

BBP NABERS UK Breakfast Briefing

14th June 2023

Legal & General Investment Management

Agenda

1. Welcome & Update on NABERS UK Scheme:
 - Sarah Ratcliffe, CEO, BBP
2. LGIM experience of implementing NABERS UK:
 - Malcolm Hanna, Senior Sustainability Manager, LGIM
3. Reflections from Australia & how NABERS is used in the market
 - Carlos Flores, Director, NABERS
4. Panel Discussion: Using Performance in-use Ratings in Leasing & Valuation
Speakers joined by:
 - Sam Carson, Senior Director, Head of Sustainability, Valuations Advisory, CBRE
 - Kirsty Draper, Head of Sustainability UK Agency, JLL
5. Closing Remarks

WELCOME

Sarah Ratcliffe, BBP

The Better Buildings Partnership



54
MEMBERS



THE BBP IS A COLLABORATION OF LEADING PROPERTY OWNERS WHO ARE WORKING TOGETHER TO IMPROVE THE SUSTAINABILITY OF COMMERCIAL BUILDINGS.



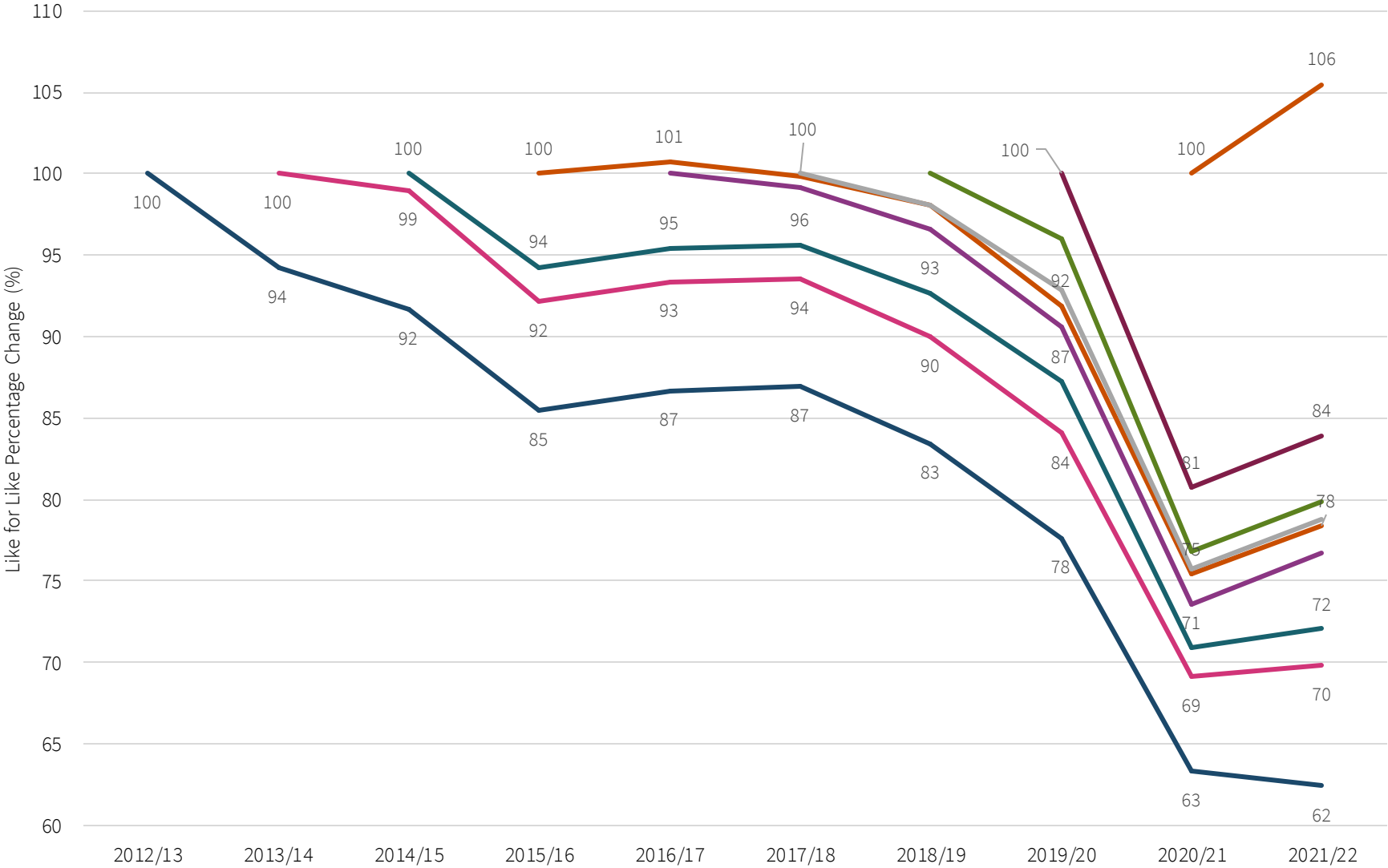
+£300bn
AUM



+450m
SQ FT



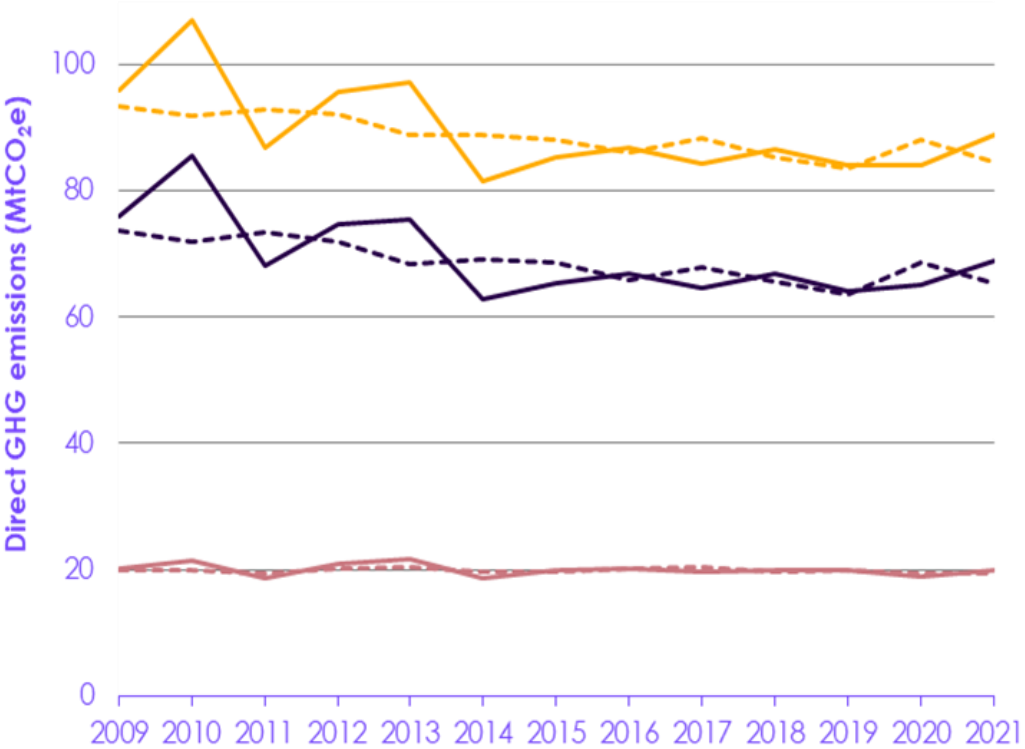
Measuring energy efficiency in commercial buildings



KEY FACTS (2021/22)

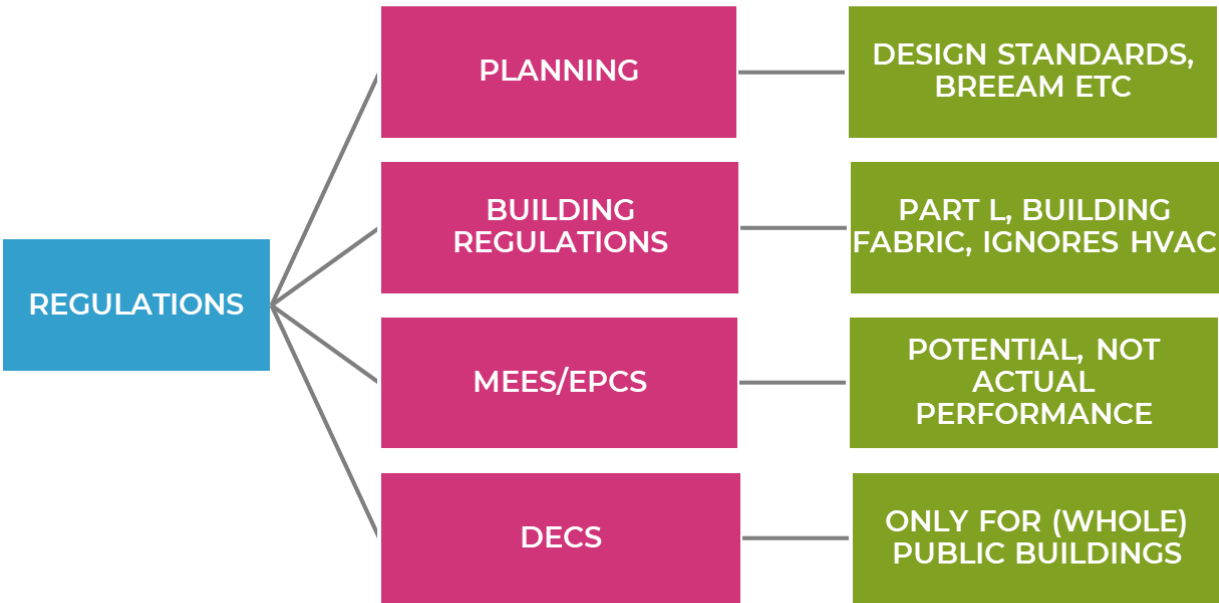
- 41**
BBP MEMBERS SUBMITTING DATA
- 8**
MAP MEMBERS SUBMITTING DATA
- 1,275**
PROPERTIES
- 12.5M**
M² OF FLOOR AREA
- 1,700**
GWH ENERGY CONSUMPTION

Emissions from commercial buildings have flat lined



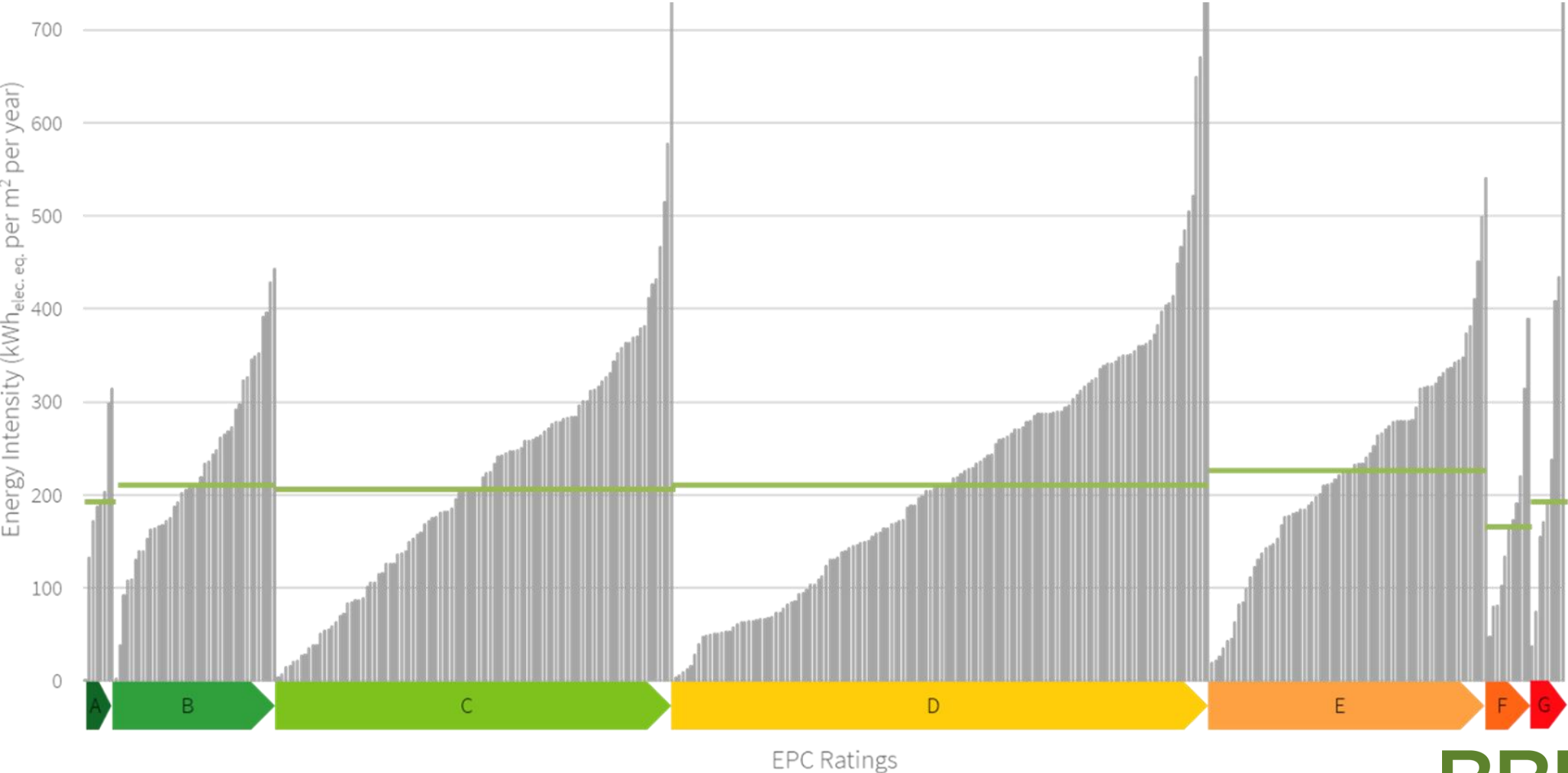
— Actual emissions - all buildings - - - Adjusted emissions - all buildings
— Actual emissions - res buildings - - - Adjusted emissions - res buildings
— Actual emissions - non-res buildings - - - Adjusted emissions - non-res buildings

