Advancing net zero by planning for the removal of offsets

For the purpose of this document, all terminology relates only to energy-related emissions from the operational phase of a building in-line with the boundaries of the Net Zero Carbon Buildings Commitment (the Commitment). Other phases of a building's lifecycle are not covered at this current stage.

Confusion around net zero

Within industry, "net zero carbon" is often interchanged with other common terms like "net zero energy", "carbon neutral", "carbon negative" and "carbon positive".

All of these terms share a commonality to achieve net zero through a combination of energy efficiency, on-site renewable energy, off-site renewable energy and/or offsets. While the end result appears similar, the typical combinations defined within each term vary substantially, and therefore, so do the actual emissions released into the atmosphere. The absence of a globally adopted standard to clarify these terms has reinforced confusion on what the best practice approach is and hindered decarbonisation progress worldwide.

WorldGBC's approach

In 2017, to alleviate this confusion, WorldGBC sought agreement between green building councils worldwide on a best practice definition for a net zero carbon building which would be formalised as part of the Advancing Net Zero project and listed in the call to action report From Thousands to Billions. The definition was as follows:

Net zero carbon - A highly energy-efficient building with all remaining operational energy use from renewable energy, preferably on-site but also off-site production, to achieve net zero carbon emissions annually in operation[1].

To WorldGBC, this definition focuses on the critical issue (carbon), priorities the right strategies first (decarbonisation) and provides a universal decision tree of suggested actions as follows:

- **energy efficiency (as much as possible)**
- **on-site renewable energy**
- **off-site renewable energy**
- **offsets as a last resort[2]**

[1] Principle 3: generate balance from renewables of the Advancing Net Zero Infographic provides further guidance for renewables and states "Supply remaining demand from renewables from renewable energy sources preferably on-site, followed by off-site, or from offsets"

[2] For more information, please see page 28 of the Detailed Guidance document.

This decision tree allows for all buildings and regions across the globe to be part of the climate solution. For example, high-rise buildings which may not be able to meet all energy needs on-site can procure off-site renewable energy to reduce their emissions. Where limits on additionality of renewables exist, such as in New Zealand or Canada, the use of best practice offsets allows organisations to meet desired goals, enable market transformation and send clear policy signals.

While offsets should generally be viewed as a last resort to achieving net zero carbon, the decision tree does recognise that in some cases there are prohibitive technical, financial and lifecycle implications to implementing energy efficiency and/or renewable energy. An organisation should always look to minimise the quantity of offsets purchased, but where they must form part of the solution, WorldGBC has set best practice requirements for their purchase (for further information see Appendix B of the Detailed Guidance); specifying the location of offsets, principles to adhere to and well-known standards to use. These requirements are based on criteria and guidelines set by the industry-leading initiative RE100 and the GBC network.

Facilitating market transformation locally

Different regions and nations through member GBCs (when appropriate) have added local requirements to WorldGBC's net zero carbon definition as a way to spur targeted market transformation. For example, the Green Building Council of Australia introduced a rule that electricity-related emissions (ie Scope 1 & 2) cannot be reduced through the use of offsets – they must be reduced through the use (generation and/or procurement) of renewable electricity to drive establishment of more renewable energy in the Australian electricity grid. The German Green Building Council, DGNB, as part of their "Framework for Carbon Neutral Buildings and Sites" do not allow for offsets but instead consider a substitution effect of feeding energy back into the grid through on-site renewable energy. This approach seeks to demonstrate that buildings are a part of the energy transition solution and can be active elements of the energy grid.

Increasing ambition as markets mature

In-line with the GBC network and industry partners, WorldGBC will tighten this definition as markets mature and become more equipped to deliver viable and genuine net zero solutions. For example, based on the IPCC report, and the early-stage work being undertaken by WRI and SBTi, WorldGBC will evaluate limiting offsets to natural carbon sequestration activities in the future. Dependant on regional circumstances, other considerations could include:

- focusing on carbon removal mechanisms only
- limiting the percentage contribution from offsets within the portfolio as grids worldwide become increasingly optimised
- working with local GBCs to specify minimum energy efficiency requirements before offsets can be used.