Net Zero: Obstacles and Catalysts for Business Climate Action

The SustainAbility Institute by ERM

EDF ENVIRONMENTAL DEFENSE FUND + BUSINESS

Contents

1 Overview

ERM and EDF+Business conducted interviews and a survey to understand the obstacles companies face when pursuing their climate goals and the catalysts that might help to overcome them. Conducted in the fall of 2021, the research finds that numerous internal and external obstacles stand in the way of companies achieving their climate goals. Internally, companies struggle to connect their goals with broader business strategy, assign operational ownership of these goals, and measure and manage emissions associated with complex value chains; externally, companies need additional governmental support for climate action, greater availability and knowledge of climate-related technological solutions, and a better understanding of the climate-related tools and guidance available to them. Despite these challenges, companies are confident that they will be able to overcome obstacles and achieve their climate goals with the right assistance and direction.

2 Introduction

The Net Zero Challenge

It is painful but true: The world is not on track to meet the Paris Agreement's 1.5°C goal and prevent dangerous anthropogenic interference with the climate system.

According to the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report, global temperature rise will exceed 1.5°C during the 2030s unless significant greenhouse gas (GHG) emissions reductions in line with a net zero pathway begin immediately.[1] Others, like the British Weather Service, predict this will happen in at least one of the next five years.[2] Coupled with the United States' federal climate action vacillation, it is clear that countries can do more to mitigate climate change. Nevertheless, countries are only one piece of the global net zero puzzle. Companies also have a central role to play.

> Global temperature rise will likely exceed 1.5°C during the 2030s, if not earlier, if aggressive action is not soon taken.

The corporate net zero landscape is rapidly changing due to the urgency of the climate crisis as well as stakeholder pressure, regulatory developments, and hyper-transparency. As a result, climate leadership and action have become business imperatives, motivating companies worldwide to set net zero goals. Over 5,000 companies have pledged to reach net zero emissions through the United Nations Framework Convention on Climate Change's (UNFCCC) Race to Zero Campaign, and 1,500 of these companies have committed to set a net zero goal aligned with a 1.5°C future.[3, 4]

While corporate climate goals are increasingly common, there remains a tremendous gap between rhetoric and action. Accelerating climate change impacts have many stakeholders demanding that companies close this gap by going beyond goal-setting to develop defined and realistic pathways to achieve their targets.

However, recent assessments find that many businesses fall short. One study by the Energy & Climate Intelligence Unit found that only 20 percent of published corporate net zero goals meet the minimum requirements of the Race to Zero Campaign, while another study by Climate Action 100+ found that only 17 percent of the world's biggest GHG-emitting companies have developed quantified strategies to achieve their climate goals.[5]

> Only 20 percent of published corporate net zero goals meet the minimum requirements of the Race to Zero Campaign.

Stakeholders will soon have another medium through which to evaluate net zero ambitions. In March 2022, the United Nations launched the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities.[6] The group will develop credibility criteria for assessing the objectives, measurement, and reporting of net zero goals of non-state entities (e.g., companies and investors) and develop processes for verifying and accounting for progress against them. The need for this type of group signals that current non-state net zero goals are perceived as lacking what is required to deliver emissions reductions in line with 1.5°C.

Identifying Obstacles To Achieving Net Zero and Catalysts To Overcome Them

Companies are struggling to make tangible progress on the road to net zero. To better understand the obstacles companies face and the catalysts that might help to overcome them, EDF+Business (the arm of environmental NGO Environmental Defense Fund that works to bring science, policy, and economic expertise to high-impact companies) and ERM examined where companies are in their climate journey and the types of support that would most accelerate progress toward their goals. Building on EDF+Business' Pathways to Net Zero report series, our work set out to outline how companies can turn net zero pledges into real results.[7]

The study's fall 2021 research included interviews and a survey with North America-based companies representing 14 sectors, a range of climate ambitions, and different market capitalizations.

Taken together, the participants' input painted a representative picture of the state of corporate climate action on net zero delivery.

Interviewees and survey respondents were asked about their climate commitments, the obstacles they face in implementing them, the types of support that would help catalyze action, and their interest in participating in an EDF+Business program to help companies accelerate climate action.

3 Catalyzing Action: Overcoming Obstacles To Corporate Net Zero Success

Obstacles Are Prevalent

Unsurprisingly given the state of the climate crisis, almost all participating companies acknowledge internal and external obstacles slowing progress toward their climate goals.

