

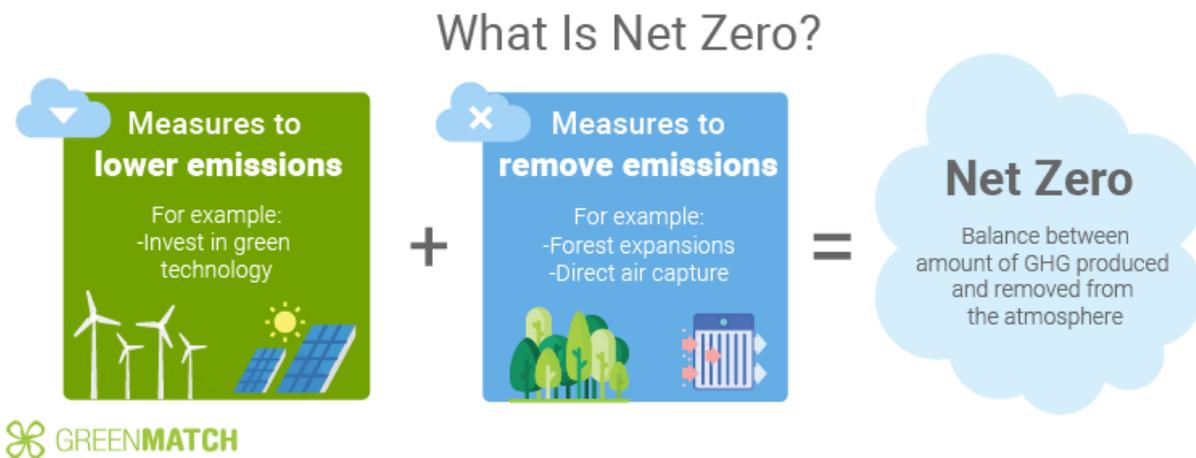
## Net-Zero Remains The Most Important Goal In The Energy Transition

Net-zero goals are a cornerstone in the global strategy to mitigate climate change. Countries, cities, and companies are adopting climate pledges to assist in the global effort. This includes ambitious targets across all industrial sectors – including [the energy sector](#), which fossil fuels have historically dominated. Together, these pledges will be a significant factor in the world reaching net-zero and limiting the impacts of climate change.

### What is net-zero?

When discussing net-zero goals, policymakers refer to a system where the quantity of greenhouse gases produced is equal to or less than the quantity of gases [removed](#) from the atmosphere. For example, this could be an organisation that plants enough trees per year to counter the carbon emissions they create.

### Net-Zero Emissions



Source: [Green Match](#)

The need for net-zero emissions has come due to the [worsening effects of climate change](#). High amounts of greenhouse gases in the atmosphere exacerbate the planet's natural environmental cycles. Continually increasing emissions leads to compounding consequences. Before industrialisation, the global environment had enough carbon sinks - or areas that would capture emissions - to balance its natural production of greenhouse gases. This balance ensured that the environment remained stable.

However, with the onset of industrialisation, burning of fossil fuels, and removal of natural carbon sinks, greenhouse gases have increased. This is causing environmental degradation in natural systems and leading to widespread climate change. As a result, global governments are working together to reach net-zero. The transport and energy sectors account for a large quantity of carbon emissions and are the

primary industries targeted by policy. But this change is happening in every aspect of the economy.

