Cooling specific FAQ to join Race to Zero

Introduction

As heat waves envelop much of the world, consumers turn to their air-conditioners, fans and refrigeration products to beat the heat. These extreme climate events come on top of already surging demand for cooling products. The sad reality is that much of this cooling is heating up the planet further. Cooling accounts for 7% of global greenhouse gas (GHG) emissions and the market for cooling appliances is growing rapidly, particularly in developing countries where climates are heating up more quickly and current regulations on equipment efficiency are not stringent enough to limit temperature rise to 1.5 degrees.

To shift this paradigm, the Climate Champions team has called on cooling suppliers to join the Race to Zero and drastically cut their GHG emissions. This document aims to provide clarity on how to join the Race to Zero and what it means for the cooling industry. It compiles responses to the most frequently asked questions from organisations wanting to join the Race to Zero.

1. Race to Zero Overview

What is the Race to Zero?

Race to Zero is the UN-backed, global campaign to rally leadership and support from all non-state actors for a healthy, resilient, zero carbon recovery. All members are committed to the same overarching goal: **halving emissions by 2030 and achieving net zero emissions by 2050 at the very latest**.

The Race to Zero is an umbrella campaign - driven by science - that aggregates credible commitments to become net zero, absolute zero, or climate positive from a range of leading networks and initiatives across the climate action community.

Networks and Initiatives that join Race to Zero are termed “Partners,” while the companies, cities, states and regions, investors, and other individual entities that participate in these networks and initiatives are termed “Members.”

Partner networks and initiatives define the exact criteria that businesses, cities, states and regions, investors, universities, and other Members setting targets are required to meet, tailored for different types of actors.

Why does it matter?

Scientists are certain that human-caused emissions have dangerously and permanently changed our planet. The kinds of extreme weather events we are seeing now will keep growing in strength and frequency, **unless we rapidly cut**

carbon emissions.

The latest Assessment Report of the Intergovernmental Panel on Climate Change confirmed that Carbon and methane emissions both need to be rapidly reduced this decade and reduced to net-zero by 2050, in order to give us our best chance of limiting temperatures to 1.5°C by the end of the century. But the window is closing fast on our opportunity to achieve this.

This is why we are in a **race to zero emissions**. But we will not win this race unless we see a dramatic step-change in ambition and progress - as a central part of our recovery from Covid-19.

How does it link to COP26?

At the COP21 United Nations climate change conference in Paris, governments agreed that mobilizing stronger and more ambitious climate action was urgently required to achieve the goals of the Paris Agreement. To connect the work of governments with the many voluntary and collaborative actions taken by cities, regions, businesses and investors, nations decided to appoint two high-level champions.

The UN High Level Climate Champions receive their mandate from the United Nations - as written in the Paris Agreement - for two key areas of work:

- Engage with interested Parties and non-Party stakeholders – This work builds on existing initiatives and supports new and more geographically diverse initiatives. Focus is placed on connecting initiatives and coalitions with national action plans such as nationally determined contributions (NDCs) to the Paris Agreement. This helps bring more transparency, with result tracking and lends demonstrable credibility to climate action.
- Input from the champions efforts to mobilize action helps the secretariat organize technical expert meetings and, in collaboration with the Executive Secretary and the current and incoming Presidents of the Conference of the Parties, coordinate annual high-level events to spur even greater ambition and action.

As part of this mandate the Race to Zero acts as a campaign targeting non-state actors to make net zero commitments aligned with 1.5C and deploy concrete action to halve emissions by 2030 and meet net zero by 2050.

Why should my organisation join the Race to Zero now vs. after COP26?

Climate emergency is happening now. Today, the **biggest barrier we face in achieving net zero emissions is delay,** not denial. It's far easier and cheaper to tackle systemic risks upfront, and mitigate their worst impacts, than to wish them away. Every second, every fraction of a degree, counts.

We are already running late. If we move now, and quickly - we can still create a

healthier, fairer, more resilient and ultimately more liveable zero-carbon world. That's why joining the Race to Zero is the first step in demonstrating action towards limiting the intensity and frequency of life-threatening climate events.

There are already over 3,000 businesses in the Race to Zero. COP26 is a platform for companies to demonstrate their climate leadership, reassure their investors about how seriously they take climate change and how they are bringing to their customers the products they want without damaging the planet. Those companies that are not, will be left off the agenda with many policy makers, journalists and customers asking whether these businesses are on the right side of tackling the climate emergency and how polluting their products are.

What happens if my organisation doesn't join the Race to Zero?

At best your company won't be recognised as helping to solve the climate crisis, at worst your company will be seen as a key contributor to global emissions. Your company will also be at risk of being on the back foot in responding to changing market conditions, both regulatory and also in terms of customer and investor preferences for more sustainable solutions.

Even if your organisation is active in the climate space, ambitious and scientifically grounded action is needed to meet current mitigation needs. This starts with net zero commitments that can be recognised at COP26.

