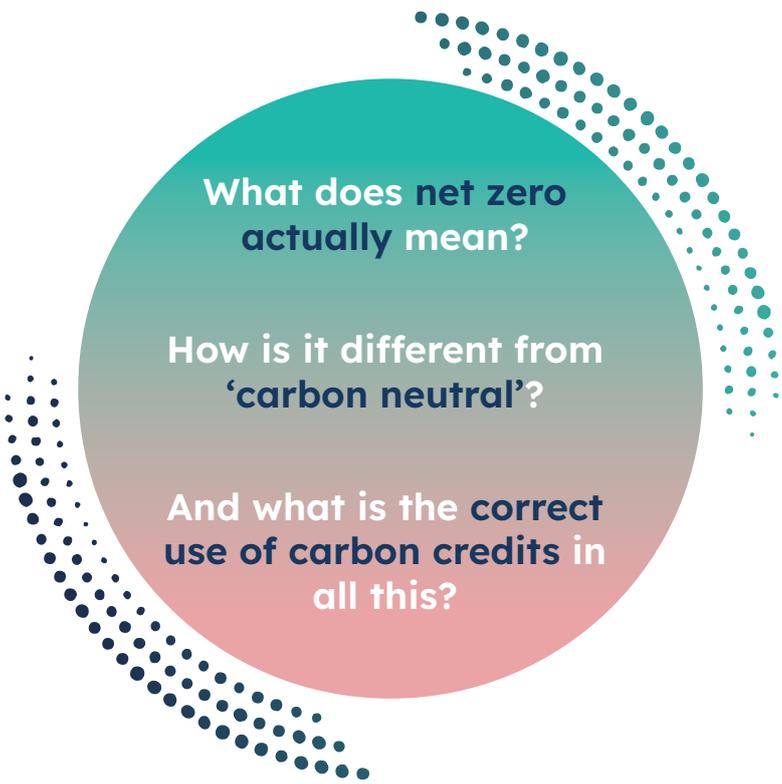


The role for voluntary carbon credits in the race to net zero

As the world faces up to its obligations to reach a '1.5 degree world', there is growing consensus that **'net zero' emissions must be reached by 2050, with substantial actions to reduce and mitigate existing unavoidable emissions before 2030.** 60% of the Fortune 500 have set climate targets with 13% making specific net zero commitments and thousands of smaller companies following suit.¹ Nearly half the world's GDP is now generated in places where authorities have set or are proposing to set net zero targets.

A large circular graphic with a teal-to-pink gradient, surrounded by a dotted pattern of small circles. It contains three key questions in white text.

What does net zero actually mean?

How is it different from 'carbon neutral'?

And what is the correct use of carbon credits in all this?

¹ [Fortune 500 companies are acting on the climate crisis—but is it enough? | Stories | WWF \(worldwildlife.org\)](#)

Net zero

At the global level, the [IPCC](#) provides a clear definition of net zero: Net zero emissions are reached when anthropogenic (i.e., human-caused) emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

At a corporate level, this is less clear cut and can mean different things for different industries. For most companies, net zero is an end-state whereby they have reduced their own internal (scope 1 & 2) and product (scope 3) emissions as much as possible. Any residual emissions are then counterbalanced by 'removals' (i.e. actions which remove carbon dioxide from the atmosphere and store it either biologically in trees or soil or geologically such as direct air capture and storage). Typically an end date is announced by when this target should be reached (e.g. 2050, 2030 etc).

Pathway to net zero

This refers to the journey or the 'plan' a company must embark on or execute in order to reach the end-state of net zero. Typically, this involves a detailed account of how emission reductions will be achieved within a company's own value chain and sets interim milestones for when emission reductions should be achieved. For example, 50% reductions from a 2020 baseline by 2030.

The ambition of the interim milestones is arguably more important for the climate than the long-term goal of net zero. We cannot just continue business as usual until 2050 and then finally reduce or remove all our emissions. The next decade is crucial in the climate battle, so ambitious short-term interim milestones are essential.

Carbon neutral

Carbon neutral is a contested term which does not have a clear, internationally recognised definition and the resulting confusion has sometimes led to accusations of 'greenwashing'. In carbon markets it has been used as shorthand to describe when an entity has purchased an equivalent amount of carbon credits to match their carbon footprint. Under this scenario one may be said to have 'offset' one's footprint. Because of the confusion around the term, it would be preferable for a different label to be used to describe when an entity has purchased an equivalent amount of carbon credits to match their carbon footprint.