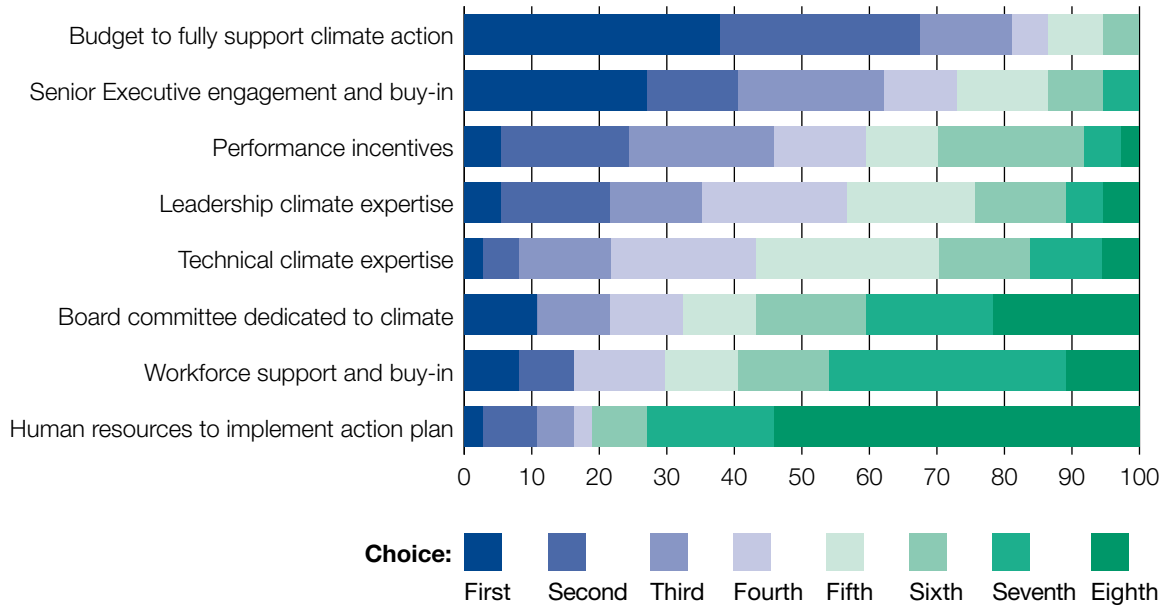
Internal

Companies mentioned three internal obstacles most frequently.

- **Strategy:** Companies do not know how to develop and deliver a climate strategy that connects climate goals with broader business objectives and drives progress by incentivizing action.
- **Organization:** Companies face difficulties integrating climate action into their organizations, which hampers goal implementation.
- **Value Chain and Scope 3:** Companies find it challenging to measure and manage emissions associated with complex value chains.

Q If you were to accelerate action toward your climate commitment, which of the internally focused actions / support mechanisms would be most effective?

Figure 1
Internal Actions or Support Surveyed Companies Need To Accelerate Climate Action



External

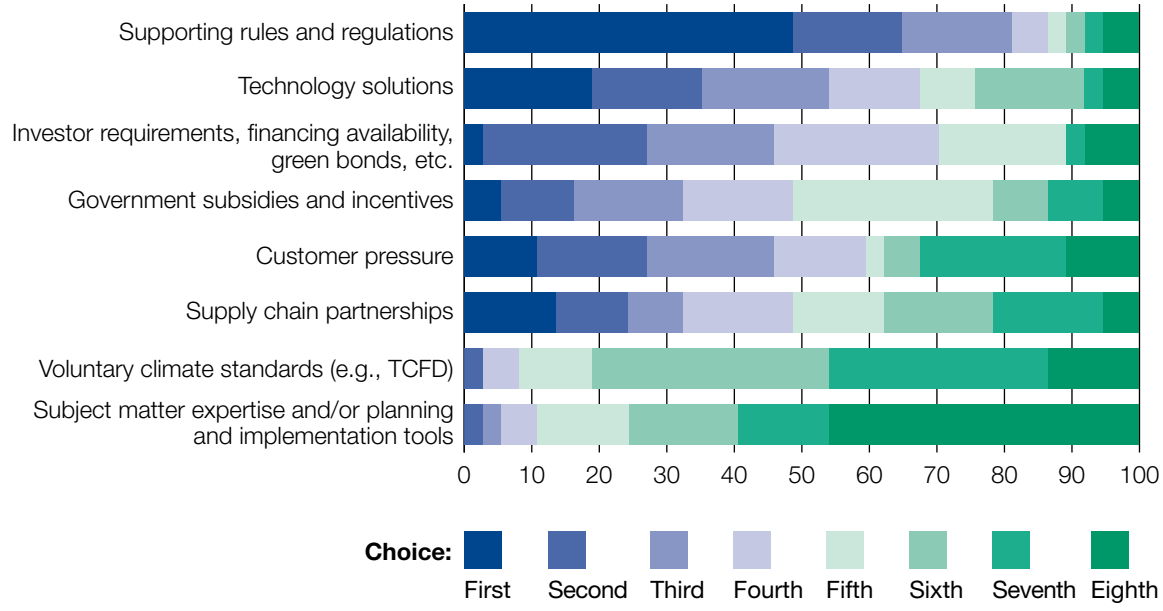
Companies also cited the three external obstacles they face most often.

- **Policy and Regulation:** Companies say that more governmental support for climate action is essential to realizing climate goals.
- **Technology:** Companies state that the technological solutions needed to achieve their climate goals are not yet available at scale – or at all.
- **Tools and Guidance:** Companies suggest that uncertainty on which external climate-related tools and guidance are right for them limits the scale of their climate action.

Q If you were to accelerate action toward your climate commitment, which of the externally focused actions / support mechanisms would be most effective?

Figure 2

External Actions or Support Surveyed Companies Need To Accelerate Climate Action



Internal Obstacles and Catalysts To Overcome Them

Most interviewees and survey respondents say their organizations have the will to act on climate (i.e., the motivation to reduce their GHG emissions based on a recognition of the business imperative for climate action), but add that they do not believe the internal knowledge necessary to deliver is available within their organizations. This lack of internal knowledge can be traced to three interrelated areas: Strategy, Organization, and Value Chain and Scope 3. More encouragingly, companies believe that with the right help, they can overcome these barriers.

Strategy

Companies are moving at different 'speeds' to develop the strategies they will use to achieve their climate goals.

- Companies moving at Speed 1 are building internal buy-in for climate action across the organization.
- Companies moving at Speed 2 are equipping functional leaders with the knowledge and skills required to integrate climate into their business.

