Paving a Credible Investment Pathway to Net Zero for Oil and Gas

Investment treaties will play an essential role in accelerating climate targets in the petroleum sector.

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1. Introduction

1.1. There is little doubt that oil and gas firms face an existential threat from the energy transition.[2] In one of its net zero scenarios, the IEA—long viewed as an ally to energy incumbents—forecasts that fossil fuels will only account for 20% of the world's total energy supply in 2050, down from 80% in 2020.[3] One highly-publicized milestone (among 400 others) for investors to align themselves to the scenario is "no investment in new fossil fuel supply projects."

1.2. Despite their own public rhetoric, investor-owned oil and gas companies are fully cognizant of the inevitability of a carbon-constrained world. State-owned energy giants like Saudi Aramco and Gazprom have far lower extraction costs and carbon intensity of petroleum, owing largely to favorable geology, and will outlast investor-owned companies in the race to be the last one pumping.[4]

1.3. Doubts remain, however, as to when the transition will be realized and at what cost. In spite of this uncertainty, firms are moving forward with climate transition plans out of a combination of financial interest, shareholder pressure, and self-survival to ensure a continued role in regulating the energy industry.

1.4. At the same time, investment treaty reform proposals advocate for fossil divestment "unless they are fully consistent with an ambitious, clearly defined pathway towards

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[2] Jeff Colgan, Jessica Green, and Thomas Hale, 2020, "Asset Revaluation and the Existential Politics of Climate Change," *International Organization*.
[3] International Energy Agency, 2021, *Net Zero by 2050: a Roadmap for the Global Energy Sector*.
[4] David Victor, 2021, *Energy Transformations: Technology, Policy, Capital and the Murky Future of Oil and Gas*, Engine No. 1.

climate neutrality."[5] This raises a pressing question for investors—what counts as "consistent" with an ambitious transition pathway?

1.5. This contribution to public consultation on investment treaties and climate change evaluates existing debates around oil and gas[6] transition plans in three areas:

1.5.1. The industry sees transition plans as necessary for long-term survival. Yet not all firms agree on strategy: some invest in renewables and electrification, while others see carbon dioxide reduction (CDR) technologies as pathways to continued use of petroleum in a decarbonized world.

1.5.2. Criteria used to assess the credibility of transition plans within the oil and gas sector suffer from considerable inconsistencies. Reporting standards are voluntary or driven by private sector actors, limiting the level of detail needed for accurate monitoring and evaluation.

1.5.3. Proposed changes to reporting standards may close the gap between net zero plans and climate risk management in practice. Public disclosure of detailed emissions and stranded assets will bring into focus which transition plans are credible and which are nothing more than greenwashing.

1.6. This contribution concludes with three recommendations to strengthen the linkages between investment treaties and climate change in the context of oil and gas company net zero strategies: transparency in emissions reporting; disclosure of climate risks and stranded assets; and green conditions for reinvestment of profits into renewables.

2. Oil and gas firms view transition plans as core to long-term survival, but approaches vary considerably.

2.1. While skeptics view oil and gas net zero targets as nothing more than window dressing, firms themselves undertake climate strategies for reasons of self-preservation and protecting the bottom line:

2.1.1. *Comparative advantage*. Oil and gas firms are particularly well-suited to take on investments that can be seen as core to their primary skill sets.[7] These include offshore wind, deep geothermal, biofuels, financial services, and

[5] *European Union text proposal for the modernisation of the Energy Charter Treaty*, sent to the ECT Secretariat on 19 May 2020. See also Lukas Schaugg and Greg Muttitt, 2022, *How the Energy Charter Treaty risks undermining the outcomes of COP 26*, IISD briefing.

[6] Compared to coal producers, oil and gas producers make up two-thirds of the "major emitters"—a list of 90 producers which recent analysis suggests make up 63% of the global carbon dioxide and methane emitted since the industrial revolution. See Richard Heede, 2014, "Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010," *Climatic Change*.

[7] Jessica Green, Jennifer Hadden, Thomas Hale, and Paasha Mahdavi, 2022, "Transition, Hedge, or Resist? Understanding Political and Economic Behavior toward Decarbonization in the Oil and Gas Industry." *Review of International Political Economy*.

carbon capture and storage. For example, two oil majors led the pack in the record $4.37 billion auction for offshore wind development rights in the Mid-Atlantic United States.[8] Companies like TotalEnergies see outsized gains in deepwater offshore wind development—which rely on platform technologies and engineering solutions pioneered by European oil and gas firms—and perceive their comparative advantage strong enough to be among "the world's top 5 renewable energy companies."[9]