UK HAS A COMPLIANCE-BASED APPROACH TO ENERGY EFFICIENCY

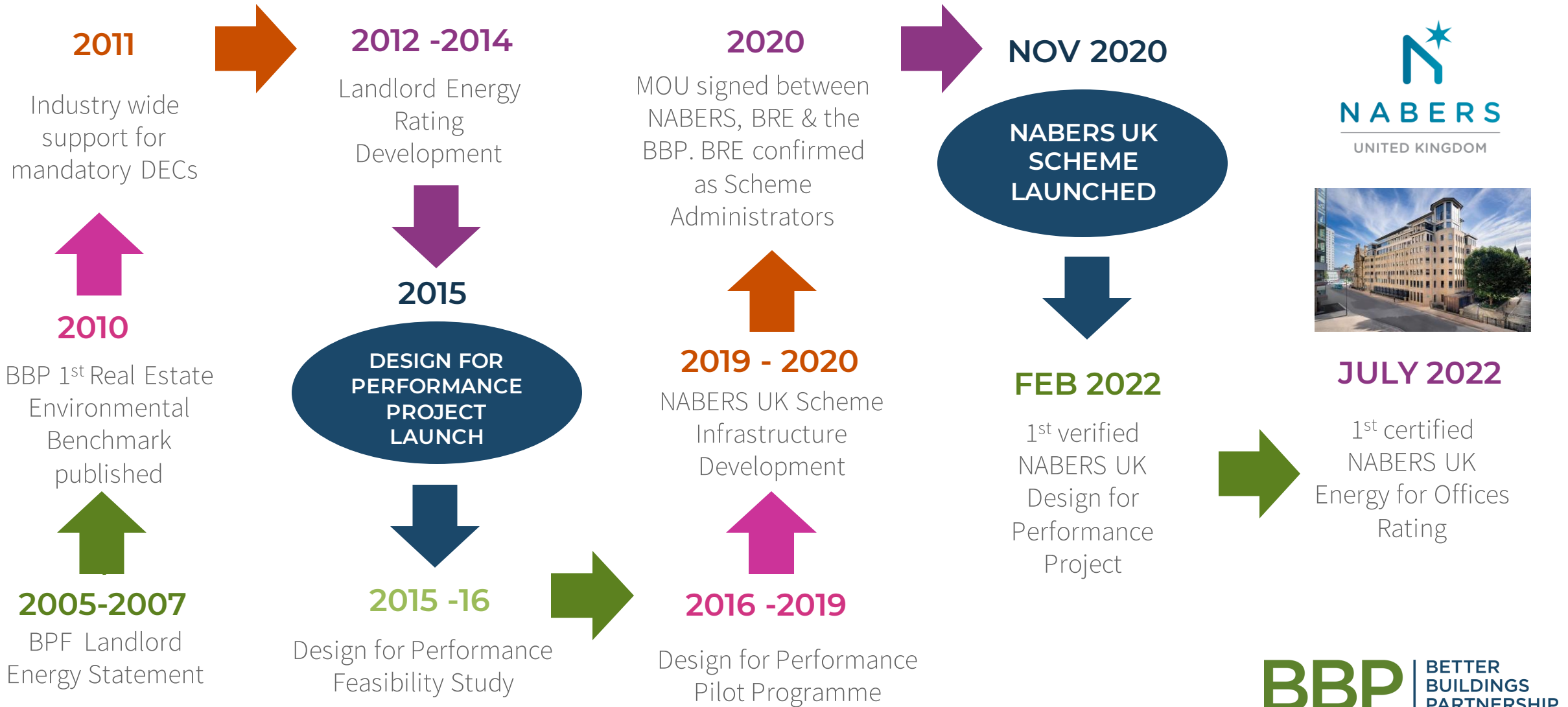


<https://www.theccc.org.uk/publication/2022-progress-report-to-parliament/#supporting-information-charts-and-data>

EPCs are not a good indicator of performance in use



The journey to NABERS UK

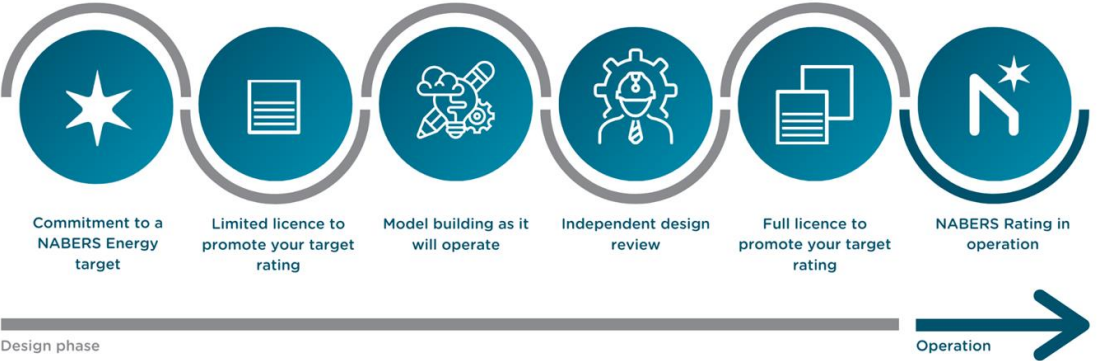


NABERS UK – addressing energy efficiency challenges



BRIDGING THE PERFORMANCE GAP

Developer or owner commits to design, build and commission a new office development or major refurbishment to achieve a specific NABERS Energy rating



DRIVING PERFORMANCE IMPROVEMENT

Annual measurement & rating of the efficiency of an office building. The energy rating works by comparing the energy consumption of a building against a set of benchmarks that have been developed using actual data.



MEASURES ACTUAL (METERED) PERFORMANCE



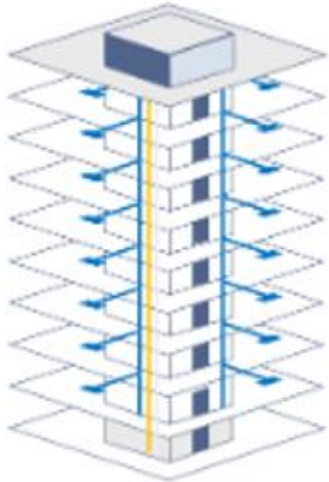
PROVIDES A FAIR COMPARISON

A simple, robust metric

NABERS communicates through 1 to 6 star, providing a simple, robust metric that can be used by a wide range of stakeholders.

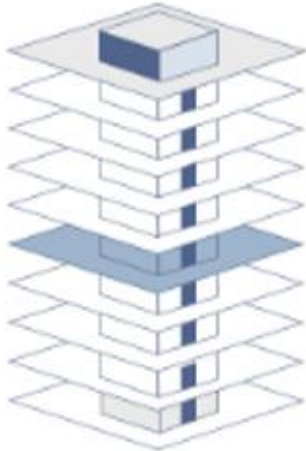


Ratings align with parties in control



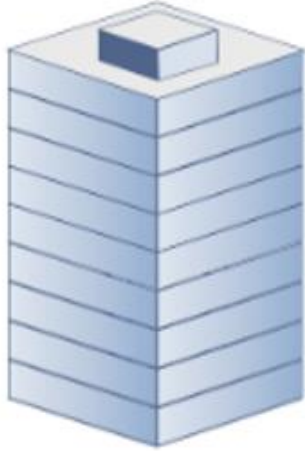
BASE BUILDING

Buildings can be rated based on their central services like heating and cooling systems, lifts and lobby lighting.



TENANCY

Enables energy used by the tenant to be rated, typically for lighting and power, plus special tenancy requirements or local a/c



WHOLE BUILDING

Provides assessment of energy used by office tenancies and by Base Building services to lettable and common spaces

April 2021

NABERS UK Design for Performance

July 2021

NABERS UK Energy for Offices (Base Build)

April 2023

Scope of NABERS UK expanded to include Whole Building and Tenancy

A nascent scheme ... but momentum is building



88

**NABERS UK DFP PROJECTS
REGISTERED**

3

**CERTIFIED NABERS UK ENERGY FOR
OFFICES PROJECTS**

22

**CERTIFIED NABERS UK DFP
PROJECTS**

**SIGNIFICANT NUMBER OF
EXPRESSIONS OF INTEREST
(SPIKE SINCE WBT LAUNCH)**

83 Licensed Assessors, ~270 people trained

21 BBP Members publicly reference use of NABERS UK




“Measurement is critical to the effective targeting of our sustainability programme. Pioneering NABERS UK on our South Molton Triangle scheme will help transform our ability to accurately measure and influence the environmental performance of buildings in use.”

Tor Burrows, Grosvenor
Executive Director, Sustainability & Innovation

NABERS
UNITED KINGDOM



“NABERS UK is the enabler our industry needs to demonstrate the value of sustainable buildings and drive positive behaviours by pursuing tangible outcomes, and we’re very excited to support this launch.”

Nils Rage, Landsec
Sustainable Design and Innovation Manager

NABERS
UNITED KINGDOM



“As the real estate industry grapples with climate challenges and we map out how we’re going to achieve ambitious net zero targets, the launch of NABERS UK will play an important building block on this journey. British Land believes that ensuring efficient designs become efficient buildings is fundamental to achieving a net zero built environment - we are proud to support realising this via the Design for Performance initiative.”

Matthew Webster, British Land
Head of Sustainable and Smart Buildings

NABERS
UNITED KINGDOM



“Derwent London is really pleased to be a Design for Performance Pioneer supporting the development of NABERS UK. We believe NABERS UK is going to be a fundamental tool in the journey towards net zero carbon and bridging the performance gap.”

John Davies, Derwent London
Head of Sustainability

NABERS
UNITED KINGDOM

BBP | BETTER BUILDINGS PARTNERSHIP



“As Design for Performance. Pioneers we set out to collaborate with our industry partners to benchmark building performance, and we are very proud to be involved in the launch of NABERS UK.”

Victoria Quinlan, Lendlease
Managing Director, Investment Management

NABERS
UNITED KINGDOM

BBP | BETTER BUILDINGS PARTNERSHIP



“In order to meet its zero carbon commitments, the UK needs to make a rapid transition from ‘design for compliance’ to ‘Design for Performance’. The former does not fully engage with real world performance, leading to a misalignment between the original design intent and how a building truly performs in-use. We are delighted to be working with NABERS UK on an initiative that supports and encourages an industry shift to design for performance, making a major milestone in how we deliver energy efficiency to UK offices.”

Simon Wilkes, LGIM Real Assets
Head of Development

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UNITED KINGDOM

BBP | BETTER BUILDINGS PARTNERSHIP



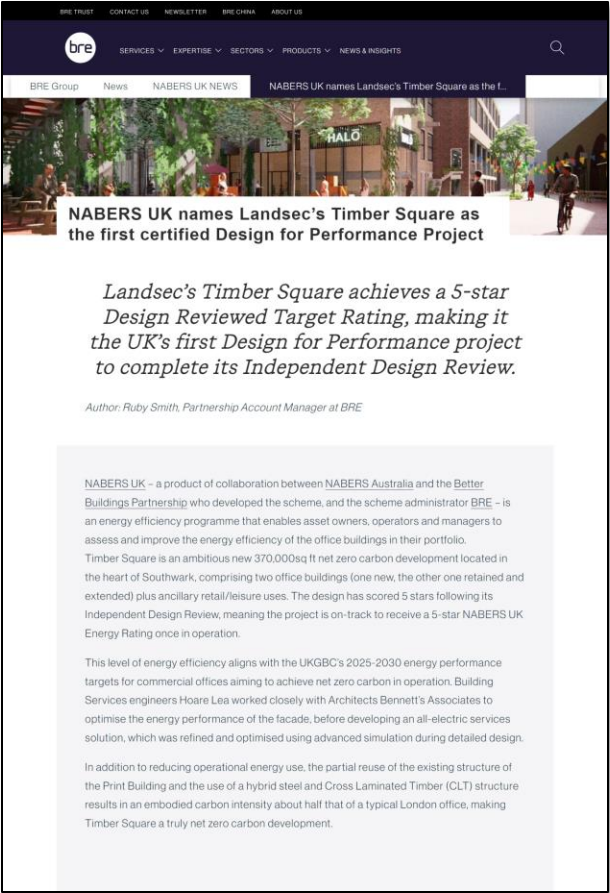
“NABERS UK is an essential tool if the industry is to transition to net zero carbon. Being a Design for Performance Pioneer was, therefore, an obvious step for us. We will be implementing it across our developments and have integrated it within our roadmap to net zero.”

Andrew White, Great Portland Estates
Development Director

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UNITED KINGDOM

BBP | BETTER BUILDINGS PARTNERSHIP

Market competing for industry firsts ... and driving performance outcomes



NABERS UK names Landsec's Timber Square as the first certified Design for Performance Project

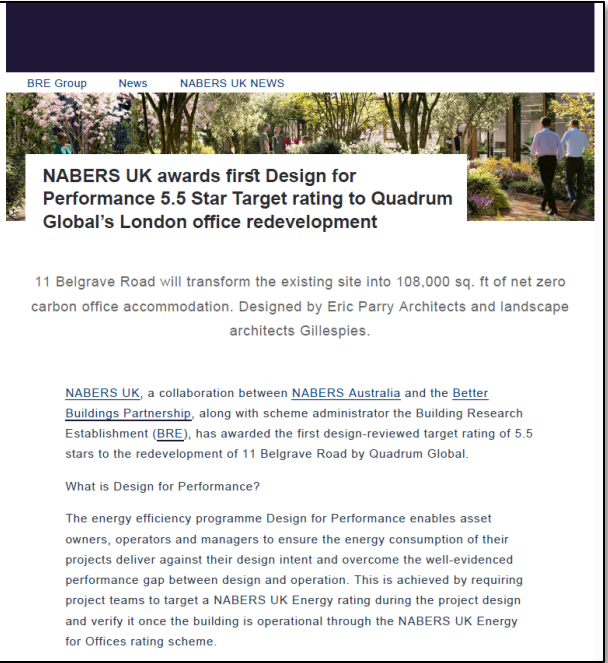
Landsec's Timber Square achieves a 5-star Design Reviewed Target Rating, making it the UK's first Design for Performance project to complete its Independent Design Review.

