WORLD GREEN BUILDING COUNCIL

ADVANCING NET ZERO

WorldGBC Net Zero Carbon Buildings Commitment

Introduction: Businesses & Organisations

September 2021

Acknowledgements

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WorldGBC Net Zero Carbon Buildings Commitment Taskforce members, past and present:

Andrew Lee, ILFI

Anna Braune, DGNB

Bianca Wong, Kingspan

Cécile Faraud, C40

Clara Bagenal George, Elementa Consulting

Clay Nesler, World Resources Institute (WRI)

Daniel Roe, Kingspan

Debbie Weyl, WRI

Elizabeth Beardsely, USGBC

Fin MacDonald, CaGBC

James Norris, Climate Group

Jason John, EmiratesGBC

Jenny Chu, Climate Group

Jorge Chapa, GBC Australia

Karl Desai, UKGBC

Lauri Tähtinen, FiGBC

Mikelann Scerbo, Alliance to Save Energy

Paul Cartwright, C40

Pia Stoll, Sweden GBC

Shannon Hilsey, WRI

Taryn Cornell, GBC Australia

Vincent Martinez, Architecture 2030

Authors

Victoria Kate Burrows
Director, Advancing Net Zero
WorldGBC

Matthew Black
Project Coordinator,
Advancing Net Zero
WorldGBC

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Background 1.0

1.1 World Green Building Council

The World Green Building Council (WorldGBC) catalyses the uptake of sustainable buildings for everyone, everywhere.

Transforming the building and construction sector across three strategic areas — climate action, health & wellbeing, and resources & circularity — we are a global action network comprised of 70 Green Building Councils around the globe.

As members of the UN Global Compact, we work with businesses, organisations and governments to drive the ambitions of the Paris Agreement and UN Global Goals for Sustainable Development. Through a systems change approach, our network is leading the industry towards a net zero carbon, healthy, equitable and resilient built environment.

1.2 Advancing Net Zero

We have entered a crucial decade of action to deliver on the Paris Agreement, all sectors of the economy must achieve significant emissions reductions; and the global building sector must transition to net zero carbon emissions by 2050. WorldGBC's Advancing Net Zero global project was launched in 2016 to inspire action from the Green Building Council network and its members towards this transition. In 2018, WorldGBC launched the Net Zero Carbon Buildings Commitment, challenging industry to decarbonise their building operations by 2030. In 2019, WorldGBC published Bringing Embodied Carbon Upfront to highlight the urgent need to address embodied carbon. As a result the Commitment now covers both operational and embodied carbon throughout the building life cycle. WorldGBC continues to advocate for market transformation and in 2021 will publish a 'Beyond the Business Case' Report to outline the wider value proposition for net zero buildings.

1.3 Green Building Councils

Green Building Councils are independent, non-profit organisations accelerating the uptake of sustainable buildings.

As members of WorldGBC, they convene businesses and governments to collectively drive environmental, economic and social impact within the built environment on a national, regional and global scale.

1.4 Commitment partners

The Climate Group's global EP100 initiative brings together a growing group of energy-smart companies committed to doing more with less. By integrating energy efficiency into business strategy, these leading companies are driving tech innovation and increasing competitiveness while delivering on emissions goals — inspiring others to follow their lead. Saving energy makes business sense; members are generating green growth and making substantial cost savings by doubling their energy productivity, cutting out waste, and owning and operating smart buildings. EP100 is led by The Climate Group in partnership with the Alliance to Save Energy as part of the We Mean Business coalition, and is delivered in association with the World Green Building Council's Net Zero Carbon Buildings Commitment. Visit theclimategroup.org/EP100 or follow #EP100 on Twitter.

C40 is a network of the world's megacities committed to addressing climate change. C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change. Around the world, C40 Cities connects 97 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future. Representing 700+ million citizens and one quarter of the global economy, mayors of the C40 cities are committed to delivering on the most ambitious goals of the Paris Agreement at the local level, as well as to cleaning the air we breathe. C40 leads the Net Zero Carbon Buildings Declaration and the Clean Construction Declaration, that include commitments made specifically by cities to decarbonise the built environment. To learn more about the work of C40 and their cities, please visit their website and C40 Knowledge Hub or follow them on Twitter.

The Climate Group is the Secretariat to the Under2 Coalition, which is a group of ambitious state and regional governments committed to keeping global temperature rises to well below 2°C. The coalition is made up of more than 220 governments who represent over 1.3 billion people and 43% of the global economy.

The Under2 Coalition works with governments across three key workstreams: Pathways, providing technical support and resources to assist governments to develop long-term emissions reduction plans; Policy Action, sharing policy innovation and success to accelerate the transition to a net-zero economy; and Transparency, increasing accountability by encouraging state and regional governments to disclose their climate targets, action and progress. Visit theclimategroup.org/project/under2- coalition or follow #Under2Coalition on Twitter.

Glossary 2.0

Advancing net zero: Actions taken to reduce emissions from operational and embodied carbon, with residual emissions compensated for in the transition to net zero emissions.

Carbon offset: An offset is where an avoidance, reduction, or removal of a carbon emission is used to compensate for or neutralise a CO_2 emission that occurs elsewhere.

