

DTRE

CRREM: Chapter II

IS THIS THE EVOLUTION OF OPERATIONAL
EMISSIONS BENCHMARKING, OR DO WE ASK TOO
MUCH OF THE CARBON BENCHMARKING TOOL?

APRIL 2026

CRREM has announced the end of the tool era and the beginning of a new, pathways-only age. It claims that market maturity has put its Risk Assessment Tool out of a job, but can any benchmark truly account for the complexities of the global energy market?

In some cases, the CRREM benchmarking tool may have been doing more damage than good. With its one-size-fits-all approach, it risks ignoring the many and very important nuances present across energy markets and the real estate industry.

Its retirement announcement has coincided with renewed conflict in the Middle East, serving only to make starker the challenges such tools face.

This latest energy crisis has forced a global re-evaluation of procurement strategies – the sort of market shock that static tools will always struggle to navigate.

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Gas is Back



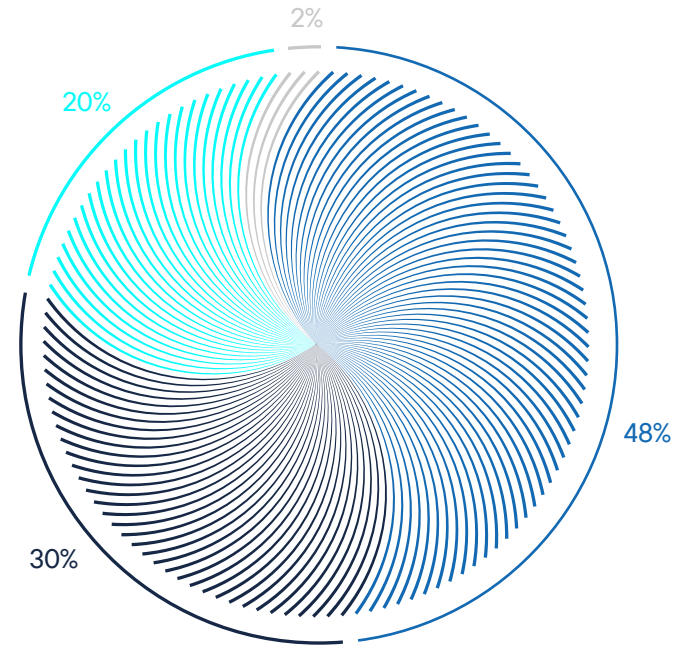
What the conflict in the Middle East has taught us is that energy procurement really does matter. Collating asset consumption (kWh) and using an emissions converter will only ever paint half the picture. There is a need to not only scrutinise the type of energy being consumed, but also its source.

The Iran war has pushed energy security back up the agenda, making on- and near-shore gas sources again more attractive relative to long-haul LNG. **It is clear that oil and gas are going to be needed in the UK (and other nations) to complement net zero goals, and so increasingly critical to appreciate that long-haul LNG creates roughly four-times more emissions than gas generated in the UK.**

Is it time to rethink the role of the North Sea in a bid to stop climate change? And what do energy security concerns mean for how we benchmark sustainability performance?

These seem particularly critical questions considering the UK's primary energy consumption mix: in 2024 the majority came from oil or oil products (40%), closely followed by natural gas at 35% of total consumption. Of that UK gas consumption, in 2025, nearly half was produced domestically (48%), with Norwegian pipelines accounting for 30%, and LNG imports filling the vast majority of the remaining gap.

UK Gas Supply 2025



- EU
- LNG Imports
- Norway (Pipe)
- UK North Sea

In sustainability measurement, emissions factors are combustion-based and calculated according to national averages – meaning every real estate asset is measured against the same benchmark, regardless of how or where its energy was sourced. This may appear reasonable.

However, consider the case of a gas-reliant but sustainability-conscious occupier. They may use only domestically produced gas, a lower-emission source, but – under the CRREM model – would be treated the same as a business reliant on LNG imports (producing 4-times more emissions). Source matters.

Under the current model, emissions of LNG-reliant buildings are likely understated in CRREM, while assets drawing on localised or lower-carbon gas sources may be overstated. Whether the gas arrived from the North Sea or on a tanker from Qatar, the emissions factor is identical. At a time when the UK's reliance on imported LNG is likely to grow, and supply chain disruption threatens to push that reliance further, this is an increasingly significant limitation of the current CRREM methodology.

