



# PRIVATE EQUITY ENERGY BETS BURN INVESTORS

While institutional investors increasingly eschew fossil fuels, private equity faces a reckoning

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# Key Points

- Energy-focused funds have largely experienced poor returns in the years leading up to the pandemic, and sunk deeper in 2020.
- The concentration of fossil fuel investments in energy funds provides an indicator of the sector's risks, which may not be apparent when such investments are interspersed into other fund strategies like buyout or infrastructure.
- Private equity-backed fossil fuel companies faced a higher rate of bankruptcies than their non-private equity-backed counterparts, contributing to performance woes.
- Industry forecasts predict an unlikely return to pre-pandemic fossil fuel demand, suggesting a structural shift in the oil and gas value chain and that poor returns are likely to remain.
- With the public equity market showing little appetite for acquiring new fossil fuel exploration and production assets, exit options have dwindled for private equity-backed companies. Limited exit options means that investors are burdened by unprofitable assets, leading to diminished investment returns.
- Renewable energy sources, complemented by flexible storage and demand options, are expanding rapidly and providing reliable services comparable to fossil fuels, at lower cost.
- Given the climate crisis and a strengthening of global environmental regulations, fossil fuel companies are expected to face increasing levels of scrutiny from investors, regulators, and the public.
- Private equity firms should take meaningful steps now to responsibly reposition portfolios away from fossil fuels, and ensure institutional investors' capital is deployed toward a clean energy economy.



# Executive Summary

For nearly a decade, private equity energy fund returns have lagged broader private equity returns by significant margins.<sup>1</sup> This report finds that private equity-backed energy funds performed poorly compared to private equity funds overall by vintage year, and the majority have lost money.<sup>2</sup> Given the concentration of fossil fuel investments in energy funds, this underperformance suggests that investors would have been better served by a strategy that did not rely on fossil fuel investments. Even the handful of energy funds that generated positive returns still lagged the private equity benchmark by significant margins.

Despite disappointing returns, private equity managers have continued to raise capital from institutional investors in energy-targeted funds.<sup>3</sup> Meanwhile publicly traded energy buyers have exhibited decreasing appetite to acquire additional fossil fuel assets. With limited options to exit and profit from fossil fuel investments, private equity energy investors are burdened by unprofitable assets and diminished returns.

More recently, the COVID-19 pandemic dramatically decreased fossil fuel demand and helped underscore the increased bankruptcy risks associated with private equity-backed fossil fuel assets. Amid these financial risks, private equity funds continue to invest billions in fossil fuel assets, such as Blackstone's \$6.3 billion investment in Tallgrass Energy in 2019, Kohlberg, Kravis Roberts' \$600 million investment in the Coastal Gaslink Pipeline in 2020, or Apollo Global Management's \$1.3 billion investment in Caelus Energy in 2014.<sup>4</sup>

Unlike private equity asset managers, governments and industry leaders are seeing the writing on the wall – fossil fuel assets are too risky as major stakeholders transition to a clean energy economic future. In February 2021, Royal Dutch Shell joined other oil majors in saying that the world reached peak oil production in 2019 and going forward it expects annual declines.<sup>5</sup>

As of November 2020, according to a report by the International Energy Agency, consumption of electricity generated by wind, solar and hydroelectric sources will have grown nearly 7 percent in 2020, a remarkable jump given that global energy demand is expected to drop by 5 percent during the same period – the steepest drop since World War II.<sup>6</sup> Renewable energy sources, complemented by flexible storage and demand options, are expanding rapidly, and providing reliable services comparable to fossil fuels, at lower cost. With the U.S. returning to the Paris Climate agreement and the strengthening of global environmental regulations, fossil fuel companies are expected to face increasing levels of scrutiny from investors, regulators, and the public.<sup>7</sup>

Taken together, fossil fuel fortunes have not only evaded investors in recent years but are expected to remain elusive. Private equity firms should take meaningful steps now to responsibly reposition portfolios away from fossil fuels and ensure institutional investors' capital is deployed toward a clean energy economic future.

# Introduction

Private equity firms have poured billions into fossil fuel investments, but the pummeling of consumer demand and oil prices by the COVID-19 pandemic have driven down returns and highlighted longer term underperformance. Private equity investments in fossil fuels appear in energy-targeted funds, but often are also folded into other vehicles including flagship buyout funds, as well as infrastructure, debt and opportunistic strategies.

