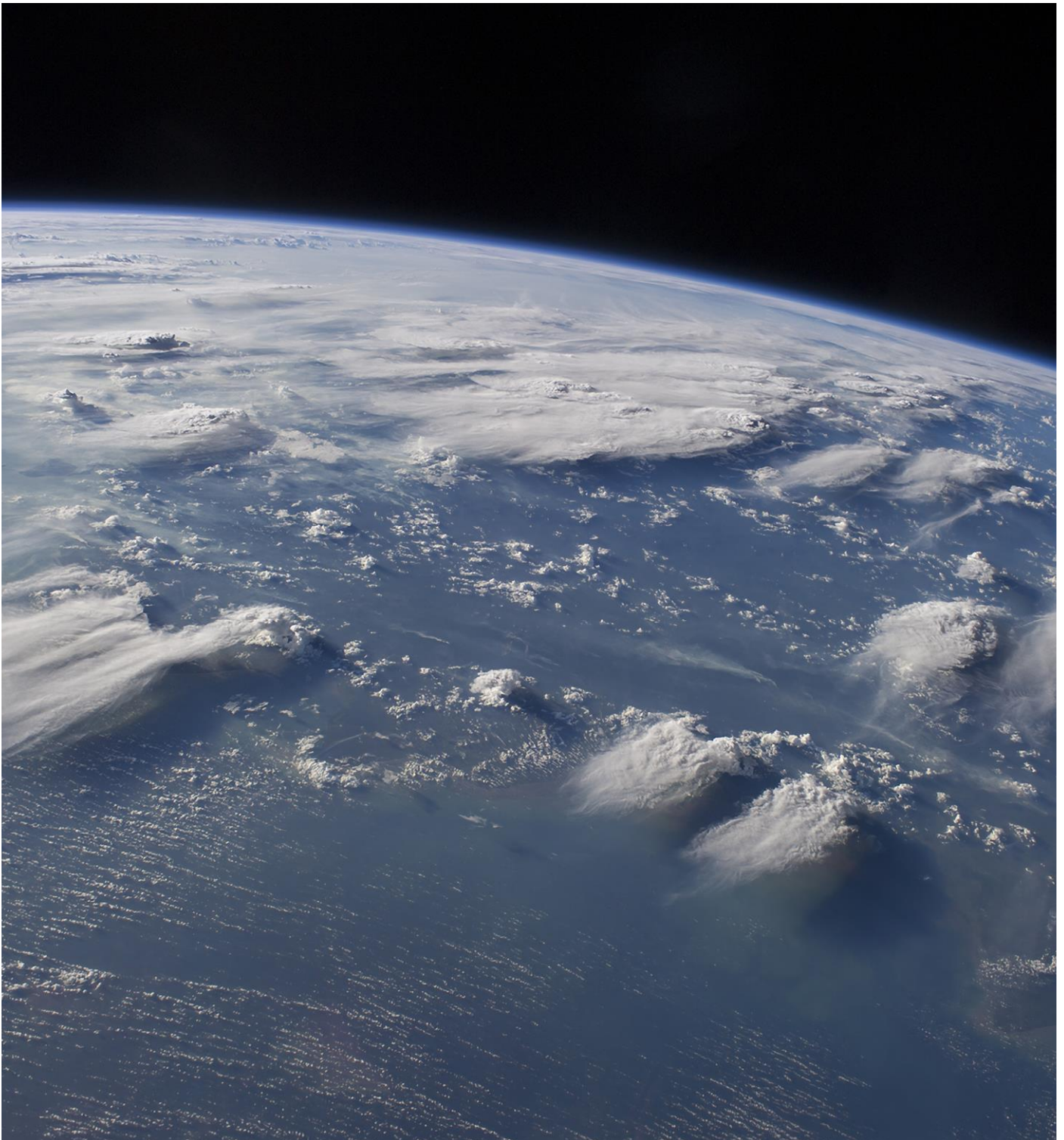


Making sense of Climate Change

Climate disclosure and action – a guide for companies

February 2025



The purpose of this guide

As an investment manager incorporating sustainability into all investment decisions, Generation has high expectations of disclosure and action on climate change at companies in which we invest.

