PANDEMIC CRISIS, SYSTEMIC DECLINE

Why Exploiting the COVID-19 Crisis Will Not Save the Oil, Gas, and Plastic Industries

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WHY EXPLOITING THE COVID-19 CRISIS WILL NOT SAVE THE OIL, GAS, AND PLASTIC INDUSTRIES

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Executive Summary

In the three months since it began, the global pandemic precipitated by the novel coronavirus (COVID-19) has sickened 1.7 million people and counting, displaced and jeopardized vulnerable populations worldwide, and shut down large parts of the global economy. The converging public health, human rights, and economic crises spurred by the pandemic are forcing governments to act worldwide, including by adopting some of the largest public investment measures the world has ever seen.

Amidst this global scramble to protect lives, livelihoods, and economies, the crisis is also spurring unprecedented lobbying by some of the world's largest corporations. While some of these lobbying efforts seek legitimate government support to help companies, workers, and communities confront an economic and social emergency, others seek to exploit the crisis to advance preexisting corporate agendas. The oil and gas industry is among the most active in these lobbying efforts worldwide, a fact highlighted in early April when nine oil industry executives met with the US President in an effort to secure additional government intervention on the industry's behalf.

The pandemic has caused massive declines in demand for oil and gas, from the precipitous curtailing of commercial air travel, to stay-at-home orders that have dramatically reduced personal transport, to slowdowns and work stoppages that have slashed energy demand in many industries. These impacts have been compounded by a price war, itself triggered by the COVID-19 crisis, that has driven oil prices to unprecedented lows. As a result, major oil companies have seen their stock prices plummet to the lowest levels in decades, and they are taking dramatic action. They are cutting back on large-scale investments, and many independent producers, particularly in the already struggling fracking sector, are on the verge of bankruptcy.

The present report documents how COVID-19 exacerbates this collapse and details how long-term systemic declines in the oil and gas industries, as well as problems in the petrochemical industry, had been accumulating for years before the pandemic emerged. These declines touch on nearly every facet of the oil and gas sector's business, including the petrochemical sector that has been touted in recent years as the primary driver of the industry's future growth.

The oil, gas, and petrochemical industry is now exploiting the catastrophic global pandemic to aggressively push its preexisting corporate agenda, including regulatory rollbacks, suspension of environmental law enforcement, criminalization of environmental protest, and direct government bailouts in a growing number of countries. The underlying risks facing the industry, however, remain unchanged. The imminent systemic decline of the oil and gas sector should serve as a stark warning to public officials and private investors alike as they consider allocating limited and vital resources to these companies.

This report shows that while massive infusions of capital and special privileges may briefly delay the inevitable decline of these companies, they will not reverse the trend. Instead, the social and economic transitions precipitated by the pandemic are more likely to accelerate that decline in the years ahead – a decline that is ultimately in the best interests of public health and the planet.

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Key Findings

- Oil and gas are among the industries hardest hit by the current economic crisis, with leading companies losing an average of 45% of their value since the start of 2020.
- Widespread suspensions of air travel, combined with shelter-at-home orders in many countries, have sharply curtailed demand for oil and gas at a moment when global supplies of both were already outpacing demand.
- This demand shock triggered an oil price war among nations competing for rapidly shrinking market share, sending oil prices plummeting to the lowest level in two decades.
- Because the plastic and petrochemical industries are deeply integrated with oil and gas and dominated by many of the same companies, the demand decline and the oil price war are disrupting the economics of the plastic and petrochemical industries as well.
- Even before the present crisis, oil, gas, and petrochemical companies showed clear signs of systemic weakness, including:
    - long-term underperformance on stock markets;
    - massive accumulations of corporate debt;
    - questionable contracts and legal opposition in resource frontiers critical to the industry's future;
    - fallen costs and rising deployment of renewable energy systems that undermine the economic case for natural gas as a "bridge fuel;"
    - rapidly slowing growth in plastic demand at a time when the industry is investing more than $200 billion in new infrastructure for plastic and petrochemical production and manufacture; and
    - growing investor skepticism about the long-term prospects for fossil fuels in a world that must act urgently to confront the climate crisis.
- Oil, gas, and petrochemical companies are lobbying governments worldwide to seek direct and indirect support, including bailouts, buyouts, regulatory rollbacks, exemption from measures designed to protect the health of workers and the public, non-enforcement of environmental laws, and criminalization of protest, among others.
- These efforts may succeed in diverting significant public resources to the sector and delaying the clean-energy transition; however, they are very unlikely to reverse the underlying trends driving the long-term decline of the oil, gas, and petrochemical industries.

Recommendations

- **Public Officials** taking policy action to respond to COVID-19 and the economic collapse should not waste limited response and recovery resources on bailouts, debt relief, or similar supports for oil, gas, and petrochemical companies.
- **Institutional Investors and Asset Managers** should recognize the overwhelming evidence that the risks of continued investment in fossil fuels now substantially outweigh the benefits, and they should rebalance their portfolios to eliminate their exposure to volatile and declining oil and gas assets.
- **Frontier Countries** considering whether to open their lands, waters, and democracies to new oil and gas extraction should urgently reassess their prospects in light of the collapse in oil prices and demand, the demonstrated severe risks of economic dependence on volatile oil markets, the ongoing long-term decline of the sector, and its fundamental incompatibility with climate action.
- **Local Communities and Decisionmakers** should reject demands from the oil, gas, and petrochemical sectors for public subsidies, tax abatements, lax environmental enforcement, or other special concessions. They should interrogate industry promises of long-term sustainable employment actively and skeptically, and they should require evidence to support those claims that goes beyond simplistic assumptions of market growth. In the rare circumstances where these burdens are met, affected communities should require project proponents to irreversibly commit the funds required to restore communities and the environment when the project reaches the end of its economic life.

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PART 1

COVID-19: Emerging Impacts for Health, Human Rights, the Economy, and the Planet

As this report is being finalized in early April 2020, COVID-19 has already infected 1.7 million people[1] in more than 200 countries and territories.[2] More than 103,000 deaths have been officially reported to date,[3] with the actual death toll unknown but certainly far greater.[4] The pandemic has placed health care systems worldwide under extreme pressure, including even those in highly developed countries, increasing the risks to health care workers and the public.[5]

High transmissibility and high rates of estimated mortality have triggered a succession of government responses, from suspending international air travel to instituting comprehensive shelter-at-home orders across large regions or entire countries. The resulting economy-wide shutdowns in many countries are triggering unprecedented losses of jobs and livelihoods;[6] disrupting access to education; turning millions of displaced workers into forced migrants;[7] and jeopardizing access to food in vulnerable communities worldwide.[8] COVID-19 intersects with and compounds these economic and social risks, particularly for already at-risk populations, including communities at increased risk because of pervasive exposures to pollutants[9] and those in refugee camps,[10] immigration detention centers,[11] and prisons[12] for whom "social distancing" is not an option.