## What Does it Mean to Go Net-Zero?

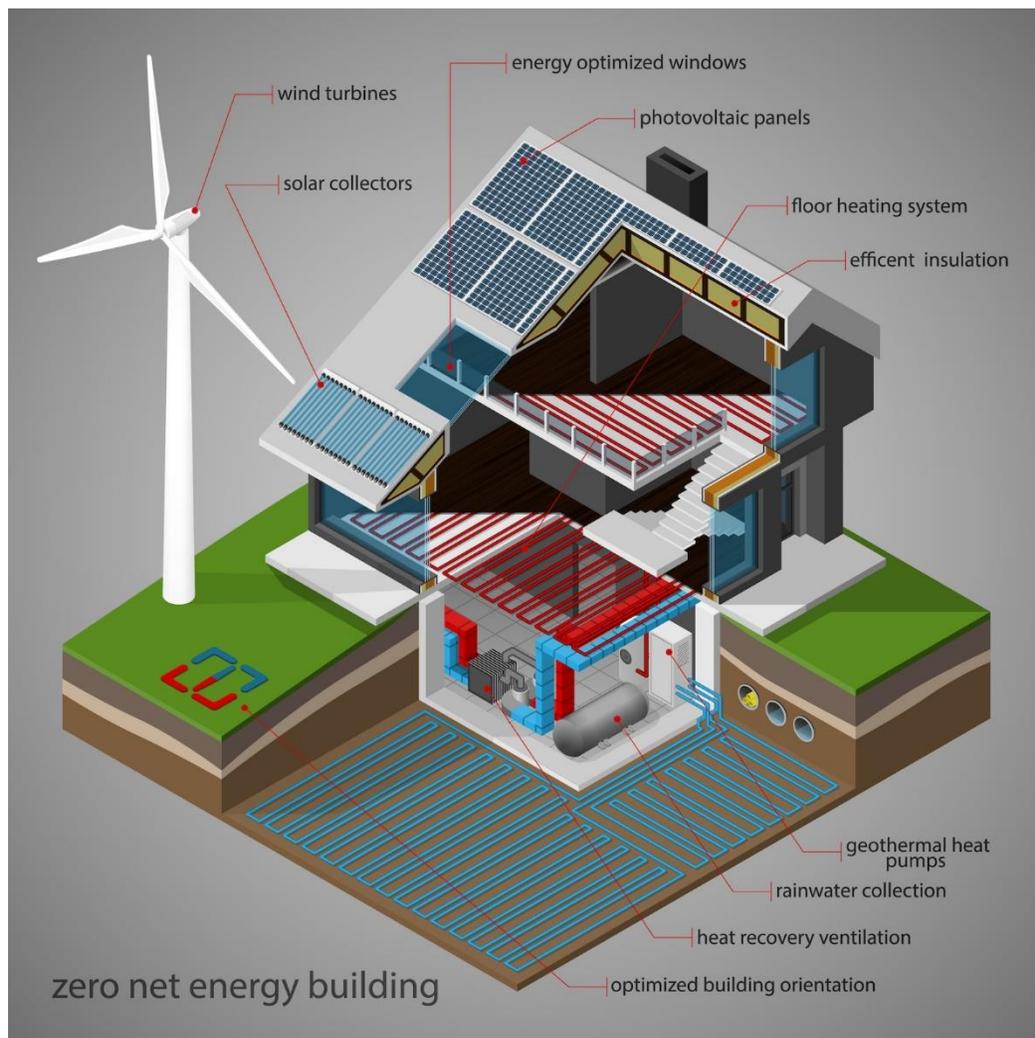
Going net-zero means achieving a balance in the produced greenhouse gases and those captured. In the short term, it means removing carbon dioxide from the Earth's atmosphere while finding low-carbon alternatives.

The push to achieve net-zero has gained popularity due to several reports highlighting global governments' [slow actions](#) to reduce their carbon emissions. Committing to an economy-wide transition to low-carbon solutions helps ensure that rapid response to remove carbon from the atmosphere is underway. In order to meet the global target of limiting warming to 1.5°C by 2100, net-zero must be reached by 2050.

## What is net-zero for a company?

For companies, net-zero involves [decarbonising](#) their operations as best they can. This means creating more efficient and sustainable products or services and exploring low-carbon alternatives throughout their supply chains.

## Net-Zero Energy Buildings



Source: [Building Doctors](#)

An opportunity that has become available for many organisations is [net-zero energy buildings](#). These buildings produce the energy they use in a year and tie in multiple innovative ways of achieving an emissions balance. These buildings run efficiently - from having their own energy production through solar or wind to less-energy intensive cooling systems and more effective insulation.

Aided by changes in planning codes and standards that create new developments with sustainability in mind, these net-zero buildings can seamlessly replace the current status quo in construction. In addition, energy efficiency for large businesses can lead to more savings and reduced overhead costs. This makes the decision to pursue net-zero emissions both a sound environmental and economic decision.