But we know that this can be a confusing landscape. It can be hard for companies to work out how to get started, make sense of the multiplicity of initiatives, or understand what good looks like. We have developed this guide as a resource for companies to try to make things easier, whether a company is early on its climate change journey or seeking to attain the very best level of practice.

BACKGROUND - THE CLIMATE CRISIS

1. Our climate is in crisis due to man-made greenhouse gas (GHG) emissions. The global average temperature for the decade 2011-2020 was 1.1°C above pre-industrial levels¹. 2024 was the warmest year on record; the global average surface temperature for 2024 was more than 1.5°C above pre-industrial levels². We see the results in a constant stream in the news: heatwaves, storms, floods, droughts, forest fires, melting ice, rising sea levels, ocean warming and ocean acidification. If we do not cut GHG emissions, temperatures could rise 3°C or more above pre-industrial levels by 2100, causing irreversible damage to the earth's ecosystems, its ability to sustain human life and the economy³.

THE GOALS OF INTERNATIONAL CLIMATE POLICY

2. The 2015 Paris Agreement set the goal of holding global warming well below 2°C and pursuing efforts to limit it to 1.5°C⁴. In 2018 the Intergovernmental Panel on Climate Change (IPCC) issued a special report on the impacts of global warming of 1.5°C, advising on the impacts that could be avoided by limiting global warming to 1.5°C compared to 2°C or more, and warning that a temperature rise of 1.5°C or higher increased the risk associated with long-lasting or irreversible changes⁵.
3. The only way to stabilise the climate system is to achieve net zero human-caused emissions of GHGs. A goal of net zero emissions by 2050 is often cited. This goal has been identified by the IPCC as consistent with limiting warming to 1.5°C, as long as human-caused emissions of CO₂ fall by at least 43 percent from 2019 levels by 2030⁶. We have a huge and urgent task this decade.
4. Developed economies including the European Union, Japan and the UK have committed to net zero by 2050, China has committed to net zero by 2060, and India by 2070.

WHY ARE INVESTORS SO CONCERNED?

5. Climate change has risen up investors' agenda because it is seen to pose clear investment risk; and the transition to a net zero economy is seen as an investment opportunity. Generation has stressed that "the ruthless maths of climate science" means that we must think in terms of the Time Value of Carbon. Corporate emissions cuts today are worth more than cuts promised in the future; while companies that take early action will benefit, those that delay will pay for it.⁷
6. Corporate climate disclosure provides investors with the information that is essential for them to assess companies' management of climate risk and opportunity. Corporate climate action provides investors with the assurance they need that companies are prepared for rapid policy and technological change as the transition to a net zero emissions economy gathers pace.
7. Regulators around the world are making climate-related disclosures mandatory:
 - The EU's Corporate Sustainability Reporting Directive (CSRD) requires public and private companies in the EU to disclose Scope 1, 2 and 3 emissions and climate transition plans. It covers non-EU companies which exceed thresholds for EU-derived revenue.

¹ For the latest science on climate change, see the Intergovernmental Panel on Climate Change (IPCC), 'Climate Change 2023, Synthesis Report, Summary for Policy Makers': https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

² Preliminary assessment from the World Meteorological Association, January 2025: <https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level>

³ For more information on the climate crisis, see The Climate Reality Project, founded by Generation's Chairman, former US Vice President Al Gore. We would be pleased to facilitate participation in the training: <https://www.climateRealityproject.org/>

⁴ For more information on the Paris Agreement, and its text, see: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>

⁵ The IPCC report on the impacts of global warming of 1.5°C is available here: <https://www.ipcc.ch/sr15/>