The COVID-19 pandemic is also exacerbating other preexisting threats to human rights, disrupting vital election-monitoring efforts in democratically vulnerable countries,[13] providing cover for authoritarian power grabs,[14] jeopardizing free press[15] and free speech[16] in a growing number of countries, and delaying vital global talks to address the climate crisis.[17]

Information regarding COVID-19, its impacts, and its implications evolves by the day – often by the hour. Accordingly, it is neither feasible nor necessary to attempt a comprehensive description of those impacts here. Rather, the preceding paragraphs offer an early snapshot of the scale, scope, severity, and diversity of those impacts, as well as the enormous and critical demands they will place on public resources, political will, and human capacity in the months and potentially years to come. Those demands are profound, and the resources available to meet them are finite. Under such circumstances, it is both reasonable and essential to measure industry requests for assistance and intervention against the potential benefits likely to accrue, not for any specific industry itself, but for society as a whole.

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PART 2

Oil, Gas, and Petrochemical Industry Efforts to Exploit the COVID-19 Pandemic

Against this backdrop, ongoing and active lobbying efforts by the oil, gas, and petrochemical industries warrant particular scrutiny. While many industries have asked governments for assistance to weather the COVID-19 crisis, the oil and gas sector is exceptional for its efforts not only to seek extraordinary levels of government support in response to the crisis but also to exploit the crisis to reverse longer-term trends confronting the industry.

An analysis by Influence Map, a nonprofit that uses data analysis to track and rank corporate lobbying efforts, found that oil and gas has been the most active sector globally in seeking to use the COVID-19 crisis to both promote increased fossil fuel production (contrary to the Paris Climate Agreement) and to secure a staggering number of regulatory rollbacks. This activity is reflected most recently in a meeting held at the White House between nine oil and gas executives, Republican lawmakers, and members of the Trump Administration, including Donald Trump himself. The list of the industries' asks is extensive and growing. In addition to seeking special access under numerous provisions of the COVID-19 stimulus bill in the US, the oil and gas industry and its allies in Congress sought to use the US strategic petroleum reserve, both to buttress industry revenues and to provide storage for rapidly accumulating oil and gas.

In Canada, the Canadian Association of Petroleum Producers has been negotiating a $15 billion bailout with the Canadian federal government. Industry groups in both the UK and Australia have argued that protecting their countries' oil and gas industries will be an essential component of responding to the crisis.[18] But industry lobbying in the wake of COVID-19 goes well beyond seeking access to capital or resources. A climate and COVID-19 policy tracker created by journalist Amy Westervelt identified more than two dozen ongoing lobbying efforts by the industry in the US alone.[19] These include efforts to roll back fuel efficiency standards, seek relief from oil and gas royalties, suspend enforcement of virtually all environmental laws affecting the industry, designate all fossil fuel and petrochemical-related infrastructure as critical infrastructure, and provide waivers from "non-essential compliance obligations." The industry has sought similar exemptions at the state level across the US, and it has gone further still with lobbying efforts in several US states to criminalize protests against fossil fuel projects and infrastructure.[20]

Industry efforts to exploit the crisis, however, do not end with oil and gas. As CIEL and other observers have extensively documented, the oil, gas, and petrochemical sectors are interconnected and deeply integrated. Indeed, the world's largest oil and gas companies also rank among its most significant producers of petrochemicals, including plastic. In recent years, these companies have announced more than $200 billion in new investment for plastic production. This production would exploit the surplus of cheap natural gas from the fracking boom and create new revenue streams to offset inevitable declines in the use of oil and gas as the world responds to the climate crisis.[21] Unsurprisingly, oil and gas companies are seeking the same regulatory rollbacks, waivers, and critical infrastructure designations for plastic and petrochemical facilities.

But plastic producers are going further still to exploit the pandemic, using COVID-19 as an opportunity to undo the progress made on curbing plastic pollution over the past several years. In March 2020, PLASTICS, the plastic industry association in the United States, sent a letter to Health and Human Services (HHS) Secretary Alex Azar requesting an official declaration from the federal government in favor of single-use, disposable plastic bags.[22] Meanwhile, as outlined in a recent briefing from Greenpeace, a collection of industry-friendly think tanks have been circulating a similar set of talking points making the case for single-use plastic bags.[23] Moreover, some are suggesting that in addition to rolling back bag bans and restrictions, the next response should be to wrap yet more fresh produce in plastic.[24] These arguments, however, appear rooted more in opportunism than science.[25] Notably, the only COVID-19-related study cited in PLASTICS' letter to HHS Secretary Azar says nothing about reusable shopping bags, but it does note that the virus can live on plastic for several days.[26]

PART 3

COVID-19 Has Triggered a Chain Reaction of Crises in the Oil, Gas, and Petrochemical Sectors

The COVID-19 crisis and resulting freeze in social and economic activity have triggered rapid and steep declines in financial markets around the world. As of March 12th, 2020, an official bear market began with the Dow Jones Industrial Average falling 20% from its peak and a second circuit-break on US stock exchanges triggered by a 7% fall in the market. Together, the two events led to the worst one-day drop in the Financial Times Stock Exchange 100 index since 1987.[27] While markets have seen brief upward spikes in response to stimulus packages and periodic news reports suggesting the pandemic may be brought under control sooner than expected, the prognosis for economic recovery in both the medium and long term remains uncertain.[28]

Oil, gas, and petrochemical stocks have been affected more rapidly and much more deeply than almost any other sector; the oil and gas sector lost more than 45% of its total value from the beginning of January to early April 2020.[29] ExxonMobil is emblematic of these declines, falling from $70 per share on January 3rd, 2020, to $42 by April 8th, 2020.[30] Oil giants Royal Dutch Shell and British Petroleum showed similar losses, each dropping to its lowest level in two decades.[31] Oil giant Occidental Petroleum fared even worse, having lost nearly 70% of its value since the start of 2020.[32] But these near-term losses pale in comparison to the declines seen in the sector over the last decade. From a high of $103 in July 2014, Exxon's stock price has now dropped by roughly 60% in less than seven years.[33]

