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CORPORATE CLIMATE TARGETS:
BETWEEN SCIENCE AND CLIMATE WASHING

Nadav Orian Peer*

ABSTRACT

The use of corporate climate targets has exploded in recent years. Over three thousand corporations, including the largest and most profitable in the world, have adopted corporate climate targets as commitments to align their actions with climate science and the Paris Agreement. However, the broad adoption of these targets raises important questions: are these commitments truly aligned with science in the way they are advertised, or do they raise “climate washing” concerns, i.e., do they exaggerate the benefits and significance of the climate targets? This Article investigates the role that science actually plays within targets, and explores potential theories of liability when commitments turn out to be exaggerated. The Article’s analysis focuses on corporate targets issued as part of the Science Based Targets Initiative (SBTi). SBTi is a standard-setting body that provides a detailed rule framework for the setting of corporate climate targets. The nonprofit has recently experienced spectacular growth, with companies representing some $38 trillion—one third of global market capitalization—now committing to targets under its seal.

The Article finds that the role of science in SBTi’s rule framework is more complex than it first appears. SBTi rules employ a scientific concept known as the global carbon budget, but scientific knowledge cannot translate that carbon budget, which is indeed global, to company-level targets. When SBTi provides that translation in its rules, it is not merely deriving targets from science, but exercising considerable discretion. That discretion, and its distributive implications, are currently under-appreciated in both academia and practice. Building on this analysis, the Article turns to the issue of potential liability for climate washing in some companies’ SBTi targets. The key, it argues, is to move beyond the instinct that a target can only amount to climate washing if it is in direct conflict with science. Because science itself cannot determine appropriate company-level targets, it is necessary to identify alternative ways in which a given corporate target is problematic or misleading. To this effect, the Article suggests three avenues through which advocates may pursue climate washing liability. These include companies in non-compliance with SBTi criteria, statements that mislead consumer perception, and SBTi criteria that depart from expert consensus.
INTRODUCTION

Recent years have witnessed dramatic growth in voluntary corporate climate targets. With a corporate climate target, a company calculates its greenhouse gas (GHG) emissions, and commits to reducing those emissions at a given rate by a given year. It is common for corporate climate targets to be issued according to technical standards created by specialized nongovernmental actors. One standard-setting body—the Science-Based Targets Initiative, or “SBTi”—has gained tremendous influence in the field. As of late 2022, companies making voluntary commitments to targets under SBTi’s standard represented a staggering one third of global market capitalization.\(^1\) SBTi’s rise to prominence is also highlighted by the Biden Administration’s 2022 proposed Federal Supplier Climate Risks and Resilience Rule.\(^2\) The proposed rule requires major federal contractors to set and validate SBTi targets.

SBTi claims that the corporate climate targets issued under its standards are “science-based,” in the sense that the speed of GHG reduction under the targets is aligned with the Paris Agreement’s goal of maintaining global warming to well-below 2°C, and ideally, no more than 1.5°C above pre-industrial levels.

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\(^2\) 87 FR 68312 (Jan 13, 2023).
According to this view, a company committing to an SBTi targets is exercising good corporate citizenship by assuming its “fair share” of necessary GHG reductions. Critics of SBTi, and corporate climate targets more generally, have expressed skepticism regarding such claims, and concerns with potential climate washing. Climate washing refers to incorrect or exaggerated claims about the climate benefits of an organization’s actions. One of the most concerning effects of climate washing is dampening of demand for true climate action by leading stakeholders to believe that necessary actions are already underway. This Article analyzes two questions regarding corporate climate targets. The first question concerns the relationship between corporate climate targets and climate science: can the targets accurately be described as science-based? As lawyers, we might feel ill-equipped to answer this question which, one might suspect, requires an understanding of climate science that lies beyond our expertise. Not so. For all its complexity, climate scientific work results in a set of easily understandable figures that go under the label of the global carbon budget. The global carbon budget is published by the International Intergovernmental Panel on Climate Change (IPCC), and reflects the maximum amount and pace of GHGs that the global economy can emit without crossing Paris Agreement thresholds. Our goal is to understand the relationship between the global carbon budget and SBTi standards. These SBTi standards are ultimately a fairly detailed set of rules, and as such, are well within the domain of legal analysis.

The Article’s finding with respect to this first question is that the relationship between corporate climate targets and science is a lot more complex than it appears in the SBTi literature. On the one hand, the global carbon budget provides an important point of departure for SBTi targets, and therefore links the targets with scientific work. On the other hand, as its name suggest, the global carbon budget applies at the global level, whereas SBTi provides targets that apply at the individual company level. That translation from the global carbon budget to the company-level target is not merely the work of science, but involves significant discretion. SBTi rules do not merely derive targets from the global carbon budget, but essentially allocate that budget according to principles that cannot themselves be determined scientifically.

Consider the following analogy. A young country needs to establish its tax system. A budget committee advised by economists is convened to determine the total amount of annual revenue that the young country needs to raise. For simplicity, assume that the amount of tax revenue recommended by the

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5 See Part II below.
budgetary committee is agreed by all, and raises no controversy. A legislative committee is then tasked with writing a tax code that would need to raise the amount of revenue recommended by the budget committee. The question that arises is whether the legislative committee’s tax code can be said to be derived from the budget committee’s tax revenue figure. The answer is that a lot of discretion is used, from needing to raise a certain amount of tax revenue, to determining rules as to how that amount will actually be raised. Will the tax base consist of income, property, or sales? And if income is chosen, how exactly is the term “income” to be defined? And what are the income brackets that will determine how progressive the tax is, and thus, the distribution of the tax burden across the population? What are potential loopholes that taxpayers can exploit through tax planning? These are all complex and somewhat controversial questions of law and policy. To say that the work of the legislative committee was simply derived from the work of the budgetary committee would be a considerable over-simplification. That over-simplification is problematic not merely on intellectual grounds, but on political ones. It makes controversial determinations by the legislative committee appear to have the same level of legitimacy as the original and uncontroversial determination by the budget committee.

Transitioning back to the climate space, IPCC is like the budget committee—determining the global carbon budget—whereas SBTi works as the legislative committee deciding the share of emissions that would need to be reduced by various corporations. This article looks at SBTi rules as a primary source, and uses these rules to distinguish between the widely accepted global carbon budget figures and the allocative and more political nature of the SBTi rule framework. In several instances, this highlights that what SBTi considers to be “science-based” targets can legitimately be viewed as under-ambitious and overly generous to corporations.

The second question the Article addresses is climate washing in corporate climate targets. An intuitive way to think about climate washing is by direct reference to climate science. Under this approach, a corporate climate target amounts to climate washing if the corporation’s actions are not truly consistent with science-based pathways to meeting the goals of the Paris Agreement. This approach is less promising than it first appears. While there can be instances where corporate climate targets seem inconsistent with scientific principles, the concern with these targets goes somewhat deeper. As noted, climate science determines a carbon budget that is global, but in-and-of-itself, cannot divide that budget across individuals (or countries, for that matter). Often, the issue is not that corporate climate targets are inconsistent with the science per se, but that they represent one particular vision of climate action, that is inaccurately raised to the level of an objective scientific truth. As climate advocates, this realization represents somewhat of a challenge as to how we use the term “climate washing” with respect to corporate climate targets. If climate washing does not mean

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7 Recall that SBTi targets are voluntary.
that a target is “inconsistent with the science,” what does it mean exactly? This question is not merely theoretical, but significant for the emerging field of climate washing litigation. Actions regarding climate washing in corporate targets represent an important frontier for this field.

Here, the article suggests we deemphasize the focus on inconsistency with climate science, and refocus on theories of climate washing that may be easier to prove. While the doctrinal aspects of climate washing liability are beyond the scope of this Article, the Article does suggest three high-level theories that advocates can pursue. It also provides examples of specific instances where these theories can be applied. The first theory is climate washing as non-compliance, and likely represents the lowest-hanging fruit. As it turns out, there are numerous instances where companies’ SBTi targets are in substantial non-compliance with SBTi’s own technical rules. An easy way to understand climate washing in targets is by reference to such non-compliance. The second theory is climate washing as misleading consumer perception. This theory assumes that a given target is SBTi compliant, but that the SBTi standard itself involves loopholes that can mislead consumers. From a litigation point of view, consumer perception is a useful concept, because it can be proven empirically through focus group surveys. It would often times be considerably easier to litigate climate washing as matter of consumer perception, than as an abstract question about inconsistency with science. The third and last theory conceives of climate washing as departure from expert consensus. Instead, the theory would be that the standards governing SBTi targets have departed from expert consensus in ways that make the term “science based” misleading. From a litigation point of view, this third theory would likely be the most difficult route for advocates to pursue. Nevertheless, it may succeed in specific instances and be useful for broader advocacy work.

