

Tying Their Hands? How Petroleum Contract Terms May Limit Governments' Climate Policy Flexibility

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Key messages

- The transition away from fossil fuels toward renewable energy sources will have a significant impact on petroleum-producing countries, whose governments will need flexibility to adapt their petroleum sectors to new realities.
- A review of 34 publicly available contracts from 11 countries signed since the 2015 Paris Agreement demonstrates that contract language may limit governments' policy flexibility and may not adequately address climate event risks.
- Traditional clauses like stabilization, arbitration and force majeure should be reconsidered to address climate change risks and the need for climate policy action.
- The Intergovernmental Panel on Climate Change has warned that global warming will exceed 1.5 and even 2 degrees Celsius without deep emissions cuts, while the International Energy Agency has proposed a stop to new development approvals for oil and gas fields as a pathway to net zero emissions. Continued petroleum development therefore comes with many risks for petroleum producers.
- Those governments that nevertheless choose to pursue new petroleum projects to fulfil national development goals should assess and adapt their petroleum sector contracts and legal framework to address energy transition and climate change risks.

CONTEXT

The pathway to net-zero requires concerted action from governments and companies to address climate change; yet for petroleum producing countries, traditional petroleum contract terms may stand in the way.

The pathway to net-zero emissions will be a fraught one for many petroleum-dependent countries. Radical policy action is necessary to decarbonize the global economy, with significant economic implications for countries dependent on oil and gas revenues.¹ The Intergovernmental Panel on Climate Change has warned that global warming will exceed 1.5 and even 2 degrees Celsius without deep emissions cuts. At the same time, the International Energy Agency has proposed a freeze on

¹ See Mike Coffin, Axel Dalman and Andrew Grant. *Beyond Petrostates: The burning need to cut oil dependence in the energy transition* (Carbon Tracker, February 2021), available at www.carbontracker.org/reports/petrostates-energy-transition-report, which predicts that 40 countries with fiscal dependence on the petroleum sector could see a reduction of \$9 trillion in government revenues under a low-carbon scenario over the next two decades, when compared with business-as-usual expectations of continued growth in petroleum demand and firm long-term prices.

new development approvals for oil and gas fields from 2021 if we are to limit the global temperature rise to 1.5 degrees Celsius.^{2,3}

These tectonic shifts give current and emerging petroleum producers much to think about. Some experts argue that equity considerations demand that developed countries who emit high levels of greenhouse gases and have already benefited from extracting their fossil fuel reserves should take the lead in winding down production.⁴ For their part, most petroleum-rich developing countries are focused on competing for dwindling investment and maximizing the economic benefits of their resources. This even as some oil majors are reducing investment in petroleum production and pivoting to lower cost oil and gas production or renewable energy projects.^{5,6}

But current and emerging producers may want to go beyond merely reacting to foreign governments' or international oil companies' evolving climate policies – they may seek to proactively decarbonize and build climate resilience in their own petroleum sectors. Indeed, producer country governments may face pressure at home to do so: According to a recent report by the United Nations Environment Programme, there has been a rapid increase in climate litigation around the world, challenging governments to set new climate goals, issue more stringent climate regulations or even keep fossil fuels in the ground.⁷ For example, Guyana's constitutional court recently agreed to hear a petition from local environmentalists to stop ExxonMobil's offshore oil production.⁸

Countries have increasingly begun to address fossil fuel production in their nationally determined contributions (NDCs) and long-term low emissions development strategies under the Paris Agreement.⁹ A small number of countries have included measures to constrain or disincentivize production, including bans on new exploration or commitments to phase out fossil fuel production subsidies. Others have included measures to reduce emissions from production or have mentioned plans to diversify the economy away from oil revenue dependence.¹⁰ Even where NDCs do not directly address petroleum production, commitments related to other sectors may also have implications for upstream petroleum sector policy. For example, commitments to reduce the use of fossil fuels in the power

