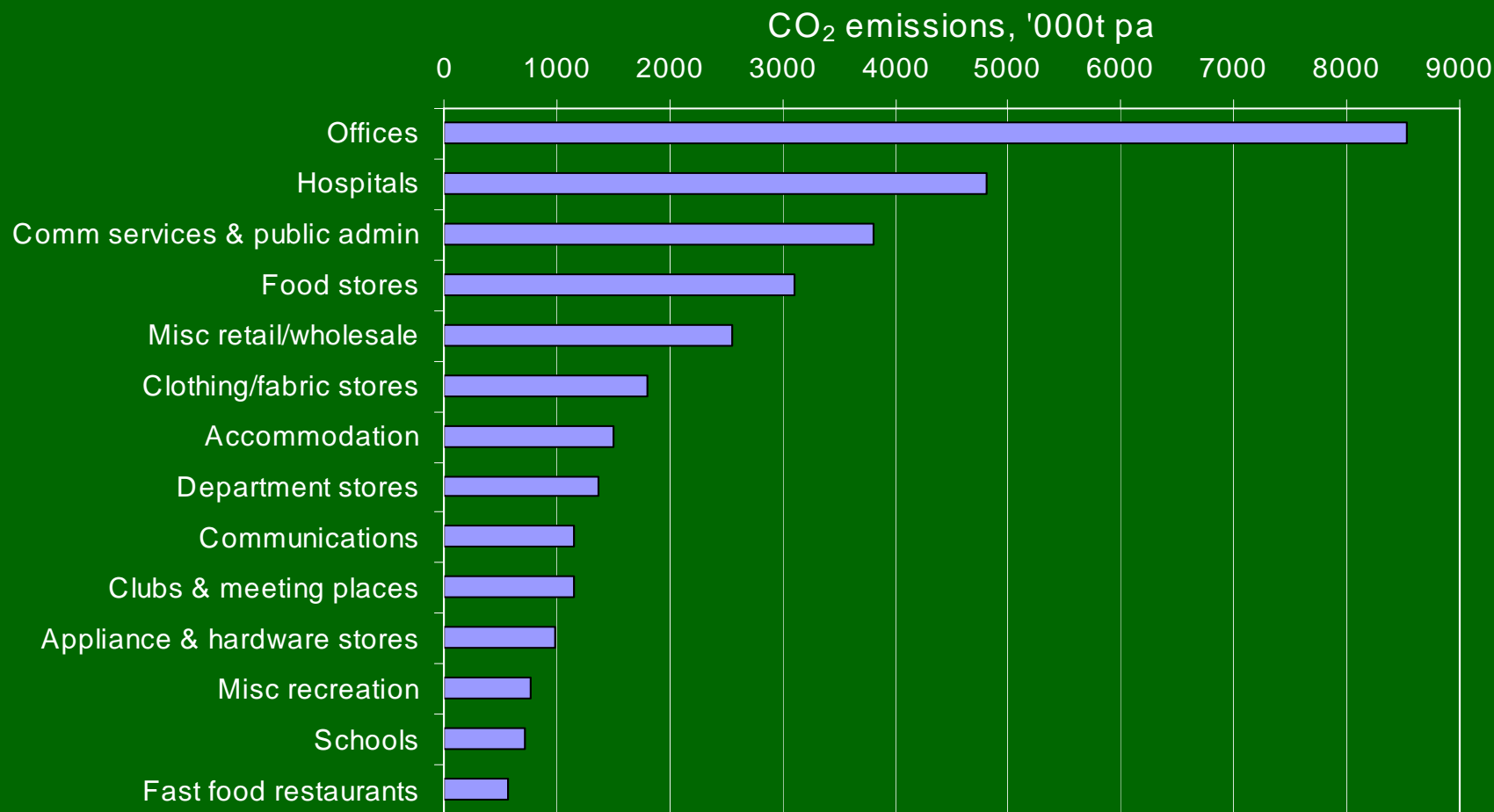
- 8.8% of the national emissions
- 3-4% growth per annum – predicted to almost double between 1990 and 2010.
- Grew by 35% between 1990 and 1998.