According to *Cambridge Associates*, for the 184 mature and maturing private equity energy funds with vintage years between 2004 to 2014, performance on average lagged broader private equity returns by 0.56x on a net multiple on paid-in capital basis (MOIC).<sup>8</sup> Based on a Preqin analysis, *Bloomberg* reported in April 2020 that oil- and gas-focused funds have been among the lowest-yielding asset classes for private capital over the past 10 years. The median internal rate of return (IRRs) for these funds is about five percentage points lower than those of comparable buyout firms.<sup>10</sup>

This trend is further highlighted in *Figure 1*, which compares the internal rates of return (IRR) for a sampled set of 16 energy funds — from the largest private equity managers, that have concentrations of fossil-fuel related investments — to Pitchbook’s private equity pooled IRR benchmark (as of 4Q 2020).<sup>10</sup> By comparing the returns of private equity-backed energy funds against private equity benchmarks from the same vintage year, it is clear that energy funds have underperformed.

The majority of the sampled energy funds lost money. The few funds that generated positive returns still lagged the private equity benchmark by significant margins. Even fewer funds maintained annual returns that exceed a standard 8 percent hurdle rate.<sup>10</sup>

For instance, KKR Natural Resources Fund had an IRR of -28% as of 4Q 2020 compared to the average 2010 vintage private equity fund pooled IRR benchmark of 12%,



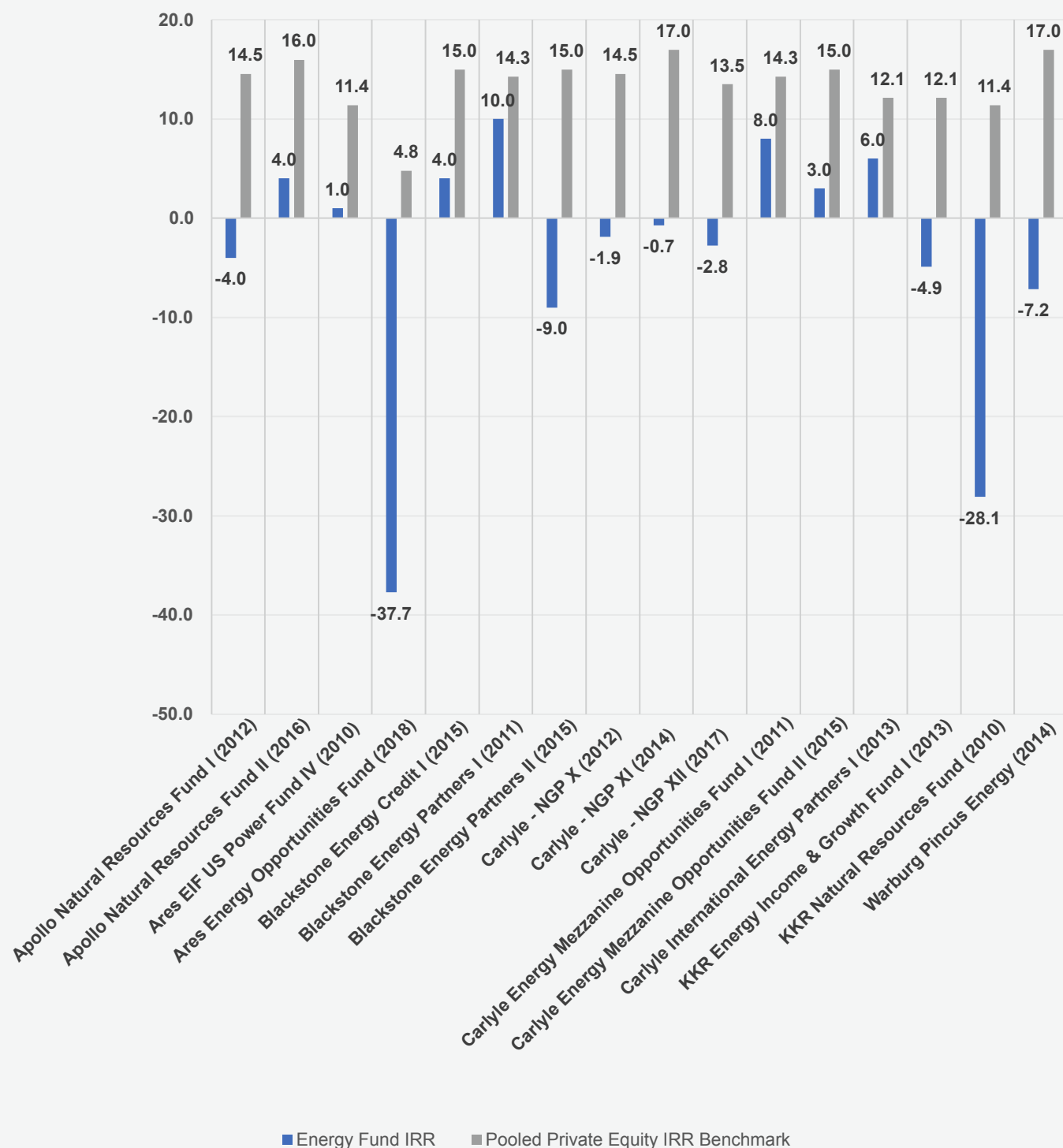
Blackstone Energy Partners II generated a -9% return as of 4Q 2020 whereas the private equity benchmark for that vintage year (2015) was nearly 15%, and Ares Energy Opportunities Fund from 2018 posted -37.7% in 4Q 2020 compared to a benchmark of 4.8%.

