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State of Play: Proxy Season 2024

Emissions, energy, and materiality in focus

- In this report, we zoom in on the **emissions of the Russell 1000** ("R1000"), an index that comprises over 90 percent of US equity market capitalization (and over 40 percent of the value of **global** stock markets). R1000 companies were targeted in over **80 percent** of the shareholder proposals CAS tracks.
- The vast majority of the R1000's Scope 1 (direct) and Scope 2 (purchased energy) emissions are generated by companies making up less than 10 percent of the index by market capitalization. Scope 3 (value chain) emissions are driven by companies representing just 15 percent of the value of the index.
- **That means investors can afford to take a tailored, company- and industry-specific approach** to sustainability issues without compromising coverage of the index's emissions. For the vast majority of the index, decarbonization will be a mostly passive process, driven by the falling emissions intensity of the electric grid.
- Out of **68 companies** with upcoming annual meetings that have been targeted by dissident proposals on climate issues, we highlight **21 companies** based on a **financial materiality screening approach**, where we suggest investors heighten their due diligence and engagement on climate and energy issues, and consider support for dissident proposals when it is an appropriate escalation tactic.
- Collectively, the R1000 generates about **3.5 percent** of global CO₂e emissions, and consumes about **24 EJ** of energy a year, a mid-single-digit share of global energy use.
- In recent years, shareholder proposals have overwhelmingly focused on the financial, energy, consumer staples, and consumer discretionary sectors. By contrast, companies representing less than one-third of the Scope 1 and 2 emissions in the utilities, industrials, and materials sectors have been targeted.



General recommendations for investors and activists

- 1) Greenhouse gas (GHG) emissions are an **output, not an input**, and requests for additional disclosure from corporates should isolate the **key inputs** that will drive emission reduction over time. For the 90 percent of the index (by value) that generates less than 20 percent of direct emissions, energy efficiency, clean power procurement, and management of non-CO₂ GHGs are more important to track than emissions.
- 2) The 10 percent of the index that generates the **vast majority** of emissions is heavily concentrated in electric utilities, oil and gas, and "[hard to decarbonize](#)" industries like steel, aluminum, and chemicals. Climate performance in these industries can be framed in terms of **industry-specific playbooks** without compromising coverage of the market's overall emissions.
- 3) For investors, support for shareholder proposals that hit on key topics can be used as an escalation tactic in ongoing engagement around these deeper drivers and metrics – it doesn't need to be a verbatim endorsement of the text of the proposal.
- 4) In this report, we highlight **21 upcoming annual meetings** where our benchmarking raises concerns about the pace of progress on energy intensity and emissions, and where dissident proposals on climate will be on the ballot.



Putting the Russell 1000 in its place

The collective emissions of the Russell 1000 index ("R1000") are a meaningful but still relatively small chunk of global GHGs. The financial cost of these emissions would be a real but ultimately survivable blow to the value of the US stock market, and thus to household wealth. The point of these comparisons is not to minimize the potential social and economic impact of climate change, which is huge and existential, but to put the role of the US corporate sector in its proper place.

Reducing global emissions will require mobilizing a massive amount of investment in low-carbon energy, and in long-lived assets that can be powered by renewable electricity rather than fossil fuels, as well as energy efficiency and carbon management measures. The **impact** case for corporate emissions reduction is no more or less than the proposition that listed companies can be one source of that investment.

The R1000 includes 1,000 of the largest companies in the US, and, by extension, the world. It makes up a little over **90 percent** of the total value of the US stock market, and therefore about **40 percent** of global equity market capitalization. R1000 constituents are also a major target for **shareholder activism on climate**. Out of the 800-plus climate-related shareholder proposals tracked by CAS from 2019 to 2024, over 80 percent were aimed at current R1000 constituents.

It is now conventional wisdom that climate change can be a source of financial risk for public companies and their shareholders. This is why disclosing greenhouse gas ("GHG") emissions is now [required for public companies](#) in markets including Canada, the European Union, and Japan. While the SEC has stayed its [climate disclosure rule](#) pending legal challenges, voluntary emissions reporting has already been adopted by many companies, [spurred on by asset managers](#) and guided by frameworks like the [Recommendations of the Task Force on Climate-Related Financial Disclosures](#).

Estimated Scope 1 (direct) and Scope 2 (purchased energy) emissions for the R1000 total 2.25 Gt CO_{2e}. 779 companies in the R1000 disclosed Scope 1 emissions in the most recent reporting year, and 745 disclosed "location-based" Scope 2 emissions.¹ The total emissions of these companies, which have actually disclosed their emissions, is 2.12 Gt CO_{2e}. In other words, voluntary reporting already covers **94 percent** of the index's emissions.

2.25 Gt CO_{2e} is a lot. It is still a lot even after subtracting Scope 2 emissions (394 MT) to avoid double-counting emissions from the utility sector. But this vast flow of emissions released into the atmosphere each year equals **a little under 3.5 percent of global emissions**.

¹ "Location-based" and "market-based" refer to different methods of calculating Scope 2 emissions. "Location-based" Scope 2 better reflects the **physical** carbon footprint of a company's purchased electricity, heat, and steam, while "market-based" Scope 2 reflects purchased energy and environmental attributes. In this report, unless stated otherwise, "Scope 2" emissions refers to the location-based approach.



Tallying up all of the estimated "Scope 3," or supply chain and customer, emissions of the R1000 involves extensive double-counting, since (for example) [Boeing's downstream emissions](#) from selling airplanes are United Airlines' direct emissions from flying them – and they also overlap with, say, ExxonMobil's emissions from drilling a barrel of crude oil and Phillips 66's emissions from refining it into jet fuel. Add up the R1000's **total** Scope 3 emissions, as problematic as the exercise is, and you get **10.3 Gt CO₂e** per year, or [a little under a fifth](#) of global emissions.

It is also important to compare the volume of the R1000's annual emissions with the **value of the index**. As of earlier this month, the combined market value of the companies in the R1000 is roughly **\$50 trillion**, which, excluding loss-making companies, is about 25x their collective earnings. The 90th percentile of all currently implemented carbon taxes and prices is \$51.50 per tonne of CO₂. Paying this price on ~1.86 Gt of direct emissions would be a nearly ~\$100 billion annual drag on the R1000's earnings, or a roughly 5 percent hit to the [average wealth of US households](#).²