Carbon removal offset: A type of offset that takes CO_2 out of the air and permanently stores it. For all forms of carbon removal, whether nature-based solutions or technologically-mediated processes, carbon must be stored[1].

Embodied carbon: Carbon emissions associated with materials and construction processes used throughout the whole lifecycle of a building or infrastructure.

Net zero operational carbon: When the amount of carbon dioxide emissions associated with building operations on an annual basis is reduced (highly energy efficient and fully powered from on-site and/or off-site renewable energy sources) to a level that is consistent with reaching net zero at the global or sector level in 1.5°C pathways. Any residual emissions that remain unfeasible to eliminate should be neutralised through carbon removals[2].

Net zero whole life carbon: When, in addition to net zero operational carbon, upfront carbon and other embodied carbon across the building lifecycle is reduced to a level that is consistent with reaching net zero at the global or sector level in 1.5°C pathways. Any residual emissions that remain unfeasible to eliminate should be neutralised through carbon removals[2].

Operational carbon: Carbon emissions associated with energy used to light, heat, cool, and power a building.

Residual emissions: Emissions which remain once all feasible methods for reducing emissions during construction and operation have been exhausted.

Scope 1 emissions: Emissions from operations that are owned or controlled by the reporting company.

Scope 2 emissions: Indirect emissions from the generation of purchased or acquired electricity, steam, heat, or cooling consumed by the reporting company.

Scope 3 emissions: All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions, with no direct ownership or control over.

Sector-based compensation offsets: Verified offsets which contribute to avoiding or reducing emissions from buildings or construction projects external to the asset.

Upfront (embodied) carbon: Total carbon emissions produced in the production and construction process stages of a building lifecycle, including emissions from raw material supply, manufacturing, transportation, and construction or installation of a building.

Zero carbon: Refers to highly efficient assets which are built and operated using 100% renewable energy sources and are fossil fuel free.

1 University of Oxford, 'The Oxford Principles for Net Zero Aligned Carbon Offsetting' (2020)

2 Science Based Targets, 'Foundations for Science-based Net Zero Target Setting in the Corporate Sector' (2020)

Introduction 3.0

This document introduces the updated WorldGBC Net Zero Carbon Buildings Commitment (the Commitment). It provides an overview of how it contributes towards market transformation and how it was developed. It also offers practical information relating to becoming a signatory as a business or organisation. For cities and sub-national governments, please refer to separate guidance documents.

3.1 The Commitment

What is it?

WorldGBC has developed the Net Zero Carbon Buildings Commitment to recognise and promote advanced climate leadership action from businesses, organisations, cities and subnational governments in decarbonising the built environment, to inspire others to take similar action and remove barriers to implementation.

A bold approach is urgently required to reduce the impacts of the sector, which is globally responsible for 35% of energy consumption, 38% of energy related carbon emissions, 50% of resource consumption, and expected to double in total footprint by 2060[3].

This requires deep collaboration across the entire value chain, and radical transformation in the way buildings are designed, built, used and deconstructed; new business models that promote circularity, re-use of buildings and materials, whole life cycle thinking, high performance operations, and ultimately a shift away from fossil fuels.

The Commitment was first introduced in 2018, to promote and inspire leadership action towards net zero carbon buildings. The accelerated actions being taken by businesses to decarbonise their portfolios and policymakers to enact regulation for net zero buildings, stimulate the solutions necessary to drive the mass market change towards 2030 and 2050 Whole Life Carbon Vision goals. It is an example of the Ambition Loop in action, with demonstrable impact from signatories leading to more businesses signing up, and policy roadmaps ensuing.

Since its launch, the Commitment has undergone continued development and improvement thanks to feedback from signatories, partners and the diligent work of the Commitment Taskforce and working groups. The 2021 update represents a significant increase in ambition through the introduction of new requirements and scope.

You can find out more information about the Commitment, access additional guidance and view the list of signatories here.

How was it developed?

The Commitment was developed and is maintained based on the guiding best practices principles of the Advancing Net Zero Whole Life Carbon Vision. This update is the result of a thorough and extensive 18 month consultation and development process involving input from more than 100 focused and dedicated industry experts from both within the Green Building Council community and wider industry stakeholders, participating in the Commitment Taskforce and Whole Life Carbon Working Group.

3 GlobalABC, '2020 Global Status Report for Buildings and Construction' (2020), p.19,48

Why Whole Life Carbon?

To ensure it continues to demonstrate a leadership position on advancing net zero buildings, the 2021 update of the Commitment involves refinement of the existing requirements for addressing operational carbon, and the addition of actions to account for embodied emissions as part of a whole life carbon approach to sustainable development. This follows the targets and actions set out in WorldGBC's 2019 report Bringing Embodied Carbon Upfront, and promotes accelerated leadership action.

In order to also prevent and mitigate embodied emissions, increase resource efficiency and stimulate the development and market supply of low carbon products, the sector must (1) reduce and account for its impact on the environment and natural resources through design and construction, and (2) generate a strong and urgent demand signal to supply chains and investors to activate the necessary finance to decarbonise heavy industry processes.

The Commitment requires that by 2030:

— Existing buildings reduce their energy consumption and eliminate emissions from energy and refrigerants removing fossil fuel use as fast as practicable (where applicable). Where necessary, compensate for residual emissions.