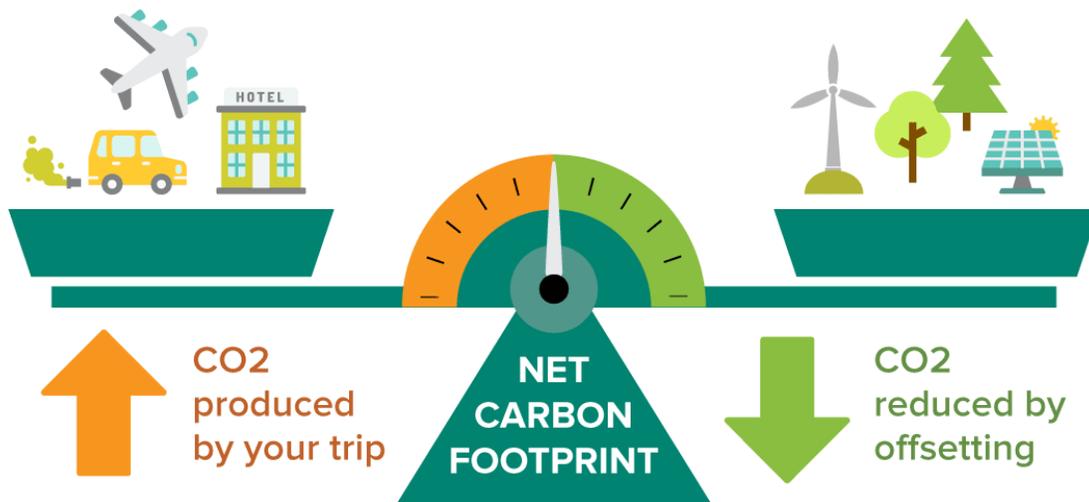
## Carbon Neutral vs Net-Zero

Carbon neutral is the ability to balance out carbon emissions, while net-zero focuses on greenhouse gases [as a whole](#). Net-zero aims to become carbon-negative overtime - where current systems absorb more gas than they produce and actively mitigate climate change.

## Carbon Neutral vs Carbon Free

In a carbon-neutral system, the assumption is that carbon is being actively produced, and operations are in place to absorb a similar amount of carbon to achieve carbon neutrality. A good example of this is taking a flight, which produces a large number of carbon emissions. The airline purchases carbon offsets in a forestry programme. The programme then plants a certain number of trees that eventually absorb the flights' carbon footprint. A carbon free model would have the flight itself produce little-to-no emissions by using renewable energy.

### CARBON OFFSETS ALLOW YOU TO BALANCE OUT YOUR EMISSIONS



 SUSTAINABLE  
TRAVEL INTERNATIONAL

Source: [Sustainable Travel International](#)

