

Global Insights



The Inclusive Approach
to Energy Transition



Climate change is one of the most pressing issues of our time and yet the experience over the past year reveals the limitation of the portfolio exclusion approach to accelerating the energy transition.

Declines in fossil fuel supply do not automatically yield a corresponding decline in demand. In many economies, declining fossil fuel production seems to have resulted in a new equilibrium, where prices rise more than GHG emissions fall, as governments restart coal plants and introduce fuel subsidies to protect households from bearing the full adjustment costs.

Rather than focus on portfolio holdings, climate impact is best measured in terms of change at the individual company level. As a result, the greatest planetary benefits are likely to come from investments that transform the operations of companies with the greatest fossil fuel appetites.

THE INCLUSIVE APPROACH TO ENERGY TRANSITION

If the world is to avoid the most catastrophic potential consequences of anthropogenic climate change, investors and analysts need to reimagine how they measure and conceive of progress. For too long, climate impact strategies have focused primarily on divestment, where portfolio holdings determine progress. While pursued with the noblest of intentions, decarbonizing investment portfolios only matters to the extent that it decarbonizes underlying real economic activity, and the evidence on this score is mixed, at best.

THE LOGIC OF PORTFOLIO EXCLUSION

Divestment, or the portfolio exclusion approach to climate impact, aims to depress fossil fuel development by reducing the amount of capital available to fund oil and gas companies and projects. This movement can claim success on both counts: traditional energy companies' cost of capital has risen appreciably as their access to equity and credit markets has declined (Figure 1), and this has effectuated the desired drop in oil and gas development spending and fixed investment rates (Figure 2). But absent a corresponding fall in demand facilitated by structural changes in the way energy is consumed

Figure 1.
Fossil Fuel Capital Costs Rise as Market Access Declines

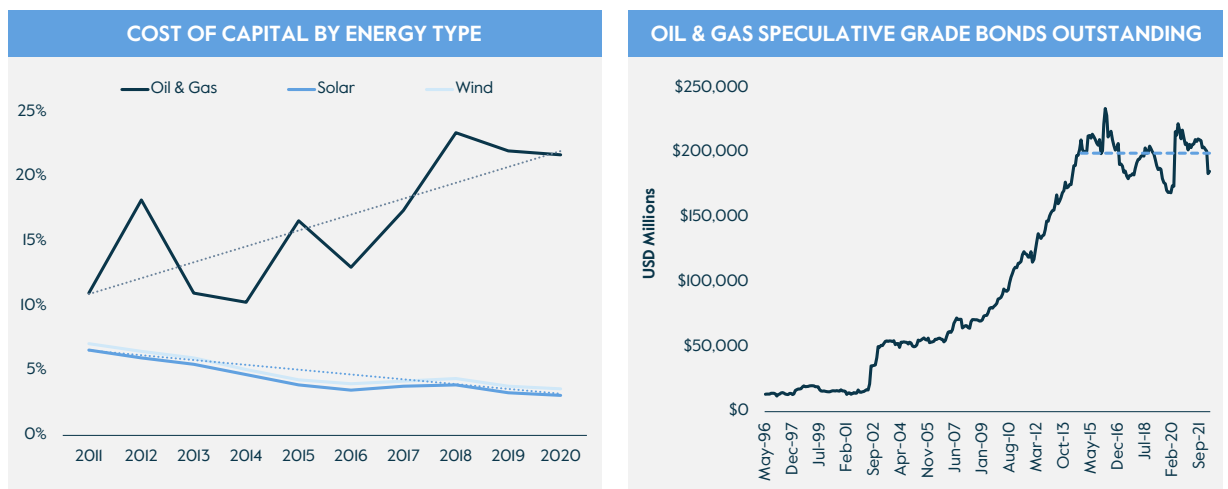
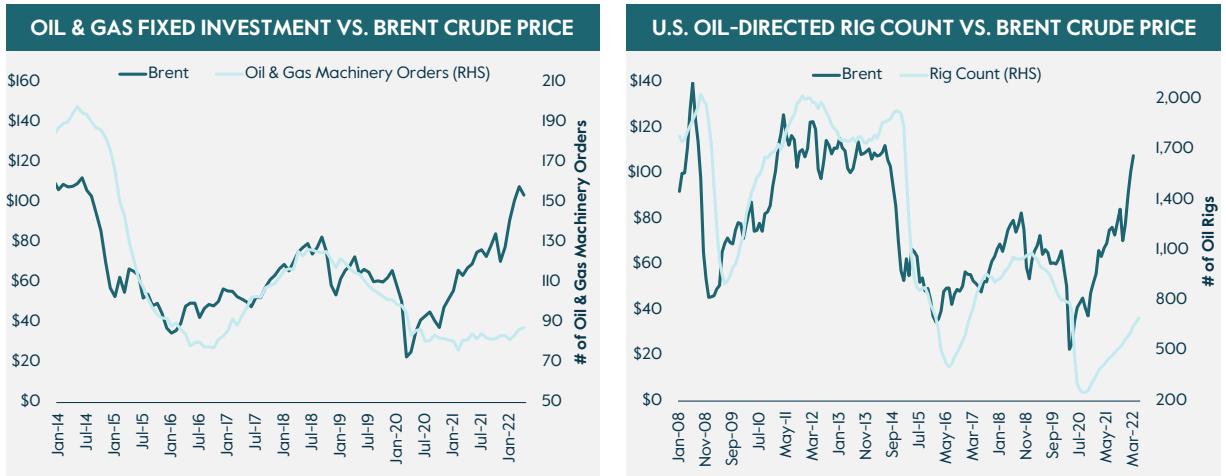