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Royal Dutch Shell has followed a similar trajectory, declining from a high of $87 in June 2014 to $35 in early April 2020.[34] In the same period, Occidental Petroleum's share price has fallen by more than 85%.[35] Indeed, a recent analysis of Occidental noted that the company's value had fallen so dramatically that it was now a potential buyout target but that any company buying Occidental would also acquire some $50 billion in corporate debt.[36]

The speed and scale of the industry crash reflects deep, widespread, and well-founded concerns about the financial health and economic viability of the oil, gas, and petrochemical industries across multiple timescales. In the near term, the COVID-19 pandemic has triggered global shutdowns affecting every major product line and revenue stream in the sector and delaying new construction, in particular of new petrochemical production facilities.[37] In the medium term, the prospect of a full recovery for many of these revenue streams is, at best, uncertain, and, in many cases, unlikely. Finally, and most significantly, the pandemic exposes and exacerbates fundamental weaknesses throughout the sector that both predate the current crisis and will outlast it.

The convergence of these forces has generated the biggest crisis facing the petroleum sector in a century. [38] The effect is three-fold: a growing number of observers, analysts, and industry insiders have concluded that the sector may never recover; an increasing number of investors,[39] decisionmakers, and communities will recognize that the risks of exposure to oil, gas, and plastic exceed the potential benefits; and the present crisis is

likely to accelerate the necessary and inevitable transition away from fossil fuels. The findings in this report support that conclusion.

If the Economy Moves on Oil, What Happens to Oil When People Stop Moving?

Transportation consumes nearly 70% of all petroleum products.[40] From a purely economic perspective, one of the immediate and most pervasive effects of the pandemic is that a significant portion of the world's population has been forced to stop moving.

China, the first country to face the COVID-19 outbreak, began imposing lockdown orders in late January and by mid-February had confined an estimated 760 million people to their homes.[41] Lockdowns continued for more than two months across large parts of the country.[42] Similarly, India adopted severe measures.[43] Less draconian shelter-in-place measures have been put in place across much of the world,[44] and Rystad Energy estimated that 50 countries and geographic entities with a combined population of three billion people were under some form of quarantine as of early April.[45]

The United States was among the slowest high-income countries to respond to the COVID-19 pandemic, and it has yet to adopt a national policy limiting in-country travel and transport. Nonetheless, shelter-at-home orders adopted at the subnational level demonstrate how such policies affect oil demand. The United States is the world's largest consumer of gasoline, accounting for 20% of global demand in 2017.[46] As of April 3rd, 2020, 41 US states, plus the District of Columbia and Puerto Rico, have issued ongoing shelter-at-home orders for those not working in essential services.[47] These states account for roughly 90% of the US population and nearly 92% of all gasoline consumption for transportation.[48] Even

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accounting for imperfect compliance with the orders[49] and the infeasibility of compliance for significant parts of the population,[50] the resulting reduction in gasoline demand is difficult to overstate. Rystad Energy estimated that global traffic had fallen 41% below previous levels by the end of March 2020.[51]

Empty Skies and Uncertain Seas: A Return to Pre-COVID-19 Levels of Air and Cruise Travel will be Neither Quick nor Guaranteed

Air travel is the fastest-growing source of transport-related fuel demand.[52] Beginning with flight restrictions to and from China in February 2020, commercial air travel was among the earliest and most acutely affected sectors. As COVID-19 spread, so too did its impacts on air transport. In March 2020, total commercial air traffic had fallen nearly 28% from 2019 levels.[53] As reported by global flight tracking service FlightRadar24, however, these figures significantly understate the scale of the decline. In the final week of March 2020, commercial air traffic was almost 63% lower than in 2019, with more than 100 airlines dramatically curtailing flights or grounding fleets altogether.[54] United Airlines, the third largest airline in the world, cut its capacity by 80% for April 2020 and projected still deeper cuts for May.[55] American Airlines, the world's largest carrier, cut its schedule by 60% during the northern hemisphere summer, with many routes shut down until at least late October.[56] With a growing number of major events being postponed until 2021 or canceled altogether,[57] any potential return to pre-COVID-19 levels of commercial air traffic may take much longer.

That return faces two additional and significant uncertainties. First, governments may reasonably balk at the up to one trillion dollars in bailouts the airline industry is seeking globally,[58] particularly since many observers argue the industry's financial practices increased its vulnerability to a downturn.[59] Second, and more significantly from the perspective of fuel producers, governments may respond to growing demands that any bailouts be conditioned on airlines cleaning up their labor and environmental practices, beginning with reducing the industry's rapidly increasing contribution to the climate crisis.[60] Indeed, given a recent high-profile court decision blocking the expansion of London's Heathrow Airport for failure to consider its significant climate impacts, even a massive bailout and the end of the pandemic may not be enough to put the airline industry back on its previous growth trajectory.[61]

Further, responding to the pandemic has forced a quantum leap in the technical and behavioral infrastructure needed to conduct business without long-distance (or even short-distance) travel. With the scientific and medical communities warning that periodic outbreaks may recur every several months until an effective vaccine is widely deployed or most of the human population develops herd immunity, substantial investments in large-scale conferences many months in advance will carry significant risk for months or years to come. During that same period, simple necessity dictates that experience with and technical capacity for remote collabo-

ration will continue to accelerate and mature. Already, informed observers are questioning whether, given the dramatic savings in carbon, capital, time, and well-being, many businesses and individuals may critically reassess how far and how frequently air travel is essential.

