CARLYLE

Taskforce on Climate-related Financial Disclosures Report 2021

TCFD ANALYSIS

Introduction

Our 2020 inaugural TCFD report was an important milestone for Carlyle, but we were clear that it was a step in our continuous process to address climate risks and opportunities – not a conclusion.

Our 2021 TCFD report highlights the next phase of our journey, and the work we have continued to build upon over the past year: from implementing a climate risk triage in our diligence of corporate private equity investments, to our innovations in environmental, social, and governance (ESG)-linked financings, to driving progress on carbon emissions, to our first portfolio-level analysis of emissions exposure and value-at-risk from near-term climate impacts.

As we stated last year, we believe that climate change is one of the most pressing issues of our time, creating unprecedented risks and opportunities for businesses across all industries. As a global investment firm we work together to create long-term value for our investors, companies, shareholders, people and communities.

In order to do that, we believe that better understanding and managing of the emerging risks and opportunities that arise from climate change is an important component of our work.

Climate change is complex, however, and it is challenging to analyze or predict the exact interrelated impacts it may have on an investment portfolio, although data and insights continue to evolve our understanding.

We are focused on improving our insights while developing strategies that we believe will make our investments more resilient to a wide array of potential outcomes. Importantly, transparency and disclosure remain critical components to articulating our learnings and challenges to stakeholders.

"We believe that climate resilience is a lens for mitigating risks, identifying efficiencies and capturing new growth opportunities in a changing world. By helping our portfolio companies increase their resilience towards climate transition, we ultimately build better businesses and deliver better results."

KEWSONG LEE
Chief Executive Officer

$930MN

Total invested in renewable energy development platforms through our Global Infrastructure team as of 3Q2021

284,521

MT CO_2e estimated avoided emissions from renewables investing in 2020

MILESTONE MARKERS

1st

Major private equity firm to make an operational carbon neutrality commitment in 2017

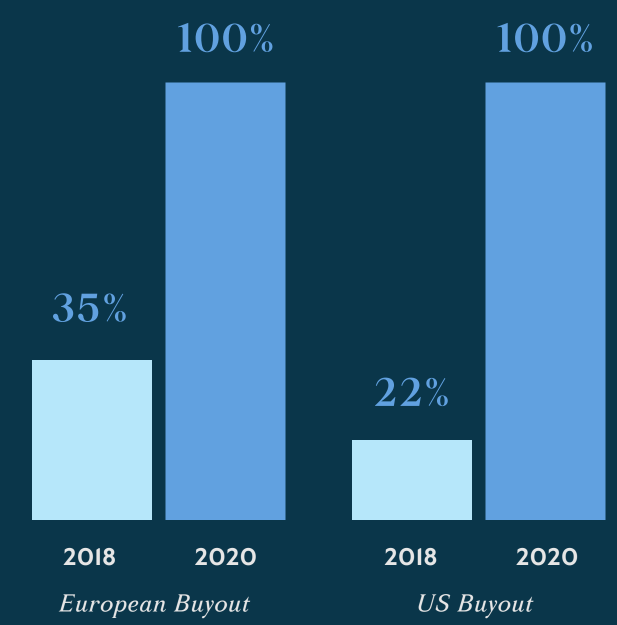
2nd

Year completed of bottom-up carbon footprinting across our majority-owned companies in the most recent vintages of our three largest private equity funds

4th

Year of carbon neutrality achieved across our 29 global offices and the activities of our more than 1,800 employees

CARBON FOOTPRINTING



These charts represent the percentage of majority-owned companies with carbon footprinting data available.

79.29 MT CO_2e

(per $MM revenue) estimated average carbon intensity for our majority-owned portfolio companies across the most recent vintages of US Buyout, Europe Buyout, and Asia Buyout.

We look forward to sharing more detailed breakouts by industry and geography as we gather a larger dataset and observe trends over time.