- 2 Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, In Press), available at www.ipcc.ch/report/ar6/wg1/#FullReport.
- 3 International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (May 2021), available at www.iea.org/reports/net-zero-by-2050.
- 4 See, e.g., Greg Muttitt and Sivan Kartha, "Equity, climate justice and fossil fuel extraction: principles for a managed phase out," *Climate Policy*, 20:8 (2020): 1024-1042, www.tandfonline.com/doi/full/10.1080/14693062.2020.1763900.
- 5 See, e.g., Moses Mozart Dzawu, Ekow Dontoh, and Yinka Ibukun, "Ghana Seek to Borrow \$1.7 billion to Help Acquire Energy Assets," Bloomberg, 2 August 2021, www.bloomberg.com/news/articles/2021-08-02/ghana-seeks-to-borrow-1-7-billion-to-help-acquire-energy-assets.
- 6 Jonas Nyabor and Nicholas Norbrook, "Exxon's exit from Ghana may be first sign of majors quitting Africa," *The Africa Report*, 17 June 2021, www.theafricareport.com/98380/excons-exit-from-ghana-may-be-first-sign-of-majors-quitting-africa/. See also, Daniel Boffey, "Court orders Royal Dutch Shell to cut carbon emissions by 45% by 2030," *The Guardian*, 26 May 2021, www.theguardian.com/business/2021/may/26/court-orders-royal-dutch-shell-to-cut-carbon-emissions-by-45-by-2030.
- 7 United Nations Environment Programme, *Global Climate Litigation Report: 2020 Status Review* (2020), available at wedocs.unep.org/bitstream/handle/20.500.11822/34818/GCLR.pdf.
- 8 Canute James, "Guyana climate activists target ExxonMobil oil project", Argus, 2 June 2021, www.argusmedia.com/en/news/2221069-guyana-climate-activists-target-exxonmobil-oil-project.
- 9 See unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement.
- 10 See Natalie Jones, Miquel Muñoz Cabré, Georgia Piggot, and Michael Lazarus. *SEI Working Paper: Tapping the potential of NDCs and LT-LEDS to address fossil fuel production* (Stockholm Environment Institute, 2021), available at www.sei.org/publications/ndcs-leds-fossil-fuel-production.

sector may be linked to government decisions on whether to impose domestic supply obligations on companies.¹¹

In this context, governments need flexibility to make regulatory changes to their petroleum sectors and environmental commitments. Yet the long-term contracts governments sign with companies for petroleum exploration and production may significantly limit this flexibility for decades. Various experts have pointed out that *stabilization*, *force majeure* and *arbitration* clauses may constrain governments that seek to apply new regulations to existing petroleum projects, or may not fairly allocate responsibility to companies to incorporate climate resilience into their project plans and operations.¹²

Given the adoption of the Paris Agreement in 2015, from 2016 onwards we might expect that producer countries have been considering policies to adapt their petroleum sectors to climate change and its potential impact on the oil and gas market. This adaptation might include strategies to reduce emissions and build climate resilience through requirements on oil and gas companies to improve energy efficiency, reduce or eliminate non-routine flaring and fugitive emissions, increase use of renewable energy in their projects, or to implement carbon capture, utilization and storage or carbon offsetting.

The question is: Have producer countries begun to modify petroleum contract terms in response to climate change and energy transition risks?

To explore this, I reviewed 34 contracts and model contracts from 11 countries. (See appendix for list of contracts.) These contracts represent all English-language petroleum contracts on ResourceContracts.org signed or issued since 2016 and uploaded as of June 2021.¹³ This review focused on stabilization, arbitration, and force majeure clauses, which may limit governments' policymaking flexibility or may not adequately allocate risk or costs of climate impacts.

The contracts reviewed do not yet indicate a shift in these clauses to respond to climate change risks and the need for government flexibility to take climate policy action.

11 Domestic supply obligations or domestic market obligations are requirements dictate that petroleum companies must sell a portion of the extracted petroleum in the host country.

12 See, e.g., Motoko Aizawa and Howard Mann. *Environmental, Social and Economic Development Provisions in Investment Contracts: A Resource for Government Lawyers in the Commonwealth* (Commonwealth Secretariat, 2021), 60-65, 98-114, available at thecommonwealth.org/sites/default/files/inline/Development%20Provisions%20in%20Investment%20Contracts_UPDF.pdf; Pedro van Meurs. *World Petroleum Industry Perspectives* (last updated 24 June 2021), app.vanmeursenergy.com/documents/free/80001007.pdf (a presentation available on Dr. van Meurs' website that is updated from time to time).

13 ResourceContracts.org is the largest online repository of publicly available oil, gas and mining contracts containing over 2,000 extractives contracts and associated documents (www.resourcecontracts.org). Additional contracts are uploaded as they are disclosed. As of reading, additional contracts signed or issued since 2016 may have been added to the repository.

CONTRACT REVIEW

a. Stabilization clauses

All reviewed contracts contained stabilization clauses and fewer than half excluded changes in environmental laws from stabilization; most contracts may therefore restrict application of new climate regulations, though the degree of potential restriction varies.

