



# Aiming for zero: a growing business movement

## A Corporate Leaders Group Business Briefing

Prompted by the Paris Agreement and the need to reduce greenhouse gas emissions at a faster pace, governments across the world are reviewing their initial ambitions, and looking at what is required to deliver on the goal of 'net zero' emissions. Achieving this goal requires further discussion, with every sector and region involved. Business has a unique and crucial role to play, and as public debates gather momentum at national, European and international levels, businesses will be expected to change their operations in order to deliver on this vision.

Business leaders can share their insights and experience to inform policy and regulation; they can also shape public expectations on how sustainable growth can be advanced. This briefing aims to support companies to engage more meaningfully in the net zero debate by first giving relevant background on what net zero is, then offering specific solutions for business, and finally providing the broader context to ensure that business is in step with relevant policy developments and timescales.

## Section 1

# Background

### What does net zero mean?

**Net zero is the state that occurs when greenhouse gas emissions resulting from human activity are effectively neutral. It is often used interchangeably with the terms ‘carbon neutrality’ and ‘climate neutrality’ even though these terms have differing scientific definitions.**

In practice net zero greenhouse gas emissions means deep decarbonisation, usually across the whole economy, combined with efforts to draw down emissions from the atmosphere. Businesses, households and the public sector all need to reduce their carbon emissions urgently, and aim for zero. At the same time, it is essential to support and protect natural assets like forests which can absorb carbon emissions (known as carbon sinks). New technologies to remove carbon emissions from the atmosphere may also be needed.

The Paris Agreement, adopted in 2015 and ratified in 2016, requires that governments “achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century”. Accurate assessment of net zero for a particular country, region, sector or business can present challenges: businesses’ scope of responsibility for emissions (i.e. direct or indirect) may need to be defined, as well as which sources and sinks of emissions to target. Governments can help to provide clarity and consistency on these issues, but there are common practical implications as described above.

### Is net zero possible?

**Achieving net zero emissions is an essential and realistic target for the overall economy; however, existing solutions need to be scaled to become cost-competitive and new innovations are also required. Early action will accelerate progress towards net zero, and mitigate the worst risks of climate change.**

Aiming for net zero emissions of carbon dioxide by 2050, and for all greenhouse gas emissions shortly after, increases the chances of keeping temperature rises below 2°C, and keeps 1.5°C within the bounds of possibility, as outlined by the Paris Agreement. This translates into tangible, improved outcomes for people, economies, and businesses. Limiting temperature rises to this extent is still possible, according to climate scientists, but it will require increased urgency of action in probable combination with negative emissions technologies.

For most business sectors, effective techniques for zero direct emissions are already available. When the full cost of carbon emissions is taken into account, many of these techniques are already cost-competitive – it is simply a matter of accelerating their deployment. In particular, the decarbonisation of energy, the electrification of road transport, and the redevelopment of buildings to the best ‘net zero carbon’ standard are vital steps. Other techniques will need further development and scaling, driven by further innovation

In all likelihood, achieving net zero will require some degree of ‘negative emission’ (i.e. processes which remove carbon dioxide from the atmosphere), and this requires increased discussion. Negative emissions can be achieved through afforestation and reforestation; land management (e.g. by increasing and fixing carbon in the soil); bioenergy with carbon capture; direct carbon capture from the air; and ocean fertilisation (e.g. introducing nutrients in the ocean to encourage CO<sub>2</sub>-absorbing plants). Some of these options, such as sustainable land management, are ‘no regrets’ initiatives with multiple benefits, but others pose a high degree of uncertainty and risk.

In summary, changes over the last decade demonstrate how human ingenuity can constantly shift the dial – including deployment of renewables, digitalisation, and the development of circular economy models. Many companies are seeing significant advantages in setting stretching goals that generate innovation, rather than targets that incrementally improve of current circumstances. Stretching targets allow for investment in research and development as well as encouraging creativity in problem solving. Setting a net zero goal can help galvanise innovation and investment in a new economy.

## Section 2

# The role of business

### Why should business engage?

**There is a strong business case for early adoption of zero carbon techniques: it will reduce the risk of ever-tightening controls on carbon-intensive operations and carbon liabilities. It can also provide a competitive advantage, both through risk reduction and through new market opportunities with zero emission technologies and services.**

Businesses both impact upon and are impacted by a net zero target; it is important, therefore, that the business voice is heard in exploring and establishing a net zero vision. After all, businesses will be expected to deliver on the agreed vision, which, in turn, will also reshape their activities. Too few businesses realise that the destination will need to be zero carbon, not just low carbon. Informed businesses understand that without a stable climate their future activities and prospects are jeopardised.

Long-term planning is crucial to business activities. Businesses need clear signals from governments on their intent and future direction. Businesses can then indicate how long time plans impact near-term decisions, and highlight any additional policy frameworks,

programmes or legislation that may be required to assist their transition to a fully decarbonised economy.

Transformative targets, like net zero emissions, require every aspect of the business to be engaged. In other words, every process and every method of working should be seen as a net zero emissions opportunity. Incremental targets can contribute to a 'tinkering around the edges' approach, creating risks later down the line if a target changes radically and shorter timescales are introduced.

Transformative targets can also spark opportunities for innovation. In striving to meet stretching targets companies can release creative thinking, use technology and processes from other sectors, and create safe spaces to challenge the status quo. By doing things on a bolder scale, businesses can drive forward advancements in research and development, roll out solutions more quickly, bring costs down faster, enjoy efficiencies earlier, and improve productivity. Leading businesses have a crucial role to play in how bold action is communicated to policy makers and business peers.

