

Carbon Risk Real Estate Monitor Global Pathways V2

Joint submission - 18 November 2022

About us

Green Building Council of Australia

The Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings and communities. The GBCA's mission is to accelerate the transformation of Australia's built environment into one that is healthy, liveable, productive, resilient and sustainable. The GBCA works with industry and government to encourage policies and programs that support its mission and operates Australia's only national, voluntary, holistic rating system for sustainable buildings and communities – Green Star.

Property Council of Australia

The Property Council of Australia is the leading advocate for Australia's largest industry – property. Our industry represents 13% of Australia's GDP, employs 1.4 million Australians and generates \$72 billion in tax revenues. Property Council members invest in, design, build and manage places that matter to Australians across all major building asset classes.

Our industry

Oceania's property industry leaders are world leaders in sustainability. They have consistently led global ESG indices like the Dow Jones Sustainability Index and the Global Real Estate Sustainability Benchmark (GRESB), which they have topped since its inception twelve years ago. Most of our leading members have commitments to net zero emissions by 2030 or sooner, with several portfolios having reached this milestone already. Beyond their own footprints, our members have a long-term stake in helping our capital and regional cities thrive and work together collaboratively to support policies for decisive action on climate mitigation and adaptation to avoid the worst projected impacts of climate change.

In summary:

- Drop 'stranded' from communications and replace it with a more representative term such as "not aligned" or "impaired".
- CCREM should provide more relevant advice to investors, there are many aspects to the carbon/energy impairment risk of property:
 - Does the region have an effective energy benchmarking and disclosure program for each property type (such as NABERS)
 - Does the region support a market for renewable energy supported by certificates that meet GHG Protocol quality requirements
 - Do the systems exist for new buildings to be designed and delivered to achieve target energy performance
 - Does the region support building codes with effective energy standards
 - Does the region support programs for minimum energy performance (excluding products with poor efficiency)

- If benchmarking is retained, normalisation for significant variables like hours of use must be included to avoid low occupancy buildings looking better on the benchmark than intensively used property
- Communication of CRREM outcomes would be enhanced using ranges and tolerances. At the moment the heavy reliance on projections implies a level of accuracy that cannot be justified
- If the carbon benchmark is to be retained, report both location and market based in accordance with GHG Protocol to encourage investment in renewables and decarbonisation of energy supply
- If the carbon benchmark is retained, be clear about inclusions in both the CO₂ and CO_{2e} benchmarks
- There is a proposition that as the energy supply decarbonises the risk of buildings becoming impaired due to a high energy intensity declines. The use of the energy intensity trajectory is unclear and more explanation is needed for users to understand the future flatline benchmark
- Ongoing governance over CRREM development and use is required to ensure it provides useful information. Changes to building and energy systems such as the electrification of transport, changing use of buildings, inclusion of energy storage, varying intensity of use will have an impact on building level energy and emissions
- CRREM should support development of energy/emissions benchmarks that distinguish between landlord controlled and tenant-controlled energy/emissions so that those with most control are enabled to act on energy and emissions performance
- CRREM is invited to collaborate with the PCA and GBCA on effective communication of future CRREM information before it is released to stakeholders so that misleading or confusing information can be eliminated

Response to CRREM v2 pathways

We are pleased to provide our feedback, consolidated through discussions with our members, on the CRREM documents:

- From Global Emission Budgets to Decarbonization Pathways at a Property Level
- Spreadsheet: CRREM_Global_Pathways-V2_PUBLIC CONSULTATION

The consultation documents did not provide sufficient background material for our members to understand the purpose of the CRREM project or the CRREM decarbonisation and energy curves.

To understand the purpose of CRREM we have also considered:

- CRREM Stranding Risk & Carbon Final version 1.01 | 29.03.2019

The Carbon Risk Real Estate Monitor (CRREM) project will accelerate decarbonisation and climate change resilience of the EU commercial real estate sector by clearly communicating the downside financial risks associated with poor energy and carbon performance and quantifying the financial implications of climate change on the building stock.

KEY OBJECTIVES OF THE CRREM TOOL INCLUDE:

- Identify and assess the risk of economic obsolescence of single properties,
- Enable investors to account for different future GHG emission reduction pathways (including 1.5°C and 2°C scenarios and NDC) and the possibility to integrate own individual targets,
- Undertake aggregated analysis of portfolios,
- Benchmark properties and portfolios against competitors,
- Evaluate the progress of investors' carbon performance,
- Quantify risks premised on cost estimations of necessary refurbishment measures to fulfil targets,
- Analyse the impact of retrofit on the total carbon performance of buildings and a company,

• Visualize the energy performance of single properties, portfolios and companies, create so called '1.5°C and 2°C-readiness reports' summarizing present and future risks of stranded assets, which will help build retrofit action plans to efficiently adapt assets to global warming and policy changes.