Author: Ruby Smith, Partnership Account Manager at BRE

NABERS UK – a product of collaboration between NABERS Australia and the Better Buildings Partnership who developed the scheme, and the scheme administrator BRE – is an energy efficiency programme that enables asset owners, operators and managers to assess and improve the energy efficiency of the office buildings in their portfolio. Timber Square is an ambitious new 370,000sqft net zero carbon development located in the heart of Southwark, comprising two office buildings (one new, the other one retained and extended) plus ancillary retail/leisure uses. The design has scored 5 stars following its Independent Design Review, meaning the project is on-track to receive a 5-star NABERS UK Energy Rating once in operation.

This level of energy efficiency aligns with the UKGBC's 2025-2030 energy performance targets for commercial offices aiming to achieve net zero carbon in operation. Building Services engineers Hoare Lea worked closely with Architects Bennett's Associates to optimise the energy performance of the facade, before developing an all-electric services solution, which was refined and optimised using advanced simulation during detailed design.

In addition to reducing operational energy use, the partial reuse of the existing structure of the Print Building and the use of a hybrid steel and Cross Laminated Timber (CLT) structure results in an embodied carbon intensity about half that of a typical London office, making Timber Square a truly net zero carbon development.



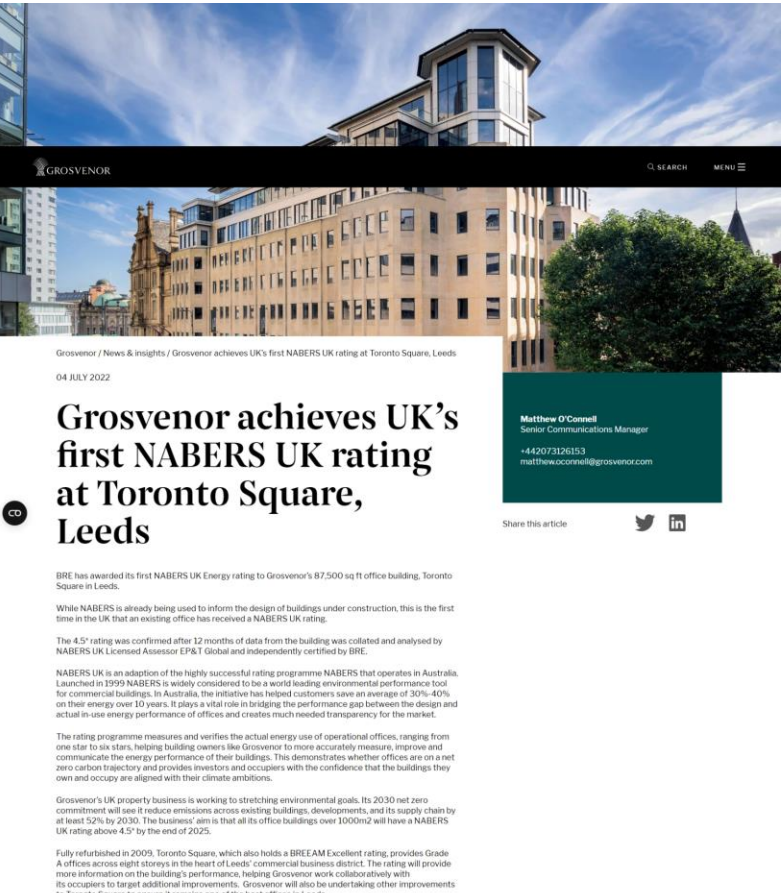
NABERS UK awards first Design for Performance 5.5 Star Target rating to Quadrum Global's London office redevelopment

11 Belgrave Road will transform the existing site into 108,000 sq. ft of net zero carbon office accommodation. Designed by Eric Parry Architects and landscape architects Gillespies.

NABERS UK, a collaboration between NABERS Australia and the Better Buildings Partnership, along with scheme administrator the Building Research Establishment (BRE), has awarded the first design-reviewed target rating of 5.5 stars to the redevelopment of 11 Belgrave Road by Quadrum Global.

What is Design for Performance?

The energy efficiency programme Design for Performance enables asset owners, operators and managers to ensure the energy consumption of their projects deliver against their design intent and overcome the well-evidenced performance gap between design and operation. This is achieved by requiring project teams to target a NABERS UK Energy rating during the project design and verify it once the building is operational through the NABERS UK Energy for Offices rating scheme.



Grosvenor achieves UK's first NABERS UK rating at Toronto Square, Leeds

04 JULY 2022

BRE has awarded its first NABERS UK Energy rating to Grosvenor's 87,500 sq ft office building, Toronto Square in Leeds.

While NABERS is already being used to inform the design of buildings under construction, this is the first time in the UK that an existing office has received a NABERS UK rating.

The 4.5* rating was confirmed after 12 months of data from the building was collated and analysed by NABERS UK Licensed Assessor EP&T Global and independently certified by BRE.

NABERS UK is an adoption of the highly successful rating programme NABERS that operates in Australia. Launched in 1999 NABERS is widely considered to be a world leading environmental performance tool for commercial buildings. In Australia, the initiative has helped customers save an average of 30%-40% on their energy over 10 years. It plays a vital role in bridging the performance gap between the design and actual in-use energy performance of offices and creates much needed transparency for the market.

The rating programme measures and verifies the actual energy use of operational offices, ranging from one star to six stars, helping building owners like Grosvenor to more accurately measure, improve and communicate the energy performance of their buildings. This demonstrates whether offices are on a net zero carbon trajectory and provides investors and occupiers with the confidence that the buildings they own and occupy are aligned with their climate ambitions.

Grosvenor's UK property business is working to stretching environmental goals. Its 2030 net zero commitment will see it reduce emissions across existing buildings, developments, and its supply chain by at least 52% by 2030. The business' aim is that all its office buildings over 1000m2 will have a NABERS UK rating above 4.5* by the end of 2025.

Fully refurbished in 2009, Toronto Square, which also holds a BREEAM Excellent rating, provides Grade A offices across eight storeys in the heart of Leeds' commercial business district. The rating will provide more information on the building's performance, helping Grosvenor work collaboratively with its occupiers to target additional improvements. Grosvenor will also be undertaking other improvements to Toronto Square to ensure it remains one of the best offices in Leeds.

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NABERS UK - embedded in industry standards & guidance



BCO GUIDE TO SPECIFICATION



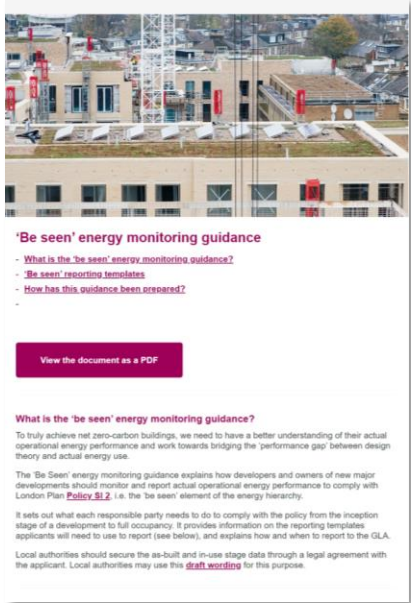
RIBA PLAN FOR USE GUIDE



UKGBC TARGETS & WLC ROAD MAP



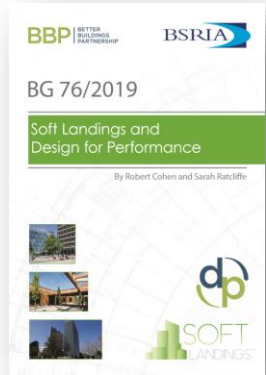
BREEAM NEW CONSTRUCTION



GLA 'BE SEEN' POLICY



CIBSE TM54



BSRIA SOFT LANDINGS



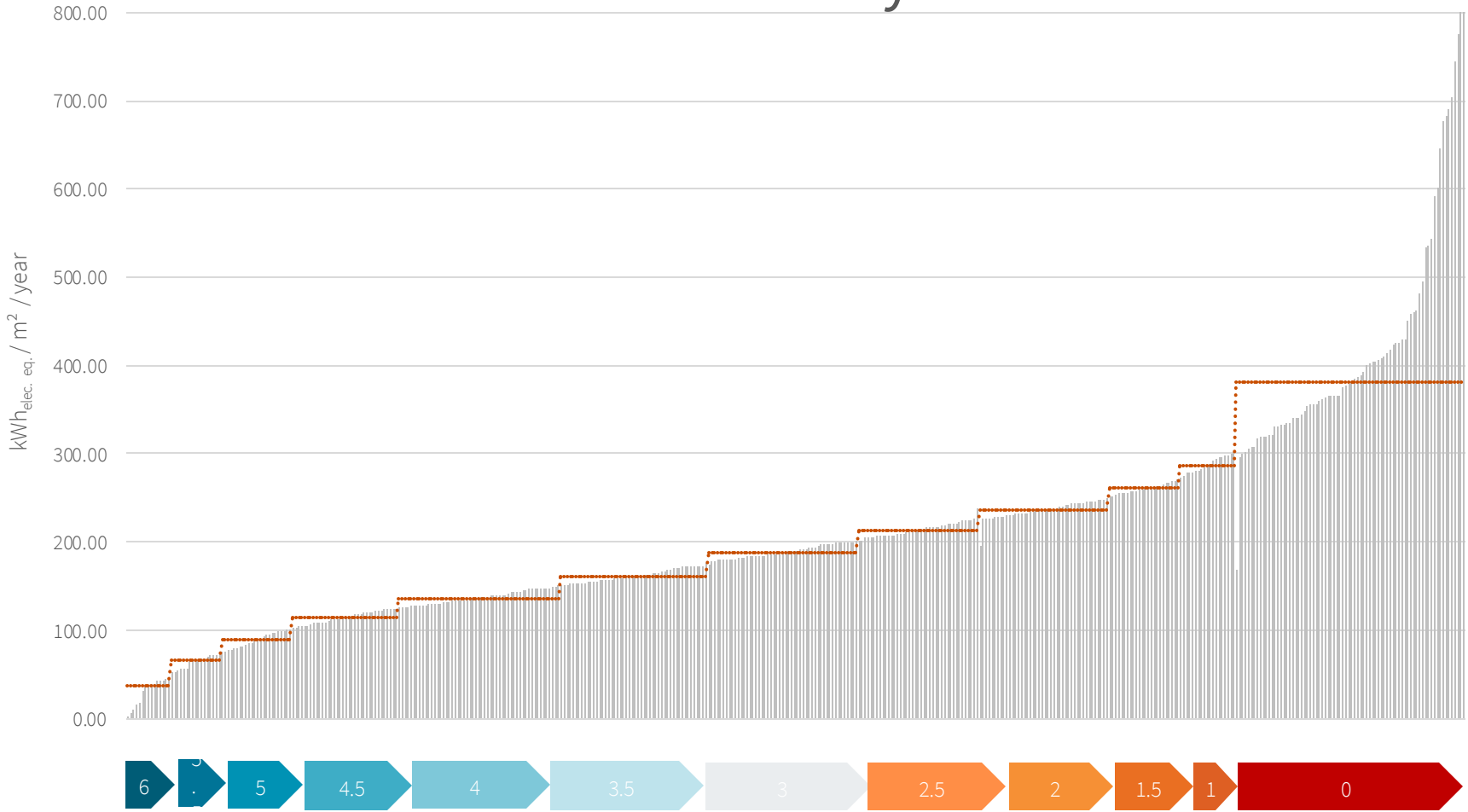
LETI TARGETS & GUIDANCE



GRESB CREDITS

... and finally

NABERS Analysis



IMPLEMENTING NABERS UK AT LGIM

Malcolm Hanna, LGIM

Reflections from Australia

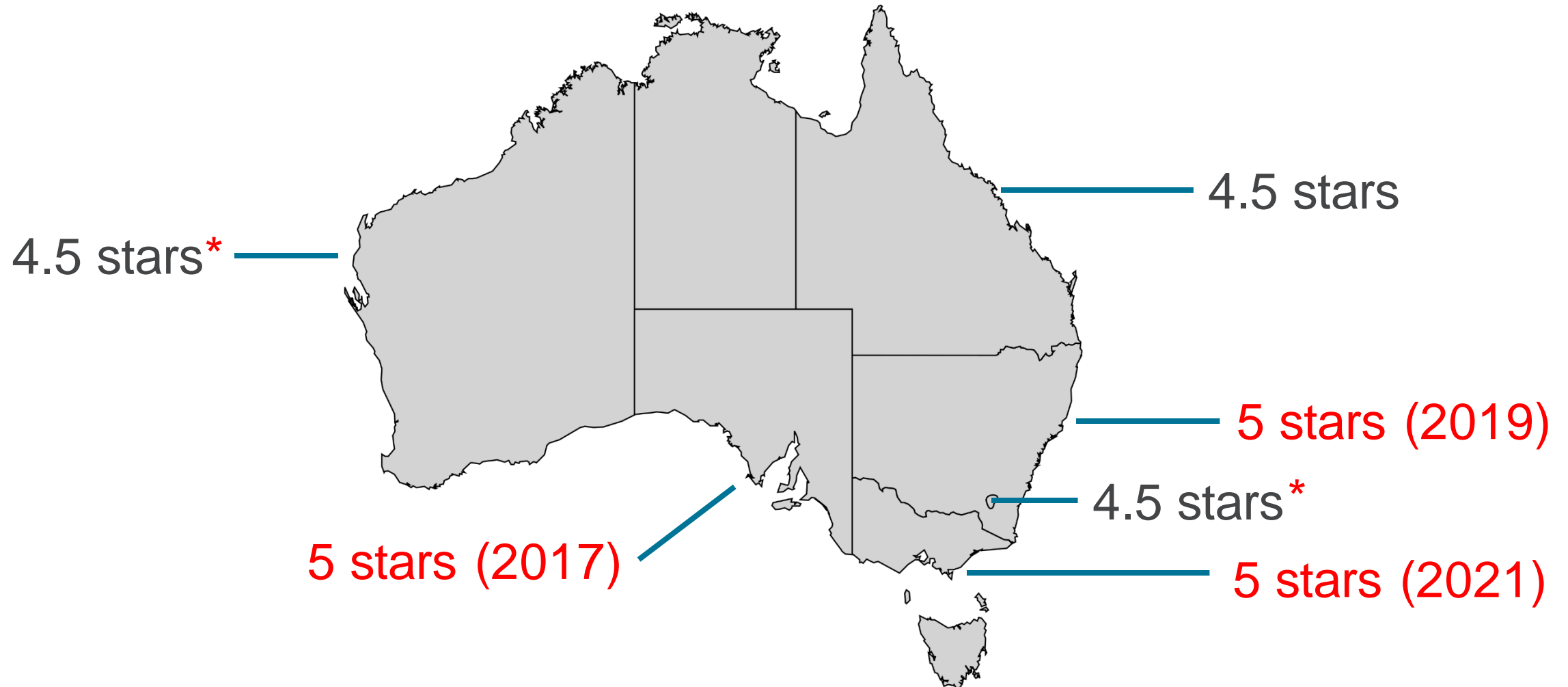
Carlos Flores | Director, NABERS



NABERS ratings have enabled some of Australia's most impactful carbon reduction policies in buildings

