

# ROAD TO ZERO EMISSIONS

100 COMPANIES RANKED ON NET ZERO PROGRESS  
2023



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## **About *As You Sow***

*As You Sow* is a nonprofit organization dedicated to increasing environmental and social corporate responsibility while increasing company value. Founded in 1992, *As You Sow* envisions a safe, just, and sustainable world in which environmental health and human rights are central to corporate decision making. Its Energy, Environmental Health, Waste, and Human Rights programs create positive, industry-wide change through corporate dialogue, shareholder advocacy, coalition building, and innovative legal strategies. For more information, visit [www.asyousow.org](http://www.asyousow.org).

## **Note to the Reader**

This data on which this report was based were collected from publicly available documents or provided directly by companies but may not be exhaustive. Please contact individual companies with questions regarding the corporate data presented in this report. If you are a company representative and believe there has been an error in the data collected and ranked, or if you would like to submit updated information, please contact [EnergyandClimate@asyousow.org](mailto:EnergyandClimate@asyousow.org). Updates to online scores will be made periodically, and all additional data and information will be reviewed at that time.

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# EXECUTIVE SUMMARY

The scorecard presents an assessment of the progress made by 100 of the largest U.S. corporations in reducing greenhouse gas (GHG) emissions to align with the Paris Agreement to limit global temperature rise to 1.5°C.<sup>1</sup> These corporations collectively represent a market capitalization of \$21 trillion across all 11 sectors of the economy. This scorecard is the second iteration, building upon the 2022 analysis of 55 U.S. companies, allowing for year-over-year comparisons and broader company coverage.

Amidst accelerating climate change, it is crucial for companies and shareholders to assess, mitigate, and reduce climate risks, spanning climate-related physical and transition risks as well as broader systemic climate risks to the global economy. Despite growing awareness, these risks are often neglected by investors and not disclosed by companies, creating difficulty to price these factors into the market. The SEC's proposed Climate Disclosure Rule, California's Climate Corporate Data Accountability Act, and regulatory changes in the EU highlight the need for emissions disclosures and climate-related accountability. While many companies have established net zero by 2050 goals and interim reduction targets, a gap persists between commitments and actual year-over-year performance on reducing emissions. Urgent and ambitious actions are required to align with 1.5°C net zero targets and avert catastrophic financial impacts associated with climate risks.

This report scores companies on its actions across three pillars for an overall net zero grade: (1) climate-related disclosures, (2) GHG reduction targets, and (3) GHG emissions reduction performance. Given the importance of emissions reductions, the overall net zero grade is weighted most heavily to success in achieving year-over-year, 1.5°C-aligned, GHG reductions.

Corporate net zero progress is growing; 65% (36/55) of companies saw an improvement in its overall scores from last year's assessment. However, companies still lag on critical indicators. While more companies are disclosing value chain (Scope 3) emissions (56/100 companies in 2023), nearly half of the companies assessed do not report all relevant value chain emissions — creating material disclosure gaps for investors assessing climate risk. Many companies are setting net zero or carbon neutral goals by 2050 or sooner; however, only 29% of companies included all relevant Scope 3 value chain emissions in net zero goals. Demonstrating emissions reductions aligned with limiting global warming to 1.5°C remains a critical gap for companies. In 2023, a majority of companies received an “F” for Pillar 3: GHG Reductions; 45% of companies failed due to non-disclosure of all relevant emissions data. Only 7% of companies earned an “A” under Pillar 3, which remains a key area for improvement.

A summary of key findings of the net zero scorecard is set forth below. Annex A provides the full list of grades by pillar. Annex B provides the list of indicators met or not met, and Annex C provides the detailed scoring methodology.

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1. “What Is the Paris Agreement?” United Nations Climate Change, accessed September 14, 2023, <https://unfccc.int/process-and-meetings/the-paris-agreement>.

# KEY FINDINGS IN 2023

## Overview

This scorecard assesses 100 companies across 11 sectors of the economy — representing the largest U.S. companies by market capitalization — based on three crucial pillars.

**Pillar 1: GHG Disclosures** reflects the importance of transparency in understanding a company's climate impacts. The scorecard assesses whether companies disclose Scope 1, 2, and 3 GHG emissions and carbon offset metrics. **Pillar 2: GHG Targets** emphasizes the significance of ambitious and measurable goals. It assesses corporate goals to reduce GHG emissions in alignment with 1.5°C and achieve net zero emissions by 2050 or sooner across the full value chain of emissions. **Pillar 3: GHG Reductions** holds the highest weight of the three pillars. It assesses actual performance in meeting 1.5°C-aligned, net zero by 2050 targets by measuring year-over-year absolute emissions and intensity reductions.

The evaluation process relies entirely on publicly available information such as published reports, press statements, and website materials. Annex C provides the complete scoring methodology.

## Scorecard Highlights

**Four companies were awarded an overall “A” grade: Apple, Nike, Oracle, and Trane Technologies.** Alphabet and Colgate-Palmolive received overall “A-” grades. Prologis received an overall grade of “B+”. Microsoft, Weyerhaeuser, and Visa received an overall grade of “B.”<sup>2</sup> Bunge, Equinix, Ford Motor, and PepsiCo received overall “B-” grades. The rest of the companies assessed received “C” (23/100 companies), “D” (40/100 companies), or “F” (23/100 companies) grades.



**The number of companies disclosing all relevant value chain (Scope 3) GHG emissions continues to grow.** In 2023, 73% of scored companies received either an “A” or “B” grade for Pillar 1: GHG Disclosures. Almost every company assessed reported operational (Scope 1 and 2) emissions (98/100), 56% of companies publicly disclosed all relevant value chain (Scope 3) emissions. This is an improvement over 2022's scores in which only 36% of companies (20/55) disclosed all relevant Scope 3 emissions.

2. Microsoft declined from an “A” to a “B” grade this year due to increasing GHG emissions from 2021 to 2022, mainly stemming from an increase in Scope 3 emissions, which negatively impacted their Pillar 3: GHG Reductions score as the emissions reduction performance was not aligned with 1.5°C. “Achieving More: 2022 Impact Summary,” Microsoft, accessed September 14, 2023, <https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE5b9S0>.

**Disclosures of carbon offsets purchased during the reporting period are improving.** During 2023, 68% of companies met the requirements of this indicator, an improvement from last year where only 20% of companies (11/55) met this indicator. Of the companies that met this indicator in 2023, 41 companies stated it did not purchase any offsets over the reporting period. A quarter of companies assessed disclosed the number of carbon offsets purchased and provided a description of the carbon offsets projects used and the verification status of these offsets.

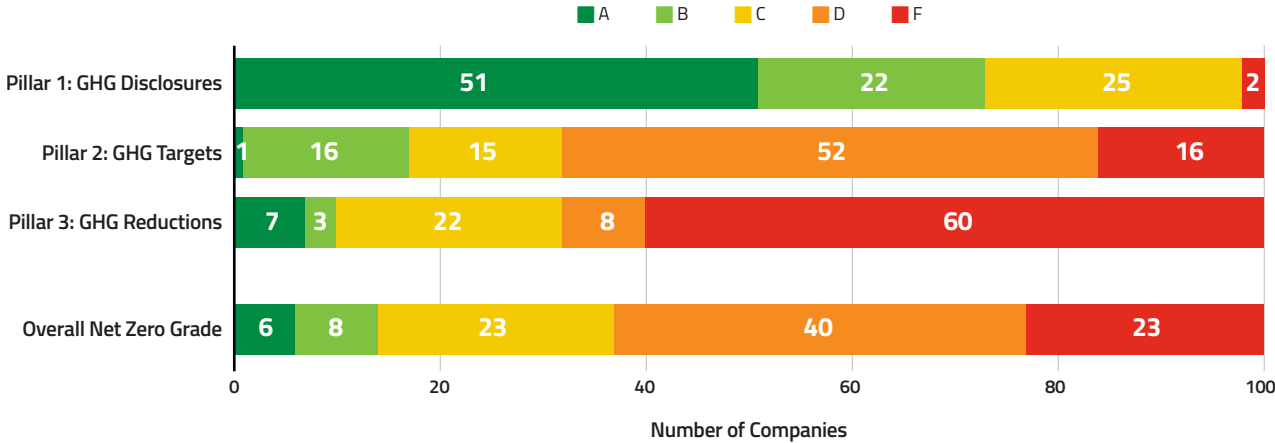
**T-Mobile is the only company to receive an “A” grade for Pillar 2: GHG Targets,** and 16% of companies (16/100) companies received a “B” grade. **T-Mobile** received an “A” grade for Pillar 2 by having set a 2050 or sooner net zero goal covering all Scopes with limited use of offsets and interim 1.5°C-aligned GHG reduction targets for Scopes 1, 2, and 3. Aligning GHG reduction targets with 1.5°C — which requires an equivalent of 4.2% or more absolute emissions reduction per year in the near term — is critical to avoiding the worst impacts of climate change. Currently, 37% of companies (37/100) have both Scope 1 and 2 GHG emissions reduction goals that are aligned with 1.5°C, and 6% of companies (6/100) have 1.5°C-aligned goals that also include its relevant Scope 3 emissions.

**A growing number of companies are now setting net zero or carbon neutral goals by 2050.** Of the companies assessed in this report, 78% (78/100) committed to a net zero or carbon neutral goal by 2050 or sooner, up from 70% of companies (39/55) last year. Given this growth, there is a corresponding need for increased clarity and accountability from companies on what emissions these goals cover. In addition to defining terminology and methodology, corporations can clarify net zero goals by providing a transition plan describing what emissions reductions are planned; stipulating when they will occur; and, if carbon credits are likely to be used, providing the percentage of credits to be used. Companies that plan to use offsets to achieve net zero or carbon neutral goals should limit use to less than 5 to 10% of residual emissions and procure high-quality offsets that lead to permanent carbon removals. Companies that do not rely on offsets to meet GHG reduction targets are encouraged to make this clear. Over 2023, only 5% of companies (5/100) have a net zero or carbon neutral goal that covers the full value chain of emissions (Scopes 1, 2, and 3) and projects using offsets for less than 10% of residual emissions.

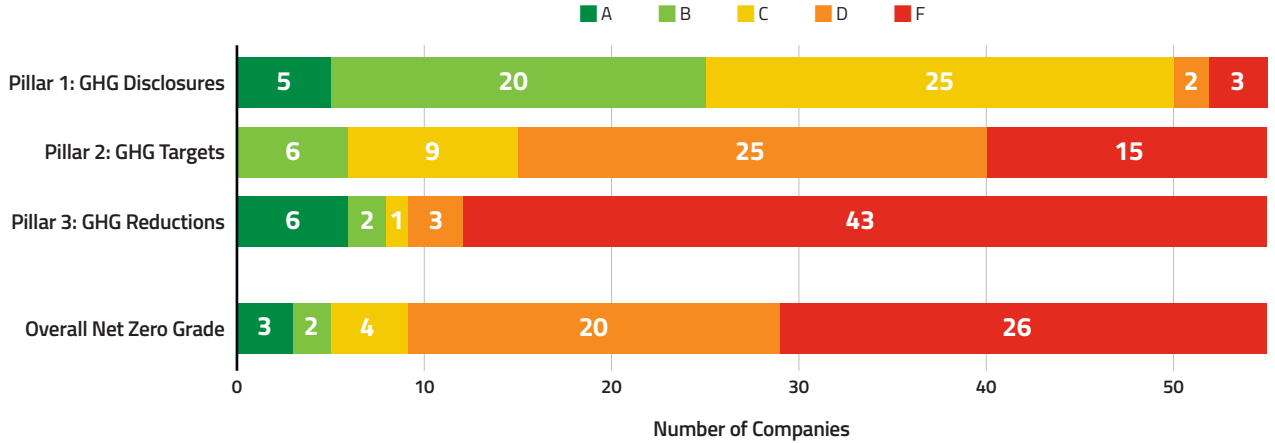
**Demonstrating GHG emissions reduction aligned with limiting global warming to 1.5°C remains a critical gap for companies.** Only 3% of companies are reducing Scopes 1, 2, and 3 absolute emissions by at least 4.2% averaged year-over-year — 4.2% is a pace that indicates reduction performance for these companies aligned with 1.5°C. Of the companies included in this report, 62% received an “F” for the GHG Reductions pillar while only 7% of companies earned an “A.” A majority of companies failed this pillar due to non-disclosure of all relevant emissions data, so this remains a key area for improvement. While strides have been made in GHG disclosures and target setting, significant challenges remain in effectively reducing emissions in alignment with the 1.5°C goal. The findings of this scorecard emphasize the urgency for companies to not only set bold, ambitious targets but also to implement rigorous measures to achieve tangible emissions reductions across value chains.

A summary of the Overall 2023 Net Zero grades is shown in Figure 3. Grades are based on the combined points earned in each of the three pillars: GHG Disclosures, GHG Targets, and GHG Reductions. Pillar 3, GHG Reductions, is weighted most heavily given the importance of reducing growing global climate impacts and ensuring company competitiveness in a transitioning economy. The maximum number of points available is 18, with four points available for GHG Disclosures, six points for GHG Targets, and eight points for GHG Reductions. A full list of company grades by pillar is provided in Annex A.

**FIGURE 1: 2023 Scorecard Grades (100 Companies)**



**FIGURE 2: 2022 Scorecard Grades (55 Companies)**





**FIGURE 3: Overall Net Zero Grades**

COMPANY NAME	TOTAL POINTS	OVERALL GRADE
Apple Inc	17	A
Oracle Corp	17	A
Trane Technologies PLC	17	A
Nike Inc	16	A
Alphabet Inc	15	A-
Colgate-Palmolive Co	15	A-
Prologis Inc	14	B+
Microsoft Corp	13	B
Visa Inc	13	B
Weyerhaeuser Co	13	B
Bunge Ltd	12	B-
Equinix Inc	12	B-
Ford Motor Co	12	B-
PepsiCo Inc	12	B-
AT&T Inc	11	C+
General Motors Co	11	C+
LyondellBasell Industries NV	11	C+
United Parcel Service Inc	11	C+
American Airlines Group Inc	10	C
Dow Inc	10	C
T-Mobile US Inc	10	C
Air Products & Chemicals Inc	9	C-
ConocoPhillips	9	C-
Devon Energy Corp	9	C-
Duke Energy Corp	9	C-
Ecolab Inc	9	C-
EQT Corporation	9	C-
Southern Co	9	C-
Verizon Communications Inc	9	C-
Vistra Corp	9	C-
NextEra Energy Inc	9	C-
Abbott Laboratories	8	C-
Meta Platforms Inc (Facebook)	8	C-
Pfizer Inc	8	C-
Sherwin-Williams Co	8	C-
SLB (Schlumberger)	8	C-
United Airlines Holdings Inc	8	C-
Ameren Corp	7	D+
Boeing Co	7	D+
Caterpillar Inc	7	D+
Cummins Inc	7	D+
Linde PLC	7	D+
Lowe's Companies Inc	7	D+
Occidental Petroleum Corp	7	D+
PayPal Holdings Inc	7	D+
Walmart Inc	7	D+
American Electric Power Co Inc	7	D+
Coca-Cola Co	6	D
Comcast Corp	6	D
Eli Lilly and Co	6	D

COMPANY NAME	TOTAL POINTS	OVERALL GRADE
Freeport-McMoRan Inc	6	D
Honeywell International Inc	6	D
Johnson & Johnson	6	D
Lockheed Martin Corp	6	D
NRG Energy Inc	6	D
Procter & Gamble Co	6	D
The Walt Disney Co	6	D
AbbVie Inc	5	D
Bank of America Corp	5	D
Delta Air Lines Inc	5	D
Exelon Corp	5	D
FirstEnergy Corp	5	D
Merck & Co Inc	5	D
RTX Corp	5	D
UnitedHealth Group Inc	5	D
Broadcom Inc	4	D-
Dominion Energy Inc	4	D-
International Paper Co	4	D-
McDonald's Corp	4	D-
NVIDIA Corp	4	D-
PACCAR Inc	4	D-
PPL Corp	4	D-
The AES Corp	4	D-
The Home Depot Inc	4	D-
WEC Energy Group Inc	4	D-
Wells Fargo & Co	4	D-
Xcel Energy Inc	4	D-
Amazon.com Inc	3	F
Charter Communications Inc	3	F
Chevron Corp	3	F
Crown Castle Inc	3	F
EOG Resources Inc	3	F
Exxon Mobil Corp	3	F
General Electric Co	3	F
JPMorgan Chase & Co	3	F
Kinder Morgan Inc	3	F
Martin Marietta Materials Inc	3	F
Sempra Energy	3	F
Southern Copper Corp	3	F
Union Pacific Corp	3	F
American Tower Corp	2	F
Block Inc (Square Inc)	2	F
Costco Wholesale Corp	2	F
Marathon Petroleum Corp	2	F
PBF Energy Inc	2	F
Phillips 66	2	F
Public Storage	2	F
Tesla Inc	2	F
Valero Energy Corp	2	F
Berkshire Hathaway Inc	0	F

# PROGRESS AND SETBACKS

The 2023 scorecard update expands the ranking coverage from 55 companies to 100 companies. Year-over-year company improvements and setbacks for companies assessed in both 2022 and 2023 are laid out below. Figure 4 demonstrates the largest shifts in overall grade for notable companies across Pillars 1, 2, and 3.