The concentration of fossil fuel investments in energy funds and the long-term trend of disappointing performance across such funds illustrate risks of the sector. Examining energy fund performance provides a useful indicator of how unreliable fossil fuel investment returns have been over time, which may not be apparent when such investments are interspersed into other fund strategies like buyout or debt funds.

While private equity firms have pursued fossil fuel investments in energy funds, they have also poured billions of dollars into oil and gas or coal companies that appear across all strategies, including infrastructure, buyout and debt funds.



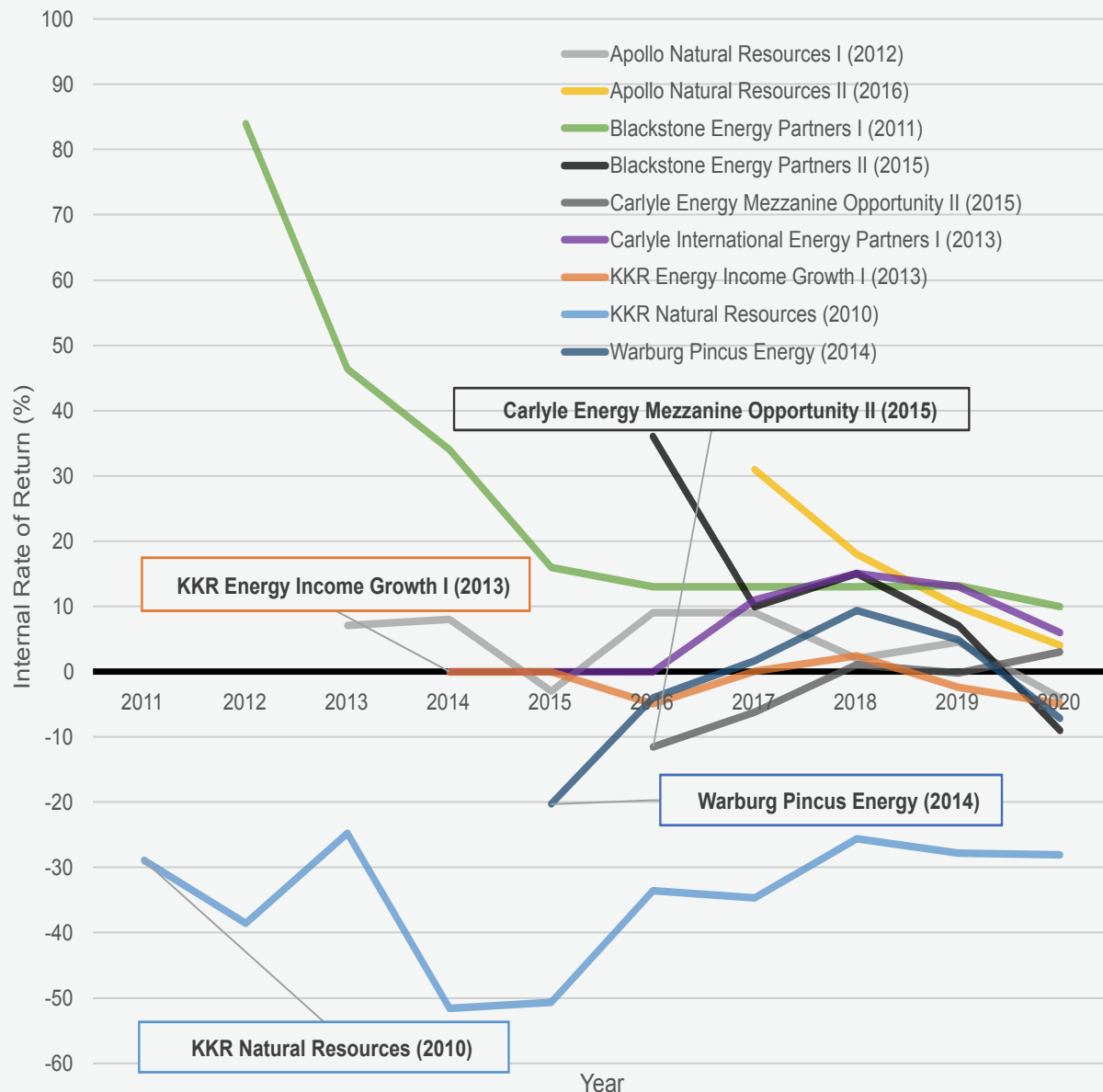
## PRIVATE EQUITY ENERGY FUND RETURNS (IRR) VS BENCHMARK



**FIGURE 1:** Parentheses denote vintage year. Sources: Returns based on 10K 2020 filings by Apollo, Ares, Blackstone, Carlyle and KKR. In its 10K filing, Carlyle does not provide specific figures for negative IRRs so Carlyle NGP fund returns from pitchbook as of 4Q 2020. Warburg Pincus fund returns from Pitchbook as of 4Q 2020. Pooled private equity IRRs from ["Pitchbook Benchmarks" as of 2Q 2020 \(with preliminary 3Q 2020 data\)](#).