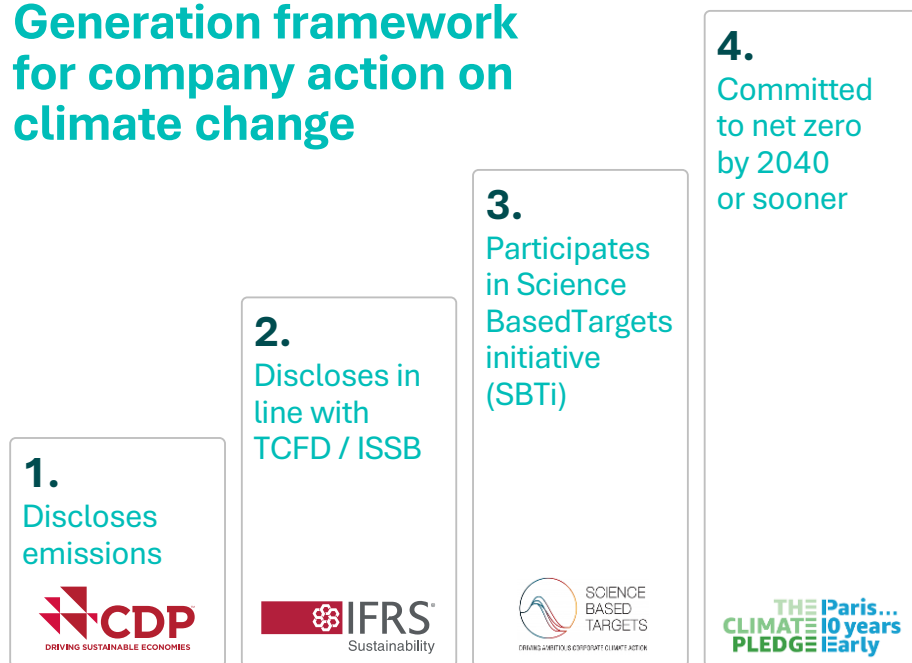
⁶ IPCC, 2022: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf

⁷ Generation's Insights piece on The Time Value of Carbon is published here: <https://www.generationim.com/our-thinking/insights/the-time-value-of-carbon/>

- California's Climate Corporate Data Accountability Act (CCDAA) requires US-based public and private companies doing business in California to disclose their Scope 1, 2, and 3 emissions together with climate-related financial risk reports consistent with the Taskforce on Climate-related Financial Disclosures (TCFD) framework.
 - The IFRS International Sustainability Standards Board (ISSB) has created disclosure standards (IFRS S1 and IFRS S2) which are rapidly being adopted or endorsed by governments all over the world including Australia, Brazil, Hong Kong, Japan, Singapore, Taiwan and the UK. IFRS S2 incorporates the TCFD framework and requires Scope 1, 2 and 3 emissions disclosures.
8. Many companies have set voluntary net zero goals to steer their climate strategies. Apple and Microsoft, for example, have set 2030 target dates⁸; Amazon and Colgate Palmolive have set 2040 target dates⁹. To limit warming to 1.5°C, or close to it, companies able to achieve net zero emissions well before 2050 will need to do so.
-
9. At Generation, we operate an investment process that fully integrates sustainability analysis into our decision-making and is focused on long-term performance. We ask ourselves whether companies' products and services are consistent with a sustainable future and consider who is paying a price for companies' externalities.

**CLIMATE
CHANGE IN
GENERATION'S
INVESTMENT
PROCESS**

Generation framework for company action on climate change



⁸ These early target dates rely on significant purchases of carbon removals

⁹ Amazon's carbon methodology excludes certain emissions: <https://sustainability.aboutamazon.com/carbon-methodology.pdf>