Companies operating at both speeds note progress in setting their climate strategy, but many struggle to connect climate goals with broader business objectives, hindering their ability to achieve both simultaneously. At Speed 1, it is difficult for companies to ensure that the organization is united in recognizing climate as a strategic priority, which constrains action. At Speed 2, the disconnect limits companies' ability to link operations to climate action and complicates their work to overcome internal climate-related skills gaps.

> **"Executives have the power to shift from "no" to "why not" on forward-looking sustainability investments. Until they see sustainability as a future de-risking opportunity, it will be challenging for companies to fully act on climate."**
>
> Technology, Media, Telecommunications Sector
> Company Representative

Companies view making a business case for climate action to senior executives as key to overcoming strategic obstacles. Central to this is their belief that they must unlock the financial resources required to fully decarbonize if they are to achieve their climate goals, a pursuit in which executive buy-in plays a major role.

> Only 19 percent of survey respondents have launched a fully costed and funded decarbonization effort.

Companies also indicate they might overcome this climate and strategy disconnect by tying performance incentives to climate goals. The view that linking compensation to climate and other sustainability objectives is important to incentivizing action is shared by 85 percent of investor and 73 percent of non-investor (e.g., companies and corporate-affiliated organizations) respondents to ISS's Global Benchmark Policy Survey.[8] However, according to Sustainalytics, only 13 percent of public companies in the United States and Canada have made this connection.[9] Despite the few companies who have connected compensation to climate, this incentivization will be critical to achieving executive buy-in and embedding climate into business strategy going forward.

> **Some companies are already taking climate change seriously. For those that are not, you need to make an economic case for action. You need to convince the CEO to take action and then, by connecting ESG to compensation, get the rest of the executives acting too.**
>
> Manufacturing Sector Company Representative

Organization

Organizational issues are a common obstacle slowing companies' climate progress. Particularly, companies struggle to embed climate goals into core business functions such as accounting and finance in a way that enables them to contribute to the company's climate action. Companies believe that this is at least partially due to the challenge of translating what climate goals mean to different functions (e.g., what kinds of climate-related action will be required by accounting teams to help achieve net zero). Further complicating matters, companies are unsure how cross-functional collaboration can be enabled to ensure that different functions work in unison toward the company's climate goals.

> Companies struggle to embed climate into core business functions like accounting and finance.

> **We need help determining what our different functions' climate action priorities should be and how they should be implemented. We struggle with connecting our overarching climate goals to these different groups in a way that ensures they are helping us accelerate toward our common goals."**
>
> Finance Sector Company Representative

Surmounting these obstacles will require companies to upscale internal climate knowledge (i.e., an understanding of how climate change will impact their company and the actions needed to achieve their goals) across their organizations. By expanding climate knowledge, companies are more likely to implement the internal organizational measures necessary for decarbonization such as developing processes to assess collective progress toward climate goals or establishing a climate governance structure to coordinate climate action. AXA is one example of a company pursuing climate learning for all its employees. In October 2021, the insurance firm announced it had launched the AXA Climate Academy, a learning program to train its more than 100,000 employees on climate-related issues.[10] The Academy's focus on building awareness of the firm's own climate strategy, developing climate literacy, and increasing understanding of climate change's business impacts is likely to help the firm embed climate action into their broader business by seeding a climate action mindset among employees.

> **We have found it difficult to scale up internal climate knowledge. We have tried internal trainings, but they do not seem to move the needle enough. We need to develop a depth of knowledge to be successful.**
>
> Food & Beverage Sector Company Representative

A lack of climate-related skills is another action-limiting factor according to companies. Other studies of companies of all sizes help corroborate this. According to a KPMG survey, 74 percent of executives at leading global companies believed that their internal leaders need to improve their climate-related skills if their company is to appropriately respond to climate change; while another survey by the SME Climate Hub found that two-thirds of small- and medium-size member companies do not have the in-house skills required to achieve net zero.[11,12]

Overcoming an internal skills gap may simply require hiring outside the company. However, as the Financial Times notes, soaring demand for ESG expertise makes this difficult, as the supply of talent is currently dwarfed by demand.[13]

> Companies do not currently possess the in-house skills required to meet their climate goals.

Instead, companies must develop climate-related skills and internal know-how to ensure that a skills gap does not become an action gap preventing full implementation of climate goals. To avoid this, participating companies seek help upskilling their operational functions. Companies believe that improving these groups' skills will help scale change more quickly and effectively than others because of their intimate knowledge of emissions-producing business processes.

> **"Providing training to people already embedded in business functions is more effective than plugging in people from sustainability teams because they have more credibility to act. Converting insiders is better than bringing in outsiders."**
>
> Finance Sector Company Representative

Learning from others who have already integrated climate action into their organizations is another path forward for companies. Studying the ways others integrate climate action can be easier than creating custom approaches. One area ripe for collaborative learning is climate-focused change management, or the processes required to incorporate decarbonization initiatives across the organization. Currently, a lack of access to defined processes impedes company efforts to implement climate-related organizational changes as they must learn by trial and error. However, if access was facilitated through knowledge sharing between companies, this challenge, along with others, is more likely to be overcome.