## PRIVATE EQUITY-BACKED ENERGY FUND RETURNS



**FIGURE 2:** Parentheses denotes vintage year. Source: Pitchbook and 2020 SEC Form 10-K for Apollo Global Management, The Blackstone Group, Carlyle Group, and KKR & Co. as of 4Q 2020.

The poor returns of energy funds is not a phenomenon that coincided with the COVID-19 pandemic and low oil demand in 2020. The trendlines in *Figure 2* illustrate generally declining returns across the sampled energy funds for the past decade, with deeper declines over the past two years. Some funds have spent most of their existence losing money for investors, such as KKR Natural

Resources, KKR Energy Income Growth I, Carlyle Energy Mezzanine Opportunity II, and Warburg Pincus Energy.

Despite poor returns, private equity funds have continued to raise capital from institutional investors, with the largest amount of aggregate capital raised in energy-related funds in 2019 (which includes diversified energy, upstream

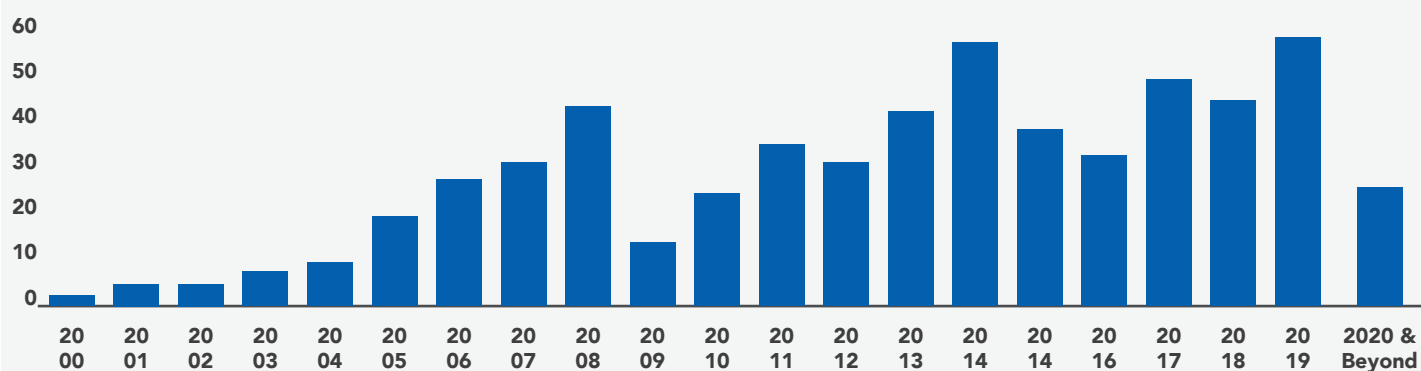


energy, midstream energy, and energy services funds) over the past two decades, according to Cambridge Associates, as shown in *Figure 3* below.