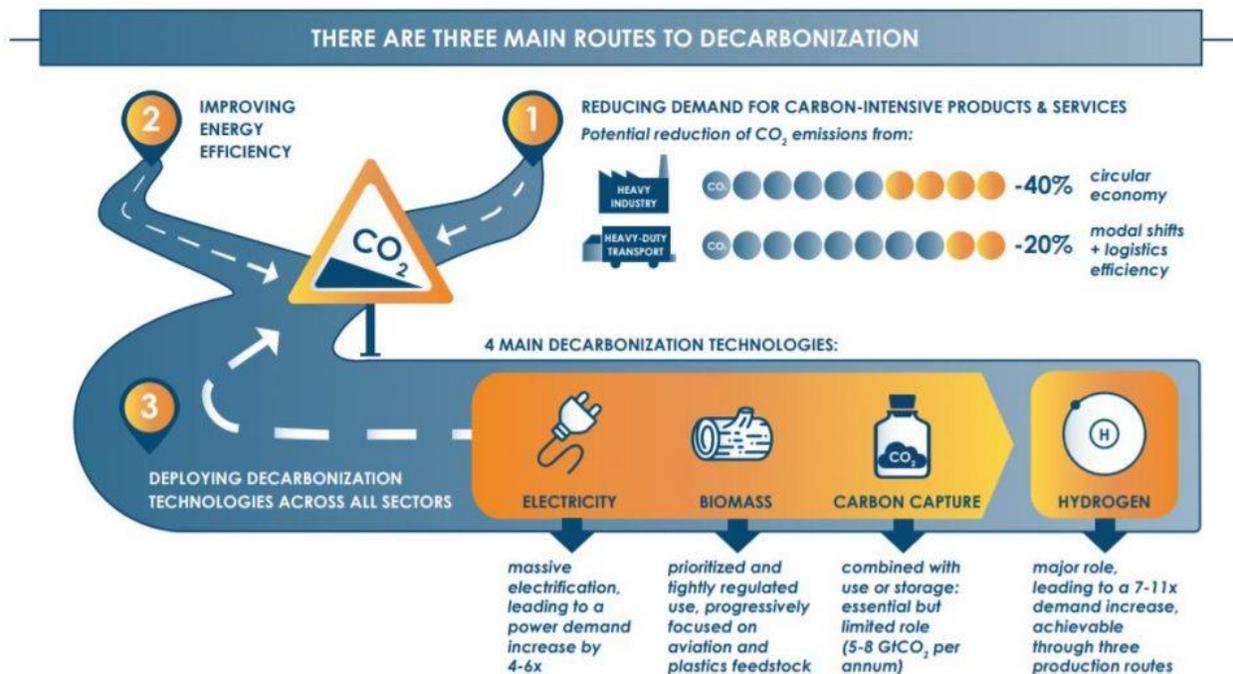
The difference between carbon neutral and carbon free is the mentality behind it. One supports a 'business as usual' approach where carbon is negated after its emissions. The other seeks to remove carbon from the equation before it is emitted. In the latter's case, supply chains and manufacturing are also considered. Then operations are streamlined to reduce any opportunity for emissions. In the case of

carbon neutral, there is not necessarily any optimisation, as the ideology follows that carbon emitted can be offset - which is an [oversimplification](#) and not necessarily true.

## What Is a Net-Zero Strategy?

A net-zero strategy refers to the plan put in place to decarbonise a specific activity. It considers current greenhouse emissions, opportunities to reduce them, the timeline to achieve a reachable goal, and the pathway to achieving it.

For governments, this involves working with stakeholders across all sectors of the economy (public, private, NGOs, academic) to [collaborate on a workable solution](#) towards net-zero. In some instances, partnerships between these sectors can help further reduce greenhouse gas emissions or lead to innovative governance and policies. In order to succeed, a net-zero strategy must consider every industry and the impacts that the shift could cause. In some cases, it may come to the detriment of one industry but boost another while opening new opportunities for an entirely new sector. A holistic and comprehensive net-zero strategy will try to incorporate and identify the issues, solutions, and alternatives available.



Source: [Actuaries Digital](#)

## Is Net-Zero Possible?

Net-zero by 2050 is a goal backed by science, and research shows that [it is possible](#). But that doesn't mean it will be easy. It requires significant changes in our current energy systems, a concerted effort by countries, and continued collaboration across industries.

For net-zero to be achieved, [serious action](#) needs to be taken now. The global transition towards low carbon was already off-track many decades ago. Now we need ambitious policies and pledges to help shift the trend. Infrastructure needs to be built, economies need to be overhauled, and supply chains and industries that have not been changed in decades must be optimised. Net-zero is an ambitious goal, and it requires collaboration and strong action to be achieved.

## Net-Zero In Asia

As countries move forward with their net-zero goals, all eyes are on the Asia-Pacific region, where developing economies are especially present. China and India have both announced net-zero plans that would see them complete their goals by [2070](#). Simultaneously, energy demand across the wider South-East Asian region is increasing and creating uncertainty because renewables are not widely available and natural gas and coal are cheaper and more accessible. Asia certainly has the opportunity to lead by example and find innovative solutions to rapidly decarbonise. With climate change already having [severe effects](#) in the region, the motivation to do so will only increase.