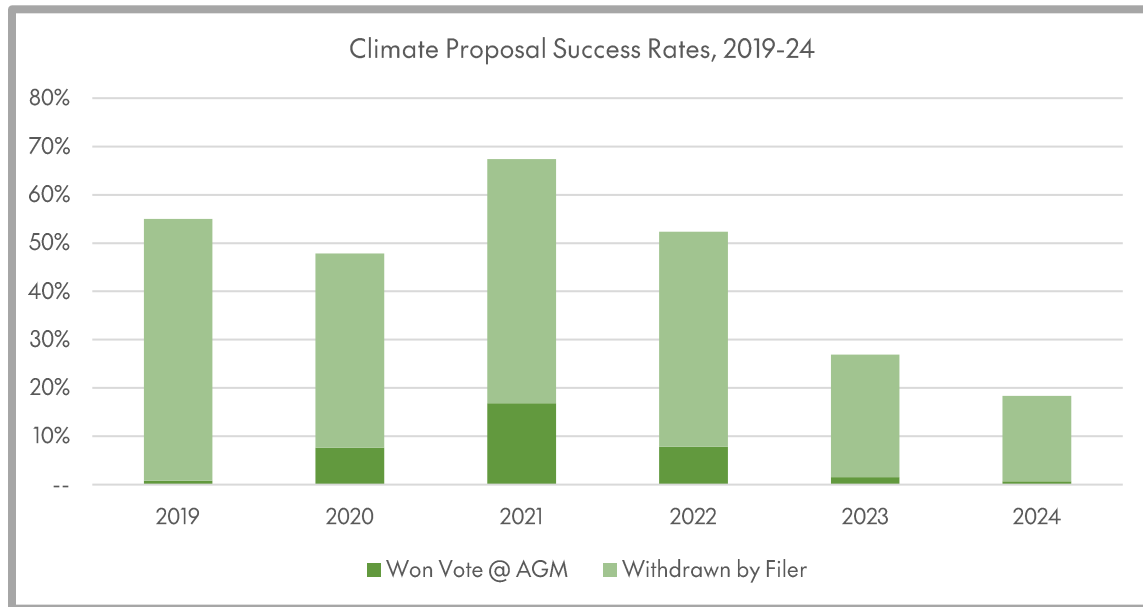
CAS is a research nonprofit focused on **transition risk**, which we think of in terms of **carbon assets** and **carbon liabilities**. As government policies around the world converge (albeit unevenly) on the goal of reaching net zero, they increasingly impose penalties on producers and users of fossil fuels, and, under the aegis of "[green industrial policy](#)," offer incentives to companies building out low-carbon industries. Analysts can develop scenarios to estimate the net present value of future CO₂ prices and taxes (the carbon liability) as well as subsidies like the IRA's tax credits for carbon capture and low-emissions hydrogen production (the carbon asset).

Shareholder proposals are one way for investors to register their discontent with a company's disclosure framework – the quantitative and qualitative information it shares with the public every quarter or every year. Support for climate proposals – which has fallen precipitously in recent annual meeting cycles – rests on the putative financial materiality of the requested disclosures.

² Obviously, given the distribution of ownership of financial assets, a shock that would be concentrated in the high end of the household wealth and income distribution.



Fig. 1 – CAS’s analysis of public shareholder resolution databases and SEC filings shows that the success rate of climate-related proposals has fallen dramatically since 2021.



The reality is that emissions are **only financially material for a few critical sectors** – a pattern that repeats itself at the industry and sub-industry level. It also holds true for Scope 3 emissions (though the list of industries with material Scope 3 emissions is slightly different, adding to the number of companies with material Scope 1 and 2 or Scope 3 emissions). Luckily, these companies drive nearly all of the direct and full value-chain emissions of the index. Unluckily, they are overwhelmingly in sectors like energy and utilities, where emissions reduction could imply decommissioning assets before the end of their economically useful lives, or in the so-called “hard to decarbonize” industries, which require intense process heat and/or emissions-intensive chemical reactions.

For most of the rest of the index, decarbonization will be a largely passive process, as companies free-ride on the declining emissions intensity of the grid. In fact, for industries that together make up **a quarter** of the value of the R1000, cutting emissions at the level required to set a “science-based” absolute emissions target, using the Science-Based Target Initiative’s “absolute contraction” approach, is a virtual certainty even if the companies themselves take no action at all.

Our provocation as this year’s proxy voting season begins is that the universal call for “science-based short-, medium-, and long-term emissions targets” may be past the point of diminishing returns. Instead, what’s needed is a greater focus on **industry-specific playbooks** for driving emissions reduction. This is because a company’s reported emissions is an **output, not an input**. Making incremental upgrades to existing, fossil-fuel-based



equipment can help a company eke out emissions intensity gains while kicking the can down the road on deeper, more strategic moves.

At the same time, we think investors should be encouraged to use shareholder proposals as a directional tool – one that can escalate ongoing engagement with a company – to flag key issues to corporate boards and management teams. Later on in this report, we highlight several of the indicators CAS tracks to screen for progress on energy and emissions intensity, pointing to upcoming annual meetings where shareholders will have an opportunity to flag issues of concern.



Zeroing in on emissions

Excluding utilities (whose Scope 1 emissions are other sectors' Scope 2 emissions), approximately 80 percent of the Scope 1 and Scope 2 emissions of the R1000 are concentrated in just three sectors – energy, materials, and industrials – which combined total only **16 percent** of the index by market cap.

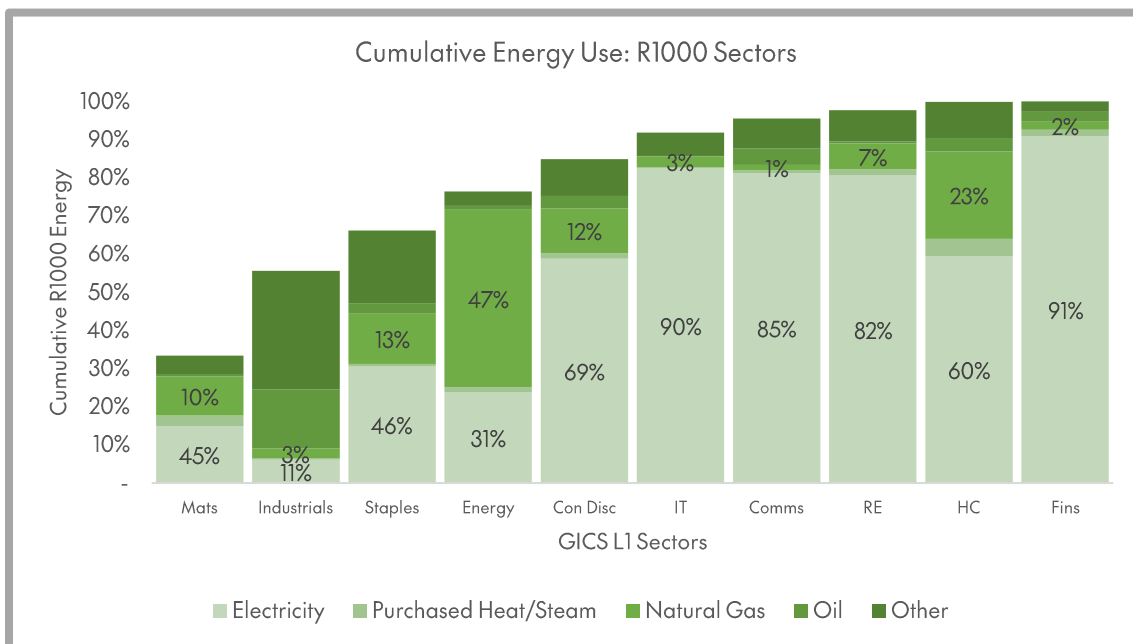
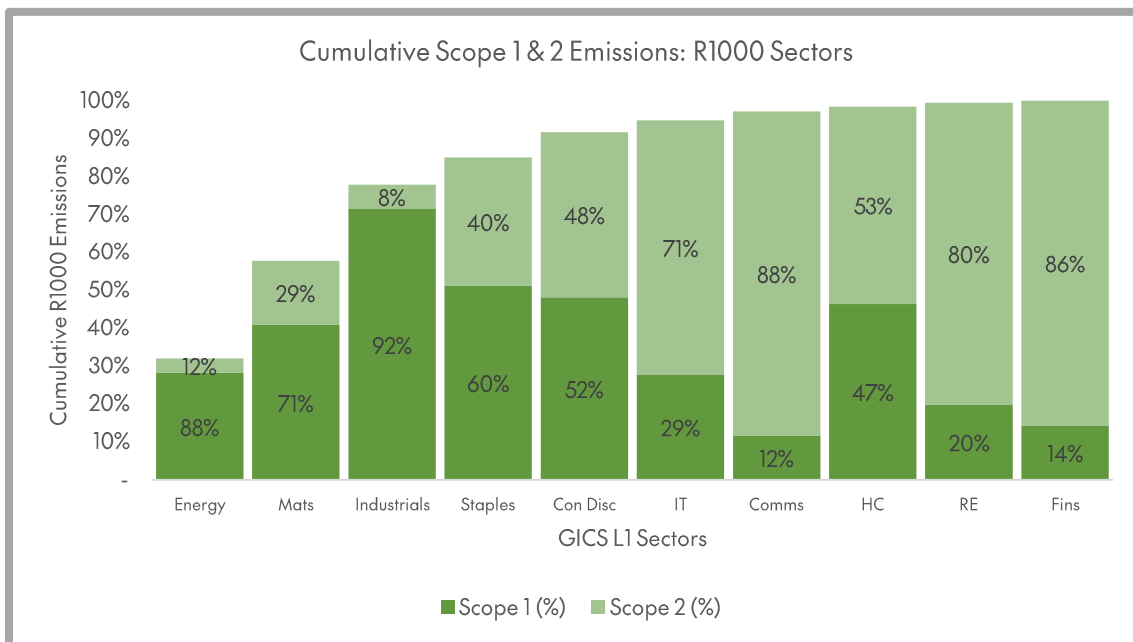
There is a fundamental divide between these three asset- and energy-intensive sectors and the rest of the market. Direct, or Scope 1, emissions make up 83 percent of emissions for these companies. On average, companies in these sectors are highly energy intensive, using 419 MWh of final energy (i.e. measured at the point of consumption) for every million dollars of sales. Finally, because most of that energy comes from the on-site combustion of fossil fuels, it is relatively emissions intensive, at 553 kg CO₂e per MWh.³

