



Extractive Industries
Transparency Initiative



Preparing for the energy transition: Key questions for countries dependent on oil, gas and mining

POLICY BRIEF





Contents

Data and dialogue to inform transition	4
Benefits of energy transition planning	5
Data for energy transition planning	7
Energy transition planning in action	10
1. Revenues and public finance	10
2. Future projects and opportunities	13
3. Policy-making and legislation	15
4. Climate impacts	16
Looking ahead: potential lessons for the renewable energy sector	17
Endnotes	18

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Data and dialogue to inform transition

73%

of global carbon emissions came from the energy sector in 2016¹

The energy transition is a global shift away from fossil fuels to renewable sources of energy, contributing to the wider transition to a decarbonised economy by mid-century. It is underpinned by a collective global commitment to keep global warming below 2°C in line with the Paris Agreement and nationally determined contributions (NDCs).

The global shift envisaged through the transition will require a transformation of the extractive industries and will expose producer countries to new risks and opportunities.² As global consumption of fossil fuels declines, countries that rely on revenues from petroleum and coal will have to contend with a decline in sectoral revenue. For mineral producers, the scaling of renewable energy and clean technologies will result in increased demand for commodities such as cobalt, lithium and copper, and a potential surge in investment.

Preparing for these rapid changes in demand will require data which can be used in forward-looking analysis, underpin dialogue on policy responses and inform public debate. The EITI Standard provides a framework for disclosure and stakeholder engagement as a foundation for accountability and good governance.

The EITI can support resource-rich countries in addressing the economic implications of the energy transition. Analysis of data reported through the EITI – such as fossil fuel production and transportation revenues, social expenditures and environmental impacts – can help governments and citizens forecast how their economies may be impacted in the coming decades. EITI data-driven forecasting can provide evidence for policymakers to manage risks and leverage opportunities of the energy transition.

EITI multi-stakeholder groups (MSGs) bring together governments, companies and civil society to promote debate and dialogue. They can act as a platform for disclosing data relevant to the future of the extractive sector, enabling engagement that will help inform transition pathways.

For countries producing critical minerals, the EITI can also support governments in identifying and addressing the risks and opportunities related to critical minerals production. EITI disclosures and dialogue can be a countermeasure against corruption across the mining value chain. There may also be lessons learned from transparency and accountability measures in the extractive industry for the renewable energy industry.

TERMINOLOGY

Nationally determined contributions (NDCs)

NDCs³ are targets set by governments under the United Nations Framework Convention on Climate Change (UNFCCC) mainly focusing on the reduction of national CO₂ emissions. Under the 2015 Paris Agreement, all governments, including those of EITI implementing countries, are required to incorporate climate change mitigation and adaptation commitments across all sectors, including the extractive industries.

Benefits of energy transition planning

45

EITI countries have energy transition laws and policies⁴



Benefits for governments

Planning for the energy transition will help governments link their climate change commitments to development priorities in the extractive sector and identify investment opportunities.

- By preparing for the eventual decrease in demand for fossil fuels and maximising the potential of mineral resources, governments can mitigate the risk of fluctuations in commodity prices and demand and economic shocks.
- Aligning national policies on climate change, energy and extractives will ensure common goals, strengthen coordination and avoid duplication.
- Collecting and analysing data on the domestic energy mix, fossil fuel use, and the economic contribution of fossil fuels and critical minerals will enable national and subnational governments to anticipate and plan for a smoother and more sustainable transition.
- Early engagement with citizens on policy dialogue builds trust in the way the government is planning for, and mitigating against, the potential impacts of the transition.



Benefits for citizens

Planning for the energy transition can empower communities dependent on the extractive industries to adjust to the new climate economy.

- Transparency of government policies and plans related to the energy transition can empower citizens to scrutinise assumptions about future revenues and participate in policy dialogue.
- Transparency and planning around the growth of the mining sector and contraction of the oil and gas sector can help citizens anticipate changes in employment and business opportunities.
- Reporting and analysis of current and future subnational transfers and payments from the extractive sector can help communities and local governments anticipate revenue fluctuations.