The prognosis for travel by ship is even less certain and potentially bleaker. The world's largest association of cruise lines announced that its members would suspend operations from US ports of call for at least 30 days.[62] This decision was preceded by deadly outbreaks aboard cruise ships, triggering massive cancellations, criminal investigations,[63] and global travel warnings from the US Centers for Disease Control. With a single large cruise ship burning more than 80,000 gallons of fuel per day,[64] widespread suspensions of cruise operations will contribute to a cross-sectoral decline of distillate fuel oils that comprise the second largest category of petroleum consumption in the US.[65] The cruise ship industry has previously recovered from repeated disasters and disease outbreaks, but this time, industry analysts have raised serious questions as to whether, when, and to what extent major cruise operators might return to pre-COVID-19 levels of activity even after the pandemic abates.[66] This skepticism is in light of widespread opposition to cruise industry bailouts among environmentalists, tax justice advocates, and lawmakers.[67]

Supply Glut Meets Storage Gap: Markets are Flooded, Taps are Still Open, and Industry is Running Out of Buckets

These declines will compound a preexisting glut of fuel oil and propane for heating caused by an unusually mild winter in both the United States and Europe,[68] itself a consequence of ongoing climate change.[69]

Estimates of the excess supply created by this demand decline have been progressively upward, with current projections of lost demand ranging from 20 to 35 million barrels per day or more.[70] Oil industry analyst Rystad Energy projects that COVID-19-related declines in transportation could reduce global oil use by as much as two and a half billion barrels for 2020, a reduction of more than 6% from 2019 levels.[71]

Critically, these declines occur at a time when oil production was already outpacing demand. The International Energy Agency estimates that the oil industry had 2.9 billion barrels of oil in storage by the end of January 2020, just slightly below its all-time peak.[72] With government stockpiles holding an additional 1.5 billion barrels,[73] roughly 4.4 billion barrels of oil were sitting in storage even before the first shutdowns of large sections of the economy began.

While the demands for natural gas receive far less media attention, they follow a similar trajectory. The US-driven fracking boom has flooded global markets with cheap fracked gas,[74] even as climate change is reducing seasonal demand for natural gas by triggering warmer winters in the northern hemisphere.[75] By the beginning of March, natural gas storage facilities in Europe were 60% full, with capacity at risk of filling by July.[76] Analyst firm IHS Markit emphasized that, just as with oil, the compounding impacts of demand reduction and the preexisting glut will cause a “chain reaction” that drives down both natural gas prices and demand for additional production well into the future.[77] As one industry analyst observed, “Like oil, right now the world is swimming in gas.”[78]

For both oil and gas, the massive, abrupt declines in consumption, coupled with preexisting, heavy demands on storage capacity, are quickly pushing that capacity to its limits. In the US, the Trump Administration announced plans to open the US strategic petroleum reserve to provide additional storage for oil. Given that the strategic petroleum reserve itself is already substantially filled, its remaining capacity cannot accommodate the looming glut. Indeed, nearly all observers have concluded that at projected levels of demand destruction, the total global capacity for storing unneeded oil and gas will soon be exceeded. More importantly, significant regional differences in storage capacity mean that many producers are at imminent risk of having nowhere to send their oil.

Plummeting Demand Sparked an Oil Price War, but Ending the War Won't Solve the Industry's Problems

Even more pressingly for oil and gas producers, the massive, sudden supply glut has further depressed prices for oil and gas that were already substantially reduced from the levels that existed at the time of key and costly investment decisions. The collapse of demand, coupled with profound uncertainty about when, where, and at what levels it might resume, triggered an oil price war that caused prices for oil and gas alike to plummet still further, falling to levels not seen for nearly two decades.[79] Brent Crude, the benchmark for global oil prices, has fallen from nearly $69 per barrel in January 2020 to just over $30 in April.[80]

Oil prices have been low for the past few years, with additional shocks sending prices lower in the first weeks of March 2020. The ongoing collapse of oil prices in early 2020 is tied to concerns about the economic impact of the COVID-19 strain of coronavirus, as well as an initial failure of Russia and Saudi Arabia to agree on production cuts.[81] Although the OPEC+ group of oil-producing nations recently reached a significant nearly ten million barrel per day short-term production cut agreement, it appears still unlikely to buoy oil prices.[82] Many analysts have observed that the negotiation to cut production by nearly ten million barrels per day falls short of what is needed to bring global oil supplies back into balance with

the greatly reduced demand.[83] This appears to be borne out in the immediate aftermath of the decision, as at the time of writing, Brent Crude remains trading below $35 per barrel.[84]

In Canada, a barrel of oil from Alberta's Tar Sands was cheaper than a bottle of beer or a barrel of monkeys.[85] Even before the pandemic emerged, natural gas prices in some parts of the US had fallen to near zero. Prices for oil and gas have continued to fall so dramatically that some producers, including Exxon, have incorporated provisions in their contracts to ensure that they will not be forced to pay buyers to take oil off their hands when the price falls below zero.[86]

These phenomena are being replicated in oil-producing regions around the world, putting oil-dependent economies like Nigeria[87] at risk of collapse and transforming the oil economics of critical frontier regions for oil and gas such as Guyana, Argentina, and Mozambique. (See discussion infra.)

Finally, the lack of available storage for crude oil is expected to put even further downward pressure on oil prices amid the demand destruction from the COVID-19 crisis. Even in the face of rapid production cuts, oil production is not likely to decline as rapidly as demand rises, and there is a limited number of tanks and tankers in which to store oil. As a result, producers may be forced to pay buyers to take oil off of their hands in order to avoid costlier disposal – in effect, creating negative oil prices until the supply can drop enough.[88] Indeed, even after the current widespread lockdowns and shelter-at-home orders begin to be lifted, the massive quantities of oil still in storage will keep demand for new production low for the foreseeable future. These risks are not limited to oil producers; the glut of natural gas can be expected to have similar dynamics.

In the wake of a similar but far smaller downturn in 2014, it took more than two years of drawing down stored oil before some semblance of balance returned to markets. As the analysis in the preceding sections demonstrates, however, for important sectors of the economy such as air travel, the resumption of previous levels of activity is at minimum months and potentially years in the future. For other sectors, such as the cruise industry, producers must confront the very real possibility that such a recovery may never materialize.

Despite the decision to cut new production, the existing, significant imbalance between diminishing storage and ongoing production will force producers in many regions to begin halting production from, or "shutting in," wells. This decision will stop the production of oil and gas for which there is neither market nor storage available.