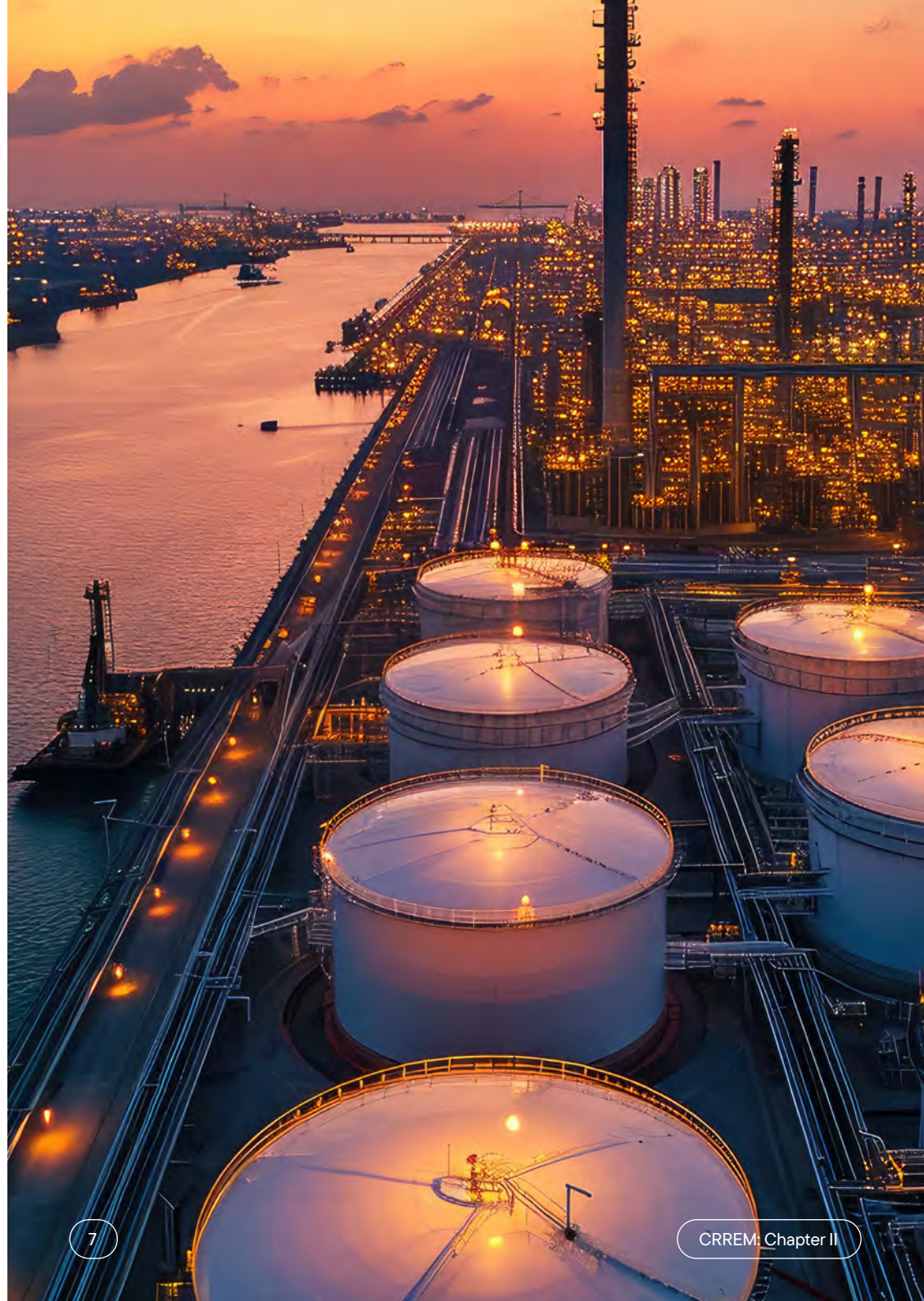
Solutions are possible. Much like the growing pressure on net zero commitments to disclose both the proportion and quality of the offsets used, a gas procurement passport, recording the origin and carbon intensity of supply, would enable occupiers to demonstrate responsible sourcing where gas use is operationally unavoidable.