The project is funded by the European Commission under the Horizons 2020 programme. The methodological process and functional specifications of CRREM is regularly scrutinised by the European Investor Committee (EIC) members. The EIC has been set up to guide the project development, enhance alignment with investors' requirements and ensure that CRREM's outcome is fit-for-purpose.

Response:

Our members find that the objectives of CRREM are not being fulfilled and the purpose of CRREM should be revisited through effective consultation accompanied with appropriate governance and technical rigour.

While illustrating how a property's carbon or energy intensity performance compares with a 1.5 degC budget may motivate underperforming buildings to improve, it can equally guide leading properties to normalise back to the curve, resulting in a failure to accelerate decarbonisation.

The CRREM tool is not successful in identifying or assessing the risk of economic obsolescence of single properties. Stranding risk, as described elsewhere, will be a function not only of the carbon/energy intensity of a building but of many other socioeconomic factors specific to a region. CRREM could provide a useful role in conducting regional analysis and communicating the status of structural and voluntary practices such as Building Codes, performance benchmark disclosure, renewable energy markets etc.

CRREM information has already been misused in the communication of GRESB results in 2022 that have included terms such as "average stranding year" for portfolios. This is an example of dangerous misinformation that may unnecessarily destroy value.

Currently, the CRREM tool and CRREM curves, existing and proposed, are not fit for purpose and should not be used until remedied for fear of misleading investors

Inherent in the CRREM method is the concept of stranding risk. Where *"Stranded assets are properties that will be increasingly exposed to the risk of early economic obsolescence due to climate change because they will not meet future regulatory efficiency standards or market expectations. These buildings will become less marketable and may require costly refurbishment measures"*

Response:

CRREM does not gather enough information to assess stranding and we strongly suggest that an alternate term be used in communication materials.

The term "stranded asset" has a well-established definition in the financial industry. It refers to assets that have suffered from unanticipated or premature write-downs, devaluation or conversion to liabilities. It would be hard to imagine that the world leading sustainable building portfolios of our members could fit that definition within a handful of years.

CRREM would benefit from providing factual information, observations such as, "This building has a carbon intensity that appears to exceed a 1.5 degC carbon trajectory" or "This building has carbon intensity lower than a 1.5 degC carbon trajectory".

Property owners are then able to explain the performance characteristics of the building and any actions that are planned that would alter carbon/energy intensity. Currently, owners are left to describe the failings of the CRREM information to investors, severely eroding the credibility and usefulness of the program.

We recommend substituting the term "stranded" with "not aligned", "impaired" or other terms that would convey an accurate meaning of the situation.

CRREM should separately consult on how observations are communicated to stakeholders to ensure accuracy and that Owners are able to inform investors of the features of buildings, portfolios and the

energy systems they are part of. This communication would be enhanced if, rather than suggesting that there is an “exactness” to the normalisations and 1.5degC curve use tolerances and ranges to communicate the degree of diversion, possibly using whisker charts or similar to demonstrate relevant distributions over time.

The following comments relate to the document: *From Global Emission Budgets to Decarbonization Pathways at a Property Level*:

The reasoning behind the need to reassess carbon and energy trajectories is understood.

Response:

The process of downscaling is not transparent and the calculations could not be readily replicated. It isn't clear where CRREM has sourced information for each property type and if this information is truly representative of the property and market.

In the consultation paper, CRREM advise the source for emissions factors for Australia are the Australian Government Dept of Environment & Energy Emissions Factors, Table 5 and Table 46 for regional factors (August 2021 report) National Greenhouse Accounts Factors – August 2021. These are a good source for historical and reasonably contemporary emission factors but provide no information about future carbon intensity of Australian electricity supply.

We understand from subsequent correspondence that future emission factors are aligned with the Australian Energy Market Operators Integrated System Plan and agree that this is the best available information.