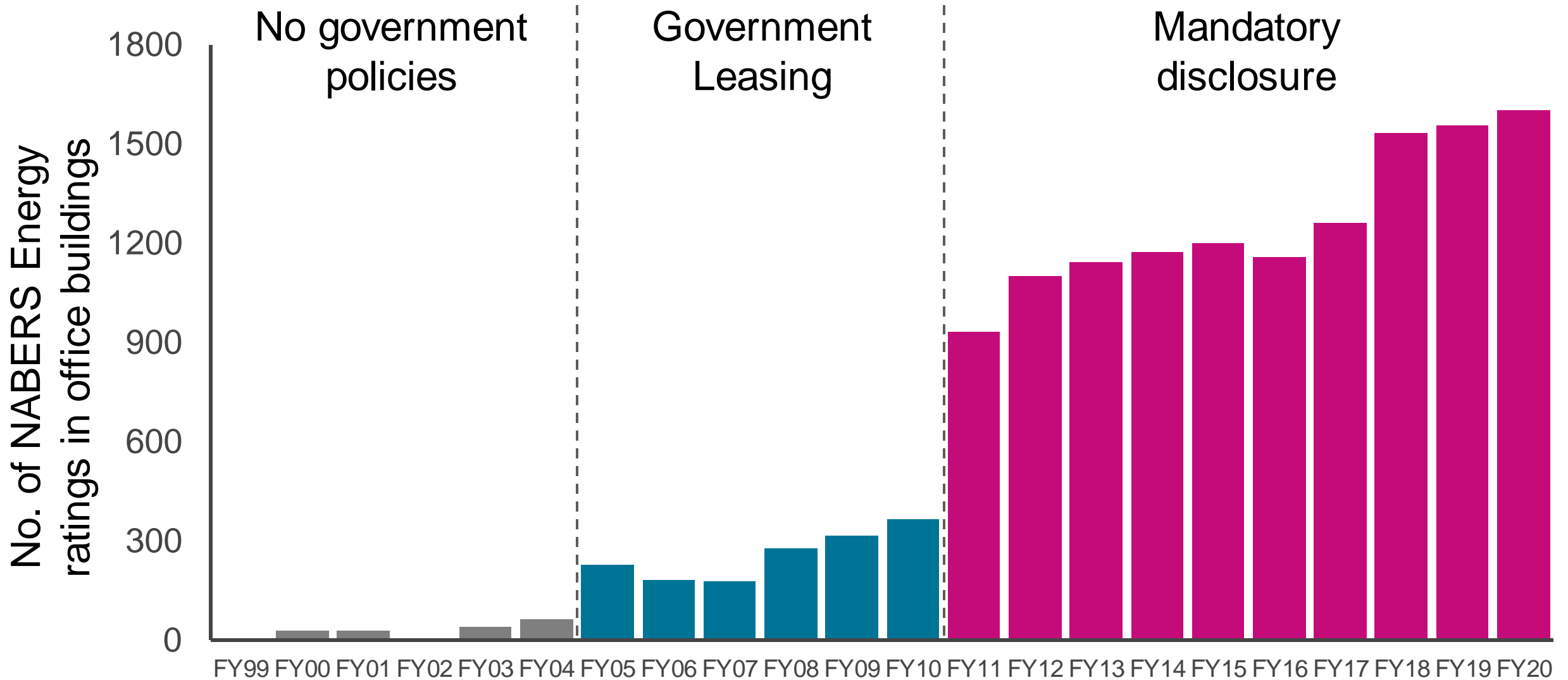


NABERS Energy have been used in Government leasing since 2006

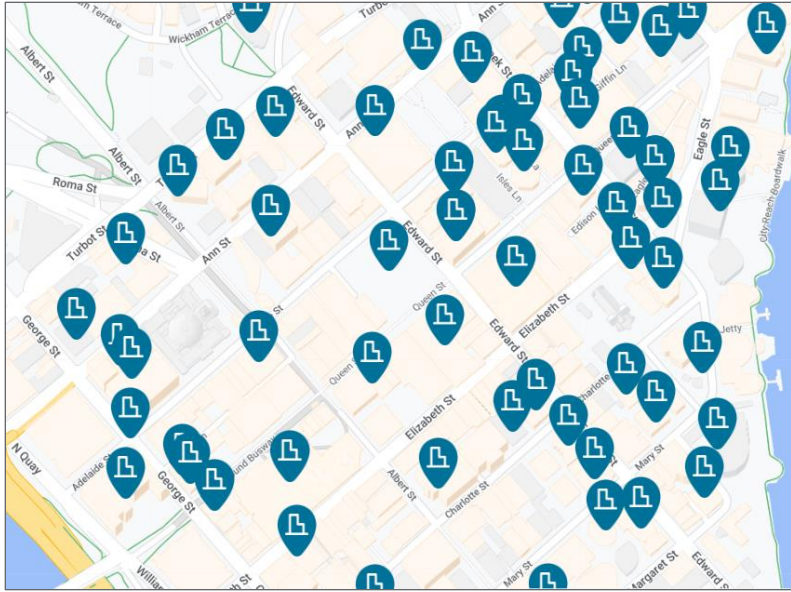


* Policies expected to be updated in 2023

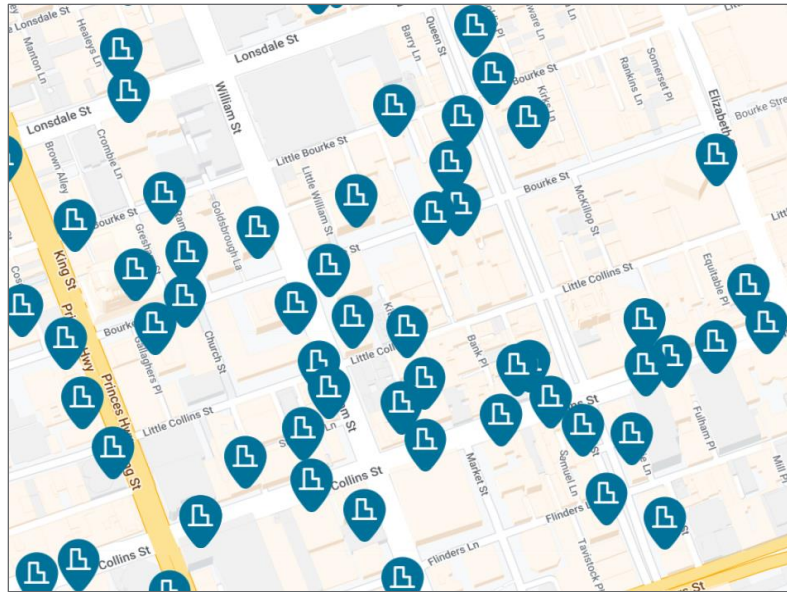
Government policies made building energy efficiency visible