CRREM, Reconsidered

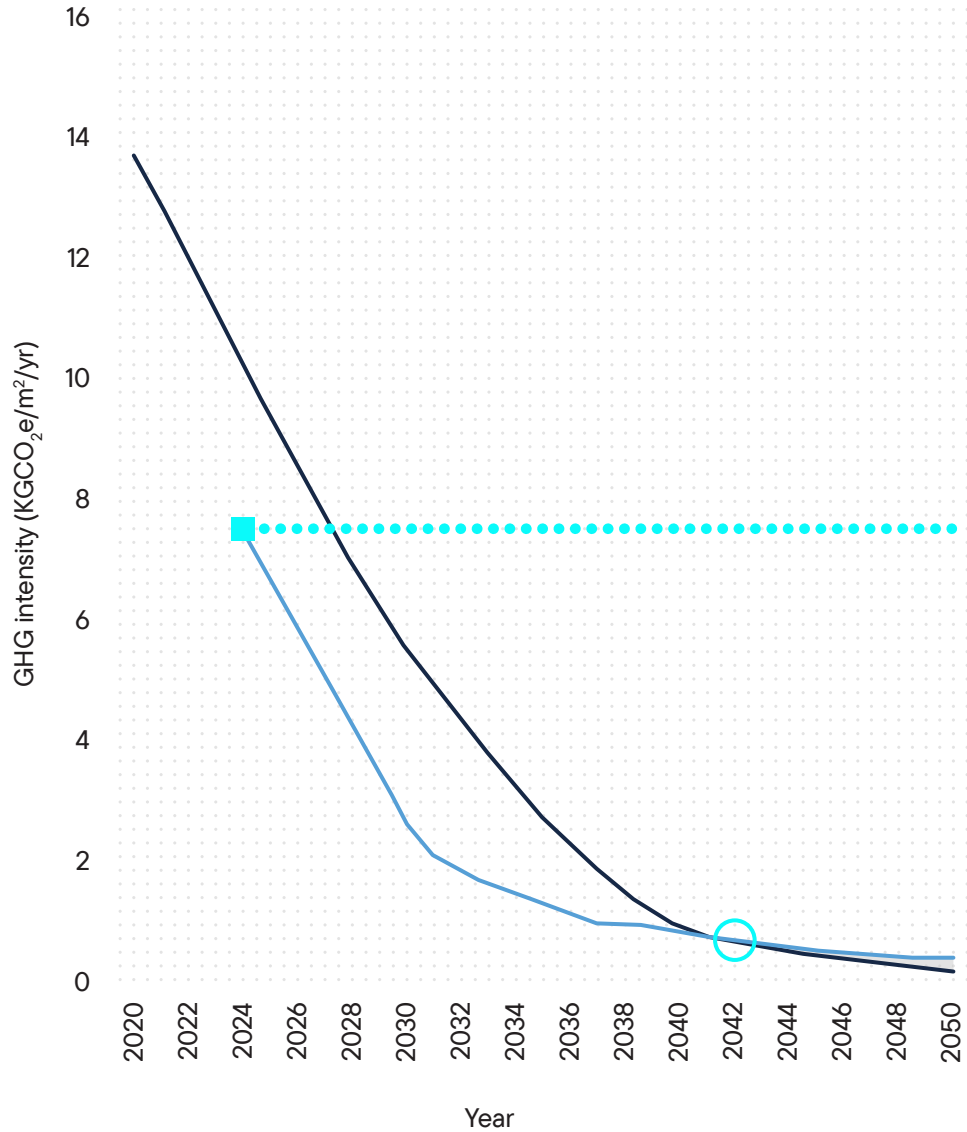
So, the latest energy crisis has provided a timely moment for CRREM, and the sector more broadly, to reconsider its approach to energy procurement and benchmarking. Unlike the static, current-year emission factor published by the Department for Energy Security and Net Zero (DESNZ), CRREM applies a forward-looking, projected emission factor that anticipates future grid decarbonisation.

When analysing ambient industrial assets in the UK, this approach produces a Day 1 emission intensity approximately 30% lower than the equivalent figure derived from the DESNZ emission factor. In practice, this means a building running on grid electricity today is effectively “rewarded” within the model – its carbon intensity falls as the projected grid gets cleaner, even if its actual energy consumption remains unchanged.

The following two examples use identical asset data. The only variable is fuel mix.