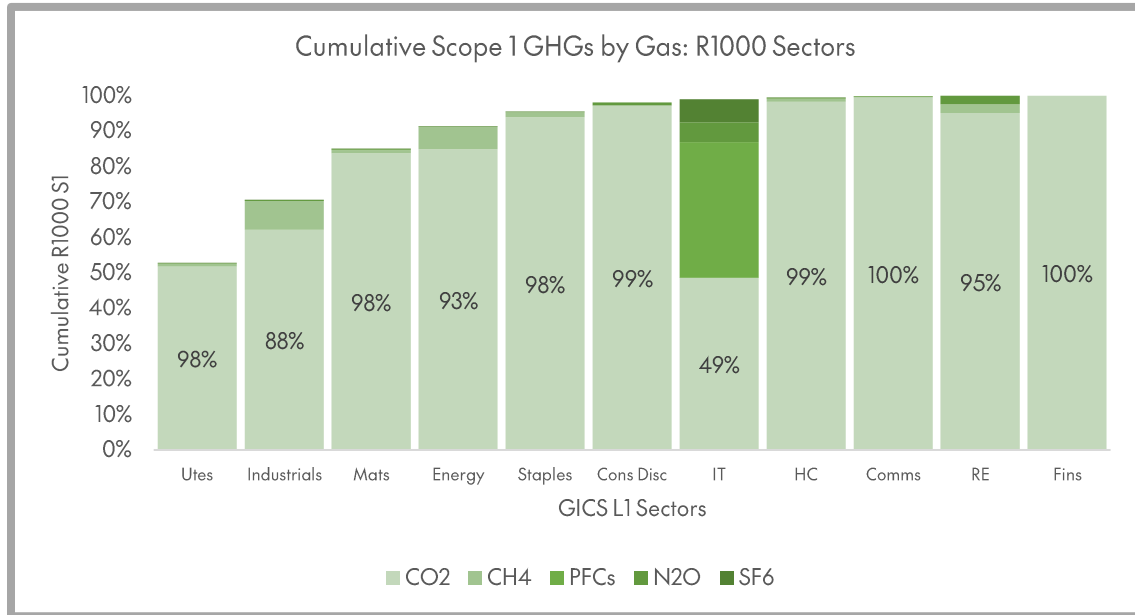
Conversely, for the rest of the market, emissions are driven by purchased energy, or Scope 2, emissions, which make up 55 percent of the total emissions for these companies. **The energy intensity of sales for these companies is almost an order of magnitude lower**, at 54 MWh per million dollars of sales. And, because a majority of that energy comes from the grid, with a significant contribution from low-carbon resources like solar, wind, hydropower, and nuclear, it is much less emissions intensive energy, at an average of 434 kg CO₂e per MWh.

³ In this report, direct consumption of fossil fuels is adjusted by the conversion factor used in the *Statistical Review of World Energy* to calculate "input-equivalent" primary energy from renewable energy sources. CAS does the opposite, calculating the final energy equivalent of fossil fuel consumption.



Figs. 2-4 - Scope 1 emissions are heavily concentrated in the energy, materials, and industrials sectors, which together drive roughly 80 percent of the index's overall emissions. These sectors are mostly reliant on the direct use of fossil fuels to meet their energy needs, rather than electricity from the grid.