**FIGURE 4:**

	Overall	Pillar 1: GHG Disclosures	Pillar 2: GHG Targets	Pillar 3: GHG Reductions
Company Name	Overall Progress	Pillar 1 Progress	Pillar 2 Progress	Pillar 3 Progress
Visa Inc	Improvement: F to B	Improvement: D to A	Improvement: F to B	Improvement: F to C
Equinix Inc	Improvement: D to B-	Improvement: B to A	No change	Improvement: F to B
Apple Inc	Improvement: B- to A	Improvement: B to A	No change	Improvement: C to A
Microsoft Corp	Decline: A to B	No change	No change	Decline: A to C
PepsiCo Inc	Decline: A to B-	No change	No change	Decline: A to C
Ecolab Inc	Decline: A- to C-	Improvement: B to A	No change	Decline: A to F
Abbott Laboratories	Decline: C+ to D-	Improvement: B to A	No change	Decline: A to F

Of the companies included in the 2022 report, 65% (36/55) saw an improvement in its overall grades since the prior assessment. Visa saw the largest improvement, moving from an overall grade of “F” to “B.” Visa’s progress came from improvements in its Pillar 2 score; it set 1.5°C-aligned interim targets covering Scopes 1, 2, and 3 over fiscal year 2021. **Apple** saw improvements year-over-year, moving from an overall grade of “B-” to “A.” Apple’s averaged year-over-year Scope 3 emissions reductions are aligned with 1.5°C this year, contributing to the bump in score. This is significant as a majority of Apple’s emissions stem from Scope 3. Apple stated in its 2023 sustainability report that the Scope 3 reduction is in part due to transitioning suppliers to renewable energy and using low-carbon materials in its products.<sup>3</sup> **Equinix** also saw a shift in improvement over 2023, moving from a “D” to a “B-.” Unlike last year, Equinix’s Scope 1 and 2 absolute emissions and Scopes 1, 2, and 3 emissions intensity saw averaged year-over-year reductions aligned with 1.5°C.

Year-over-year, 12% of companies (7/55) assessed saw a decline in its overall grade. **Abbott Laboratories** and **Ecolab** saw the largest declines. Abbott Laboratories declined from a “C+” to a “D-.” Ecolab declined from an “A-” to a “C-.” Each company performed poorly under Pillar 3, with both declining from an “A” to an “F.” The companies’ Scope 3 averaged year-over-year emissions reductions are not aligned with 1.5°C. Both companies’ Scope 3 absolute emissions saw an increase year-over-year — this is significant as both companies’ total emissions are largely allocated to Scope 3.

Notably, **Microsoft** and **PepsiCo**, the only two companies to earn an overall score of “A” in 2022, slipped to a “B” and “B-,” respectively. The companies’ decline also stemmed from emissions reduction performance, with neither company demonstrating absolute Scope 3 emissions reductions. Microsoft attributed its Scope 3 emissions increase to business growth in purchased goods and services.<sup>4</sup> Pepsico stated in its 2023 sustainability report that “2022 Scope 3 results were impacted by increased packaging use, transportation, third party manufacturing and other purchased goods due to business growth.”<sup>5</sup> Failing to take sufficient action to reduce the most material value chain emissions demonstrates a lack of accountability to each company’s net zero goals.

Overall, the year-over-year comparison underscores the necessity for companies to demonstrate plans to achieve year-over-year emissions reductions across the full value chain. Although companies are steadily improving on GHG disclosures and setting targets aligned with a 1.5°C pathway, many still lag when it comes to demonstrating reduction performance for the near term.

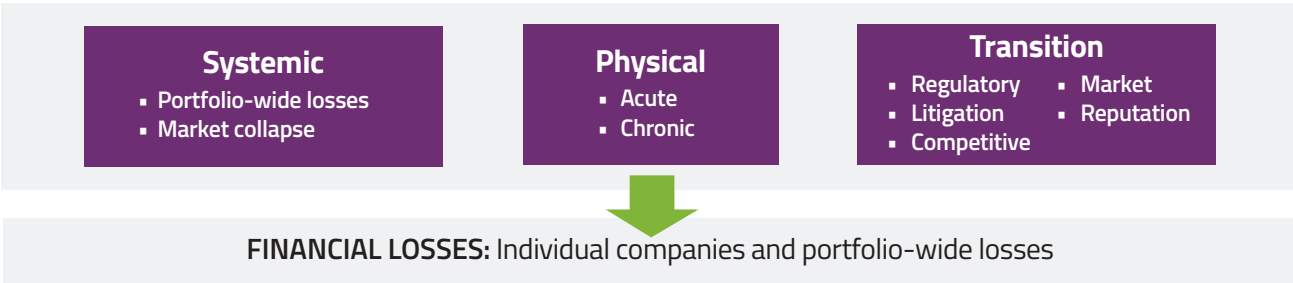
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 5. PepsiCo, *2022 ESG Summary: A High-Level Overview of Our Digital 2022 ESG Summary*, accessed September 14, 2023, [https://www.pepsico.com/docs/default-source/sustainability-and-esg-topics/2022-esg-summary/overview-of-pepsico's-2022-esg-summary.pdf?sfvrsn=4034ab02\\_3](https://www.pepsico.com/docs/default-source/sustainability-and-esg-topics/2022-esg-summary/overview-of-pepsico's-2022-esg-summary.pdf?sfvrsn=4034ab02_3).

# INTRODUCTION

## CLIMATE RISKS TO SHAREHOLDERS AND COMPANIES

As the negative impact of climate change accelerates, companies and shareholders must be conscious of the different types of climate risks – **systemic**, **physical**, and **transition** – that can lead to financial losses. Physical risks encompass both acute events, such as extreme weather events like hurricanes or floods, and chronic events, such as rising temperatures and sea levels. Transition risks can involve various challenges, including regulatory changes, increased litigation, technological advances, shifts in market demand, and reputational concerns, as companies adapt to a low-carbon economy. Systemic risk is not often assessed in climate risk mitigation by companies, but it has the potential to significantly impact global markets, leading to portfolio-wide losses or, in extreme cases, market collapse of entire industries.

FIGURE 5: Climate-Related Risks



### Systemic Risk

Climate-related systemic risk can arise when direct physical or transition risks set off a chain of events affecting investments portfolio-wide and global market stability. Although market collapses triggered by systemic risk are infrequent, there are historical instances of such systemic failures within financial and economic systems. For example, the Great Depression began with the 1929 stock market crash and subsequently caused widespread unemployment and an economic downturn in the 1930s. Similarly, the Dot-Com Bubble of 2000 underscored global financial system vulnerabilities as speculative investment in internet stocks led to the collapse of numerous internet companies. More recently, the 2008 Global Financial Crisis exposed systemic weaknesses in the global financial system, precipitated by the housing market collapse, leading to extensive government bailouts of financial institutions. These historical examples emphasize the potential far-reaching impacts of systemic risks on markets and economies.

Financial markets are at risk of experiencing climate-related systemic shocks as there is growing evidence that climate risk is not fully incorporated into pricing.<sup>6</sup> Even BlackRock, a major financial institution, acknowledges that carbon emissions have the potential to be a key indicator to reprice across the broader market.<sup>7</sup> Credit rating agencies also grapple with the complexity of assessing how climate change might impact bond issuers, with a consensus emerging that the \$133 trillion global bond market may not adequately price in potential climate-related risks.<sup>8</sup> Governments’ ability to issue debt could be severely restricted as extreme weather events continue to increase over the next decade, potentially triggering instability in the broader financial system.

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There are increasing examples of financial losses associated with the failure to integrate climate risk into market prices. Recent research revealed that numerous U.S. residential properties, facing mounting flood risks, are currently overvalued by anywhere from \$121 to \$237 billion.<sup>9</sup> U.S. Treasury Secretary Janet Yellen addressed a “protection gap” between insurance and climate change in the U.S., citing that only 60% of the \$165 billion in climate disaster losses in 2020 were covered by insurance.<sup>10</sup> Understanding the ramifications of growing climate-related changes in property insurance for real estate markets and financial institutions reliant on insurers to manage risks is pivotal.

Attributing the impact of climate change on individual weather or climate disaster events, however, has historically been difficult to determine.<sup>11</sup> It is crucial to recognize climate attribution analysis is evolving with the development of statistical methods that can identify substantial links to climate change.<sup>12</sup> An analysis found that without climate change, the extreme record-breaking heatwaves in the U.S. and Europe over 2023 would have been “virtually impossible.”<sup>13</sup> The extreme heat costs the U.S. an estimated \$100 billion annually, underscoring the long-term cost implications associated with systemic climate risk.<sup>14</sup>

As of September 2023, the National Oceanic and Atmospheric Administration announced the U.S. set a record this year for the most weather or climate disaster events costing \$1 billion each, totaling \$57.6 billion.<sup>15</sup> The last record was set in 2020, totaling \$20 billion in climate-related losses. Scientists recently projected a staggering \$84 trillion in global economic losses by the end of the 21st century due to changes in the intensity of El Niño events that are driven by climate change.<sup>16</sup> These projected and actual losses paint a clear picture that the economic toll of these recurring, costly weather or climate disaster events have a significant impact on financial stability. Systemic climate risk is building momentum, and it is critical that companies integrate this climate risk management into the financial decision-making process. The International Monetary Fund warned of the tangible economic impact of climate change on global economies over 2023,<sup>17</sup> stating that the material effects that climate change could have on financial stability, economic growth, and social welfare are far-reaching – stressing the importance of transitioning to low-carbon economies and enhancing resilience against climate-related risks to global markets.

There is a tangible disconnect between climate change risk and financial markets, with one analysis exposing pension trustees who are inadequately addressing climate-related financial risks.<sup>18</sup> These pension trustees regularly utilize flawed climate science in their projection models, even suggesting that a 6°C global warming scenario would have a negligible impact on future GDP – a consensus scientists have discredited. Climate change poses a significant potential systemic risk to global markets within the lifespan of current pensioners. Factoring in systemic risks using peer-reviewed science is imperative to avoid portfolio-wide losses for

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16. Kasha Patel, “El Niño Is Getting Stronger. That Could Cost the Global Economy Trillions,” *The Washington Post*, May 18, 2023, <https://www.washingtonpost.com/weather/2023/05/18/el-nino-economic-impact-climate-change/>.

17. Andrea Shalal, “I’m Increasingly Worried about ‘Material’ Impact of Climate Change on Economies,” *Reuters*, July 25, 2023, <https://www.reuters.com/sustainability/imf-increasingly-worried-about-material-impact-climate-change-economies-2023-07-25/>.

18. Felicia Jackson, “Rolling the DICE: Are Pension Trustees Liable for Climate?” *Forbes*, July 27, 2023, <https://www.forbes.com/sites/feliciajackson/2023/07/27/rolling-the-dice-on-climate-are-pension-trustees-liable/?sh=23071d4c42af>.

pensioners. To address systemic climate risks effectively, shareholders and companies must consider these risks across entire shareholder portfolios, rather than solely on an individual company basis. Emissions reductions by all companies play a pivotal role in mitigating portfolio-wide risks, aligning with the concept of system stewardship for universal owners.<sup>19</sup>

## Physical Risks

Physical risks encompass both acute events, like extreme weather events, and chronic changes, such as rising temperatures and sea levels.<sup>20</sup> A climate-induced extreme weather event, such as an abnormally powerful hurricane in the south, might exert temporary or permanent damage to a company facility. Wildfire-related damage may make a facility temporarily unusable, or an increase in sea level might render a company facility permanently unusable.<sup>21</sup> It is important for companies to disclose climate mitigation plans, assessing how certain areas may be more susceptible to acute and chronic physical risks. **Exelon**, for example, discloses the acute and chronic physical risks of its utility plants as part of its climate adaptation planning, outlining how infrastructure will face different acute and chronic climate-related events depending on the region of the U.S.<sup>22</sup>

Many companies estimate the financial impact of physical climate risks on its businesses. **PepsiCo** discloses exposure to chronic physical risks resulting from changing temperature, projecting a financial impact of \$1 to \$1.2 billion between 2020 to 2029, noting that “financial impact estimates are larger for longer time frames.”<sup>23</sup> PepsiCo describes the magnitude of these impacts as “high” and the likelihood of them occurring as “virtually certain.”<sup>24</sup> **Vistra** discloses \$1 billion of financial exposure to acute physical risks, describing it as an “estimated range on the impact to Vistra’s enterprise value if a physical weather event were to cause reliability issues, limit ability to procure fuel supply, result in outages at our facilities, and/or require us to procure power at higher prices.” In fact, Vistra experienced an extreme weather event in Texas – Winter Storm Uri – in February of 2021, costing \$1.6 billion.<sup>25</sup> Vistra is now undertaking risk mitigation efforts to ensure an extreme weather event like Uri will not have as large a financial impact in the future.<sup>26</sup> **Mosaic**, a global fertilizer and agricultural company, also experienced firsthand the significant financial impact of physical climate risks. In 2021, major hurricanes in Florida and Louisiana damaged its facilities, disrupting production and distribution.<sup>27</sup> As a result, Mosaic incurred financial losses, encompassing not just lost profits but also significant expenditures on insurance to cover the damages incurred during the hurricanes.

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19. “System Stewardship Theory,” Shareholder Commons, accessed September 14, 2023, <https://theshareholdercommons.com/resources-page/>. We further note that, as more companies in the value chain measure and manage their full value chain GHG emissions, demand will grow for new products that reduce emissions throughout the value chain, decreasing systemic risk. See World Resources Institute and World Business Council for Sustainable Development, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard: Supplement to the GHG Protocol Corporate Accounting and Reporting Standard*, [https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard\\_041613\\_2.pdf](https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf), Chapter 2.
  20. “Climate Risks and Opportunities Defined,” Environmental Protection Agency, accessed September 14, 2023, <https://www.epa.gov/climateleadership/climate-risks-and-opportunities-defined#:~:text=There%20are%20two%20categories%20of,physical%20impacts%20of%20climate%20change>.
  21. “Climate Risks and Opportunities Defined,” Environmental Protection Agency, accessed September 14, 2023, <https://www.epa.gov/climateleadership/climate-risks-and-opportunities-defined#:~:text=There%20are%20two%20categories%20of,physical%20impacts%20of%20climate%20change>.
  22. Exelon Corporation, *Exelon Sustainability Report 2022: Powering a Cleaner and Brighter Future for Our Customers and Communities*, accessed September 14, 2023, <https://www.exeloncorp.com/content/dam/exelon/sustainability/interactive-csr/Documents/2022/csr-year-2022-pdf.pdf>.
  23. PepsiCo, Inc., *PepsiCo, Inc. CDP Climate Change Questionnaire 2022*, accessed September 14, 2023, <https://www.pepsico.com/docs/default-source/sustainability-and-esg-topics/2022-cdp-climate-response.pdf>.
  24. PepsiCo, Inc., *PepsiCo, Inc. CDP Climate Change Questionnaire 2022*, accessed September 14, 2023, <https://www.pepsico.com/docs/default-source/sustainability-and-esg-topics/2022-cdp-climate-response.pdf>.
  25. “Vistra Says Texas February Freeze Cost about \$1.6 Billion,” *Reuters*, April 26, 2021, [https://www.reuters.com/business/energy/vistra-says-texas-february-freeze-cost-about-16-billion-2021-04-26/#:~:text=April%2026%20\(Reuters\)%20%2D%20U.S.,%24900%20million%20to%20%241.3%20billion](https://www.reuters.com/business/energy/vistra-says-texas-february-freeze-cost-about-16-billion-2021-04-26/#:~:text=April%2026%20(Reuters)%20%2D%20U.S.,%24900%20million%20to%20%241.3%20billion).
  26. Vistra Corp., *Vistra Corp. – CDP Climate Change 2022*, accessed September 14, 2023, <https://vistra.app.box.com/s/4ajn7h7sth8tqqlxygtdcvwr9q0d7lw>.
  27. “Latest Weaker Storm Brings Rain, Flash Floods to Carolinas,” *Bloomberg*, published October 1, 2022, <https://www.bloomberg.com/news/articles/2022-10-01/ian-latest-weaker-storm-brings-rain-flash-floods-to-carolinas?sref=TtrRgti9>.

## Transition Risks

Transition risk arises for companies from the ongoing transition to a low-carbon economy. Such risks include policy and legal actions that result in increased costs for companies, such as taxes on emissions, regulatory compliance costs, and penalties resulting from litigation. The last few years have seen an acceleration in climate-related policy in the U.S. For instance, the U.S. government has committed to reducing emissions across federal operations to net zero by 2050<sup>28</sup> while increasing the sustainability of federal supply chains.<sup>29</sup> To implement its climate change goals, the U.S. has developed, among other climate-related policies, supply chain initiatives that include major contractor GHG emissions disclosures paired with science-based targets, a “buy clean” initiative for low-carbon materials, and a sustainable products policy. The U.S. Department of Defense is also elevating climate change as a national security priority and integrating climate considerations into policies, strategies, and partner engagements.<sup>30</sup>

The SEC’s proposed Climate Disclosure Rule<sup>31</sup> will apply to all companies publicly traded in the U.S. and will require the disclosure of emissions data and transition planning for most companies, helping shareholders, customers, and regulators differentiate between those companies leading and lagging on climate-related planning. The California Assembly recently passed legislation that would require public and private companies with annual revenue over \$1 billion (approximately 5,300 companies) to disclose Scope 1 and 2 emissions by 2026 and Scope 3 emissions by 2027.<sup>32</sup> Those companies already aligning with 1.5°C goals will be better positioned to comply with SEC disclosure requirements and California’s emissions rules than its lagging peers.