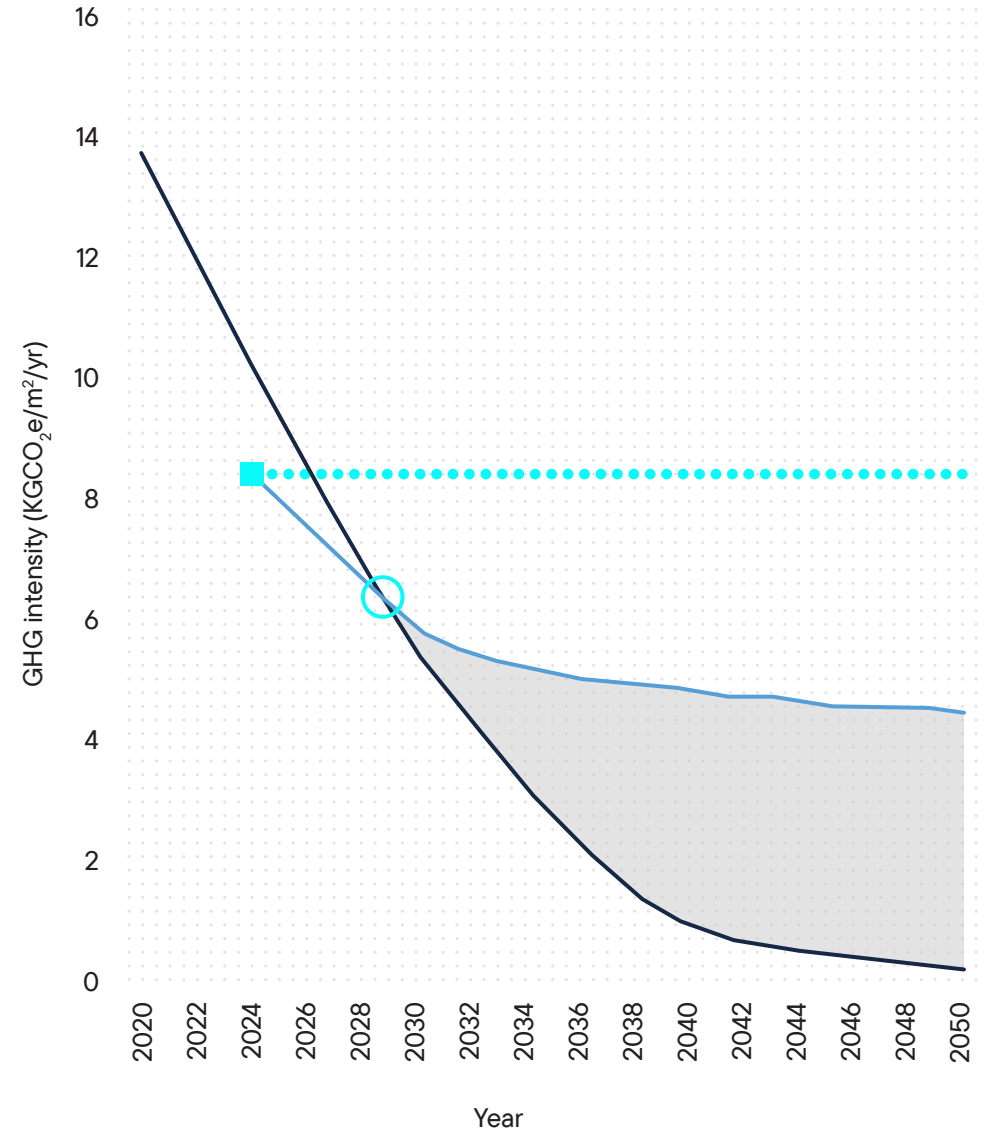


Graph 1: 100% electricity consumption – misalignment date 2043



- Decarbonisation Target
- Excess Emissions ●●●●● Baseline Asset Performance
- Climate and Grid Corrected Asset Performance ○ CRREM Misalignment

Graph 2: 50% electricity, 50% gas consumption - misalignment date 2029



- Decarbonisation Target
- Excess Emissions ●●●●● Baseline Asset Performance
- Climate and Grid Corrected Asset Performance ○ CRREM Misalignment

Gas-heated buildings receive no equivalent benefit. The model does not assume the gas grid decarbonises at a comparable rate, which creates a structural asymmetry. An efficient gas-heated industrial unit may, in reality, have a lower carbon intensity than a poorly insulated all-electric equivalent for a number of years – but CRREM will still predict it stranding sooner.

This is not to say the methodology lacks foundation. The IEA data and Sectoral Decarbonisation Approach (SDA) that underpin CRREM are well-established frameworks. The more substantive criticism is that the model treats a policy assumption – that the grid will decarbonise along a specific trajectory – as given. If grid decarbonisation is slower than projected, which remains plausible given current renewable build-out constraints, assets that electrify on the basis of CRREM outputs may not achieve the carbon reductions the model implies.