2.1.2. *Capturing carbon credits*. Firms see a financial opportunity to dominate CDR given decades of experience in enhanced oil recovery techniques that have paved the way for current approaches to carbon sequestration. Among the largest known carbon storage assets are formations of depleted oil reservoirs, estimated to hold hundreds of billions of tons of carbon dioxide.[10] Firms like ExxonMobil and Occidental pursue carbon capture and sequestration at the source of emissions as well as direct air capture (DAC), which takes diffuse carbon dioxide and stores it in underground reservoirs. While investment in these technologies is ultimately directed at prolonging existing oil and gas production assets, the financial model also relies on government subsidies and tax credits for carbon sequestration such as the United States' Section 45Q payments or the European Commission's proposed Sustainable Carbon Cycles regulatory framework.[11]

2.1.3. *Shareholder pressure*. Oil and gas firms have also pursued climate transition strategies in direct response to shareholder and activist pressure.[12] In recent years, climate activists and green investors scored numerous high-profile victories, including a Dutch court ordering Shell to reduce its carbon emissions by 45% by 2030 and an activist hedge fund winning three board seats at ExxonMobil.[13] These victories have pushed firms to be more active in creating value from the energy transition, with some investors rewarding firms that adopt more aggressive climate-forward strategies.[14] It remains to be seen whether this pressure will persist in a high-oil-price market to convert excess profits into renewable investments or instead to justify staying the course in upstream oil and gas.[15]

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[8] Amanda Battersby, "Shell and TotalEnergies among the winners in watershed US offshore wind lease sale," *Upstream Energy Explored*, 22 February 2022.
[9] TotalEnergies, "TotalEnergies Increases Offshore Wind Investments" 14 June 2021.
[10] David Blackmon, "How Oxy's New Carbon Venture Could Become A True Game-Changer," *Forbes*, 11 April 2021.
[11] European Commission, "Sustainable carbon cycles."
[12] Joyeeta Gupta, Arthur Rempel and Hebe Verrest, 2020, "Access and Allocation: The Role of Large Shareholders and Investors in Leaving Fossil Fuels Underground," *International Environmental Agreements*; Naghmeh Nasiritousi, 2017, "Fossil fuel emitters and climate change: unpacking the governance activities of large oil and gas companies." *Environmental Politics*.
[13] Across 1993-2019, 43% of shareholder resolutions related to climate change were tabled in the last 5 years. See Green et al. *supra* 9.
[14] Tom Wilson, "Oil majors under pressure as activists circle," *Financial Times*, 19 December 2021.
[15] Axel Dalman, Mike Coffin, and Mark Fulton, 2022, *Managing Peak Oil: Why rising oil prices could create a stranded asset trap as the energy transition accelerates*, Carbon Tracker.

2.1.4. *Leadership gains*. Voluntary action by oil and gas firms in the form of net zero targets—alongside select disclosure of emissions—could lead to investments in technologies that allow the industry to set the narrative for decarbonization. The voluntary Oil and Gas Climate Initiative, for example, aims to "progress to net zero emissions in the second half of this century" by investing research and development funds in CDR. Scholars view such structural changes as an indicator for greater leadership in climate governance and enhance firms' capacity to undertake meaningful action in the future.[16]

2.1.5. *Sidelining coal.* Pro-climate action by oil and gas firms can also be a tool in gaining market share in a carbon-constrained world relative to coal. Oil majors have backed carbon pricing to maintain a seat at the table to more readily influence outcomes and, perhaps more importantly, to ensure the continued competitiveness of gas relative to coal. As one study notes, carbon pricing "supports the realization of a 'gray' transition toward a lower-carbon future, in which Big Gas can expand its market shares at the expense of coal and become a major bridge fuel next to renewables."[17]

2.2. But there is little uniformity across the sector in pursuing these climate strategies.[18] Many are investing heavily in CDR to maintain the continued extraction of petroleum. Others are shifting investments from oil to gas given its perceived lower emissions footprint. Even the "greenest" of firms are not fully transitioning, but rather are hedging their bets as a means to mitigate risk through diversification rather than moving toward wholesale decarbonization.[19]

2.3. For example, Equinor leads the oil majors in renewable and low-carbon investments as well as reducing the carbon intensity of its operations.[20] The company vies to hit a clean energy target of 50% gross annual capex by 2030, yet in 2020 renewables amounted to only 4% of gross capex, with the remainder targeted towards oil, gas, and petrochemicals.[21] Equinor calls this a "disciplined capital allocation" strategy for the future: stable investments in petroleum combined with high-value growth in renewables, all with the "flexibility to optimize the project portfolio."[22]