Stabilization clauses are contractual provisions that provide investors varying degrees of protection from changes in law. They may take the form of “freezing” clauses, providing that changes in some or all laws made after the deal is signed will not be applicable to the project. Limited freezing clauses may stabilize only specific fiscal terms like income tax or royalties and/or may provide stability only for a specific period. Stabilization clauses may also take the form of “economic equilibrium” clauses stipulating that changes in law having a significant negative economic impact on the company will require compensation by the state to restore the economic balance between the parties. “Hybrid” clauses combine elements from freezing and economic equilibrium clauses and provide that parties may agree to restore the economic balance through an exemption to the changes in law or through other forms of compensation.

Oil and gas projects require large upfront expenditures, have long lifespans (20 – 30 years or more), and are location-specific; once a project has been developed, it is difficult to relocate. It is therefore not surprising that companies may pressure governments to provide assurances against changes in law. Such changes are almost certain to occur over a decades-long project and might alter its profitability. But stabilization clauses can significantly limit the ability of governments to advance legitimate policy goals in a rapidly changing world.

Due to the marked disadvantage these clauses pose to governments, the Organization for Economic Co-operation and Development and the United Nations, among others, have discouraged their use. They have cautioned that stabilization clauses, if they are used at all, should be limited to specific fiscal terms for a limited duration and should exclude bona fide and non-discriminatory environmental, labor, health and safety, human rights, or other similar rules.¹⁴ The International Monetary Fund has also advised that stabilization clauses may be unnecessary for attracting investment.¹⁵

Despite these warnings, all contracts reviewed here included some form of stabilization clause, and fewer than half (13 out of 34) of these explicitly excluded environmental laws. In addition, one contract somewhat ambiguously stated that the company shall not be subject to any laws “contrary to or inconsistent with” the provisions of the contract, but otherwise shall be subject to “all laws. . . in force,” leaving some uncertainty as to whether new environmental obligations. . . could be considered “inconsistent with” the contract.¹⁶

14 See Organisation for Economic Co-operation and Development, *Guiding Principles for Durable Extractive Contracts* (2019), 14, available at www.oecd.org/dev/Guiding_Principles_for_durable_extractive_contracts.pdf; United Nations Human Rights Office of the High Commissioner, *Principles for Responsible Contracts: Integrating the Management of Human Rights Risks into State-Investor Contract Negotiations-Guidance for Negotiators* (2015), 15-18, available at www.ohchr.org/Documents/Publications/Principles_ResponsibleContracts_HR_PUB_15_1_EN.pdf; and Natural Resource Governance Institute, *The Natural Resource Charter, 2nd edition* (2014), 37, www.resourcegovernance.org/analysis-tools/publications/natural-resource-charter-2nd-ed.

15 International Monetary Fund, *Fiscal Regimes for Extractive Industries: Design and Implementation* (2012), 35, available at www.imf.org/external/np/pp/eng/2012/081512.pdf.

16 Government of the Syrian Arab Republic, Block 1, 2020, www.resourcecontracts-nrgi.s3.us-west-2.amazonaws.com/5151/5151-kapital-limited-liability-company-block-1-exploration-license-2020.pdf.

The vast majority of the stabilization clauses (27 out of 34) were economic equilibrium clauses. Only seven were limited freezing clauses that fixed certain legal provisions for the duration of the contract.

All but one of these limited freezing clauses explicitly excluded environmental laws from stabilization, while only seven of the 27 economic equilibrium clauses did so.

The economic equilibrium clauses included in the contracts do not block the application of new environmental requirements. However, they may shift the economic burden of new climate-responsive regulations to governments if they do not explicitly exclude environmental regulations from stabilization.

Even those stabilization clauses that excluded environmental laws may limit the introduction of carbon taxes as a means of incentivizing emissions reductions.¹⁷ Several of the contracts that included a carve-out for environmental laws also stipulated that the company shall not be subject to any tax other than those specified in the contract, or protected it from changes in law pertaining to “taxes”.¹⁸

Almost all the stabilization clauses provided stabilization for the duration of the contract, potentially protecting the company against changes to laws for two or three decades.

b. Arbitration clauses

All but one of the reviewed contracts included dispute resolution via arbitration; combined with stabilization, such clauses may discourage governments from implementing new climate regulations in the petroleum sector.