This article contributes to an emerging literature on corporate climate targets in legal scholarship. Several legal scholars have approached corporate climate targets through the lens of a broader phenomenon known as “private environmental governance.” The term, coined by Michael Vandenbergh in a 2013 article, refers to instances where private actors voluntarily adopt norms of environmental conduct in the absence of mandatory government regulation. Vandenbergh was especially interested in understanding

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8 See note 68 infra.
10 Michael P. Vandenbergh, Private Environmental Governance, 99 CORNELL L.R. 129 (2013); see also, SARAH P. LIGHT & MICHAEL P. VANDENBERGH, Private Environmental Governance, ELGAR
the conditions and incentive structures that were driving private environmental action in the decades where traditional public environmental regulation seemed rather static. Corporate climate targets epitomize many of the themes from Vandenbergh’s original article: private action filling a void left by public action on climate, consumer and investor pressures for sustainability as key incentives, the critical role of standard-setting bodies, and the potential “hardening” of soft private norms into hard state law.11

Another important theme of the emerging literature is concern with the climate washing risks of corporate targets. These concerns are varied. They include the lack of enforcement mechanism to ensure target reductions are delivered,12 illegitimate uses of offsets and carbon removals in satisfaction of goals,13 variance in the content of net zero commitments (and hence, under-ambitious targets),14 and “leakages” where companies shift carbon-intensity targets to other companies, which are not themselves bound by targets.15 Authors identifying these concerns generally seem hopeful that they can be addressed, often through concrete proposals made in the articles. More structural critiques of corporate climate targets exist as well. Shelly Welton in particular highlighted the way in which corporate targets “...intentionally [sideline] democratic and distributive considerations” involved in societal climate policy, especially as they relate to racial and economic justice. Her work also expresses concern that the uncoordinated nature of the targets can lead to policy outcomes that are incoherent when taken in the aggregate (especially with respect to carbon removal).16

While the present Article shares many of these concerns, its focus is different. The animating question concerns the “science” in “science-based targets,” specifically, whether the SBTi claim for derivation of basic scientific findings into a system of target rules can be understood as convincing. Based on the analysis of this question, the Article then turns to propose some pragmatic ways in which corporate climate targets can be litigated for climate washing concerns they raise. The difference in focus translates into a difference in methodology. The article’s analysis is driven by primary sources from SBTi’s normative framework, including SBTi criteria, standards, and manuals, and relatively detailed discussions of the GHG Accounting Protocol on which the SBTi framework relies.17 Part II of the article also provides an in-depth discussion of

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11 See articles cited in supra note 9.
12 Perez & Vandenbergh, supra n. 9; Lin 2022A, supra n. 9.
13 Lin 2022, supra n. 9; Shelly Welton, Neutralizing the Atmosphere, 132 YALE L.J. 171 (2022).
14 Esty & de Ariba-Sellier, supra n. 9.
16 Welton, supra n. 13 (Welton refers to these concerns as the “neutrality mirage” and the “collective achievement challenge” respectively).
17 For a recent contribution on the GHG Accounting Protocol, see Madison Condon, What’s Scope 3 Good For?, 56 U.C. DAVIS L. REV. 1921 (2023).
the Corporate Climate Responsibility Monitor ("CCRM"), an NGO research report that addresses climate washing concerns in corporate targets. The focus on these primary sources is meant to facilitate exchange between academic work on corporate climate targets and the advocacy work carried by practitioners, including the CCRM authors, and lawyers pursuing climate washing litigation strategies.

The remainder of the Article proceeds as follows. Part I builds our understanding of the alignment approach to climate policy that underlies SBTi corporate climate targets. It does so by breaking that approach down to its three core components: the global carbon budget, its allocation to specific entities through targets, and the system of carbon accounting that underlies targets. A key theme of Part I is the nuanced role that climate science plays in climate alignment. That role goes far beyond the common perception of simple derivation of targets from science. Part II follows by analyzing notions of climate washing based on the analysis from Part I. It offers three distinct theories that plaintiffs may pursue to establish climate washing in targets: targets failing to comply with SBTi criteria, SBTi criteria that are advertised as Paris-aligned in ways that mislead consumer perception, and SBTi criteria that are controversial within the expert community.

I. THE ROLE OF SCIENCE IN SBTI TARGETS

A. The Global Carbon Budget

SBTi’s approach to corporate climate targets is part of a broader policy framework that we may refer to as the alignment approach to climate action. The point of departure for the alignment approach is in a scientific concept known as the “global carbon budget” (“carbon budget”). The carbon budget refers to the total amount of carbon dioxide (CO₂) that humanity can emit into the atmosphere before reaching a certain impact on the global climate. Every carbon budget is specific to some level of global warming that policy makers seek to avoid. The 2016 Paris Agreement did not specify a single level, instead opting for a target range between “well-below 2°C and 1.5°C” above pre-industrial levels, also known as the “reference period.”¹⁸ Since the Paris Agreement was signed, scientific work has highlighted that the difference in outcomes between 1.5°C and well-below 2°C is significant.¹⁹ Scientists also emphasize that crossing the 1.5°C

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¹⁸ Global warming is measured against temperatures in the pre-industrial era, also known as the “reference period.”

threshold risks “tipping points” that can be highly destabilizing to the climate system. The international policy community has accordingly shifted its focus to achieve the 1.5°C climate target, i.e., the bottom of the Paris range. The carbon budget discussed in this Article will typically track that 1.5°C target. The global carbon budget is measured in tons of carbon dioxide, or “tCO₂.” Other greenhouse gases are also incorporated into the carbon budget, and their contribution to global warming is expressed through its carbon equivalent, or CO₂e (the “e” stands for equivalent). For simplicity, the exposition below focuses on carbon alone, but the basic principles are similar.

The carbon budget figures that policy makers use are taken from the scientific work of the U.N. International Panel on Climate Change (IPCC), and are updated in its ongoing reports. The IPCC publishes so called “pathways,” each corresponding to a different level of warming (1.5°C, 2°C, 3°C etc.) and each having its own carbon budget. Figure 1 below provides an example from the IPCC’s most recent Assessment Report, AR6 (2023). The IPCC pathway labeled SSP1-1.9 shows the total carbon budget for limiting global warming to 1.5°C with a probability greater than 50% (SSP1-1.19 appears in light-blue. The range in the graph reflects model uncertainties; for simplicity, focus on the mid-range).

The x-axis in Figure 1 shows cumulative CO₂ emissions since 1850, measured in gigatons (Gt) CO₂ (one gigaton is one billion or one thousand million tons). The carbon budget is measured in cumulative emissions because the warming effects of carbon in the atmosphere last for centuries. Thus, what matters from a carbon budget perspective is not merely the annual emissions, or “flows,” of carbon into the atmosphere, but the accumulation, or “stock,” of carbon year over year since the dawn of the industrial era. The y-axis shows the level of global warming since the reference period (1850-1900). The graph in that space plots the relationship between the growth in cumulative CO₂ emissions (x-axis) and global warming (y-axis). For the period before 2020 (left of the bold vertical line), we can see that about 2,500 in cumulative GtCO₂ resulted in warming slightly above 1°C. For the period after 2020 (right of the bold vertical line), we can see that at cumulative emissions just shy of 3,000 GtCO2e, global warming will reach 1.5°C. Any excess above 3,000 GtCO₂ cumulative emissions will lead to warming exceeding 1.5°C (for simplicity, consider the middle of the light blue range, which has a y value of 1.5°C).

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20 David I. Armstrong McKay, et al., Exceeding 1.5°C Global Warming Could Trigger Multiple Climate Tipping Points, 377 SCIENCE 1171 (Sept. 9, 2022).
22 Pathways also specify the probability for not exceeding the relevant target, for example, e.g., limiting warming to 1.5°C (>50%), limiting warming to 2°C (>67%), etc.
In IPCC terminology, using a graph like the one in Figure 1, one would speak of the “total” carbon budget for a 1.5°C target as 3,000 GtCO$_2$. More importantly, one speaks of the “remaining” or “available” carbon budget, being the maximum amount of carbon emissions consistent with the relevant limit on warming. Looking at the figure, the remaining carbon budget for 1.5°C equals about 500 GtCO$_2$, the difference between the total carbon budget (about 3,000 GtCO$_2$) and the amount already spent before 2020 (about 2,500 GtCO$_2$). When policy makers speak of the “carbon budget” informally, what they often refer to is the remaining or available carbon budget, rather than the total. A striking observation from Figure 1 is that the remaining carbon budget is very small compared to historical emissions, roughly 20% ($=500$ GtCO$_2$ / $2,500$ GtCO$_2$). With annual (flow) global emissions at around 40 tCO$_2$ per year, if emissions stay at their current levels, the remaining carbon budget will be exhausted in little over a decade ($= 500$ GtCO$_2$ / 40 GtCO$_2$). Venturing further right on the x axis, we can see that pathways leading to higher levels of warming have higher carbon budgets (e.g., SSP1-2.6 with about 3,400 GtCO$_2$ for well-below 2°C; SSP2-4.5 at 2°C around 3,800 GtCO$_2$ etc.). The less ambitious the target, the more room under the carbon budget.

Figure 1: IPCC Remaining Carbon Budget for 1.5°C and 2°C

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24*Id.* at 83 (blue lines, vertical arrows, and labels added by author).
Next, we must understand how the remaining carbon budget is translated into a global reduction target. When the IPCC sets these targets, it takes the remaining carbon budget, and divides it over several decades to prevent too abrupt a transition (e.g., maintaining emissions at their current levels, then moving toward zero in 2030). Consider, for example, the common goal of reducing carbon emissions by about 50% from 2020 to 2030, and then to net-zero by 2050.\textsuperscript{25} A stylized version of such reduction target is included in the left panel of Figure 2 below (for expositional simplicity, Figure 2 omits a number of aspects included in IPCC target spaces).\textsuperscript{26} This graph is quite different from Figure 1. The x-axis shows time, and the y-axis shows annual (not cumulative) global carbon emissions. The blue target curve plots the annual reduction in emissions that would be necessary to stay within the 1.5°C carbon budget. The target space is constructed in a way that if we add up all the annual emissions on the target curve, they need to exactly equal the remaining carbon budget. Graphically, this means the light-blue area under the target curve equals the 500 GtCO\textsubscript{2} we calculated from Figure 1. This point is crucial because it underscores that climate targets do not merely specify a level of reductions to be attained at a distant point in time. To stay within the remaining carbon budget, the gradual year-by-year reduction specified in the target curve must take place. This point is demonstrated in Figure 2; meeting the long-term target will not prevent exceeding the target level of global warming if the carbon budget is overspent along the way.

The global carbon budget is the foundation of the alignment approach. Implicitly, every climate target (see Figure 2) is based on a corresponding carbon budget (see Figure 1). The main benefit of the alignment approach is the way in which it links the activities of individual actors to scientific climate targets. The remainder of this Part examines how this link is made in practice.