Benefits for companies

Planning for the energy transition will help companies maximise shareholder returns through better management of upside and downside investment risks.


- Transparency of government transition plans can help companies adopt context-specific net zero goals in line with national priorities.
- State-owned enterprises can strategise in consultation with stakeholders and devote resources to build technical skills to adjust to the transition.
- By disclosing information on their strategy and approach to managing risks and engaging proactively with stakeholders, companies can demonstrate their preparedness.
- Companies can strengthen their social license to operate by incorporating clean energy technologies into their operations and communicating to stakeholders on their plans and progress to contribute to a net zero economy.






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Data for energy transition planning

The impacts of the energy transition will vary significantly depending on the country and commodities produced, and there will be different pathways to achieving the transition sustainably. Data reported under the EITI Standard and the multi-stakeholder platform can underpin transition planning and public debate.

Issue	Key questions for debate and analysis	EITI Requirements
 Revenues and public finance How might extractive industry revenues be affected under different transition scenarios?		
Revenue resilience and optimisation	<ul style="list-style-type: none"> How do national assumptions on commodity prices and demand compare to global projections? Do these assumptions account for shifting demands for fossil fuels or critical minerals? Do price and demand assumptions sufficiently account for changing demand patterns? What are the implications for national spending and debt? 	Comprehensive disclosure of taxes and revenues (Requirement 4.1) Revenue management and expenditures (Requirement 5.3)
Public finance at risk	<ul style="list-style-type: none"> How much public finance is invested in the extractive industry (including assets and liabilities)? How much public finance is at risk in a rapid transition scenario? Do governance frameworks in state-owned enterprises support the energy transition and enable climate risk to be assessed? Are state-owned enterprises prepared to adapt to the transition? 	State participation (Requirement 2.6) Transactions related to state-owned enterprises (Requirement 4.5)
Subsidies	<ul style="list-style-type: none"> Are state support for oil and gas and fossil fuel subsidies transparent and accounted for? How does state support affect project viability? What is the net contribution of the extractive sector to the economy? How do subsidies affect the competitiveness of clean energy technologies? How could subsidy reform support the ability of a country to meet its nationally determined contributions (NDCs) under the Paris Agreement? 	State participation (Requirement 2.6) Quasi-fiscal expenditures (Requirement 6.2)

Issue	Key questions for debate and analysis	EITI Requirements
 Future projects, opportunities and risks How will future projects, local economy and employment opportunities be impacted by the energy transition?		
Project viability	<ul style="list-style-type: none"> • What is the cost of fossil fuel production by project? • How competitive are current and potential projects, when compared to others nationally and internationally? 	Production (Requirement 3.2) Project-level reporting (Requirement 4.7)
Carbon pricing	<ul style="list-style-type: none"> • Is there a carbon pricing regime? What is the impact of carbon pricing on revenues or commodity prices? • What are the carbon price assumptions of operating companies? • Do state-owned enterprises apply internal carbon pricing? 	Comprehensive disclosure of taxes and revenues (Requirement 4.1) Social and environmental expenditures (Requirement 6.1)
Transition away from fossil fuels	<ul style="list-style-type: none"> • Is there a plan for managing the socio-economic impacts of the transition away from fossil fuels? • How will the transition affect subnational income? • How will the transition affect employment and supply chains in the extractive industry? • Where might energy transition support green growth and jobs? 	Subnational payments (Requirement 4.6) Subnational transfers (Requirement 5.2) Contribution of the extractive sector to the economy (Requirement 6.3)