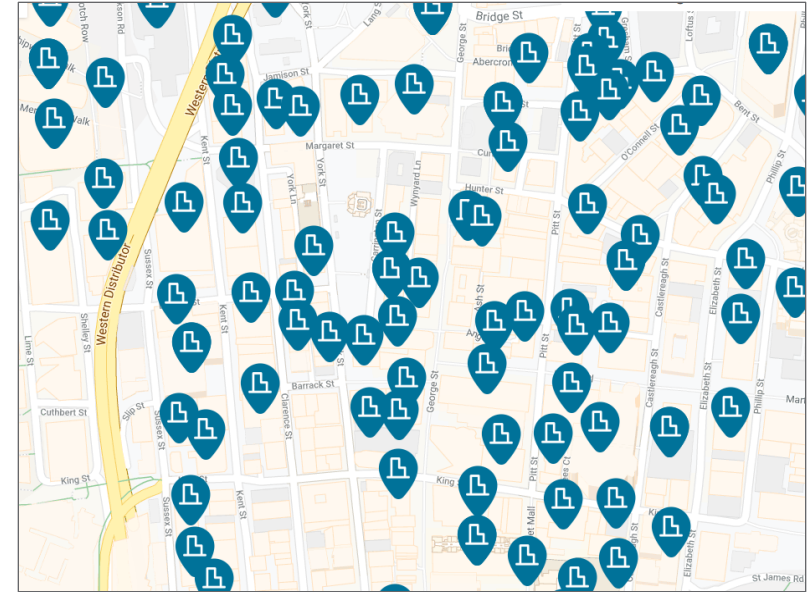
Brisbane



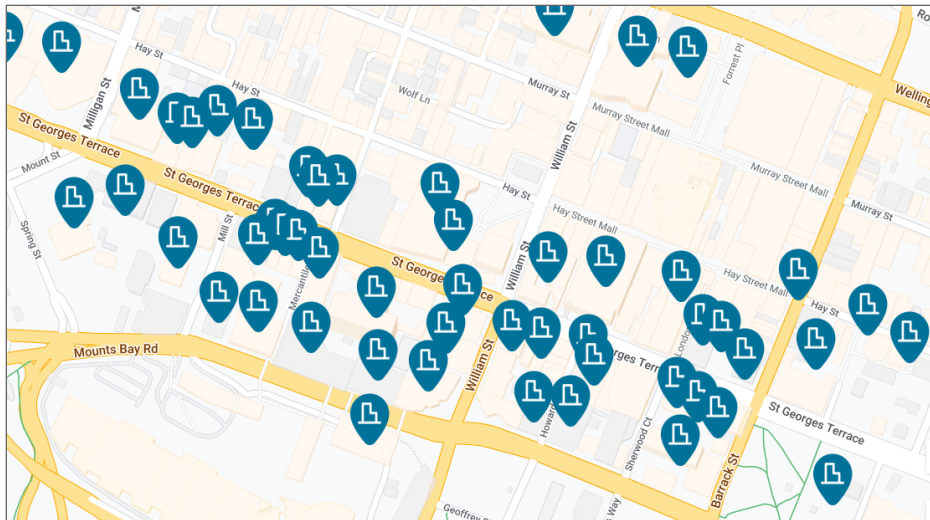
Melbourne



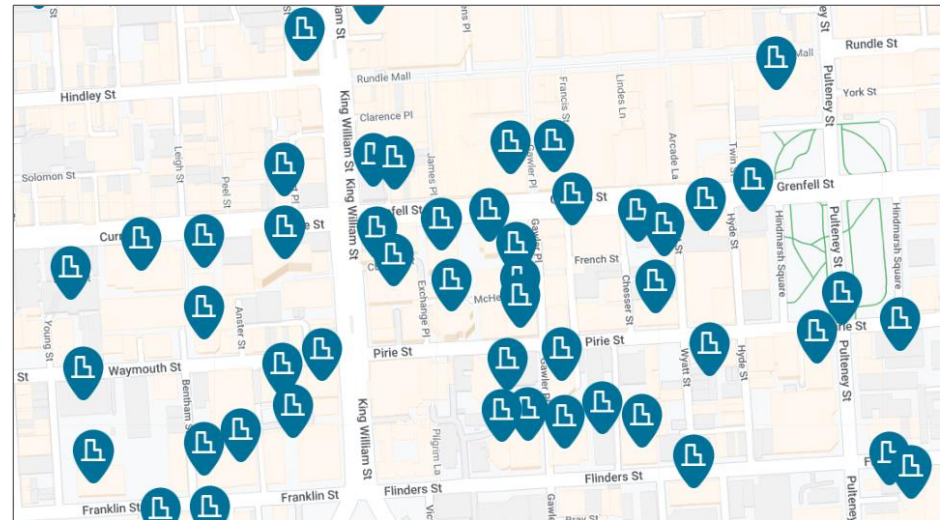
Sydney



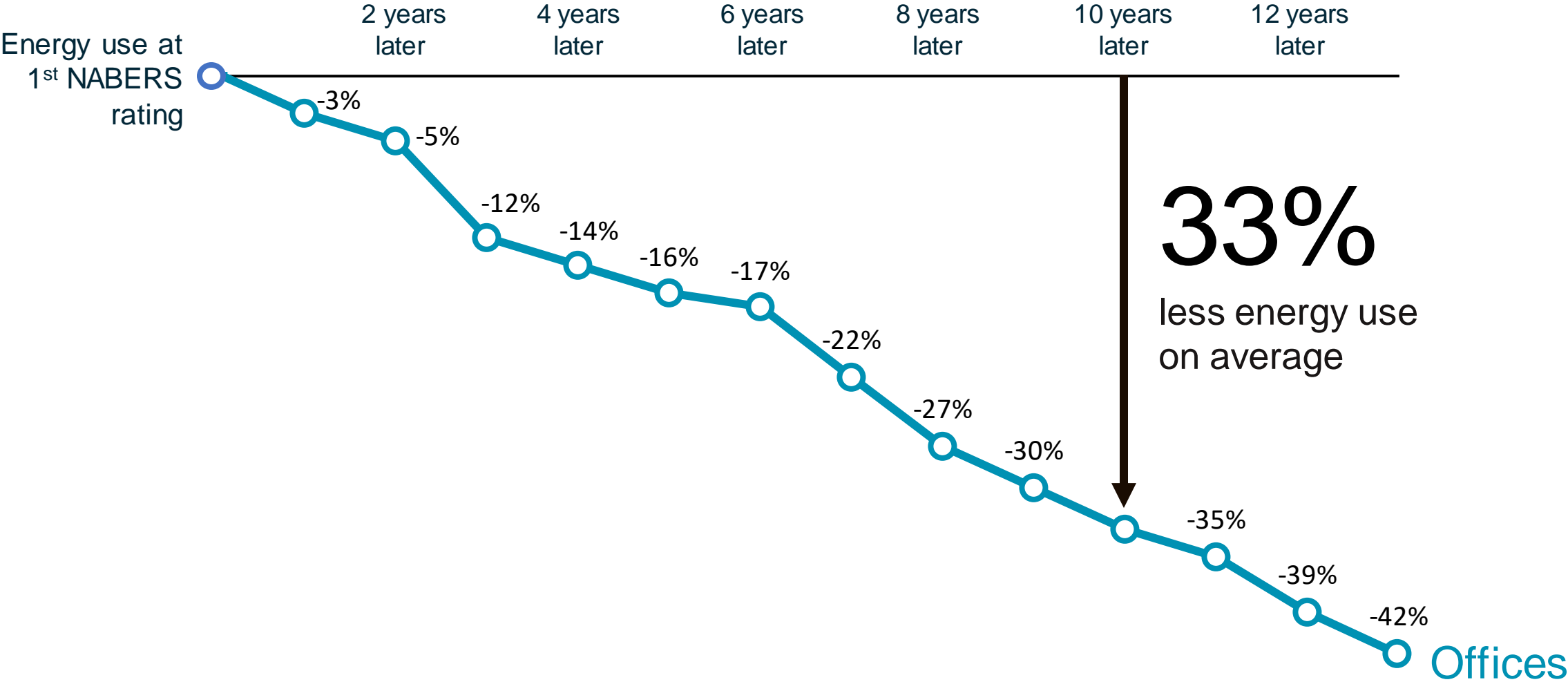
Perth



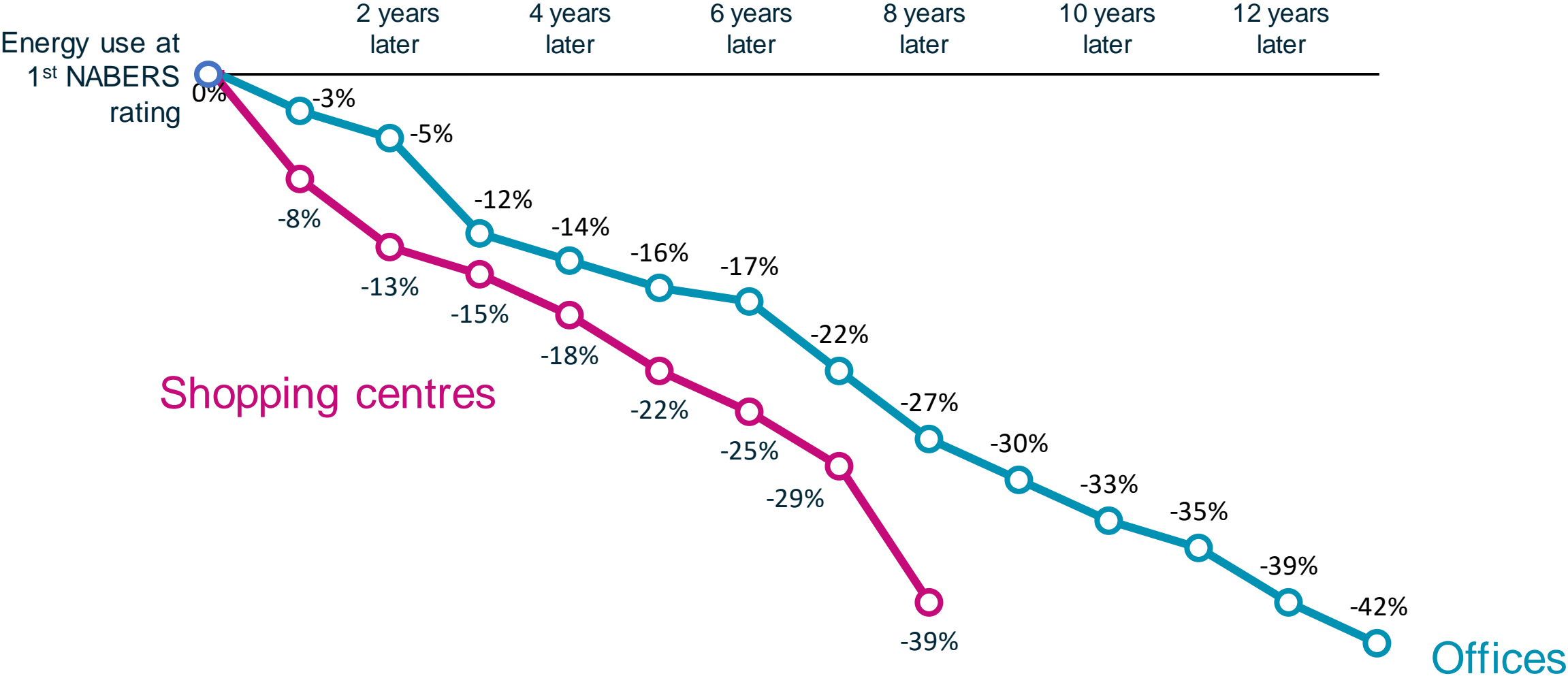
Adelaide



Existing buildings certifying in NABERS are reducing energy use at one of the fastest rates globally

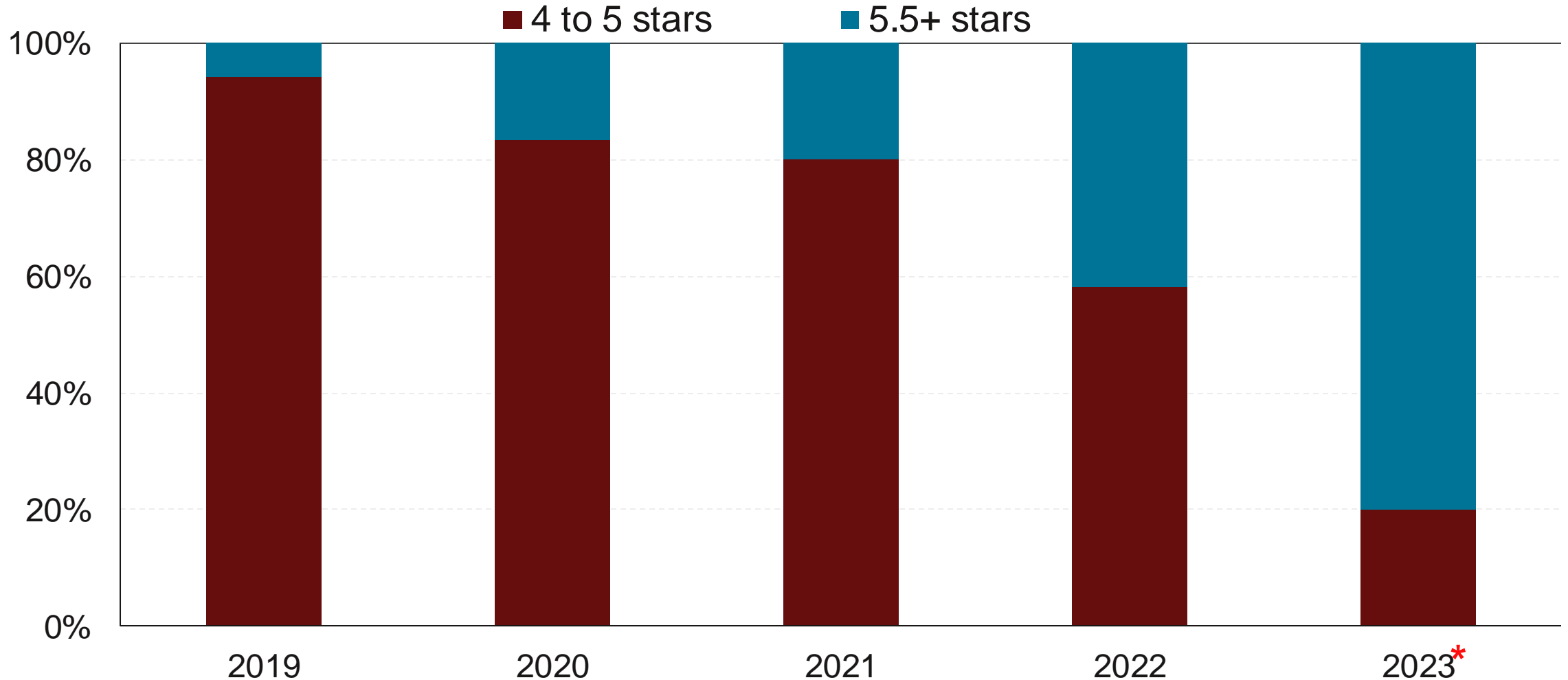


Existing buildings certifying in NABERS are reducing energy use at one of the fastest rates globally



New buildings in Australia are aiming for higher energy efficiency targets

Star rating target in NABERS Commitment Agreements (Design for Performance)

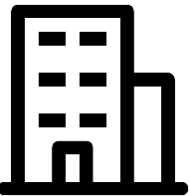


* Year in progress, figures up to June 2023

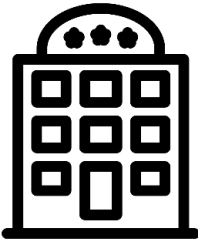
**Expanding the benefits of NABERS to more sectors
has become a national priority**



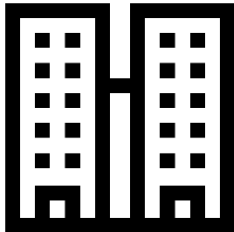
The Australian Government is rapidly expanding NABERS to new sectors