ESG-LINKED FINANCINGS FOCUSED ON CLIMATE

Nobian

€1.6BN

ESG-linked facility tied to goal of 50% carbon emissions reduction by 2030, carbon neutrality by 2040, and 50% use of energy from renewable sources by 2025

Flender

€1BN

Financing with margin ratchet linked to the installation of new gearboxes in wind turbines

European Subscription Facility

€2.3BN

ESG-linked credit facility for Carlyle's European private equity platform linked to carbon footprinting portfolio companies, as well as goals related to DEI and ESG-competent board training for Carlyle board directors

Action Plan

Carlyle's action plan on climate change follows the recommendations from "TCFD for Private Equity General Partners: A Technical Guide", which addresses each pillar of the TCFD in turn, and outlines a series of priority actions for private equity GPs in each specific pillar. We have highlighted the corresponding actions taken by Carlyle over the past year in support of these pillars.

OUR TCFD PILLARS:

01 Governance

02 Strategy

03 Risk Management

04 Metrics and Targets

01

Governance

OBJECTIVE NO. 1
Raise climate awareness throughout the organization and broader field

CARLYLE ACTIONS
Carlyle played an active role in raising climate awareness in the broader field. For example, we:

- Co-led the creation of the ESG Data Convergence Project with a group of global LPs and GPs representing more than $4T in AUM to catalyze convergence towards reporting on a standard set of ESG metrics for private companies, including greenhouse gas emissions and renewable energy use

- Contributed to the Ceres and Environmental Resources Management (ERM) report, "The Changing Climate for Private Equity" and Focus Capital on the Long-Term (FCLTGlobal)'s Net Zero Portfolios Working Group and research report

- Active member of the One Planet Private Equity Funds Initiative, a group of private investment firms focused on integrating climate change into our investments, including through our participation in the ongoing working group, leadership summits, and the 2021 deliverables

- Spoke at Ceres' Sustainable Investment Forum in September 2021, Boston Consulting Group's Climate Conference in May 2021, Ceres' annual conference in March 2021, as well as multiple industry conferences on climate change and ESG more broadly

- Directly engaged with Ceres, Initiative Climat International, the Science-Based Targets Initiative (SBTi), CDP and other leading organizations on best practices in climate change integration

- Promoted climate integration in higher education by speaking at the 2021 Convening of the Impact and Sustainable Finance Faculty Consortium, Columbia's 2020-21 Social Enterprise Conference, classes at Wharton, the Leadership Council on Legal Diversity ("LCLD") 1L Summer Program, and the London Business School Energy Summit 2021 alongside Saudi Aramco and BP on decarbonization and net-zero.

- Submitted comments to the SBTi draft guidance for private equity

CARLYLE ACTIONS

Carlyle also implemented several initiatives to raise climate awareness throughout our organization:

- Conducted systematic ESG training sessions with investment teams and provided an overview of potentially significant ESG issues, such as climate change
- Hosted a discussion on Climate Risk and Opportunity at Carlyle for our Young Professionals Employee Resources Group attended by more than 150 Carlyle professionals
- Published our inaugural impact report for investors in our Renewable and Sustainable Energy strategy, quantifying the climate impacts of the underlying investments
- Held targeted educational sessions, such as a workshop for our International Energy team to assess transition readiness of each portfolio company in our Carlyle international energy Funds

CARLYLE ACTIONS

Finally, we engaged with our portfolio companies and management teams on climate change issues through several different means. We:

- Held thematic webinars to help educate our portfolio companies on issues such as TCFD reporting and developing decarbonization pathways
- Engaged 1:1 with our portfolio companies to help them understand their carbon footprint and actionable ways to reduce it (please see Risk Management for more information), and also engaged 1:1 with portfolio companies that are working to set decarbonization targets and action plants
- Requested climate-related data points from our Corporate Private Equity and Natural Resources portfolio companies (see Risk Management section for more detail)

150+

Attendees of Carlyle's Young Professionals Employee Resources Group participated in a Climate Risk and Opportunity Seminar