International arbitration clauses are frequently included in investor-state contracts as the mechanism for resolving disputes arising out of the contract. However, some experts have discouraged their use, pointing out that arbitration presents many disadvantages to host countries and their citizens.¹⁹

Some experts have also pointed out that governments face increased risks when investors have several options for pursuing arbitration, including through domestic law, contracts, and investment treaties. Where multiple options for arbitration are open to the investor, the government has multiple chances to lose. If arbitration clauses are included at all, some experts recommend that contracts include an express waiver of any other arbitration rights related to the government measure in dispute.²⁰

All but one of the reviewed contracts provided for dispute resolution via arbitration and 27 of the 34 contracts provided for international arbitration.

17 See www.carbonpricingdashboard.worldbank.org/map_data for information on regional, national and subnational carbon pricing initiatives.

18 None of the countries included in the review has implemented a carbon tax to date. Experts like Pedro van Meurs have also noted that clauses that provide that a state-owned enterprise or other government entity shall pay taxes on behalf of the company will also blunt the effect of carbon taxes on companies' behavior. Eleven of the contracts included such provisions.

19 Cited disadvantages include undermining the role of domestic courts and state sovereignty, lack of transparency in arbitration proceedings and the high costs to governments of arbitration proceedings and arbitration awards, should the government lose. See, e.g., Lise Johnson, Jesse Coleman, Brooke Guven and Lisa E. Sachs. *Costs and Benefits of Investment Treaties: Practical Considerations for States* (Columbia Center on Sustainable Investment, 2018), available at www.scholarship.law.columbia.edu/sustainable_investment_staffpubs/81.

20 Aizawa and Mann, *Environmental, Social and Economic Development Provisions in Investment Contracts*, 104-113.

Only five contracts from two countries explicitly restricted the option to pursue arbitration via multiple routes. For example, one country's contracts specified that "no other arbitration tribunal under any other procedure, agreement or international treaty shall have jurisdiction over such disputes between the [p]arties."²¹ By contrast, another country's contracts explicitly assured investors of multiple recourses, specifying that "nothing in this [contract] shall limit the rights of the [company] pursuant to... existing laws of the [country] on protection of foreign investments, which rights shall apply *in addition* to any other rights the [company] may have under this [contract] notwithstanding any other law, both current and future in the [country] [emphasis added]."²²

Combined with stabilization clauses, arbitration clauses could have a chilling effect on government regulation to reduce emissions in existing petroleum projects. The mere cost of defending an arbitration suit may deter some governments from applying new climate regulations to existing projects.

c. Force majeure clauses

Despite changing weather patterns, all but one of the reviewed contracts included extreme weather as a basis for force majeure excusing company non-performance without an explicit requirement that such events be unforeseeable; some included government regulation as a basis for a company to declare force majeure, potentially adding another layer of deterrence against issuing new climate regulations.

Force majeure clauses generally excuse a party from contractual obligations due to unforeseen circumstances beyond the party's control that hinder or prevent the party from performing those obligations. These clauses are often considered standard "boilerplate" provisions, but have received increased attention since the onset of the coronavirus pandemic when companies sought to invoke the clause to pause their operations or other contractual obligations.²³ These clauses often include a standard "laundry list" of events that will constitute force majeure, including extreme weather events like storms, lightning or floods, and sometimes specify that the event must be unforeseeable. Clauses may also include a requirement to mitigate the effects of the force majeure event. Depending on the stage of the project when the force majeure event occurs and the duration of the force majeure event, invoking force majeure might push back the start of production and delay government revenues, or may allow the company to terminate the agreement.

Changing weather patterns triggered by the effects of climate change now raise the question of what constitutes unusually severe or unexpected weather. There is growing uncertainty as to when extreme weather events should be deemed unforeseeable, in light of the increasing frequency of such events, and there is some

- 21 See, e.g., São Tomé and Príncipe, Block 10, 2018, www.resourcecontracts-nrgi.s3-us-west-2.amazonaws.com/4360/4360-bp-exploration-stp-limited-kosmos-energy-sao-tome-e-principe-block-10-psa-2018.pdf
- 22 See, e.g., Azerbaijan, Ashrafi-Dan Ulduzu-Aypara Area, 2018, www.resourcecontracts-nrgi.s3-us-west-2.amazonaws.com/5160/5160-statoil-azerbaijan-ashrafi-dan-ulduzu-aypara-bv-socar-oil-affiliate-ashrafi-dan-ulduzu-aypara-area-psa-2018.pdf.
- 23 See Nicola Woodroffe, "Force Majeure and Other Coronavirus-Era Legal Challenges: Lessons for Resource-Dependent Countries from the Glencore-Zambia Dispute," Natural Resource Governance Institute, 13 May 2020, www.resourcegovernance.org/blog/force-majeure-coronavirus-legal-challenges-resource-dependent-zambia-glencore.