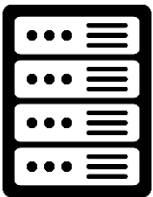
Offices



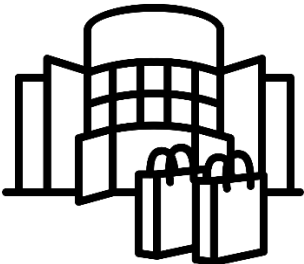
Hotels



Apartment Buildings



Data centres

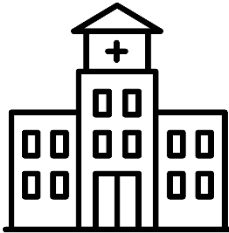


Shopping centres



Public Hospitals

EXPANDED TO SINCE 2021



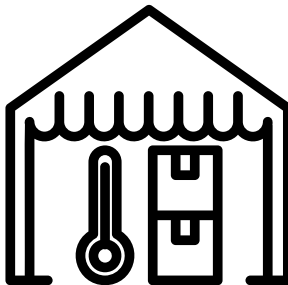
Residential aged care



Warehouses

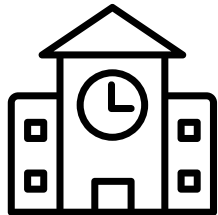


Retirement living



Cold stores

IN DEVELOPMENT



Schools

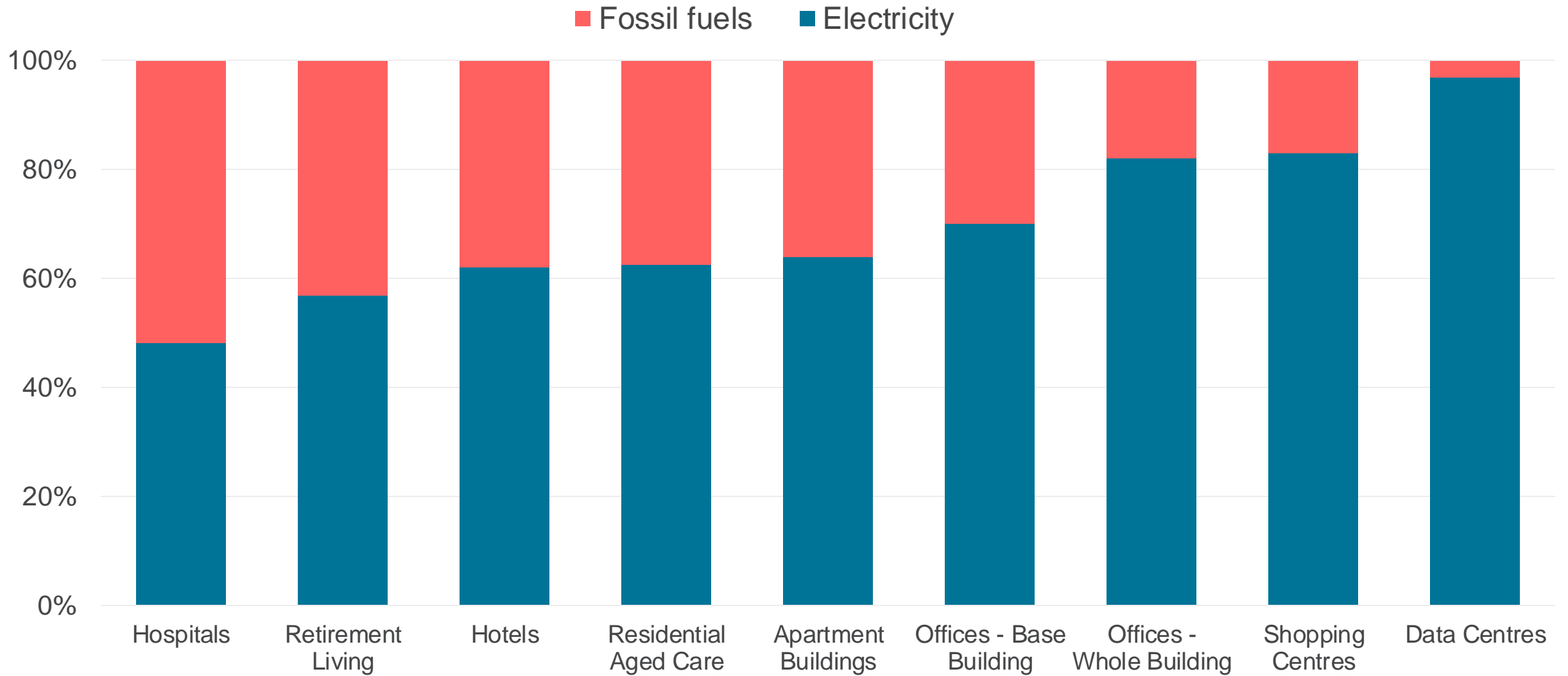


Retail stores

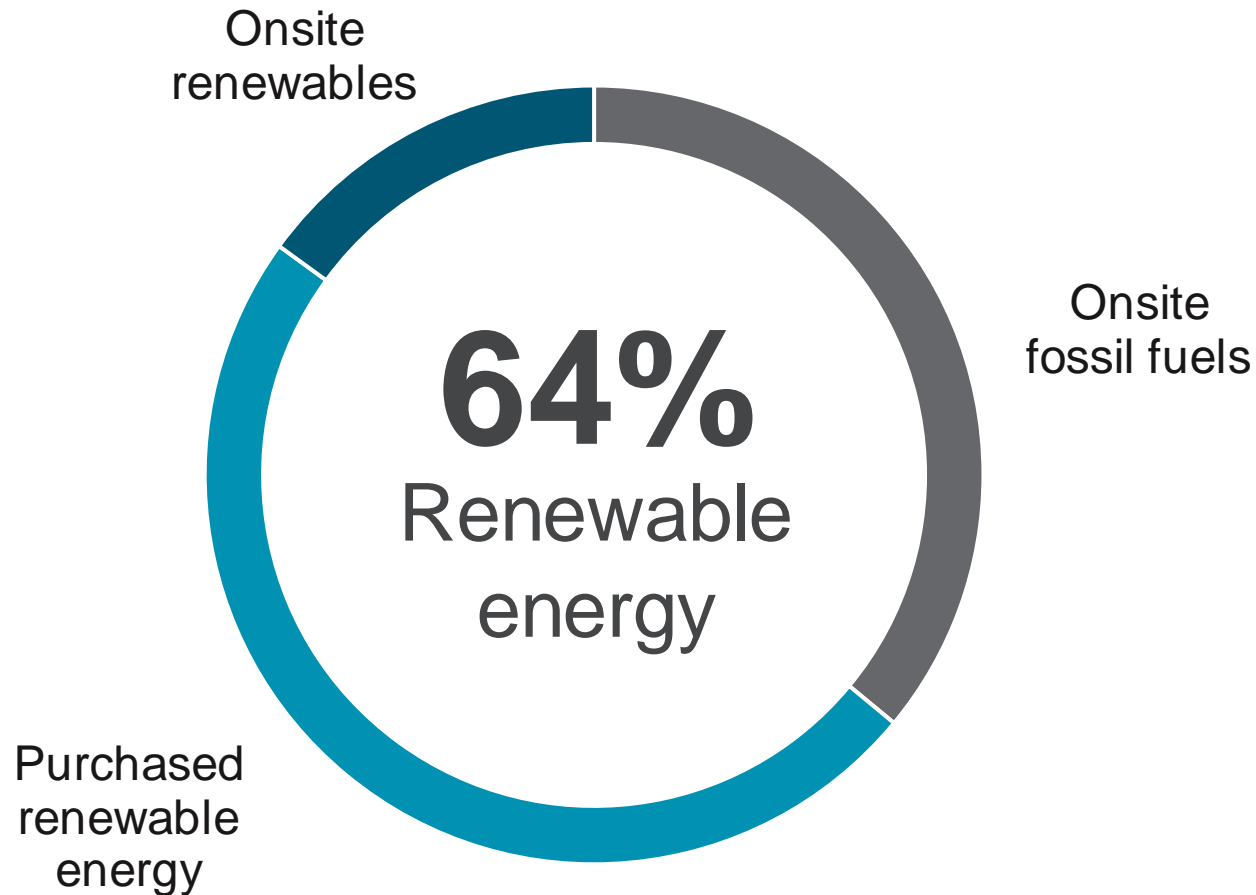
**We are adapting NABERS to drive
large-scale electrification in existing buildings**



Electrifying buildings is a huge challenge, even in Australia



All NABERS ratings now include a Renewable Energy Indicator

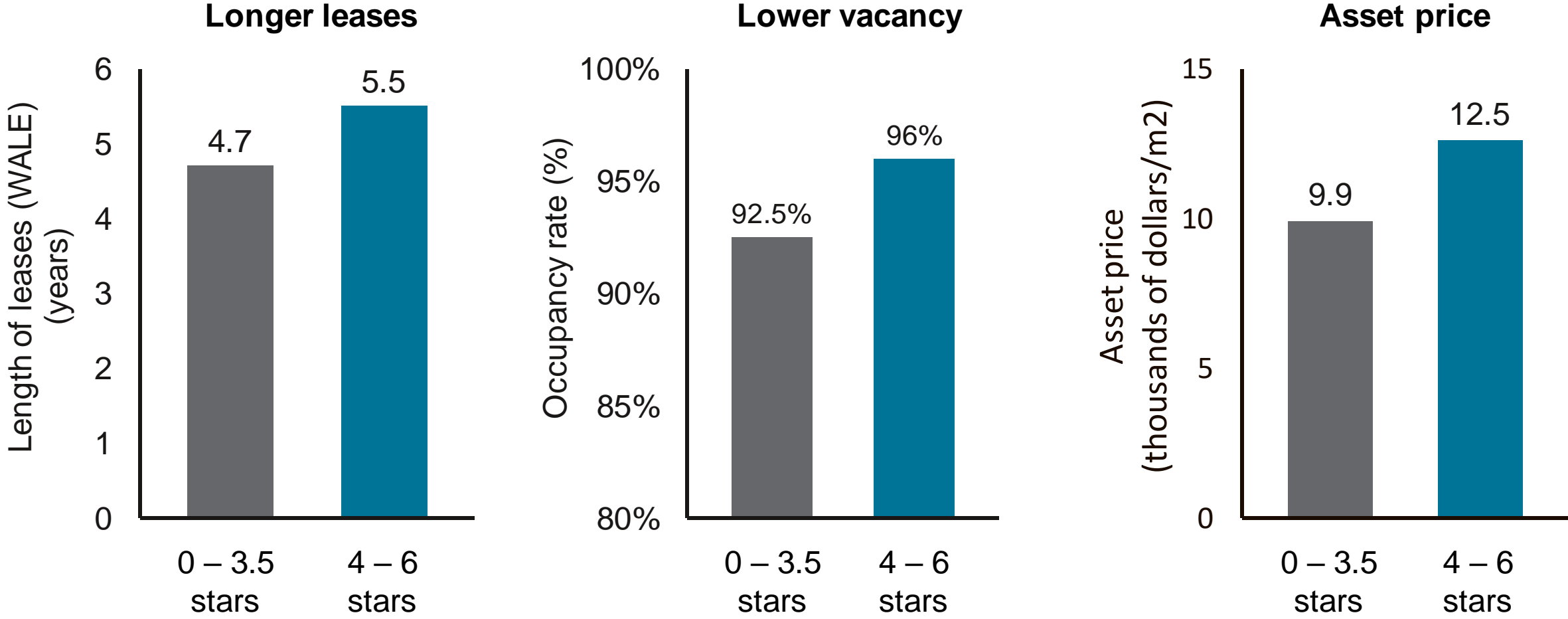


A NABERS Energy 6-star rating certificate. At the top, it features a large '6' with a star and the text 'NABERS ENERGY'. Below this, a circular graphic shows '64% Renewable energy'. To the right is the 'Climate Active Carbon Neutral BUILDING' logo. The certificate text states: 'This certificate certifies that The Trustee for Barrack Property Trust Achieved 6-star NABERS Energy Rating for The Barracks Building 10 Barrack Street Sydney NSW 2000. This rating is valid until 12 June 2022'. The NABERS and NSW Government logos are at the bottom, along with a disclaimer: 'NABERS is a national initiative managed by the New South Wales Government - Office of the Industry, Planning and Environment on behalf of the Commonwealth, State and Territory Governments. www.nabers.gov.au'.

How NABERS ratings are amplifying the impact of sustainable finance



Good NABERS ratings are linked to significant financial benefits



*Source: Real Investment Analytics

NABERS Sustainable Portfolio Index 2023

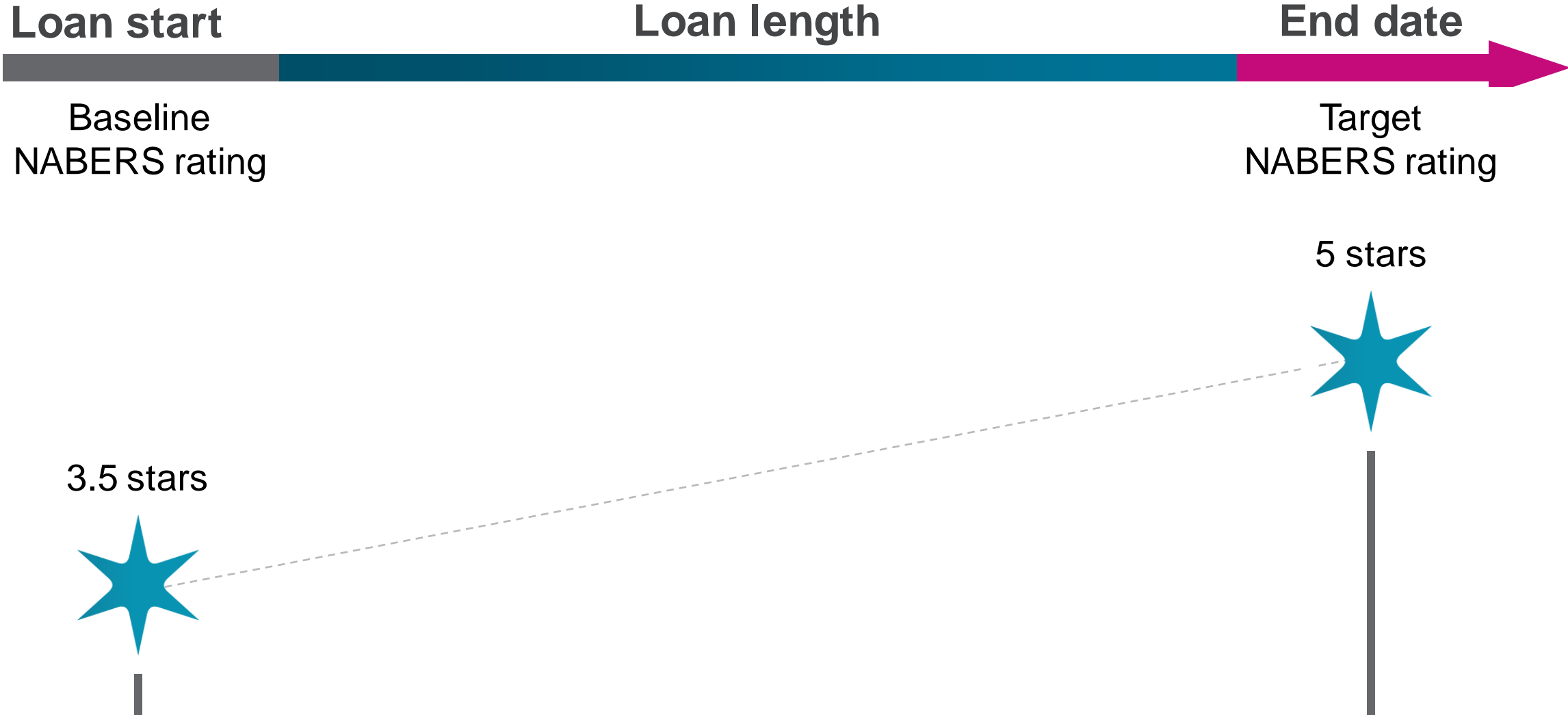
Property Portfolio	NABERS Energy rating (stars)
Lendlease Barangaroo International Towers	6.0
Walker's Parramatta Square	5.8
Cromwell Direct Property Fund	5.5
Local Government Property Fund	5.5
Brookfield Premier Real Estate	5.5
CBUS Australia	5.4
Collins Square	5.4
Cromwell Diversified Property Trust	5.4
QIC Office Fund	5.4
Lendlease's Australian Prime Property Fund (APPF)	5.3
NSW Government's Property NSW	5.3
Charter Hall (CHOT)	5.2
Frasers Property	5.2
Investa Gateway Offices (IGO)	5.2
Brookfield Property Partners	5.1
Charter Hall (CPOF)	5.1