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[16] Matthew Bach, 2019, "The oil and gas sector: from climate laggard to climate leader?" *Environmental Politics*; Aseem Prakash, 2000, *Greening the Firm: The Politics of Corporate Environmentalism*, Cambridge University Press.
[17] Vormedal, Irja, Lars H. Gulbrandsen, and Jon Birger Skjærseth. 2020. "Big Oil and Climate Regulation: Business as Usual or a Changing Business?" *Global Environmental Politics*, p.144.
[18] Simon Dietz, Dan Gardiner, Valentin Jahn and Jolien Noels, 2020, *Carbon Performance of European Integrated Oil and Gas Companies*, Transition Pathway Initiative; Ben Caldecott, Ingrid Holmes, Dileimy Orozco, Shane Tomlinson and Lucas Kruitwagen, 2018, *Crude Awakening: Making Oil Major Business Models Climate-Compatible*, E3G Report. See also InfluenceMap, 2019, *Big Oil's Real Agenda on Climate Change*.
[19] Green et al. *supra* 9.
[20] This assessment is based on the top 10 oil majors by market capitalization across 2004-2019: BP, Chevron, ConocoPhillips, ENI, Equinor, ExxonMobil, Occidental, Repsol, Shell, and TotalEnergies. See Green et al. *supra* 9.
[21] Equinor, "Presenting strategy to accelerate Equinor's transition," 15 June 2021.
[22] Equinor, *Capital Markets Update 2022*.

2.4. This underlines a key problem facing both the industry and its investors: how credible are net zero and other climate targets when even the greenest oil major is far behind on hitting even relatively modest milestones?

3. Existing standards make it difficult to assess the credibility of net zero and ESG targets.

3.1. What counts as ESG in the oil and gas sector? Scholars and practitioners alike have struggled to find consistent ratings guidelines that can answer this question across a variety of firms in different contexts.[23] Indeed, there is minimal overlap in ESG measures across major ratings agencies and between ESG ratings and management of greenhouse gas emissions or climate risk management.[24]

3.2. Despite little uniformity in how investors can assess the credibility of transition plans—and ESG in general—there is growing consensus on minimal criteria that can be applied to make this assessment. The academic literature on oil and gas transition plans[25] identifies four key areas:

3.2.1. Do renewables investments constitute an increasing and meaningful percentage of capital expenditures?

3.2.2. Is there a timeline to ramp down fossil fuel production?

3.2.3. Does the firm disclose detailed information on its carbon, methane, and other greenhouse gas emissions?

3.2.4. What are the firm's plans in reducing operational emissions? Is it investing in methane monitoring, remediating abandoned wells, capturing and sequestering carbon, or is it switching away from hydrocarbons entirely?

3.3. Criteria 3.2.1, 3.2.2, and 3.2.4 are all readily disclosed by firms in annual reports, investment calls, press releases, and other public-facing documents. By contrast, reporting on criterion 3.2.3 has remained elusive. There is a lack of consistency in standards over how firms estimate their emissions, broken down into the three conventional categories of emissions from company operations (scope 1); indirect sources, such as purchased electricity (scope 2); and consumption (scope 3).

[23] Sebastian Meyer and Karim Hende, 2021, "Searching for 'Greenium'," IHSMarkit; Julian F. Kölbel et al., "Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact," *Organization & Environment.*
[24] See, e.g., R. Boffo, C. Marshall, and R. Patalano, 2020, "ESG Investing: Environmental Pillar Scoring and Reporting," OECD Paris; Florian Berg, Julian F. Koelbel, Anna Pavlova, and Roberto Rigobon, "ESG Confusion and Stock Returns: Tackling the Problem of Noise."
[25] Green et al. *supra* 9; Vormedal et al. *supra* 19; Dietz et al. *supra* 20.

4. Proposed changes to disclosure rules will strengthen oil and gas climate commitments.

4.1. This lack of consistency in standards has led to increased efforts by governments to mandate disclosure of certain ESG targets for publicly-listed firms.[26] For the fossil fuel sector, the most important of these are emissions reporting and climate risk assessments.