Companies are also increasingly subject to climate-related litigation: **Delta Airlines** is facing a lawsuit over its offset-reliant claims about “carbon neutrality.”<sup>33</sup> The fossil fuel industry is increasingly facing lawsuits from citizens, states, and municipalities harmed by the impacts of climate change.<sup>34</sup> Companies may face severe penalties depending on their outcomes. While few of these climate-related legal cases have been decided, the scope of the judgements could be massive: a lawsuit brought by Oregon’s largest county seeks \$50 billion in damages from **ExxonMobil** and **Chevron**, among other major oil and gas companies, for harms caused by climate-related extreme heat waves.<sup>35</sup>

Other transition risks include **competitive, market, and reputation risks**. Companies may face competitive risks when its technologies or products are outpaced by lower-carbon alternatives, potentially leading to missed climate-related opportunities. A historical example of a swift technological transformation is the transition from horse carriages to automobiles in the early 20th century, profoundly altering the transportation industry. Similarly impactful, there is an ongoing shift from fossil fuel energy and traditional gasoline cars to renewable energy sources and electric vehicles. Companies must not overlook this transition as the International Energy Agency (IEA) reports that electric vehicle sales have already tripled since 2020 and are expected to continue growing in 2023.<sup>36</sup>

Other market risks may emerge as demand for products shifts in response to greater consideration of climate impacts. **General Electric**, for example, stated in its 2018 annual review that “market factors such as increasing

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28. Harry Bowcott, Giacomo Gatto, Alastair Hamilton, and Erik Sullivan, “Decarbonizing Defense: Imperative and Opportunity,” McKinsey & Company, accessed September 14, 2023, <https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/decarbonizing-defense-imperative-and-opportunity>.

29. “Net-Zero Emissions Procurement by 2050,” Federal Sustainability Plan, accessed September 14, 2023, <https://www.sustainability.gov/federaalsustainabilityplan/procurement.html>.

30. “Tackling the Climate Crisis,” U.S. Department of Defense, accessed September 14, 2023, <https://www.defense.gov/Spotlights/Tackling-the-Climate-Crisis/>.

31. “Enhancement and Standardization of Climate-Related Disclosures for Investors,” U.S. Securities and Exchange Commission, accessed September 14, 2023, <https://www.sec.gov/rules/proposed/2022/33-11042.pdf>.

32. Sheryl Tian Tong Lee, “California Moves Toward Broad Emissions Rules for Big Business,” *Bloomberg*, September 12, 2023, <https://www.bloomberg.com/news/articles/2023-09-12/california-moves-toward-broad-emissions-rules-for-big-business>.

33. Ed Davey, “Delta Air Lines Hit with Lawsuit over Claims of Carbon Neutrality,” *Associated Press*, accessed September 14, 2023, <https://apnews.com/article/delta-airlines-lawsuit-carbon-credits-carbon-neutral-469f2671010ba7f40c934cc23d62149a>.

34. Dharna Noor, “‘Game Changing’: Spate of US Lawsuits Calls Big Oil to Account for Climate Crisis,” *The Guardian*, June 7, 2023, <https://www.theguardian.com/us-news/2023/jun/07/climate-crisis-big-oil-lawsuits-constitution>.

35. Clark Mindock, “US Climate Change Lawsuit Seeks \$50 Billion, Citing 2021 Heat Wave,” *Reuters*, June 22, 2023, <https://www.reuters.com/world/us/us-climate-change-lawsuit-seeks-50-billion-citing-2021-heat-wave-2023-06-22/>.

36. “Electric Vehicles,” IEA, published July 11, 2023, <https://www.iea.org/energy-system/transport/electric-vehicles>.

energy efficiency and renewable energy penetration continue to impact our view of long-term demand,” resulting in a \$22 billion impairment loss for the second half of 2018 related to its Power Generation and Grid Solutions reporting units.<sup>37</sup> Reputational risks are also rising as customers begin to expect that companies support a net zero economy. Companies are already seeing impacts from a warming climate; these are likely to intensify as climate impacts worsen and the transition to a low-carbon economy continues gaining speed.

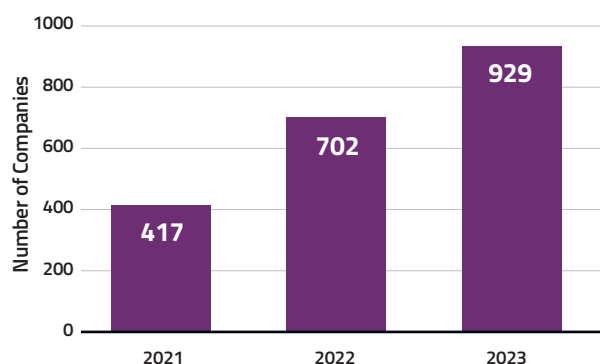
Setting Paris-aligned net zero goals mitigates climate-related physical and transition risks by limiting an individual company’s contribution to the emissions that cumulatively drive systemic climate risks. Some of the steps companies may take to decarbonize its operations and supply chains can make them more resilient to physical and transition climate risks. This is especially true for companies with vast emissions in their value chains (Scope 3 emissions). For example, **ExxonMobil** projects the Scope 3 emissions from burning its products to be equivalent to 720 million metric tonnes of carbon dioxide.<sup>38</sup> That means that ExxonMobil is responsible for greater emissions than every country except the U.S., China, India, Russia, and Japan.<sup>39</sup> Even companies outside the energy sector can exceed emissions larger than those of entire countries; **Procter & Gamble** is such a major contributor to GHG emissions through its supply chains that its emissions are larger than those of Argentina.<sup>40</sup>

## STATE OF NET ZERO BY 2050

Over the last decade, corporate climate commitments have played a powerful role in integrating climate considerations into business decisions.<sup>41</sup> As seen in Figure 6, the number of large publicly listed companies to set net zero targets has almost doubled in the past two and a half years, from 417 to 929.<sup>42</sup> Setting net zero targets is vital to align business strategies with the Paris climate goals of limiting global warming to 1.5°C and achieving net zero emissions by 2050 or sooner. While most of these companies are not yet on target to meet such goals, this period of assessment and transition planning is critical to effective action across value chains.

Significant policy and regulatory developments are emerging to solidify these voluntary climate commitments into mandatory requirements. The proportion of net zero targets set into domestic legislation or policy globally has substantially increased from 7% of total GHG coverage in 2020 to 75% today, with over 70 countries committing to net zero targets as a goal in policy documents.<sup>44</sup> The EU recently adopted stringent corporate reporting requirements under the Corporate Sustainability Reporting Directive (CSRD), requiring companies to disclose detailed information,

**FIGURE 6: Companies Committed to Net Zero 2021 Through 2023<sup>43</sup>**



37. General Electric Company, *GE Annual Report 2018*, accessed September 14, 2023, [https://www.annualreports.com/HostedData/AnnualReportArchive/g/NYSE\\_GE\\_2018.pdf](https://www.annualreports.com/HostedData/AnnualReportArchive/g/NYSE_GE_2018.pdf).

38. ExxonMobil, *Advancing Climate Solutions Progress Report GHG Data Supplement*, April 2023, <https://corporate.exxonmobil.com/-/media/global/files/advancing-climate-solutions-progress-report/2023/2023-acs-ghg-data-supplement.pdf>.

39. Hannah Ritchie and Max Roser, “CO2 Emissions,” Our World in Data, accessed September 14, 2023, <https://ourworldindata.org/co2-emissions>.

40. Bryan Harris, “Meatpacker JBS Comes Under Fire Over 50% Emissions Rise,” *Financial Times*, accessed September 14, 2023, <https://www.ft.com/content/92904829-3a28-4d6e-aab7-467c625497c7>.

41. “Hiring of Chief Sustainability Officers Surged in 2020; Rise in Women, Little Diversity,” Weinreb Group, last modified May 18, 2021, <https://weinrebgroup.com/hiring-of-chief-sustainability-officers-surged-in-2020-rise-in-women-little-diversity/>.

42. NewClimate Institute, Oxford Net Zero, Energy & Climate Intelligence Unit, and Data-Driven EnviroLab, *Net Zero Stocktake 2023*, ZeroTracker, published June 11, 2023, <https://zerotracker.net/analysis/net-zero-stocktake-2023>.

43. NewClimate Institute, Oxford Net Zero, Energy & Climate Intelligence Unit, and Data-Driven EnviroLab, *Net Zero Stocktake 2023*, ZeroTracker, published June 11, 2023, <https://zerotracker.net/analysis/net-zero-stocktake-2023>.

44. NewClimate Institute, Oxford Net Zero, Energy & Climate Intelligence Unit, and Data-Driven EnviroLab, *Net Zero Stocktake 2023*, ZeroTracker, published June 11, 2023, <https://zerotracker.net/analysis/net-zero-stocktake-2023>.

such as Scope 3 emissions, and have sustainability reports audited by a third party.<sup>45</sup> Puma’s sustainability director recently stated it is “nowhere near being able to fulfil the requirements of CRSD,” which goes into effect for reports published in 2025. This should be a similar concern addressed by any company operating in the EU.<sup>46</sup> The EU is also poised to adopt a directive on corporate sustainability due diligence, which would require large companies to ensure its business strategies are compatible with limiting global warming to 1.5°C.<sup>47</sup> In the U.S., the Inflation Reduction Act is funneling nearly \$400 billion in federal funding to decarbonize the most emissions intensive sectors, including energy and power, manufacturing, and transportation.<sup>48</sup> The share of renewables in electricity generation is increasing while the price of batteries suitable to electrify light-duty vehicles is decreasing – indicating the momentum and speed at which change can occur.<sup>49</sup>

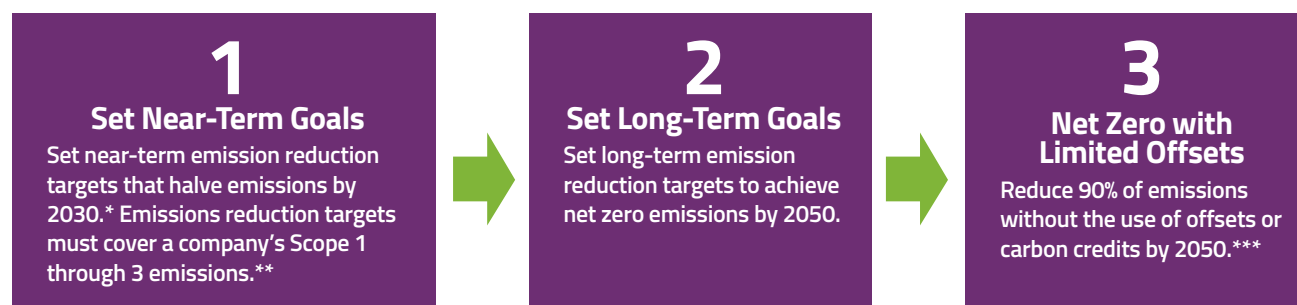
## DEFINING NET ZERO

Voluntary net zero guidance frameworks are converging around critical principles to create more clarity on the elements of a robust net zero target. These principles include prioritizing real emissions reductions, taking responsibility for impacts across the value chain, committing to a genuine just transition, and pursuing net zero-compatible innovations.<sup>50</sup>

The Science Based Targets initiative (SBTi), a partnership between expert groups working to drive climate action in the private sector, provides clear standards for a net zero pathway aligned with climate science. By adhering to these standards, companies can avoid the pitfalls of greenwashing and demonstrate commitment to genuine climate action.

As laid out in figure 7, core components of the SBTi Net Zero Standard include setting near-term and long-term emission reduction targets while committing to net zero by 2050 with limited offsets used.<sup>51, 52</sup>

**FIGURE 7: Core Components of the SBTi Net Zero Standard**



\* If applicable, adopt industry specific reduction pathways outlined by SBTi.

\*\* If Scope 3 emissions are 40% of total emissions.

\*\*\* A company must use permanent carbon removal and storage to address residual emissions that cannot be eliminated. There are expectations for some industries on the amount of offsets that can be used to achieve net zero.

45. Nasdaq, “CSRD & EU Climate Regulations: What Companies Need To Know About the Revised European Sustainability Reporting Standards,” *CSRwire*, accessed September 14, 2023, [https://www.csrwire.com/press\\_releases/779016-csrd-eu-climate-regulations-what-companies-need-know-about-revised-european](https://www.csrwire.com/press_releases/779016-csrd-eu-climate-regulations-what-companies-need-know-about-revised-european).

46. Helen Reid, “New EU Sustainability Reporting Rules Are a Challenge, Says Puma,” *Reuters*, September 6, 2023, <https://www.reuters.com/sustainability/reuters-impact-new-eu-sustainability-reporting-rules-are-challenge-says-puma-2023-09-06/>.

47. “Corporate Sustainability Due Diligence,” European Commission, accessed September 14, 2023, [https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence\\_en#what-are-the-obligations-for-companies-and-their-directors](https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en#what-are-the-obligations-for-companies-and-their-directors).

48. Justin Badlam, Jared Cox, Adil Kumar, Nehal Mehta, Sara O’Rourke, and Julia Silvis, “The Inflation Reduction Act: Here’s What’s in It,” McKinsey & Company, accessed September 14, 2023, <https://www.mckinsey.com/industries/public-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it>.

49. World Resources Institute, *State of Climate Action 2022*, October 2022, <https://files.wri.org/d8/s3fs-public/2022-10/state-of-climate-action-2022.pdf?VersionId=sfihZTSlzbenOLt565PIXidO2L5jTLg>.

50. “New HLEG Report Provides Clear Guidance on Net Zero for Cities, Regions, and Corporations,” Net Zero Climate, published November 9, 2022, <https://netzeroclimate.org/hleg-report-net-zero/>.

51. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>, p. 33.

52. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>, p. 51.



The quality of carbon offsets faces increasing scrutiny, making it essential for companies to prioritize emissions reductions as the key means to achieve science-based net zero targets. A variety of studies have shown that there is too much uncertainty in the voluntary carbon markets to adequately back up company claims that investing in or paying for emissions reductions from other projects can reliably offset a company's own emissions.<sup>53</sup> At worst, carbon credits allow companies to avoid reducing its own emissions while continuing to contribute to environmental and social justice harms. Indeed, such claims are increasingly scrutinized by consumers, sometimes leading to serious litigation.

At their best, carbon credits can be used to reduce ongoing emissions as companies undertake emissions reduction actions across its value chains.<sup>54</sup> Investments in carbon removal techniques will be necessary to achieve 1.5°C pathways, yet a dearth of funding for critical mitigation and adaptation projects exists. Leading companies are working to address these concerns in a new way. Companies like **Nestlé** and **easyJet** withdrew its carbon neutral commitments to focus on investments that cut emissions in its supply chain and operations.<sup>55</sup> Companies that purchase offsets are also switching to contribution claims, whereby it highlights investments in necessary technologies and projects but do not use those investments to make claims about its own emissions footprint.<sup>56</sup> While contribution claims greatly reduce the risk of misleading consumers and investors, companies must still ensure its purchasing high-quality carbon credits that represent real carbon reductions and finance projects that would not otherwise be feasible. The evolution of acceptable uses for carbon offsets is a huge step toward transparency and accountability.

Net zero frameworks are expanding their climate requirements to encompass more, such as aligning lobbying activities with stated climate goals and adopting just transition elements in transition planning. The Climate Action 100+ Benchmark – covering \$68 trillion in market capitalization – offers a comprehensive roadmap for companies embracing the net zero transition.<sup>57</sup> It not only emphasizes emissions reduction targets but also the alignment of capital expenses and political involvement with Paris Agreement goals. It urges the phasing out of investments in carbon-intensive assets and the appointing of competent board members to manage climate risks and allocate responsibility for climate action. It now links executive compensation to climate performance to encourage innovation and tangible action. Notably, it now also assesses companies on its just transition plan, which acknowledges social impacts and equity considerations related to decarbonization. This approach ensures a fair distribution of costs and benefits during structural and economic shifts.

While thousands of companies have committed to SBTi, there is still a significant gap between commitments and actual emissions reductions. In fact, global GHG emissions today are higher than they were before the Paris Agreement was adopted in 2015.<sup>58</sup> Studies indicate the world has already warmed 1.15°C, bringing us dangerously close to the 1.5°C limit.<sup>59</sup> To avoid catastrophe and limit overshoot as much as possible, robust net zero targets must inform near-term actions by companies and industries. To achieve the necessary emissions reductions, there is a pressing need for increased ambition, accelerated innovation, and investment in net zero-compatible technologies.

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53. Patrick Greenfield, "Revealed: Forest Carbon Offsets' Biggest Provider 'Worthless,'" *The Guardian*, January 18, 2023, <https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe>. Dieter Holger, "Rebuilding Trust in Carbon Offsets Faces Uphill Battle," *The Wall Street Journal*, accessed September 14, 2023, <https://www.wsj.com/articles/rebuilding-trust-in-carbon-offsets-faces-uphill-battle-d7811603>.
  54. Allison Lampert and Clark Mindock, "Delta Air Lines Faces Proposed U.S. Class Action Over Carbon-Neutral Claims," *Reuters*, May 30, 2023, <https://www.reuters.com/legal/delta-air-lines-faces-proposed-us-class-action-over-carbon-neutral-claims-2023-05-30/>.
  55. Dasha Afanasieva, "Nestle Puts KitKat Carbon Neutrality in Greenwashing Graveyard," *Bloomberg*, June 28, 2023, <https://www.bloomberg.com/news/articles/2023-06-28/nestle-drops-carbon-neutral-pledge-for-kitkats-san-pellegrino-and-perrier>.
  56. "VCMi Claims Code of Practice," VCMi Integrity, accessed September 14, 2023, <https://vcmintegrity.org/vcmi-claims-code-of-practice/>.
  57. Climate Action 100, *Climate Action 100+ Net Zero Company Benchmark 2.0*, published March 2023, <https://www.climateaction100.org/wp-content/uploads/2023/03/Climate-Action-100-Net-Zero-Company-Benchmark-Framework-2.0..pdf>.
  58. Sophie Boehm, Louise Jeffery, Kelly Levin, Judit Hecke, Clea Schumer, Claire Fyson, Aman Majid, Joel Jaeger et al., *State of Climate Action 2022* (Berlin/Cologne, Germany, San Francisco, CA, and Washington, DC: Bezos Earth Fund, Climate Action Tracker, Climate Analytics, ClimateWorks Foundation, New Climate Institute, United Nations Climate Change High-Level Champions, and World Resources Institute), <https://doi.org/10.46830/wriipt.22.00028>.
  59. Lauren Stuart, Jürg Luterbacher, Roseline Devillier, Laura Paterson, Kate Solazzo, and Isha Bhasin, *United in Science 2023* (Geneva, Switzerland: World Meteorological Organization (WMO) Library, 2023), <https://library.wmo.int/records/item/68235-united-in-science-2023>, p. 9.