Facilitating EU-Taxonomy-aligned sustainable finance methods

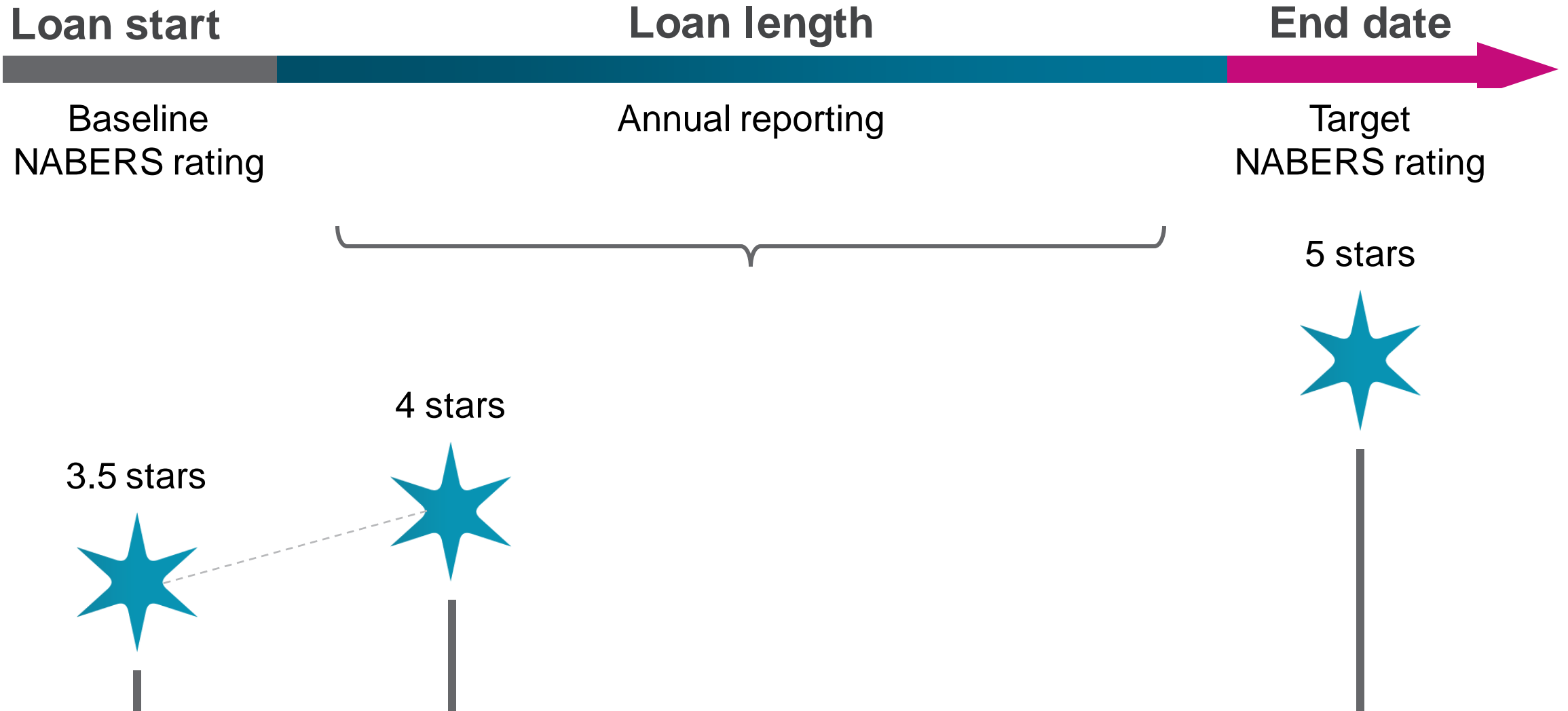


N A B E R S

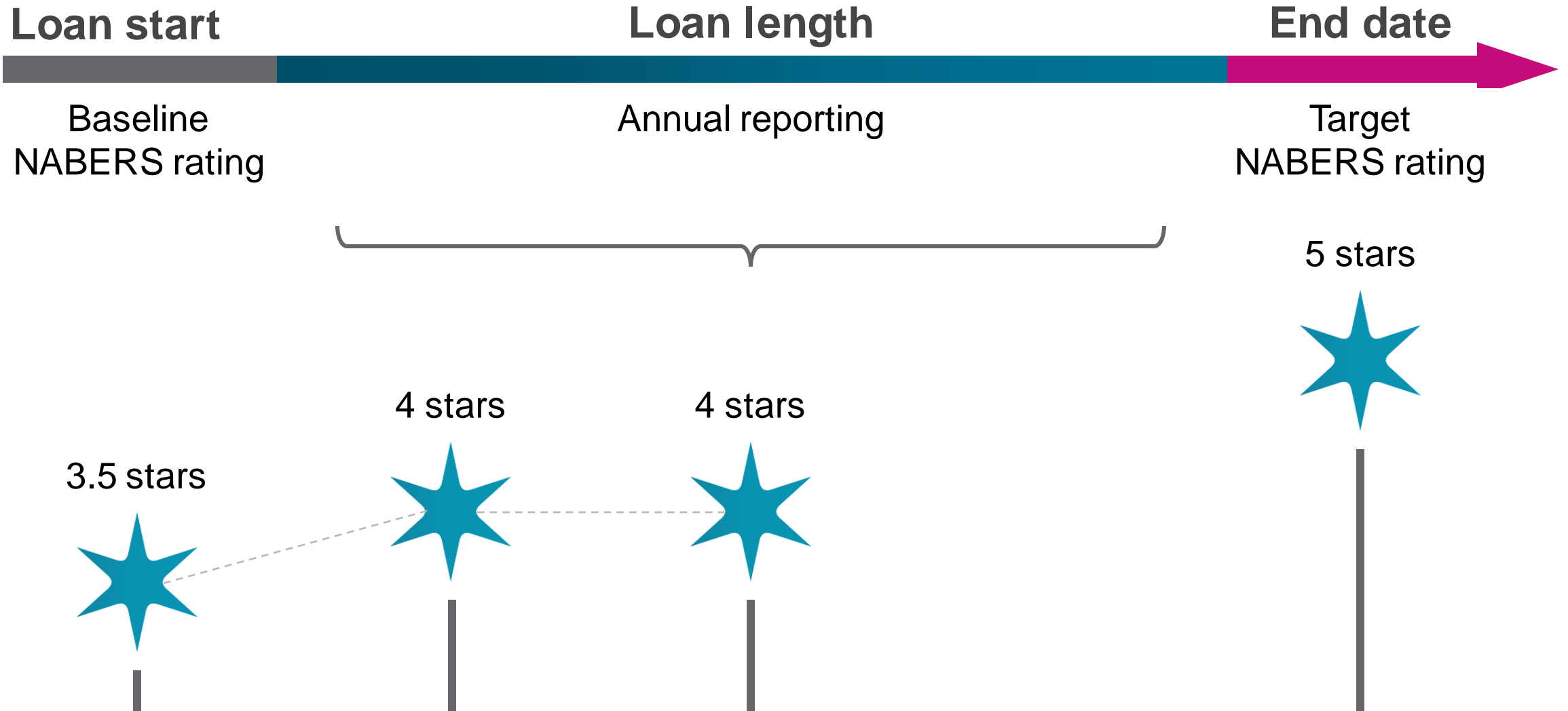
Method 1: major building upgrades (30% emissions reduction)



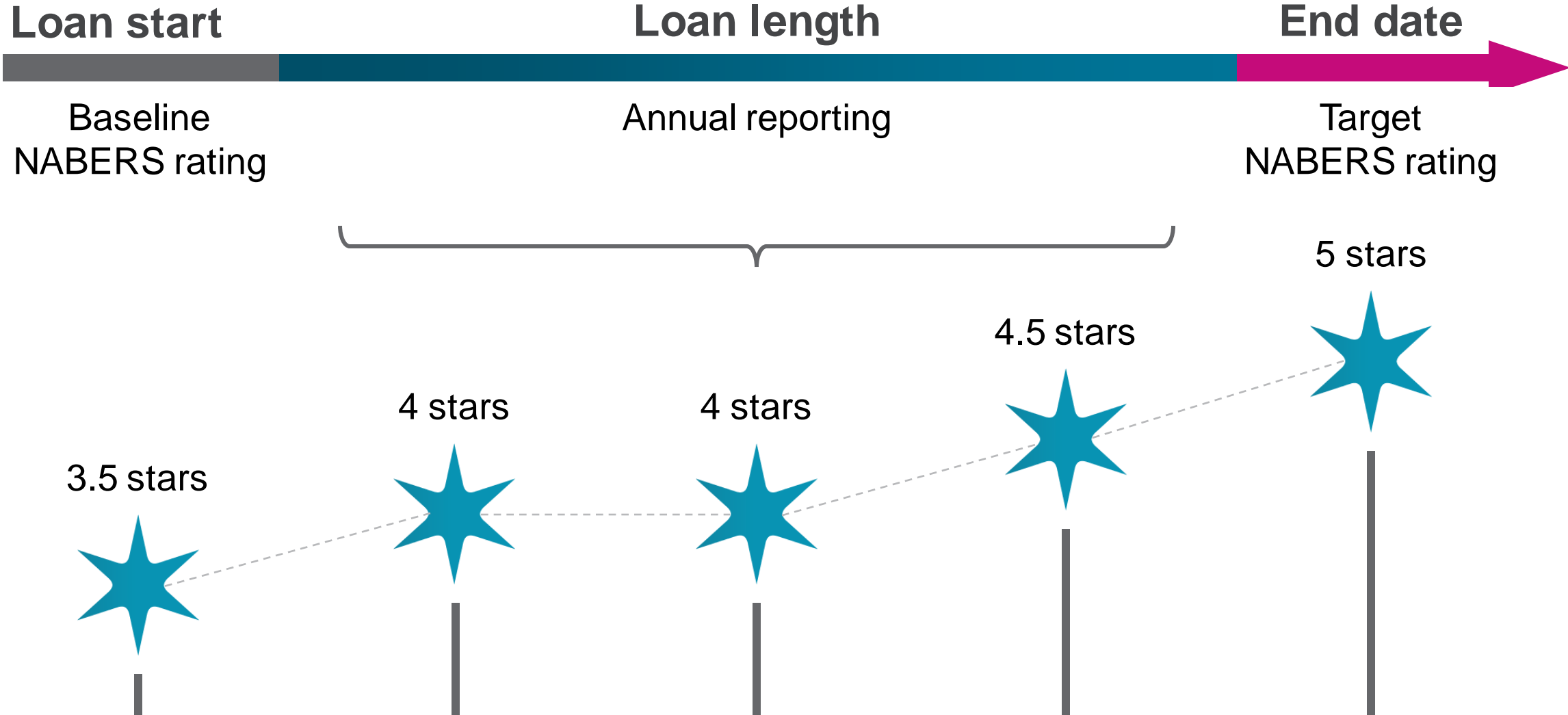
Method 1: major building upgrades (30% emissions reduction)



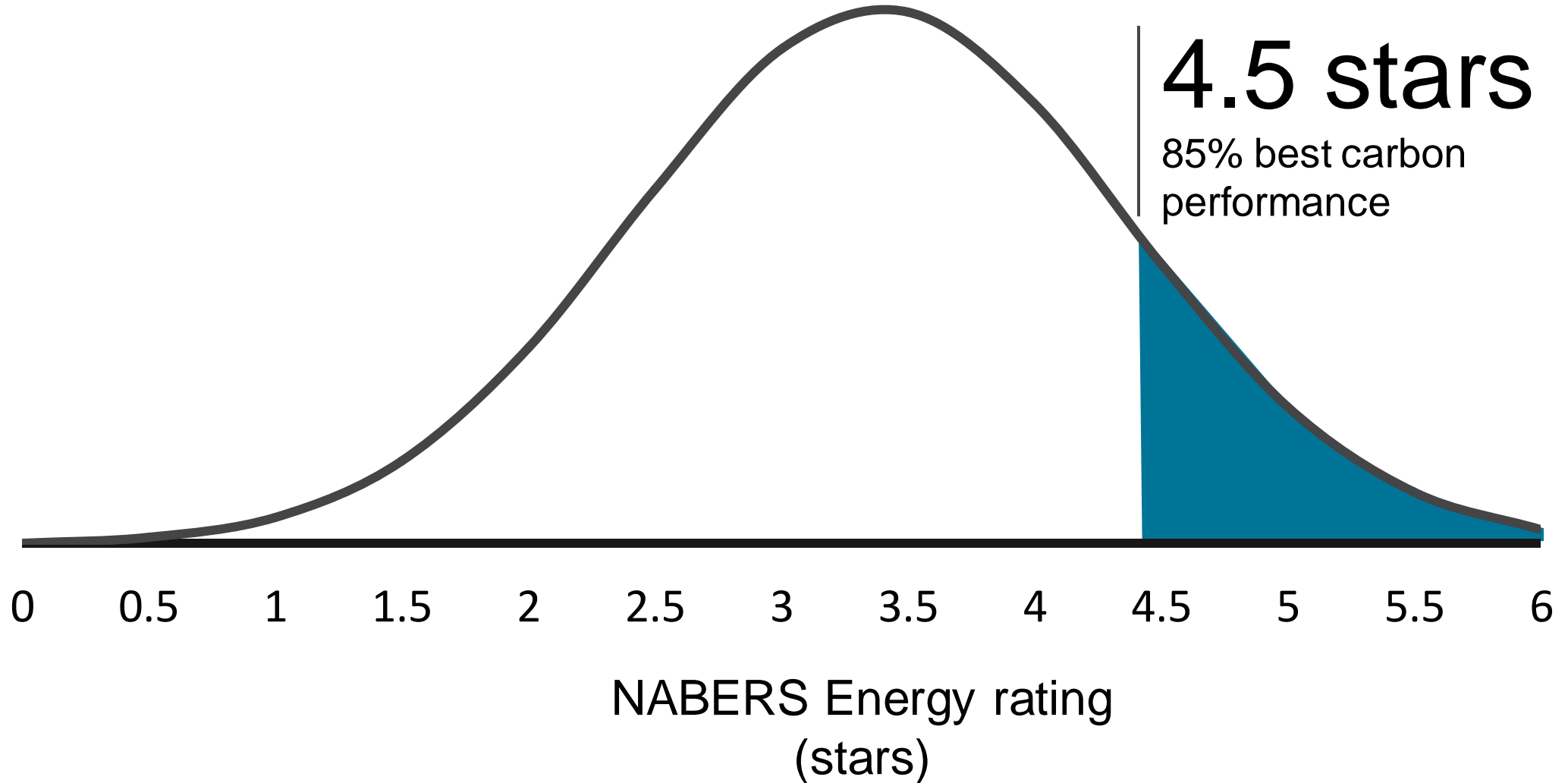
Method 1: major building upgrades (30% emissions reduction)



Method 1: major building upgrades (30% emissions reduction)



Method 2: Low-carbon buildings (15% lowest emissions intensity)