\textsuperscript{25} Id. at 59 the reduction is for 43% from 2019 to 2030
\textsuperscript{26} For the non-stylized version, see id. Note that this version refers to all greenhouse gases rather than CO2e alone. 2050 emissions remain at a low, but non-zero, level (this likely takes into account natural carbon sinks).
B. Allocating the Global Carbon Budget

The carbon budgets published by IPCC are global, meaning they apply to the planet as a whole, rather than to specific actors. But in and of itself, a global carbon budget is of limited use. Actual emissions are driven by countries, corporations, and households. To be operative, the remaining carbon budget needs to be allocated to those actors. This allocation is a policy challenge of the first order. It is important to appreciate how much more difficult and controversial this step is than merely calculating the global carbon budget. The former task is scientifically complex but ultimately enjoys a broad consensus within the scientific community. In contrast, allocating the remaining carbon budget requires policymakers to make diverse judgements rooted in politics, law, economics, ethics, engineering, and so forth. These judgements are bound to be controversial. While science provides us with carbon budget figures, how we choose to allocate the remaining budget is a question that takes us beyond the realm of science. This gap between the carbon budget and its allocation has been a persistent challenge to climate action.

Consider the Paris Agreement as a case in point. A key goal of the Paris Agreement is to allocate the remaining carbon budget between the signatory countries. One approach to achieve this goal would have been for each country to reduce its emissions at the global reduction rate discussed above. For example, if aiming for the more ambitious 1.5°C target, each country would need to cut its emissions by about 50% by 2030, and to net-zero by 2050.27 This equal reduction approach may seem fair and elegant, but it ignores disparities between countries and is a political non-starter. Countries vary in their economic

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27 See Figure 2. To be sure, the emphasis on 1.5°C (the bottom of the Paris range) would have been premature in 2016.
and technological capacity to decarbonize, in the intensity of their emissions relative to population size, and in their historical contribution to global emissions.\textsuperscript{28} By way of example, the U.S. and India are both large emitters of greenhouse gases.\textsuperscript{29} But the U.S. GDP per capita is nearly 10 times that of India; its greenhouse gas emissions per capita are greater by a factor of about 6, and its contribution to historical emissions is greater by a factor of 8.\textsuperscript{30} It is virtually inconceivable to think that the two countries would need to adopt targets requiring to decarbonize their economies at the same rate.

The Paris Agreement (Art. 2) acknowledges this point in the principle known as “common but differentiated responsibilities” (“CBDR”). According to CBDR, the responsibilities for implementing the Paris agreement should take into consideration the “…respective capabilities [of the signatories], [and] in the light of different national circumstances.”\textsuperscript{31} Under CBDR, developing countries should be allowed to decarbonize slower than they would under the global reduction target, but that would involve over-spending the carbon budget and failing to meet the Paris climate targets. For the system to work, developed countries would need to make up for those lost carbon reductions (see Figure 3). The purple area in Figure 3 represents emissions in excess of the global carbon budget resulting from slower decarbonization by developing countries, while the green area represents emission levels below the global carbon budget from faster decarbonization by developed countries. For the carbon budget to be maintained, the green area must at least equal the purple area. While simple in principle, the Paris Agreement signatories were not able to find an agreed-upon formula to affect this arrangement. What we got instead was the system of Nationally Determined Contributions (NDCs) where signatories set their own targets.\textsuperscript{32} To date, the NDC system has failed to produce sufficient commitments to stay within the global carbon budget, even within a 2°C limit.\textsuperscript{33} Such are the challenges of allocation.

\begin{thebibliography}{99}
\bibitem{28} The World Bank, Our World in Data, Per Capita Greenhouse Gas Emissions, \url{https://ourworldindata.org/grapher/per-capita-ghg-emissions} (emissions per capita); \textit{see also}, Our World in Data, Our World in Data, Who Has Contributed Most to Global CO2 Emissions?, \url{https://ourworldindata.org/contributed-most-global-co2} (share of historical emissions).
\bibitem{29} Hannah Ritchie and Max Roser, \textit{CO2 Emissions: How CO2 Does the World Emit? Which Countries Emit the Most?}, The World in Data, \url{https://ourworldindata.org/co2-emissions}.
\bibitem{30} See supra note 28.
\bibitem{31} Paris Agreement, Preamble, Dec. 12, 2015, 3156 U.N.T.S. 79.
\bibitem{32} See, 3156 U.N.T.S. 79, Art. 4.
\end{thebibliography}
Figure 3: How CBDR Should Work in Principle

The allocation of the remaining carbon budget across countries is only the beginning of our difficulties. Most carbon is emitted by corporations and households. Governments can of course enact regulatory measures and provide incentives. But the record of climate action over the past decades has shown how difficult those are to achieve at scale. Early enthusiasm with policies such as carbon pricing and carbon taxation has been largely abandoned in most countries as economically and politically infeasible. These once sought-after policy “sticks” (make carbon expensive) have been replaced with policy “carrots,” or subsidies, as in the U.S. 2022 Inflation Reduction Act. Subsidies are difficult to provide on the necessary scale, particularly in developing countries. The alignment approach to climate policy emerged out of the growing realization that national policies by themselves are insufficient to reach Paris targets. The logical step was to try to implement voluntary reduction targets to corporations, analogously to the NDCs countries make under the Paris Agreement.

As applied to corporations, a “climate alignment” commitment refers to a company voluntarily adopting a target to reduce its emissions at a rate consistent with the Paris Agreement. Unfortunately, the first generation of corporate climate targets has been marred in greenwashing and controversy. The Science-Based Targets Initiative, widely known as SBTi, grew as a response to those controversies. SBTi is a non-profit affiliated with organizations such as the U.N., World Wildlife Foundation (WWF), and World Resources Institute (WRI). Since 2015, it has been developing technical standards that specify the

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34 Michael Pappas, Structure in Climate Policy (forthcoming).
requirements for a corporation to declare a “science-based target” (SBT). SBTi’s rise over the past years has been meteoric. The organization has grown from a start-up to a global standard setter.\textsuperscript{37} According to 2022 data, over 2,000 companies have SBTs. These companies represent some 34\% of global market capitalization.\textsuperscript{38} The ranks of SBTi include some of the world’s largest and wealthiest companies, such as Apple, Microsoft, Walmart, Toyota, and Procter & Gamble.\textsuperscript{39} SBTi’s brand has become nearly synonymous with corporate social responsibility in the climate arena.

One of the key questions SBTi standards address is how fast relative to global reduction targets should companies decarbonize for their targets to be considered “science-based.” Deciding that question essentially amounts to allocating a share of the remaining carbon budget to specific companies (recall that every climate target, Figure 2, is based on a remaining carbon budget, Figure 1). SBTi, in short, has set to provide the private sector with an answer to the same question that the Paris Agreement could not answer for its signatories.

SBTi’s technical standards answer this question by providing two main approaches, known as the absolute contraction approach (ACA), and the sectoral decarbonization approach (SDA).\textsuperscript{40} Under the ACA, a company calculates emissions in a baseline year (e.g., 2020), and is required to reduce these emissions at the rate of the global reduction target. The reduction rate is based on the IPCC 1.5°C carbon budget and corresponding global targets in the manner described in Section A.\textsuperscript{41} Note that the ACA is essentially the equal emissions reduction approach that the Paris Agreement rejected as inconsistent with CBDR. SBTi’s ACA leads to the underwhelming result that some of the world’s largest and wealthiest companies in the world are required to cut their emissions at the same rate as, say, a rural region in a developing country.

More pertinent to this Article is the second approach developed by SBTi. The features that made the equal reduction approach challenging for the Paris signatories also make its equivalent, the ACA, challenging for the private sector. Companies work in different sectors that have different carbon intensities. Each sector faces different economic and technological opportunities to reduce its emissions. As a result, a quantitative target that might be easily attainable to a company in one sector, could be nearly impossible to a company in

\textsuperscript{37} See Ian Morse, Inside the Little-Known Group Setting the Corporate Climate Agenda, MIT TECHNOLOGY REV. (May 16, 2023), https://www.technologyreview.com/2023/05/16/1073064/inside-the-little-known-group-setting-the-corporate-climate-agenda/.


\textsuperscript{40} See, e.g., SCIENCE BASED TARGETS, SBT\textit{i Criteria and Recommendations For Near-Term Targets} (Version 5.1, 2023), https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf.

another sector. To address these differences, SBTi developed the sectoral decarbonization approach, or “SDA.” The SDA is a methodology that pertains to high-emitting sectors, including power, oil and gas, transport, steel, cement, forest and agriculture, maritime shipment, and so forth. Under that approach, each sector is assigned its own “sectoral carbon budget” with corresponding targets. SBTi derives the sectoral carbon budget from technical work by scientists and engineers in expert bodies like the International Energy Agency (IEA).

Consider the following example using the steel sector. Growth in the demand for steel, together with challenges of decarbonizing steel production mean that the steel sector cannot decarbonize at the pace required by the global carbon budget for 1.5°C. IEA publishes technological pathways that calculate the future demand for steel, and the amount of decarbonization in the steel sector that it considers cost-feasible. By taking other economic sectors into consideration, IEA ensures that the carbon budget allocated to the steel sector adds up with all other sectors so as not to exceed the global carbon budget. In other words, IEA is doing across sectors what CBDR is supposed to do across countries.

In allocating the carbon budget, IEA pathways always draw distinctions by industrial sector, but they do not always draw distinction by region or country. The IEA’s Sustainable Development Scenario (SDS) for well-below 2°C warming includes differentiation that is based on technological, demographic, and economic features of each country. However, the prominent pathway for 1.5°C —IEA’s Net-Zero by 2050 (“NZE2050”)— currently lacks such differentiation (future updates to NZE2050 are anticipated). Historically, much of SBTi’s work on sectoral targets relied on the SDS, and hence, could have in principle accounted for differences between counties in corporate target setting (e.g., requiring higher targets from companies in developed countries). Nevertheless, SBTi’s position is that targets should only be derived from global (rather than regional or country level) carbon budgets. This means that while SBTi

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46 Net-Zero By 2050, supra note 44
47 Sectoral Decarbonization Approach (SDA), supra note 42, at 38. One exception to this approach is SBTi’s FLAG (forest, land, agriculture) sectoral targets, to be discussed in Part II below. Ironically, the
acknowledges sectoral differences between a steel manufacturer and an electric utility, an electric utility in the U.S. and its Indian counterpart would have the same “science-based” target, requiring the same level of carbon reduction.