# METHODOLOGY

## Overview of Pillars

This report presents a comprehensive benchmark methodology that assesses companies based on three crucial pillars: GHG Disclosures, GHG Targets, and GHG Reductions. The evaluation focuses on the largest U.S. corporations across 11 sectors. The assessment process builds upon valuable insights gained from the 2022 scorecard evaluation and carefully analyzes 100 companies across 17 indicators. The report aims to provide a comprehensive and insightful assessment of companies' progress toward achieving net zero emissions. By shedding light on its performance and highlighting areas for improvement, the goal is to foster a more sustainable and responsible business environment.

The evaluation process relies on publicly available information such as published reports, press statements, and website materials. Each company is assigned a "Met" score if it earns a point for fulfilling the requirements of each indicator within a pillar. The sum of these points in each pillar determines the company's Overall Net Zero grade, graded on a scale ranging from "A+" to "F" (excluding "E").

To determine the overall grades, the methodology employs a differential weighting system for the three pillars outlined in Figure 8. Companies' progress in measuring and disclosing GHG emissions is acknowledged as well as its efforts in setting GHG reduction targets. However, the assessment reveals relatively poor performance in achieving emissions reductions throughout the companies' value chains, which are the critical components to align with a 1.5°C scenario; therefore, Pillar 3 is weighted the highest in this scorecard.

**FIGURE 8:**

	Assessed Metrics	Actions Required	Weight
Pillar 1: GHG Disclosures	Disclosure of GHG emissions and carbon offset information.	Company reports Scopes 1 through 3 emissions and discloses carbon offsets.	22%
Pillar 2: GHG Targets	Interim GHG emissions reduction targets covering Scopes 1 through 3 and net zero goals by 2050 or sooner.	Company has set 1.5°C-aligned interim targets to halve emissions by 2030 and committed to reach net zero by 2050 or sooner with limited offsets covering Scopes 1 through 3.	33%
Pillar 3: GHG Reductions	Average year-over-year absolute emissions and emissions intensity reductions.	Company demonstrates 1.5°C-aligned GHG reductions. For absolute emissions, average reductions decreased 4.2% year-over-year. For emissions intensity, average reductions decreased 7% year-over-year.	45%

The detailed breakdown of the questions, indicators, and methodologies employed can be found in Annex C.

# PILLAR RESULTS

The 2023 Road to Zero Emissions Scorecard results are uncovered below by individual pillar. The full list of grades by company is provided in Annex A. The full list of questions, indicators, and methods for each of the three pillars is provided in Annex C.

## PILLAR 1: GHG DISCLOSURES

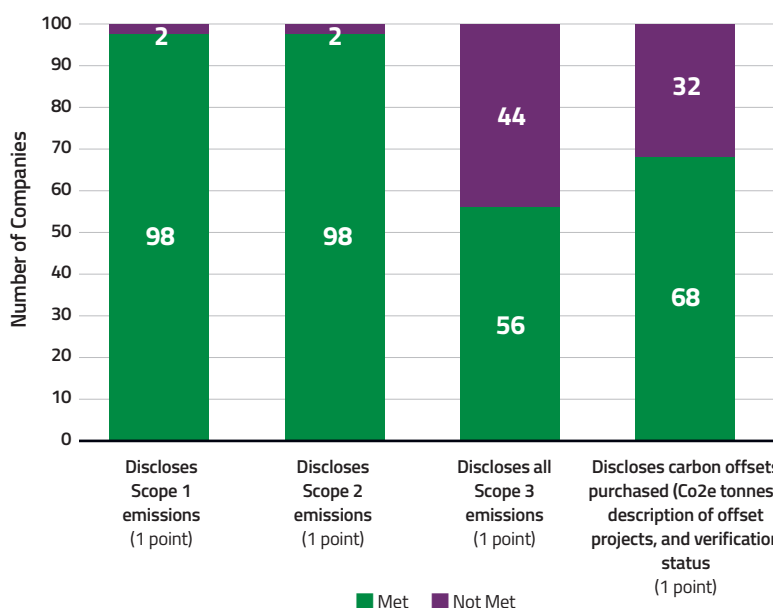
Pillar 1 assesses corporate climate-related disclosures based on publicly available reporting. Indicators 1.1 through 1.4 assess disclosure of Scope 1 emissions; Scope 2 emissions; all relevant categories of Scope 3 emissions; and disclose carbon offsets purchased, a description of offset projects, and the verification status.

In 2023, nearly three quarters of companies (73/100) assessed have a grade of “A” or “B” for GHG emissions disclosures. This is a significant improvement from last year, where only 45% of companies (25/55) received a grade of “A” or “B.” Showing progress since last year’s assessment, in 2023 only a quarter of companies received a “C” grade, and no companies received a “D.” These lower grades were mainly due to companies failing to disclose all relevant Scope 3 emissions and relevant carbon offset information. Two companies received an “F” grade for Pillar 1: **Block Inc** and **Berkshire Hathaway** both failed to disclose any emissions. Berkshire Hathaway currently does not disclose its

company-wide emissions across its subsidiaries and received an “F” on Pillar 1: GHG Disclosures.<sup>60</sup> Block Inc reports its emissions and carbon offset information to CDP but does not publicly disclose its CDP response or any materials, including the company’s GHG emissions.<sup>61</sup> CDP responses are a transparent way for companies to disclose its critical emissions, reduction target details, and carbon offset information.<sup>62</sup> However, CDP responses require signing up for a third party service that can include fees, making these GHG disclosures non-public and not freely available to investors. To earn credit for GHG disclosure on this scorecard, companies must publicly share CDP responses on the company’s website or provide GHG emissions data in another accessible and transparent format.

All but two companies assessed in 2023 report both Scope 1 and 2 emissions, which shows that there is substantial progress on reporting operational emissions (Scope 1 and 2). However, although improvements are being made, there are gaps in reporting value chain (Scope 3) emissions. In 2023, 56% of companies (56/100) disclosed all relevant Scope 3 emissions versus in 2022 where fewer than half of companies (20/55) disclosed

FIGURE 9: Pillar 1 (GHG Disclosures) Indicators



60. Berkshire Hathaway, accessed September 14, 2023, <https://www.berkshirehathaway.com/sustainability/sustainability.html>.

61. Block, Inc, *Block, Inc CSR Report 2022, 2023*, [https://s29.q4cdn.com/628966176/files/doc\\_downloads/2023/03/Block-2022-CSR-Report.pdf](https://s29.q4cdn.com/628966176/files/doc_downloads/2023/03/Block-2022-CSR-Report.pdf).

62. “Who We Are,” CDP, accessed September 14, 2023, <https://www.cdp.net/en/info/about-us>.

Scope 3. Many companies from 2022 now publicly disclose some of the most impactful Scope 3 categories for its businesses. For example, **AT&T** and **Sherwin-Williams** have started to publicly disclose its relevant Scope 3 emissions; both companies have most of its emissions under Scope 3, underscoring the importance of providing full emissions disclosure.

There are still companies, however, in high Scope 3 emitting sectors that fail to provide all relevant Scope 3 emissions. For example, General Electric reports on only one Scope 3 category, Use of Sold Products, while leaving out relevant categories, such as Purchased Goods and Services.<sup>63</sup> **Tesla** began reporting Scope 3 emissions for the first time over 2023.<sup>64</sup> Although its Scope 3 emissions now account for a majority of its total emissions, Tesla did not receive credit for disclosing Scope 3 emissions as it only provided emissions for nine of 15 categories and did not state whether these include all relevant categories. Because full reporting of Scope 3 emissions is needed to comprehensively assess climate risks, a company only received credit for disclosing Scope 3 if it disclosed data for each of the 15 GHG Protocol Scope 3 categories or explicitly stated that certain categories do not apply, or are not relevant, to its business. Disclosing all Scope 3 categories allows investors to assess the full scope of climate impacts in the value chain.

Some companies that failed to report relevant Scope 3 emissions are waiting until pending regulation is finalized. **Martin Marietta** stated in its 2023 sustainability report that it is not currently reporting Scope 3 emissions as it is “awaiting the final position on Scope 3 emissions of the U.S. Securities and Exchange Commission in its final climate disclosure rule.”<sup>65</sup> However, this presents risks to the company for not proactively starting the process of assessing value chain emissions and severely lagging industry peers.

The GHG Protocol has already set the stage for how necessary Scope 3 emissions reporting is and, due to the complexity of Scope 3 reporting, even recommends companies approach disclosing Scope 3 in a “phased approach” and improve the quality of emissions data over time.<sup>66</sup> With investors already identifying Scope 3 emissions as critical information to disclose for businesses across industries, companies have much to gain from leading the development of these potential standards that take time to accurately report on.

In 2023, there has been a notable increase in the disclosure of carbon offsets by companies. Specifically, 68% of the assessed companies received recognition for disclosing information about carbon offsets, marking a significant improvement from the previous year when only 20% of companies (11/55) provided such details. This increase in transparency is a positive trend, with over half of these companies stating that it did not purchase carbon offsets in 2023, while the rest provided essential metrics regarding the offsets it did purchase.

However, despite this positive development, there are still concerns about the quality and comprehensiveness of carbon offset disclosures. For example, when a company indicates plans to utilize carbon offsets for achieving neutrality goals, it must provide clear and comprehensive disclosures about how these offsets will be employed and whether they are verified for quality. **Charter Communications** committed to achieving carbon neutrality across all operations by 2035 with a reliance on offsets.<sup>67</sup> However, Charter does not disclose the number of offsets used or planned to be used for achieving its carbon neutral by 2035 goal. To meet investor expectations, companies must ensure that it provides a description and transparent metrics of the carbon offsets purchased as part of its plans to reduce emissions and work toward a net zero future.

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63. General Electric Company, *2022 Sustainability Report: A Transformative Era of Action*, 2023, [https://www.ge.com/sites/default/files/ge2022\\_sustainability\\_report.pdf](https://www.ge.com/sites/default/files/ge2022_sustainability_report.pdf), p. 9.

64. Tesla, Inc., *2022 Tesla Impact Report Highlights*, accessed September 14, 2023, [https://www.tesla.com/ns\\_videos/2022-tesla-impact-report-highlights.pdf](https://www.tesla.com/ns_videos/2022-tesla-impact-report-highlights.pdf).

65. Martin Marietta, *Sustainability 2022*, published 2023, <https://mcdn.martinmarietta.com/assets/sustainability/flip/sustainability2022-a/index.html>.

66. World Resources Institute and World Business Council for Sustainable Development, *Greenhouse Gas Protocol: Technical Guidance for Calculating Scope 3 Emissions*, April 2013, [https://ghgprotocol.org/sites/default/files/standards/Scope3\\_Calculation\\_Guidance\\_0.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf).

67. Charter Communications, *ESG Report 2022, 2023*, <https://corporate.charter.com/esg-report.pdf>.

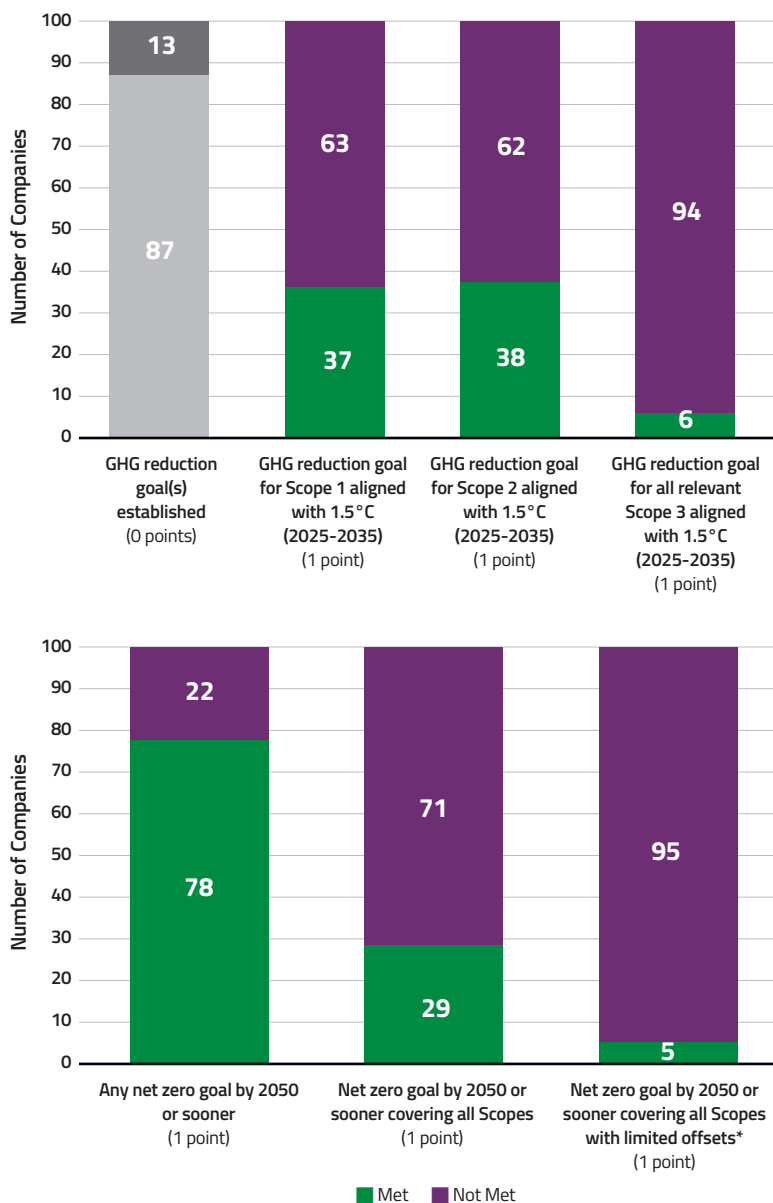
Definitive and complete emissions reporting from companies plays a vital role in assessing its progress and performance in GHG emissions reduction. Investors must scrutinize company GHG disclosures and carbon offsets reporting with a discerning eye to ensure the information is comprehensive and transparent. It is particularly crucial to be cautious of Scope 3 emissions reporting that is limited to lower impact categories as this can lead to confusion and misinterpretation. By holding companies accountable for complete and transparent emissions reporting, investors can make informed decisions and contribute to driving sustainability. Clarity and accuracy in reporting are key to promoting meaningful progress and ensuring that companies are taking effective actions toward a net zero future.

## PILLAR 2: GHG TARGETS

Pillar 2 assesses the status of company GHG targets and goals to reduce GHG emissions and achieve net zero emissions by 2050 or sooner. Indicators 2.2 through 2.4 gauge whether a company has set a 1.5°C-aligned interim target for Scopes 1, 2, and 3 emissions.<sup>68</sup> Indicators 2.5 through 2.7 assess if a company has set a net zero by 2050 goal covering all Scopes with limited offset use. Company reduction goals could be framed as either absolute emissions reductions or intensity reductions.<sup>69</sup>

**T-Mobile** is the only company to receive an “A” grade for GHG target setting in 2023. T-Mobile received the highest score because it set targets to reduce Scopes 1 through 3 emissions in line with 1.5°C and set a 2050 net zero emissions reduction goal covering all emissions with limited offsets used.<sup>70</sup>

FIGURE 10: Pillar 2 (GHG Targets) Indicators



68. This scorecard does not separate interim targets into short- and medium-term timeframes because companies define these periods differently. This scorecard emphasizes the critical nature of short-term emissions reductions by weighting companies' actual GHG reductions over the short term (2018-2020) as 45% of the Overall Grade.

69. As discussed at greater length in the GHG Reductions section, 1.5°C-aligned reductions are credited where absolute emissions reductions reach 4.2% or more annually and emissions intensity reductions reach 7% or more annually. Intensity is assessed using emissions per dollar of revenue to create comparability across all 100 companies.

70. Trane Technologies, 2022 ESG Report: We're Taking Action for a Better Plan, 2023, <https://www.tranetechnologies.com/en/index/sustainability/sustainability-reports/esg-report.html>.

Sixteen companies received a “B” grade, and 15 received a “C” grade in this pillar; the rest received “D” or “F” grades. **Ecolab, Weyerhaeuser, Trane Technologies,** and **Nike** have committed to net zero goals by or before 2050 for all Scope emissions with limited offset use; however, each failed to set necessary Scope 3 reduction targets aligned with 1.5°C. **Oracle, Apple, Visa, Microsoft,** and **Alphabet** have set targets to reduce Scopes 1 through 3 emissions in alignment with 1.5°C and committed to achieve net zero goals by 2050 for all Scope emissions, but each company failed to disclose whether its goal includes limited offset use.