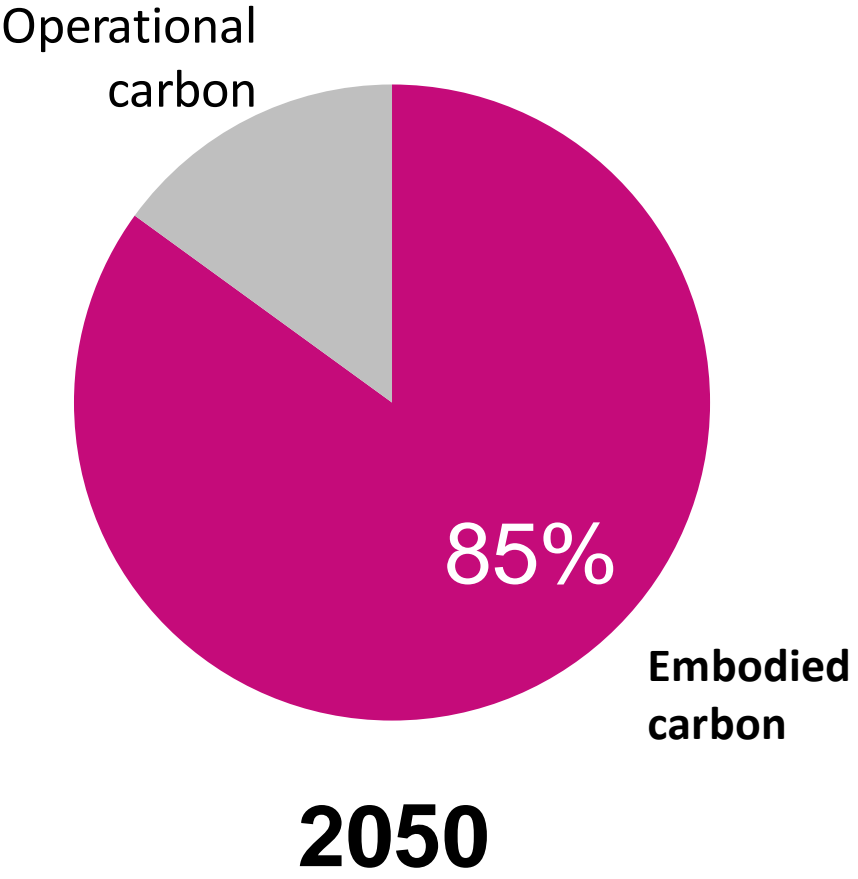
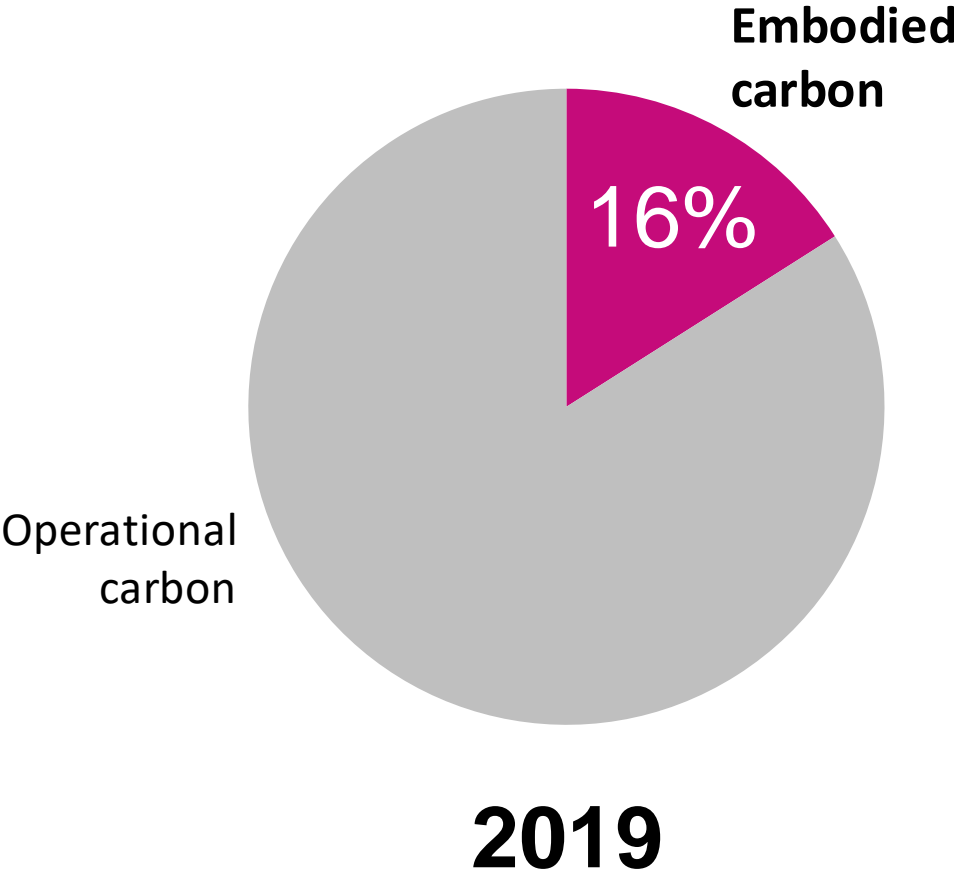


**NABERS is creating the Australian
standard for embodied carbon in buildings**



N A B E R S

Embodied carbon emissions are on track to be the largest source of emissions in Australian buildings

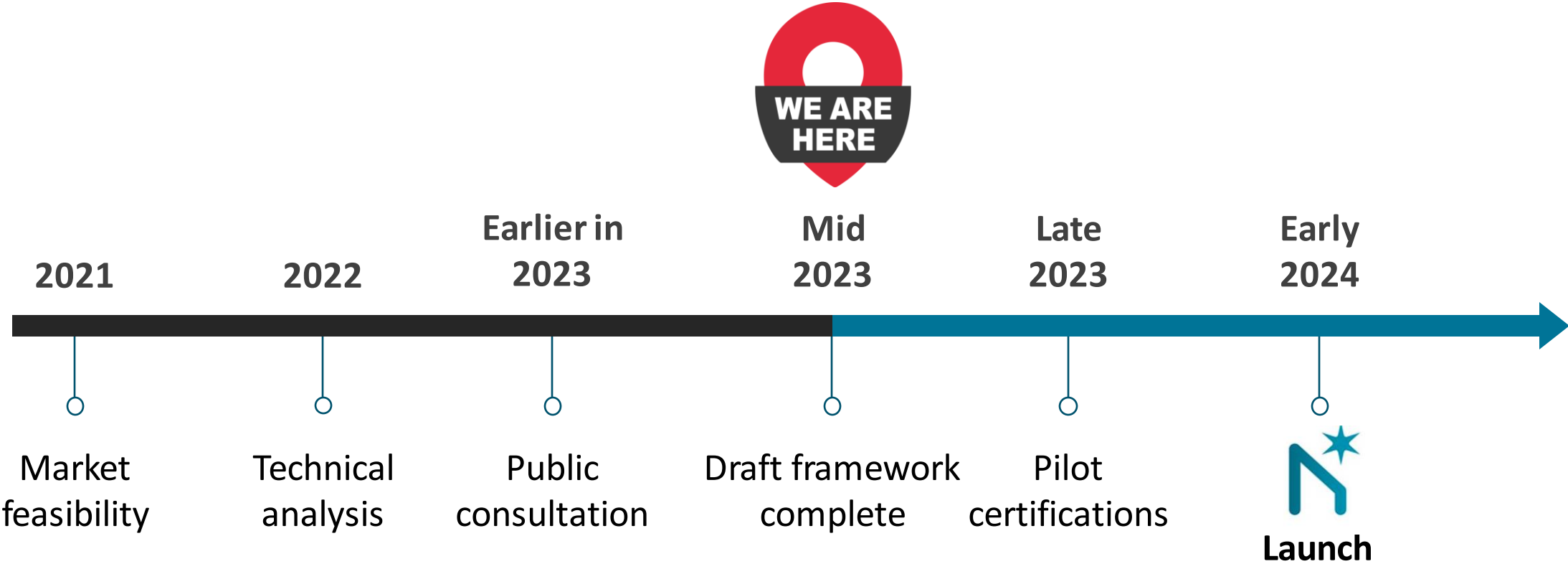


Source: GBCA (2021), Embodied Carbon & Embodied Energy in Australia's Buildings

We are designing a national standard with industry



Release timeline for the NABERS embodied carbon standard



THANK YOU

Carlos.Flores@environment.nsw.gov.au



NABERS



Sarah Ratcliffe

CEO

Better Buildings Partnership



Sam Carson

Head of Sustainability,
Valuations and Advisory
Services

CBRE



Kirsty Draper

Head of Sustainability – UK
Agency

JLL



Malcolm Hanna

Senior Sustainability Manager –
Real Assets

Legal & General IM



Carlos Flores

Director
NABERS

Panel discussion

The Impact of Performance in-use Ratings on Leasing & Valuation

Closing Comments

abrdrn

AECOM Imagine it. Delivered.

ARUP

atelier ten

ATKINS
Member of the SNC-Lavalin Group

BCO

BPF BRITISH PROPERTY FEDERATION

British Land

Bryden Wood

BSRIA

BP

BURO HAPPOLD

Carbon Intelligence

CIBSE

chapmanbdsp

CREFC Europe

CUNDALL

DERWENT LONDON

EDSL Tas

ELEMENTA
GLOBAL

EVORA

EVORA
EDGE

Federated
Hermes

GPE
Greater together

GROSVENOR

H|M

HOARE LEA (H.)

INKLING

KJ TAIT ENGINEERS

Landsec

LAING O'Rourke

Legal & General
INVESTMENT MANAGEMENT

lendlease

M&G
REAL ESTATE

MAPP

MECSERVE

MEPC

NG Bailey

Norman
Disney & Young
A TETRA TECH COMPANY

nuveen
REAL ESTATE

PICK
EVERARD

RAMBOLL

RIBA
Architecture.com

RICS

ROYAL
LONDON
ASSET MANAGEMENT

STANHOPE

SWECO

TFT

THE CROWN
ESTATE

thornton | reynolds

Transport
for London

TWIN EARTH

UBT
Usable Buildings Trust

UK
GBC

watkins payne
designed + engineered + focused

WILLMOTT DIXON
SINCE 1852

WORKSPACE

WSP

verco

DELTA Q

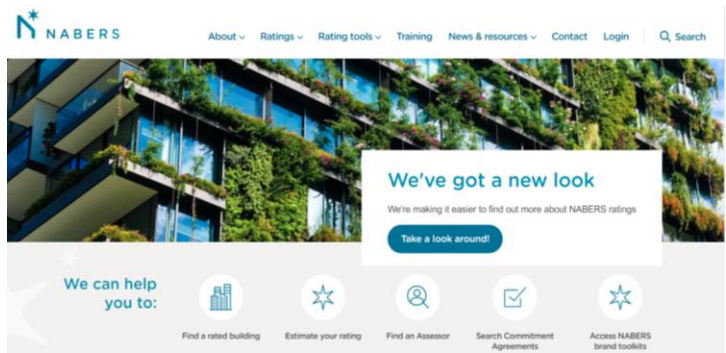
NABERS

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BBP | BETTER
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PARTNERSHIP

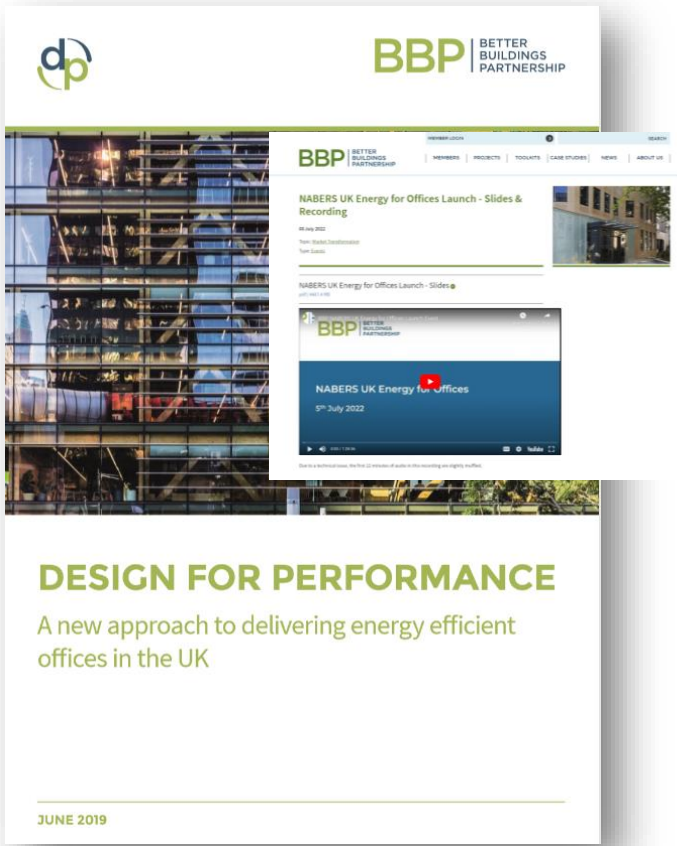
NABERS Resources and where to find them

NABERS in Australia



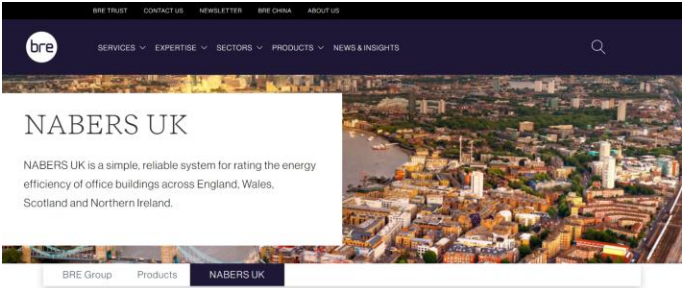
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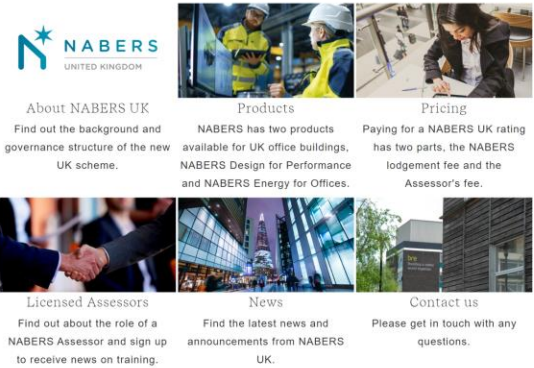


BBP web site:
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Rating a Building: Rules, Tools & Training



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