Figure 1 Source: Bloomberg, May 2022. There is no guarantee any trends will continue.

Figure 2.
O&G Investment No Longer Responsive to Higher Prices



and produced, a negative supply shock of this sort could simply result in a new equilibrium where prices adjust more than quantities (BTUs/MWh) or emissions.

Proponents of divestment campaigns have drawn comparisons to prior experiences with tobacco stocks.¹ The atmospheric pollution from burning fossil fuels imposes societal costs broadly akin to those from cigarettes, but the difference is that modern life

and efforts to alleviate global poverty depend on energy consumption (Figure 3), which is why the word “transition” is used in the energy context rather than “suppression” or “cessation.” With 80% of economic life still powered by fossil fuels, including over 95% of all transportation (Figure 4), we desperately need more of that energy to come from carbon-free sources and used in decarbonized industrial and commercial processes.

1 C.f. <https://tobaccofreeportfolios.org/wp-content/uploads/2020/05/Genus-Report.pdf>
Figure 2 Source: Carlyle; Federal Reserve, April 2022. There is no guarantee any trends will continue.

Figure 3.
Higher Living Standards Demand Greater Energy Capacity

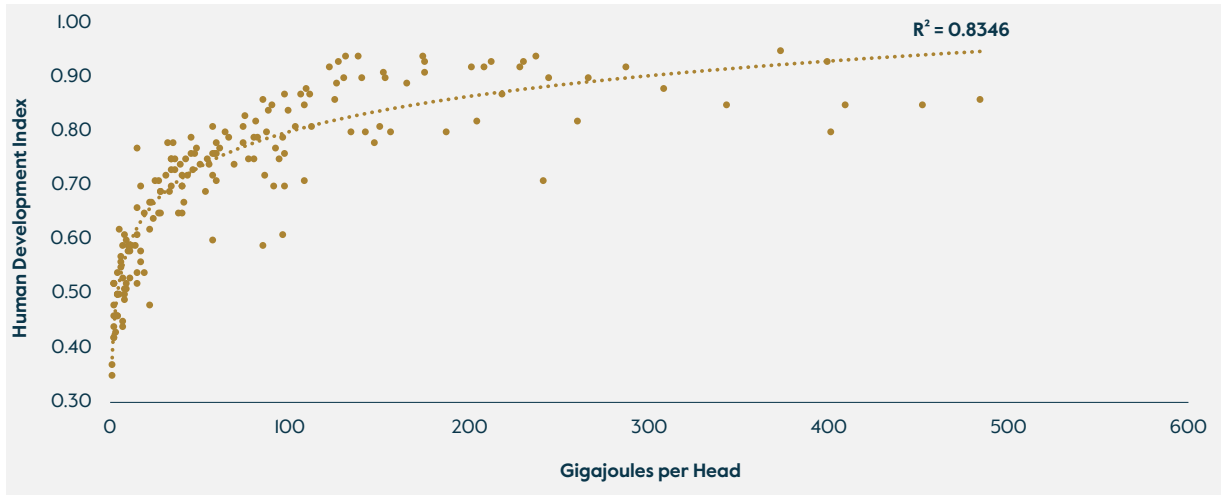


Figure 4.
Transportation Powered by Fossil Fuels

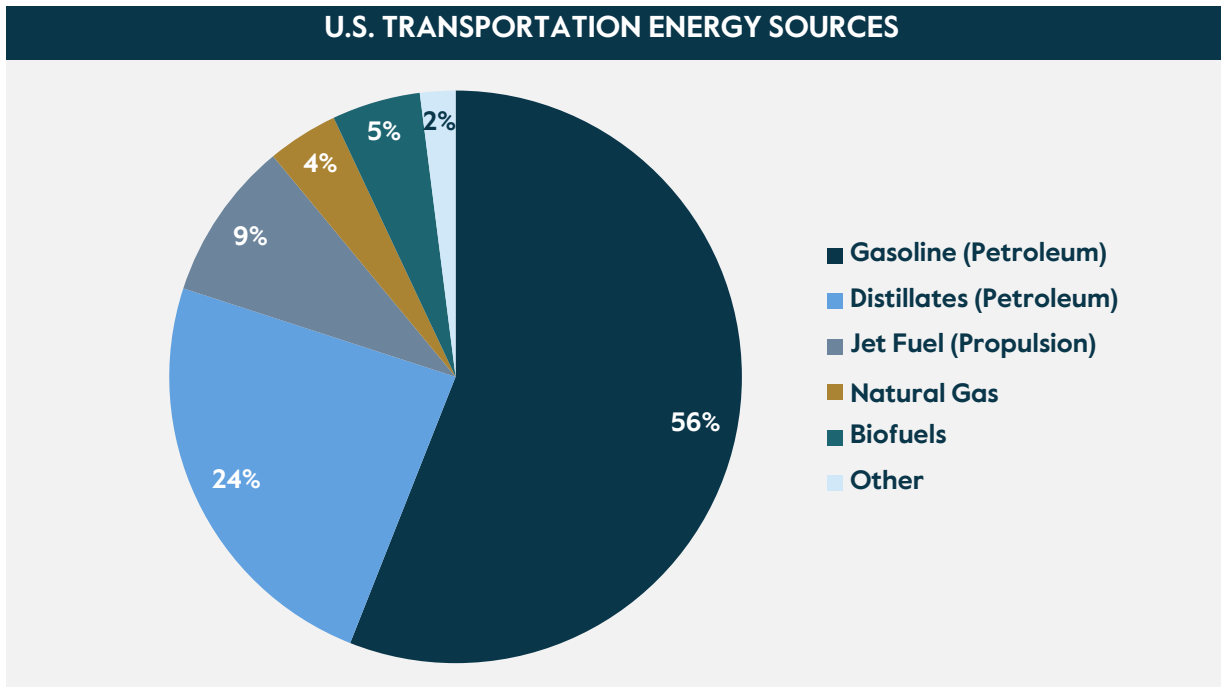


Figure 3 Source: BP Energy Outlook, 2019; UN 2018. There is no guarantee these trends will continue.
Figure 4 Source: U.S. EIA, 2022. Data as of 2020. There is no guarantee any trends will continue.