Why office buildings initially?

Australian Building Greenhouse Rating scheme

CO₂ emissions by building type, Australia 1990 [EMET & Solarch, 1999]



Why office buildings initially?

Australian Building Greenhouse Rating scheme

ABGR – key attributes

- Simplicity, accessibility, voluntary
- National coverage
- Performance, not design based tool
- Derived from the real performance of Australian office buildings



ABGR world first initiative

Australian Building Greenhouse Rating scheme

ABGR – key attributes

- Market Transformation program for SEDA
- Focussed on existing buildings
- Parramatta CBD Greenhouse Leaders Project
- Badging best practice in new buildings



ABGR world first initiative

Australian Building Greenhouse Rating scheme

ABGR – key attributes

- Performance benchmark for operational energy use
- Separately rates base building, tenancies, whole building
- Web based, allows self assessment
- 76 Assessors to do accredited ratings



ABGR world first initiative

Australian Building Greenhouse Rating scheme

ABGR – key attributes

- Data normalised for :
 - Nett lettable area
 - Hours of occupancy
 - Climate
 - Equipment load (no of computers)
- Benchmark - kg CO₂/sq. m./p.a.



ABGR world first initiative

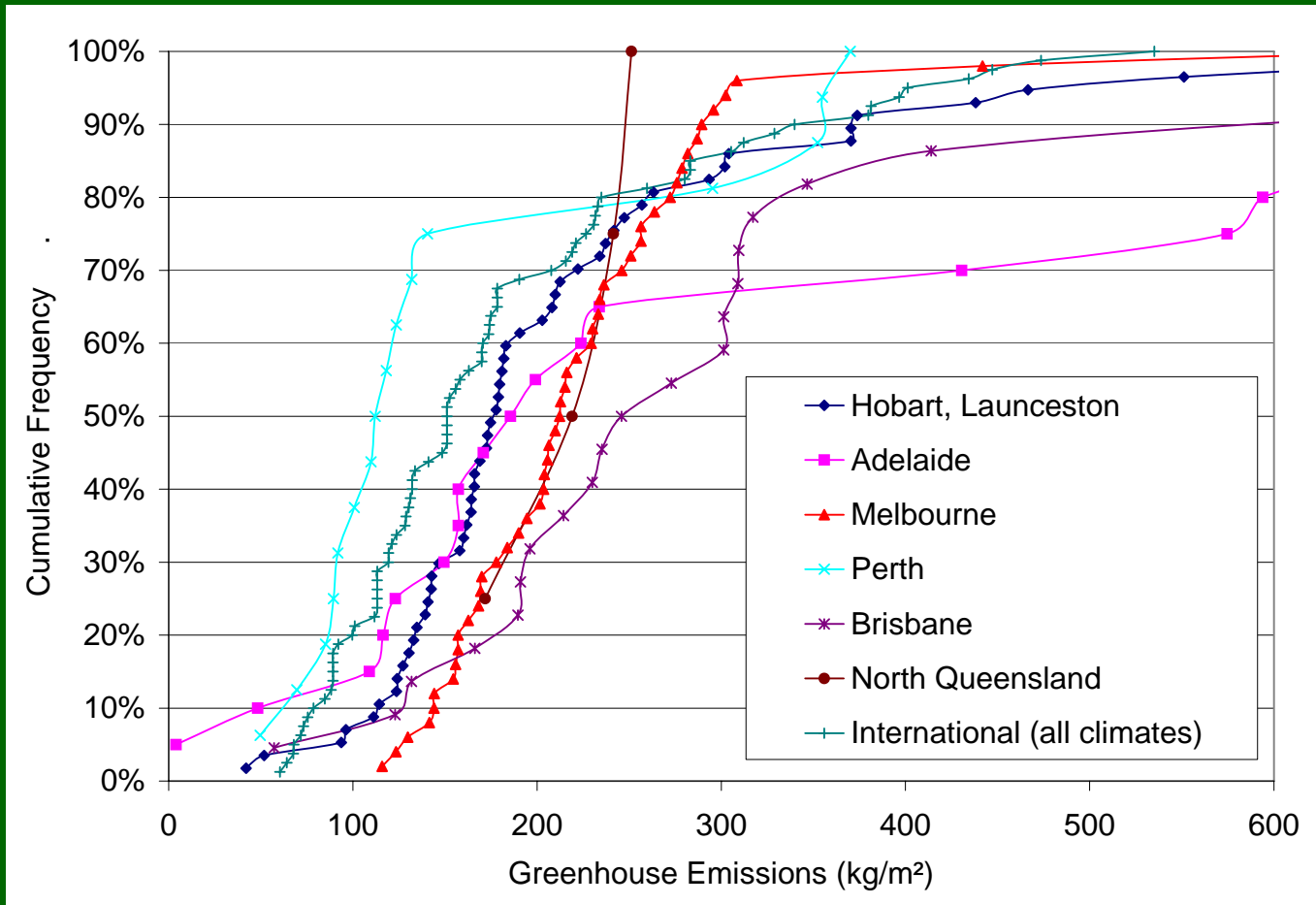
Australian Building Greenhouse Rating scheme