Although most companies have set GHG emissions reduction goals over 2023, few have established goals that reduce Scope 1 and 2 emissions at a rate aligned with 1.5°C.<sup>71</sup> Many companies have goals to reduce Scope 1 and 2 emissions aligned with well below 2°C of global warming but have not yet set targets aligned with the Paris 1.5°C goal. For example, **American Airlines** and **United Airlines** have interim targets covering its most relevant Scope 1 emissions; however, the targets are designed to limit warming to well below 2°C.<sup>72</sup> This is significant as both companies have high sources of Scope 1 emissions, covering close to 70% of the total emissions for both companies. Many other companies are not aligned with even a well below 2°C goal. Scientists and investors agree that companies must strive to limit global warming to 1.5°C to reduce the worst impacts of climate change.

Many companies lack Scope 3 reduction goals, which often represent a company’s most significant source of total emissions. This discrepancy is significant for the oil and gas industry, where no companies assessed include the emissions associated with producing fossil fuels (Scope 3 Category 11 Use of Sold Product emissions) in its emissions reduction targets. In fact, the majority of oil and gas companies assessed fail to disclose emissions arising from the value chain related to the burning of fossil fuels.

From a trend perspective, the last three years have seen a significant increase in net zero or carbon neutral by 2050 or sooner goals. In 2023, 78% of companies have set some sort of carbon neutral or net zero goal, which is an improvement from 2022. However, only 29% of those companies ensure the net zero goal covers relevant Scope 3 emissions as well.

There is an urgent need to elevate the level of ambition across all emissions Scopes and align reduction plans with limiting global warming to 1.5°C. Although Scope 3 emissions can be complex to identify and calculate, there are clear methodologies for measuring value chain emissions and tools to work with supply chain partners to improve emissions modeling. Additionally, as each company acts to reduce its full scope of value chain emissions in line with global goals, other companies are encouraged and enabled to do so as well. Significant progress has already been made by many companies in response to climate change, but concerted efforts are required to avoid increasingly severe and systemic consequences. It is both feasible and imperative to push for greater ambition and expedite emissions reductions across sectors. By pushing the boundaries and setting more ambitious targets, companies can effectively contribute to mitigating risks associated with the impacts of climate change.

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71. Requires 4.2% or more year over year absolute reductions in the near-term or 7% annual intensity reductions.

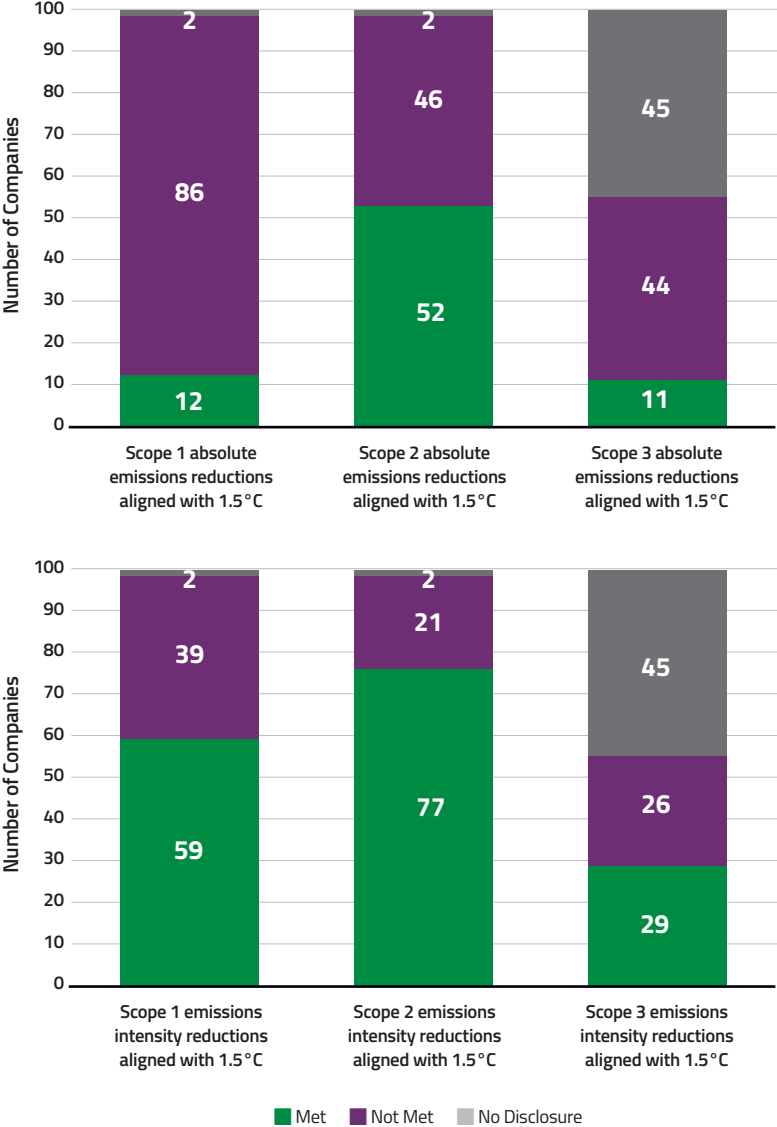
72. American Airlines, *Sustainability Report 2022, 2023*, <https://s202.q4cdn.com/986123435/files/images/esg/aa-sustainability-report-2022.pdf>.

# PILLAR 3: GHG REDUCTIONS

Pillar 3 provides insight into company progress in achieving emissions reduction. The scorecard uses SBTi near-term absolute and intensity emissions reduction guidance to assess whether a company’s emissions are declining at the rate necessary to align with the global 1.5°C pathway.<sup>73,74</sup> Publicly available reporting data from 2020 to 2022 were used to assess companies’ emissions reduction progress.<sup>75</sup> For each company, the Scope contributing the greatest amount of emissions was weighted the heaviest in an effort to reward companies that address their largest source(s) of emissions.

Seven companies received “A” grades in emissions reduction performance – **Oracle, Colgate-Palmolive, Trane Technologies, Nike, Prologis, Apple, and Bunge** – by reducing Scopes 1, 2, and 3 absolute emissions and emissions intensity in line with 1.5°C. Three companies – **Alphabet, Equinix, and United Parcel Service** – received a “B” grade due to slightly underperforming on its most relevant sources of emissions. Notably, well over half of companies received “F” grades for this pillar. One of the main factors that resulted in such low grades was a lack of adequate Scope 3 disclosure. For most companies in this assessment, Scope 3 emissions disclosure lacked the information necessary to calculate emissions performance.<sup>76</sup>

FIGURE 11: Pillar 3 (GHG Reductions) Indicators



73. Absolute gross Scope 1, 2, and 3 emissions must decline by 4.2% or more per year in the near term (note that this method has been extended for Scope 3 as SBTi doesn’t provide guidance on percent reduction for near-term Scope 3 emissions aligned with 1.5°C). Economic emissions intensity (CO2e/Revenue) must decline by 7% or more in the near term to be aligned with 1.5°C (note that this method has been extended for Scopes 1 and 2 as SBTi doesn’t provide guidance on percent reduction for near-term Scopes 1 and 2 emissions intensity aligned with 1.5°C).

74. Economic emissions intensity (CO2e/Revenue) is used to provide a standardized intensity metric to see overarching trends from a diverse set of companies. This report evaluates all companies by revenue-based intensity, which has limitations. For example, a company experiencing significant growth can show a declining revenue-based intensity trend even while its absolute emissions are increasing.

75. Due to the inability to assess company emissions reductions in the absence of disclosures, companies that fail to report on a parameter received a score of zero on that parameter.

76. To avoid presenting misleading information, we evaluated only the emissions trends of companies that report all 15 Scope 3 categories.

Although nine companies reduced both absolute Scope 1 and 2 emissions in line with 1.5°C, only **Broadcom** and **AES** had Scope 1 and 2 emissions that represented 50% or more of its total emissions. The other companies had most emissions stem from Scope 3 value chain, and while these companies may be reducing operational emissions (Scopes 1 and 2), many value chain emissions remained unaddressed or in some cases not disclosed at all. Similarly, although 77% of companies had Scope 2 intensity reductions aligned with 1.5°C, only two of these companies had Scope 2 emissions that represented more than half of its total emissions. For many companies demonstrating Scope 1 and 2 emissions reductions, Scope 3 emissions reflect most of its total emissions and continue to increase year-over-year.

Another key finding is that many companies with GHG reduction targets and net zero ambitions failed to demonstrate year-over-year emissions reductions. Interestingly, 17 companies received “A” or “B” grades under Pillar 2 for target setting; however, five of these companies then received “C” grades and seven received “F” grades for failing to demonstrate actual year-over-year emissions reductions. Companies that set ambitious targets and goals should be further down the path to net zero and demonstrate near-term emissions reductions. Failure to make sufficient GHG reduction progress in the near term means higher costs and greater systemic risk as emissions are added into the atmosphere.

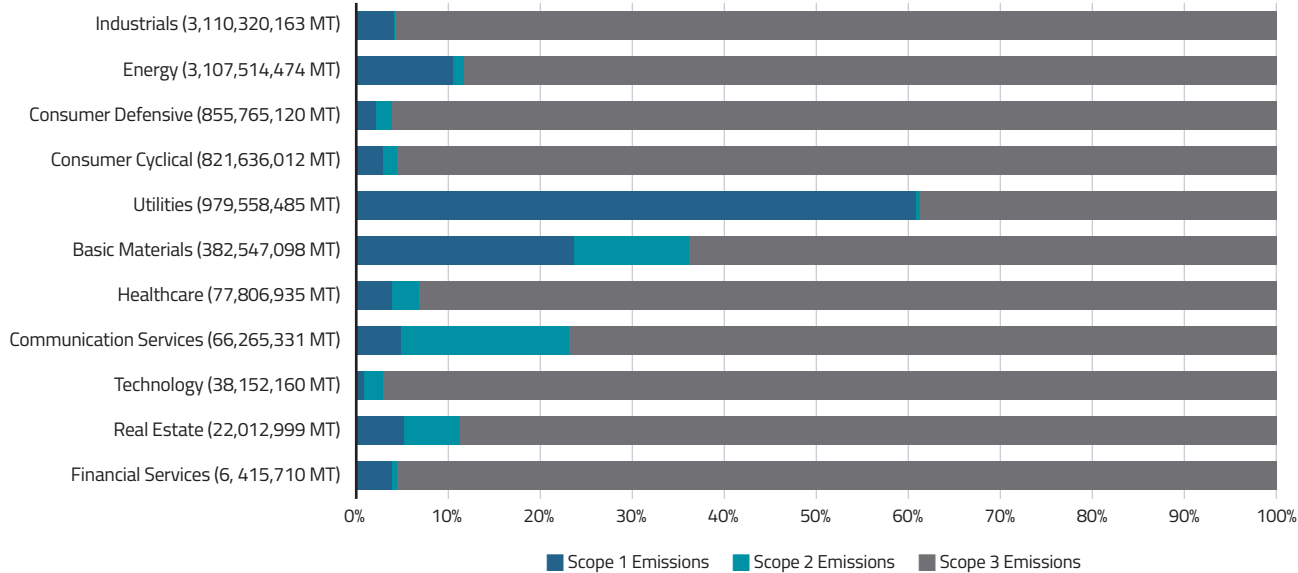
Over the last decade, there has been notable progress in how companies measure and disclose emissions data, set climate targets, and devise essential emissions reduction strategies. However, many companies are still failing to demonstrate actual year-over-year emissions reductions. It is critical for companies to follow up emissions disclosures and reduction targets by demonstrating actual emissions reductions aligned with 1.5°C. As urgency is mounting to meet the 1.5°C global warming threshold, it is more important than ever for companies to demonstrate actual emissions reductions.



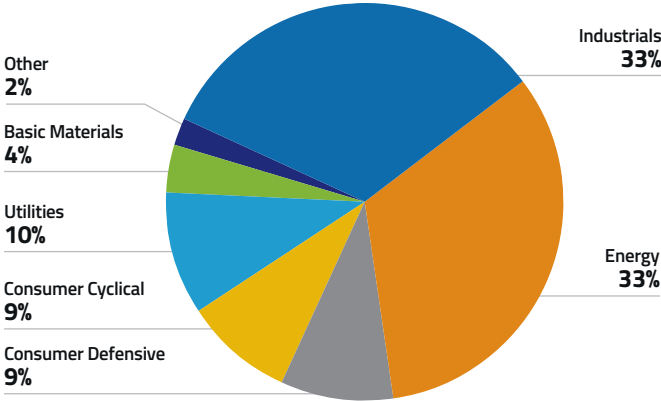
# SECTOR REVIEW

Comparing emissions reported by companies across different sectors, Figure 12 provides an overview of total emissions categorized by Scope. It is important to note that aggregated emissions data from all companies can lead to double counting as the indirect Scope 3 emissions for one company often overlap with the operational Scope 1 and 2 emissions of others. While voluntary reporting does not guarantee complete and comprehensive reporting by each company, the findings illustrate that each sector presents a unique emissions landscape. For example, the industrials and energy sectors represent a majority of emissions reported, primarily due to indirect Scope 3 emissions. Meanwhile, utilities report the highest total of Scope 1 emissions, primarily from the combustion of fossil fuels in power generation facilities. Some sectors seem to significantly underreport emissions, with a notable absence of financed emissions under Scope 3 in the financial services sector.

**FIGURE 12<sup>77</sup>**  
**Reported Emissions by Scope Percentage**



**Reported Emissions by Sector**



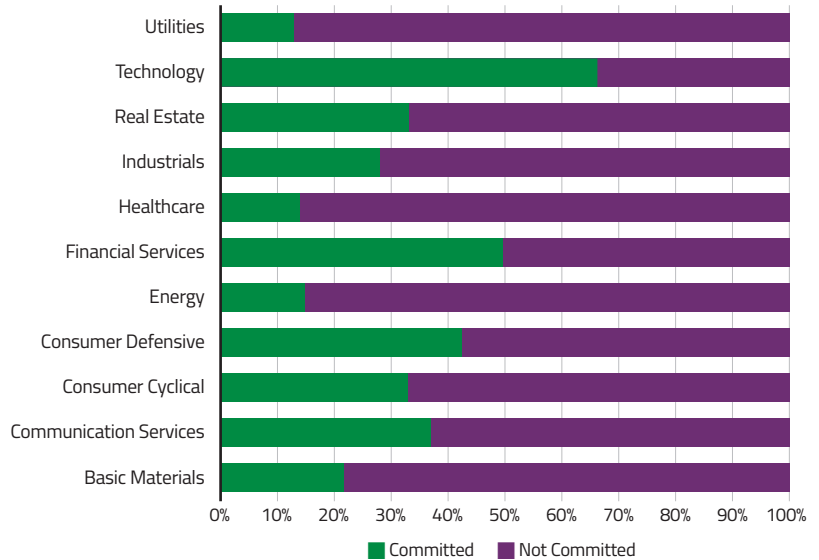
77. Other\* represents the following sectors: real estate, healthcare, technology, communication services, and financial services.

A significant insight from these data is the prevalence of Scope 3 emissions across all sectors. Scope 3 emissions encompass all indirect emissions along a company’s value chain, and they tend to be substantial due to the carbon-intensive nature of supply chain processes. While strategies will naturally differ across sectors, a consistent theme emerges — the imperative for each sector to address its significant Scope 3 emissions through collaborative and innovative endeavors.

While some sectors may wield more influence in reducing Scope 3 emissions than others, it remains vital for all companies to disclose and

address these emissions in some capacity to meet its 1.5°C-aligned targets. Figure 13 highlights by sector the number of net zero goals by 2050 or sooner covering Scopes 1 through 3 (including all relevant Scope 3 emissions). Energy and utilities report the most emissions out of any sector, yet both sectors had very few net zero by 2050 commitments covering the full value chain compared to other sectors. Industry actions and cross-sector collaboration will play a substantial role in addressing the challenges that lie ahead on the path to net zero.

**FIGURE 13: Net Zero by 2050 or Sooner Goals by Sector (Covering Relevant Scope 1, 2, and 3 Emissions)**



## Energy

Reducing fossil fuels from the energy sector is pivotal to achieving net zero emissions by 2050. Cross-sector collaboration between end-use sectors and oil and gas companies will be essential for reducing the use of fossil fuels from the value chain. The most material source of emissions for oil and gas companies stems from indirect Scope 3 emissions through the Use of Sold Products, but surprisingly only a third of these companies disclosed all relevant Scope 3 emissions. Additionally, no energy companies have set interim GHG reduction targets that cover all relevant Scope 3 emissions, leaving large value chain emissions unaligned with a 1.5°C pathway. Only two companies, **SLB** and **Occidental Petroleum**, have net zero goals that cover all relevant Scope 1, 2, and 3 emissions.<sup>78</sup> However, it is unclear whether these companies will limit offset use to meet these goals, another important piece to demonstrate commitment to a net zero future.

## Industrials

Emissions sources within the industrials sector vary depending on a company’s industry focus. For airlines and railroads, the bulk of emissions come from direct Scope 1 emissions through the combustion of jet fuel or diesel fuel during operations. The significance of these emissions depends on factors like the type of fuel used, vehicle efficiency, and travel distances. Interestingly, none of the three airlines assessed – **Delta Air Lines**, **United Airlines**, and **American Airlines** – had Scope 1 reduction goals aligned with the 1.5°C pathway, even though each company has committed to net zero goals by 2050. Achieving these 2050 net zero goals is essential and working to reduce Scope 1 emissions by investing in sustainable aviation fuels is critical.