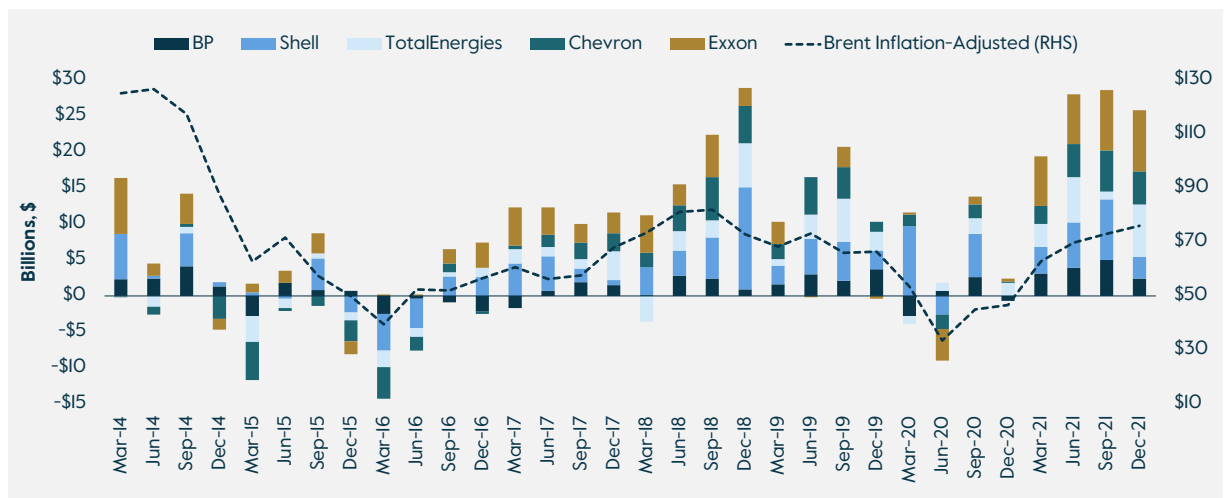
EMPIRICAL REALITIES RAISE QUESTIONS OF EFFICACY

Because of this interdependence, starving the oil and gas industry of *external* sources of capital can only do so much. To the extent divestment succeeds in depressing the supply of fossil fuels, it also increases their price.² This raises the expected return on new energy development projects and energy companies' capacity to finance them with internally generated cash flow. In recent quarters, integrated oil and gas companies' cash from operations has risen so appreciably that they can boost capex budgets while also substantially increasing the share of free cash flow distributed to investors through dividends and stock repurchases (Figure 5).

If divestment is to have any real effect, it will be through the demand destroyed by high prices. The problem is that such price adjustments tend to be sudden and dislocative. When supply constraints bind, prices rise exponentially to ration demand, leading to far more collateral damage than if the same cumulative price increase had been implemented intentionally and transparently over time through a carbon pricing regime. This is especially true when considering how these cost increases are borne by lower-income consumers, for whom fuel and electricity costs consume a far larger share of income.

Governments rarely allow these sorts of market processes to run their natural course. Starting in the fall of 2021 – well in advance of Russia's invasion

Figure 5.
Oil Majors' Cash for Dividends and Repurchases Near All-Time Highs



² This, of course, assumes that demand is inelastic in the short-run.
Figure 5 Source: Bloomberg, S&P Capital IQ; February 2022. There is no guarantee any trends will continue.