The overall disappointing returns from energy investments have been punctuated by an inability to exit in order to monetize investments,<sup>12</sup> increasing number of bankruptcies,<sup>13</sup>

uncertain market demand,<sup>14</sup> and increasing disillusionment with the asset class due to growing environmental concerns.<sup>15</sup> These problems have only been aggravated by the pandemic. Altogether, these trends indicate a structural shift away from fossil fuels that private equity appears unprepared for.

### TOTAL ENERGY FUNDRAISING BY VINTAGE YEAR (\$ BILLIONS)



**FIGURE 3:** Data include funds classified as diversified energy, upstream energy, midstream energy, and energy services. Vintage year is defined as a fund's legal inception year. Source: "Real Asset Dynamics: PE Energy", Cambridge Associates, May 2020.

# A Crashing Tidal Wave

## Rising Bankruptcies

Private equity-backed companies comprised the majority of oil & gas producer bankruptcies in 2020. Of the companies that filed for bankruptcy last year, 57 percent were backed by private equity firms, according to data tracked by *Haynes and Boone*.<sup>16</sup>

Private equity's capital structure, which relies heavily on debt, has also made it more prone to bankruptcies within the sector. Notably, 2020 saw an increase in bankruptcies with debt loads greater than \$1 billion, with an unusually high number relative to the prior six years.<sup>17</sup> Furthermore, our analysis of the *Haynes and Boone* data show that more than two thirds (71%) of 2020's bankruptcies were backed by private equity. A few prominent examples include Blackstone and Mesquite Energy's billion-dollar bankruptcy at Gavilan Resources, Ares Management and Apollo Global's bankruptcy at Chisholm Oil and Gas, and the Carlyle Group's multibillion-dollar bankruptcy at Chesapeake Energy.

Moreover, our analysis of the *Haynes and Boone* data also showed that the average debt held by bankrupt private

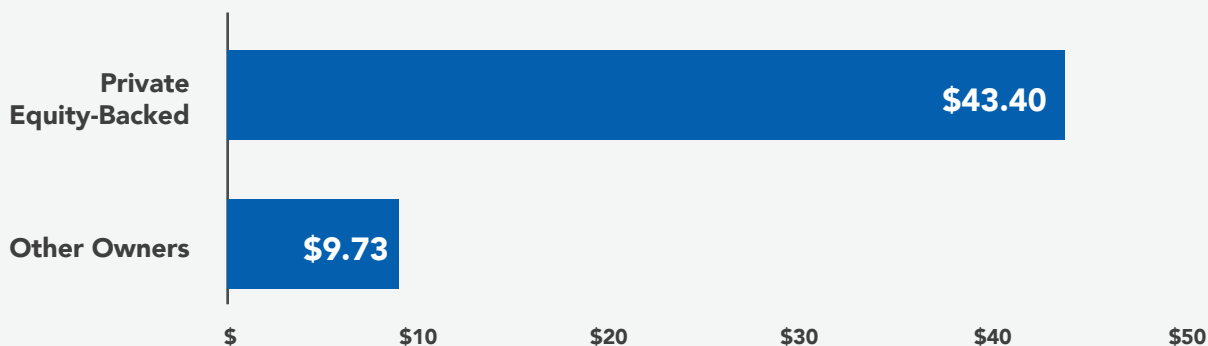
equity-backed crude producers was more than three times that of their non-private equity-backed peers. Given that these high debt loads are a core aspect of private equity's capital structure, the pandemic has only underscored long-standing risks associated with fossil fuel exploration, production and infrastructure development.

The combined debt of the private equity-backed companies that filed for bankruptcy through December 2020 was approximately \$53 billion.<sup>18</sup> Private equity-backed oil producers constitute over 82 percent of that debt, owing a combined \$43 billion (see *Figure 4*).