Issue	Key questions for debate and analysis	EITI Requirements
 Planning and legislation Do countries have legal and policy frameworks to support national energy transition?		
Energy transition policies	<ul style="list-style-type: none"> Does the government have a plan or policy related to critical minerals? Is the government taking measures to address associated governance challenges related to critical minerals exploration, production and exports? 	Legal framework and fiscal regime (Requirement 2.1)
Distribution of risk	<ul style="list-style-type: none"> Do legal and fiscal regimes account for transition risks? Do contracts contain “risky” clauses that may put the government at a disadvantage or delay revenues? 	Contracts (Requirement 2.4)
 Climate impacts How are countries incorporating climate change considerations in their extractive sector management?		
Emissions	<ul style="list-style-type: none"> Is project-level data on fossil fuels reserves and emissions disclosed? What is the emissions intensity of production? Are extractive sector emissions considered in plans to meet nationally determined contributions (NDCs) and/or long-term climate targets? 	Environmental impact of extractive industries (Requirement 6.4)

Energy transition planning in action

Several EITI implementing countries are going beyond the EITI Standard by incorporating energy transition considerations into their reporting, drawing on specific disclosure requirements to provide context-specific data for transition planning and dialogue.



1. Revenues and public finance

Understanding the assumptions made in revenue forecasts – both from fossil fuels and critical minerals – will be important for governments and citizens to consider the potential risks posed to public finance, and whether investment decisions related to state-owned assets and enterprises are likely to yield returns or lead to stranded assets. Governments and analysts will also need reliable data on fossil fuel subsidies to assess their impact on clean energy investment.

How EITI data can be used

EITI reporting can help address questions around revenue resilience, revenue optimisation, public finance and risks and opportunities related to the transition. Existing disclosures required by the EITI on fiscal terms governing the industry, revenues, and revenue management and expenditures can inform debate on these issues.

Combining data on project costs and revenues can help stakeholders to:

- Anticipate the impact of the transition on the economic potential of the extractive industry.
- Compare cost curves between domestic projects and similar projects abroad.
- Forecast the viability of future projects and inform investment decisions by the government.

The EITI also requires disclosures on the role of state-owned enterprises and their related investments and transactions, which can be used to consider climate risks associated with their investment decisions. It also requires disclosures on expenditures not usually included in the government budget, such as subsidies.



Key question

How will current and future revenues from oil, gas and minerals be impacted by the energy transition?

EITI Requirements

2.6 State participation

4.1 Comprehensive revenue and tax disclosures

4.5 Transactions related to state-owned enterprises

5.3 Revenue management and expenditures

6.2 Quasi-fiscal expenditures, including fossil fuel subsidies

CASE STUDY

Iraq**Forward-looking reporting and forecasting**

Iraq has almost 10% of the world's proven oil reserves (143 billion barrels) and 2% of global natural gas reserves. The federal government controls the industry in Baghdad-administered Iraq, with the state-owned oil marketing company SOMO selling crude to 40 accredited international companies. The semi-autonomous Kurdish Regional Government (KRG) has a series of production sharing agreements with international companies.

Iraq EITI is leveraging its disclosures to develop a revenue forecasting model for SOMO. The model combines historical data with price and cost projections to estimate future production and revenues. It will also be used to estimate future declines in crude oil demand and prices to inform national planning processes related to the energy transition.

CASE STUDY

Indonesia**Fiscal risks posed by the transition**

Indonesia is a major producer of fossil fuels and minerals and the world's largest exporter of coal. Production of oil and gas is declining and the country is increasingly reliant on imports of fuel oil, which is heavily subsidised. The country's dependence on fossil fuels has raised concerns around the potential fiscal risks posed by the energy transition. The Indonesia EITI Multi-Stakeholder Group has highlighted that further investment in extractives and energy infrastructure could pose a risk for the economy, especially in light of the country's energy transition ambitions.

The MSG plans to define its role on achieving the nationally determined contributions (NDCs) under the Paris Agreement and to build its capacity in areas related to climate and energy transition. There are opportunities for the MSG to inform and engage in national energy transition policymaking by leveraging EITI disclosures on revenues, production costs and emissions. Given the highly decentralised nature of governance in Indonesia, the EITI can also play a role in supporting government and stakeholders on policy alignment and coordination by bringing the right government, industry and civil society actors around the table.