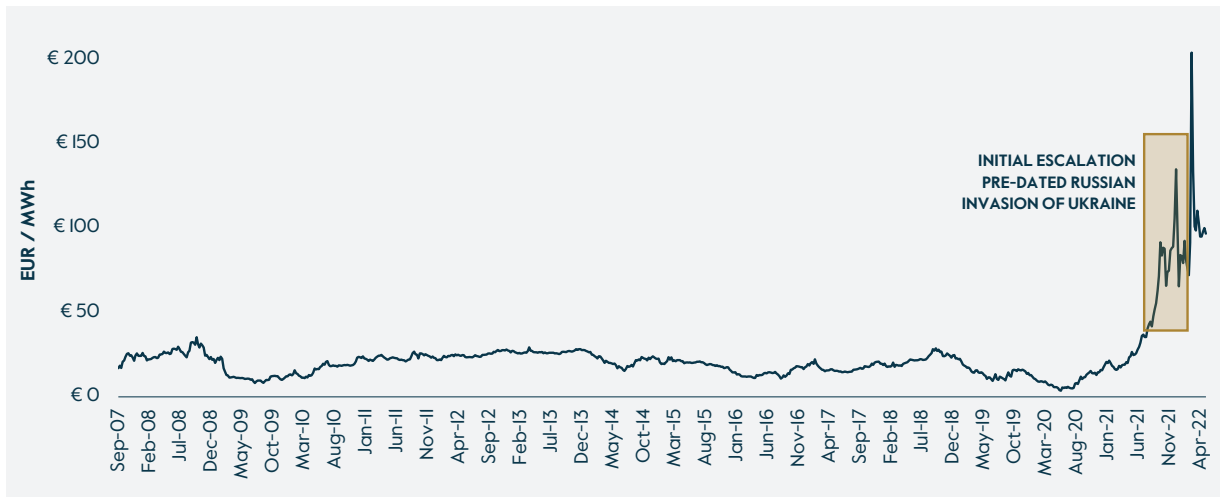
of Ukraine – natural gas prices in Europe spiked to 5x the average of the prior decade (Figure 6). Fearful of backlash from the electorate in response to debilitating increases in electricity and heating bills, governments responded by actively subsidizing consumers’ fossil fuel consumption and restarting coal-fired power plants.³ Rather than facilitating the desired decline in GHG emissions, this negative supply shock effectively created an entirely new and potentially very costly fiscal obligation.

Unfortunately, the process by which some portfolios cleanse themselves of dirty assets often directly results in greater carbon emissions. As demand for coal skyrockets in response to natural gas shortages, coal mining becomes more profitable. But large

energy companies with coal subsidiaries often cannot pursue these opportunities without compromising their own climate commitments. So a well-intentioned corporate actor spins off a coal-producing subsidiary to reduce its carbon footprint and meet the climate-related portfolio goals of its board and shareholders, thereby creating an independent business *more likely* to expand coal production aggressively precisely because it has been freed from a corporate parent publicly opposed to such initiatives.⁴

For these reasons, the divestment approach to climate impact, while pursued with the best of intentions, has not only failed when measured through the lens of energy security or GDP growth, but on its own terms. Exclusive focus on carbon accounting at the portfolio

Figure 6.
European Natural Gas Spot Price



³ C.f. “Europe’s efforts to shield households from energy cost spike,” Reuters, March 30, 2022.

⁴ For an example of this phenomenon, see: “ESG-Minded Investors Pile Into Coal Stock, Sparking 1,000% Rally,” <https://www.bloomberg.com/news/articles/2022-04-26/anglo-coal-spinoff-gets-boost-from-climate-conscious-investors>

Figure 6 Source: Carlyle Analysis; Bloomberg, May 2022. There is no guarantee any trends will continue.

level has left the world so bereft of low-emission energy that economies are turning to coal – the dirtiest of fossil fuels – to meet their energy needs (Figure 7). At the same time, governments actively subsidize fossil fuel consumption to protect consumers from the (emissions reducing!) price spikes wrought by

negative supply shocks. And, perhaps most perversely, the resulting high-price equilibrium has increased fossil fuel producers' terms of trade and consolidated market values, as energy consumes a far larger share of GDP (Figure 8).