Nor are the economic shutdowns limited to oil and natural gas. Even before the present crisis, prices for plastic and petrochemical feedstocks had lagged as global demand failed to grow in alignment with optimistic industry assumptions.[89] In the wake of the present crisis, growing numbers of producers have moved to delay final investment decisions or pull out of projects altogether.[90] Among others, Lyondell Basel has slowed construction of one facility, Nova Chemicals cut 90% of its construction crew at another, and Shell has suspended construction of both a polymers plant and a liquefied natural gas (LNG) plant.[91]

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PART 4

Preexisting Condition: The Pandemic Exposes and Exacerbates Fundamental and Systemic Weaknesses Across the Oil, Gas, and Petrochemical Sectors

As noted in the preceding section, COVID-19 triggered rapid and massive drops in value for oil, gas, and petrochemical stocks that exceeded those for nearly every other major industry sector. The sector's share in market upswings following stimulus bills and other positive news has been modest and short-lived by comparison to the scale of its losses. While the direct impacts of COVID-19 on transportation and other fossil-intensive products and industries played a significant role in this plummet, the speed with which investment dollars fled the industry and the relative reluctance with which they are returning points to a deeper truth. The acute shock of the pandemic and ensuing supply glut and oil price war are exposing and exacerbating underlying weaknesses in the sector.

Massive increases in US oil and gas production over the last decade, driven by the fracking boom, had forced OPEC countries and Russia to adopt sustained production cuts in an effort to keep prices at levels acceptable to a majority of countries amidst a flood of new oil and gas. Even amidst these production cuts, oil and gas production exceeded consumption in much of the world on a recurring basis, resulting in near-record stockpiles of oil and gas in many regions. The steep demand shock driven by COVID-19, and widespread recognition that the supply glut will not simply dissipate once the crisis is over, triggered an oil price war as producing companies and countries declared open competition for the limited demand that remained.

While all sides declared a temporary truce in that war on April 11th, the agreement is already too late for a growing number of oil and gas operators, particularly fracking companies that have been forced to retire assets or declare bankruptcy when failing markets left them unable to cover massive debts. The scale of corporate debt accumulated by the industry was highlighted on April 9th, when a group of major banks announced plans to begin taking possession of oil and gas companies and assets in an effort to recoup up to $200 billion in loans to the troubled sector.

Nor are risks limited to the fracking industry. As the following sections detail, the challenges facing oil, gas, and plastic producers are at once diverse and intersecting – playing out across multiple timescales, geographies, and product streams. Recent weeks indicate that COVID-19 is serving as an accelerant, putting increased and concentrated pressure on cracks that already pervaded the fossil economy.

Financial Markets are Turning Against Oil and Gas

Oil and gas companies rely on capital markets and other financial industry actors to support their continued operations. These markets, including institutional and retail investors, banks, insurers, and credit rating agencies, have been withdrawing support from the oil and gas sector. This withdrawal is both a result of poor performance and a dismal outlook for oil and gas, as raising the cost of capital for new or continued operations exacerbates the challenges facing these industries. Critically, this trend existed before the COVID-19 crisis began, and it is likely to only accelerate further because of it.

A rapidly growing number of financial institutions are adopting policies that avoid or sharply limit direct financial support of fossil fuels. Several banks have issued restrictions on lending for tar sands projects,[92] most recently Blackrock[93] and Wells Fargo.[94] The two largest development banks, the European Investment Bank and the World Bank Group, have policies designed to eliminate nearly all direct fossil fuel funding,[95] and a consortium of additional multilateral development banks have committed to aligning their investment activities with Paris Agreement goals.[96]

In addition to restrictions on direct lending, equity investors are turning away from fossil fuels. As of March 2020, asset owners with over $12 trillion have announced pledges to divest from fossil fuels,[97] with many more asset owners, managers, and analysts developing policies to shift away from fossil fuels. For example, BlackRock, the world's largest asset manager, announced it would incorporate climate analysis into the core of its investment strategy,[98] and the incoming governor of the Bank of England explicitly declared his intention to align the bank's portfolio to align with climate goals.[99]

As the financial outlook for the oil and gas sector deteriorates, the legal incentives

for divestment or otherwise reducing exposure to the sector increases. Because many investors, including pension funds, which are the largest category of equity investors globally, have fiduciary duties to their beneficiaries, they have legal obligations on top of the financial incentives to maximize profits: they must also reduce risk.[100] As the risks of investing in the oil and gas sector become ever more apparent, more and more investors subject to fiduciary duties will likely choose to steer clear of these companies.

The rapidly shifting view of oil and gas by the finance sector can be seen in the noted financial analyst Jim Cramer's declaration, "Fossil fuels are done."[101] Given the energy sector was the worst-performing of the 11 sectors in the S&P 500 over the past decade, this sentiment is perhaps unsurprising.[102] Notably, this poor performance coincides with a period of high dividend yields and large share buybacks, which typically buoy stock prices. However, according to an analysis from the Institute for Energy Economics and Financial Analysis, the largest oil and gas companies have been spending more on dividends and buybacks than they have earned since 2010.[103] This paradigm is only sustainable for so long, as the gap between cash flow in and distributions has been met by a combination of asset sales and taking on new debt.[104] And, as oil and gas prices remain depressed, the ability of companies to raise cash by selling off assets is similarly diminished.[105] As long as distributions outpace free cash flow, these companies will accumulate higher debt burdens and cannibalize assets, putting future returns at even greater risk.

Summary of Financial Challenges Facing the Oil and Gas Industry

- Fracking is not profitable, and debt is accumulating for upstream producers;
- Gas and oil prices remain depressed, undercutting potential profitability;
- Oil companies are writing down fossil fuel reserves as they become stranded;
- Electric vehicles and renewable energy are changing the fundamentals of the energy sector;
- The backlash to plastic pollution undermines the infinite growth expectations for petrochemicals; and
- Amid these challenges, financial institutions are withdrawing financial support from the sector.

Fracking Companies Are on the Brink of Collapse

Fracking companies in the United States were already in financial disarray before the pandemic began, as demonstrated by a recent analysis from Friends of the Earth.[106] The demand collapse and price war are triggering bankruptcies and oil well shut-ins across the industry.[107] Fracking operators in the United States have been losing money for over a decade, with estimates of losses topping $280 billion.[108] Since 2015, over 200 drillers have gone bankrupt, with 32 declaring bankruptcy in 2019.[109] At the beginning of 2020, the industry continued to struggle as natural gas prices remained low due to sluggish demand growth.[110] By the end of the first quarter, another seven drillers had declared bankruptcy,[111] six additional drillers had their credit outlook downgraded,[112] and several major banks had written down the expected value of many drillers' reserves.[113] A recent analysis from Rystad Energy indicated that, at prevailing oil and gas prices, almost all new fracking wells drilled would lose money.[114]