No-one is denying that we should be moving towards a fossil fuel-free society, but gas is going to be a key part of our progress towards net neutrality. The source of the gas and the associated emissions should therefore be weighted fairly, especially in the short and medium term.

After all, a fully electric unit with the heating on and the windows open is still, fundamentally, a poorly performing asset, regardless of the energy source.



Renewables, Shunned



Additionally, a key element of the CRREM model is the limited weighting that the model gives to assets that produce and use renewable energy onsite. This would appear to run contrary to its aim of assisting with decarbonisation, and sits uncomfortably alongside both the UK Government's push for small-scale renewables deployment and the EU's revised EPBD, which explicitly targets the roll-out of renewables in buildings as part of its decarbonisation pathway to 2050.

The model factors renewable energy into the carbon intensity curves ($\text{kgCO}_2\text{e/sqm/year}$) – logical given the replacement of the high-carbon grid with a low-carbon solar source. However, the energy use intensity (EUI) remains unchanged despite the reduction in carbon as, technically, the electricity use of the building is unchanged.

As a result, some high-energy consumers – such as logistics operators – may be unable to change their EUI. This would seem unfair punishment and something that, in a worst-case scenario, may even disincentivise solar installations.

The saving grace here is EPCs: a key driver of energy performance upgrades independent of CRREM. The installation of renewable energy sources is increasingly key to achieving top ratings, top rents and staying compliant (MEES or EPBD).

CRREM is a purely operational carbon tool, but it is being used to measure other aspects too. Users must be wary of its overall restraints: two very different assets can achieve the same score, even if they should in reality be considered very differently. Relying solely on the CRREM output could completely miss the broader risk picture of an asset.

The critical flaw is that a vacant building will always be the best performing asset in a CRREM model – zero occupiers, zero emissions, zero returns.



CRREM Retiring Due to “Market Maturity”



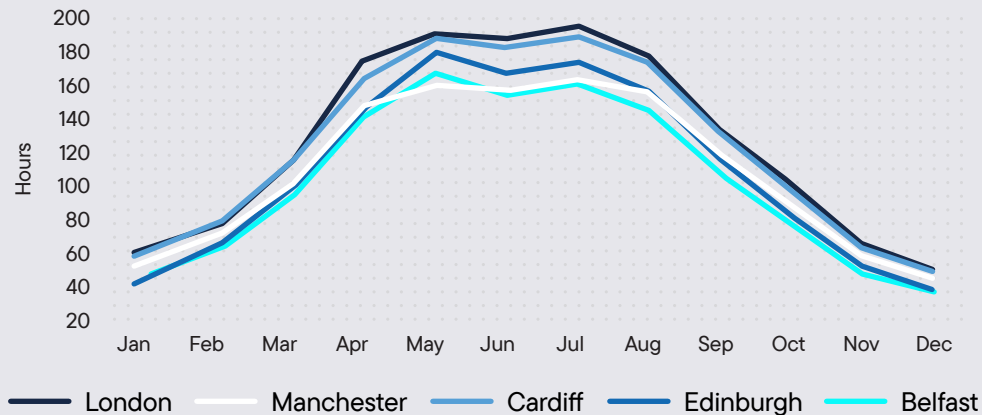
Retiring a tool is the easy part; the harder question to answer is whether CRREM can now better serve its market – and a market that it has itself described as “maturing”. Today, we have access to more data than ever on individual assets and across portfolios, and that pool is growing by the second.

We are told that CRREM pathways and the methodology behind them will remain intact. The foundations are there, yet the tool’s inability to support a full breadth of asset types has always been the real issue – a square peg for a number of round holes.