2. How to join the Race to Zero

What is the process to join the Race to Zero?

Signing up to the Race to Zero is a three-step process:

1. You need to make a commitment through a Partner Initiative. This will involve getting in contact directly with the Partner Initiative and/or sign a commitment letter that is aligned with the Race to Zero criteria and defined by the Partner Initiative.
2. The Partner Initiative will review your commitment
3. Once reviewed and approved you are in the Race

As a business you can join the Race to Zero through the following Partner Initiatives:

- ★ Business ambition for 1.5* (led by the Science Based Targets initiative in partnership with the UN Global Compact and the We Mean Business coalition)
- ★ The Climate Pledge
- ★ B Corp Climate Collective

- ★ Exponential Roadmap Initiative
- ★ Business Declares
- ★ SME Climate Hub
- ★ Pledge to Net Zero
- ★ The future Net Zero standard with CBN Expert Community
- ★ Planet Mark

**If you want to join Business ambition for 1.5 and have your commitment announced at COP the deadline for submitting your commitment is 30th September.*

What is the criteria?

Race to Zero represents only a subset of global net zero commitments - and the most credible ones. Any company, city, or university can claim that it is going net zero by 2050, but only by signing up with a partner of the Race to Zero do we know that it is meeting the criteria to do so.

The high-level criteria are as follows:

- **Pledge:** Pledge at the head-of-organization level to reach (net)-zero in the 2040s or sooner, or by 2050 at the latest, in line with global efforts to limit warming to 1.5C.
- **Plan:** In advance of COP26, explain what steps will be taken toward achieving net zero, especially in the short- to medium-term. Set an interim target to achieve in the next decade, which reflects a fair share of the 50% global reduction in CO2 by 2030 identified in the IPCC Special Report on Global Warming of 1.5C.
- **Proceed:** Take immediate action toward achieving net zero, consistent with delivering interim targets specified.
- **Publish:** Commit to report progress at least annually, including via, to the extent possible, platforms that feed into the UNFCCC Global Climate Action Portal.

Do I need to have a defined science-based target (SBT) now?

If you decide to join the Business Ambition for 1.5, at this stage you are not required to have a defined SBT. By signing up to the campaign you commit to developing your net zero emissions target and respective plan to achieve this. You will have 24 months to work on this and define your SBT.

More information can be found in the SBTi's guidance paper: DRAFT V.1.4_Business_Ambition_for_1.5°C_Guidance and FAQ (sciencebasedtargets.org)

What is the deadline to join the Race to Zero?

There is no deadline to join the Race to Zero, companies can make commitments anytime through one of the partner initiatives.

3. Cooling specific questions

Why is the cooling sector targeted?

Cooling accounts for 7% of global greenhouse gas emissions - more than aviation and maritime transport combined. Our world won't be able to achieve net zero emissions if the cooling sector is not decarbonised.

The cooling market is growing rapidly and our planet cannot afford to lock-in additional emissions, therefore we need net zero compatible solutions today. It is crucial that cooling suppliers align with this vision and bring to market super efficient equipment with ultra low Global Warming Potential (GWP) refrigerants.

To achieve this, all cooling suppliers need to make net zero commitments through a Race to Zero Partner Initiative now.

Which cooling stakeholders are already in the Race to Zero?

Over 4,000 businesses, 173 investors, 733 cities have joined the Race to Zero. You can find who is in the Race here. Companies are listed under each Partner Initiative dropdown.

Cooling suppliers in the Race are: Advansor, Danfoss, Electrolux, GEA, Godrej & Boyce, Hitachi, Johnson Controls, Orbia Advanced Corporation, Philips, Schneider Electric, Trane Technologies.

Out of the 4,000 businesses many operate in sectors where cooling emissions represent a significant share of their carbon footprint this includes companies in retail, hospitality, pharmaceutical, medtech, transportation etc. For example **retailers** already in the race include: Tesco, Sainsbury's, Sodexco, Nestle, Walmart, Auchan Retail, Grupo Bimbo, Danone, Unilever, Pepsico, Heineken, Pernod Ricard, Diageo, Brewdog and more.

Scope 3 emissions are a challenge, our organisation is concerned about not being able to halve emissions by 2030 or reaching net zero and therefore not meet the criteria to join the Race to Zero?

Scope 3 emissions represent the largest chunk of emissions (>80%) for most cooling suppliers. This is mainly due to the operation of cooling equipment that consumes electricity from often carbon intensive grids, but also due to leakages of refrigerants with high GWP.

There has been a rapid increase over the last year in the number of governments pledging to reduce greenhouse gas emissions to net zero. These pledges to date cover around 70% of global GDP and CO2 emissions. In order to deliver this, countries are prioritising the decarbonisation of their power system, and therefore reducing the carbon intensity of energy consuming activity.