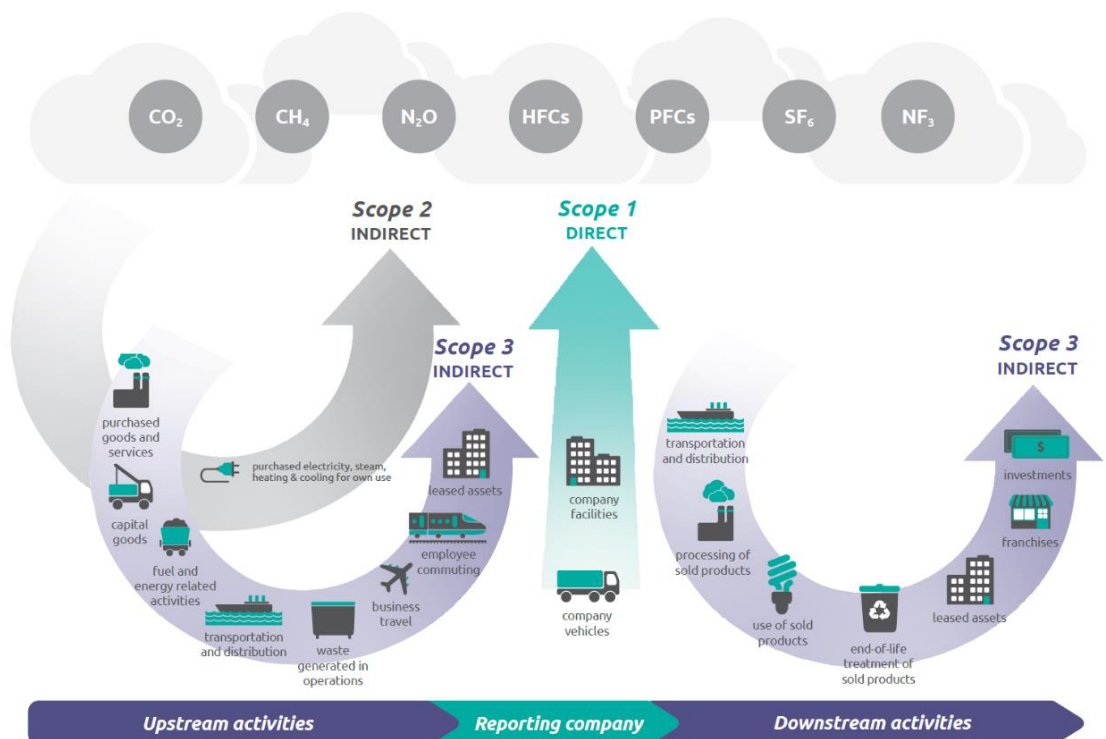
10. Generation's climate change framework identifies four stages of company responses to climate change. We look for all companies to take all the actions set out in the framework. The steps are not necessarily sequential. While companies may find it easier to approach them in sequence, we have also seen companies successfully take a number of these steps at once, or even start off by setting out a high level of climate action ambition, and backfill actions from there.

What are Scope 1, Scope 2 and Scope 3 emissions?

The Greenhouse Gas (GHG) Protocol is a partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). It establishes comprehensive global standardised frameworks to measure and manage GHG emissions from private and public sector operations, value chains and mitigation actions.

The [Corporate Standard](#) classifies a company's GHG emissions into three 'scopes'. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

There are 15 [categories of Scope 3 emissions](#). Major categories include purchased goods and services (i.e. supply chain emissions) and use of sold products (i.e. product emissions).



**CLIMATE
DISCLOSURE
(MINIMUM - CDP)**

11. Climate disclosure is a long-established feature of corporate reporting. Without data, investors cannot assess companies' sustainability and companies cannot begin to make progress on it. As Sir Christopher Hohn, founder of The Children's Investment Fund Management, once put it to the Financial Times: "Investing in a company that doesn't disclose its pollution is like investing in a company that doesn't disclose its balance sheet."
12. The Carbon Disclosure Project (known now simply as CDP) was founded 25 years ago to promote and support climate disclosure and has been backed by Generation since our inception. Today, CDP requests information on climate risk and opportunity on behalf of over 700 capital markets signatories representing more than \$142 trillion in assets¹⁰. Companies who have not received a disclosure request from CDP can register to disclose on a self-selected basis¹¹.
13. Generation looks to companies to disclose all emissions across their value chain – Scopes 1, 2 and 3 (explained in the box above).
14. **Generation strongly recommends that disclosure is made both in a company's own sustainability disclosures and via reporting to CDP.** Reporting to CDP provides companies a structured way of compiling disclosure in line with evolving investor expectations, means that a company is always making its key climate disclosures in line with the latest good practice and ensures that emissions disclosures are fed into ESG data providers used by investors.