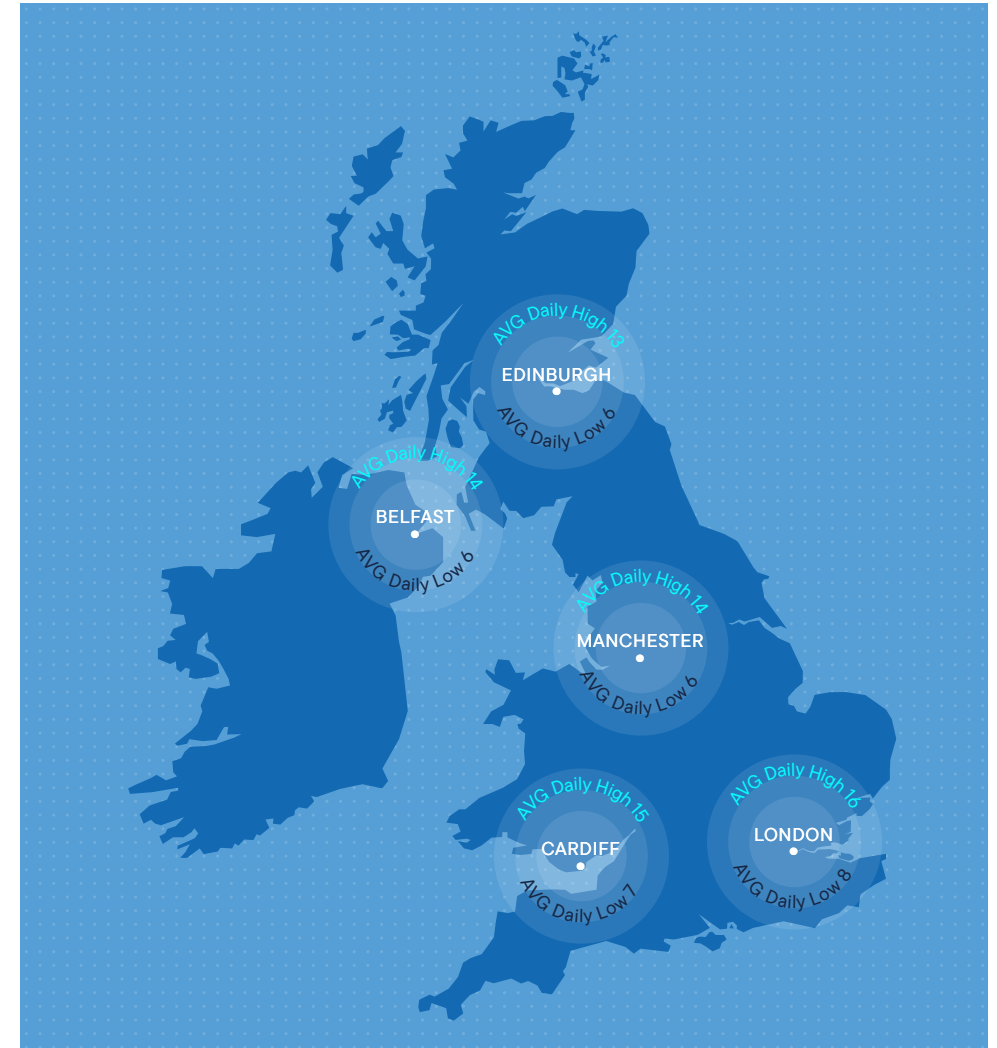
Building emissions are affected by a whole host of factors, from location, age and build type, to hours of use, actual use and specific building features.

Looking at location specifically, monthly sunshine shows how the gap between regions narrows in winter and widens in summer: all regions are relatively grey in December, but May to July London and Cardiff pull far ahead.

Average Sunshine Hours



So, an asset’s location is key: Weymouth records 1,904 sunshine hours a year, while Lerwick in Shetland sees just 1,158 – a difference of nearly 750 hours, or an additional ~30 days of sunlight. This will naturally affect both temperature and lighting; benchmarks should be adjusted accordingly. As this will be a significant barrier in other countries in Europe too, the country-wide, blanket approach is no longer fit for purpose, if it was in the first place.



Furthermore, building use must be accommodated – particularly for industrial and logistics. Across the sector, any particular unit might be used for warehousing, as a logistics hub, or as an intensive manufacturing unit. As you’d expect, these would all result in very different energy use intensity and cannot be compared like-for-like.

In 2023, CRREM split its pathways into cold and warm storage categories, reflecting that a single route was clearly too blunt – but the industry perspective is that these need to be split further to fairly account for the full breadth of the sector.



Is CRREM Moving Pricing?