U.S. legal precedent for courts applying an unforeseeability requirement to a force majeure claim, even where the contract did not include one.^{24,25}

A recently published resource from the Commonwealth Secretariat has explicitly advised that climate change events are “no longer unforeseeable” and that investment contracts should allocate responsibility for any foreseeable climate-related weather events to the company, including through requirements to embed climate resilience in project design, construction and operations, and requirements to obtain insurance to cover climate events, if available.²⁶

Notably, none of the force majeure clauses specifically required companies to prepare for climate change events. Instead, 33 of the 34 contracts routinely included extreme weather events such as storms, lightning or floods as a basis for force majeure claims, with only 12 of them explicitly requiring that the event be unforeseeable. Only one contract required precautionary measures to avoid force majeure events, rather than just after-the-fact mitigation, stipulating that “if reasonably foreseeable [the company] shall have prior thereto taken all reasonably appropriate precautions. . . .”²⁷ Such precautions might include ongoing climate change impact risk assessment and enhancements to project infrastructure and operations.²⁸ However, most of the contracts (23) required insurance coverage of the kind that is “customary” in the petroleum industry, which might include coverage of climate events as such insurance becomes more prevalent.

It is worth noting that nine contracts included government regulation or “action” as a basis for force majeure, with two of them specifying that said government action must “prevent” the performance of an obligation. However, three contracts merely required that the law, treaties, regulations or other rules “substantially hinder[] or impede[]” or “substantially impair[] or threaten[] [the company’s rights” under the contract. Such clauses potentially provide similar protection against changes in law as a stabilization clause (which all three contracts also included). One contract only required that the law or regulation “lead to the inability of the company to meet its obligations in a timely manner.” Responsibility for any resulting cost was then placed on the government by providing that “[g]overnment shall incur no responsibility...for any damages, restrictions, or loss” as a consequence of the force majeure event “except a force majeure caused by any order, regulation or direction of the government whether published in the form of a law or otherwise.”²⁹ Governments should be wary of including such general and unqualified bases for force majeure in contracts.

24 Kirkland & Ellis, “COVID-19 Offers Force Majeure Lessons for Climate Planning”, 14 July 2020, www.kirkland.com/publications/article/2020/07/covid19-force-majeure-lessons-climate-planning.

25 Jocelyn L. Knoll and Shannon L. Bjorklund, “Force Majeure and Climate Change: What is the New Normal?”, *Journal of the American College of Construction Lawyers* Vol 8, Issue 1 (February 2014), 18-21, available at www.dorsey.com/-/media/files/newsresources/publications/2017/force-majeure-and-climate-change-what-is-the-new-normal.pdf.

26 Aizawa and Mann, *Environmental, Social and Economic Development Provisions in Investment Contracts*, 63.

27 Ghana, Cape Three Points Block 4, 2016, www.resourcecontracts-nrgi.s3-us-west-2.amazonaws.com/2767/2767-eni-ghana-exploration-production-limited-vitol-upstream-tano-limited-woodfields-upstream-limited-ghana-national-petroleum-corporation-explorco-cape-th....pdf.

28 See Theodoros Katopodis and Athanasios Sfetos, “A Review of Climate Change Impacts to Oil Sector Critical Services and Suggested Recommendations for Industry Uptake,” *Infrastructures* 4, no. 4 (2019): 74. www.doi.org/10.3390/infrastructures4040074.

29 Government of the Syrian Arab Republic, Block 1, 2020, www.resourcecontracts-nrgi.s3-us-west-2.amazonaws.com/5151/5151-kapital-limited-liability-company-block-1-exploration-license-2020.pdf.

CONCLUSION

A long-term transition away from fossil fuel production creates many uncertainties for petroleum-producing countries. Developing country petroleum producers may want to maximize the benefits of their petroleum resources while they still can. But producer countries may also want to proactively improve their resilience to climate risks and reduce emissions in their petroleum sector; indeed, some are already committing to doing so.³⁰

A limited review of publicly available petroleum contracts signed since the adoption of the Paris Agreement indicates that governments are still including stabilization and arbitration clauses that may hinder them from applying future climate-related regulations to their petroleum sector. Force majeure clauses still routinely include extreme weather events as a basis for force majeure without explicitly requiring companies to take precautionary measures against the corresponding risks.