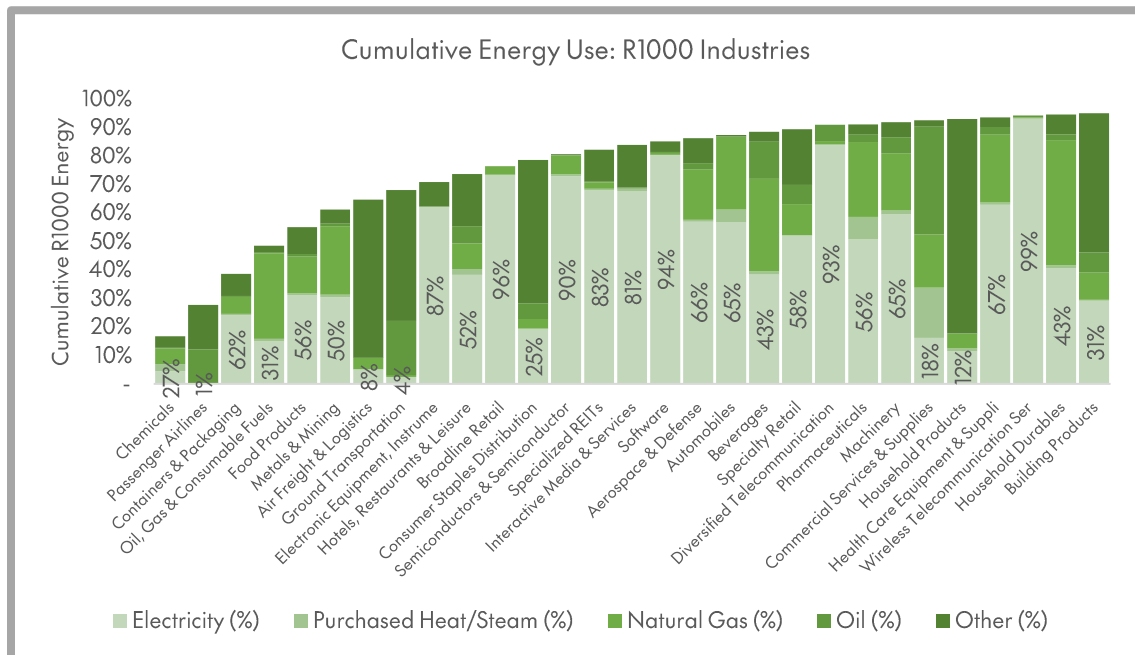
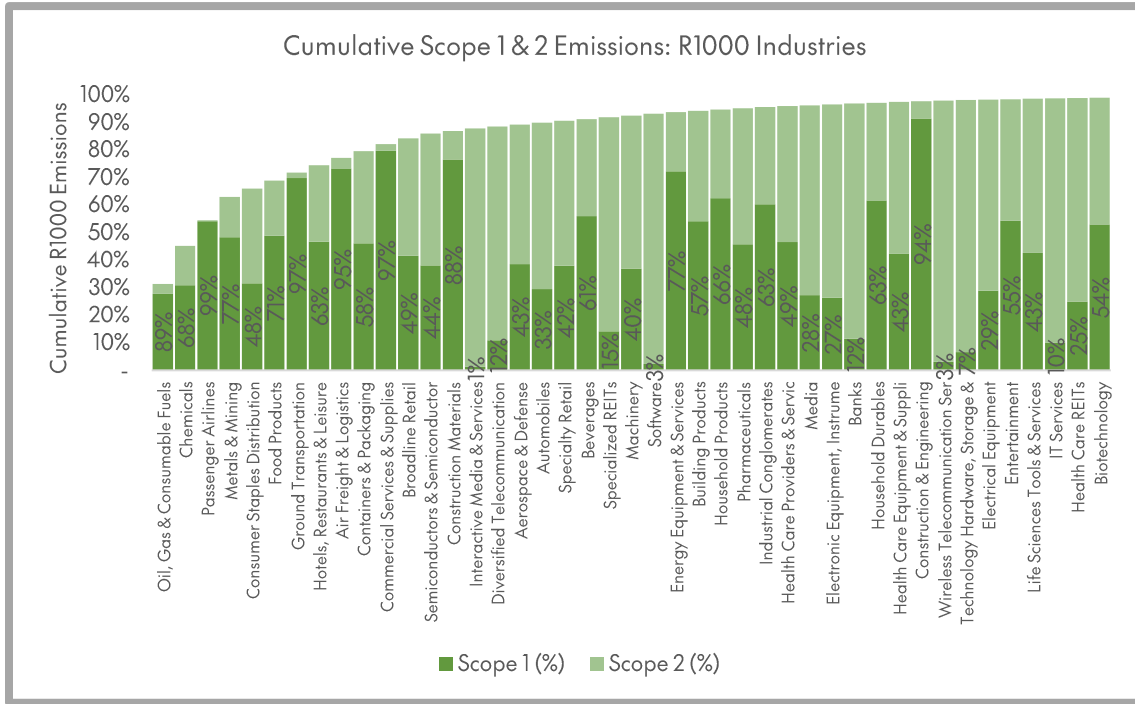


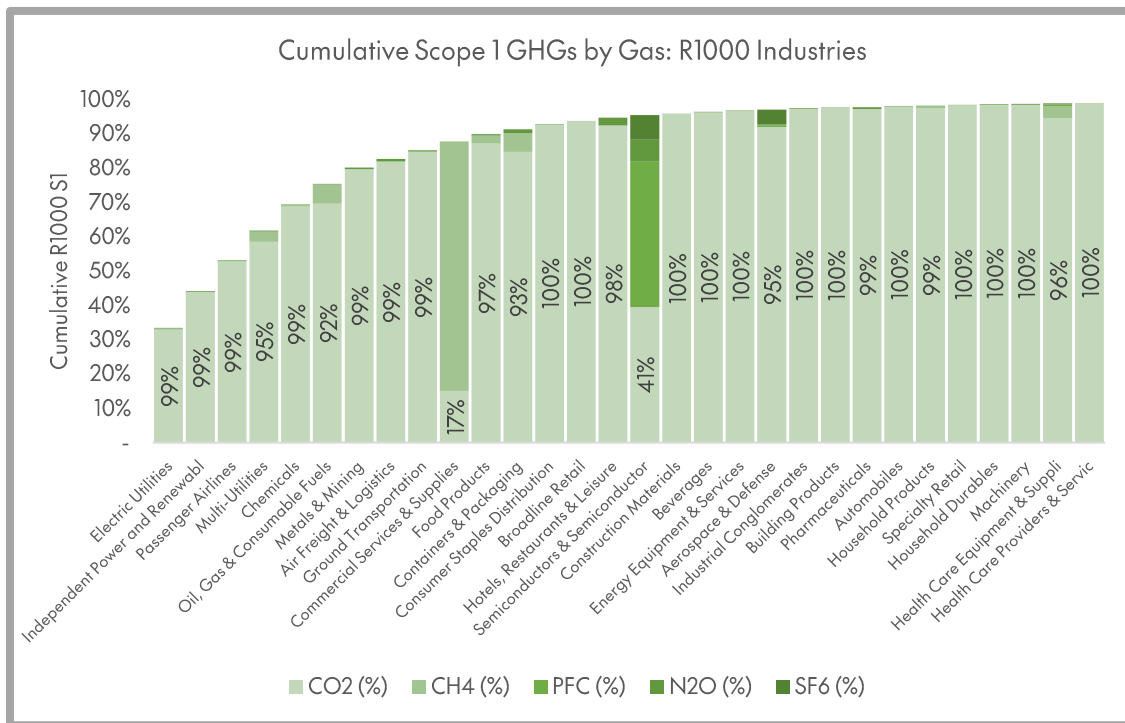


These patterns repeat themselves at the industry level. 80 percent of the index’s emissions are driven by just 11 industries. The constituent industry groups within the GICS Energy, Materials, and Industrials sectors are joined in the “head” of the emissions and energy distribution by Consumer Staples Distribution, Food Products, and Hotels, Restaurants and Leisure.



Figs. 5-7 – A similar pattern repeats itself at the industry level, which also highlights a few energy- and emissions-intensive consumer categories.