26

Total number of carbon footprinting debrief calls

01 Governance

OBJECTIVE NO. 2
Define climate-dedicated governance

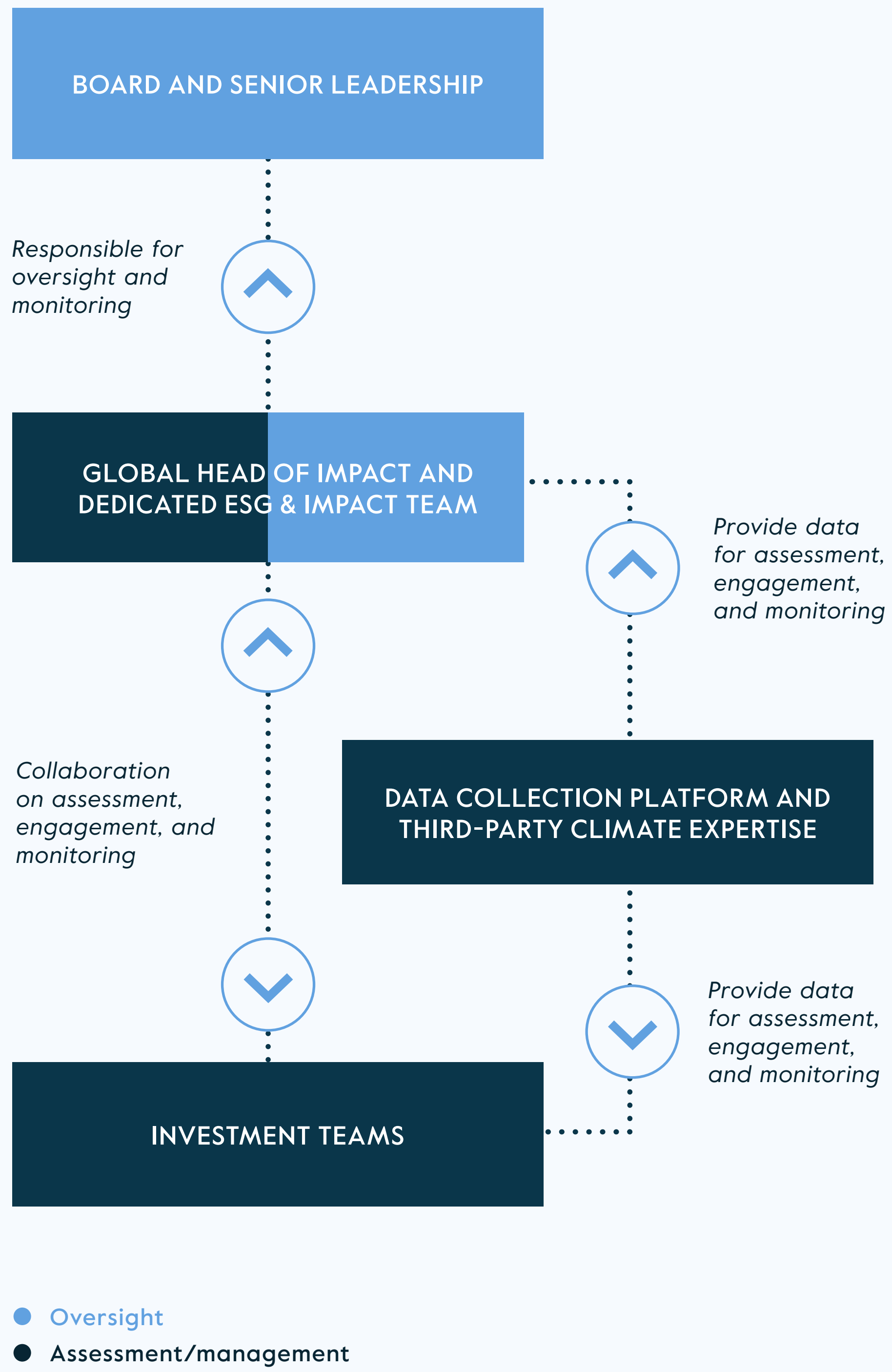
CARLYLE ACTIONS

- In 2020, Carlyle formally established oversight for our ESG activities, including our approach to climate risks and opportunities, through The Carlyle Group Board of Directors. The Board receives regular updates on the firm's ESG strategy and investment implications, which have included Carlyle's approach to climate risks and opportunities. One of the members of our Board of Directors has been appointed as the ESG and Impact lead, directly responsible for oversight of the firm's work in this area.

- Carlyle's Global Head of Impact is directly responsible for Carlyle's climate strategy, and reports into the firm's Chief Operating Officer and Board of Directors.

- Please see the chart directly to the right, which details our climate governance.