## How should business respond to an economy-wide net zero emissions goal?

Of course, different businesses in different sectors face different challenges. Most importantly, individual businesses need to look at their operations and customer base, consider how these are going to change, and assess where the significant risks lie. From there, each business can start to generate an internal conversation on how that change can be achieved.

Companies that have made significant progress did not, generally, know at the start how to achieve their goals: innovation at the right level only came with the challenge of an ambitious target. In many major engineering businesses, for instance, the feedback has been: “Give us a target of 10% reduction and we won’t have to do anything new to meet it, but give us the challenge of 100% reduction and we will have to find new solutions.”

A net zero target gives the right signal to examine business processes and then initiate business change. Setting the target now would provide a thirty-year timeline for achieving objectives, but it should not be an excuse for delay or inaction. On the contrary, a political commitment is needed to justify legislative action and policy development, which can then support investments and drive change in a way that is acceptable to businesses and shareholders alike.

## Should companies set a net zero carbon target?

If they have the power to do so, but all companies should start to understand what will be required to deliver net zero emissions and to identify the main obstacles to achieving it. These obstacles will be the priority for developing innovative solutions and identifying zero emission alternatives.

Climate stability is essential for our society, environment, and economy. A net zero emissions target is an essential step to that stability, which is why it has been agreed by governments in the Paris Agreement.

Some companies have already been able to commit to net zero, serving as both a powerful leadership signal and a useful recognition of the long-term direction of travel. Companies that have sought to focus on net zero report that it has forced them to rethink their operations, their business models and their offerings in a positive way. For example, focusing on changing a business in this way reduces fuel costs and overheads, uncovers new and more efficient ways of operating, builds a positive reputation with both customers and staff, assists recruitment, and often uncovers new value and income streams.

Many companies are likely to lack the clarity of means for delivering on a net zero goal. Others will need to win over shareholders and other interests before they can commit to the capital investment or innovation needed. This is why the first and most important step is for businesses and government to begin discussing what a net zero economy should look like.

## Section 3

# The broader context

### Why should net zero be talked about now?

**The temperature rise limits set by the Paris Agreement can only be confidently achieved by reaching net zero carbon dioxide by mid-century. Increasingly, governments are realising that they need to plan for the long term to ensure a smooth transition for the global economy.**

Since negotiations concluded on the Paris Agreement, some positive momentum has been generated by governments, with certain countries having already set national targets for net zero emissions before or by mid-century. For instance, Norway has brought its net zero goal forward to 2030 and Sweden has committed to net zero by 2045. Other countries including Brazil, Colombia, Costa Rica, Ethiopia, Finland, France, Germany, Iceland, Luxembourg, Marshall Islands, Mexico, Netherlands, New Zealand and Portugal – as well as thirty-two cities – have signed up to a statement to develop long-term pathways to transition to net zero emissions as part of the carbon neutrality coalition. In the UK, Claire Perry, The Minister of State for Energy and Clean Growth has already announced that the government will ask the Independent Committee on Climate Change to review the UK Climate Change Act's long-term target in light of the Paris Agreement, and has hinted at a 2050 net zero emissions target.

At the EU level the European Parliament drafted a position on net zero at the beginning of the year, followed up by mentions in European Council conclusions. July 2018 saw the launch of the European Commission Consultation on the Strategy for long-term EU greenhouse gas emissions reductions, which is open until 9 October 2018.

In partnership with policy makers, business has an important role to play in informing and shaping this transition and ensuring that their core activities can be planned according to the science of climate change.

### Are the current climate change targets compatible with net zero?

**To have a good chance of meeting the Paris climate targets, in particular the goal of keeping warming to 1.5°C, the world will need to hit net zero greenhouse gas emissions early in the second half of the century, which implies that developed countries should get there by 2050 at the latest.**

Different countries, cities, regions and businesses have a broad range of commitments and targets. Very few of them are currently on target to keep global temperature increases below 2°C. This has often prompted criticism, although there are increasing examples of leadership available.

### What should governments do on net zero?

**The Corporate Leaders Group has recently produced a position paper on net zero which calls on governments to develop strong, credible and appropriate 2050 strategies that:**

1. Are consistent with the Paris Agreement's goals and the UN Sustainable Development Goals and aim for net-zero emissions as early as possible in the second half of this century, by 2050 at the latest. Advanced economies should aim to achieve this by 2050 at the latest, sooner.
2. Maximise certainty for business, investors and society as a whole by taking a comprehensive and credible approach, covering the whole of the economy and society.
3. Are developed and implemented in an open and transparent way, with government working in partnership with all stakeholders including business, civil society, employers, investors and trade unions, as well as sub-national, regional and local authorities.
4. Will be regularly reviewed, in line with the Paris Agreement cycle, to ensure they are kept up to date, reflect the latest economic, scientific and technological developments, and are on track to achieve the agreed goals.

Plans developed in such a way, and which are consistent with a net zero goal, are likely to include key policies such as a robust carbon pricing policy framework, sustainable finance, and support for low carbon innovation. They are likely to transform key sectors to deliver essential milestones, including zero-carbon energy, net zero carbon buildings and electrified transport, as well as greater resource efficiency and new bio-based, circular models.

An adequate net zero goal must feed into more ambitious nearer term targets, but also provide a clear signal to prompt innovation and action from business by making the destination of travel crystal clear.

The Corporate Leaders Group, working with its partners in the We Mean Business Coalition, will continue to make the case for a positive vision of a new net zero economy. To find out more and support our work contact us on [clg@cisl.cam.ac.uk](mailto:clg@cisl.cam.ac.uk)

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