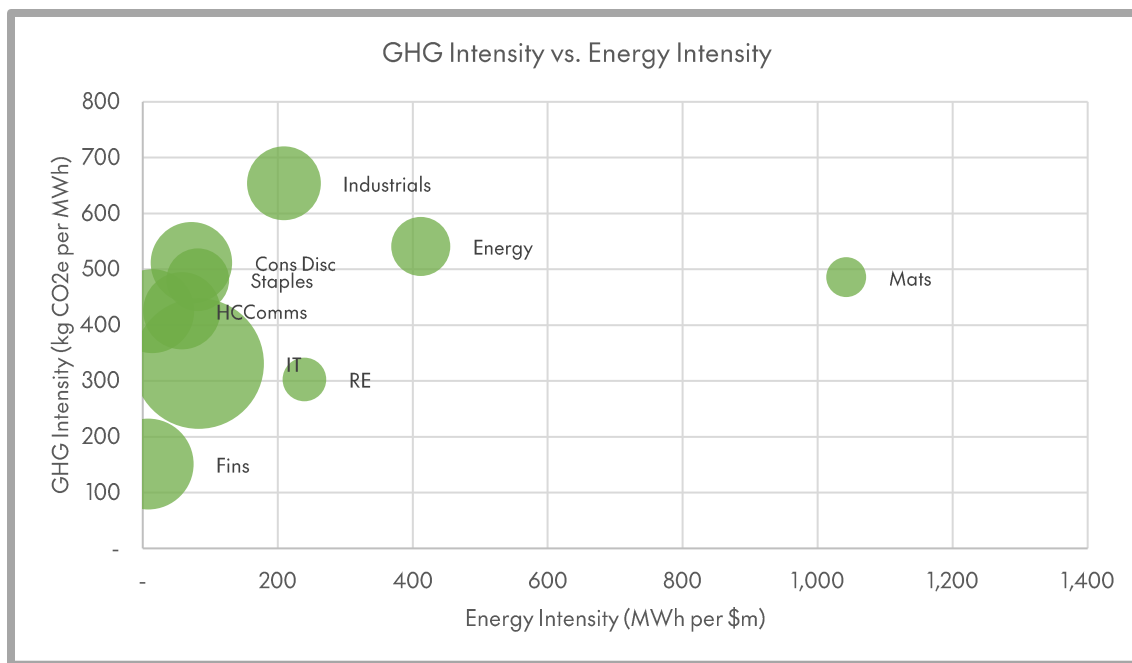




The most energy- and emissions-intensive sectors and industries tend to be valued at lower multiples of sales and earnings than other, more asset-light businesses. The upshot is that the **vast majority of the value of the R1000 lies in companies that do not consume much energy per dollar of sales, and generate relatively low emissions per unit of energy they do use.**



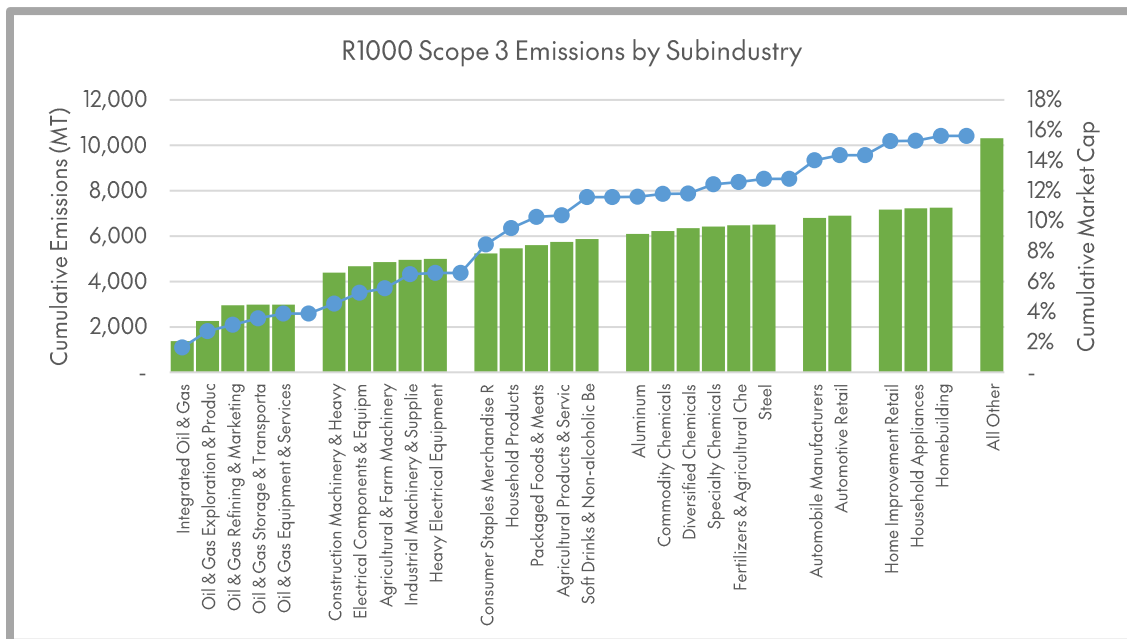
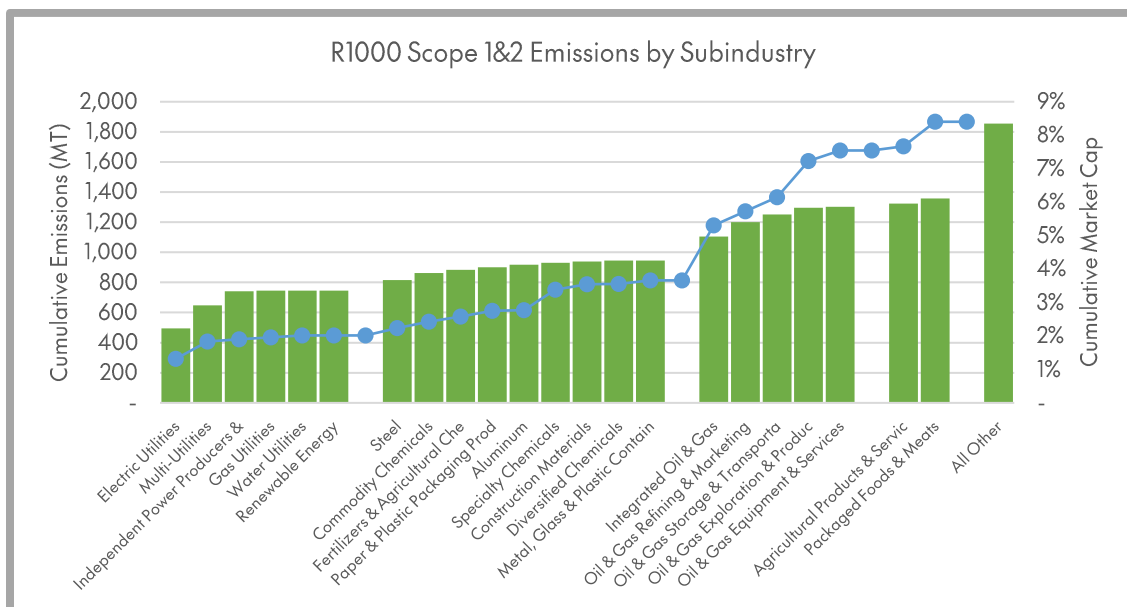
Fig. 8 – Energy and GHG intensity are closely related. In other words, the sectors that consume more energy for each unit of sales tend to generate more emissions for each unit of energy they use. The grid-reliant sectors tend to be services- and technology-focused categories, like financials, information technology, and health care.



Perhaps unexpectedly, **this also applies to Scope 3 emissions**. Besides the sectors with the highest direct emissions and energy footprint (which also tend to have substantial Scope 3 emissions), the automobile supply chain (manufacturers, parts suppliers, and dealers) and food and agriculture-related businesses (food processors and meatpackers), and machinery companies stand out for their contribution to the index's supply chain and customer emissions.



Figs. 9-10 – The fractal pattern of emissions concentrated in a few companies continues at the subindustry level, where companies representing < 10 percent of the value of the R1000 generate over 70 percent of its aggregate Scope 1 and 2 emissions, and companies representing ~15 percent of the index’s value generate over 70 percent of its aggregate Scope 3 emissions.



Over 70 percent of the value of the R1000 is in companies with an energy intensity **below 100 MWh per million dollars of sales** and over 50 percent in companies with an emissions intensity of energy below **500 kg CO₂e per MWh**. Illustratively, at a CO₂ price of \$100 per tonne, these thresholds imply CO₂ costs of just 0.5 percent of sales.