— New developments and major renovations are built to be highly efficient, powered by renewables, with a maximum reduction in embodied carbon and compensation of all residual upfront emissions.

As this is a global challenge requiring local solutions, the Commitment is outcomes based and action focused, allowing for creative and flexible solutions at asset and portfolio level to achieve high levels of perfomance based on best practice application.

WorldGBC recognises that definitions of net zero and approaches to achieve a net zero emissions balance vary. As such, WorldGBC does not encourage signatories to make claims about achieving net zero based purely on their participation in the Commitment. However, they will always be recognised as leaders in transforming the market and in advancing net zero. This is further explained in section 4.2 Navigating net zero.

The Commitment sets the direction of travel for the industry, providing a platform for championing leadership action in truly accounting and compensating for the emissions of projects being built today, whilst enabling the low carbon solutions for buildings of the future.

Does the Commitment include benchmarks for energy and embodied carbon reductions?

As per WorldGBC's Whole Life Carbon Vision, by 2030 all new projects globally must achieve at least 40% embodied carbon reductions, with a focus on upfront carbon.

As leaders, Commitment signatories must go further, faster and strive to achieve the maximum possible reductions based on project type, location and market solutions. Please refer to national benchmark data and local Green Building Councils for more information.

Net Zero Carbon Buildings Commitment

The Commitment structure is designed to facilitate genuine action towards decarbonisation of the built environment. Its outcomes based approach promotes flexibility and delivery, in order to ensure that signatories are accounting for the total impact of assets within their direct control, and acting as an enabler for other organisations to do the same.

Entities deliver an action plan that covers five key components:

Who can sign up for the Commitment?

Entities seeking to become a signatory must demonstrate a level of ambition and impact equivalent to the leadership required by this Commitment. Signatories may demonstrate this through one or more of the following:

- international presence to stimulate global markets
- significant presence in their country
- significant capacity to influence the built environment
- high level of carbon emissions within their sector relative to an average entity to be addressed
- high potential for advocacy to increase uptake within industry

Eligibility will be assessed by local GBCs (where possible) and finalised by the Advancing Net Zero team of WorldGBC during the recruitment process. Where necessary, eligibility will be further determined by members of the Taskforce of the Net Zero Carbon Buildings Commitment.

Please note: Businesses and organisations must sign the Commitment to take action as relevant to portfolio profile, and must include all assets within their portfolio under their direct control (see definitions section in forthcoming Detailed Guidance document).

3.2 Transitioning to the new requirements

The Commitment now introduces mandatory requirements depending on the profile of an entity's portfolio, determined via direct control of the assets (operational and financial control):

- If an entity only has **existing buildings** to manage within its portfolio, the **operational carbon requirements** apply.
- If an entity is also responsible for the **development of new buildings or major renovations** within its portfolio, **both the operational carbon and embodied carbon requirements** apply.

Effective 1 January 2023, all new signatories to the Commitment will be required to commit to the requirements relevant to their portfolio profile.

Existing signatories will be invited to make the transition to the new requirements, and WorldGBC will continue to engage with these signatories to support this process.

3.3 Benefits of being a part of the Commitment

The Net Zero Carbon Buildings Commitment promotes and inspires proactive climate leadership to ensure the carbon emission reduction goals of the Paris Agreement are achieved through urgent and immediate action. It provides entities with the opportunity to futureproof their operations and creates a unique platform for action.

Driving change

By setting ambitious 'absolute' targets, the Commitment gives a framework for entities to develop globally ambitious yet locally relevant, flexible and universally viable solutions for their assets and portfolio to reduce energy demand, advance net zero carbon operations and tackle embodied emissions. By becoming a signatory and leveraging the vast experience of other signatories and partner organisations, participants can demonstrate to industry the level of action required to advance decarbonisation, and stimulate wider uptake.

The power of advocacy

Whilst the Commitment addresses an organisation's 'footprint' in terms of carbon emissions they can directly address from their portfolio, for many organisations the potential of their 'handprint', via the work they conduct as an organisation, can have far greater impact to further tackle indirect emissions. These actions help to reflect a holistic approach to decarbonising the built environment. Signatories are asked to track and report this impact.

Beyond the Business Case

The business case for pursuing net zero carbon buildings is strengthening. Consumer demand and investor expectations to ensure the resilience of business operations — including built assets — are driving towards a future net zero economy. Moreover, it is increasingly clear that pursuing net zero carbon buildings results in a multitude of additional health and social benefits beyond the immediate reduction of emissions, not only for buildings users, but the wider community and society.

Theory of Change: Advancing Net Zero 4.0

Advancing net zero emissions is a journey and an integral part of a wider systemic shift towards a more sustainable built environment.

As part of the transition towards total sector decarbonisation, WorldGBC advocates for a holistic approach to sustainability that also enables tangible environmental and social co-benefits in support of the UN's Sustainable Development Goals (SDGs).

Signatories to the Commitment are advancing net zero by facilitating and accelerating market transformation. Their commitment represents a leadership position within the buildings and construction sector in taking action further and faster to decarbonise the built environment. Through this action, we seek to engender sector transformation that will allow mainstream actors to achieve the goals set out within WorldGBC's Sustainable Buildings for Everyone, Everywhere strategy.