## No Exit Plan; Trouble Generating Returns

For years, private equity has been increasing its investment in various parts of North American oil and natural gas production, but the old strategy of selling after a few years is not working. The inability to sell investments in a timely manner negatively impacts investment returns for investors. Publicly traded oil and gas producers used to be the primary buyers of privately backed oilfield investments. But as crude demand and prices

### DEBT LOAD OF 2020 OIL & GAS BANKRUPTCIES (\$ BILLIONS)



**FIGURE 4:** Source: *Haynes and Boone Bankruptcy Monitor*, December 31, 2020







fell, combined with investor demands to conserve cash, demand for new acquisitions shrunk.<sup>19</sup>

The problems started before the pandemic, in 2019, when fossil fuels were rapidly losing their appeal to investors due to environmental concerns. Before the pandemic began, many privately held oil explorers and producers had paused plans to go public.<sup>20</sup> “There’s an inability to exit” private equity oil and gas holdings as a whole, George McCormick of Outfitter Energy Capital, said in a January 2020 *Bloomberg* article. “The engine on the train is really public companies buying assets from privately backed companies. But public companies aren’t buying today.”<sup>21</sup>

Initial public offerings (IPOs) worked well when oil was still “fashionable and profitable,” Jules van Limborgh, director at Kerogen Capital told *Bloomberg* in November 2020.<sup>22</sup> Making an exit now is posing to be serious challenge and could be costly to investors.

Leading up to 2020, private equity firms sold an average of \$10.4 billion in oil and gas assets a year in the 2017-2019 period, a 64 percent drop compared to 2016 when they sold \$28.5 billion, according to energy data-analytics company Enverus. “The private equity industry mistook a structural change, that is a collapse in buyer demand, for being cyclical and tied to oil prices,” Waterous Energy’s CEO Adam Waterous told *Private Equity News* in June 2020.<sup>23</sup> With limited exit options, investors are burdened with unprofitable assets which erode investment returns.

## Shale Enticed Private Equity, Capital Vaporized

Similar struggles to exit and profit from oil investments face the natural gas industry. Private equity jumped in on the shale boom in the early 2010s, and stayed in during the mid-decade price drops. It was assumed that “even if oil prices go the wrong way, you’re still going to be creating value” by mastering the technology behind the shale boom, Dane Gregoris, a director at RS Energy Group, told *Bloomberg* in April 2020. But 2020 showed that, “That thesis is no longer as clear.”<sup>24</sup>

Private equity firms have not succeeded in securing buyers for shale assets they intended to hold for just a few years, and ended up having to drill, in many cases without being able to turn a profit.<sup>25</sup> In 2019, *Bloomberg* reported that drilling new wells is unprofitable for nearly all of the 500 private equity-backed oil and gas explorers in the U.S. today, regardless of size.<sup>26</sup>

“The industry was just vaporizing capital over the last five years,” Waterous told *Bloomberg* in 2019. Prior to the 2020 plunge in crude prices, “the U.S. unconventional business was not working, and specifically, the returns that were being earned were atrociously poor.”<sup>27</sup>

## Natural Gas – A Bridge To Nowhere

Although natural gas is often promoted as a “bridge fuel” between oil and renewable energy, the overall industry is contending with intensifying pressure to replace gas with



renewables to facilitate the electrification of the broader energy system and growing criticism and regulation around methane gas emissions associated with natural gas production.<sup>28</sup>

“Renewables like wind and solar, complemented by flexible zero-carbon resources like storage and demand response, are already providing the same reliability services and energy as new natural gas plants at lower cost,” Mike O’Boyle, of the nonpartisan policy think-tank Energy Innovation, told *S&P Global Platts* in March 2020.<sup>29</sup> As of November 2020, according to a report by the International Energy Agency, consumption of electricity generated by wind, solar and hydroelectric sources will have grown nearly 7 percent in 2020, a remarkable jump given that global energy demand is expected to drop by 5 percent – the steepest drop since World War II.<sup>30</sup>

According to research published in *Science*, the U.S. methane supply chain emissions from natural gas are likely close to 60 percent higher than estimated by the Environmental Protection Agency. This leakage rate implies that natural gas-fired plants emit closer to 75 percent of coal-fired plant emissions.<sup>31</sup>

Private equity capital has flowed toward developing natural gas power plants and pipelines, with operating lifetimes extending far beyond what is permitted in climate stabilization models. Examples of this long-term infrastructure footprint include Blackstone’s Rover Pipeline, Carlyle’s Varo Energy, and KKR’s Coastal Gaslink

Pipeline. But gas infrastructure proliferation contributes to risks that expose investors to regulatory, technological transition and reputational risks, according to Energy Innovations and shareholder advocacy group, As You Sow.