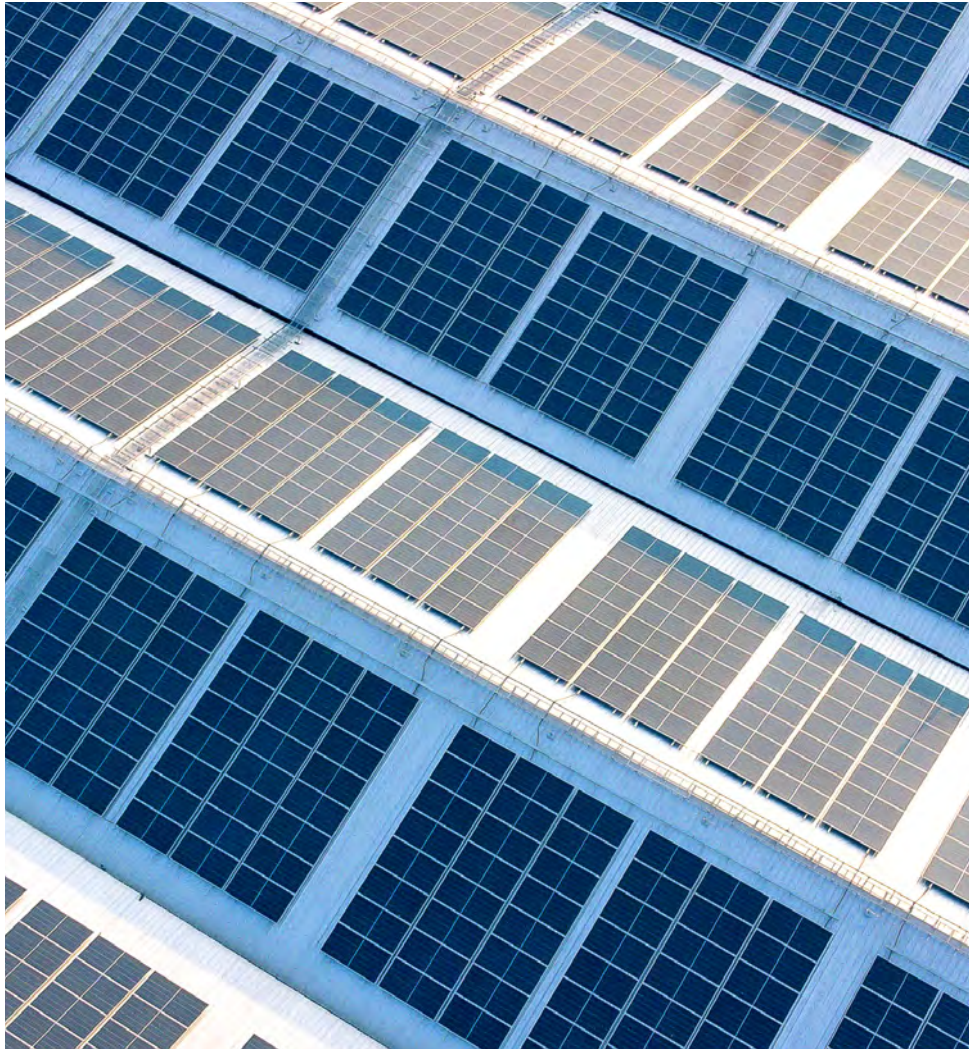
The reality is that CRREM has huge knock-on effects for capital raising and investment. While the transaction market has not yet proven itself to be sophisticated enough in factoring in transition pathways directly, that does not mean this will remain the case forever, or that they are not already having some indirect impact. Instead, pressure usually comes from the capital source, exerted on the asset managers or fundraising teams – teams who are very rarely at the forefront of the transactions themselves.

We have evidence that sustainability performance, on the whole, is a driver of financial return – and that the very best performing assets will be considered prime and achieve a premium premium, or vice versa. For the most part, though, forecasting the exact scale of this premium or discount is a challenge and rarely considers asset emissions. As a result of this uncertainty, some funds are making managers’ lives more challenging – and this is where benchmarks and tools can and should have the greatest opportunity for impact.

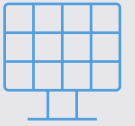
Despite all this, CRREM currently offers very little evidence for where the energy use intensity figures (EUIs) that form the building blocks of its benchmarks have come from. CRREM has in fact already acknowledged this lack of clarity. As if to labour the point, under the old tool, the calculations were hidden in a tab titled ‘Back-End’ – a tab almost wholly un navigable.

Given the consequences of such benchmarks, we should expect and demand more transparency from CRREM on the assets that are feeding into these scores. They’ve promised this will be a key part of the new approach but, as always, the proof will be in the pudding.

From the occupier perspective, events in the Middle East have put a spotlight on energy security. We expect high energy users to look at power availability and renewable energy in more detail going forward as a route to saving on operational costs – a future-proofing that investors, too, will celebrate.



What we'd like to see from CRREM Chapter II



As global conflict drives energy uncertainty, the turning of CRREM's second chapter brings with it significant opportunity: to address the questions stated above, to provide added nuance, and to deliver more accurate, actionable insights.