Unlike the simpler ACA targets which are set in metric tons of CO₂, sectoral targets are so-called “intensity targets.” Intensity targets divide a company’s absolute emissions (tCO₂) by a physical unit, for the steel sector, a ton of steel (or for other sectors, a kilowatt of electricity, a kilometer traveled by car, etc.). Using existing data, the SBTi steel pathway calculates a baseline of emissions intensity for the steel sector, e.g., 2.42 tCO₂ / ton of steel for 2020. Relying on IEA work, it then derives a reduction trajectory for different years (e.g., 1.71 tCO₂ / ton of steel for 2030, 0.77 tCO₂ / ton of steel for 2040, and so forth). In practice, steel manufacturers adopting the target all start with different carbon intensities of production, that may be above or below the 2020 baseline. SBTi has an online tool that calculates their convergence path to the required intensities in its sectoral pathway. That tool is meant to ensure that the steel sector as a whole remains within the carbon budget allocated to it by IEA.

The SBTi approach is not without its critics. Some of the critiques refer to technical shortcomings in its standards, inconsistency with CBDR, and weaknesses in the certification process that lead to climate washing. These critiques are valid and significant. For present purposes, however, it is important to highlight what makes the SBTi approach so powerful in the present policy landscape. For better or for worse, SBTi developed a procedure that disaggregates and allocates the remaining carbon budget to specific private companies. The targets derived from that process create a system where each company has a clear share of reductions to pursue, and can therefore claim to be doing its “fair share”. As hinted above, whether or not an entity is actually meeting its share is a question that cannot be authoritatively answered by science. Science determines the remaining carbon budget, but it cannot allocate it. Nevertheless, the fact that concrete targets are generated from scientific (IPCC) and engineering (IEA) inputs, has lent SBTi exceptional credibility as the “gold standard” for corporate climate targets. This characterization sometimes raises significant climate washing concerns, but before we turn to those, we need to address the third component of the climate alignment approach, namely, carbon accounting.

use of regional differentiation in FLAG targets may favor companies in developing countries whose emissions derive purchases of agricultural products in the developing world.

48 SBTi STEEL GUIDANCE, supra note 43, at 62 (these figures are for 100% ore-based).
49 See id. at 19-20.
50 See, e.g., CCRM, supra note 4 infra, Bjorn et al, From the Paris Agreement to corporate climate commitments: evaluation of seven methods for setting 'science-based' emission targets, ENVIRON. RES. LETT. 16 (2021).
C. Accounting for Emissions

The third piece of the alignment puzzle concerns the all-important question of emissions accounting. Allocating a share of the remaining carbon budget to an organization assumes that we are able to say which entity is responsible for what emissions in the first place. This is harder than it sounds. GHG accounting rules are not merely about creating a physical inventory of emissions. They are about assigning responsibility for these emissions to specific entities. Much like the carbon budget cannot allocate itself, a physical inventory of GHGs cannot declare who is responsible for what emissions. That task lies within the domain of policy, not science. The insight is crucial because corporate climate targets are based on an organization’s GHG inventory. An inventory that is under-inclusive is essentially a way to water-down a target. An organization’s commitment to reduce its tCO2e in emissions by 50% by 2030 may sound impressive. But the significance of this commitment depends on the scope of responsibility that GHG accounting rules assign to that organization in the first place. Where accounting rules are narrow, reducing 50% of a small amount might be a lot less impressive than it first appears. A key theme of this Section is that conceptually, there is simply no way to think of the target independently of the underlying accounting rules. This fact should lead to intense scrutiny of carbon accounting frameworks.

To familiarize ourselves with the challenges of GHG accounting, consider the following example of emissions arising power generation through natural gas. Natural gas is extracted by an oil and gas (O&G) company and is burned to generate power by an electric utility. It is then used by a manufacturer that sells its product to other firms. The question is who should account for the emissions associated with burning the natural gas? Until we answer that question, we cannot know who would be responsible for reducing these emissions if that company has a climate target. Carbon accounting rules are prescribed by the widely used Greenhouse Accounting Protocol (the “GHG Protocol”). Like SBTi, the GHG Protocol is a non-profit organization, and companies may choose to follow its standards, or not, on a voluntary basis. A company choosing to do so, would report its emissions in an annual greenhouse gas inventory following the Protocol’s detailed standards. Voluntarism aside, the GHG Protocol is to carbon accounting what standard-setting bodies like FASB (author of the U.S. GAAP) and IASB (author of the IFRS) are to general accounting.

To answer the question of who should account for given emissions, the GHG Protocol distinguishes between three different “scopes” of emissions in an organization’s greenhouse inventory. These different scopes provide essential building blocks for climate targets. Briefly, Scope 1 refers to emissions from fossil fuels from equipment that an organization owns or controls directly; Scope 2 refers to emissions from generation of electricity that an organization purchases; and Scope 3 refers to indirect emissions, produced up

and down the organization’s value chain.\textsuperscript{52} Thus, in our example, emissions from burning natural gas would be reported as follows in Table 1:

Table 1: The Three Scopes of Emissions

<table>
<thead>
<tr>
<th></th>
<th>Scope 1</th>
<th>Scope 2</th>
<th>Scope 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>O&amp;G company</td>
<td></td>
<td></td>
<td>Scope 3 (downstream),\textsuperscript{53} because emissions associated with product sold.</td>
</tr>
<tr>
<td>Electric utility</td>
<td>Scope 1, because it owns the plant emissions occurred.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Scope 2, because emissions from generating electricity consumed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies consuming the product</td>
<td></td>
<td></td>
<td>Scope 3 (upstream), because emissions incurred to produce product purchased.</td>
</tr>
</tbody>
</table>

While Scopes 1 and 2 are relatively straightforward to measure, Scope 3 has proved more challenging. Understanding that challenge is important because, for the average company, Scope 3 accounts for the vast majority of emissions.\textsuperscript{54} The Scope 3 challenges are two-fold. First, there’s data. Value chains stretch far and wide, so collecting the data from upstream suppliers and downstream consumers can require

\textsuperscript{53} In order to simplify, the example abstracts from fugitive emissions of methane in the extraction process. Those would be classified as “Scope 1” for the O&G company, as they are associated with owned equipment.  
\textsuperscript{54} Deloitte, Zero in on… Scope 1, 2 and 3 Emissions: What You Need to Know, \url{https://www2.deloitte.com/uk/en/focus/climate-change/zero-in-on-scope-1-2-and-3-emissions.html} (accessed on Jan 12, 2024) (“For many businesses, Scope 3 emissions account for more than 70 percent of their carbon footprint”). According to the New Climate Institute, Scope 3 emissions accounted for 90% of emissions for the companies reviewed in their report. CCRM 2023, \textit{supra} n. 4 at 6.
considerable effort. Fortunately, over the recent years, data limitations have been relaxed by the work of the Carbon Data Project (CDP).55 CDP is a non-profit that centralizes emissions data and makes it available to its members (it is also one of the founding members of SBTi). Private vendors have also emerged to support companies through granular analysis of Scope 3 categories.56

The second challenge is more fundamental, and involves the type of conceptual dilemmas that would be familiar to lawyers. Consider the following example. When a guest is flying to stay at a hotel resort, should their air-travel emissions be counted in the hotel’s Scope 3 (downstream) inventory? That is, are these emissions sufficiently associated with the service that the hotel is providing to be considered part of the value chain? Switching perspectives, assume that a company is paying for an employee’s stay at a hotel as part of business travel. The construction and operation of the hotel involve considerable emissions. Should a portion of these emissions be attributed to the company paying for the room under its Scope 3 (upstream) inventory? Like CBDR, these questions cannot be answered on a purely scientific basis. They are not merely about creating an inventory of physical emissions, but about attributing specific physical emissions to specific organizations. Attribution is based on a judgement that there is a sufficient link between the organization’s activities and the relevant emissions. In jargon, we refer to this link as the “operational boundary.”57 Defining the operational boundary is a little like determining the scope of liability for negligence in Torts. It is a complex exercise combining rules, policy heuristics, and discretion. Returning to the hotel example, under the GHG Protocol, guests’ air travel emissions will not be included in the hotel’s minimum operational boundary, nor will the hotel’s emissions be included in the guest company’s operational boundary.58 These outcomes are arguably quite problematic.

The complexities around Scope 3 led the GHG Protocol to make its Scope 3 Standard optional.59 With Scope 3 accounting for the majority of most companies’ emissions, this result is far from ideal. To see why, return to the gas emissions example in Table 1. A key insight from that table is the overlapping nature of responsibility for what are essentially the same physical emissions.60 With Scope 3 accounting,

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55 For details of their work, see the CDP website, [https://www.cdp.net/en here](https://www.cdp.net/en).
56 See, e.g., Sievo, [https://sievo.com/](https://sievo.com/).
57 For a discussion on operational boundaries, see GREENHOUSE GAS PROTOCOL, 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-Reporing-Standard_041613_2.pdf](https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf) 59; for Scope 3 minimum boundaries, see id. at 35-57.
58 Id. at 46, 47.
59 Id. at 6.
60 For this reason, aggregating Scope 3 emissions of different companies can involve double-counting, and does not lead to meaningful results. Put differently, if one were to add all reported Scope 3 emissions in a given year, the total amount would exceed global carbon emissions by multiples. For discussion of Scope 3 aggregation issues, see Condon, supra note 17. The same principle applies to Scope 2, because
the emissions are booked in four distinct inventories: the O&G company, the electric utility, the manufacturer, and the consumer companies. In legal terms, we may think of this arrangement as joint and several liability for the emissions, where every party is liable for the entire amount. Just as in other legal context, there are good reasons to require this overlapping responsibility for emissions.