“New gas infrastructure is increasingly likely to become stranded — the natural gas ‘bridge’ must end now if investors want to avoid massive stranded asset cost risk,” continued O’Boyle.<sup>32</sup>

### **Demand Unlikely to Recover**

Although oil demand is expected to recover somewhat in 2021 from the depths of 2020, it will remain lower than its pre-pandemic levels by about 4 to 7 percent, *Deloitte* reported based on forecasting by Rystad Energy last year.<sup>33</sup> Oil prices and energy stocks have underperformed the broader S&P 500 since July 2020. Moreover, *Deloitte*’s research shows that U.S. oil and gas companies laid off 14 percent of permanent employees in 2020, and 70 percent of the jobs lost are projected to not return by the end of 2021.<sup>34</sup>

Even the oil majors are acknowledging a permanent shift. In February 2021, Royal Dutch Shell joined other oil majors in saying that the world reached peak oil production in 2019, and going forward it expects annual declines.<sup>35</sup> In September 2020, British oil giant BP came to the same conclusion that oil demand peaked in 2019.<sup>36</sup>

Transportation is a major driver of oil consumption and uses nearly 70% of the petroleum produced in the U.S.,<sup>37</sup>



but demand is expected to drop dramatically in the coming decade. In response to the climate crisis, over a dozen local and national governments set targets to phase out new sales of gasoline-powered cars.<sup>38</sup> The next decade could look very different to what was projected prior to the pandemic.

For instance, in 2020 one of the largest markets for vehicles sales, California, established a gasoline-powered car phaseout goal of 2035. The United Kingdom also revised its goal to 2035 and mandated that any car sold after 2030 must have at least a hybrid drivetrain capable of running on a battery (see *Figure 5*).<sup>39</sup> In January 2021, General Motors, Detroit's largest automaker, announced plans to completely phase out vehicles using internal combustion engines by 2035. It also plans to use renewable energy for its U.S. factories by 2035, and overseas by 2040.<sup>40</sup>

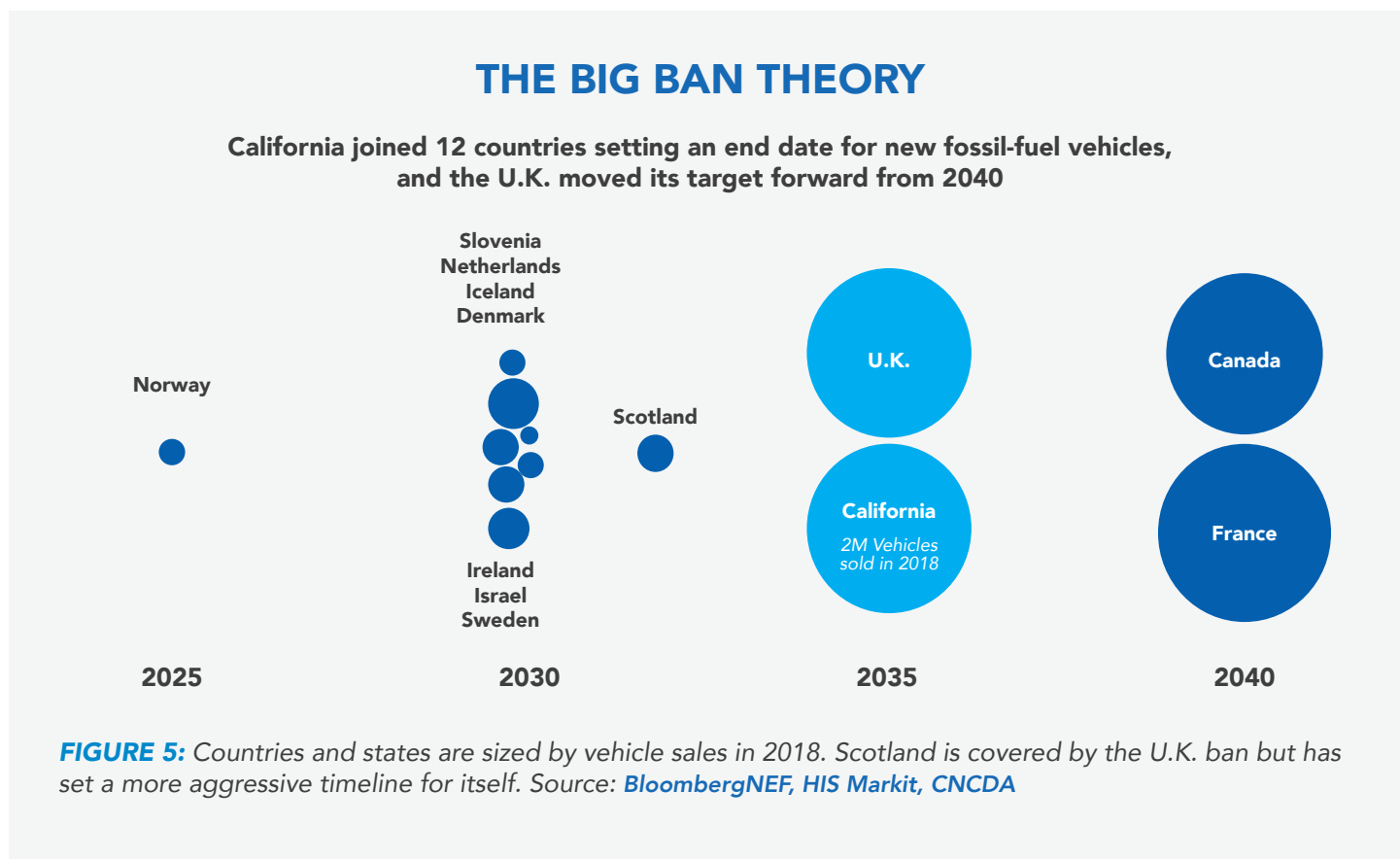
Governments are not alone in taking action to address climate change and spurring the decline in projected