4.2. The US SEC has recently proposed both: requirements to disclose climate risks and consistent standards for reporting emissions by all listed firms, including scope 1 and 2 emissions with lighter requirements for reporting scope 3 emissions.[27] The UK and the European Commission have adopted or proposed similar standards, in line with Taskforce on Climate-related Financial Disclosures (TCFD) recommendations.[28]

4.3. These proposed regulations would get at the crux of the net zero dilemma. At present, companies can unveil ambitious plans to drastically cut their emissions footprints decades from now. But share prices in the distant future are the only accountability firms currently face. Existing laws, such as the US Exchange Act of 1934, deem net zero plans as "forward looking statements" that are not bound by the same strict reporting standards as cost and revenue disclosures.[29] By contrast, newly proposed rules aim to regulate any firm's net zero plan as "a material statement about the future of its business" akin to disclosure of profits and losses.[30]

4.4. Proposed net zero targets paired with emissions disclosures in the oil and gas sector have in part been motivated in anticipation of such regulations.[31] However, voluntary disclosures are lacking in detail about scope 3 emissions and climate-vulnerable assets, posing a "hidden risk" for investors.[32] This again points to the need for a holistic approach to ensure full disclosure of the sector's climate risks.

5. Incorporating climate provisions in the investment treaty regime will accelerate oil and gas transition plans.

5.1. Investment treaties have the potential to play a significant role in motivating and bolstering confidence in climate targets by fossil fuel firms. It is clear in general that there are considerable linkages between the investment treaty regime and climate

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[26] "US climate rules are good for business," *Financial Times*, 23 March 2022.
[27] US Securities and Exchange Commission, "Enhancement and Standardization of Climate-Related Disclosures."
[28] See "UK to enshrine mandatory climate disclosures for largest companies in law," 29 October 2021; European Commission, *Proposal for a Corporate Sustainability Reporting Directive (CSRD)*, 21 April 2021.
[29] Pub. L. 73-291, Sec. 18 (a) and Sec. 21 (e). See also Paasha Mahdavi, Jessica Green, Jennifer Hadden, and Thomas Hale, 2022, "Using Earnings Calls to Understand the Political Behavior of Major Polluters," *Global Environmental Politics.*
[30] Robinson Meyer, "American Companies Can't Sugarcoat Their Carbon Pollution Anymore," *The Atlantic*, 23 March 2022.
[31] Simon Dietz, Dan Gardiner, Valentin Jahn, and Jolien Noels, 2021, "How ambitious are oil and gas companies' climate goals?" Science. See also Green et al. *supra* 9.
[32] Alexandra Thornton, 2021, "Why Companies Should Be Required To Disclose Their Scope 3 Emissions," Center for American Progress.

change.[33] The above discussion suggests three specific proposals that will strengthen these linkages in the context of oil and gas company net zero and other climate strategies:

5.1.1. ***Transparency in emissions reporting***. Just as the OECD has proposed transparency in investor claim resolution,[34] investment treaties should adopt high standards for the reporting of detailed data on emissions resulting from investments in the fossil fuel sector. This includes not only operational (scope 1) and indirect (scope 2) emissions but also consumption-based (scope 3) emissions as well, in line with recent proposals by the SEC, the European Commission CSRD, and the broader objectives of the TCFD.

5.1.2. ***Disclosure of climate risks in oil and gas investments***. Oil and gas firms have historically internalized risk assessments of climate-vulnerable assets, such as the exposure of refineries to sea level rise and increased storm intensity.[35] Yet few report these data to their investors, let alone to the broader public. Exposure to these potentially stranded assets in the fossil fuel sector is estimated at roughly $250 billion.[36] Investment treaties should adopt disclosure standards for climate risk to publicize parties' exposure to stranded assets and climate-vulnerable investments.

5.1.3. ***Green conditions for reinvestment into renewables***. Much like financing incentives for investors to support coal ramp-down in the Global South,[37] investment treaties should adopt provisions to incentivize oil and gas firms and their financiers to reinvest profits into renewable and low-carbon solutions. This could include tax credits, fee exemptions, or low-interest loans and grants. Such provisions could further provide a market-based motivation for oil and gas firms to increase the overall share of renewables in forward capital expenditures.

5.2. By targeting disclosure standards and incentives for clean energy reinvestments, the future of the investment treaty regime holds great promise for further advancing green transitions within the oil and gas sector.

[33] Lauge Poulsen, 2021, "The Investment Treaty Regime," in *The Oxford Handbook of International Political Economy*; David Gaukrodger, "The future of investment treaties—possible directions," OECD Working Papers on International Investment 2021/03.
[34] Angel Gurría, "The growing pains of investment treaties," OECD Insights Blog, 13 October 2014.
[35] Christina Carlson, Gretchen Goldman, and Kristina Dahl, 2015, *Stormy Seas, Rising Risks: What Investors Should Know About Climate Change Impacts at Oil Refineries*, Union of Concerned Scientists.
[36] Carbon Disclosure Project, *World's biggest companies face $1 trillion in climate change risks*, 4 June 2019.
[37] Rocky Mountain Institute, Carbon Tracker, and Sierra Club, 2020, *How to retire early making accelerated coal phaseout feasible and just*.