The Commitment is an example of the Ambition Loop in action — signatories are advancing climate action within their own building portfolios to demonstrate what is possible, and advocate for change through their business activities. Governments of all levels are responding to these signals of readiness by setting policy roadmaps and targets, creating the confidence in investors and supply chains to activate low carbon solutions ahead of mainstream regulation and uptake.

The 2021 update to the Commitment continues this journey, to advance net zero whole life carbon emissions for the built environment through the introduction of requirements to measure, reduce and offset embodied carbon. By requiring signatories to take all necessary actions to achieve a maximum reduction in whole life carbon emissions (and compensate any residual emissions) for all new developments or major renovations over which they have direct control by 2030, remaining barriers will be overcome to further initiate market transformation to enable mainstream uptake of solutions.

A reduction first, outcomes based approach to decarbonisation.

The Commitment continues to promote a reduction first, outcomes based approach — allowing the flexibility for signatories to develop a bespoke action plan for their specific portfolio profile based on best practice principles towards reducing both consumption and emissions, with annual reporting of verified progress towards decarbonisation goals.

Through gathering data to inform low carbon choices, relevant benchmarks and targets can be set, best practice methods incorporated, associated costs reduced, and greater uptake enabled — accelerating market transformation and leading to significant sector emissions reductions.

Despite leading efforts in maximising emission reductions, due to external limitations in some markets offsets represent an important facilitator in compensating for residual emissions, particularly when also accounting for embodied carbon.

WorldGBC advocates for halving emissions of the building and construction sector by 2030 and the total decarbonisation of the sector by 2050. As we transition, we also recognise the value of offsets as a means to compensate for and neutralise the impacts of the sector, and to facilitate positive social and environmental impact in pursuit of overall net zero emissions.

Residual upfront embodied carbon emissions should be offset at point of practical completion (for new developments). Residual operational emissions (where necessary), and embodied emissions for major renovations, should be offset as they occur on an annual basis throughout the lifecycle of the asset. See section 4.2 Navigating net zero and Advancing Net Zero: Offsetting Residual Emissions from the Building and Construction Sector for more information.

4.1 Stakeholder Impact

In order to realise our shared goal of the total decarbonisation of the built environment, it is vital that all stakeholders from across the value chain take action, working collectively and collaboratively. Different stakeholder types will have varying ability and impact in directly influencing the reduction of whole life carbon emissions through their actions, but all have the potential to also influence indirect emissions.

The forthcoming updated Detailed Guidance document will include suggested actions for different stakeholders to pursue, to realise their Commitment and beyond, and fulfil requirements under the Advocate section. Examples of opportunities to influence direct and indirect whole life carbon emissions include:

Building Owners / Investors — optimise the ongoing performance of existing buildings, and the specification of new developments to advance net zero whole life carbon. When existing building assets are retrofitted for reuse, pursue net zero whole life carbon for those activities.

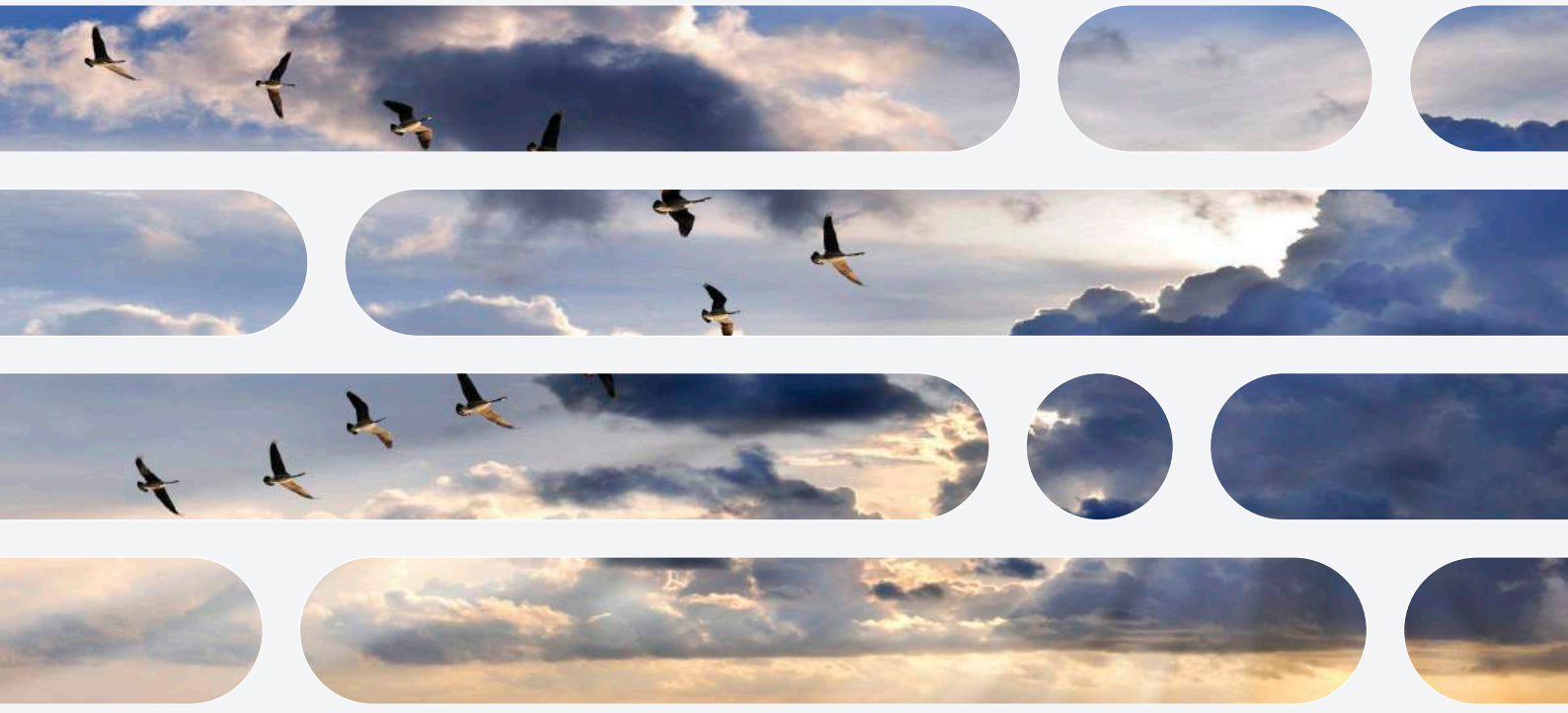
Developers — optimise operational and embodied carbon emission reductions in new developments. Accelerate supply chain action to increase demand for low carbon materials and construction processes. Enable assets being sold on to operate at net zero.