- **Scale** – a reduction in the quantity of data presented, for ease of use and more compelling presentation.
- **Appropriate benchmarking** – an accounting for assets that may have higher energy use or different requirements.
- **Consideration** – for the role of location and the retrofit opportunity.
- **Transparency and accuracy** – consideration for scope 3 emissions, alongside scope 1 and 2.
- **Carbon reduction** – greater emphasis on the role and potential impact of renewable energy.
- **Grid estimation** – the CRREM curve relies heavily on grid forecasts but needs to account for all possible futures.

CRREM is right: the market has matured. However, they themselves appear to be struggling to keep pace. The data on which its pathways depend are lacking critical nuance and failing to account for the latest avenues for meaningful change.

CRREM was designed for portfolio benchmarking and to compliment other tools, but since has evolved into something far bigger. In this shift, it has struggled to maintain its purpose. CRREM has now seen plenty of change under the leadership of Andrea Palmer, culminating in this tool retirement.

We have been told to expect a renewed focus on being the leading standard for transition pathways and the methodology that underpins them.

The real estate community has high hopes for CRREM Chapter II.

Glossary

BREEAM (Building Research Establishment Environmental Assessment Methodology): Globally recognised sustainability certification assessment used for master planning projects, infrastructure and buildings.

Brown-to-Green: Repositioning real estate to make it more sustainable from a relatively low initial quality.

CRREM (Carbon Risk Real Estate Monitor): A tool that assesses the carbon risk exposure of real estate assets by evaluating current and projected carbon emissions, provides a decarbonisation pathways and asset benchmarking.

DESNZ (Department for Energy Security and Net Zero): the UK government department responsible for energy policy, net zero strategy, and decarbonisation targets.

Energy Use Intensity (EUI): A measure of a building's energy consumption relative to its size, typically expressed in kWh/m²/year. Used to benchmark operational energy performance and track progress against decarbonisation targets.

EPBD (Energy Performance of Buildings Directive): EU legislation requiring member states to improve the energy efficiency of buildings, including mandatory EPC ratings and near-zero energy standards for new builds.

IEA (International Energy Agency): An intergovernmental organisation that provides data, analysis, and policy recommendations on global energy markets and the transition to clean energy.

Green Premium: Additional value attributed to an asset that is more environmentally friendly with sustainable features.

GRESB (Global Real Estate Sustainability Benchmark): ESG data performance benchmarking tool used by investors to rank and validate portfolios.

Impact Funds: Funds that aim to improve social and environmental factors as well as generating a profit.

MEES (Minimum Energy Efficiency Standards): UK regulations under the Energy Act 2011 that set the minimum EPC rating a commercial or residential property must achieve before it can be legally let. Currently E for most properties, with proposals to raise this to B by 2030.

Net-zero Operational Carbon: Buildings that are highly energy efficient and powered by renewable energy on a trajectory to reaching net zero in line with the global target (1.5 degrees). Unavoidable CO₂ emissions are eliminated by carbon removal.

Physical Risk: Extreme weather and physical hazards, such as flooding, tornados and wildfires that can pose a risk to assets.

PPAs (Power Purchase Agreements): A long-term contract between an electricity generator and a customer, usually a utility, government or company.

SBTi (Science Based Targets initiative): A clearly defined pathway for companies and financial institutions to reduce greenhouse gas (GHG) emissions.

Scope 1 Emissions: Emissions from sources that an organisation owns or controls directly.

Scope 2 Emissions: Emissions that a company causes indirectly when the energy it purchases and uses is produced.

Scope 3 Emissions: Emissions that are not produced by the company itself, and not the result of activities from assets owned or controlled by them, but by those that it's indirectly responsible for, up and down the value chain.

Sectoral Decarbonisation Approach (SDA): A science-based methodology for setting corporate carbon reduction targets aligned with a specific sector's decarbonisation pathway, ensuring targets reflect the unique emissions profile of that industry.

SFDR (Sustainable Finance Disclosure Regulation): A European regulation introduced to improve transparency in the market for sustainable investment products, and to prevent greenwashing. Article 9 funds are funds that specifically have sustainable goals as their key objective.

Stranding/Transition: Properties that will not meet future energy efficiency standards and market expectations and might be increasingly exposed to the risk of early economic obsolescence.

The Paris Agreement: A legally binding international treaty on climate change adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, 2015, entered into force on 4 November 2016. The overarching goal is to limit the temperature increase to 1.5°C above pre-industrial levels.

United Nations' Sustainable Development Goals: The 17 SDGs were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet, and ensure people enjoy peace and prosperity.



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For more information,
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