Companies interested in collaboration can take advantage of established collaborative initiatives. For example, the cross-sectoral Transform to Net Zero (TONZ) brings companies together to help achieve an inclusive net zero economy no later than 2050.[14] TONZ's Transformation Guides are particularly relevant to companies looking to learn from others as they outline the experiences and lessons learned by members during their net zero journeys.[15]

> **We were able to reduce a lot of our emissions with just action and leadership from two people in operations. To get all the way to net zero will require collaboration across the company in a way that we have not done before. To get here we will need to educate all functions and help them acquire new climate-related skills.**
>
> Technology, Media, Telecommunications Sector
> Company Representative

Value Chain and Scope 3

Interviewees and survey respondents repeatedly point to value chain emissions reductions as the greatest climate action challenge their companies face. Given that a company's Scope 3 emissions are on average 11.4 times higher than operational (Scope 1 and 2) emissions, struggles to reduce them could significantly limit climate goal achievement.[16]

> Interviewees and survey respondents repeatedly point to value chain emissions reductions as the greatest climate action challenge their companies face.

Companies note that their lack of control over the actions of value chain partners complicates their efforts to reduce Scope 3 emissions. The Science Based Targets initiative corroborates these views in a report outlining Scope 3 best practices, acknowledging that a lack of control poses obstacles to collecting robust Scope 3 data and impedes emissions reduction efforts.[17] A UN Global Compact/Accenture CEO survey focused on corporate climate action provides further evidence, finding that six out of 10 CEOs see limited ESG and climate data for value chains as a limiting factor to Scope 3 reductions.[18]

Because of Scope 3 management challenges, companies are interested in learning about how to work with businesses outside their direct control to reduce these emissions. A specific method they seek upskilling guidance on is how to best engage supply chain partners because without direct interaction with their value chains, companies' view of emissions and any reduction progress is clouded. Specifically, because of the multitude of different sectors that compose modern supply chains, companies are interested in learning how to engage suppliers in a consistent manner that ensures steady progress.

One Scope 3 engagement resource already available to companies is the TONZ Buyer-Supplier Engagement to Reduce Upstream Scope 3 Emissions guide, which includes examples of how companies engage their suppliers on decarbonization.[19] Another is the Exponential Roadmap Initiative's 1.5°C Supplier Engagement Guide, which outlines strategies for working with suppliers on climate goals.[20]

> **Our biggest challenge is Scope 3 emissions since we do not have control over them. We have worked on things to reduce these emissions but have not been able to make a big impact. There is a need to figure out how to get our supply chain partners to act on climate.**
>
> Food & Beverage Sector Company Representative

External Obstacles and Catalysts To Overcome Them

While not as common as internal obstacles, companies report that external challenges also hinder their climate action. Like internal obstacles, these can be subdivided into three interrelated areas: Policy and Regulation, Technology, and Tools and Guidance.

Policy and Regulation

Interviewees and survey respondents say that they will struggle to realize their climate ambitions without government policies and regulations that do more to support the attainment of corporate climate goals. This view is reflected in a UN Global Compact/Accenture CEO survey where only 18 percent of respondents said they believe that governments provide the clarity companies need to achieve a 1.5°C trajectory.[21] Companies want governments and regulators to do more to help them achieve their climate goals and count the enactment of carbon pricing schemes and clean energy tax incentives as examples of possible policy-driven support.

> Companies want governments and regulators to do more in support of the attainment of corporate climate goals.

In addition to more, better, and clearer policy and regulatory support, companies want to learn how to best engage government decision makers on forthcoming rules. Internally, they acknowledge that their government affairs teams' understanding of climate-related issues must be improved so that they can better advocate for supportive policy and regulation. They also note that climate change is not always a priority for these teams and that they would be interested in learning how to build the case for why government affairs teams should prioritize climate-related engagements.

> **"Companies need to take bold climate action, but they cannot get to net zero on their own. They need policy and regulatory support from governments to fully achieve their ambitions."**
>
> Consumer Packaged Goods Sector Company Representative

A World Resources Institute study on barriers to corporate climate policy leadership in the United States supports these views, identifying climate knowledge gaps and competing priorities as limiting factors.[22] The authors note that many companies lack a full understanding of how climate change will impact their business physically and/or through policies meant to mitigate it. The study also finds that climate change is not a priority issue for corporate engagement with governments; instead, issues seen as having more immediate or material impacts rise to the top. These knowledge and prioritization issues that government affairs teams face make it difficult for companies to successfully engage decision makers.

> **Guidance on how executives and government affairs functions can best engage with policymakers on support for climate action would be a value add that would help accelerate corporate progress.**
>
> Consumer Packaged Goods Sector Company Representative

Companies looking to overcome climate policy obstacles can leverage the AAA Framework for Climate Policy Leadership guide, which outlines the three essential actions companies should take when pursuing science-based climate policy engagements: advocate for policies consistent with achieving net zero emissions by 2050, align your trade associations' climate policy advocacy with the goal of net zero emissions by 2050, and allocate advocacy spending to advance climate polices, not obstruct them.[23]

Technology

A lack of widely available climate-related technologies (e.g., alternative fuels, advanced batteries for vehicles and energy storage, etc.) and insufficient knowledge of how to leverage those already available are impeding companies' ability to advance their climate goals.

In particular, two technology-related obstacles stand out. First, many reveal that their companies often do not have time or capacity to fully identify available technologies to reduce emissions, or do not know which available technologies would be most feasible for them. Second, many imply that the technologies needed to reduce emissions are not yet available at scale. This point is echoed in other studies: According to an IEA projection, almost half of the carbon abatement needed to achieve net zero by 2050 will need to come from technologies still being demonstrated or developed.[24]

> A lack of widely available climate-related technologies and insufficient knowledge of those already available is impeding companies' ability to advance their climate goals.