This mounting financial pressure is also impacting industry employment, especially in the Permian Basin in the Gulf Coast of the United States where the industry is either shedding jobs or adding them slower than the pace of the surrounding economy.[115]

Amid this financial failure is a looming wave of debt repayments. Over the next four years, over $200 billion of debt will come due, with $40 billion due this year alone.[116] With banks growing increasingly unwilling to extend additional credit to oil and gas drillers, these debt obligations will likely drive another wave of oil and gas bankruptcies as other pressures mount on the industry. A recent analysis from the Federal Reserve Board of Kansas City put this risk in sharp relief. The analysis determined that 40% of drillers could face bankruptcy by the end of the year if oil prices remain around $30 per barrel, and over a third would still be insolvent should the price increase to $40 per barrel.[117]

Plastic is Not Growing Indefinitely

The oil and gas industry as a whole, and ExxonMobil in particular, are betting on growth in petrochemicals and plastic to support their business models in the coming decades. Analyses from the World Economic Forum and International Energy Agency identify growth in petrochemicals, especially plastic, as the critical driver of growth in oil demand through midcentury.[118] Oil and gas major BP similarly stresses the importance of plastic to its industry in its 2019 Energy Outlook, concluding that a global ban on single-use plastic would cause demand for liquids (oil and LNG) to peak this decade.[119] The heavy reliance on plastic as a source of growth is becoming a clear problem as supply overexpansion and demand constriction converge.

Much of the investment in new production capacity in the United States is intended for export, although it is unlikely that those markets will absorb the additional supply. Legislative action to combat the proliferation of plastic is accelerating across the world. According to a report from the United Nations Environment Programme and the World Resources Institute, 127 countries have passed some form of single-use plastic legislation.[120] The European Union adopted its single-use plastic directive, which bans several single-use plastic products and sets collection and recycled content requirements for other products as well.[121] Furthermore, a ban on single-use plastic announced by China, the largest single plastic producer and consumer, is expected to result in a massive reduction in demand for new plastic.[122]

Nevertheless, even before the COVID-19 crisis, petrochemical producers had hoped to invest in new production capacity[123] despite a capacity overbuild and narrowing margins for plastic.[124] This build-out has been interrupted by the current crisis, as several petrochemical projects have been suspended or delayed.[125] Moreover, during times of normal operation, these projects take years to complete as they experience startup delays and run up additional costs, thus cutting into potential returns.[126] Any projects continuing development will now be subject to those normal pressures in addition to the unique challenges of this crisis.

The US region of Appalachia is already feeling the pressures of the capacity oversupply. Before the COVID-19 crisis, analysis firm IHS Markit had removed the $5.9 billion ethane cracker being proposed by PTTG Global Chemical from its long-term plastic supply forecast.[127] A more recent analysis from the Institute for Energy Economics and Financial Analysis further outlines the financial precariousness of this particular project.[128] The weakness of this one project is emblematic of the industry at large. Construction delays, which were a problem before the COVID-19 crisis began, are now exacerbated as construction is forced to halt to protect workers and public health.[129] This weakness was also already apparent before the COVID-19 crisis, with industry analysts acknowledging that the ongoing build-out was plagued by excess capacity, poor project implementation, workforce shortages, and weaker demand caused by a greater emphasis on recycling and plastic reduction.[130]

Communities betting their futures on these projects are likely to be left without the jobs and revenue they were promised and forced to bear considerable costs. Moreover, projects that do move forward face even more uncertain prospects over the long term.[131]

An editorial cartoon in the leading plastic industry news outlet in early March highlights the existential risks the industry faced from plastic reduction initiatives even before markets plummeted in response to COVID-19. Source: Plastics News, March 6, 2020, https://www.plasticsnews.com/viewpoint/why-not-take-cost-plastic-pollution.

Oil and Gas Prices Remain Depressed

The prices of oil and gas are some of the key drivers of profitability for oil and gas companies. Low prices threaten the financial viability of these companies, as their performance is often tied to the value of the commodities they produce. Before the current crisis, oil and gas prices had been low leading up to and throughout 2019, while returns on capital for oil production were diminishing, cutting into margins as prices plummeted.[132] Now, with unprecedented demand destruction from the COVID-19 crisis, the outlook for oil prices is even worse.

Natural gas prices in the United States and globally have also hit recent lows. This decline is driven by the supply glut from US fracking and, in large part, from warmer winters, which typically provide the cyclical demand peak for gas. This past year, both North America and Europe experienced unusually mild winters.[133] As noted by an analyst at Zacks Investment Research, "[n]o major commodity in the US had a worse 2019 than natural gas."[134]

The impact of this low gas price environment is not limited to the United States. Shell's recent decision to abandon a liquefied natural gas export project in the United States is likely a warning of more to follow.[135] As many of the oil majors increase their reliance on natural gas, low gas prices will continue to put ever-greater pressure on their bottom lines.

The Low Oil Price Environment Threatens the Economic Viability of Many Frontiers of New Oil Production

The low oil price environment not only cuts into the profitability of existing production, but it also threatens the viability of currently unexploited oil deposits. Many of the oil industry's expected new frontiers for oil production have fallen out of economic viability, in particular, those in Guyana and Argentina.

In Guyana, ExxonMobil, among other companies, is pursuing the development of the large Stabroek offshore block. This development faces two challenges that existed before the present crisis: opposition from concerned citizens and an unstable political climate. The permits granting drilling rights to multiple companies are in the process of being challenged, and appeals of those permissions continue. Moreover, a contested presidential election, in which the de facto President declared victory despite challenges and concerns raised by international observers, raises important questions about the legitimacy and stability of any executed drilling contracts.[136]

Both of these challenges present substantial obstacles to offshore oil development, and persistent low oil prices exacerbates them. Hess, one of the companies pursuing the development of the Stabroek block, claims breakeven prices for the first phase of drilling are $35/barrel.[137] At the time of writing, oil prices are several dollars per barrel below even the optimistic $35/barrel estimate from Hess.