One key reason is incentives. Overlapping responsibility for Scope 3 means that multiple parties would have incentives to reduce the same emissions (if those parties are subject to targets). Harnessing the incentives of different parties is key because different parties can use different emission reduction strategies. Climate action that combines a multitude of strategies can be far more effective than climate action that only relies on strategies available to small subset of actors (reporters of Scope 1-2 emissions). For concreteness, consider our previous example of emissions from burning natural gas to power a manufacturing process. Scope 1-2 emissions are reported by the utility (Scope 1) and manufacturer (Scope 2), while Scope 3 emissions are reported by the O&G company (downstream) and consumer firms (upstream). These Scope 3 reporters have valuable strategies they can pursue to reduce emissions: the O&G company and could diversify its business to include renewable energy, while the consumer firms could switch to products that are less energy intensive, or are produced in cleaner grids. Without Scope 3 reporting, the incentives to pursue these strategies would be dampened. This leaves the utility and producer firm with the full burden of reducing emissions. The strategies available to these Scope 1-2 reporters are limited compared to those available to reporters of all three scopes.

One of the main achievements of SBTi has been the inclusion of Scope 3.61 While Scope 3 reporting is optional under GHG Protocol, it becomes mandatory for companies adopting targets under SBTi. 62 That development marks important progress. At the same time, under the fine print,Scope 3 inclusion in SBTi targets remains considerably looser than Scopes 1-2. First, companies are allowed to exclude 33% of their Scope 3 emissions from near-term targets, as opposed to only 5% for Scopes 1-2. 63 Second, the carbon budget for Scope 3 near-term targets is based on a well-below 2°C pathway, rather than a 1.5°C pathway

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62 Id. at 33 (Companies are only required to include S3 in their targets if their S3 emissions exceed 40% of their total emissions (S1+S2+S3)). See also Nicole Labutong and Vincent Hoen, How Can Companies Address Their Scope 3 Greenhouse Gas Emissions? (May 25, 2018), https://sciencebasedtargets.org/blog/how-can-companies-address-their-scope-3-greenhouse-gas-emissions (SBTi reports that 90% of companies meet that threshold).
63 SBTi CORPORATE NET-ZERO STANDARD, supra note 61 at 33, 35; see also, id. at 19 (stating that “near-term targets” are 5-10 years to targets).
for Scopes 1-2. This leads to reduction that is at nearly half the rate, 2.5% per year rather than 4.2%. Third, a prominent watch-dog report, the Corporate Climate Responsibility Monitor, highlights that companies’ (many of them with SBTi targets) Scope 3 inventories seem incomplete, and it is unclear what portion of Scope 3 they plan to address. Forth, and lastly, SBTi Scope 3 definitions are based on the GHG Protocol. As the hotel example suggests, these definitions themselves may be overly narrow.

How does all of this comport with the scientific global carbon budget? The answer is, once again, that science provides the global carbon budget, but it cannot allocate it. Decisions over accounting are essentially decisions over allocation. Consider the example where a company’s carbon emissions would be 2 million (M) tCO$_2$ under an accounting rule with a broader Scope 3 boundary (Rule 1), but only 1 MtCO$_2$ with an accounting rule with a narrower definition of that boundary (Rule 2). The company adopts a target requiring 50% reduction by 2030. The company’s required reductions for 2030 would be 1 MtCO$_2$ under Rule 1, but only 500,000 tCO$_2$ under Rule 2. Whichever rule is chosen for the actual Scope 3 accounting standard would determine whether the company’s 2030 emissions can be 1.5 MtCO$_2$ (in Rule 2, = 2MtCO$_2$ – 0.5MtCO$_2$ required reduction), or only 1 MtCO$_2$ (under Rule 1, = 2MtCO$_2$ – 1MtCO$_2$ required reduction). If Rule 2 is adopted, a Rule 1 proponent would not consider the reduction of 0.5MtCO$_2$ to be a 50% reduction aligned with a 1.5°C pathway. Rather, it is a 25% reduction (=0.5MtCO$_2$ / 2MtCO$_2$) barely aligned with a well-below 2°C pathway. As noted at the outset, conceptually, there is simply no way to think of the target independently of the underlying accounting rules. What is ambitious climate action for proponents of the Rule 2, is climate washing to proponents of Rule 1. The GHG accounting rules and the target reduction levels needs to be analyzed in tandem.

The last accounting issue concerns the use of carbon credits. In a nutshell, carbon credits refer to emissions reductions that take place outside the company’s operations and value chain, and that the company would like to use as an offset against its own emissions. A common example of carbon credits includes “nature-based solutions,” e.g., projects that plant or conserve forests and sell credits representing the carbon sequestered by trees. The cost of purchasing a carbon credit is typically far lower than the cost of reducing emissions within a company’s own value chain. This led many companies to rely on credits as a major component of meeting their climate targets. Unfortunately, experience over the last decades demonstrated that the institutional framework of the carbon credit market is extremely weak. Many of the credits sold did not result in the

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64 See id. at 38.
65 CCRM 2023, supra n. 4 at 9.
66 SBTi CORPORATE NET-ZERO STANDARD, supra n. 61 at 32-33.
67 The following paragraphs uses the term “carbon credits” as synonymous with “carbon offsets”. While there are distinctions between these two terms, those are not of significance to the discussion.
promised carbon reductions, and several high-profile projects came under criticism for human rights violations.\(^{68}\)

An important achievement of SBTi was to constrain the use of credits. Under the SBTi’s Net Zero standard, companies are generally barred from using credits to fulfill targets.\(^{69}\) Nevertheless, there are several exceptions to this rule, one of which in particular will be discussed in Part II. below for illustration.\(^{70}\) That exception concerns SBTi’s new standard for the so-called FLAG sector (forest, land, agriculture). Under this standard, companies land-intensive sectors may use biogenic removals (e.g., reforestation, or improvements in soil carbon sequestration on auricular land) to reduce the emissions under their target. Practitioners refers to this arrangement as “insetting,” because the biogenic removals take place within the company’s supply chain (as distinct from credit or “offsets,” that are purchased from vendors outside the company’s supply chain). As discussed in below, the concept of insetting has been controversial. The CCRM has expressed concerns that insetting is essentially offsetting by other means, and called companies to make meeting their targets independent from insetting.\(^{71}\)

The insetting in SBTi’s FLAG standard highlights the controversial nature over the fungibility of carbon, that is, the extent to which purported removals of carbon can be counted against other sources of emissions for target compliance. While debates around credits or insetting are certainly informed by scientific principles (e.g., whether removals are of a permanent nature), the underlying disagreements often go beyond straightforward derivation from scientific principles. For example, disagreement may be rooted in different levels of trust regarding the integrity of the institutional framework governing credits or insetting. It could also be rooted in different policy understandings of the role of biogenic removals in the broader context of global climate action (for example, the need to limit the use of removals for hardest-to-abate sectors\(^{72}\)). The questions that cannot be answered directly through science requires policy analysis, and the outcomes of that analysis have important implications for emissions reductions that will actually take place under a target.


\(^{69}\) SBTi Corporate Net Zero Standard, supra note 61 at 44, 51. The exception is the permissible use of credits for so-called “residual emissions” in long-term targets. For present purposes, this exception is of little significance.

\(^{70}\) See II.C. below and references cited there.

\(^{71}\) CCRM 2023, supra note 4, at 29.

\(^{72}\) See, e.g., Welton, supra note 13.
To summarize: the key benefit of the alignment approach to climate policy is its anchor in the carbon budget. The approach uses the global carbon budget to inform the level of carbon reduction required by individual actors as they set their targets. Meanwhile, the main challenge of the alignment approach is that there is no single accepted way to allocate the global budget to individual actors. To be sure, SBTi’s reliance on technological pathways published by IEA and other experts is valuable. But it cannot authoritatively resolve the consequential questions that allocation presents. And so, while SBTi’s approach is in certain ways informed by science, it cannot be accurately said to derive from it. This is not intended to suggest that SBTi is meritless. Translating the global carbon budget to company-level target rules inherently involves discretion. The strengths and the weaknesses of SBTi targets depend on how SBTi chooses to exercise this discretion in specific contexts, e.g., in defining the role of Scope 3 emissions in targets, or the permissible uses of insetting. Another important service the SBTi system provides is a system of safeguards. While SBTi target rules are often controversial, they are highly detailed. This level of detail allows for meaningful assessments whether a given company’s target is formulated in compliance with SBTi rules. As discussed below, lack of compliance with SBTi rules has turned out to be a major concern, and one that SBTi itself has not addressed adequately. To date, the value of the detailed rules is not in ensuring compliance, but rather, in enabling climate advocates to expose instances of non-compliance. In Part II, we move from these insights about the role of science in SBTi rules, to assess the various climate washing concerns that can exist with respect to SBTi targets.

II. THE ALIGNMENT APPROACH & CLIMATE WASHING

In this part, the article will discuss climate washing concerns that often accompany corporate targets under the alignment approach. “Climate washing” refers to incorrect or exaggerated claims regarding climate benefits advertised by corporations and other organizations (e.g., universities). The economic drivers behind climate washing are substantial. In many parts of the world, corporations are coming under increased pressure to decarbonize their activities. The setting of Paris-aligned climate targets is a powerful way in which organizations can signal that they are living up to their climate responsibilities. However, appearing to be aligned with the Paris Agreement is quite different from actually being so. Appearances are created through marketing and communications, whereas actual alignment requires changes in operations.

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73 See CCRM 2023, supra n. 4 at 7.
74 CCRM 2023, supra note 4 at 13.
and business models. And where appearances are quick and cheap to achieve, actual alignment can be slow and resource-intensive. The technical nature of climate targets and accounting makes it difficult for stakeholders to assess the true level of ambition of their organization’s targets. This means that organizations can often reap reputational benefits on the cheap, while only engaging in limited action. This is the peril of climate washing.

The social costs of climate washing are considerable. From an advocacy point of view, climate washing dampens stakeholder pressure to engage in appropriate climate action. By creating the appearance of appropriate climate action, organizations placate stakeholders who believe the organization is already living up to their values. Meanwhile, from an economic point of view, climate washing undermines competitive pressures that can drive climate action. Absent climate washing, stakeholder demands could lead to a virtuous “race to the top” where organizations try to differentiate themselves by leading the climate transition. With climate washing, climate alignment becomes so ubiquitous that organizations face difficulties distinguishing themselves based on authentic climate action. If everybody is a climate leader, no one is. Interestingly, the same seems to hold true in reverse. When a valid target is labeled as climate washing, the value of truly responsible climate action goes unacknowledged in ways that erode incentives for such action. From an advocate’s point of view, it is valuable to use the term climate washing precisely, because both false negatives (climate washing that goes undetected) and false positives (authentic action labeled as climate washing) have costs.