ORGANIZATIONAL GOVERNANCE



02 Strategy

OBJECTIVE NO. 1
Develop a simplified implementation plan

CARLYLE ACTIONS
Our current climate strategy includes the following steps:

- Establish appropriate governance, oversight, and resourcing for climate change
- Identify how climate risks and opportunities can impact portfolio holdings, and establish strategy-specific guidelines for assessments in due diligence
- Depending on the materiality of climate risks and/or opportunities, initiate deeper diligence – integrate third-party expertise where necessary
- Track climate-change related data points for Corporate Private Equity and Natural Resources investments annually over our hold period
- Partner with select portfolio companies on tailored climate change value-creation plans
- Build out capabilities to monitor the climate exposures of portfolio holdings with more detail, and develop appropriate climate change related goals for the firm
- Report on our activities and progress through an annual TCFD report

CARLYLE ACTIONS

The Carlyle strategy for managing climate risk and opportunity is complemented by several robust climate-related activities across the firm. Carlyle:

- Invested over $900M in renewable energy as part of our Global Infrastructure portfolio
- Achieved carbon neutrality as a firm for the 4th year (please see page 17 for additional information)
- Became one of the first major PE firms to publish TCFD report in 2020
- Initiated numerous portfolio-level initiatives, including decarbonization pathway development with multiple portfolio companies and the launch of our "Energy + Carbon Playbook" for portfolio companies in October 2021, a step-by-step resource for profitably decarbonizing
- Developed a transition readiness assessment for all portfolio companies in Carlyle International Energy Partners platform with targeted recommendation for each portfolio company. Work was carried out in partnership with Baringa Partners' energy and ESG team and informed by the Bank of England's climate stress testing methodology. We had debrief calls with each company with the directive that each company should report progress towards the recommendations at a 2022 Board meeting

$930MN

Invested in renewable energy

DEFINITIONS

In assessing the potential risks from climate change, we look to the definitions established by the TCFD, below. Given the average hold period of our typical investment, we focus most on potential acute physical risks, and policy & legal, technology, market, and reputation transition risks. The broader set of risks are important components of a longer-term strategy.

Physical risks resulting from climate change

Acute risks: event-driven exposures, including the increased severity of extreme weather events (cyclones, hurricanes, floods, etc.); and
Chronic risks: longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause sea-level rise or chronic heat waves, for example.

Transition risks resulting from the transition to a lower-carbon economy

Policy and legal risks: the evolution of regulations and potential litigation or legal risk;
Technology risks: technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system;
Market risks: the effects of climate change on supply and demand; and
Reputation risks: changing customer or community perceptions related to climate considerations.

Note on scope

This document covers controlled direct equity and credit investments made by The Carlyle Group. Due to our different business model, this policy does not apply to related entities AlpInvest or NGP. More information on AlpInvest's own alignment with TCFD can be found at the following link.

02

Strategy

OBJECTIVE NO. 2
Conduct materiality analysis on current portfolio holdings to identify climate risk exposure

CARLYLE ACTIONS

- In 2021, Carlyle conducted an analysis of the carbon emissions across the majority of our direct private equity investments to identify the areas of highest potential value-at-risk from near-term energy transition risks. These findings were presented to senior management at Carlyle and are being used to inform broader strategic work on climate change.

03

Risk Management

OBJECTIVE NO. 1
Define key climate performance indicators for each portfolio holding

CARLYLE ACTIONS

- We track certain ESG key performance indicators (KPIs) that are relevant across diverse geographies and assets for our Corporate Private Equity and Natural Resources investments. These KPIs include several climate-related questions, such as if a company purchases renewable energy and/or has a target for purchasing renewable energy, if a company monitors energy usage and/or greenhouse gas emissions and reports on that, and if a company has set energy efficiency or greenhouse gas emissions reduction targets.

- For some of our largest strategies, we also work with portfolio companies on collecting more tailored climate-related data, where material.

- Additionally, for the investments done by our Renewable and Sustainable Energy team, we perform a qualitative and quantitative analysis of the climate impact of each investment as part of our due diligence process, which is included in our Investment Committee memos. As an example, we calculated the total carbon emissions abatement capacity potential of a pipeline of solar projects in various stages of development. This quantitative approach helps us refine our investment decisions and better understand the environmental implications of our renewable and sustainable energy investments. These calculations are tracked and aggregated annually at the portfolio company and strategy levels.