**CLIMATE
DISCLOSURE
(DESIRED –
TCFD / ISSB)**

15. The Task Force on Climate-Related Financial Disclosures (TCFD) was established by the Financial Stability Board (FSB) in 2015 and presented its recommendations in 2017¹². The recommendations mapped out a comprehensive scheme of climate-related financial disclosures for use by investors and other stakeholders. The risks covered included physical, liability and transition risks. The TCFD has now been disbanded and the recommendations consolidated into the IFRS International Sustainability Standards Board (ISSB) IFRS S1 and S2 standards¹³. Helpfully, the CDP questionnaire is designed to elicit the disclosures required by the ISSB.
16. **Generation expects companies to disclose against the IFRS S1 and S2 standards in full.** This includes disclosing climate-related scenario analysis using an approach that is commensurate with the entity's circumstances. Generation expects all companies to maintain transition plans and under IFRS S2 companies are required to disclose information about them¹⁴.

¹⁰ CDP's website can be found here: <https://www.cdp.net/en>

¹¹ For details on how to disclose to CDP in the absence of a disclosure request from CDP, please see: <https://www.cdp.net/en/disclose/how-to-disclose>

¹² Full information about the TCFD is available here: <https://www.fsb-tcfd.org/> Please note that Generation's Senior Partner, David Blood, was a member of the TCFD.

¹³ For more information on the ISSB standards, please see the IFRS sustainability knowledge hub: <https://www.ifrs.org/sustainability/knowledge-hub/>

¹⁴ IFRS transition plan resources are available here: <https://www.ifrs.org/sustainability/knowledge-hub/transition-plan-taskforce-resources/>

17. The Science-Based Targets Initiative (SBTi) is a corporate climate action organisation originally established by CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI)¹⁵, and the World Wide Fund for Nature (WWF).
18. A Science Based Target (SBT) is a target adopted by a company to reduce GHG emissions – including material Scope 3 emissions – in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement. SBTs therefore provide companies with a clear pathway to cut their emissions in step with international climate policy.
19. At the time of writing, over 7,000 companies have set SBTs. In addition, nearly 3,000 further companies have committed to set SBTs¹⁶. Companies setting a near-term SBT (5-10 years) can also set a long-term net zero target under the initiative.

Getting started

Initial emissions cuts are often made through improved energy efficiency and swift moves to achieve 100% renewable electricity and 100% electric vehicles. Initiatives exist to mobilise and support companies to take these latter two steps, [RE100](#) and [EV100](#).

Given the problems with the credibility of some forms of renewable energy purchasing – particularly renewable energy certificates (RECs) sold ‘unbundled’ from the electricity underpinning the certificates – Generation recommends the guidance on the procurement of renewable power published by RE100.

The Greenhouse Gas Protocol is currently revising a number of its standards, including the Scope 2 standard that defines how companies should account for emissions relating to purchased electricity. An initial consultation on revisions to the Scope 2 standard is due in 2025.

20. **Generation expects all companies across all our investment strategies to set Science Based Targets validated by SBTi.** We have set public targets of 60% SBT coverage across all assets under management by 2025 and 100% coverage by 2030 (both targets relate to SBTs *set*).

21. Generation has set a goal of aligning the investment portfolios we manage with net zero GHG emissions by 2040 or sooner, and notified our clients of this in July 2020. We believe that it is right for us to set an early goal for net zero emissions given our vision of a sustainable world and the fact that we do not invest in companies facing the most intractable transitions to net zero. Our desired standard of climate action, net zero emissions no later than 2040, therefore simply reflects what we require of portfolio companies if we are to meet our net zero target, and what the world requires of our portfolio companies if it is to achieve the goals of the Paris Agreement.
22. Guidance on setting net zero targets is available from SBTi¹⁷. There is also an initiative co-founded by Amazon for companies committed to net zero emissions by 2040 – the Climate Pledge¹⁸. It is important to understand what is meant by a state of net

¹⁵ Please note that David Blood, Senior Partner at Generation, is Chair of WRI’s Board of Directors

¹⁶ For the latest numbers of participating companies, and to search companies with SBTs, see the SBTi website: <https://sciencebasedtargets.org/target-dashboard>

¹⁷ Guidance and support from SBTi for net zero commitments is available here: <https://sciencebasedtargets.org/net-zero/>

¹⁸ The Climate Pledge website can be found here: <https://www.theclimatepledge.com/>

zero emissions. **Net zero emissions are achieved when a company has eliminated all GHG emissions from its value chain, save for residual emissions that are unfeasible to eliminate, which are neutralised by permanently removing an equivalent amount of CO₂ from the atmosphere.**

23. Net zero emissions is a very different standard to “carbon neutral”, which typically involves purchasing offsets to compensate for emissions, and does not require that the only emissions that are left are residual emissions that are genuinely unfeasible to eliminate. **Most companies require deep decarbonisation of 90-95% to reach net zero.**

Do ‘avoided emissions’ count towards carbon reduction efforts?