ABGR world first initiative

Australian Building Greenhouse Rating scheme

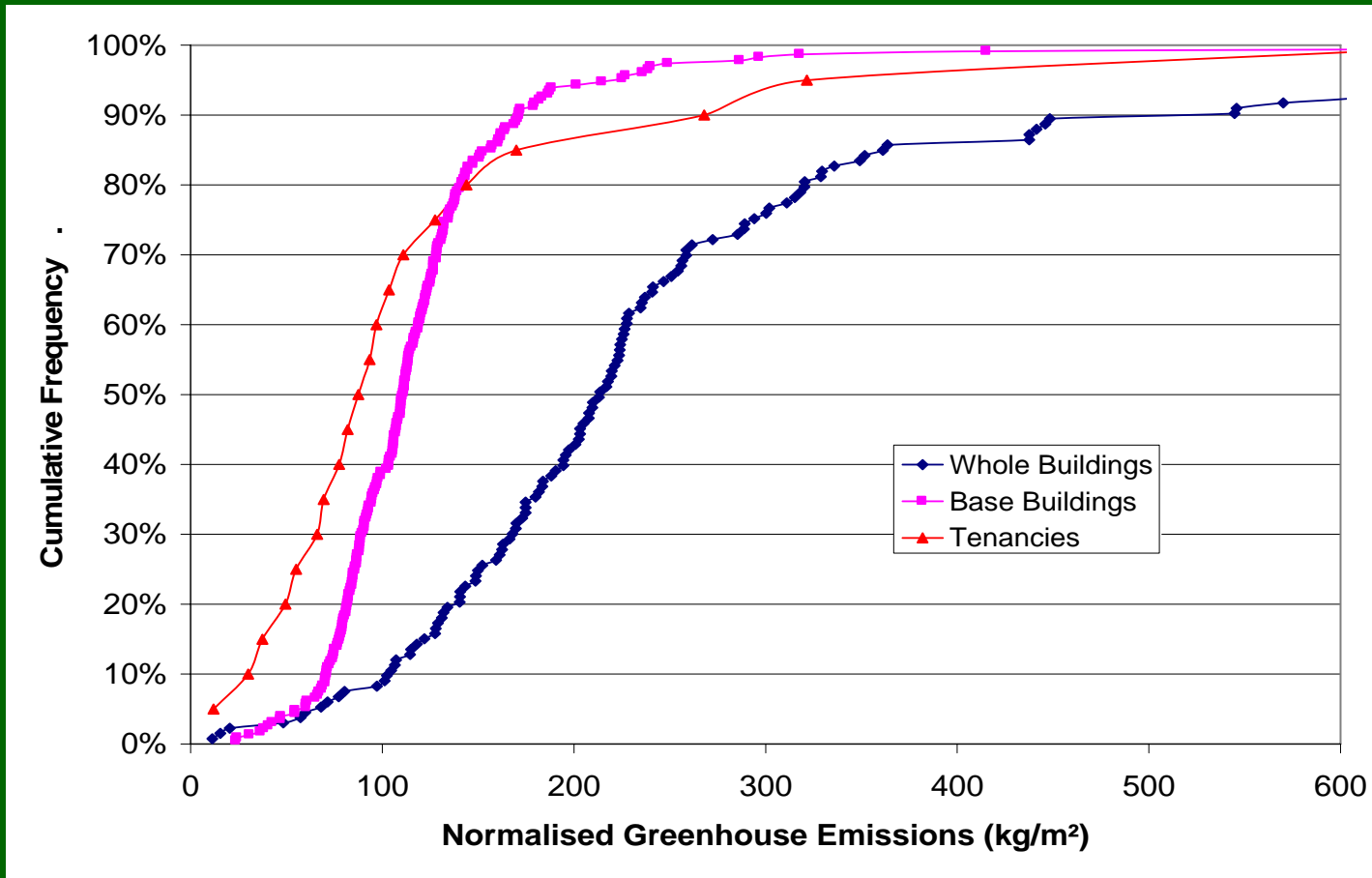
Australian Office Benchmarking – whole building data