Fig. 11 – This table highlights the ratio of CO₂ costs to sales as a function of energy intensity of revenue (MWh per million dollars of sales) and emissions intensity of energy (kg CO₂(e) per MWh of energy), at \$100 per tonne.

		<u>MWh per \$m of sales</u>				
		100	200	300	400	500
<u>kg CO₂e per MWh</u>	100	0.10%	0.20%	0.30%	0.40%	0.50%
	200	0.20%	0.40%	0.60%	0.80%	1.00%
	300	0.30%	0.60%	0.90%	1.20%	1.50%
	400	0.40%	0.80%	1.20%	1.60%	2.00%
	500	0.50%	1.00%	1.50%	2.00%	2.50%

An overarching takeaway is that analysts can absolve themselves of the responsibility to come up with a one-size-fits-all framework for evaluating emissions targets (and transition strategies). Because the index's emissions are concentrated in a few critical sectors, and industries *within* those sectors, it's possible to develop a small number of industry-specific playbooks for evaluating corporate progress on climate issues, and to still cover the vast majority of both the R1000's total emissions, which is the best denominator for measuring potential *impact*, and of the R1000's transition risk, which is the best denominator for measuring financial materiality.



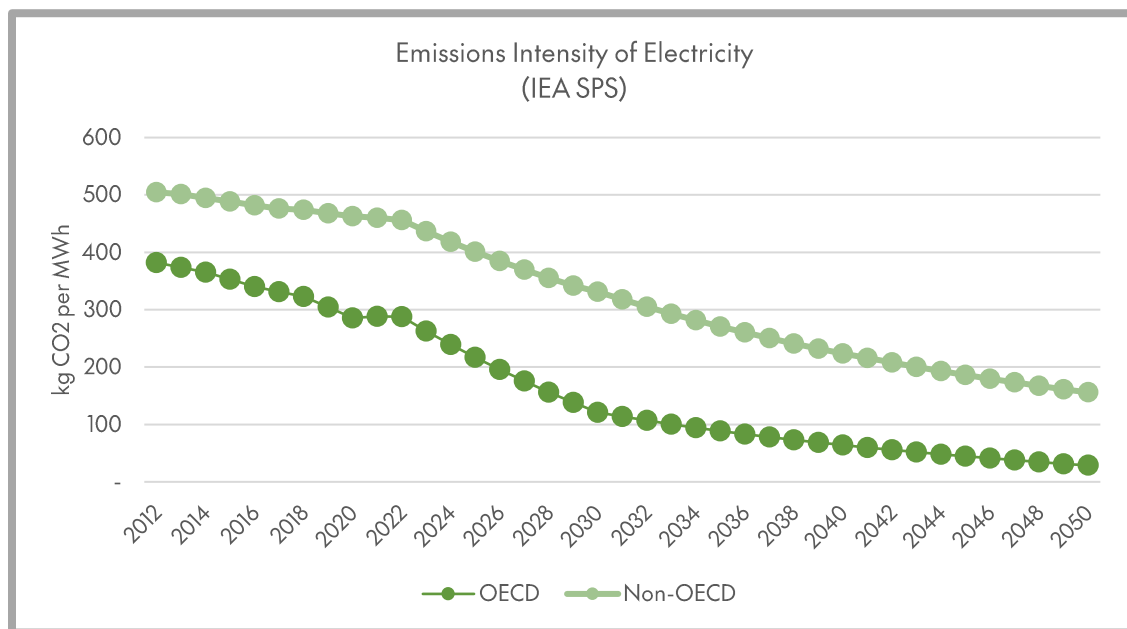
Grading on the right curve

Current emissions can be a poor proxy for future emissions. This is because even under energy scenarios anchored in current policies and trends, like the International Energy Agency (IEA) Stated Policies Scenario (SPS), rapid deployment of renewable energy is expected to drive a decline in the emissions intensity of the electric grid.

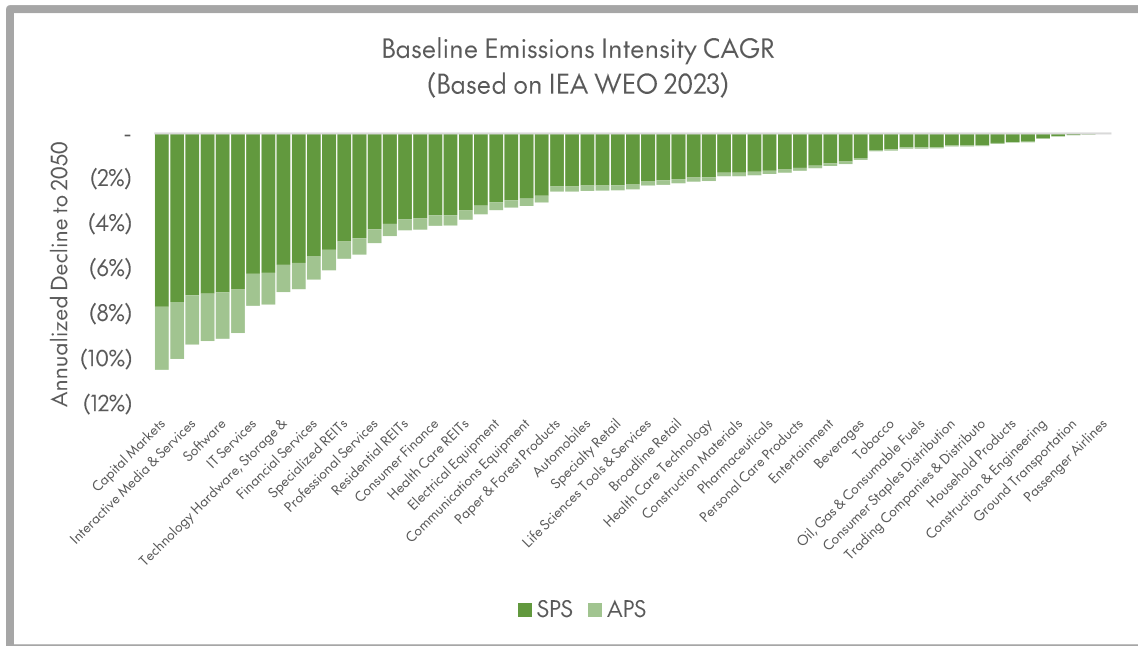
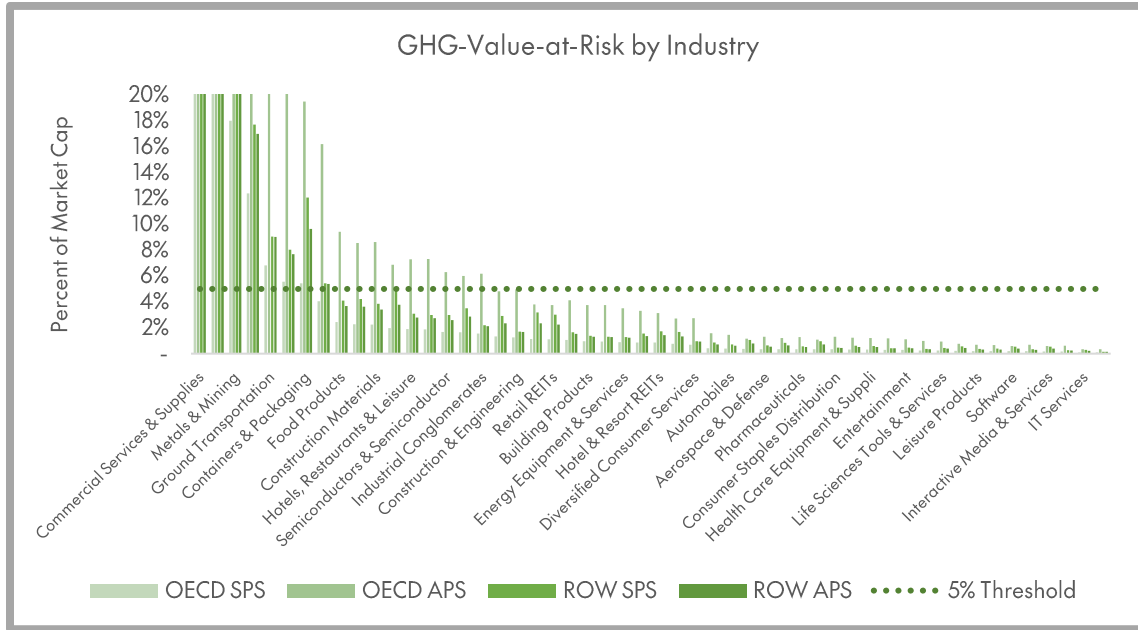
Comparing current emissions to sales, or to a company's market value – perhaps using an illustrative carbon price to relate the two – is a sensible way to screen for emissions risk. But, especially for companies that rely on the grid for most of their energy needs, it can seriously overstate the net present value (NPV) of carbon liabilities, since carbon taxes and prices are expected to ramp up gradually, even as the emissions intensity of electricity declines.