Figure 7.
Coal Consumption on the Rise

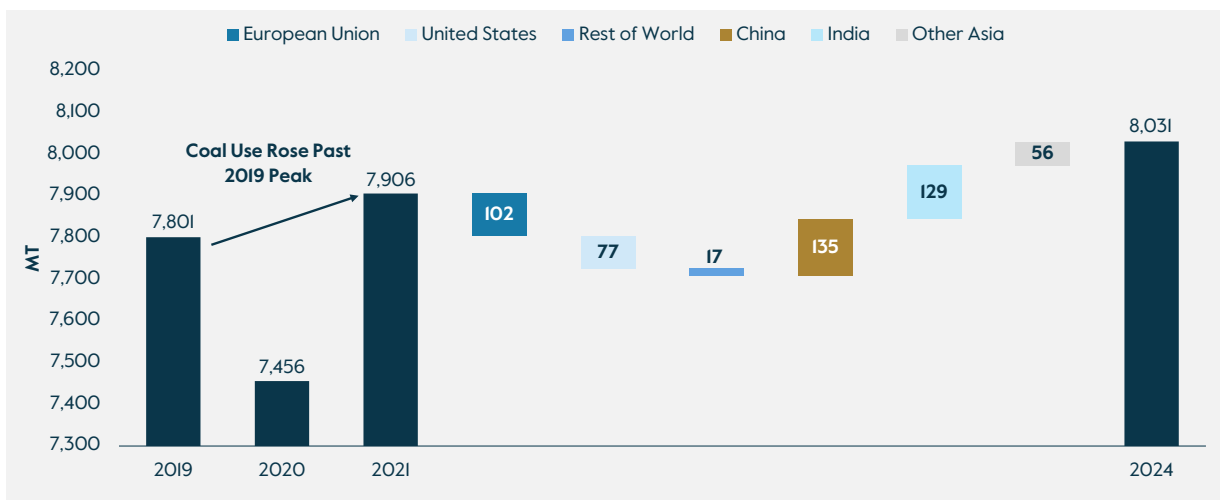


Figure 8.
Rise in Fossil Fuel Producers' Terms of Trade

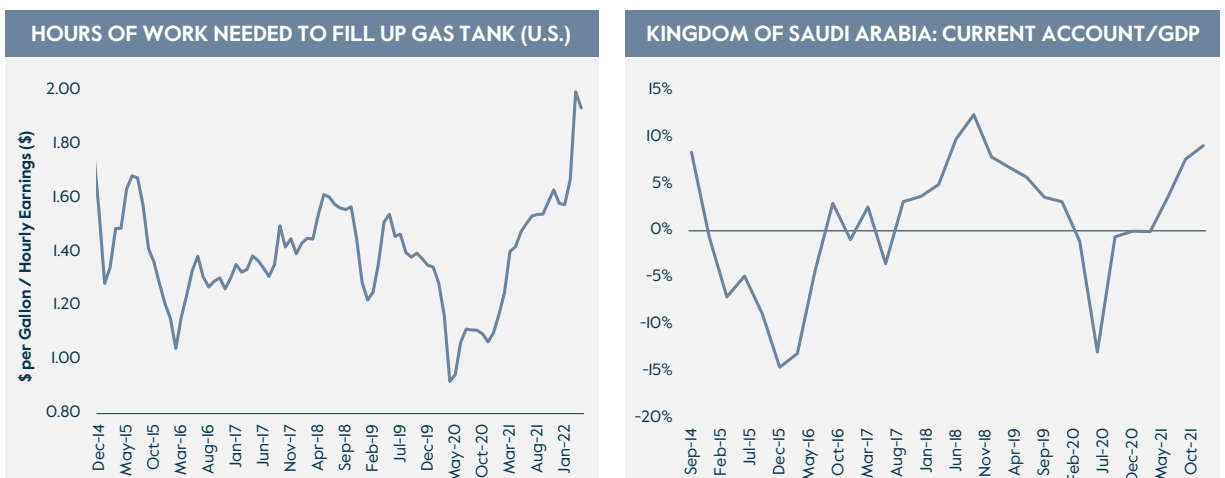


Figure 7 Source: Carlyle; IEA, 2022. There is no guarantee any forecasts will materialize.