Companies believe that sector-specific pathways are needed to overcome technology-related obstacles and fully decarbonize. Ideally, these pathways would outline currently available or emerging climate-related technologies and explain how they will support decarbonization efforts.

> **Credible climate technology pathways will be key to our success. Laying out these pathways would help us accelerate our climate action.**
>
> Consumer Packaged Goods Sector Company Representative

Tools and Guidance

As with technology, companies find it hard to identify tools to support climate action. Particularly, they note that their ability to project future GHG emissions and then develop appropriate reduction targets and strategies is hindered by difficulties identifying the right data modeling tools for their business. As such, their ability to transition climate initiatives from a historical-looking model of analyzing the past to a forward-looking model where actions are shaped by a clear picture of the likely future is limited. Again, like technology, external help with tool identification is key to surmounting these difficulties, as companies often do not have the time or in-house expertise.

> **We need to figure out how to use our GHG emissions data to look ahead and understand how we will achieve our climate targets. There are many new data solutions out there to help, however, it is hard for us to keep track of which ones are best for our needs.**
>
> Consumer Packaged Goods Sector Company Representative

Outside of data-focused assistance, assistance developing climate action plans is a top priority for companies. Roadmaps outlining the steps to operationalize corporate climate goals are critical. However, many feel that clear, sector-specific guidance is not always available, which in turn hinders their ability to accelerate their ambitions. This availability issue is a major obstacle, as accessing external subject matter expertise is one of the primary ways companies will be able to overcome internal knowledge gaps.

> Companies want sector-specific guidance on how to develop climate action plans and roadmaps.

The EDF+Business' Pathways to Net Zero report series helps to address this gap by outlining paths for companies to follow on their net zero journeys.[25] The report series covers both the near-term (up to 2030) and the long-term (up to 2050) portion of net zero journeys, with the near-term focused on cross-sector abatement solutions, and the long-term focused on transportation, agriculture, retail, and technology abatement solutions. The TONZ Transformation Guides outlining the climate action journeys of TONZ members are another resource for companies seeking additional guidance.[26]

> **"A starter kit that outlines where companies' climate priorities should be in different sectors would be a value add. Companies would benefit from guidance on how to accelerate action internally using internal experts."**
>
> Finance Sector Company Representative

4 Conclusion

The flurry of corporate net zero goals released in recent years, coupled with the growing climate aspirations of countries highlighted at COP26, provides clear evidence that the global community is beginning to step up to the climate crisis. But commitments must only be the beginning. To avert the worst effects of the climate crisis, meaningful progress must be made this decade.

However, as our research shows, progress is challenging given the internal and external obstacles currently impeding companies' climate action. Yet despite these challenges, companies are optimistic their climate goals can be achieved with the right catalysts. In this report, we identified numerous catalysts and the ways they can help accelerate corporate climate action. While companies must pursue some of these on their own, the need for further capacity-building, upskilling, and collaboration across sectors and functional areas frequently arose. To fully realize their ambitions, companies must work closely with other companies, governments, non-governmental organizations, and other non-state actors.

As the IPCC's Sixth Assessment report makes clear, time is running out to limit warming to 1.5°C and to prevent the cascading impacts that would come with exceeding that temperature. Because the actions taken today to reduce emissions will shape the world well into the future, the moment for companies to accelerate their decarbonization is now.

5 Endnotes

[1] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2021: The Physical Science Basis Summary for Policymakers*. Online posting. Intergovernmental Panel on Climate Change. Accessed 1 August 2022. https://www.ipcc.ch/report/ar6/wg1/

[2] Madge, G. 2022. *Temporary breaching of 1.5C in next five years?* Online posting. The Meteorological Office. Accessed 1 August 2022. https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/decadal-forecast-2022

[3] United Nations Framework Convention on Climate Change. N.D. *Race To Zero Campaign*. Online posting. United Nations Framework Convention on Climate Change. Accessed 1 August 2022. https://unfccc.int/climate-action/race-to-zero-campaign#eq-3

[4] Science Based Targets initiative. N.D. *Business Ambition for 1.5°C*. Online posting. Science Based Targets initiative. Accessed 1 August 2022. https://sciencebasedtargets.org/business-ambition-for-1-5c

[5] Climate Action 100+. 2022. *Climate Action 100+ Net Zero Company Benchmark*. Online posting. Climate Action 100+. Accessed 1 August 2022. https://www.climateaction100.org/news/climate-action-100-net-zero-company-benchmark-shows-an-increase-in-company-net-zero-commitments-but-much-more-urgent-action-is-needed-to-align-with-a-1-5c-future/

[6] United Nations. 2022. *UN Secretary-General to push business, investors, cities to walk the talk on net-zero pledges; Expert Group launched amid worsening climate crisis*. Online posting. United Nations. Accessed 1 August 2022. https://www.un.org/sites/un2.un.org/files/hleg_press_release_pdf.pdf

[7] EDF+Business. 2021. *Pathways to Net Zero*. Online posting. EDF+Business. Accessed 1 August 2022. https://business.edf.org/files/EDF021_Decisive-Decades-Net-Zero-Pathways-FINAL.pdf

[8] Belyeu, K. et al. 2021. *2021 Global Benchmark Policy Survey*. Online posting. ISS Governance. Accessed 1 August 2022. https://www.issgovernance.com/file/publications/2021-global-policy-survey-summary-of-results.pdf

[9] Gorley, A. 2022. *Should Leadership Compensation Be Tied To ESG Metrics? Here's Why It Makes Sense*. Online posting. Sustainalytics. Accessed 1 August 2022. https://www.sustainalytics.com/esg-research/resource/corporate-esg-blog/should-leadership-compensation-be-tied-to-esg-metrics.