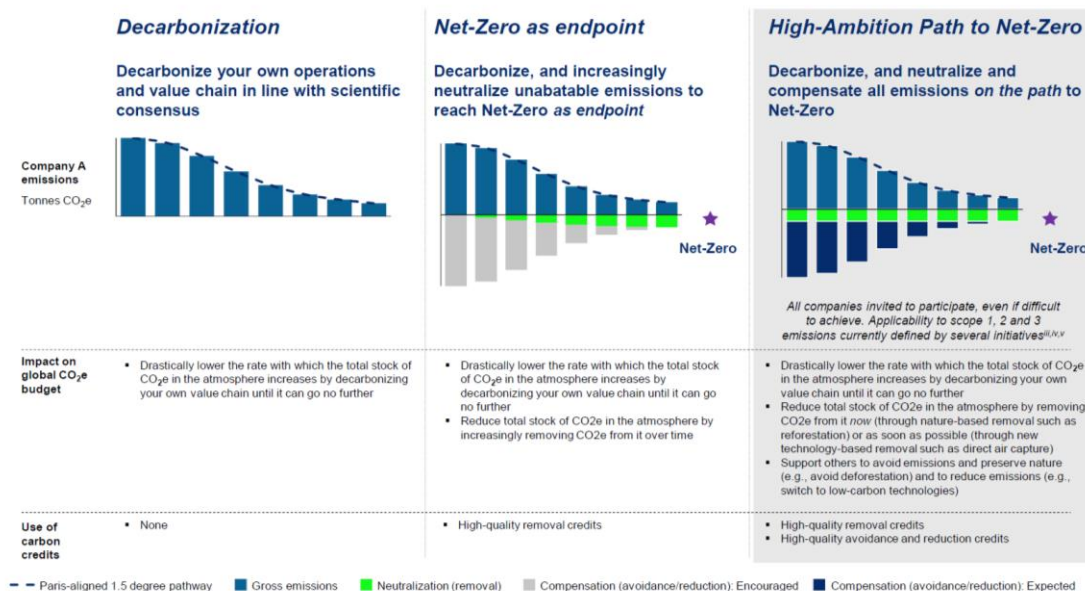
‘Avoided emissions’ are emissions that do not occur because a company’s product or service is a substitute for a similar, but more carbon intensive, alternative – e.g. a wind farm avoids emissions that would otherwise result from the generation of electricity from fossil fuels, and building insulation prevents emissions that would otherwise result from a less well insulated building heated or cooled using fossil fuel energy, whether in full or in part.

Avoided emissions are often an important feature of our sustainability and investment case for making an investment and we very much welcome and encourage their disclosure. However, there is currently no definitive standard to account for avoided emissions. We recommend the [guidance developed by the World Business Council for Sustainable Development](#) and transparent disclosure of avoided emissions methodology. Avoided emissions must be reported separately from a company’s GHG emissions inventory and cannot be used to offset a company’s Scope 1-3 emissions.