Figure 8 Source: Carlyle; U.S. EIA; Saudi Central Bank; General Authority for Statistics KSA, May 2022. There is no guarantee any trends will continue.

A DUALITY RATHER THAN A BINARY

Treating energy transition as a problem of portfolio construction creates a *de facto* binary of “virtuous” and “problematic” businesses. This framework overstates the extent to which financial allocations shape real economic outcomes and leaves little room for the most important element of transition: accounting for change at the individual, energy-consuming company level.

The portfolio selection binary ascribes more blame to traditional energy companies than would be merited by an honest assessment of the current dilemma. This is perhaps most evident by the effort to attribute to traditional energy companies the “Scope 3” emissions generated by the energy demands of their customers.⁵ Those Scope 3 emissions must decline, but monomaniacal focus on energy companies abstracts from the concrete steps downstream consumers must take to reduce their own Scope 1 and Scope 2 emissions, by reengineering industrial processes to consume less energy, or switching to direct solar for their facilities’ heat and electric needs, for example.

Signaling out traditional energy companies for opprobrium also overlooks the role they could play to accelerate energy transition thanks to their massive capex budgets (reoriented towards renewables), extensive energy transport and trading platforms, and technical expertise for things like green hydrogen development and carbon capture and storage (CCS). A “good” vs “bad” binary also seems woefully

inadequate for capturing the complex trade-offs of the current moment, as revealed by the competing challenges of fuel poverty, energy security, and the tendency for carbon-intensive energy production to migrate across borders rather than simply wind down.

MORE AMBITIOUS, BETTER TARGETED

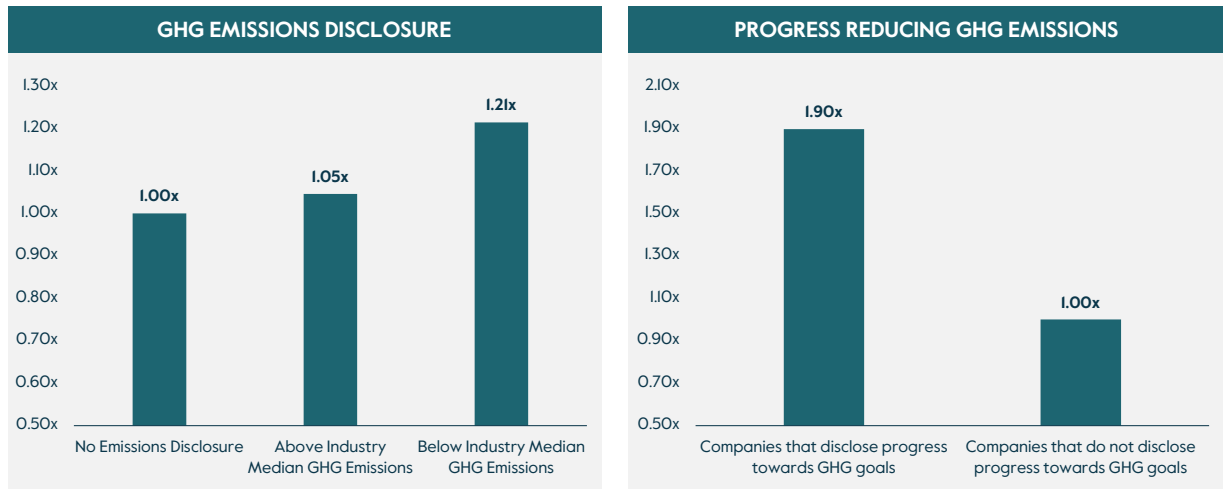
The problem is not a lack of ambition, but misplaced focus. We cannot rid the world of fossil fuel producers until we find other ways to satisfy energy demands. Obviously, this requires – first and foremost – adding far more renewable MWs to the electric grid. But it also means finding ways to transition companies off fossil fuels in ways that facilitate growth and enhance enterprise value.