78. Oxy, *Climate Report 2022: Building to Net Zero*, December 2022, <https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2022.pdf>. SLB, *Sustainability Report 2022, 2023*, <https://www.slb.com/-/media/files/sustainability/2022/sustainability-report-2022.ashx>.

In the aerospace and defense, farm and heavy machinery, and specialty machinery sectors, emissions generally also stem from fuel combustion. However, in 2023, these industries primarily reported its highest emissions coming from indirect Scope 3 emissions through the Use of Sold Products. Strikingly, none of the companies under these industries had a near-term Scope 3 reduction goal aligned with the 1.5°C pathway, and many lacked any Scope 3 reduction goals. Engaging with suppliers and customers across the value chain for emissions reduction demonstrates a comprehensive commitment to achieving net zero emissions by 2050.

## Utilities

In 2023, every utility company assessed had a net zero by 2050 goal – but only one company, **NRG Energy**, had a near-term 1.5°C-aligned Scope 1 emissions reduction goal. This is important to differentiate as the utilities sector has its highest source of emissions stemming from the combustion of fossil fuels in power generation facilities (Scope 1 emissions). The utilities sector should be taking proactive steps to reduce Scope 1 emissions in the near term if it will be able to meet its net zero by 2050 goals. Without ambitious 1.5°C-aligned reduction targets for Scope 1 emissions, utilities companies run the risk of becoming laggards.

There is a strong focus on absolute emissions reductions for this sector, especially within the next decade.

**Duke Energy** stated in its 2022 climate report that it may need to use carbon capture technology to meet its 2035 goal to exit coal.<sup>79</sup> However, the Edison Electric Institute, representing a majority of utility companies evaluated in the scorecard, has recently cast doubts on the feasibility of technologies like carbon capture and storage in response to the EPA's proposed climate regulations.<sup>80</sup> Skepticism within the industry highlights the importance of focusing on more immediate and achievable targets that lead to concrete 1.5°C-aligned absolute emissions reductions from direct fossil fuel combustion.

Electric power generation is responsible for a significant share of global GHG emissions, given that a substantial portion of electricity production relies on fossil fuels.<sup>81</sup> To align with the 1.5°C trajectory, the IEA warns that there must be triple the amount of renewable power capacity by 2030.<sup>82</sup> The utilities sector has a significant role in achieving this outcome by investing in existing renewable energy sources to decarbonize electricity generation. Over 2022, \$1.7 trillion was invested in clean energy, resulting in \$2.6 trillion of revenue according to an analysis of 8,000 public companies.<sup>83</sup> This demonstrates the immense potential of climate-related opportunities under this sector.

## Financial Services

The carbon intensity of investments held by financial institutions can significantly impact Scope 3 emissions. Financed emissions from investments in carbon-intensive industries often represent the most material sources of emissions in the financial services sector. While it is encouraging that every bank assessed on this scorecard has set net zero goals by 2050, the lack of disclosure regarding financed emissions under Scope 3 and the absence of 1.5°C-aligned near-term reduction targets for Scope 3 emissions raise concerns. For instance, despite both being members of the Net Zero Asset Managers initiative, neither **JPMorgan Chase** nor **Wells Fargo** has yet to

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79. Duke Energy, *Climate Report 2022: Advancing Toward a Clean, Affordable and Reliable Energy Future*, February 2023, [https://s201.q4cdn.com/583395453/files/doc\\_downloads/esg-key-documents/2023/climate-report-2022.pdf](https://s201.q4cdn.com/583395453/files/doc_downloads/esg-key-documents/2023/climate-report-2022.pdf).

80. Jeff Brady, "Utility Group Calls for Changes to Proposed EPA Climate Rules," *NPR*, published August 8, 2023, <https://www.npr.org/2023/08/08/1192445638/utility-group-calls-for-changes-to-proposed-epa-climate-rules>.

81. "Sources of Greenhouse Gas Emissions," EPA, last modified August 25, 2023, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>.

82. Laura Cozzi, Paolo Frankl, Brent Wanner, Heymi Bahar, and Thomas Spencer, "Tripling Renewable Power Capacity by 2030 Is Vital to Keep the 1.5°C Goal within Reach," IEA, published July 21, 2023, <https://www.iea.org/commentaries/tripling-renewable-power-capacity-by-2030-is-vital-to-keep-the-150c-goal-within-reach>.

83. Nathaniel Bullard, "The Trillions of Dollars Forgotten When Tracking the Energy Transition," *Bloomberg*, published August 17, 2023, <https://www.bloomberg.com/news/articles/2023-08-17/want-to-measure-net-zero-progress-check-clean-energy-sales-figures>.

fully include all relevant Scope 3 emissions in its 2050 net zero goals.<sup>84</sup> This lack of action demonstrates the critical need for financial institutions to transparently disclose financed emissions; otherwise, these net zero goals will leave its most material sources of emissions unaddressed.

Integrating climate considerations into investment strategies and risk assessments will have an impact on financial institutions' responses to the transition risks associated with climate change. The financial industry, given its global reach, could lead in standardizing climate risk assessment methodologies and incentivizing low-carbon projects. These efforts can encompass investments in renewable energy, sustainable infrastructure, and clean technologies to steer capital toward a net zero future.

## Technology & Communication Services

The technology and communication services sectors have the potential to significantly influence the transition to clean energy. In recent years, the surge in computational activities, driven by advancements like artificial intelligence (AI), cloud computing, and complex data analysis, has become increasingly noticeable.<sup>85</sup> A critical issue confronting these sectors is the energy-intensive nature of computational tasks. **Microsoft's** ChatGPT has led to a significant spike in water consumption in Iowa, which is closely tied to the data centers that underpin AI and cloud computing operations.<sup>86</sup> Data centers, which serve as the backbone of these industries, consume substantial amounts of energy and water that must be addressed to ensure a net zero future.

Encouragingly, in 2023, most technology companies have committed or are already using 100% renewable energy. This shift toward cleaner energy sources is a significant step forward. It reduces the carbon intensity of the electricity used for data centers and other operations. However, the path to a net zero future involves more than simply changing energy sources; it also requires collaborative efforts to invest in clean energy infrastructure and innovative hardware technologies to reduce all value chain emissions. By pooling resources and expertise, companies can expedite progress in mitigating emissions.

## Consumer Cyclical & Consumer Defensive

In the consumer cyclical and defensive sectors, significant emissions often originate from supply chain activities under Scope 3 emissions. It is crucial for these companies to disclose and establish 1.5°C-aligned reduction targets for its Scope 3 emissions. Over 2023, however, six companies – **Costco, McDonald's, Amazon, Tesla, Home Depot, and Lowe's** – failed to do so. Addressing this gap is vital as Scope 3 emissions often represent a substantial portion of a company's carbon footprint and aligning with 1.5°C is imperative for staying on course toward a net zero future.

Cross-sector collaboration can ignite innovation within supply chains and support the clean energy transition across industries. Investments in renewable energy have the potential to significantly reduce emissions for these industries as it relates to its Scope 3 emissions, such as initiatives like **Amazon's** electric delivery vehicles or its recent low-carbon shipping deal with **Maersk**.<sup>87</sup> However, it is important to note that Amazon still needs to fully capture its total Scope 3 emissions as its current disclosure only covers a specific portion of Scope 3 emissions related to Amazon-branded products.

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84. The Net Zero Asset Managers Initiative, "Signatories," updated June 2023, <https://www.netzeroassetmanagers.org/signatories/>.

85. Michael Allen, "Researchers Issue Warning over the Increasing Carbon Footprint of Computational Science," *Physics World*, published July 20, 2023, <https://physicsworld.com/a/researchers-issue-warning-over-the-increasing-carbon-footprint-of-computational-science/>.

86. Matt O'Brien and Hannah Fingerhut, "A.I. Tools Fueled a 34% Spike in Microsoft's Water Consumption, and One City with Its Data Centers Is Concerned about the Effect on Residential Supply," *Fortune*, published September 9, 2023, <https://fortune.com/2023/09/09/ai-chatgpt-usage-fuels-spike-in-microsoft-water-consumption/>.

87. Amazon, *Building a Better Future Together: 2022 Amazon Sustainability Report*, accessed September 14, 2023, <https://sustainability.aboutamazon.com/2022-sustainability-report.pdf>.

# CONCLUSION

## Summary of Results

**Disclosing all relevant Scope 3 emissions remains a key area for improvement.** In 2023, significant progress was seen in GHG disclosures, with nearly three quarters of assessed companies achieving “A” or “B” grades, a notable improvement from the previous year. However, half of the assessed companies failed to disclose all relevant Scope 3 emissions, despite improved reporting of operational (Scope 1 and 2) emissions. Nevertheless, there is progress as more companies are reporting Scope 3 emissions compared to the previous year. Continuing to improve in this area will allow companies to fully evaluate its emissions inventory, allowing investors to assess a companies’ progress each year, and conduct accurate climate risk mitigation that targets a company’s most material sources of emissions.

**Companies assessed year-over-year show signs of improvement, but some companies declined in overall score.** When comparing the results from the 2022 scorecard to 2023, half of the companies assessed demonstrated slight improvements in its overall grades, showing progress toward a net zero future. Notably, **Visa**, **Apple**, and **Equinix** demonstrated significant progress. However, 12% of companies experienced a decline in their overall grades, with **Abbott Laboratories** and **Ecolab** facing substantial drops due to increasing emissions year-over-year. This demonstrates the need for companies to not only implement ambitious targets, but also achieve tangible emissions reductions aligned with a 1.5°C pathway.

**The lack of 1.5°C-aligned year-over-year emissions reductions across companies’ full scope of emissions remains a concern.** A majority of companies received an “F” grade for GHG performance, highlighting a critical area for improvement. While some firms set ambitious net zero goals, many failed to demonstrate year-over-year emissions reductions, with many examples of companies even increasing its most significant sources of emissions. This highlights the importance for interim GHG reduction targets to cover companies’ vast majority of emissions sources and be aligned with 1.5°C.

This scorecard establishes the progress and gaps in companies’ efforts toward achieving net zero emissions. While notable strides have been made in GHG disclosure and target setting, there remains a significant challenge in effectively reducing emissions, especially in alignment with 1.5°C pathway. The findings of this report emphasize the urgency for companies to not only set bold targets, but also to implement rigorous measures to achieve tangible reductions across its value chains.

## Looking to the Future

The findings from this assessment – as well as the outcome of the 2023 proxy season – underscore the need for shareholders to leverage their rights to advocate for companies to set comprehensive net zero goals. It is evident that even some of the world's most advanced companies have considerable work ahead to demonstrate progress toward achieving a 1.5°C-aligned net zero pathway by 2050. The need for collective action is highlighted by several focal areas for improvement.

1. There is a pressing need for industry wide transparency in Scope 3 emissions disclosures – comprehensive reporting of indirect emissions along the value chain is crucial for shareholders to make informed decisions and for companies to conduct robust climate risk management.
2. Companies across industries must establish and commit to 1.5°C-aligned interim and long-term targets covering all Scopes. Investors can leverage their voting power to ensure companies across their portfolio have taken climate risks into consideration by setting these necessary targets.
3. In addition to setting targets, companies must demonstrate near-term 1.5°C-aligned averaged year-over-year emissions reductions, which demonstrates to shareholders a company's commitment to tangible advancements toward a net zero future.

While the 2023 scorecard grades indicate room for growth, optimism remains that corporate climate progress will improve in the coming years. The transition to a clean energy economy is already underway, driven by cost-effective, renewable technology. Each year, companies continue to commit to net zero emissions by 2050. When large companies report emissions and set reduction targets, other companies across the supply chain are then supported in disclosing and reducing value chain emissions. Shareholders and companies can both take proactive steps to address climate risks by focusing on transparent disclosures, ambitious 1.5°C-aligned interim and long-term targets, and average year-on-year emissions reductions. By embracing this evolving landscape, shareholders and companies can collectively drive substantial progress toward a net zero future.

# ANNEX

## A. COMPANY SCORES BY PILLAR

COMPANY NAME	OVERALL POINTS	OVERALL GRADE	PILLAR 1: DISCLOSURES	PILLAR 2: TARGETS	PILLAR 3: PERFORMANCE
Apple Inc	17	A	A	B	A
Oracle Corp	17	A	A	B	A
Trane Technologies PLC	17	A	A	B	A
Nike Inc	16	A	B	B	A
Alphabet Inc	15	A-	A	B	B
Colgate-Palmolive Co	15	A-	A	C	A
Prologis Inc	14	B+	A	D	A
Microsoft Corp	13	B	A	B	C
Visa Inc	13	B	A	B	C
Weyerhaeuser Co	13	B	A	B	C
Bunge Ltd	12	B-	A	F	A
Equinix Inc	12	B-	A	C	B
Ford Motor Co	12	B-	A	B	C
PepsiCo Inc	12	B-	A	B	C
AT&T Inc	11	C+	A	C	C
General Motors Co	11	C+	A	C	C
LyondellBasell Industries NV	11	C+	A	C	C
United Parcel Service Inc	11	C+	B	D	B
American Airlines Group Inc	10	C	A	D	C
Dow Inc	10	C	A	D	C
T-Mobile US Inc	10	C	A	A	F
Air Products & Chemicals Inc	9	C-	A	D	C
ConocoPhillips	9	C-	A	D	C
Devon Energy Corp	9	C-	A	D	C
Duke Energy Corp	9	C-	A	D	C
Ecolab Inc	9	C-	A	B	F
EQT Corporation	9	C-	A	D	C
Southern Co	9	C-	A	D	C
Verizon Communications Inc	9	C-	A	C	D
Vistra Corp	9	C-	A	D	C
NextEra Energy Inc	9	C-	A	D	C
Abbott Laboratories	8	C-	A	F	C
Meta Platforms Inc (Facebook)	8	C-	A	B	F

(Continued on next page.)

COMPANY NAME	OVERALL POINTS	OVERALL GRADE	PILLAR 1: DISCLOSURES	PILLAR 2: TARGETS	PILLAR 3: PERFORMANCE
Pfizer Inc	8	C-	A	B	F
Sherwin-Williams Co	8	C-	A	F	C
SLB (Schlumberger)	8	C-	A	B	F
United Airlines Holdings Inc	8	C-	A	D	C
Ameren Corp	7	D+	A	D	D
Boeing Co	7	D+	A	C	F
Caterpillar Inc	7	D+	B	F	C
Cummins Inc	7	D+	A	C	F
Linde PLC	7	D+	A	D	D
Lowe's Companies Inc	7	D+	B	B	F
Occidental Petroleum Corp	7	D+	A	D	D
PayPal Holdings Inc	7	D+	B	B	F
Walmart Inc	7	D+	A	C	F
American Electric Power Co Inc	7	D+	A	D	D
Coca-Cola Co	6	D	A	D	F
Comcast Corp	6	D	A	D	D
Eli Lilly and Co	6	D	A	D	D
Freeport-McMoRan Inc	6	D	B	D	D
Honeywell International Inc	6	D	B	C	F
Johnson & Johnson	6	D	B	C	F
Lockheed Martin Corp	6	D	A	D	F
NRG Energy Inc	6	D	B	C	F
Procter & Gamble Co	6	D	A	D	F
The Walt Disney Co	6	D	B	C	F
AbbVie Inc	5	D	B	D	F
Bank of America Corp	5	D	B	D	F
Delta Air Lines Inc	5	D	B	D	F
Exelon Corp	5	D	A	D	F
FirstEnergy Corp	5	D	A	D	F
Merck & Co Inc	5	D	C	C	F
RTX Corp	5	D	B	D	F
UnitedHealth Group Inc	5	D	C	C	F
Broadcom Inc	4	D-	C	D	F
Dominion Energy Inc	4	D-	B	D	F

(Continued on next page.)