Contractors — support clients to specify and deliver designs and completed developments optimised for net zero whole life carbon. Engage with supply chain to incorporate lean construction approaches, decarbonise construction equipment, processes and material transport, and implement circular economy principles.

Designers / Architects / Engineers — optimise the ongoing performance of own assets towards net zero operational carbon. Specify own new developments & major renovations to advance net zero embodied carbon. Support clients and projects to achieve maximum reductions in whole life carbon.

Product Manufacturers — optimise the ongoing performance of own assets to advance net zero. Specify own new developments & major renovations to advance net zero embodied carbon. Optimise and decarbonise manufacturing processes and products in order to meet market demand for low carbon and circular materials.

Tenants — optimise performance of occupied assets and encourage asset owners to join the Commitment to transition to net zero. Advocate through core business activities and market demand signals to accelerate and advance the transition to net zero whole life carbon.



4.2 Navigating net zero

The Commitment is designed to recognise leadership action towards decarbonising building portfolios, and the contribution of signatories to the wider industry transformation towards net zero, and ultimately, zero carbon. It promotes aggressive reduction-first strategies, with residual emissions being compensated for via offsets.

WorldGBC does not encourage signatories to make claims about achieving net zero based purely on their participation in the Commitment. However, they will be recognised as leaders in transforming the market and in advancing net zero.

The IPCC defines net zero as: When anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. The Science Based Targets initiative (SBTi) outlines what it means to reach net zero at the corporate level as: (1) achieving a scale of value-chain emission reductions consistent with reaching net zero at the global or sector level in scenarios that limit warming to 1.5°C with no or limited overshoot and; (2) neutralising the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently removing an equivalent amount of atmospheric carbon dioxide[4].

Therefore, deep and equitable decarbonisation is a pre-requisite to a state of net zero.

As set out in Advancing Net Zero: Offsetting Residual Emissions from the Building and Construction Sector, WorldGBC recommends that signatories should pursue permanent removal offsets to reach net zero. However, as part of the transition towards total sector decarbonisation that also enables tangible environmental and social co-benefits in support of the SDGs, WorldGBC recognises the significant contribution of sector-based compensation offsets, and the role they play in the short to medium term to facilitate systemic change.

WorldGBC therefore encourages companies to invest in compensation measures in the transition to net zero emissions.

Entities should seek to transition to the use of removal offsets over time as this market matures. Before making a net zero claim that will also be recognised by other definitions, signatories should be aware of those differentiations and communicate appropriately.

4 The Science Based Targets initiative is currently developing the first global Net Zero Standard for validating corporate net zero targets. The Standard will launch in late 2021 and they will begin to validate targets in January 2022.

A Whole Life Cycle Approach to Advancing Net Zero Buildings 5.0

Operational Carbon

Advancing net zero operational emissions involves reducing energy demand, shifting to renewable energy, and compensating for residual emissions from sources that cannot be abated (such as remaining fossil fuels or refrigerants). As quickly as practicable, buildings must shift to full use of renewables by removing equipment that uses fossil fuels. Entities are committed to measuring, mitigating, and reducing (and offsetting where necessary) the operational emissions of their assets and advocating for a net zero whole life carbon built environment.

Why energy efficiency matters

Energy efficiency measures could contribute a 48% reduction in global emissions by 2030, with 43% of those coming from buildings. They also are a significant source of cost reductions while contributing to increased resilience, durability, comfort and productivity, and support grid decarbonisation.