Argentina's Vaca Muerta shale formation has some of the largest gas and oil reserves in the world and draws comparison to the Permian Basin in the United States. However, a lack of infrastructure and domestic economic challenges have hindered the ability of drillers to expand production in the region as they have in the Permian. Moreover, before the current crisis, activity in Vaca Muerta was already slowing, the number of rigs dropping from 70 to 50, due to price control introduced by the central government to combat inflation.[138] The present crisis has exacerbated the situation, stalling almost all new development of oil and gas. According to Guillermo Nielson, Chairman of the state-owned oil company YPF, the current crisis "puts all Argentine oil production in doubt."[139]

Finally, Mozambique has rapidly shifted from an expected new frontier for oil and gas companies to a country where the door is likely shut to new developments. The combination of depressed prices and internal instability has changed the fundamentals of projects in the country, and ExxonMobil is likely to delay its planned $30 billion liquefied natural gas plant.[140]

Electric Vehicles and Renewables Change the Fundamentals

Oil and gas face competition from renewables and electric vehicles in the areas of energy production and transportation, respectively. Current developments in both markets suggest critical thresholds have been or will soon be passed, which will fundamentally change the economics of oil and gas. A 2019 report from BNP Paribas concluded that, for oil to remain competitive with electric vehicles, oil prices would have to drop as low as $10 per barrel.[141] The report concludes "that the economics of oil for gasoline and die-

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sel vehicles versus wind- and solar-powered EVs are now in relentless and irreversible decline, with far-reaching implications for both policymakers and the oil majors[.]"[142]

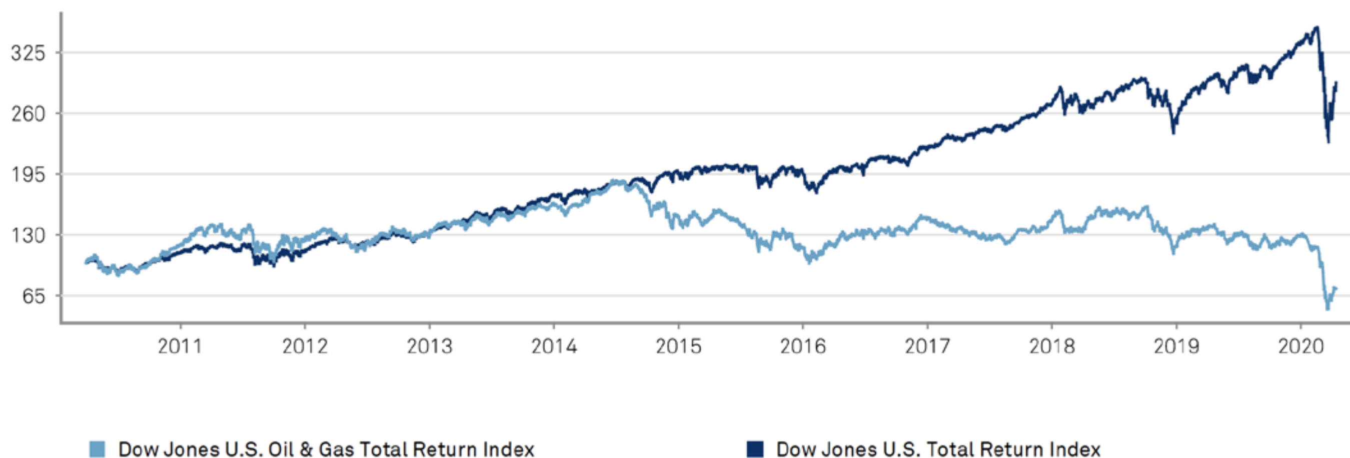
Significantly, the growth of electric vehicles is happening concurrently with the long-term stagnation of vehicle miles traveled. In the United States, the total number of miles traveled in cars has grown at less than 1% per year for the past three years and at barely half a percent a year overall since 2008.[143] The market share lost to electric vehicles is therefore not likely to be offset by an overall increase in miles driven – and therefore, gasoline consumed – making the threat posed by electric vehicles even more severe.

This shift is already manifesting in the power sector. As noted by Citi CEO David Bailin, the cost of renewables for energy production is now lower than that of fossil-fired power.[144] The permanent nature of this change as a rebalancing of global energy markets puts an "ultimate cap" on oil prices.[145] As a result, since 2014, orders for gas turbines, the energy-producing components in gas-fired power plants, have been cut in half,[146] and shares of gas-fired power utilities are now trading at a steep discount to renewable electricity utilities.[147]

Write-downs Provide Clear Evidence of the Risks to Oil and Gas Companies

The evidence that the outlook is weak for fossil fuel producers is becoming clear to many oil and gas companies themselves. A spate of recent write-downs, where companies declare losses by reducing the reported value of their oil reserves to reflect their belief that such reserves cannot be profitably exploited, demonstrate this point. In December 2019, Chevron wrote down almost $11 billion in assets it believed would not be economically recoverable.[148] Spanish oil company Repsol, noting the need to reduce its emissions in a world tackling climate change, wrote down an additional $5 billion.[149] ExxonMobil also reversed course, writing off 3.2 billion barrels of oil in its Canadian tar sands reserves after adding them to its balance sheet in 2017.[150]

As companies realize the risk of stranded assets, the scope of that risk is being understood more fully. One analysis in the Financial Times suggested stranded assets could reach $900 billion,[151] while the International Monetary Fund reported a potential loss of $2 trillion for oil-producing countries in the Middle East.[152]



Source: Dow Jones U.S. Oil & Gas Index Fact Sheet, S&P Dow Jones Indices, *available at* https://us.spindices.com/indices/equity/dow-jones-us-oil-gas-index (last updated Mar. 31, 2020).

CASE STUDY

ExxonMobil Exemplifies Intersecting Challenges Facing Industry

ExxonMobil is the largest investor-owned integrated oil and gas company in the world, and it, too, is fighting the same headwinds as the rest of the sector. In addition to these sector-wide risks, ExxonMobil faces additional, specific challenges. As such, it provides a useful case study in how a comprehensive view of the current crisis, sectoral trends, and company-specific factors present an even greater risk when considered together.

According to its investor presentations, ExxonMobil's plan for growth relies on a combination of petrochemical operations, Permian Basin fracking, and new oil production, especially in Guyana.[153] However, evaporating margins in its petrochemical business, potential slowdowns in the Permian basin, and legal challenges alongside political instability in Guyana all threaten these plans. Moreover, this convergence coincides with a decade of distributions to shareholders that exceed free cash flow.