CARLYLE ACTIONS
Portfolio carbon footprinting:

- Importantly, we recently completed our second year of work to carbon footprint Scope 1 and Scope 2 carbon dioxide equivalent (CO_2e) emissions for majority-owned portfolio companies across the most recent vintages of our three primary corporate private equity strategies: US Buyout, Europe Buyout, and Asia Buyout. The work was accomplished through a partnership with the Environmental Defense Fund Climate Corps and our dedicated ESG & Impact team.

- Our portfolio carbon footprinting methodology is consistent with the Greenhouse Gas Protocol and Scope 2 Guidance developed by the World Resources Institute. It includes the direct emissions from owned or controlled sources as well as indirect emissions associated with purchased energy for the 2020 reporting year, expressed in MT CO_2e. We did not gather data on Scope 3 emissions this year, though some of our portfolio companies actively track, measure, and work to reduce these indirect emissions occurring both upstream and downstream within their supply chains.

- We carbon footprinted the majority of companies across the most recent vintages of the three funds. There were a small number of instances where companies were unable to access the data required to complete the carbon footprint exercise. In these cases, we used estimations and assumptions to calculate a carbon footprint, for example by using square footage, location and activity data.

- There were also a very small number of cases where we were unable to complete the carbon footprint exercise due to circumstances such as exits from the portfolio.

- For most companies, we assisted in completing and calculating the carbon footprint using data provided to us. For businesses that already undertake a carbon footprint exercise annually, we were able to review the data for completeness and accuracy.

We believe this carbon footprinting exercise can help companies better understand their climate impact, exposure and resilience, as well as better prepare them for potential climate-related policy changes, to help them comply with GHG emissions reductions targets and reporting requirements, and better position themselves for growth in a business and consumer context that is increasingly focused on climate change.

- Through this exercise, we observed that there are increasing market pressures for consumer-facing companies to disclose and reduce carbon emissions. Investors, employees, and customers are interested in the position of the companies they invest in and buy from, from a carbon perspective. By publishing carbon data, companies may be able to improve transparency, bolster their credibility and reputation among stakeholders, and improve profitability through cost savings and operational efficiency measures. Strategic carbon management can potentially be leveraged as a strength and value proposition that brings a competitive advantage to both mitigate risks and create opportunities.

03

Risk Management

OBJECTIVE NO. 2
Fully integrate climate considerations within the investment process

CARLYLE ACTIONS
Carlyle Global Private Equity (GPE) Process:

- Carlyle developed a climate risk materiality analysis, which we began integrating into diligences this year
- We use a risk-based approach based on investment type, sector, location/geography, exposure to carbon-related regulations, intended hold duration, and likelihood of carbon significantly impacting the exit process
- Where a potential investment triggers two or more of these categories, we recommend additional climate change risk and opportunity review

CARLYLE ACTIONS
Carlyle Credit Process:

- Our Global Credit platform rolled out a proprietary ESG Materiality Analysis tool at the beginning of 2021 which is now used to evaluate most* investments prior to Investment Committee or Credit Committee investment decisions are made. The tool focuses on climate change in three ways. First, it draws on SASB data to focus on the most material climate change-related risks for a given sector and industry, second, it suggests some targeted engagement questions to use in any conversations with management on the most material ESG risks, including climate change, where relevant, and third, it incorporates a data set that highlights the potential physical risks of climate change based on the geography of the borrower's operations and/or supply chain. A summary of the ESG Materiality Analysis is included in the investment committee memo for relevant strategies. In certain instances, climate change-related risks have been a factor in our decision to decline a potential investment. We recently began incorporating an ESG Risk Rating into the ESG Materiality Analysis as well.