This analysis flags potential contract interpretations that could be unfavorable to governments seeking to adapt their petroleum sectors to climate change. These are not the only possible interpretations of the cited clauses. A government lawyer may still rightly argue that they should not be interpreted as definitive barriers to government action to protect the environment or address climate change or energy transition risks.

Nevertheless, it is important to ensure that the petroleum sector's legal framework does not constrain government action and requires companies to incorporate climate resilience measures in their project plans and operations.

To improve their resilience to future risks, governments might consider the following recommendations:

1. Adapt future petroleum contracts to address climate change risks.

The International Energy Agency has said that any new oil and gas projects that have not yet been approved are incompatible with achieving the global climate goals.³¹ Embarking on new exploration and production therefore carries growing risks for producer countries. Those countries that nevertheless decide to pursue additional petroleum projects to fulfill their national development goals should adapt their contracting processes to the new risks. At a minimum producer country governments should:

- Avoid stabilization clauses if possible. If such clauses are granted to companies, they should explicitly state that stabilization does not apply to any measures to address climate change, *including any carbon taxes or other new taxes or charges*.
- Consider limiting recourse to international arbitration (for example, by limiting the scope of issues subject to arbitration) or restricting companies' options to pursue arbitration via multiple routes. This will reduce the risk of costly arbitration should governments seek to implement new climate regulations to existing projects.
- Include requirements to incorporate climate change impact risks into project design and operations. This might include defining "unforeseeability" or "extreme weather" for the purposes of claiming force majeure.³² Beware of including broad

30 See Jones, Cabré, Piggot, and Lazarus, *SEI Working Paper: Tapping the potential of NDCs and LT-LEDS to address fossil fuel production*.

31 International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector*.

32 See Jocelyn L. Knoll and Shannon L. Bjorklund, "Force Majeure and Climate Change: What is the New Normal?"

references to government regulation as a basis for force majeure to avoid additional contractual impediments to future climate-related government regulation.

Other kinds of provisions such as the fiscal terms³³ or rules on asset transfers, among others, may also require adaptation to address climate risks.

It is in the interest of both petroleum producer governments and oil and gas companies to also consider more fundamental changes to traditional contracting practices, and experts are already developing new ideas on petroleum contracting for the future. For example, a recent paper explores how production-sharing contracts can be modified to include a “renewable contribution parameter” that defines what portion of the company’s profit oil should be re-invested in the renewable energy sector in the host country.³⁴

Governments would be well advised to keep abreast of these kinds of innovations to consider what changes might be appropriate for their own context. Developing country petroleum producers may want to share lessons learned and coordinate with one another on creating new standards for petroleum contracting.³⁵ Publication of petroleum contracts is even more critical in this changing context, as it will allow governments, companies and citizens to understand how upstream petroleum contracts are evolving and enable informed discussion of petroleum sector policy reforms in light of energy transition considerations.

2. Review the legal framework governing the petroleum sector for climate change and energy transition risks and identify needed reforms.

Beyond the contractual provisions addressed in this note, other contractual, legal or institutional arrangements in the petroleum sector may obstruct governments’ strategies for navigating the energy transition and combating climate change.

For example, domestic supply obligations—often accompanied by take-or-pay commitments—may be costly to governments and impede transition towards a higher share of renewable energy in a country’s energy mix, if they are not well designed.³⁶ Investment plans for state-owned national oil companies could further expose petroleum dependent economies to a decline in oil and gas prices.³⁷ International treaty obligations may also open up governments to international arbitration when seeking to implement new climate regulations.³⁸

33 See, e.g. van Meurs, World Petroleum Industry Perspectives.

34 See Majd Olleik, Hans Auer, and Rawad Nasr, “A petroleum upstream production sharing contract with investments in renewable energy: The case of Lebanon,” *Energy Policy* 154 (July 2021), www.doi.org/10.1016/j.enpol.2021.112325.

35 The New Producers Group is one such forum for collaboration and exchange among petroleum producer governments. See www.newproducersgroup.online

36 See David Manley and Thomas Scurfield, *Surplus or Shortage? The Challenge of Setting a Domestic Supply Obligation for Tanzania’s Offshore Gas* (Natural Resource Governance Institute, 2021), www.resourcegovernance.org/analysis-tools/publications/surplus-or-shortage-challenge-setting-domestic-supply-obligation.

37 See David Manley and Patrick Heller, *Risky Bet: National Oil Companies in the Energy Transition* (Natural Resource Governance Institute, 2021), www.resourcegovernance.org/analysis-tools/publications/risky-bet-national-oil-companies-energy-transition.