Actions as part of a decarbonisation strategy must be demonstrated based on the following principles:

1. **Reduce and optimise energy demand** — prioritise consumption reduction and energy efficiency to ensure that buildings are performing as efficiently as possible, and not wasting energy.
2. **Generate balance from renewables** — supply remaining demand from renewable energy sources, either on-site or off-site.
3. **Compensate for residual emissions** — offset residual operational emissions, such as from refrigerants or the use of unavoidable fossil fuels in buildings with high quality, credible compensation activities[5].
4. **Plan for deep decarbonisation** — set up action plans to remove any remaining sources of fossil fuels in buildings as soon as possible.

Embodied Carbon

Advancing net zero embodied emissions involves reducing emissions associated with materials and construction processes throughout the building's lifecycle as far as possible. Once all reduction efforts have been exhausted, compensate for the residual upfront emissions from new developments and major renovations via offsets. Entities are committed to measuring, mitigating and reducing the embodied emissions of their assets and advocating for a net zero whole life carbon built environment throughout the building and construction sector and supply chain.

Why embodied carbon reduction matters

Cement manufacture is responsible for 7% of global carbon emissions, with steel also contributing 7-9%, of which around half can be attributed to buildings and construction. More than half of total carbon emissions from new construction between 2020 and 2050 will be due to upfront emissions.

Actions as part of a decarbonisation strategy must be demonstrated based on the following principles:

1. **Prevent** — avoid embodied carbon from the outset by considering alternative strategies to deliver the desired function (e.g. renovation of existing buildings rather than new development etc.)
2. **Reduce and optimise** — evaluate each design choice using a whole lifecycle approach and seek to minimise upfront carbon impacts (e.g. lean construction, low carbon materials and construction processes etc.)
3. **Plan for the future** — take steps to avoid future embodied carbon during and at end of life (e.g. maximise potential for renovation, future adaptation, circularity etc.)
4. **Compensate for residual emissions** — offset residual upfront embodied carbon emissions with high quality, credible compensation activities[5].

5 WorldGBC, 'Advancing Net Zero: Offsetting Residual Emissions from the Building and Construction Sector' (2021)

Requirements 6.0

This section outlines the high level requirements for each component of the Commitment. Please refer to the forthcoming Detailed Guidance for more information by entity type.

6.1 Determining Portfolio

Cities and subnational governments

Policymakers will continue to be considered under either the 'Policy' and/or 'Municipal/Government Buildings' pathways. These requirements remain unchanged for operational carbon.

For cities who wish to consider whole life carbon impact, refer to the C40 Clean Construction Declaration.

Busineses and Organisations

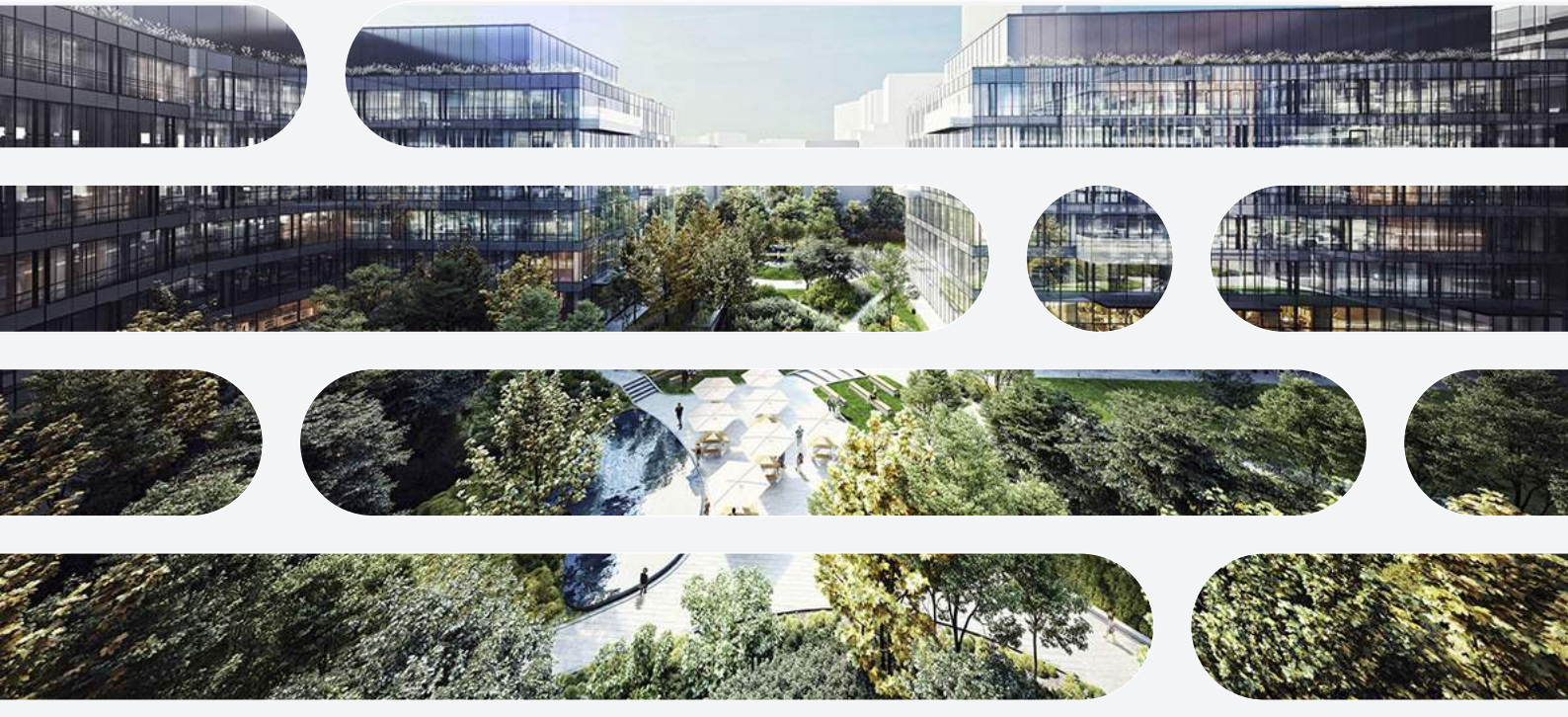
All businesses and organisations signed up to the Net Zero Carbon Buildings Commitment will now be considered under one pathway for all types of entities. Requirements will be based upon the level of direct control an entity has over each asset and the activities they undertake within their portfolio.