**This tool is not currently utilized by our Aviation Finance team as they invest in a single sector. We are happy to separately share our approach to ESG/climate risks and opportunities for our Aviation Finance team.*

04

Metrics and Targets

OBJECTIVE NO. 1
Support holdings with tools and recommendations to address climate risk

CARLYLE ACTIONS
We have worked to significantly expand the support we are able to provide to portfolio companies as they work to address climate change. Some examples of our work done in 2021 include:

- Calculated and/or reviewed the carbon footprint for 40+ of our portfolio companies

- Benchmarked carbon footprint performance and outlined steps to accelerate progress on carbon reduction for 33 of our portfolio companies, and ran dedicated engagement sessions on these topics with 26 of these companies

- Developed and launched the Integrated Energy and Carbon Management Playbook which provides detailed guidance on how to develop a decarbonization program. This playbook was launched in October 2021 via a webinar with 60 attendees including ESG and energy management professionals from portfolio companies

- Have regular check-ins with our higher carbon intensity portfolio companies to support them in setting climate goals, understanding progress and helping remove obstacles. We have built a database of advisors and consultants to assist companies in setting climate goals and have pre-vetted a select bench of skilled climate advisors

- Hosted informational events for portfolio companies, such as our 2021 Sustainability Workshop, which included sessions on developing resilient climate strategies and leading practices for energy management. The workshop welcomed over 60 portfolio company attendees

60+

Attendees participated in the 2021 Integrated Energy and Carbon Management Playbook webinar

04

Metrics and Targets

OBJECTIVE NO. 2
Conduct yearly reviews of portfolio holdings to assess progress towards climate objectives

CARLYLE ACTIONS
Our portfolio monitoring approach is still in progress as we work to identify the most useful information to help inform our understanding of the composition of the portfolio, target our portfolio engagements, and track progress over time. A few important components of this development include:

- As mentioned previously, this past year we conducted an analysis of the carbon emissions across the majority of our direct private equity investment portfolio and to identify the areas of highest potential value-at-risk from near term energy transition risks. These findings were presented to senior management at Carlyle and are being used to inform broader strategic work on climate change.

- We also track a series of data points for all of our Corporate Private Equity and Natural Resources investments which focus the maturity of climate change-related management practices. We use this data, in part, to understand the progress of investments towards climate objectives.

Carbon Emissions

In 2018, we became the first major private equity firm to set and achieve a goal of carbon neutral operations, offsetting our emissions from 2017. 2020 marks the fourth consecutive year we have been carbon neutral across our 29 global offices and more than 1,800 employees.

To achieve this objective, we measure, reduce and then offset our firmwide carbon emissions.

Using the World Resources Institute Greenhouse Gas (GHG) Protocol, we have focused on material sources of emissions for our firm over which we have control, including: office utilities, offsite data centers, and commercial and private air travel. From there, we made significant efforts to reduce our overall energy consumption over the past year, a key contributor to our footprint. These efforts are detailed above. While our Scope 3 emissions from our investment activity are material, we are working to more accurately measure those emissions, and to support our portfolio companies in any decarbonization activities they may undertake.

In 2020 we emitted 6,552 MT CO2e equivalent across those categories, detailed in the table on the right.

In 2020, we offset our emissions by purchasing carbon offsets through Varo, a Carlyle portfolio company, and the Carbon Fund.

In addition to the reduction efforts we describe above, COVID-19 has demonstrated that a meaningful amount of business may be conducted virtually, which has important environmental impacts – we expect to continue to find ways to reduce energy consumption through increased use of remote working and meeting tools.

6,552

MT CO2e total emitted across the three main categories in 2020

4,999

MT CO2e in Scope 2 (Office Utilities & Data Centers)

1,553

MT CO2e in Scope 3 (Business Travel)

Conclusion

Climate change has critical implications for us as a global investment firm, creating both risks as well as significant investment opportunities.

We believe that companies that can navigate these emerging challenges – from physical risks to policy shifts and technological disruptions – and seize the mounting opportunities of the energy transition, will have the climate resilience to thrive in a changing world.

Our first TCFD report in 2020 reflected our commitment to enhance our governance, strategy, risk mitigation, and metrics and targets on climate change over time. This second report builds on that work, and describes how we have evolved our thinking, tools, and capabilities as we help our portfolio companies navigate the complex risks and opportunities of climate change.

We learn a tremendous amount from our stakeholders and peers in this important work, and look forward to incorporating new insights and approaches as we continually improve our thinking. Thank you to all of the external organizations mentioned in this report for being a part of that process. Climate change takes tremendous collaboration to address, and we are grateful to all of our partners who have shared their time and expertise to drive our practice.

CARLYLE