Benchmarking Australian Office Buildings

Australian Building Greenhouse Rating scheme

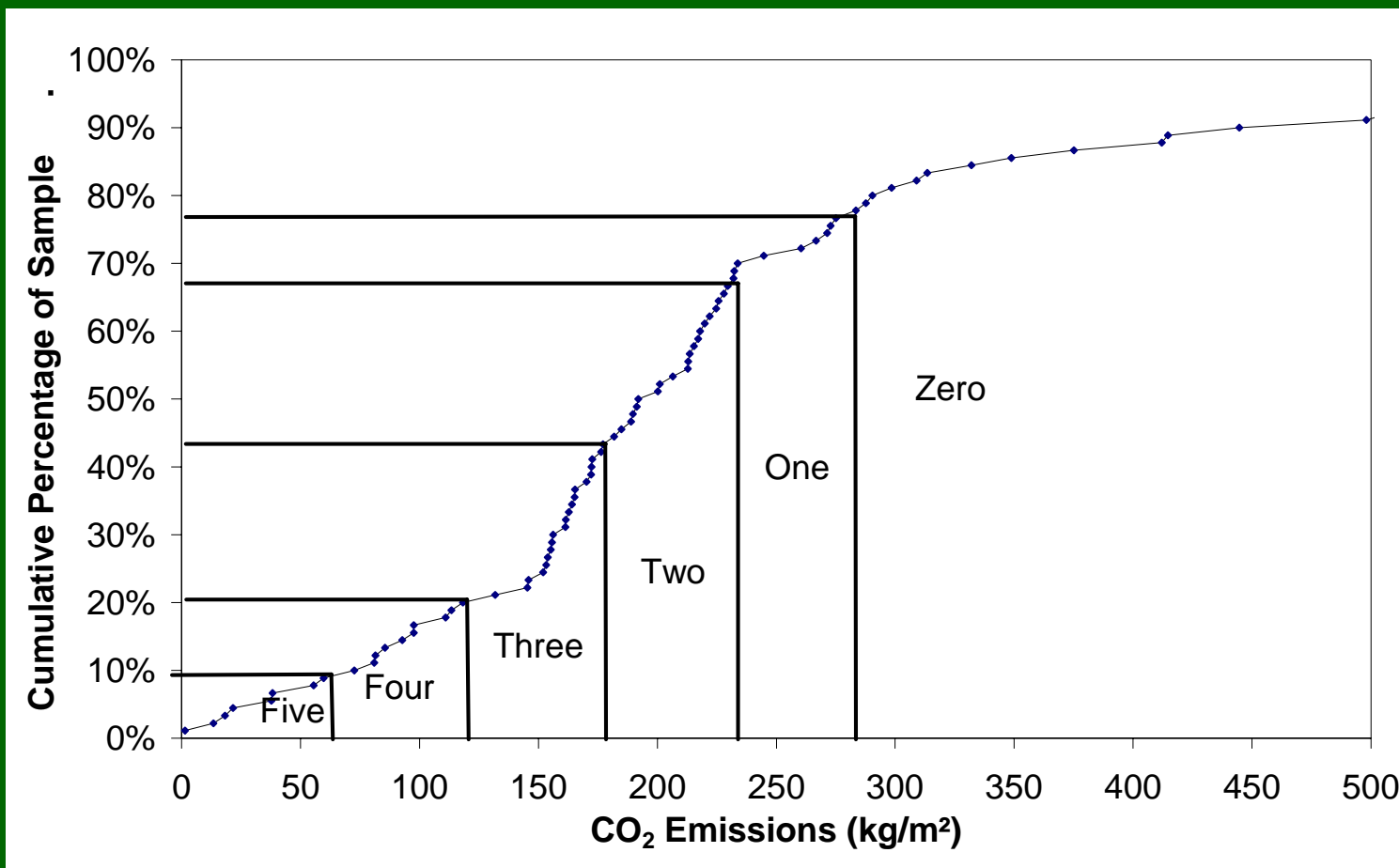
Australian Office Benchmarking – normalised GHG emissions