[10] AXA. 2021. *Making AXA's employees pioneers to fight climate change*. Online posting. AXA. Accessed 1 August 2022. https://www.axa.com/en/magazine/axa-employees-and-climate-change

[11] Davies, M. and Hayes, M. 2021. *Climate change and corporate value*. Online posting. KPMG. Accessed 1 August 2022. https://assets.kpmg/content/dam/kpmg/xx/pdf/2021/03/climate-change-and-corporate-value.pdf

[12] SME Climate Hub. 2022. *New data reveals two-thirds of surveyed small businesses concerned over navigating climate action*. Online posting. SME Climate Hub. Accessed 1 August 2022. https://smeclimatehub.org/new-survey-reveals-small-business-barriers-climate-action/

[13] O'Dwyer, M. 2021. *Sustainable investing boom and net zero pledges drive ESG talent war*. Online posting. The Financial Times. Accessed 1 August 2022. https://www.ft.com/content/6c59ed7a-170b-4898-81a2-7420f0c28888

[14] Transform to Net Zero. N.D. *Transform to Net Zero*. Online posting. Transform to Net Zero. Accessed 1 August 2022. https://transformtonetzero.org/

[15] Transform to Net Zero. N.D. *Transformation Guide*. Online posting. Transform to Net Zero. Accessed 1 August 2022. https://transformtonetzero.org/resources_category/transformation-guide/

[16] CDP. 2021. *Transparency to Transformation: A Chain Reaction*. Online posting. CDP. Accessed 1 August 2022. https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/554/original/CDP_SC_Report_2020.pdf?1614160765

[17] Science Based Targets initiative. 2018. *Value Change in the Value Chain: Best Practices in Scope 3 Greenhouse Gas Management*. Online posting. Science Based Targets initiative. Accessed 1 August 2022. https://sciencebasedtargets.org/resources/files/SBT_Value_Chain_Report-1.pdf

[18] Timmermans, K. 2022. *The supply chain is the key to winning the fight against climate change*. Online posting. Accenture. Accessed 1 August 2022. https://www.accenture.com/_acnmedia/PDF-170/The-Supply-Chain-Key-To-Winning-Fight-Against-Climate-Change.pdf

[19] Transform to Net Zero. 2021. *Buyer-Supplier Engagement to Reduce Scope 3 Emissions*. Online posting. Transform to Net Zero. Accessed 1 August 2022. https://transformtonetzero.org/resources/buyer-supplier-engagement-to-reduce-upstream-scope-3-emissions/

[20] Exponential Roadmap Initiative. N.D. 1.5°C *Supplier Engagement Guide*. Online posting. Exponential Roadmap Initiative. Accessed 1 August 2022. https://exponentialroadmap.org/supplier-engagement-guide/

[21] Lurie, G. et al. 2021. *Climate Leadership in the Eleventh Hour: The 2021 United Nations Global Compact-Accenture CEO Study on Sustainability*. Online posting. United Nations Global Compact and Accenture. Accessed 1 August 2022. https://www.accenture.com/_acnmedia/PDF-166/Accenture-UNGC-CEO-Study-Sustainability-2021.pdf

[22] Meyer, A. and Metzger, E. 2021. *Seven Barriers to U.S. Business Leadership on Climate Policy and How to Break Them Down*. Online posting. World Resources Institute. Accessed 1 August 2022. https://files.wri.org/d8/s3fs-public/2021-06/barriers-us-business-leadership-climate-wri.pdf?VersionId=B9bDTRh3ok6xiTZAlmL82m-GUAqazbXHS.

[23] EDF+Business. 2020. *AAA Framework Guide for Climate Policy Leadership*. Online posting. EDF+Business. Accessed 1 August 2022. https://business.edf.org/files/AAA-Framework-Guide-for-Companies-8.5x11_UPDATED_091520-1.pdf

[24] International Energy Agency. 2021. *Net Zero by 2050*. Online posting. International Energy Agency. Accessed 1 August 2022. https://www.iea.org/reports/net-zero-by-2050

[25] EDF+Business. 2021. *Pathways to Net Zero*. Online posting. EDF+Business. Accessed 1 August 2022. https://business.edf.org/files/EDF021_Decisive-Decades-Net-Zero-Pathways-FINAL.pdf

[26] Transform to Net Zero. N.D. *Transformation Guide*. Online posting. Transform to Net Zero. Accessed 1 August 2022. https://transformtonetzero.org/resources_category/transformation-guide/

6 Appendix

Interview Questions

Note: Not all interview questions were asked to every interviewee depending on the flow of the particular conversation.

1. **What prompted your organization to make a public climate commitment?**

2. **On a scale of 1 to 4, how would you characterize the status of your organization's journey toward your public climate commitment?**
   a. Just starting out
   b. Done planning and starting to implement
   c. Reviewing previous round(s) of implementation and ready to start the next one
   d. Reached our Goal

3. **Are you moving as fast as you want to be moving toward this target?**
   a. What would prompt your organization to want to move faster?