The focus of this Article is on the specific concerns climate washing raises in the context of corporate climate targets. Recall that the backdrop to SBTi’s rise to prominence was the widespread climate washing that accompanied the first generation of corporate climate targets. SBTi has emerged as the standard-setting body that could provide transparency and integrity to climate targets. Whether or not SBTi fulfills its intended role is a matter of controversy. The Corporate Climate Responsibility Monitor (CCRM) is a detailed research report analyzing the climate targets of about two dozen global companies. Many of these companies have SBTi targets. Overall, the image of SBTi that appears from the CCRM is complex. While SBTi plays a necessary and somewhat positive role in standard-setting, it shares responsibility for widespread climate washing. One of the central themes of the 2023 CCRM is the role that SBTi plays in legitimating otherwise inadequate targets:

...
“SBTi certifications for short- and medium-term targets lend credibility to companies whose targets are highly insufficient. . . . Most of these companies highlight their SBTi certifications prominently in their climate-related communications to defend targets that are highly insufficient in the context of latest available science, and sometimes misleading. The SBTi’s verifications of 2030 targets often neglect relevant details leading to the undifferentiated certification of corporate targets, regardless of whether a company is lagging in climate action or can truly be considered a climate leader.”79

When discussing climate washing, it is important to recall the key takeaway from our discussion of the alignment approach in Part I of the Article. The alignment approach is science-based in that it references the global carbon budget, but it inherently considerable discretion to standard-setting bodies in allocating that budget and defining carbon accounting rules. This understanding has important implications for climate washing. On the one hand, it makes SBTi’s emphasis on the science behind its targets less convincing than it initially appears. If the claim is that the targets are a direct logical derivation from scientific work, and therefore have all the legitimacy of the underlying science, then the claim is clearly an exaggeration. Indeed, such a claim may amount to a subtle but potent form of climate washing. On the other hand, the realization that science often does not provide unique answers for corporate climate targets can also complicate the case for climate washing claims. If science did uniquely determine how corporate climate targets should be constructed, one would be able to criticize such targets simply by referring to the relevant science. That this direct derivation is often not possible, means that some other objective criteria for climate washing should be invoked. Where such criteria cannot be found, the notion of climate washing can become incoherent. Namely, why is one choice between various possible targets considered “science-based” whereas another choice is deemed climate washing? This kind of relativist thinking – “climate washing is ultimately in the eye of the beholder” – can deny advocates the ability to raise their concerns. That result too would be highly problematic.

What is necessary is a practical middle path that avoids exaggerated claims about the role of science in targets, but also avoids the pitfalls of relativism. As hinted above, the key is in diversifying the kind of objective criteria that can be used to identify climate washing. In this spirit, the remainder of this Part distinguishes between three different types of climate washing concerns surrounding SBTi targets:

79 CCRM 2023, supra n. 4, at 34.
The first type refers to a given corporate target failing to comply with the rules of the target framework (e.g., SBTi criteria);

The second type refers to instances where a target complies with SBTi criteria, but is advertised as Paris-aligned in ways that mislead consumer perception;

The third and last type involves instances where the SBTi framework includes criteria that are controversial within the expert community.

Figure 4 organizes the three types in a tree diagram to show their inter-relationships. In part, this typology is made with an eye towards the emerging field of climate washing litigation. While the doctrinal aspects of climate washing liability lie beyond the scope of this Article, the typology can inform the strategies plaintiffs take to articulate their claims. As discussed below, the strategies present a clear pecking order where Type 1 claims are the easiest to make (low hanging fruit), but also the narrowest in application, while Type 3 claims are more challenging to make, but cover broader and more structural issues. Type 2 claims lie in between. Beyond the realm of litigation, the typology can also inform the work of monitoring reports, like the CCRM. It can also inform the role that regulators and legislators need to play in ensuring climate integrity.

80 About 25 claims climate washing claims have been filed worldwide in both 2021 and 2022 (up from under 10 claims in both 2019 and 2020). Only a subset of these claims is specific to climate targets, as distinct from other forms of climate washing. About two dozen cases have been filed in the U.S. See, SETZER & HIGHAM, supra n. 68 at 40-41.

81 Infra, pt. XX.
A. Climate Washing as Non-Compliance

The first type of climate washing occurs when an organization’s target does not comply with the target framework under which it is issued. For present purposes, that target framework is the SBTi criteria and standards, though other target frameworks exist as well. The relatively high level of detail in the SBTi framework has the effect of facilitating a compliance assessment. In the first instance, the compliance assessment is carried by SBTi itself. When companies set SBTi targets, they are required to submit those targets for SBTi “validation” within 24 months (the terms validation, certification, and approval, are often used interchangeably in the SBTi literature). The validation process is carried out by professional SBTi staff and involves non-trivial service fees. In principle, that process is meant to ensure that the corporate targets are compliant with SBTi’s quite detailed set of criteria. In practice, it seems that major deficiencies can survive the validation process. At times, the CCRM reads as a catalogue of major misses by the SBTi validation desk. A number of examples are included below:

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• **Companies excluding most emissions**: The 2023 CCRM reports that Carrefour, the French retail giant, appears to have only included 20%-50% of its locations under its 2030 climate target. The exclusion of the large majority of the company’s locations was made in an inconspicuous footnote. Carrefour’s 2030 target has already been validated by SBTi.85

• **Choosing an artificially high baseline year**: The 2022 CCRM reports that CVS Health chose a base year for its target with unusually high emissions. Specifically, the year 2019 chosen as the base year had nearly double the Scope 3 emissions reported for both the previous and subsequent years (2018 and 2020). As CCRM notes, the choice of an artificially high base year means that CVS can meet its target of 47% reduction in Scope 3 relative to 2019 with only minimal reductions relative to 2018 and 2020.86 Scope 3 comprises virtually all of CVS’s emissions. The 2030 CVS target has already been validated by SBTi. CCRM raises similar concerns regarding targets of Accenture and GlaxoSmithKline (GSK).87

• **Adopting an incorrect methodology**: The 2022 CCRM reports that Nestlé, the food and beverage giant, appears to have set its 2030 climate target relative to business-as-usual (“BAU”) emissions in 2030. In so doing, Nestlé appears to use an incorrect methodology as SBTi targets are generally set relative to a base year (in this case, 2018), rather than forecasts of the company’s BAU emissions.88 The choice of incorrect methodology is significant because Nestlé’s BAU emissions are modeled to rise relative to the base year. Consequently, by using the BAU rather than the base year, Nestlé seems to be diluting the ambition of its target from a 50% reduction to only an 18% reduction.89 Here again, the target was validated by SBTi. The 2023 CCRM notes that Nestlé, in response to CCRM’s critique, claimed that its 2030 target used the 2018 baseline rather than BAU. CCRM found that “… the complex and untransparent accounting behind this target leads us to the interpretation that the target remains far weaker than it appears.”90

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85 CCRM 2023, supra n. 4 at 35, 82-83 (“It remains unclear whether SBTi explicitly allows Carrefour to exclude the vast majority of its stores and global activities from its target coverage, or if such exclusions have been overlooked.”).
86 CCRM 2022, supra n. 4, at 64. For SBTi validation, see Science Based Targets, Companies Taking Action, https://sciencebasedtargets.org/companies-taking-action#dashboard (targets are validated unless labeled as “Committed”).
87 See id.
88 CCRM 2022, supra note 4, at 89.
89 Id. at 26-27, 89.
90 CCRM 2023, supra note 4, at 107.
In light of such instances, the 2022 CCRM expresses skepticism regarding the ability of standard-setting bodies like SBTi to perform compliance assessments. Its concerns are worth quoting at length:

The “legislative” function of standard-setting initiatives should be separated from the “judicative” function of evaluating companies’ implementation of those standards [e.g., SBTi target validation]. Now that climate action is seen as an important component of companies’ marketing strategies, companies have the intrinsic motivation to present themselves as frontrunners and their claims therefore need to be checked by independent entities. Due to their own intrinsic motivation to demonstrate mobilisation and momentum, standard-setting initiatives are not entirely independent in this regard. There must be a division of power between organisations performing the functions of mobilisation, standard setting, and verification, just as there should be a separation between legislative and judicative functions in any governance system. Standard-setting initiatives should focus on the development of guidelines and standards, rather than pursuing the mass evaluation of individual companies with insufficient resources and conflicting incentives. This can otherwise lead to a platform for greenwashing; multiple examples are included in this report.91

Other critics of SBTi have also highlighted the financial conflict of interest the organization faces given its collection of significant fees for target validation, and its reliance on corporate donations.92 In an attempt to alleviate these concerns, SBTi recently announced a separation between its standard-setting and target validation activities.93 It remains to be seen whether the reform can in fact boost the integrity of the validation process. Be that as it may, when discussing the first type of climate washing concerns, the focus

91 CCRM 2022, supra note 4, at 27.
92 Camilla Hodgson, Climate targets oversight group under scrutiny over its own governance: Science Based Targets initiative makes changes after complaint about transparency and potential for conflict of interest, FINANCIAL TIMES (February 2022), https://www.ft.com/content/75527cce-9748-4aec-b6e6-7c7828460d2a. See also SBTi, How we are Funded, https://sciencebasedtargets.org/about-us/funders (as of 2023, about 45% of funding is from donations, which include Bezos Earth Fund, IKEA foundation, and Bloomberg Philanthropies. Other donors include NGOs; 48% of income comes from service fees, including target validation). Specific projects, like the FLAG standard, also received funding from relevant companies. See discussion infra Section II.C.
is largely descriptive: “Is the target in compliance with the target framework?” The key benefit of this approach is that compliance allows for relatively objective, and hence, uncontroversial, judgements. For plaintiffs seeking to establish climate liability, compliance claims are likely to be the low-hanging fruit. Companies should clearly abide by the target framework rules they represent to be following. SBTi itself could be a potential codefendant given the representations it makes regarding validation.