ExxonMobil's chemical segment is suffering from reduced prices and increased cost for plastic, cutting into margins from both sides. The company's investor presentations show that capacity additions have outpaced demand growth in plastic,[154] reducing prices for commodity plastic like polyethylene.[155] Moreover, the cost of naphtha-based ethylene shot up 65% in just the fourth quarter of 2019.[156] Overall, ExxonMobil estimates an average 40% decrease across the market for margins on chemicals.[157] In the fourth quarter of 2019, its chemical segment lost $355 million,[158] its first quarterly loss in at least 13 years, according to an analyst with RBC Capital Markets.[159] Chemical earnings were down over 80% for the year overall.[160]

The other major plays for ExxonMobil, fracking the Permian Basin and exploration off the coast of Guyana, are on shaky foundations. ExxonMobil has already indicated that it is likely to scale back, rather than accelerate, its planned Permian expansion amid shrinking margins from fracking.[161] Despite its intention to develop offshore oil fields in Guyana, ExxonMobil is facing legal and political pushback for oil drilling contracts that are predatory – and potentially illegal.

Beyond these significant plays, additional projects may be under threat from ExxonMobil's own reduced capital expenditures.[162] For example, in addition to cutting 1,800 jobs in Louisiana, ExxonMobil is expected to delay a planned LNG export terminal in Mozambique as well.[163]

The challenges to Exxon's expansion plans coincide with a precarious financial position for the company. Moody's recently adjusted the company's outlook to negative.[164] In 2019, ExxonMobil, long considered a reliable blue-chip stock, fell out of the S&P 500's top ten stocks for the first time, hitting its lowest share price in a decade.[165] (In early 2020, that price fell further to 15-year lows, as of March 5th, although the situation is evolving rapidly.)[166] According to an analysis for the Institute for Energy Economics and Financial Analysis, ExxonMobil spent $64.5 billion more on distributions to shareholders over the past ten years than it earned in free cash flow.[167] And, despite freezing share buybacks, in 2019, ExxonMobil again took on additional debt to finance dividends.[168]

Summary of Additional ExxonMobil-Specific Challenges

- Offshore exploration in Guyana continues to be contested;
- Company has indicated it may need to slow Permian operations;
- Losses from chemicals division compounded by global pressures on plastic; and
- Distributions to shareholders outpacing free cash flow despite poor stock performance.

These pressures are converging as renewable energy and electric vehicles change fundamental and long-held assumptions about the possibilities of profits in oil and gas. Billions of dollars' worth of assets are being revealed as worthless, with trillions more potentially stranded. This is happening while Exxon's own debt accumulates, and its share price falters despite aggressive shareholder distributions.[169]

These myriad risks existed before and will continue to exist in the wake of both the market selloff due to concerns regarding the COVID-19 coronavirus and the oil price war between Saudi Arabia and Russia. However, these twin calamities add additional pressure to an already unstable industry and a company that has been bleeding cash and shareholder value for a decade.

Any state, community, or investor considering a partnership with or investment in ExxonMobil should be wary of these significant financial concerns.

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CONCLUSION

COVID-19 Will Accelerate Ongoing Decline Across the Oil, Gas, and Plastic Industries

Before the present crisis, oil, gas, and petrochemical companies showed already clear signs of systemic weakness, including: long-term underperformance on stock markets; massive accumulations of corporate debt; questionable contracts and legal opposition in resource frontiers critical to the industry's future; fallen costs and rising deployment of renewable energy systems that undermine the economic case for natural gas as a "bridge fuel;" rapidly slowing growth in plastic demand at a time when the industry is investing more than $200 billion in new production facilities for plastic and petrochemicals; and growing investor skepticism about the long-term prospects for fossil fuels in a world that must act urgently to confront the climate crisis.

Since the COVID-19 pandemic and economic crisis, oil and gas are among the industries hardest hit by the current economic crisis, with leading companies losing an average of 45% of their value since the start of 2020. In addition, quarantine measures have sharply curtailed demand for oil and gas, oil prices are plummeting to the lowest level in two decades, and the demand decline and the oil price war are disrupting the economics of the plastic and petrochemical industries as well.

In the midst of this crisis, oil, gas, and petrochemical companies are lobbying governments worldwide to seek direct and indirect support, including bailouts, buyouts, regulatory rollbacks, exemption from measures designed to protect the health of workers and the public, non-enforcement of environmental laws, and criminalization of protest, among others.[170] These efforts may succeed in diverting significant public resources to the sector and delaying the clean-energy transition; however they are very unlikely to reverse the underlying trends driving the long-term decline of the oil, gas, and petrochemical industries.

Recommendations

- **Public Officials** taking policy action to respond to COVID-19 and the economic collapse should not waste limited response and recovery resources on bailouts, debt relief, or similar supports for oil, gas, and petrochemical companies.

- **Institutional Investors and Asset Managers** should recognize the overwhelming evidence that the risks of continued investment in fossil fuels now substantially outweigh the benefits, and they should rebalance their portfolios to eliminate their exposure to volatile and declining oil and gas assets.

- **Frontier Countries** considering whether to open their lands, waters, and democracies to new oil and gas extraction should urgently reassess their prospects in light of the collapse in oil prices and demand, the demonstrated severe risks of economic dependence on volatile oil markets, the ongoing long-term decline of the sector, and its fundamental incompatibility with climate action.

- **Local Communities and Decisionmakers** should reject demands from the oil, gas, and petrochemical sectors for public subsidies, tax abatements, lax environmental enforcement, or other special concessions. They should interrogate industry promises of long-term sustainable employment actively and skeptically, and they should require evidence to support those claims that goes beyond simplistic assumptions of market growth. In the rare circumstances where these burdens are met, affected communities should require project proponents to irreversibly commit the funds required to restore communities and the environment when the project reaches the end of its economic life.

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PANDEMIC CRISIS, SYSTEMIC DECLINE

Why Exploiting the COVID-19 Crisis Will Not Save the Oil, Gas, and Plastic Industries

Amidst a global pandemic caused by the novel coronavirus, the oil, gas, and plastic industries are exploiting the crisis by aggressively lobbying for massive bailouts and special privileges in a desperate attempt to revive an oil and gas industry already in decline.

This report documents how long-term systemic declines in the oil and gas industry had been accumulating long before the coronavirus pandemic emerged. Compounded by the impacts of the pandemic and related economic crisis, the industry's collapse has accelerated, with leading companies losing an average of 45% of their value since the start of 2020.

While the current crises have exacerbated the industry's collapse, its underlying risks remain unchanged. Ultimately, government bailouts and regulatory rollbacks will not reverse the inevitable decline of the oil, gas, and plastic industries.

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