COMPANY NAME	OVERALL POINTS	OVERALL GRADE	PILLAR 1: DISCLOSURES	PILLAR 2: TARGETS	PILLAR 3: PERFORMANCE
International Paper Co	4	D-	A	F	F
McDonald's Corp	4	D-	B	D	F
NVIDIA Corp	4	D-	B	D	F
PACCAR Inc	4	D-	A	F	F
PPL Corp	4	D-	B	D	F
The AES Corp	4	D-	C	D	F
The Home Depot Inc	4	D-	C	D	F
WEC Energy Group Inc	4	D-	B	D	F
Wells Fargo & Co	4	D-	B	D	F
Xcel Energy Inc	4	D-	B	D	F
Amazon.com Inc	3	F	C	D	F
Charter Communications Inc	3	F	C	D	F
Chevron Corp	3	F	C	D	F
Crown Castle Inc	3	F	C	D	F
EOG Resources Inc	3	F	C	D	F
Exxon Mobil Corp	3	F	C	D	F
General Electric Co	3	F	C	D	F
JPMorgan Chase & Co	3	F	C	D	F
Kinder Morgan Inc	3	F	B	F	F
Martin Marietta Materials Inc	3	F	C	D	F
Sempra Energy	3	F	C	D	F
Southern Copper Corp	3	F	C	D	F
Union Pacific Corp	3	F	C	D	F
American Tower Corp	2	F	C	F	F
Block Inc (Square Inc)	2	F	F	D	F
Costco Wholesale Corp	2	F	C	F	F
Marathon Petroleum Corp	2	F	C	F	F
PBF Energy Inc	2	F	C	F	F
Phillips 66	2	F	C	F	F
Public Storage	2	F	C	F	F
Tesla Inc	2	F	C	F	F
Valero Energy Corp	2	F	C	F	F
Berkshire Hathaway Inc	0	F	F	F	F

# B. INDICATORS MET BY COMPANY

PILLAR 1				
COMPANY NAME	1.1 DISCLOSES SCOPE 1 EMISSIONS	1.2 DISCLOSES SCOPE 2 EMISSIONS	1.3 DISCLOSES ALL RELEVANT SCOPE 3 EMISSIONS	1.4 DISCLOSES CARBON OFFSETS PURCHASED (CO2E TONNES), DESCRIPTION OF OFFSETS PROJECTS, AND VERIFICATION STATUS
Abbott Laboratories	Met	Met	Met	Met
AbbVie Inc	Met	Met	Not Met	Met
Air Products & Chemicals Inc	Met	Met	Met	Met
Alphabet Inc	Met	Met	Met	Met
Amazon.com Inc	Met	Met	Not Met	Not Met
Ameren Corp	Met	Met	Met	Met
American Airlines Group Inc	Met	Met	Met	Met
American Electric Power Co Inc	Met	Met	Met	Met
American Tower Corp	Met	Met	Not Met	Not Met
Apple Inc	Met	Met	Met	Met
AT&T Inc	Met	Met	Met	Met
Bank of America Corp	Met	Met	Not Met	Met
Berkshire Hathaway Inc	Not Met	Not Met	Not Met	Not Met
Block Inc (Square Inc)	Not Met	Not Met	Not Met	Not Met
Boeing Co	Met	Met	Met	Met
Broadcom Inc	Met	Met	Not Met	Not Met
Bunge Ltd	Met	Met	Met	Met
Caterpillar Inc	Met	Met	Met	Not Met
Charter Communications Inc	Met	Met	Not Met	Not Met
Chevron Corp	Met	Met	Not Met	Not Met
Coca-Cola Co	Met	Met	Met	Met
Colgate-Palmolive Co	Met	Met	Met	Met
Comcast Corp	Met	Met	Met	Met
ConocoPhillips	Met	Met	Met	Met
Costco Wholesale Corp	Met	Met	Not Met	Not Met
Crown Castle Inc	Met	Met	Not Met	Not Met
Cummins Inc	Met	Met	Met	Met
Delta Air Lines Inc	Met	Met	Not Met	Met
Devon Energy Corp	Met	Met	Met	Met
Dominion Energy Inc	Met	Met	Not Met	Met
Dow Inc	Met	Met	Met	Met
Duke Energy Corp	Met	Met	Met	Met
Ecolab Inc	Met	Met	Met	Met
Eli Lilly and Co	Met	Met	Met	Met

(Continued on next page.)

## PILLAR 1

COMPANY NAME	1.1 DISCLOSES SCOPE 1 EMISSIONS	1.2 DISCLOSES SCOPE 2 EMISSIONS	1.3 DISCLOSES ALL RELEVANT SCOPE 3 EMISSIONS	1.4 DISCLOSES CARBON OFFSETS PURCHASED (CO2E TONNES), DESCRIPTION OF OFFSETS PROJECTS, AND VERIFICATION STATUS
EOG Resources Inc	Met	Met	Not Met	Not Met
EQT Corporation	Met	Met	Met	Met
Equinix Inc	Met	Met	Met	Met
Exelon Corp	Met	Met	Met	Met
Exxon Mobil Corp	Met	Met	Not Met	Not Met
FirstEnergy Corp	Met	Met	Met	Met
Ford Motor Co	Met	Met	Met	Met
Freeport-McMoRan Inc	Met	Met	Met	Not Met
General Electric Co	Met	Met	Not Met	Not Met
General Motors Co	Met	Met	Met	Met
Honeywell International Inc	Met	Met	Not Met	Met
International Paper Co	Met	Met	Met	Met
Johnson & Johnson	Met	Met	Met	Not Met
JPMorgan Chase & Co	Met	Met	Not Met	Not Met
Kinder Morgan Inc	Met	Met	Not Met	Met
Linde PLC	Met	Met	Met	Met
Lockheed Martin Corp	Met	Met	Met	Met
Lowe's Companies Inc	Met	Met	Not Met	Met
LyondellBasell Industries NV	Met	Met	Met	Met
Marathon Petroleum Corp	Met	Met	Not Met	Not Met
Martin Marietta Materials Inc	Met	Met	Not Met	Not Met
McDonald's Corp	Met	Met	Not Met	Met
Merck & Co Inc	Met	Met	Not Met	Not Met
Meta Platforms Inc (Facebook)	Met	Met	Met	Met
Microsoft Corp	Met	Met	Met	Met
NextEra Energy Inc	Met	Met	Met	Met
Nike Inc	Met	Met	Met	Not Met
NRG Energy Inc	Met	Met	Not Met	Met
NVIDIA Corp	Met	Met	Not Met	Met
Occidental Petroleum Corp	Met	Met	Met	Met
Oracle Corp	Met	Met	Met	Met
PACCAR Inc	Met	Met	Met	Met
PayPal Holdings Inc	Met	Met	Not Met	Met
PBF Energy Inc	Met	Met	Not Met	Not Met

(Continued on next page.)

## PILLAR 1

COMPANY NAME	1.1 DISCLOSES SCOPE 1 EMISSIONS	1.2 DISCLOSES SCOPE 2 EMISSIONS	1.3 DISCLOSES ALL RELEVANT SCOPE 3 EMISSIONS	1.4 DISCLOSES CARBON OFFSETS PURCHASED (CO2E TONNES), DESCRIPTION OF OFFSETS PROJECTS, AND VERIFICATION STATUS
PepsiCo Inc	Met	Met	Met	Met
Pfizer Inc	Met	Met	Met	Met
Phillips 66	Met	Met	Not Met	Not Met
PPL Corp	Met	Met	Not Met	Met
Procter & Gamble Co	Met	Met	Met	Met
Prologis Inc	Met	Met	Met	Met
Public Storage	Met	Met	Not Met	Not Met
RTX Corp (Raytheon Technologies)	Met	Met	Not Met	Met
Sempra Energy	Met	Met	Not Met	Not Met
Sherwin-Williams Co	Met	Met	Met	Met
SLB (Schlumberger)	Met	Met	Met	Met
Southern Co	Met	Met	Met	Met
Southern Copper Corp	Met	Met	Not Met	Not Met
Tesla Inc	Met	Met	Not Met	Not Met
The AES Corp	Met	Met	Not Met	Not Met
The Home Depot Inc	Met	Met	Not Met	Not Met
The Walt Disney Co	Met	Met	Not Met	Met
T-Mobile US Inc	Met	Met	Met	Met
Trane Technologies PLC	Met	Met	Met	Met
Union Pacific Corp	Met	Met	Not Met	Not Met
United Airlines Holdings Inc	Met	Met	Met	Met
United Parcel Service Inc	Met	Met	Met	Not Met
UnitedHealth Group Inc	Met	Met	Not Met	Not Met
Valero Energy Corp	Met	Met	Not Met	Not Met
Verizon Communications Inc	Met	Met	Met	Met
Visa Inc	Met	Met	Met	Met
Vistra Corp	Met	Met	Met	Met
Walmart Inc	Met	Met	Met	Met
WEC Energy Group Inc	Met	Met	Not Met	Met
Wells Fargo & Co	Met	Met	Not Met	Met
Weyerhaeuser Co	Met	Met	Met	Met
Xcel Energy Inc	Met	Met	Not Met	Met

(Continued on next page.)

## PILLAR 2

COMPANY NAME	2.1 GHG REDUCTION GOAL(S) ESTABLISHED (NOT INCLUDED IN SCORE)	2.2 GHG REDUCTION GOAL FOR SCOPE 1 ALIGNED WITH 1.5°C (2025-2035)	2.3 GHG REDUCTION GOAL FOR SCOPE 2 ALIGNED WITH 1.5°C (2025-2035)	2.4 GHG REDUCTION GOAL FOR ALL RELEVANT SCOPE 3 ALIGNED WITH 1.5°C (2025-2035)	2.5 ANY NET ZERO GOAL BY 2050 OR SOONER	2.6 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES	2.7 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES WITH LIMITED OFFSETS
Abbott Laboratories	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
AbbVie Inc	Met	Met	Met	Not Met	Not Met	Not Met	Not Met
Air Products & Chemicals Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Alphabet Inc	Met	Met	Met	Met	Met	Met	Not Met
Amazon.com Inc	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Ameren Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
American Airlines Group Inc	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
American Electric Power Co Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
American Tower Corp	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Apple Inc	Met	Met	Met	Met	Met	Met	Not Met
AT&T Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Bank of America Corp	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Berkshire Hathaway Inc	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Block Inc (Square Inc)	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Boeing Co	Met	Met	Met	Not Met	Met	Not Met	Not Met
Broadcom Inc	Met	Met	Met	Not Met	Not Met	Not Met	Not Met
Bunge Ltd	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Caterpillar Inc	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Charter Communications Inc	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Chevron Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Coca-Cola Co	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Colgate-Palmolive Co	Met	Met	Met	Not Met	Met	Not Met	Not Met
Comcast Corp	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
ConocoPhillips	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Costco Wholesale Corp	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Crown Castle Inc	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Cummins Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Delta Air Lines Inc	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Devon Energy Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Dominion Energy Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Dow Inc	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Duke Energy Corp	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Ecolab Inc	Met	Met	Met	Not Met	Met	Met	Met
Eli Lilly and Co	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met

(Continued on next page.)

## PILLAR 2

COMPANY NAME	2.1 GHG REDUCTION GOAL(S) ESTABLISHED (NOT INCLUDED IN SCORE)	2.2 GHG REDUCTION GOAL FOR SCOPE 1 ALIGNED WITH 1.5°C (2025-2035)	2.3 GHG REDUCTION GOAL FOR SCOPE 2 ALIGNED WITH 1.5°C (2025-2035)	2.4 GHG REDUCTION GOAL FOR ALL RELEVANT SCOPE 3 ALIGNED WITH 1.5°C (2025-2035)	2.5 ANY NET ZERO GOAL BY 2050 OR SOONER	2.6 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES	2.7 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES WITH LIMITED OFFSETS
EOG Resources Inc	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
EQT Corporation	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Equinix Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Exelon Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Exxon Mobil Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
FirstEnergy Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Ford Motor Co	Met	Met	Met	Not Met	Met	Met	Not Met
Freeport-McMoRan Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
General Electric Co	Not Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
General Motors Co	Met	Met	Met	Not Met	Met	Not Met	Not Met
Honeywell International Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
International Paper Co	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Johnson & Johnson	Met	Met	Met	Not Met	Met	Not Met	Not Met
JPMorgan Chase & Co	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Kinder Morgan Inc	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Linde PLC	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Lockheed Martin Corp	Met	Met	Met	Not Met	Not Met	Not Met	Not Met
Lowe's Companies Inc	Met	Met	Met	Not Met	Met	Met	Not Met
LyondellBasell Industries NV	Met	Met	Met	Not Met	Met	Not Met	Not Met
Marathon Petroleum Corp	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Martin Marietta Materials Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
McDonald's Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Merck & Co Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Meta Platforms Inc (Facebook)	Met	Met	Met	Not Met	Met	Met	Not Met
Microsoft Corp	Met	Met	Met	Met	Met	Met	Not Met
NextEra Energy Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Nike Inc	Met	Met	Met	Not Met	Met	Met	Met
NRG Energy Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
NVIDIA Corp	Met	Not Met	Met	Not Met	Not Met	Not Met	Not Met
Occidental Petroleum Corp	Not Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Oracle Corp	Met	Met	Met	Met	Met	Met	Not Met
PACCAR Inc	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
PayPal Holdings Inc	Met	Met	Met	Not Met	Met	Met	Not Met
PBF Energy Inc	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met

(Continued on next page.)

PILLAR 2							
COMPANY NAME	2.1 GHG REDUCTION GOAL(S) ESTABLISHED (NOT INCLUDED IN SCORE)	2.2 GHG REDUCTION GOAL FOR SCOPE 1 ALIGNED WITH 1.5°C (2025-2035)	2.3 GHG REDUCTION GOAL FOR SCOPE 2 ALIGNED WITH 1.5°C (2025-2035)	2.4 GHG REDUCTION GOAL FOR ALL RELEVANT SCOPE 3 ALIGNED WITH 1.5°C (2025-2035)	2.5 ANY NET ZERO GOAL BY 2050 OR SOONER	2.6 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES	2.7 NET ZERO GOAL BY 2050 OR SOONER COVERING ALL SCOPES WITH LIMITED OFFSETS
PepsiCo Inc	Met	Met	Met	Not Met	Met	Met	Not Met
Pfizer Inc	Met	Met	Met	Not Met	Met	Met	Not Met
Phillips 66	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
PPL Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Procter & Gamble Co	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Prologis Inc	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
Public Storage	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
RTX Corp (Raytheon Technologies)	Met	Met	Met	Not Met	Not Met	Not Met	Not Met
Sempra Energy	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Sherwin-Williams Co	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
SLB (Schlumberger)	Met	Met	Met	Not Met	Met	Met	Not Met
Southern Co	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Southern Copper Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Tesla Inc	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
The AES Corp	Not Met	Not Met	Not Met	Not Met	Met	Met	Not Met
The Home Depot Inc	Met	Met	Met	Not Met	Not Met	Not Met	Not Met
The Walt Disney Co	Met	Met	Met	Not Met	Met	Not Met	Not Met
T-Mobile US Inc	Met	Met	Met	Met	Met	Met	Met
Trane Technologies PLC	Met	Met	Met	Not Met	Met	Met	Met
Union Pacific Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
United Airlines Holdings Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
United Parcel Service Inc	Met	Not Met	Not Met	Not Met	Met	Met	Not Met
UnitedHealth Group Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Valero Energy Corp	Met	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Verizon Communications Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
Visa Inc	Met	Met	Met	Met	Met	Met	Not Met
Vistra Corp	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Walmart Inc	Met	Met	Met	Not Met	Met	Not Met	Not Met
WEC Energy Group Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Wells Fargo & Co	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Weyerhaeuser Co	Met	Met	Met	Not Met	Met	Met	Met
Xcel Energy Inc	Met	Not Met	Not Met	Not Met	Met	Not Met	Not Met

(Continued on next page.)

## PILLAR 3

COMPANY NAME	3.1 SCOPE 1 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.2 SCOPE 2 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.3 SCOPE 3 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.4 SCOPE 1 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.5 SCOPE 2 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.6 SCOPE 3 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C
Abbott Laboratories	Not Met	Not Met	Not Met	Met	Met	Met
AbbVie Inc	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
Air Products & Chemicals Inc	Not Met	Not Met	Not Met	Met	Met	Met
Alphabet Inc	Not Met	Not Met	Met	Not Met	Not Met	Met
Amazon.com Inc	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
Ameren Corp	Not Met	Not Met	Not Met	Met	Not Met	Not Met
American Airlines Group Inc	Not Met	Met	Not Met	Met	Met	Met
American Electric Power Co Inc	Not Met	Met	Not Met	Not Met	Met	Met
American Tower Corp	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Apple Inc	Not Met	Not Met	Met	Met	Not Met	Met
AT&T Inc	Met	Met	Met	Not Met	Not Met	Not Met
Bank of America Corp	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Berkshire Hathaway Inc	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.
Block Inc (Square Inc)	Not Met	Not Met	Not Disclosed.	Met	Not Met	Not Disclosed.
Boeing Co	Not Met	Met	Not Met	Not Met	Met	Not Met
Broadcom Inc	Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
Bunge Ltd	Not Met	Not Met	Met	Met	Met	Met
Caterpillar Inc	Not Met	Not Met	Not Met	Met	Met	Met
Charter Communications Inc	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Chevron Corp	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Coca-Cola Co	Not Met	Not Met	Not Met	Met	Met	Not Met
Colgate-Palmolive Co	Not Met	Met	Met	Not Met	Met	Met
Comcast Corp	Met	Met	Not Met	Met	Met	Not Met
ConocoPhillips	Not Met	Not Met	Not Met	Met	Met	Met
Costco Wholesale Corp	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.	Not Disclosed.
Crown Castle Inc	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Cummins Inc	Not Met	Not Met	Not Met	Met	Met	Not Met
Delta Air Lines Inc	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
Devon Energy Corp	Not Met	Not Met	Not Met	Met	Met	Met
Dominion Energy Inc	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
Dow Inc	Not Met	Met	Not Met	Met	Met	Met
Duke Energy Corp	Not Met	Met	Not Met	Met	Met	Not Met
Ecolab Inc	Not Met	Not Met	Not Met	Met	Not Met	Not Met
Eli Lilly and Co	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.

(Continued on next page.)



### PILLAR 3

COMPANY NAME	3.1 SCOPE 1 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.2 SCOPE 2 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.3 SCOPE 3 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.4 SCOPE 1 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.5 SCOPE 2 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.6 SCOPE 3 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C
EOG Resources Inc	Not Met	Not Met	Not Disclosed.	Met	Not Met	Not Disclosed.
EQT Corporation	Not Met	Not Met	Not Met	Met	Met	Met
Equinix Inc	Met	Met	Not Met	Met	Met	Met
Exelon Corp	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
Exxon Mobil Corp	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
FirstEnergy Corp	Not Met	Met	Not Met	Not Met	Met	Not Met
Ford Motor Co	Not Met	Met	Not Met	Not Met	Met	Met
Freeport-McMoRan Inc	Not Met	Not Met	Not Met	Met	Met	Not Met
General Electric Co	Not Met	Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
General Motors Co	Not Met	Met	Not Met	Not Met	Met	Met
Honeywell International Inc	Not Met	Not Met	Not Disclosed.	Not Met	Met	Not Disclosed.
International Paper Co	Not Met	Met	Not Met	Not Met	Not Met	Not Met
Johnson & Johnson	Not Met	Met	Not Met	Not Met	Met	Not Met
JPMorgan Chase & Co	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
Kinder Morgan Inc	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Linde PLC	Not Met	Not Met	Not Met	Met	Met	Not Met
Lockheed Martin Corp	Not Met	Met	Not Met	Not Met	Met	Not Met
Lowe's Companies Inc	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
LyondellBasell Industries NV	Not Met	Not Met	Not Met	Met	Met	Met
Marathon Petroleum Corp	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
Martin Marietta Materials Inc	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
McDonald's Corp	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Merck & Co Inc	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Meta Platforms Inc (Facebook)	Not Met	Met	Not Met	Not Met	Met	Not Met
Microsoft Corp	Not Met	Met	Not Met	Met	Met	Met
NextEra Energy Inc	Met	Not Met	Not Met	Not Met	Not Met	Not Met
Nike Inc	Not Met	Met	Met	Not Met	Met	Met
NRG Energy Inc	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
NVIDIA Corp	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Occidental Petroleum Corp	Met	Met	Not Met	Met	Met	Not Met
Oracle Corp	Not Met	Met	Met	Met	Met	Met
PACCAR Inc	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met
PayPal Holdings Inc	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
PBF Energy Inc	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.