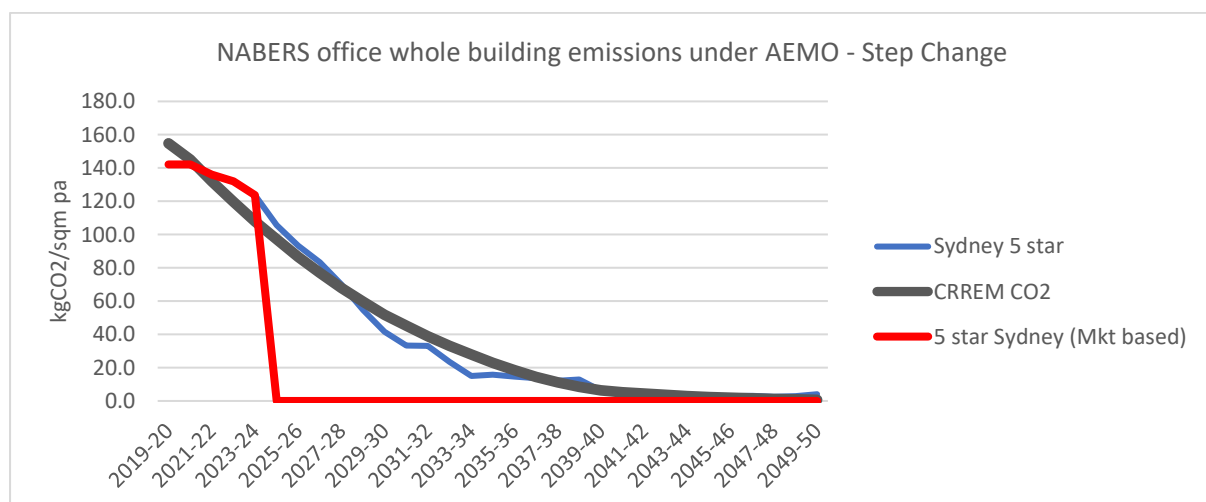
CRREM have also developed curves for sub regions in Australia, but no information is provided that identifies the sub regions.

CRREM faces an inherent contradiction where it attempts to measure the characteristics of a building but then assesses it via the emissions factor of the electricity grid.

CRREM attempts to normalise carbon and energy by area and climate zone but fails to take into account occupancy hours. This shortfall would have an intensely occupied building (say 24/7) determined as “stranded” much earlier than a 9am-5pm, 5 days/week building.

The adjustments for climate zone are based on Heating Degree Days and are likely to overcompensate for buildings traditionally heated using fossil fuels as they electrify. The program would benefit from greater technical rigour in this area.

CRREM communications would be improved by ensuring that both location based and market based carbon inventories are included. By including market based reporting CRREM would encourage more rapid decarbonisation through both energy efficiency measures and voluntary purchase of renewable electricity. A sample is provided:



In this case the area between the blue and red curves shows the additional carbon savings made in a market economy that successfully values efficiency, trades renewable energy and values low carbon buildings. The blue curve is the location based carbon intensity while the red line represents the market based accounting method including voluntary purchase of renewable electricity.

There have already been examples where CRREM outcomes have been miscommunicated through the omission of market based inventories. CRREM needs to ensure that licensees are aware of this requirement.

As CRREM realises the inherent contradictions in measuring property characteristics via a carbon metric it introduces the energy curve as an alternate measure. We understand that the energy curves are reverse calculated from emissions, take into account the SDG objective of 2.9% energy efficiency improvement per annum and then plateau at a low energy intensity relating to a global budget for renewable energy as determined by the IEA.

This curve is beyond current technical limits for most buildings and is difficult to reconcile for portfolios that have already been on a path to optimise performance and achieve savings of more than 50% over the past 10+ years. (as shown in the NABERS Annual Report).

The methodology to determine the energy curve all the way out to 2050 requires heroic assumptions about the capacity of renewable energy systems, how economies will allocate this energy efficiently and how economies will change over this period.

Starting the process of energy allocation based on the ratio of built environment emissions to whole of economy emissions is likely to lead to flawed analysis. As primary fossil fuel energy inefficiency is driven out of economies the proportions of energy taken up by different sectors of the economy will change significantly with buildings consuming a greater percentage of national energy accounts than is currently the case.

Meeting the proposed CRREM energy curve would require a severe curtailment of services in buildings leading to uncomfortable, unhealthy buildings with a correspondingly high social cost. CRREM must re-evaluate future energy intensity scenarios and develop alternative measures through broad consultation.

CRREM would limit the potential for errors in the energy curve by curtailing the time horizon to no longer than 10 – 15 years. This timeframe avoids spurious future stranding assertions and is better aligned with CAPEX planning horizons.

CRREM could also change the context of the energy curve by using benchmarks in a similar way to the EU Green Taxonomy, suggesting that buildings that perform in lower segments of the benchmark at risk of high operational energy costs with consequent lower appeal to tenants.

In the Australian context, the NABERS benchmarking program enables markets to explore and incentivise best practice in energy efficiency in buildings. CRREM could create a similar metric on a global scale if it could be determined this information would be useful to investors.

CRREM treatment of onsite solar when calculating CO2 may need to be revised. The diagram on page 36 suggests electricity emissions are calculated:

$$(\text{Electricity from the grid} - \text{electricity generated onsite} + \text{electricity exported}) * EF$$

This method would understate emissions when there is onsite generation with some export, so it is suggested to replace it with:

$$\text{Electricity from the grid} * EF$$

Conclusion:

The CRREM methodology requires significant work before it is fit for purpose. The concept of providing benchmarked energy and carbon performance information to investors is a valuable one and the Australian property sector is prepared to work with the appropriate technical working committees and governance bodies to rectify the critical faults in the current system.