Conversely, many companies' emissions targets are much less ambitious than they appear at first glance, and could be achieved as a by-product of grid decarbonization, without any additional action or investment by the company required. In this case, targets won't do much good, either from a risk mitigation or impact standpoint. **Investors should interrogate whether GHG targets are an appropriate tool for managing transition risk in these cases**, or whether they should shift their focus to more tailored and input-oriented mechanisms, like voluntary clean power procurement goals.

Fig. 12 – The forecast generation mix in the IEA's SPS implies a 66 percent reduction in the emissions intensity of electricity for non-OECD countries, and a 90 percent reduction for OECD members, between 2022 and 2050.



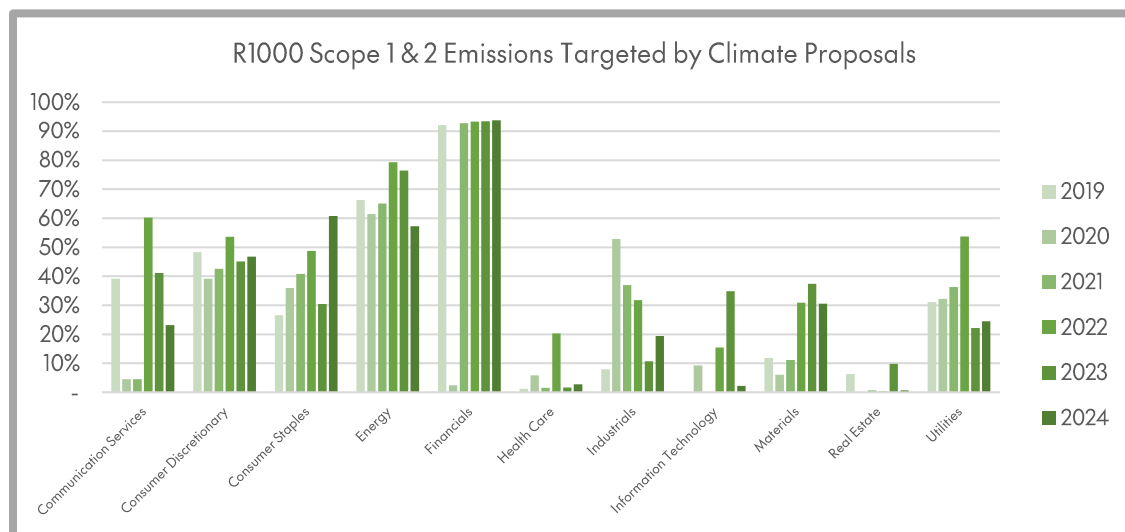
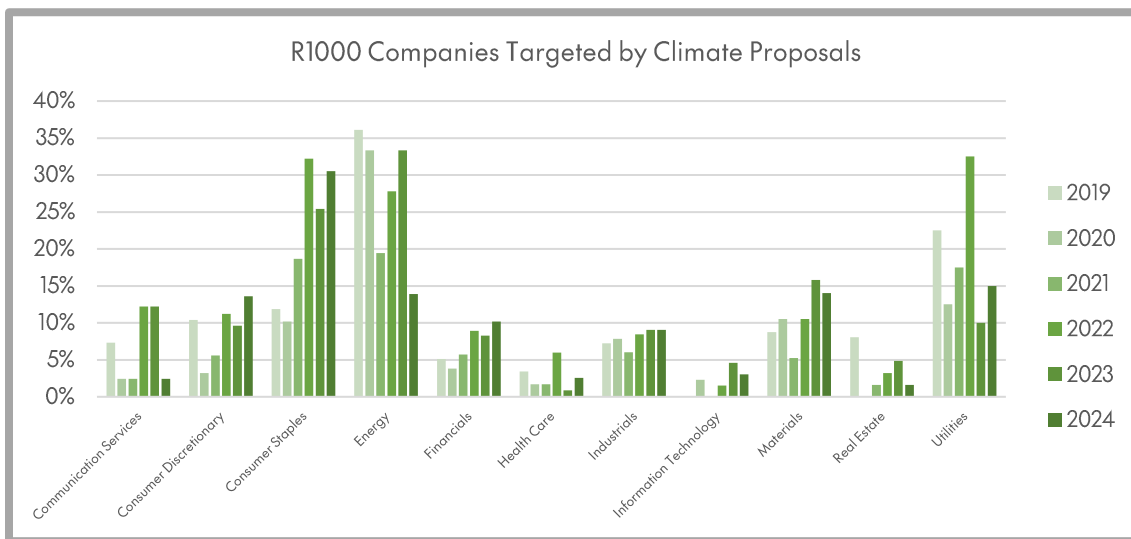
Figs. 13-14 – CAS calculates "GHG-Value-at-Risk" as the NPV of future carbon taxes and prices, assuming a decline in the emissions intensity of electricity based on the IEA's long-term energy scenarios. These scenarios can also be used to derive "baseline" rates of change in emissions intensity, based on how grid-dependent each industry is.



Opportunities for shareholder engagement

Even in the sectors most heavily targeted by activists – energy, consumer staples, and utilities – no more than a third of companies have been targeted by shareholder proposals over the last several proxy cycles. Materials and industrials have been especially under-represented in climate campaigns, relative to their share of the index’s emissions, possibly because management teams in these sectors have been able to tell a more conciliatory story to investors around climate issues, emphasizing energy transition related opportunities over risks.

Figs. 15-16 – In recent cycles, on an emission-weighted basis, shareholder activists have focused on financials, energy, and the consumer sectors, while fewer materials and industrials companies have been targeted.