fossil fuel demand. Fossil fuel companies in the public markets are as well. Last year, BP along with Royal Dutch Shell stated they would cut net emissions to zero by 2050, joining similar pledges made in 2019 by France's Total SA, Spain's Repsol and Italy's Eni.<sup>41</sup>

## Preparing for the New Energy Calculus

Institutional investors such as New York State's \$226 billion pension fund,<sup>42</sup> New York City's pension funds,<sup>43</sup> Georgetown University,<sup>44</sup> and the University of California have committed to exit fossil fuel investments.<sup>45</sup>

Jagdeep Singh Bachher, the University of California's chief investment officer, and Richard Sherman, the chairman of the UC Board of Regents' Investments Committee wrote in a September 2019 *Los Angeles Times* op-ed, "Our job is to make money for the University of California, and we're betting we can do that without fossil fuels investments." They observe that "hanging on to fossil fuel assets is a financial risk. That's why we will have made our





\$13.4-billion endowment “fossil free” as of the end of this month, and why our \$70-billion pension will soon be that way as well.”<sup>46</sup> New York state comptroller Thomas DiNapoli echoed these sentiments in a *New York Times* article in December 2020, “New York State’s pension fund is at the leading edge of investors addressing climate risk, because investing for the low-carbon future is essential to protect the fund’s long-term value.”<sup>47</sup>

## Conclusion

The evidence is growing that we have entered a structural shift in the fossil fuel industry. Institutional investors are increasingly moving away from fossil fuels. Energy fund returns were poor in the years leading up to the pandemic and industry forecasts predict an unlikely return to pre-pandemic fossil fuel demand.<sup>48</sup> The disruption in 2020 led debt-laden private equity-backed fossil fuel companies face a higher rate of bankruptcies.<sup>49</sup> With the public equity market showing little appetite for fossil fuel exploration and production companies, monetization or exit options have dwindled for private equity-backed companies.<sup>50</sup> Given the pressing issue of climate change, the U.S.’ return to the Paris Climate Agreement, and a strengthening of global environmental regulations, fossil fuel companies are expected to face increasing levels of scrutiny.<sup>51</sup>

*Deloitte’s 2021 Oil & Gas Industry Outlook* said, “With the survival of many companies at risk and the longer-term decline in petroleum demand, the next decade could look very different for the entire [oil and gas] value chain.”<sup>52</sup> In

the U.S., the Biden administration is advancing changes with more policy and regulation expected on methane emissions from oil and gas facilities, limitations on drilling or fracking on federal lands, vehicle emission standards and emphasis on renewable infrastructure.<sup>53</sup>

Taken together, the writing is on the wall: fossil fuels have lost their shimmer. Fossil fuel fortunes have not only evaded investors in recent years but are expected to remain a mirage.

Private equity firms should take meaningful steps now to responsibly reposition portfolios away from fossil fuels, and ensure institutional investors’ capital is deployed toward a clean energy economy.



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