Success for investors, therefore, should be predicated on *rates of change* in GHG emissions, for individual companies or assets, recognizing that the greatest climate *impact* comes precisely in those assets where Scope 1 and 2 emissions are the greatest at entry.

When it comes to climate impact, markets reward companies for transparency and progress. Companies that disclose GHG emissions trade at premiums to companies that do not, irrespective of the actual level of emissions. In addition, companies that disclose progress towards meeting clearly-defined GHG reduction goals are valued at twice the level of those of companies that make no such disclosures, on average (Figure 9).

5 <https://www.epa.gov/climateleadership/scope-3-inventory-guidance>

Figure 9.
Relative Valuations & Climate Disclosures



Companies with lower GHG emissions carry higher valuations than industry peers and this finding is consistent with past research on the impact of technology on intra-industry valuations. The more richly valued a company in a given sector, the more likely it operates at the industry’s technological and productivity frontier.⁶ As a result, these companies’ lower GHG emission levels and greater progress in meeting their emissions goals likely reflect more technologically-advanced operations and a culture more oriented towards performance measurement and evaluation.

Viewed in this light, one can see how the theoretical virtues of portfolio exclusion policies could prove more problematic in practice. If reducing GHG emissions

is primarily a question of technological diffusion and improved operations, the highest “impact” returns are likely to come from efforts to channel capital to those businesses that lack the requisite technology and know-how to measure and reduce emissions. And this is likely to become even more important as the energy transition moves from the low-hanging fruit of solar panels to combating industrial emissions, which can be very expensive to abate in the absence of breakthrough technologies.⁷ It is ironic to consider that the success of energy transition may come to depend on investors’ willingness to engage with those businesses likely to score worst on many of ESG scorecards.

6 “Frontier Firms, Technology Diffusion, and Public Policy,” OECD, 2015.

7 Rahul Tongia, (2021), “Net zero carbon pledges have good intentions. But they are not enough.” Brookings Institution.

Figure 9 Source: Carlyle Analysis; Based on Data in “Surveying the landscape: how investors use (or don’t use) ESG,” Bank of America Global Research., February 2022.

INCLUSIVE CLIMATE IMPACT

Climate change is among the most pressing challenges of our age, but the experience over the past year reveals the limitation of the portfolio exclusion approach to climate impact investing. Efforts to rid the world of fossil fuel companies must address how to rid the world of demand for their products so that fossil fuel production can be responsibly wound down. Otherwise, the result may be a new equilibrium, where prices rise more than GHG emissions fall, and governments restart coal plants and introduce fuel subsidies to protect households from bearing

the full adjustment costs. Climate impact is best measured in terms of *change* at the individual company level over the period when the asset is in the portfolio, which suggests the greatest planetary benefits – surprisingly – are likely to come from investments in companies with the greatest fossil fuel appetites.

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Jason Thomas is the Head of Global Research at The Carlyle Group, focusing on economic and statistical analysis of Carlyle portfolio data, asset prices and broader trends in the global economy. He is based in Washington, DC.

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Prior to joining Carlyle, Mr. Thomas was Vice President, Research at the Private Equity Council. Prior to that, he served on the White House staff as Special Assistant to the President and Director for Policy Development at the National Economic Council. In this capacity, Mr. Thomas served as primary adviser to the President for public finance.

Mr. Thomas received a BA from Claremont McKenna College and an MS and PhD in finance from George Washington University, where he studied as a Bank of America Foundation, Leo and Lillian Goodwin Foundation, and School of Business Fellow. Mr. Thomas has earned the chartered financial analyst designation and is a Financial Risk Manager certified by the Global Association of Risk Professionals.

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Prior to joining Carlyle, Ms. Starr was within Goldman Sachs' Investment Management Division, where she helped build the ESG and impact investing business. Previously, Ms. Starr served in roles at The JPB Foundation, a \$3.8B private family foundation based in New York City.

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