Most carbon credits certified to date have been 'avoidance' credits (i.e. they have prevented a further tonne of CO₂e from entering the atmosphere from projects such as forest conservation or renewable energy rather than removing it). These are very useful on the pathway to net zero as they help to finance climate solutions and reverse nature loss, as well as counterbalancing decreasing unavoidable emissions. However, they cannot be used in an end state because the tonne emitted has not been removed from the atmosphere – another separate tonne has been avoided.

Step 1

Measure emissions today and set a date by which a company would become 'net zero' (ideally well before 2050).

Step 2

Create a plan and set interim targets for a company's own emissions reductions along the way (ideally in line with the latest recommendations from IPCC). Plans can be 'certified' by [SBTi](#).

Step 3

In the near term, compensate for any residual emissions by purchasing a corresponding amount of high-quality voluntary avoidance credits. If one wants to also address forest and biodiversity loss, REDD+ credits certified by [VCS](#) and [CCB](#) are a great way to do this. Other high-quality avoidance credit types with high co-benefits tracked to SDGs can include cookstoves, boreholes and off-grid renewable energy in least developed countries.

Step 4

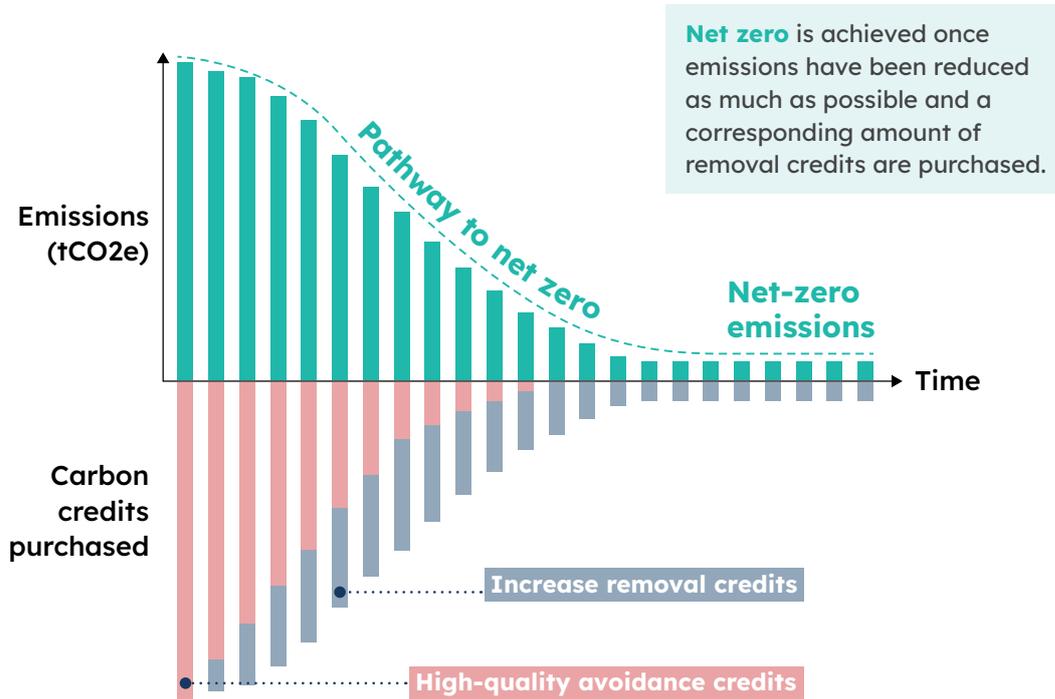
Gradually increase the amount of 'removal' credits (e.g. reforestation, direct air capture) purchased. The end state of net zero will be achieved once one's own emissions have been reduced as much as possible and a corresponding amount of removal credits are purchased.

Bonus

Consider fully compensating for one's own historical emissions by purchasing a corresponding amount of removal credits. Microsoft have done this.



The role of high-quality carbon credits on the pathway to net zero



A carbon credit represents either the permanent removal of a tonne of CO₂ from the atmosphere, or the avoidance of one tonne of CO₂ being emitted