There are certain conditions that can improve plaintiffs’ ability to pursue the first type of claim. First, as noted above, the high level of specificity of SBTi criteria facilitates compliance assessment. Some frameworks are far looser and include terms that are often vague and open to interpretation. A prime example here is the Net Zero Banking Alliance (NZBA) framework under which major global banks (including the six large U.S. banks) issue their targets. Plaintiffs should take full benefit of the specificity that SBTi criteria offer to expose climate washing. Second, the technical nature of target frameworks means that accountability efforts like the CCRM play a key role in flagging non-compliance. As much as possible, it would be useful if these reports cite the specific SBTi criteria and policies that a given corporate target seems to violate. Table 2 below provides an example of what such analysis might look like with the company target described above (Carrefour, CVS Health, and Nestlé). Third, the work of reports by monitoring bodies would be greatly facilitated by access to companies’ target validation documentation. So far, it seems like this documentation has been treated as proprietary information rather than a public resource. To increase the credibility of its validation process, SBTi must make this documentation public. This will also avoid the need to file claims to obtain the documentation in discovery. For their part, regulators and legislators should consider mandatory disclosure of target validation documents as part of financial disclosures for public companies.95

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### Table 2: Assessment of Company Targets’ Compliance with SBTi criteria

<table>
<thead>
<tr>
<th></th>
<th>Issues involved (based on CCRM)</th>
<th>Specific SBTi criteria raising compliance concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrefour</td>
<td>Only including 20%-50% of emissions under target</td>
<td>C5 – Scope 1,2, and 3 allowable exclusions (Companies may only exclude up to 5% of Scope 1-2 emissions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C6 – Scope 3 emissions coverage for near-term targets (Companies must include cover 67% of Scope 3 emissions under target).</td>
</tr>
<tr>
<td>CVS Health,</td>
<td>Choosing an artificially high baseline year</td>
<td>C14 – Progress to date (sets requirements for minimum forward-looking reductions from the most recent year; notes that the “representativeness of both base and most recent year will be thoroughly evaluated during the [SBTi] validation process.”).</td>
</tr>
<tr>
<td>Accenture, GSK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nestlé</td>
<td>Seems to calculate its target using BAU rather than base year</td>
<td>C13 – Base and target years (C13 and other SBTi criteria all assume that a target is calculated as required emissions reduction from a base year rather than a BAU scenario).</td>
</tr>
</tbody>
</table>

### B. Climate Washing as Misleading Consumer Perception

The second type of claim refers to instances where a corporate target complies with the target framework, but the target framework itself raises climate washing concerns because it misleads consumer perceptions. Consider the following examples:

- An SBTi criterion known as C6 allows companies to exclude 33% of Scope 3 emissions from near-term targets.  
  Scope 3 emissions “account for over 90% of the GHG emissions footprints for of the companies [assessed in the CCRM].”  
  While CCRM does not seem to explicitly mention [SBTi] criteria and recommendations for near-term targets 8 (2023), 
  [https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf](https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf).

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97 See id.; see also, SBTI CRITERIA AND RECOMMENDATIONS FOR NEAR-TERM TARGETS 8 (2023), [https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf](https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf).  
98 CCRM 2023, supra note 4, at 6.
C6, the report does flag the “exclusion of significant emissions share” for virtually all companies with SBTi validated targets.\textsuperscript{99} Some of the companies flagged for exclusion of substantial emissions may have done so in violation of SBTi criteria. If so, such violations raise the kind of compliance issues discussed above under Type 1. However, CCRM’s nearly-universal coding of SBTi targets for “exclusion of significant emissions share” is likely to address a broader phenomenon than mere non-compliance. It seems to address the C6 exclusion itself.

- At times, SBTi allows companies to set Scope 3 targets at the (slower) reduction rate of well-below 2°C, while still certifying their targets as the (more ambitious seeming) 1.5°C aligned.\textsuperscript{100} Here again, CCRM does not explicitly mention the relevant SBTi standard or policy, but the general concern nevertheless emerges from the report. Thus, CCRM observes in a footnote: “The SBTi temperature ratings for short- and medium-term targets do not cover certain emission scopes, which is not directly obvious from SBTi’s presentation and companies’ communications.” That concern is amplified in a table comparing the ratings CCRM assigns to each company with their SBTi alignment scores. Nearly all of the dozen or so companies with SBTi-validated near-term targets for 1.5°C have a caption reading: “temperature alignment provided for s1 and s2 targets only (s3 target listed on SBTi webpage, but not covered by provided temperature alignment for s1 & s2).”\textsuperscript{101} Here again, the problem is not unique to compliance issues with a specific company. It is with SBTi (unlikely) assertion that a company with a Scope 3 target of well-below 2°C is aligned with a 1.5°C pathway.

The key in Type 2 claims is to find an objective way to demonstrate that the target framework itself engages in climate washing. At first instance, that might lead us back to climate science, and the global carbon budget. However, as discussed above, the global carbon budget as a scientific concept does not lead to unique conclusions as far as how to allocate that budget among companies. That involves discretion. That inherent discretion makes the SBTi criteria more difficult to justify on purely scientific terms, but it also makes them more difficult to criticize as inherently inconsistent with science. The risk is that litigating

\textsuperscript{99} Id. at 35 (Table 9).

\textsuperscript{100} See SBTi, NET ZERO STANDARD (2023) 38 \url{https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf} (for absolute targets). For sector-intensity specific intensity targets, see the specific industry guidance, \url{https://sciencebasedtargets.org/sectors}. Note that all companies using the SBTi Net Zero Standard are considered to be aligned with a 1.5°C pathway. See definition of “net-zero”, “near-term science-based target” and “science-based target” at 11-12.

\textsuperscript{101} See CCRM 2023, supra note 4, at 35 (Table 9), 162 (Table 19). Exceptions: Mercedes-Benz Volkswagen, where the differentiation between 1.5C alignment for Scope 1, and less ambitious alignment for Scope 3 is explicit.
this kind of claim would turn into a relatively philosophical discussion whether or not SBTi criteria are indeed consistent with science. This could be a difficult strategy to pursue.

A more direct path would be to turn to consumer perception. While a doctrinal discussion is largely beyond the scope of this Article, the key to appreciate is as follows. A plaintiff seeking remedy for climate washing does not necessarily need to demonstrate that a company’s alignment claims are inherently inconsistent with climate science. Rather, that plaintiff may succeed if they demonstrate that the company’s claims are inconsistent with the meaning that consumers attribute to the company’s alignment claims. Under U.S. federal law, to take one example, consumer perception is the decisive factor in establishing liability for environmental marketing claims amounting to unfair and deceptive practice under Section 5 of the Federal Trade Commission (FTC) Act. The FTC’s enforcement guidelines are provided in the so-called Green Guides.102 Under the Green Guides, the meaning of a marketing claim is assessed according to the natural meaning that consumers would assign to a term, rather than the correct technical meaning that would be accessible to scientists and other subject matter experts.103 Consumer perception is often determined empirically through group studies where subjects are offered several meanings to choose from. If a substantial portion of consumers, say 30%-40%, choose a certain meaning, that meaning would qualify as consumer perception.

For concreteness, consider how Type 2 claims might work in the context of the previous examples. A company advertises a 2030 climate target which it claims to be 1.5°C aligned (for simplicity, assume the target follows the absolute contraction approach). The company’s total base year emissions are 100 MtCO₂e, with 90% coming from Scope 3. Under the company’s target, Scope 1-2 emissions will be reduced at 50%, being the global rate of reduction for a 1.5°C pathway. For Scope 3, 33% of emissions are excluded, and the remainder 67% will be reduced at about 25%, being the global reduction rate of a well-below 2°C pathway. Under the SBTi Net Zero Standard, the target will be validated as 1.5°C aligned. In this case, plaintiffs will bring action arguing that the claim of 1.5°C alignment is inconsistent with consumer perceptions of the term. For example, plaintiffs can design the following survey:

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Company A says that its 2030 climate target is aligned with a pathway to limiting global warming to 1.5°C. Company A’s 2020 GHG inventory shows total emissions of 100 MtCO₂e per year. The global rate of emissions reduction required for 1.5°C is 50% by 2030 (2020 baseline). According to your understanding, to meet its 2030 climate target, Company A’s total 2030 emissions would have to be:

- A) 80 MtCO₂e per year (20% below 2020);
- B) 50 MtCO₂e per year (50% below 2020).

Assume that consumers chose option B, namely, 50%. It can be easily shown that the defendant company’s 2030 target will be met with 80 MtCO₂e, i.e., only 20% reduction (=50%*10 MtCO₂e in Scope 1-2 emissions + 25%*60MtCO₂e being the two-thirds of included Scope 3 emissions, divided by the total GHG emissions of 100tCO₂e). Note that a 20% reduction is barely aligned with well-below 2°C, so the difference between the two meanings is substantial. What is critical to notice is that plaintiffs in this case will not necessarily need to argue that SBTi rules themselves are inconsistent with the appropriate or scientific meaning of 1.5°C. What matters is that an ordinary consumer would understand such term to require 50% rather than 20% reduction.

Another important principle of the Green Guides is that third-party certifications—like SBTi—do not relieve a company from liability for claims made by the certification. Thus, under U.S. federal law, companies as well as SBTi, may potentially be subject to FTC enforcement. The FTC Green Guides are suggested as only one theory of liability. To date, it appears that little if any enforcement actions have been initiated by the FTC regarding climate washing in targets. Plaintiffs seeking to establish Type 2 climate washing liability can explore notions of consumer perception under securities law (the reasonable investor standard), common law (liability for misrepresentation), and legal options available in foreign jurisdictions. Each of these options requires an in-depth analysis of its own.