CAS screens upcoming annual meetings for the potential for constructive engagement on climate issues – up to and including support for dissident shareholder proposals – based on four factors:

- **Financial materiality of emissions** – we focus on companies in industry groups where the net present value of Scope 1 and 2 emissions, using an 8 percent discount rate ("NPV8") crosses a 1-percent-of-market-capitalization threshold, under the IEA's Announced Pledges Scenario ("APS").
- **Energy and emissions benchmarking versus peers** – depending on data availability, we compare the company's energy intensity, Scope 1 and 2 emissions content, and Scope 3 emissions content per unit of sales to a sub-industry, industry, or sector-wide average. Companies with a higher degree of energy and emissions intensity relative to peers warrant more scrutiny from investors.
- **Short-and-long-term energy and emissions trends** – even if they have targets in place, companies where energy intensity, absolute Scope 1 and 2 emissions, and Scope 3 emissions intensity have been growing over time may be struggling to appropriately manage transition risks.
- **Proposal design** – generally, we take a top-down approach, focusing on identifying **companies facing material emissions-related risk** rather than evaluating the merits of each individual proposal. However, we tend to screen out proposals that we have a harder time mapping onto either a shareholder value case or an impact case.

Our approach is to highlight companies in industries where direct emissions are on average financially material, targeted by proposals that directly address either overall GHG targets, or specific categories of value chain emissions that are potentially material, and where our analysis shows performance lagging peers or moving in the wrong direction on the benchmarking metrics we highlight. **This framework points to 21 key annual meetings over the next few months** that we would highlight as an opportunity for climate-minded shareholders to engage with portfolio companies, and to closely evaluate whether supporting dissident shareholder proposals could be an effective stewardship tactic.



Fig. 17 - We highlight historical trends in energy intensity, Scope 1 and Scope 2 emissions, and Scope 3 emissions intensity, as well as baseline levels of each metric versus peers, for companies in industry categories that have material emissions in the IEA's Announced Pledges Scenario (APS), which we define as an NPV8 of future carbon taxes and prices greater than 1 percent of market capitalization. Companies with concerning metrics in both the **baseline** and **historical** trend categories, where a climate proposal in one of our highlighted categories will be on the ballot, are flagged for heightened due diligence by investors.

Date	Flag	Company Name	Industry (GICS L2)	Proposals by Type			Trend in Key Metrics			Key Metrics vs. Peers		
				GHG Targets	Plastics	Supply Chain	Energy Intensity	Scope 1&2	Scope 3 Intensity	Energy Intensity	Scope 1&2	Scope 3 Intensity
4/30		PACCAR Inc.	Machinery	N	N	N	=	=	=	<	<	<
5/1		Huntington Ingalls Industries Inc.	Aerospace & Defense	Y	N	N	+	=	=	>	nd	nd
5/1		PepsiCo, Inc.	Beverages	N	N	Y	=	=	=	>	<	<
5/2	x	Raytheon Technologies	Aerospace & Defense	Y	N	N	=	+	+	>	<	<
5/2	x	Weis Markets	Consumer Staples Distribution	Y	N	N	+	-	-	nd	>	nd
5/3	x	Ryder Systems	Ground Transportation	N	N	N	+	=	=	<	<	>
5/3	x	The Timken Co	Machinery	Y	N	N	+	-	-	>	<	nd
5/6		Enbridge Inc.	Oil, Gas & Consumable Fuels	Y	N	N	-	-	-	>	>	>
5/6		Hershey Company	Food Products	N	Y	N	=	=	=	<	<	<
5/7		Suncor Energy	Oil, Gas & Consumable Fuels	N	N	N	-	=	=	>	>	>
5/8	x	International Paper Company	Containers & Packaging	N	N	Y	+	=	=	>	<	>
5/9	x	Boeing Co.	Aerospace & Defense	Y	N	N	+	-	-	>	<	>
5/12	x	Cummins Inc.	Machinery	N	N	N	-	=	=	>	<	>
5/12	x	Phillips 66	Oil, Gas & Consumable Fuels	N	Y	N	=	+	+	>	<	<
5/12		Westlake Chemical Corp	Chemicals	N	Y	N	=	-	-	>	<	nd
5/13		Union Pacific Corporation	Ground Transportation	N	N	N	=	+	+	>	<	<
5/14		Skyworks Solutions Inc	Semiconductors & Semiconductor	Y	N	N	=	=	=	<	<	nd



Date	Flag	Company Name	Industry (GICS L2)	Proposals by Type			Trend in Key Metrics			Key Metrics vs. Peers		
				GHG Targets	Plastics	Supply Chain	Energy Intensity	Scope 1&2	Scope 3 Intensity	Energy Intensity	Scope 1&2	Scope 3 Intensity
5/15	x	Ingredion Inc.	Food Products	Y	N	N	=	+	+	>	<	>
5/16		Knight-Swift Transportation Holdings	Ground Transportation	Y	N	N	+	=	=	nd	<	nd
5/16		Republic Services, Inc.	Commercial Services & Supplies	N	N	N	-	=	=	>	<	<
5/16		Texas Roadhouse Inc	Hotels, Restaurants & Leisure	Y	N	N	+	=	=	nd	nd	nd
5/17		Old Dominion Freight Line Inc	Ground Transportation	Y	N	N	+	=	=	nd	<	<
5/23	x	Restaurant Brands International Inc.	Hotels, Restaurants & Leisure	N	Y	Y	+	+	+	>	>	>
5/26		Air Transport Services Group Inc	Air Freight & Logistics	Y	N	N	+	+	+	nd	nd	nd
5/26	x	Amazon.com Inc.	Broadline Retail	Y	Y	N	+	+	+	>	<	<
5/26	x	McDonald's Corp.	Hotels, Restaurants & Leisure	N	N	Y	=	+	+	=	<	>
6/2	x	Chevron Corporation	Oil, Gas & Consumable Fuels	N	Y	N	=	+	+	>	<	>
6/2	x	Exxon Mobil Corporation	Oil, Gas & Consumable Fuels	N	Y	N	=	+	+	>	<	<
6/8	x	Granite Construction Inc	Construction & Engineering	N	N	Y	+	+	+	nd	>	>
6/12	x	Keurig Dr Pepper	Beverages	N	Y	N	=	+	+	>	<	>
6/20	x	General Motors	Automobiles	N	N	Y	=	+	+	>	<	>
6/23	x	Kroger Co.	Consumer Staples Distribution	N	N	N	=	+	+	>	<	<
7/18	x	Constellation Brands Inc.	Beverages	N	Y	Y	-	+	+	>	<	>
8/4		Tesla, Inc.	Automobiles	N	N	Y	+	+	+	nd	<	<
8/16	x	JM Smucker Co.	Food Products	N	N	Y	-	+	+	<	<	>
8/18	x	Linde plc	Chemicals	N	N	N	=	+	+	>	=	<



Date	Flag	Company Name	Industry (GICS L2)	Proposals by Type			Trend in Key Metrics			Key Metrics vs. Peers		
				GHG Targets	Plastics	Supply Chain	Energy Intensity	Scope 1&2	Scope 3 Intensity	Energy Intensity	Scope 1&2	Scope 3 Intensity
9/6		Casey's General Stores, Inc.	Consumer Staples Distribution	Y	N	N	+	+	+	nd	nd	nd

Note: AGM dates that have not been announced are estimated based on the prior year's meeting date.