The Commitment now requires entities to consider the whole life carbon impacts of their actions; mandating that for all assets under direct control, achieve maximum operational and embodied carbon emission reductions, with all lifecycle stages considered, and compensate for any residual upfront emissions. The new embodied carbon requirements apply to all signatories who develop new building assets, or assets that undergo a significant renovation, within their direct control.

Different regions and countries have varying access to supply chains and sources of energy that will affect procurement strategies. Where guidance is available by a local Green Building Council that exceeds the requirements of the Commitment, local guidance applies.

Assets within entity portfolio under direct control

Existing buildings	New developments & major renovations
Operational Carbon requirements	**Operational + Embodied Carbon requirements**



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	Operational Carbon	Embodied Carbon
COMMIT	assets under direct control to reduce (and compensate where necessary) all **operational carbon emissions** by 2030	new developments and major renovations under direct control to reduce and compensate (for residual upfront emissions) **embodied carbon emissions** by 2030
DISCLOSE	and assess annual asset and portfolio operational **energy demand** and **carbon emissions**	**whole life carbon emissions** according to EN 15978 or other accepted national standard
ACT	to achieve maximum emission reductions with key actions and milestones towards **energy efficiency** and **renewable energy**	to achieve maximum emission reductions in **upfront, in-use and end-of-life embodied carbon**
VERIFY	**enhanced energy performance,** reduced carbon emissions and progress towards net zero carbon assets and portfolio	**prevention strategies, WLCA calculations,** offsets and progress towards net zero embodied carbon assets and portfolio
ADVOCATE	for wider emissions reductions by acting as a catalyst through **core organisation activities** for further action within respective supply chains	for wider emissions reductions by acting as a catalyst through **core organisation activities** for further action within respective supply chains

COMMIT

DISCLOSE

ACT

VERIFY

ADVOCATE

Commit all assets within direct control to advance net zero operational and/or whole life carbon by 2030.

Aim:

To recognise entities that are committed to owning, occupying and developing new and existing assets within their direct control to reduce (and compensate where necessary) operational carbon emissions by 2030 and, for newly developed assets or major renovation activities, achieve maximum reductions and compensate residual emissions by 2030 (at practical completion and as emissions occur).

New developments or major renovation activities should achieve the maximum possible reduction in upfront embodied carbon emissions, maintaining a whole life carbon perspective, achievable within their local market / context, with the remaining residual emissions compensated for according to guidance outlined in Advancing Net Zero: Offsetting Residual Emissions from the Building and Construction Sector.

Requirements:

Operational Carbon

Commit **all assets** under direct control to reduce (and compensate where necessary) **operational carbon emissions** (complete scope 1 and 2 emissions including refrigerants and manufacturing/process loads) by **2030.**

Achieve maximum possible emission reductions from energy and refrigerants, and compensate for any residual emissions that remain.

Embodied Carbon

Commit all **new developments and major renovations** of existing assets to reduce and compensate (for residual upfront emissions) **embodied carbon emissions** by **2030.**

Achieve maximum possible emission reductions in upfront embodied carbon (module A lifecycle stage as defined in EN 15978, with modules B - D measured, considered and planned for), and compensate for any residual emissions that remain.

COMMIT

DISCLOSE

ACT

VERIFY

ADVOCATE

Measure and assess annual asset and portfolio energy demand, operational carbon emissions and whole life carbon emissions. Disclose portfolio data publicly.

Aim:

To create transparent building performance metrics through measurement and monitoring to compare and evaluate across asset and portfolio level.

Generate easily digestible and publicly available information (for consumers, employees etc), establish the portfolio Commitment baseline, and identify performance gaps and opportunities for improvements at asset and portfolio level.

Increase access to data and methodologies to accurately calculate the impacts of design decisions, and to influence necessary supply chain changes to reduce impacts.

Inform the development and adjustment of individual implementation plans and decarbonisation roadmaps, and potential advocacy impact.