4. **What could help your organization move even faster**
   a. Will e.g., motivation, commitment
   b. Skill e.g., aptitude, knowledge

5. **What issues / barriers have you encountered while working toward your goal? Are they internal challenges and/or external challenges?**
   a. Prompts for internal challenges:
      i. Strong mandate from CEO
      ii. Executive alignment / priority alignment
      iii. Board oversight
      iv. A climate forward corporate culture
      v. Access to capital / resources
      vi. Climate/ESG remuneration / incentives
      vii. Climate integration into processes (e.g., strategic planning, capital investment, hiring)
      viii. Climate knowledge and expertise
      ix. Skills / knowledge to guide the process / implement the process
   b. Prompts for external challenges:
      i. Collaboration with supply chain
      ii. Constructive engagement with governments & policymakers
      iii. Constructive engagement w/ NGOs
      iv. Customer demand
      v. Regulatory environment (lack thereof / ambiguous)
      vi. Technology limitations

6. **What would be most helpful in the next 12 – 18 months to support your next milestone in your journey?**
    a. Prompts:
        i. Change management
        ii. Technical know how
        iii. Executive engagement / alignment
        iv. Operational engagement / alignment

7. **How do you normally build skills in the organization to take on a major transformational challenge?**
    a. Follow up themes: What format would be most useful? (e.g., workshops, webinars, in person, online, peer to peer, company team)

8. **Who in the company has been charged with delivering on the climate commitment? (accountability and /or responsibility)**

Survey Questions

1. **Select the statement that best characterizes your company's public climate commitment.**
    a. No public climate goal statement made to date
    b. Net Zero 2030 or sooner
    c. Net Zero 2040
    d. Net Zero 2050
    e. Paris aligned (below 1.5 or 2 degrees)
    f. SBTI
    g. Other

2. **Your public climate commitment covers which GHG scopes?**
    a. Scope 1
    b. Scope 2
    c. Scope 3

3. **Has your company set interim targets on the path to achieving their climate commitment?**
    a. Yes
    b. No

4. **Where is your company on its climate commitment implementation journey?**
    a. No material actions taken yet
    b. Just starting to plan
    c. Have a plan and starting to implement
    d. Reviewing previous round(s) of implementation and ready to start the next one
    e. Reached our goal

5. **Which of the following actions has your company taken as part of your climate efforts?**
   a. Appointed an executive to drive the program
   b. Established a climate team (standalone function or embedded in various groups)
   c. Conducted a strategic analysis of the business implications of delivering the commitment
   d. Set quantitative emission reduction goals that apply across all business units
   e. Designed and launched a fully costed and funded decarbonization effort
   f. Established an internal price on carbon or some other advanced accounting/funding mechanism to pay for decarbonization efforts
   g. Engaged value chain (e.g., suppliers, customers)
   h. Engaged regulators
   i. Developed technology (e.g., direct or through partnership)
   j. Invested in carbon reductions external to your value chain

6. **Which best represents your perception of the company's level of buy-in and willingness (e.g., motivation) to turn their climate commitment(s) into actions and a goal(s) achieved?**
   a. We do not have organizational buy-in on the climate commitment(s) made
   b. There are few key individuals that support this but not a shared priority by management
   c. The executive team supports this, but there is not the buy-in in levels below
   d. We have a shared commitment

7. **Which best represents your perception of the company's "skill" (e.g., expertise, know-how) to turn their climate commitment(s) into actions and a goal(s) achieved?**
   a. We are missing the "skill" we need to move forward in any meaningful way
   b. A few individuals in the organization have the needed "skill"
   c. The needed "skill" is in several pockets of the organization
   d. Throughout the organization we have the "skill" we need

8. **Has your company encountered any challenges while defining and working toward your climate commitment?**
   a. Yes, we have encountered challenges
   b. No, we have not encountered challenges

9. **How would you characterize the challenges encountered?**
   a. Regulatory
   b. Commercial
   c. Leadership
   d. Organizational
   e. Technical

10. **Specifically, which topics / issues best represent the challenges encountered?**
    a. Transition climate risk impact / analysis
    b. Physical climate risk impact / analysis
    c. Scope 1 & 2 inventories (develop, track, improve, etc.)
    d. Scope 3 inventories (develop, track, improve, etc.)
    e. GHG emission reduction strategies (e.g., identify, develop, cost, prioritize, plan, execute)
    f. Carbon credits or offsets
    g. External climate-related standards and protocols (e.g., TCFD, CDP)
    h. Government / regulator requirements which affect the company's path toward its goal
    i. Value chain engagement / impact (e.g., customers, suppliers, investors, finance)
    j. Performance measurement and disclosure
    k. Managing expectations / pressures (e.g., employee, investor, and consumer demands for climate action)
    l. Change management – to bring the organization along the climate journey
    m. Organizational governance model to deliver the climate strategy
    n. Technology innovations and opportunities to help attain the goal
    o. Target setting to enable meaningful progress toward the goal
    p. Other

11. **How does your organization normally overcome challenges related to skill / knowledge gaps?**
    a. Hire subject matter experts
    b. Find free tools / learning resources from credible sources (e.g., associations, NGOs, consultants, academia)
    c. Peer to Peer collaboration events (e.g., conferences, online forums, associations)
    d. Take short topic-specific courses through academia, professional associations, etc.
    e. Take a longer-term certificate granting program
    f. Internal education programs
    g. Other

12. **The pace of your company's actions to achieve its public commitment is best described as:**
    a. Not moving fast enough
    b. Moving at the right pace
    c. Moving slightly faster than expected
    d. Going much faster than expected