The IEA recently released a roadmap to Net Zero, guiding decarbonisation trajectories of countries' energy systems globally. The roadmap projects an uptake in renewables share in generation, expected to be 61% by 2030 and 88% by 2050. The analysis also calls for a major worldwide push to increase energy efficiency in a world economy projected to be 40% larger than today but that uses 7% less energy by 2030. Massive deployment of all available clean and efficient energy technologies will result in the annual rate of energy intensity improvements averaging 4% to 2030 – about three-times the average rate achieved over the last two decades. The IEA will provide more detail on G7 countries power supply decarbonisation pathways in their forthcoming report (ahead of COP26).

These government (and utility) commitments to net zero and the projections from the IEA for net zero pathways have raised the confidence of 11 cooling suppliers and many other companies that their supply chain emissions will reduce hugely. These organisations have committed to the Race to Zero and are planning their actions to meet net zero emissions by 2050 based on existing decarbonisation pathways. A collaborative approach is still needed however. Cooling suppliers have a major role to play in making super efficient cooling equipment accessible to mass markets across all sectors because this will make it easier, cheaper and faster for governments and utilities to reduce the carbon intensity of the energy supplies. In particular, cooling is a key driver of peak demand in countries with high penetration of AC and as such these systems are already straining power systems, particularly when products are inefficient. By

being more efficient and smoothing out the peaks, then energy systems won't be forced to bring into use fossil fuels if peak demand uses up all available clean power.

What are the steps my organisation can take to start defining a net-zero target and address Scope 3 emissions?

There is no one size fits all answer to start working on a net zero goal. A key common feature across cooling suppliers already in the Race is the strong buy-in from company leaders and the senior management.

The first step requires company top-executives to make climate change a key priority and demonstrate willingness in investing time and resources on making this challenge a streamlined process across teams. The second priority should be to focus on understanding how the company's Scope 1, 2 and 3 emissions look like. This means deploying an extensive data collection process. For scope 3 companies can build on existing product standards to estimate product emissions or develop their own sophisticated models tailored to their different products.

Once the different sources and share of emissions are laid out, the organisation can start thinking about an approach to address its own emissions. From increasing the performance of their products and adopting sales strategies to put forward more climate-friendly models on the market, to engaging with suppliers will help tackle the value chain's carbon footprint. Suppliers should encourage their suppliers to make their own commitments or join initiatives such as CDP supply chain which serves as a platform for suppliers to disclose their emissions data and de-risk decarbonisation strategies.

Are there any other resources specific to cooling?

Yes, earlier this year a Net Zero Cooling Action Pathway was developed providing high-level milestones to meet net zero emissions by 2050 categorised by stakeholder groups.

List of Net Zero cooling related documentation is:

Document	Description
Net Zero Cooling Climate Action Pathway, Executive Summary	• Overview of Cooling Emissions and challenges • Summary of key intervention to meet net zero emissions through (1) super-efficient

	equipment (2) Ultra-low GWP refrigerants (3) passive cooling measures
Net Zero Cooling Climate Action Pathway, Action Table	• Overview of Actions and milestones per stakeholder group to meet net zero cooling by 2050
Cooling suppliers' climate assessment	• Ranking of cooling suppliers climate action and readiness to join the Race to Zero
EIA Pathway to Net Zero Cooling Product List	• List of climate-friendly products across all major cooling sectors, with a unique focus on ultra-low Global Warming Potential (GWP) natural refrigerants alongside appliance energy efficiency to help businesses, governments and consumers around the globe make sustainable cooling choices
Cool Calculator, 2050 scenario model	• The Cool Calculator allows stakeholders to run simple but open calculations on key aspects of cooling decarbonisation, empowering them to identify a set of solutions that works best for particular regions and/or sectors.

Transitioning towards net zero cooling represents a high up-front cost barrier, what financial mechanisms exist to overcome this barrier?

Many finance institutions have made net zero commitments and will look to invest and support sustainable solutions. Alliances that are joining investments towards net zero intervention include:

- The Glasgow Financial Alliance for Net Zero (GFANZ), chaired by Mark Carney, UN Special Envoy on Climate Action and Finance, unites over 160 firms (together responsible for assets in excess of US$70 trillion)) from the

leading net zero initiatives across the financial system to accelerate the transition to net zero emissions by 2050 at the latest.

- Net Zero Asset Managers Initiative is an international group of asset managers committed to supporting investing aligned with net zero emissions by 2050 or sooner. It unites 128 signatories, US$43 trillion assets under management.
- The Paris Aligned Investment Initiative (PAII) was established in May 2019 by the Institutional Investors Group on Climate Change (IIGCC) at the request of asset owner members, it now involves over 110 investors representing $33 trillion in assets. As of March 2021, the initiative has grown into a global collaboration supported by four regional investor networks – AIGCC (Asia), Ceres (North America), IIGCC (Europe) and IGCC (Australasia).