(Continued on next page.)

## PILLAR 3

COMPANY NAME	3.1 SCOPE 1 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.2 SCOPE 2 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.3 SCOPE 3 ABSOLUTE EMISSIONS REDUCTIONS ALIGNED WITH 1.5°C	3.4 SCOPE 1 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.5 SCOPE 2 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C	3.6 SCOPE 3 EMISSIONS INTENSITY REDUCTIONS ALIGNED WITH 1.5°C
PepsiCo Inc	Not Met	Met	Not Met	Met	Met	Met
Pfizer Inc	Not Met	Not Met	Not Met	Met	Met	Not Met
Phillips 66	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
PPL Corp	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
Procter & Gamble Co	Not Met	Met	Not Met	Not Met	Met	Not Met
Prologis Inc	Met	Met	Met	Met	Met	Met
Public Storage	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
RTX Corp (Raytheon Technologies)	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
Sempra Energy	Not Met	Not Met	Not Disclosed.	Met	Not Met	Not Disclosed.
Sherwin-Williams Co	Not Met	Not Met	Not Met	Not Met	Met	Met
SLB (Schlumberger)	Not Met	Met	Not Met	Not Met	Met	Not Met
Southern Co	Not Met	Not Met	Not Met	Met	Met	Met
Southern Copper Corp	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Tesla Inc	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
The AES Corp	Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
The Home Depot Inc	Not Met	Met	Not Disclosed.	Met	Met	Not Disclosed.
The Walt Disney Co	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
T-Mobile US Inc	Not Met	Met	Not Met	Not Met	Met	Not Met
Trane Technologies PLC	Met	Met	Met	Met	Met	Met
Union Pacific Corp	Not Met	Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
United Airlines Holdings Inc	Not Met	Met	Not Met	Met	Met	Not Met
United Parcel Service Inc	Not Met	Met	Met	Met	Met	Met
UnitedHealth Group Inc	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Valero Energy Corp	Not Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.
Verizon Communications Inc	Met	Met	Not Met	Met	Met	Not Met
Visa Inc	Not Met	Met	Not Met	Not Met	Met	Met
Vistra Corp	Not Met	Met	Met	Met	Met	Met
Walmart Inc	Not Met	Met	Not Met	Not Met	Met	Not Met
WEC Energy Group Inc	Not Met	Met	Not Disclosed.	Not Met	Met	Not Disclosed.
Wells Fargo & Co	Not Met	Not Met	Not Disclosed.	Not Met	Not Met	Not Disclosed.
Weyerhaeuser Co	Met	Not Met	Not Met	Met	Met	Met
Xcel Energy Inc	Met	Not Met	Not Disclosed.	Met	Met	Not Disclosed.

# C. SCORING METHODOLOGY

## Overview

- The 2023 scorecard continued to assess the 55 companies on the 2022 scorecard. The additional companies assessed on the 2023 scorecard were chosen from a selection of top five U.S. companies by market capitalization across 11 sectors, resulting in 100 companies on the 2023 scorecard.
- Company disclosures were assessed as of August 31, 2023.
- For each indicator, a company received a “Yes” if it had fulfilled the requirements of that indicator or a “No” if it had not fulfilled the requirements.
- The definitions, methodology, and grading used in each Pillar are provided below by indicator.

**Overall Grading:** To determine the overall grades, the methodology employs a differential weighting system for the three pillars.

Overall Grade	Pillar Weight	Pillar 1: 22%				Pillar 2: 33%						Pillar 3: 45%								
	Points	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Grade	F	F	F	F	D-	D	D	D+	C-	C-	C	C+	B-	B	B+	A-	A	A	A+

## Pillar 1: GHG Disclosures

*Common rules for Pillar 1:*

- Emissions disclosure must encompass all GHG compounds, such as methane and carbon dioxide, with a global warming impact. CO<sub>2e</sub> is frequently used as a common unit for all types of GHG emissions.
- Emissions disclosures must include all sources of emissions related to a company’s operations, products, and supply chains, as described in the GHG Protocol’s Scopes 1, 2, and 3 standards. Companies that only reported on certain segments received a zero score for the emissions disclosure pillar (e.g., a steel company that only discloses its electric arc furnace emissions as opposed to its entire operation’s emissions would not receive a point; an oil and gas company that only discloses upstream emissions would not receive a point; a company with global operations that only discloses data in limited regions would not receive a point). Although companies do not always use the “Scopes 1 through 3” terminology, language indicating that emissions from a particular Scope were reported did receive a point.
- Emissions disclosure must be reported annually (e.g., aggregated emissions for multiple years is not sufficient). If 2022 data were unavailable, then 2021 data were used. If the only data available were 2020, they were excluded. In instances where equity-basis and operated-basis reporting was provided, equity-basis was used to score companies to ensure only the emissions that companies have direct involvement in were captured.

**Grading for Pillar 1:** Every indicator met is worth 1 point each. Pillar 1 is weighed at 22%.

Pillar 1	Points	0	1	2	3	4
	Grade	F	D	C	B	A

	Indicator	Methodology
1.1	Discloses Scope 1 emissions.	Scope 1 emissions disclosure must include all direct emissions that occur from sources controlled or owned by an organization. The GHG Protocol Corporate Standards states that Scope 1 emissions are principally the result of emissions from (1) the generation of electricity, heat, or steam; (2) emissions from physical or chemical processing; (3) emissions from the transportation of materials, products, waste, and employees; and (4) fugitive emissions. <sup>88</sup>
1.2	Discloses Scope 2 emissions.	<p>Scope 2 emissions are defined by the GHG Protocol as indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling.<sup>89</sup></p> <p>Either “location-based” or “market-based” Scope 2 emissions reporting is acceptable when covering all power use by the company. Location-based accounting considers average emissions factors for the electricity grids that provide electricity. Market-based accounting considers contractual arrangements under which the company procures power from specific sources, such as renewable energy credits or virtual power purchase agreements with renewable sources.</p> <p>In assessing companies where both types of data were provided by companies, market-based Scope 2 emissions were used to score companies to give credit to companies that are engaging in renewable energy procurement.</p>
1.3	Discloses all relevant Scope 3 emissions.	<p>Scope 3 emissions include all other indirect emissions that occur in a company's value chain that are not included in Scopes 1 and 2. The GHG Protocol breaks Scope 3 emissions into 15 categories and requires companies to quantify and report emissions from each category.<sup>90</sup></p> <p>To earn a point, company reporting must include all 15 Scope 3 categories or state that all relevant Scope 3 categories have been reported. A company that discloses some categories, such as Category 6, “business travel,” but fails to disclose other relevant categories, will not receive credit for this indicator.</p> <p>“Relevance” is determined on a per-business-model basis and is informed by other third party frameworks, including those released by the SBTi and CA100+ Net Zero Company Benchmark. Relevant emissions are defined for this indicator as emissions germane to the company's business model that are not <i>de minimis</i>. For example, a retailer that primarily outsources manufacturing of products must disclose Category 1, “purchased goods and services.” An engine manufacturer that sells high-emitting products must disclose Category 11, “use of sold products.” Financial institutions with investment units must disclose financed emissions associated with Category 15, “investments.” However, a company without franchises could report Category 14, “franchises,” as not relevant. Additionally, a company may have emissions from Category 8, “upstream leased assets,” that only account for 2% of its total emissions and could therefore report Category 8 as <i>de minimis</i>.</p>

88. World Resources Institute and World Business Council for Sustainable Development, *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, February 2017, <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>, p. 27.

89. World Resources Institute and World Business Council for Sustainable Development, *GHG Protocol Scope 2 Guidance*, September 2020, [https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance\\_Final\\_Sept26.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf).

90. World Resources Institute and World Business Council for Sustainable Development, *Greenhouse Gas Protocol: Technical Guidance for Calculating Scope 3 Emissions*, 2013, [https://ghgprotocol.org/sites/default/files/standards/Scope3\\_Calculation\\_Guidance\\_0.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf).

	Indicator	Methodology
1.4	Discloses carbon offsets purchased (CO <sub>2</sub> e tonnes), description of offsets projects, and verification status.	<p>To receive credit, a company must (1) disclose the amount of carbon offsets or carbon credits purchased over a given year; (2) provide a description of the types of carbon offsets projects; and (3) provide verification information and status of offsets.</p> <p>A company will not receive a point for this category if it (1) claims to or plans to achieve carbon neutrality but does not report the number of credits purchased annually or (2) only provides the amount of money invested in offsets and similar projects but does not provide the number of credits generated and retired.</p>

## Pillar 2: GHG Targets

### Common rules for Pillar 2:

- To earn credit, reported GHG reduction targets, net zero goals, and carbon neutrality goals must address the company’s Scope 1, 2, and 3 emissions.
- If a company states it is “in the process of measuring” or “developing” a goal, or that it has an “ambition to set a goal,” the company did not receive a point for this category.
- Only GHG reduction goals were accepted. Goals regarding renewables, waste, or energy efficiency were not accepted. Furthermore, a net zero or carbon neutrality goal was not accepted as a GHG reduction goal unless it stated a commitment that a specific percentage reduction would be achieved without the use of carbon offsets.
- A GHG reduction goal for a particular Scope of emissions only counted if it encompassed 95% of a given Scope’s emissions.
- Assessment of whether a goal is aligned with 1.5°C utilizes methodologies of SBTi’s cross-sector 1.5°C requirements.<sup>91</sup> The requirements of 1.5°C alignment is for 4.2% or more reductions year over year in the short term. Where a company has a 1.5°C-aligned target validated by SBTi, such company earned full credit.
- Indicator 2.1 “GHG reduction goal(s) established” is worth 0 points.

**Grading for Pillar 2:** Every indicator from 2.2 through 2.7 that is met is worth 1 point each. Pillar 2 is weighed at 33%.

Pillar 2	Points	0	1	2	3	4	5	6
	Grade	F	D	D	C	B	B	A

91. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

	Indicator	Methodology
2.2	Interim GHG reduction goals for Scope 1 aligned with 1.5°C (2025-2035).	To satisfy this requirement, companies must either have explicit validation from SBTi or a goal that is consistent with SBTi guidance for alignment with limiting global warming to 1.5°C (i.e., 4.2% average reduction per year). <sup>92</sup> Goals that have received approval from SBTi for “well below 2 degrees” do not receive a point for this category.  Goals must have an end date in the 2025 to 2035 timeframe.
2.3	Interim GHG reduction goals for Scope 2 aligned with 1.5°C (2025-2035).	To satisfy this requirement, companies must either have explicit validation from SBTi or a goal that is consistent with SBTi guidance for alignment with limiting global warming to 1.5°C.  Goals must have an end date in the 2025 to 2035 timeframe.
2.4	Interim GHG reduction goals for all relevant Scope 3 aligned with 1.5°C (2025-2035).	To satisfy this requirement, companies must either have explicit validation from SBTi or a goal that is consistent with SBTi guidance for alignment with limiting global warming to 1.5°C.  Assessments if a goal is aligned with 1.5°C criteria utilize methodologies of SBTi’s cross-sector 1.5°C requirements. <sup>93</sup> The requirement of 1.5°C alignment is for 4.2% or more reductions year over year in the short term for Scope 3. Note that this method has been extended from Scope 1 and 2 requirements as SBTi doesn’t provide percent reduction for near-term Scope 3 emissions aligned with 1.5°C.  Goals must have an end date in the 2025 to 2035 timeframe.
2.5	Net zero ambition or carbon neutrality goal by 2050 or sooner.	Goal requires net zero/carbon neutral emissions by 2050 or sooner.
2.6	Net zero ambition or carbon neutrality goal by 2050 or sooner covering all Scopes.	Goal requires net zero/carbon neutral emissions by 2050 or sooner. The goal covers enterprise-wide emissions for Scopes 1 and 2 (e.g., net zero targets by 2050 for Scope 1 and 2 emissions). The goal covers Scope 3 emissions for all 15 categories (or indicates where such categories are not relevant due to <i>de minimis</i> emissions).
2.7	Net zero ambition or carbon neutrality goal by 2050 or sooner covering all Scopes with limited offsets.	Goal requires net zero/carbon neutral emissions by 2050 or sooner. The goal covers enterprise-wide emissions for Scopes 1 and 2 (e.g., net zero targets by 2050 for Scope 1 and 2 emissions). The goal covers Scope 3 emissions for all 15 categories (or indicates where such categories are not relevant due to <i>de minimis</i> emissions). Long-term net zero goals must achieve 90% or more of reductions from reductions, unless otherwise specified for a given industry. <sup>94</sup> Goals that depend largely on the use of offsets and/or unproven technology, such as geologic carbon capture, do not satisfy this category.

92. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

93. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

94. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

## Pillar 3: GHG Reductions

### Common rules for Pillar 3:

- Annual emissions data and revenue from 2018 to 2022 were collected and calculated to determine absolute and intensity reductions. Annual reductions were determined by comparing 2020 data to 2022 data. If 2020 data were not disclosed, 2022 data were compared to 2021; if 2022 data were not yet disclosed due to annual publication timelines, 2021 data were compared to 2020. If a company failed to report 2022 data on its prior reporting data, it was assumed that the company did not report, and no point was given. The change in emissions was averaged year-over-year for either the two-year or three-year period and was compared to the near-term 1.5°C-aligned SBTi requirements.<sup>95</sup>
- Although some companies report GHG intensity emissions used to produce units of products (e.g. barrels of oil, tons of steel), GHG intensity scoring for this report uses company revenue as the denominator (emissions/revenue) to ensure comparability of scoring. Revenue data were retrieved from the company's annual report and compared to sustainability metrics for that year. In some cases, revenue data were retrieved from Yahoo! Finance.
- Companies with only one year of emissions disclosure data, such as 2022, did not receive credit for performance indicators as a year-over-year trend could not be deduced.

**Grading for Pillar 3:** Pillar 3 is worth up to 8 points total, the 6 indicators are weighted by each Scope's percent of total emissions. Pillar 3 is weighed at 45%.

Pillar 3	Points	0	1	2	3	4	5	6	7	8
	Grade	F	D	D	C	C	B	B	B	A

	Indicator	Methodology
<b>3.1</b>	Scope 1 absolute emissions reductions aligned with 1.5°C.	Following SBTi near-term 1.5°C-aligned guidance, absolute Scope 1 emissions must decline at 4.2% or more per year to receive a point on this indicator.
<b>3.2</b>	Scope 2 absolute emissions reductions aligned with 1.5°C.	Following SBTi near-term 1.5°C-aligned guidance, absolute Scope 2 emissions must decline at 4.2% or more per year to receive a point on this indicator.  Market-based Scope 2 data were preferred for this scorecard. When a company provided both market-based and location-based data, market-based data were recorded. If a company only provided location-based data, location-based data were recorded.

95. Science Based Targets Initiative, *SBTi Corporate Net-Zero Standard*, published April 2023, <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>. In addition to the cross-sector pathway guidance, SBTi has also laid out guidance for sector-specific pathways. The sector-specific pathway is for companies that are in a typically heavy-emitting sector or a FLAG (forest, land, and agriculture emissions) sector and may need different requirements for target-setting methodologies and ambition levels. See Science Based Targets Initiative, "Sector Guidance," <https://sciencebasedtargets.org/sectors>.

	Indicator	Methodology
<b>3.3</b>	Scope 3 absolute emissions reductions aligned with 1.5°C.	SBTi guidance on aligning near-term Scope 1 and 2 emissions to 1.5°C has been extended to Scope 3. Absolute Scope 3 emissions must decline at 4.2% or more per year to receive a point on this indicator.
<b>3.4</b>	Scope 1 emissions intensity reductions aligned with 1.5°C.	SBTi only provides 1.5°C-aligned economic intensity requirements for Scope 3 emissions of near-term 7% year over year reductions. Extending this guidance, a 7% year over year reduction is used to determine if Scope 1 emissions intensity is aligned with 1.5°.
<b>3.5</b>	Scope 2 emissions intensity reductions aligned with 1.5°C.	SBTi only provides 1.5°C-aligned economic intensity requirements for Scope 3 emissions of near-term 7% year over year reductions. Extending this guidance, a 7% year over year reduction is used to determine if Scope 2 emissions intensity is aligned with 1.5°C.
<b>3.6</b>	Scope 3 emissions intensity reductions aligned with 1.5°C.	Following SBTi's 1.5°C-aligned near-term requirements, Scope 3 economic emissions intensity must decline at 7% or more per year to receive a point on this indicator.



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