38 For example, the Energy Charter Treaty has been receiving a lot of media attention in recent years as companies have sued treaty member governments for over 1 billion USD over plans to ban or phase out fossil fuel projects. See Josephine Moulds, “Outrage as Italy faces multimillion pound damages to UK oil firm,” *The Guardian*, 25 July 2021, www.theguardian.com/business/2021/jul/25/outrage-as-italy-faces-multimillion-pound-damages-to-uk-oil-firm; Karl Mathiesen, Sarah Anne Aarup and Kalina Oroschakoff, “EU governments whipsawed by climate and coal lawsuits,” *Político*, 4 February 2021, www.politico.eu/article/eu-government-climate-and-coal-lawsuits; David Keating, “A Little-Known EU Investor Dispute Treaty Could Kill The Paris Climate Agreement,” *Forbes*, 5 September 2019, www.forbes.com/sites/davekeating/2019/09/05/a-little-known-eu-investor-dispute-treaty-could-kill-the-paris-climate-agreement/?sh=3ca0c6014ecf.

Governments will need to thoroughly audit their petroleum sector legal framework—including existing contracts—to identify and address climate and energy transition risks. Remedies may require new legislation and regulations, which could run afoul of stabilization clauses. Governments may therefore want to proactively reach out to operators of existing petroleum projects to discuss necessary reforms and possible amendments to contracts. Companies will also be considering the impact of new climate laws in their home countries, obligations to shareholders, and evolving market conditions, among others. In light of growing public pressure to meet climate goals, governments and companies may well find their interests aligned on pursuing climate adaptations in the petroleum sector.

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APPENDIX: REVIEWED CONTRACTS

Country	Company	Signature Year	ResourceContracts Document URL
Azerbaijan	Zenith Aran Oil Company Limited; SOCAR Oil Affiliate	2016	resourcecontracts.org/contract/ ocds-591adf-6366830637/view#/pdf
Azerbaijan	Statoil Azerbaijan Ashrafi Dan Ulduzu Aypara BV; SOCAR Oil Affiliate	2018	resourcecontracts.org/contract/ ocds-591adf-5535899866/view#/pdf
Azerbaijan	BP Exploration (Azerbaijan) Limited; SOCAR Oil Affiliate	2018	resourcecontracts.org/contract/ ocds-591adf-3963642606/view#/pdf
Egypt	IEOC Production B.V.; BP Exploration (Delta) Limited	2021	resourcecontracts.org/contract/ ocds-591adf-1816623208/view#/pdf
Egypt	BP Exploration (Delta) Limited; Tharwa Petroleum Company S.A.E.	2021	resourcecontracts.org/contract/ ocds-591adf-1961937507/view#/pdf
Egypt	Chevron Egypt Holdings C PTE. Ltd; Tharwa Petroleum S.A.E.	2021	resourcecontracts.org/contract/ ocds-591adf-2716478550/view#/pdf
Egypt	BG Delta Limited; Noble Energy Egypt II B.V.; Tharwa Petroleum Company S.A.E.	2021	resourcecontracts.org/contract/ ocds-591adf-6597289443/view#/pdf
Egypt	Chevron Egypt Holdings B PTE. Ltd.; Tharwa Petroleum Company S.A.E.	2021	resourcecontracts.org/contract/ ocds-591adf-5541913618/view#/pdf
Egypt	No Company - Model Contract	2021	resourcecontracts.org/contract/ ocds-591adf-7198231830/view#/pdf
Equatorial Guinea	Kosmos Energy Equatorial Guinea; Guinea Ecuatorial de Petroleos	2017	resourcecontracts.org/contract/ ocds-591adf-3544719155/view#/pdf
Equatorial Guinea	Kosmos Energy Equatorial Guinea; Guinea Ecuatorial de Petroleos	2017	resourcecontracts.org/contract/ ocds-591adf-0179644427/view#/pdf
Equatorial Guinea	Kosmos Energy Equatorial Guinea; Guinea Ecuatorial de Petroleos	2017	resourcecontracts.org/contract/ ocds-591adf-3883099279/view#/pdf
Equatorial Guinea	Ophir Equatorial Guinea Limited; Guinea Ecuatorial de Petroleos	2017	resourcecontracts.org/contract/ ocds-591adf-7671284346/view#/pdf
Equatorial Guinea	No Company - Model Contract	2019	resourcecontracts.org/contract/ ocds-591adf-6183523443/view#/pdf
Ghana	ENI Ghana Exploration & Production Limited; Vitol Upstream Tano Limited; Woodfields Upstream Limited; Ghana National Petroleum Corporation; Explorco	2016	resourcecontracts.org/contract/ ocds-591adf-2887938326/view#/pdf
Guyana	Esso Exploration and Production Guyana Ltd.; CNOOC Nexen Petroleum Guyana Ltd.; Hess Guyana Exploration Ltd.	2016	resourcecontracts.org/contract/ ocds-591adf-1399550295/view#/pdf
Guyana	Tullow Guyana B.V.; Eco Oil and Gas Limited	2016	resourcecontracts.org/contract/ ocds-591adf-2603001790/view#/pdf
Côte d'Ivoire	BP Exploration Operating Company Limited; Kosmos Energy Cote d'Ivoire; Petroci Holding	2017	resourcecontracts.org/contract/ ocds-591adf-1677413274/view#/pdf
Côte d'Ivoire	BP Exploration Operating Company Limited; Kosmos Energy Cote d'Ivoire; Petroci Holding	2017	resourcecontracts.org/contract/ ocds-591adf-7202085028/view#/pdf
Côte d'Ivoire	BP Exploration Operating Company Limited; Kosmos Energy Cote d'Ivoire; Petroci Holding	2017	resourcecontracts.org/contract/ ocds-591adf-0218900327/view#/pdf