24. Generation welcomes companies setting net negative emissions goals. Net negative emissions are achieved when a company permanently removes from the atmosphere more CO₂ than is required to neutralise its residual emissions. Microsoft for example has pledged to be carbon negative by 2030 and by 2050 to have removed from the atmosphere the equivalent of all the CO₂ the company has emitted directly or by electrical consumption since its founding in 1975. Microsoft is deploying significant capital to accelerate the development of carbon reduction and removal technologies that will help the company and the world to become carbon negative.
25. Permanent emissions removal can be achieved in a number of ways, to differing degrees of permanence, including by afforestation and reforestation, soil carbon sequestration, bioenergy with carbon capture and storage (BECCS) and direct air capture (DAC).
26. **Generation strongly encourages companies to invest in nature-based solutions while they are reducing their emissions to net zero.** This responsible practice ensures that emissions are compensated for while they are being reduced to net zero. Destruction of primary, tropical forests is a material source of GHG emissions and we cannot restrict warming to 1.5°C, or close to it, without halting the degradation of nature. It has been estimated that nature-based solutions have a carbon sequestration potential of 11 billion tonnes per year by 2030¹⁹ but this will not be achieved without hundreds of billions of dollars of annual cash flows. This approach has been characterised by Mark Carney and others as the “High Ambition Path to Net Zero” and is represented in the infographic below.

¹⁹ See Griscom et al: <https://www.pnas.org/content/114/44/11645>

27. One coalition which is driving progress on nature-based solutions is the LEAF coalition²⁰. LEAF aims to mobilize public and private sector finance with forward purchase commitments to reward forest governments for reducing deforestation, while catalysing a wider market for high-integrity forest carbon credits.



ENDING DEFORESTATION

28. As noted above, we cannot get to net zero without ending deforestation. At COP26 in Glasgow in November 2021, world leaders committed to halt and reverse forest loss and land degradation by 2030. Generation is a signatory to the Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation²¹, also launched at COP26. As signatories, Generation commits to seek to eliminate forest-risk agricultural commodity-driven deforestation activities at companies in our investment portfolios by 2025 as part of the Finance Sector Deforestation Action (FSDA) initiative²². These forest-risk commodities are: palm oil, soy, cattle and wood products. We expect companies procuring these commodities to:
- set a date urgently to eliminate deforestation from their supply chains;
 - institute a process of assessment and disclosure, including transparency on suppliers; and
 - conduct ongoing due diligence.
29. Generation engages directly with relevant companies on this issue²³.

²⁰ The LEAF Coalition website can be found here: <https://www.leafcoalition.org/home>

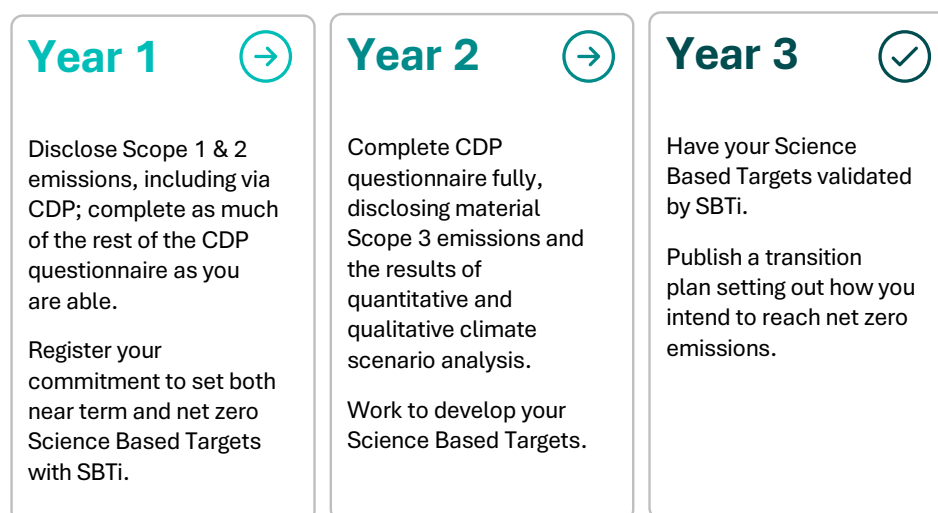
²¹ The full finance sector commitment letter on eliminating commodity-driven deforestation can be found here: <https://racetozero.unfccc.int/wp-content/uploads/2021/11/DFC-Commitment-Letter-.pdf>

²² The FSDA website can be found here: <https://www.iigcc.org/finance-sector-deforestation-action>

²³ The Accountability Framework initiative is an excellent resource for companies exposed to forest-risk commodities: <https://accountability-framework.org/>. Generation has published its expectations on deforestation here: https://www.generationim.com/media/se1ntxp3/booklet_making-sense-of-deforestation.pdf

**A SUGGESTED
THREE-YEAR
TIMELINE TO
MEETING
GENERATION'S
EXPECTATIONS**

30. We believe that a company can position itself to meet our climate expectations within no more than three years, and illustrate this with the potential timeline below.



