

Terms and Definitions

Carbon Neutral Climate Neutral Net-Neutral

Carbon neutrality is a state whereby all greenhouse gasses released into the atmosphere from activities is balanced to zero. This is achieved through carbon offsetting, where emissions are recorded and measured in a standardised way, then investments are made in the equivalent amount of carbon credits, which typically represent the removal of 1 tonne of CO₂ from the atmosphere.

Carbon Net Neutral

Net-zero is achieved when a company undertakes deep and rapid emissions cuts against a baseline year to reduce emissions by a minimum of 90% by 2050. This is in line with the Paris Agreement and the targets set by the World Green Building Council.

Carbon Net-Zero Zero-Carbon

Related terms; Science based targets; Paris aligned; 1.5°C aligned; Absolute Zero

This is achieved when no greenhouse gases are emitted into the atmosphere from any activity attributable to the business. Net zero targets set out that businesses should aim to halve their emissions by 2030 and achieve at least 90% emissions reductions by 2050, with carbon offsets used only for the remaining, hard to decarbonise emissions. Achieving these targets would keep global temperature rise in line with the 1.5°C goal set by the Paris Agreement.

This definition is sourced from the Science Based Targets initiative (SBTi) and The Carbon Trust.

Carbon Positive

Also occasionally referred to as carbon negative, this is when a business or product goes beyond carbon neutrality through removing additional greenhouse gas from the atmosphere than the amount that is emitted through investment in additional carbon credits.

Carbon Neutral Products

A product is considered carbon neutral when all emissions associated with the manufacturing of the product, from the extraction and supply of raw material to the completion of the final product, are measured and offset through investment in carbon credits.

Embodied Carbon Emissions

Embodied carbon refers to all the emissions associated producing materials, from the extraction and transportation of raw materials, through to the completion of the final product.

Operational Carbon Emissions

Operational carbon emissions are all emissions attributable to the operation of a building or business. Sources of a building's operational emissions include lighting, power and heating, typically powered by electricity and natural gas during its use phase. For businesses, operational emissions include all business activities that produce carbon emissions, including energy use, business travel, company vehicles and waste.

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Carbon Offsetting

The action of compensating for carbon emissions through investment in an equivalent amount of carbon credits.

Carbon Credits

These are tradeable, measurable and verifiable removals or reductions of greenhouse gas (GHG) emissions in the atmosphere, representing the removal of 1 tonne of CO₂ or an equivalent amount of greenhouse gases through projects such as reforestation and development of renewable energy infrastructure.

Cradle-to-Gate Offset

Cradle-to-gate includes the carbon emissions associated with raw materials extraction and processing, transport to, between and within a manufacturing site, and product manufacturing up to the gate of the manufacturing site.

Life Cycle Assessment (LCA)

A methodology for assessing the environmental impacts associated with all the stages of the life cycle of a product, building or process. LCA's are useful for determining the amount of greenhouse gases emitted throughout the manufacture of a product or over a building's life in order to offset emissions or reduce emissions from the outset.

Environmental Product Declaration (EPD)

Based on the LCA model, EPD's provide a transparent, objective means of communicating the environmental impacts of a product over its life cycle. EPD's are third-party verified and follow standardised methodology allowing for the comparison of products based on their environmental performance.

Common Acronyms

CO₂ – Carbon Dioxide
 CO₂-e – Carbon Dioxide equivalent
 GWP – Global Warming Potential
 GHG – Greenhouse Gas
 LCA – Life Cycle Analysis
 EPD – Environmental Product Declaration

References

Pineda, A. C., Faria, P. (2019) Towards a science-based approach to climate neutrality in the corporate sector. Discussion paper. Science Based Targets initiative. PDF. [Accessed 2022].

The Carbon Trust. Net Zero. [online] Available at: <<https://www.carbontrust.com/what-we-do/net-zero>> [Accessed 2022].

CIBSE., LETI. (2022) Net Zero FAQs. [online] Available at: <<https://www.leti.london/netzero>> [Accessed 2022].

IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.