Country	Company	Signature Year	ResourceContracts Document URL
Côte d'Ivoire	BP Exploration Operating Company Limited; Kosmos Energy Cote d'Ivoire; Petroci Holding	2017	resourcecontracts.org/contract/ocds-591adf-9188516395/view#/pdf
Côte d'Ivoire	BP Exploration Operating Company Limited; Kosmos Energy Cote d'Ivoire; Petroci Holding	2017	resourcecontracts.org/contract/ocds-591adf-6801345335/view#/pdf
Lebanon	Total E&P Liban SAL; Eni Lebanon BV; Novatek Lebanon SAL	2018	resourcecontracts.org/contract/ocds-591adf-2775370937/view#/pdf
Lebanon	Total E&P Liban SAL; Novatek Lebanon SAL; Eni Lebanon BV	2018	resourcecontracts.org/contract/ocds-591adf-1121032259/view#/pdf
Mauritania	Kosmos Energy Mauritania	2016	resourcecontracts.org/contract/ocds-591adf-9160512674/view#/pdf
Mozambique	Government of Mozambique; Sasol Petroleum Mozambique Exploration Limitada; Empresa Nacional de Hidrocarbonetos	2018	resourcecontracts.org/contract/ocds-591adf-4874346271/view#/pdf
Mozambique	Government of Mozambique; ExxonMobil Moçambique Exploration and Production Limitada; RN Zambezi South PTE. LTD; Empresa Nacional de Hidrocarbonetos	2018	resourcecontracts.org/contract/ocds-591adf-3738262397/view#/pdf
Mozambique	Government of Mozambique; ExxonMobil Moçambique Exploration and Production Limitada; RN Zambezi South PTE. LTD; Empresa Nacional de Hidrocarbonetos	2018	resourcecontracts.org/contract/ocds-591adf-3804443329/view#/pdf
Mozambique	Government of Mozambique; ExxonMobil Moçambique Exploration and Production Limitada; RN Angoche PTE. LTD; Empresa Nacional de Hidrocarbonetos	2018	resourcecontracts.org/contract/ocds-591adf-3871678018/view#/pdf
Mozambique	Government of Mozambique; Eni Mozambico; Sasol Petroleum Mozambique Exploration Limitada; Empresa Nacional de Hidrocarbonetos	2018	resourcecontracts.org/contract/ocds-591adf-8950306478/view#/pdf
São Tomé and Príncipe	Equator Exploration STP Block 12 Limited	2016	resourcecontracts.org/contract/ocds-591adf-8754224127/view#/pdf
São Tomé and Príncipe	BP Exploration (STP) Limited; Kosmos Energy São Tomé e Príncipe	2018	resourcecontracts.org/contract/ocds-591adf-2284629316/view#/pdf
São Tomé and Príncipe	BP Exploration (STP) Limited; Kosmos Energy São Tomé e Príncipe	2018	resourcecontracts.org/contract/ocds-591adf-3224646133/view#/pdf
Syrian Arab Republic	Kapital Limited Liability Company	2020	resourcecontracts.org/contract/ocds-591adf-0532241380/view#/pdf