Requirements:

Operational Carbon

Disclose and assess annual asset and portfolio **energy demand** and **carbon emissions** including:

1. energy consumption and energy use intensity (EUI) / predicted
2. renewable energy contribution (on-site and off-site)
3. scope 1 and 2 operational carbon emissions from portfolio including refrigerants and process loads
4. contribution from offsets (if apply)

Disclose impact of business activities that contribute to indirect emission reductions

Embodied Carbon

Disclose **whole life carbon emissions** for new developments and major renovations, according to EN 15978 or other accepted national standard, including:

5. upfront embodied carbon data
6. whole life emissions data
7. contribution from offsets for residual upfront emissions

Disclose impact of business activities that contribute to indirect emission reductions

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ADVOCATE

Develop and implement a bespoke decarbonisation roadmap including key actions and milestones, reflecting portfolio activities under entity's direct control.

Aim:

To develop, maintain and update an implementation plan for achieving the Commitment, aligned with the Advancing Net Zero Framework.

Identify and implement energy efficiency measures and renewable energy targets and milestones demonstrating a decarbonisation trajectory for assets and portfolio, which are technically feasible, economically viable, substantive and verifiable.

Maximise the reduction of upfront embodied carbon emissions for the project type, location and market solutions, based on whole lifecycle assessment (WLCA).

Requirements:

Operational Carbon

Develop and implement a decarbonisation roadmap that includes **energy efficiency measures** to reduce consumption, building measures to decarbonise grids, **renewable energy** generation and procurement at asset and portfolio level.

Produce an action plan to remove any remaining sources of fossil fuels from buildings as soon as possible.

Embodied Carbon

Develop and implement a decarbonisation roadmap that maximises the reduction of **upfront, in-use and end-of-life embodied carbon** at asset level.

Offset residual upfront emissions at practical completion, and emissions from major renovations as they occur on an annual basis.

Produce a whole lifecycle plan for assets under development, including reuse and end of life stages.

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VERIFY

ADVOCATE

Provide accurate, reliable and verified data that demonstrates progress towards advancing net zero carbon assets and portfolio.

Aim:

To annually verify the progress of each asset and the portfolio towards achieving the outcomes of the Commitment through locally relevant third-party certification, third-party assurance or market mechanisms, and adjust decarbonisation roadmap as appropriate.

Create better understanding and consistent measurement of the whole life carbon emissions of new and renovated built assets to enable comparability of results, benchmarking and target setting to achieve maximum whole life carbon reductions.

Create demand signals for greater accessibility to low carbon solutions for the sector.

Requirements:

Operational Carbon

Verify and report **enhanced energy performance and reduced carbon emissions** in assets and portfolio via an **independent third party** or market mechanisms at asset level (such as green building certification).

Provide verified data to demonstrate **impact of advocacy actions**.

Embodied Carbon

Verify and report **lifecycle assessment calculations, embodied carbon and whole life carbon emissions data**, via an **independent third party** or market mechanisms at asset level (such as green building certification).

Provide verified data to demonstrate **impact of advocacy actions**.

WORLD GREEN BUILDING COUNCIL

ADVANCING NET ZERO

COMMIT

DISCLOSE

ACT

VERIFY

ADVOCATE

Demonstrate leadership to support advancing net zero buildings, market transformation and the transition to a net zero built environment.

Aim:

To demonstrate leadership through core business activities as a catalyst for further action within respective supply chains. Through initiatives such as voluntary programmes (e.g. community greening, design guidance), incentives (e.g. energy efficiency rebates/retrofit financing) or contractual agreements (e.g. green leases, low carbon procurement policies etc), each stakeholder has the potential to facilitate more momentum towards achieving the target of total decarbonisation by 2050.

Capture any actions or activities that go beyond the minimum requirements of the Commit section, including other emissions sources from an entity's carbon footprint and opportunities to further reduce emissions as a result of the entity's activities.

Requirements:

Operational Carbon

Demonstrate leadership through **core business activities** that contribute to understanding and reducing **whole life carbon emissions**, and help facilitate the wider advancement of net zero whole life carbon buildings throughout the supply chain and wider industry.

Track the impact that business activities contribute towards influencing indirect whole life carbon emissions.

Embodied Carbon

Demonstrate leadership through **core business activities** that contribute to understanding and reducing **whole life carbon emissions**, and help facilitate the wider advancement of net zero whole life carbon buildings throughout the supply chain and wider industry.

Liaise with partners and supply chain to increase demand side signals for increased quality and availability of low carbon materials, data and tools, and **track the impact.**

WORLD GREEN BUILDING COUNCIL

ADVANCING NET ZERO

Interested in signing up?

There are no fees associated with becoming a signatory to the Net Zero Carbon Buildings Commitment.

Due to its focus on improving energy efficiency, eligible businesses can also opt in to EP100 membership and receive the associated benefits for an annual fee.

If you are interested in joining the Commitment, please visit the website to view the full Information Pack or contact your local Green Building Council or anzproject@worldgbc.org

Contact
office@worldgbc.org
www.worldgbc.org

London office
World Green Building Council
Suite 101,
66-67 Newman St,
Fitzrovia,
London W1T 3EQ
United Kingdom

Toronto office
World Green Building Council
Woodbine Steeles Corporate Center
7030 Woodbine Avenue - Suite 500
Markham,
Ontario,
Canada L3R 6G2

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