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104 At a broad level, this way of thinking about the quantitative significance of targets seems consistent with CCRM practice. See, e.g., CCRM, supra note 4, at p. 6 (Figure S2).
105 As far as private enforcement, the FTC Act, Sec. 5 does not allow that option. Private enforcement is, however, available under certain state consumer protection laws.
C. Climate Washing as Departure from Expert Consensus

The third type of claim refers to instances where there is expert disagreement regarding the appropriateness of SBTi criteria in light of prevailing views in the climate science and policy community. From the perspective of a plaintiff in a climate washing suit, this is likely the most difficult claim. Like a Type 2 claim, these situations arise when a given corporate climate target complies with the target framework (so low hanging Type 1 claims cannot be made). Unlike a Type 2 claim, however, the topic at hand is too technical or nuanced for consumer perception to serve as an objective criterion (e.g., through a consumer survey). The reliance on the meaning ascribed by lay consumers is a key strength of Type 2 claims, but with highly technical issues, it can also be a weakness. This is where Type 3 claims come in. Consider the following examples:

- The target setting-methods provided in SBTi criteria generally ignore the CBDR principle which is part of the Paris Agreement.\(^{107}\) This results in an inequitable distribution of the remaining carbon budget between developed and developing countries. It can also lead to a significant emissions gap due to unrealistic assumptions about decarbonization in developing countries.\(^{108}\) Legal and policy experts may argue, for example, that climate targets that ignore CBDR cannot be advertised to align with the Paris Agreement. Nevertheless, corporate climate targets that ignore CBDR are SBTi compliant, and so Type 1 claims are unavailable. It is possible that most consumers in a given jurisdiction will not have clear perceptions as to the role of CBDR in climate action, and so, Type 2 claims might not be an option. This leaves a Type 3 claim.

- SBTi targets are generally based on the minimum accounting boundaries provided in the GHG Accounting Protocol. In some instances, these accounting boundaries are controversial. Recall the examples in Part I, where the minimum Scope 3 boundary of a hotel leaves out the air-travel emissions of its guests.\(^{109}\) There are many other examples.\(^{110}\) Emissions from waste disposal trucks can be excluded from the inventories of the company that contracts a waste management company. A company leasing an asset (potentially even long-term) does not need to account for emissions incurred in its construction. A company providing a franchise (franchisor) is only required to include the franchisee’s Scope 1-2 emissions, while Scope 3 emissions are optional. When a company sells a

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\(^{107}\) Exception: FLAG


\(^{109}\) See discussion supra Section I.C.

\(^{110}\) See GHG Accounting Protocol, supra note 8, Table 5.4; 35-37 Categories 5, 8, 11, 14.
product, “direct use-phase emissions,” like direct consumption of energy by an appliance, are included in the manufacturer’s minimum Scope 3 boundary. But “indirect use-phase emissions,” such as emissions incurred when processing a raw material, are excluded. Even more technical in nature are determinations made regarding minimum boundaries in sectoral pathways. Take SBTi’s Steel Guidance for examples. As SBTi documents, various technical initiatives differ in the way that they define their minimum boundaries.111 Some of these questions seem to concern complex issues of indirect use-phase emissions from processing steel.112 Consumers may or may not have clear perceptions about boundaries. When they do not, experts can weigh in as part of a Type 3 claim.

- SBTi’s guidance for the FLAG sector (Forestry, Land Management, Agriculture) allows companies in that sector to “inset” their emissions by engaging in carbon removal projects in their value chain (e.g., reforestation). The 2023 CCRM expresses concern with that practice. According to CCRM, the notion of insetting is similar to problematic carbon offsetting practices that were rejected by the climate policy community, e.g., in SBTi’s general restriction on using offsets in targets.113 One of the objections CCRM raises to offsetting is the scarcity of projects that can provide legitimate carbon removal opportunities. CCRM argues that this limited carbon removal capacity should be conserved for use in the hardest-to-decarbonize sectors where it is truly necessary, rather than where easier opportunities in sectors with opportunities for direct reduction in emissions.114 Some specific insetting schemes in the FLAG sector might raise compliance issues with SBTi, or even mislead consumers. In those specific cases, they can give rise to Type 1 and Type 2 claims. But when considering SBTi’s more general policy of allowing insetting in its FLAG standard, the key issue may be the controversy within the expert community. Here again, this would also be a Type 3 claim.

The key benefit of Type 3 climate washing claims is their breadth. These claims address instances where the target setting body (SBTi) is making technical determinations that are deemed unacceptable by some portion of the expert community (e.g., CCRM). The limitation of this approach is the relative difficulty of undermining the technical legitimacy of the target setting body’s criteria. Unlike Type 2 claims, a plaintiff cannot make a successful case for climate washing by showing that advertised targets are inconsistent with

111 STEEL SCIENCE-BASED TARGET-SETTING GUIDANCE, supra n. 46.
112 See CCRM 2023, supra note 4, at 24 (stating that “[t]here remains no clear consensus on the extent to which steelmaking companies should be required to take responsibility for indirect product use phase emissions.” The 2023 CCRM seems to predate the release of SBTi Steel Guidance of the same year).
113 Id. at 66.
114 Id. at 51-54.
consumer perceptions. With Type 3 claims, the argument is more substantive and goes to the heart of the technical credibility of the target setting body.

It is an interesting question what standard of expert disagreement a plaintiff would have to meet to prevail in such a claim. For example, is it a strict standard, requiring that the SBTi position be a narrow minority view within the science and policy community, or is it sufficient for there to be a mere lack of consensus? In part, the choice of standard for Type 3 claims depends on how one interprets SBTi’s claims of a science-based methodology. When advertising its own methodologies as science-based, is SBTi implying that they are supported by scientific consensus? If so, plaintiffs might be able to shift the burden of proving scientific or policy consensus to SBTi’s shoulders. Be that as it may, a plaintiff bringing Type 3 claims would face the usual challenges involved with dueling expert opinions. At a practical level, the technical reputation of a body like SBTi could make it challenging to argue that it is working outside of expert consensus. SBTi, after all, is considered to be the gold standard of climate corporate responsibility. If SBTi holds a certain position, that position itself can shift the center of gravity within the expert community.

Herein lies a perverse outcome of the alignment approach to climate action as currently practiced. The same allusion to climate science, that gives that approach its power, sometimes works to insulate targets from criticism by climate advocates. There is an inherent democratic deficit in an NGO like SBTi acting as an arbiter of global climate policy. Rhetorically, the description of the targets as “science-based” and their quite technical nature de-emphasizes the discretion involved in setting criteria. In actuality, the science supporting the global carbon budget does not encompass how that carbon budget is allocated or whose inventory includes what emissions. A system that oversells its reliance on science, and under-acknowledges its allocative role commits a kind of intellectual Type 2 climate washing. It insulates itself from critique by creating an impression of reliance on science that sometimes departs from the ordinary meaning of the term. This does not go to suggest that SBTi is a bad faith actor, or that its technical work is not valuable. But it does go to suggest that it is an actor whose work sometimes extends beyond the boundaries of its legitimacy in ways that require attention.

The concerns with SBTi’s more allocative role are highlighted by the significant industry involvement in its governance and standard-development process. The 2023 CCRM expresses particular alarm at the role that major companies played in the GHG Protocol’s recent Guidance for corporate accounting of land sector emissions and removals and its relationship to a controversial SBTi position in its new FLAG standard.\textsuperscript{115} Indeed, the SBTi FLAG standard was funded in part by companies with large land use emissions including Danone, Mars, Cargill, IKEA, Kimberly Clark, General Mills Foundation,\textsuperscript{115} Id. at 66.
and Tyson.\textsuperscript{116} Industry involvement can be beneficial insofar as it harnesses on-the-ground knowledge and increases buy-in. At the same time, it raises the risk that the interests under consideration are disproportionately those of industry. Affected communities, especially in the developing world, do not seem to be meaningfully integrated into SBTi’s governance. We should be concerned with an outsized industry voice in SBTi for the same reason we are concerned with, say, the outsized involvement of fossil fuel industry representatives in COP28.\textsuperscript{117} Addressing these concerns will likely require a combination of strategies, including watchdog reports, climate washing litigation, legislative and regulatory measures, and institutional reforms within SBTi itself. Each of these options involves tradeoffs. For example, legislative campaigns can provide democratic input, but would likely still involve high levels of industry input through lobbying and political contributions.

Whatever the mix of strategies, so much is clear. Scrutiny over corporate target frameworks is becoming a central concern for climate advocacy. Advocates need to master the technical and often intricate body of knowledge around target frameworks. At one level, that knowledge is required to expose climate washing through traditional tools like compliance reviews and consumer perception studies. At another level, advocates urgently need to articulate their own vision of what climate alignment ought to mean, and push to institutionalize that vision.

\textbf{CONCLUSION}

Corporate climate targets have become a central aspect of global climate policy. The goal of this Article is not to argue that the phenomenon as a whole represents climate washing, or that it is undesirable for future climate policy. Rather, the principal concern is with the way that “science-based” targets are used to legitimize a particular allocation of the global carbon budget that is beyond the domain of science. As a matter of substance, that allocative scheme seems to favor the world’s largest and most powerful corporations at the expense of the rest of the world.

The notion that science cannot determine company-level targets is, in a sense, a double-edged sword. While it uncovers corporate claims regarding “science-based” targets as inaccurate, it also makes it difficult to label these claims as climate washing for being in direct conflict with the science. Instead of taking that

\textsuperscript{116} SBTi FLAG GUIDANCE, supra note \textsuperscript{X}, at 3.

approach, the Article’s advice to advocates is to pursue easier avenues to establish climate washing liability. Companies that commit to SBTi criteria should clearly ensure their targets comply with those criteria (when SBTi validates their target, it should also ensure compliance). Companies and SBTi should not advertise targets in ways that mislead consumer perception in ways that can be empirically supported. SBTi should not present its framework as science-based in instances where its criteria do not reflect consensus in the expert community. Admittedly, these theories of liability provide practical remedies. They do not address the broader and more fundamental question: what is one’s responsibility— one’s true “fair share”— of global emissions reductions? While that question cannot be answered by science, the door is open for climate advocates to answer it based on their own normative vision.