31. Achieving these milestones will require internal sustainability resource, sponsorship from the Board and leadership from the Chief Executive, and normally external assistance.

**RESOURCES
TO HELP YOU**

32. There are resources to help you at every stage of your climate journey:

Climate disclosure

- CDP's website is here: <https://www.cdp.net/en>
- CDP runs events on climate disclosure and sustainability strategy. See: <https://www.cdp.net/en/events>
- Information on disclosing in line with TCFD / ISSB is here: <https://www.ifrs.org/supporting-implementation/supporting-materials-for-ifrs-sustainability-disclosure-standards/ifrs-s2/>

Climate action

- The Science Based Targets initiative website is here: <https://sciencebasedtargets.org/>
- SBTi resources are available here: <https://sciencebasedtargets.org/resources/>
- The We Mean Business Coalition develops helpful resources on corporate climate leadership: <https://www.wemeanbusinesscoalition.org/>
- The Climate Pledge website is here: <https://www.theclimatepledge.com/>
- Examples of comprehensive net zero transition plans can be found here:
 - CBRE: <https://mediaassets.cbre.com/-/media/project/cbre/dotcom/global/about/corporate-responsibility/planet/climate-transition-strategy.pdf>
 - Nestle: <https://www.nestle.com/sites/default/files/2023-12/nestle-net-zero-roadmap-en.pdf>
 - Schneider Electric: <https://www.se.com/ww/en/assets/564/document/466151/2023-climate-report.pdf>
 - Unilever: <https://www.unilever.com/files/ctap.pdf>

**SERVICE
PROVIDERS
AND OTHER
INITIATIVES**

- 33. CDP maintains a list of organisations with whom it partners who can support companies to take action on climate change, including GHG emissions inventory, renewable energy procurement, scenario analysis, Science Based Target setting and transition planning: <https://www.cdp.net/en/find-accredited-solutions-providers>. Generation does not endorse individual service providers.
- 34. Information on other useful initiatives that can help you achieve your climate disclosure and action goals is included in the annex.

**YOUR
PARTNERS
ON CLIMATE
CHANGE**

- 35. Generation stands ready to support you every step of the way through advice from the Generation team and introductions to others who can help, including peers at other companies in our network who have trodden this path before you. We are keen to help and partner you.
- 36. Please do give us feedback on ways we could improve this guide.

Annex: other useful initiatives

Climate Governance Initiative – An initiative with chapters in over 70 countries worldwide that empowers board directors to take climate action by enhancing their knowledge and skills in climate governance. Website: <https://climate-governance.org/>

Conservation International²⁴ – A US non-profit, one of whose activities is to facilitate investment in nature-based solutions. Website: <https://www.conservation.org/priorities/working-with-corporations>

EV100 – A global initiative bringing together companies committed to accelerating the transition to electric vehicles. Website: <https://www.theclimategroup.org/ev100>

Mission Possible Partnership – An ambitious effort to trigger a net-zero transformation of seven industrial sectors: aluminium, concrete & cement, chemicals, steel, aviation, shipping and trucking. Website: <https://www.missionpossiblepartnership.org/>

The Nature Conservancy²⁵ – A US non-profit, one of whose activities is to facilitate investment in nature-based solutions. Website: <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/working-with-companies/companies-investing-in-nature1/>

RE100 – a global initiative bringing together businesses committed to 100% renewable electricity. Website: <https://www.there100.org/>

We Mean Business Coalition – A global non-profit coalition working to catalyse business leadership on climate change. Website: <https://www.wemeanbusinesscoalition.org/>

²⁴ Please note that Mark Ferguson, Co-Chief Investment Officer at Generation, sits on Conservation International's Board of Directors

²⁵ Please note that John Bernstein, Partner in Generation's Private Equity business, sits on The Nature Conservancy's Board of Directors.

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