13. **If you were to accelerate action toward your climate commitment, which of the internally focused actions / support mechanisms would be most effective?**
    a. Budget to fully support the plan
    b. Senior Executive engagement and buy-in (e.g., fully bought in to the need for the climate goal and prioritization of climate action within the overall strategy)
    c. Performance incentives (e.g., the creation of performance-based systems to embed climate goals in the business and hold the workforce accountable for results)
    d. Leadership expertise (e.g., knowledge to analyze the strategic impact of climate on the business and options to achieve the commitment)
    e. Technical expertise (e.g., knowledge to create / implement decarbonization strategies)
    f. Dedicated Board committee on climate
    g. Workforce support and buy-in (e.g., an engaged workforce ready to implement and innovate on ways to achieve net zero goals)
    h. Human resources (e.g., additional, new / different skills) to implement plan

14. **Are there any internal actions, not listed above, that would be very effective in accelerating your carbon reduction pace?**

15. **If you were to accelerate action toward your climate commitment, which of the externally focused actions / support mechanisms would be most effective?**
    a. Rules and regulations that support the transition to a lower carbon organization (e.g., carbon pricing schemes, SEC filings requirements)
    b. Technology solutions
    c. Investor requirements, financing availability, green bonds, etc.
    d. Government subsidies / other incentive programs
    e. Customer pressure
    f. Supply chain partnership
    g. External voluntary climate standards (e.g., TCFD, CDP)
    h. Access to subject matter experts and/or planning and implementation resources, or tools

16. **Are there any external actions, not listed above, that would be very effective in accelerating your company's pace?**

17. **Which type of organizations would you look to for practical guidance to help your organization accelerate action to achieve the reductions outlined in your climate commitment?**
    a. Consultants
    b. Non-governmental organizations
    c. Peers in my industry
    d. Corporate customers / Supply chain partners
    e. Government
    f. Trade / Sector associations
    g. Investors / Finance community

18. **Are there specific companies you typically look to regarding benchmarking or gaining best practice insights with respect to climate action?**

19. **Rate the level of interest your organization would have in accessing external resources that could help accelerate the pace of action toward achieving the reductions outlined in your public commitment? (Scale of 1-5)**

20. **Which engagement & education program types would be most effective for your company, helping accelerate emission reductions efforts to achieve climate commitments?**
    a. Executive learning programs / events for the C-Suite team
    b. Executive learning programs / events for the full leadership team
    c. Programs / events that brought together individuals from your company and external peers from your industry or sector
    d. Programs / events that brought together individuals from your company and participants from a variety of industries and sectors
    e. Individualized coaching
    f. Other

21. **Please select the option that best represents your company's sector**
    a. Agri-business
    b. Chemical
    c. Consumer packaged goods
    d. Energy – Oil & Gas
    e. Energy – Power
    f. Finance (e.g., Banking, Investment, Insurance)
    g. Food and Beverage
    h. Government
    i. Manufacturing
    j. Mining / Metals
    k. Oil & Gas
    l. Pharmaceuticals & Healthcare
    m. Real-estate / Infrastructure
    n. Retail
    o. Technology, media, telecommunications
    p. Transport
    q. Other

22. **Select which best characterizes your level in the organization**
    a. C-Suite
    b. Just below C-Suite (e.g., C-1, C-2)
    c. Function Leader
    d. Function Manager
    e. Front Line Management
    f. Other

23. **Which group in the company has been made accountable for leading delivery against your net zero pledge?**
    a. Environmental, Health & Safety
    b. Finance
    c. Government Affairs
    d. Investor Relations
    e. Legal
    f. Operations (core business line)
    g. Public Relations
    h. Research and Development
    i. Sustainability

24. **At what level does this accountable person sit?**
    a. C-Suite
    b. Just below C-Suite (e.g., C-1, C-2)
    c. Function Leader
    d. Function Manager
    e. Front Line Management
    f. Other

25. **Which group(s) has been made responsible for day-to-day delivery against the climate commitment?**
    a. Environmental, Health & Safety
    b. Finance
    c. Government Affairs
    d. Investor Relations
    e. Legal
    f. Operations (core business line)
    g. Public Relations
    h. Research and Development
    i. Sustainability
    j. Other

26. **Finally, please share any additional reflections / insights on how to support companies, like yours, accelerate toward achieving their climate commitment.**

About The SustainAbility Institute by ERM

The SustainAbility Institute is ERM's primary platform for thought leadership on sustainability. The purpose of the Institute is to define, accelerate, and scale sustainability performance by developing actionable insight for business. We provide an independent and authoritative voice to decode complexities. The institute identifies innovative solutions to global sustainability challenges built on ERM's experience, expertise, and commitment to transformational change.

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About Environmental Defense Fund

Environmental Defense Fund's mission is to preserve the natural systems on which all life depends. We believe companies, communities and the environment can thrive in unison, and we bring cutting-edge science, policy, and economic expertise to high-impact companies – including McDonalds, Walmart, and KKR – to transform business as usual in their products, operations and advocacy.

For more than 30 years, EDF+Business has supported the EDF mission by finding pragmatic, market-based solutions to environmental issues. Leveraging the power of the private sector, challenging business leaders to raise the bar on environmental leadership and innovation, and forging unexpected partnerships that catalyze action across companies and supply chains, our work drives EDF's goals for oceans, climate, health and ecosystems by leveraging the power of business to model the way for sustainability and smart policy.

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