Benchmarking Australian Office Buildings

Australian Building Greenhouse Rating scheme

Setting the rating bands



Benchmarking Australian Office Buildings

Australian Building Greenhouse Rating scheme

Normalised emissions thresholds (kgCO₂/m², base building rating)

Star level	State						
	NSW/ACT	VIC	QLD	SA	WA	NT	TAS Normalised energy
1 star	199	225	215	201	205	147	230
1.5 star	183	209	198	185	189	136	212
2 star	167	194	180	169	172	124	194
2.5 star	151	178	163	153	156	112	175
3 star	135	163	146	136	139	100	157
3.5 star	119	147	129	120	123	88	138
4 star	103	132	111	104	106	76	120
4.5 star	87	116	94	88	90	65	101
5 star	71	101	77	72	74	53	83



Benchmarking Australian Office Buildings

Australian Building Greenhouse Rating scheme

Market uptake of ABGR

- AMP self assessed portfolio using ABGR
- Deutsche Asset Management self assessed
- Investa accredited ratings for NSW portfolio, re-rating NSW, Qld, Vic buildings, SAM recognition
- Macquarie Property Trust - asset contracts have penalties / bonuses for improving ABGR rating, also taking 10%-15% green power per building



Market Uptake

Australian Building Greenhouse Rating scheme

Market uptake of ABGR

- General Property Trust – rating portfolio with ABGR and reporting to shareholders in Annual Report
- Colonial First State - \$136 m. ethical investment on basis of ABGR ratings and action plans to upgrade buildings, now integrating into portfolio
- AuSec offering fixed rate debenture, using ABGR
- EP&T - ABGR in energy management system to make accredited ratings easy, in 350 buildings



Market Uptake

Australian Building Greenhouse Rating scheme

Market uptake of ABGR

- Mirvac – ABGR ratings of whole portfolio, systematic upgrading through SEDA program
- Multiplex – delivering 3 new buildings to specified levels of ABGR performance
- First 5 star building announced on April 30th by NSW Premier. Represents a step change in way industry addresses greenhouse performance



Market Uptake

Australian Building Greenhouse Rating scheme

ABGR & new buildings

- Commitment Agreement allows developer to “badge” best practice from outset
 - Agrees to rate building when 12 months of data available from operational building
 - Requires simulation in design 4.5, 5 stars
 - Requires independent design review



How ABGR applies to new buildings

Australian Building Greenhouse Rating scheme