CASE STUDY**Ghana****Investments in state-owned assets**

Between July and August 2021, Ghana's parliament approved a deal to borrow USD 1.65 billion, to increase the stake in two oil blocks of Ghana National Petroleum Corporation (GNPC), a state-owned enterprise. The deal was intended to accelerate asset development in the face of the energy transition and mitigate the risk of stranded assets.

The deal raised concerns around potential governance risks, such as rising government debt and the valuation of the assets, which was based on a high oil price scenario. Questions were also raised around the sustainability of investments in new oil assets managed by GNPC.

The reactions to the deal demonstrate growing public interest in participating in policy debates on the energy transition. The public debate around the case highlights opportunities for Ghana EITI to support data-driven public debate on the risks related to state investments, the role of state-owned enterprises and implications for debt sustainability. It also presents an opportunity to build trust in government decision-making through transparency and stakeholder dialogue. The Ghana EITI Multi-Stakeholder Group is considering opportunities to reflect energy transition issues in their contributions to public debate.

Disclosures on fossil fuel subsidies

The EITI Standard requires the publication of information on subsidies related to extractive commodities that are not recorded in national budgets. The EITI has published an overview of countries disclosing information on fossil fuel subsidies, which include Germany (direct coal industry subsidies), Mongolia (discounts on thermal coal), Nigeria (subsidies to consumption of petroleum products), Republic of the Congo (crude oil supply to domestic refinery) and Ukraine (discounted natural gas for domestic consumption).⁵



2. Future projects, opportunities and risks

The energy transition is likely to impact the project economics of future extractive projects. To understand if projects are at risk of becoming stranded assets, governments and citizens will need to reassess the commercial viability of existing and proposed projects. Other factors that affect future projects in the industry include the development of carbon pricing regimes that introduce additional taxes based on carbon emissions⁶ or phasing out of fossil fuel projects with impacts on subnational income and employment.

How EITI data can be used

Project-level revenue and production data disclosed through the EITI can support analysis of project viability. Data on production costs is key to understanding which projects may no longer be commercially viable and therefore how vulnerable revenue streams may be. Some EITI countries are exploring opportunities for improving transparency of project costs to support such analysis.

Disclosures of payments related to carbon taxes, which are covered in EITI reporting where such payments are considered significant, can be useful when projecting future revenues. Some EITI countries have an intended carbon price which forms the basis of their carbon taxation system, but many do not yet levy this tax in the extractive sector. For example, Niger and Nigeria have an intended carbon price of USD 50 per tonne of carbon dioxide equivalent (tCO₂e) which, when implemented, will generate additional government revenues. Reporting on this revenue stream can inform planning and dialogue on national climate change objectives.

Disclosures of payments related to carbon taxes are also covered in EITI reporting, where such payments are considered significant. EITI reporting in Norway shows a carbon tax from its oil industry, which generated over USD 600 million in government revenue in 2018.

The EITI also requires disclosures related to revenues and social expenditures received at the local level and employment. Subnational governments and communities that depend on the extractive industry for income and employment could use data on revenue trends to prepare for the future, by basing current spending and investment decisions on this data. Existing extractives revenue can also be channelled towards developing local capacity and skills to engage in the renewable and clean energy sector.

Project viability: Comparing projects on the cost curve

The “break-even price” indicates the average price needed over the life of the project for it to be profitable. The net present value of a project is based on the underlying commodity price assumptions prevailing in the market. Understanding these measures and how underlying price assumptions compare with forecasts can help governments and citizens assess project viability and the potential risk of stranded assets.

The Natural Resource Governance Institute (NRGI) has analysed⁷ and compared break-even prices of prospective projects in 19 countries. This kind of analysis can help public debate and policymaking by producing countries.



Key question

How will future projects, local economy and employment opportunities be impacted by the energy transition?

EITI Requirements

3.2 Production

4.6 Subnational payments

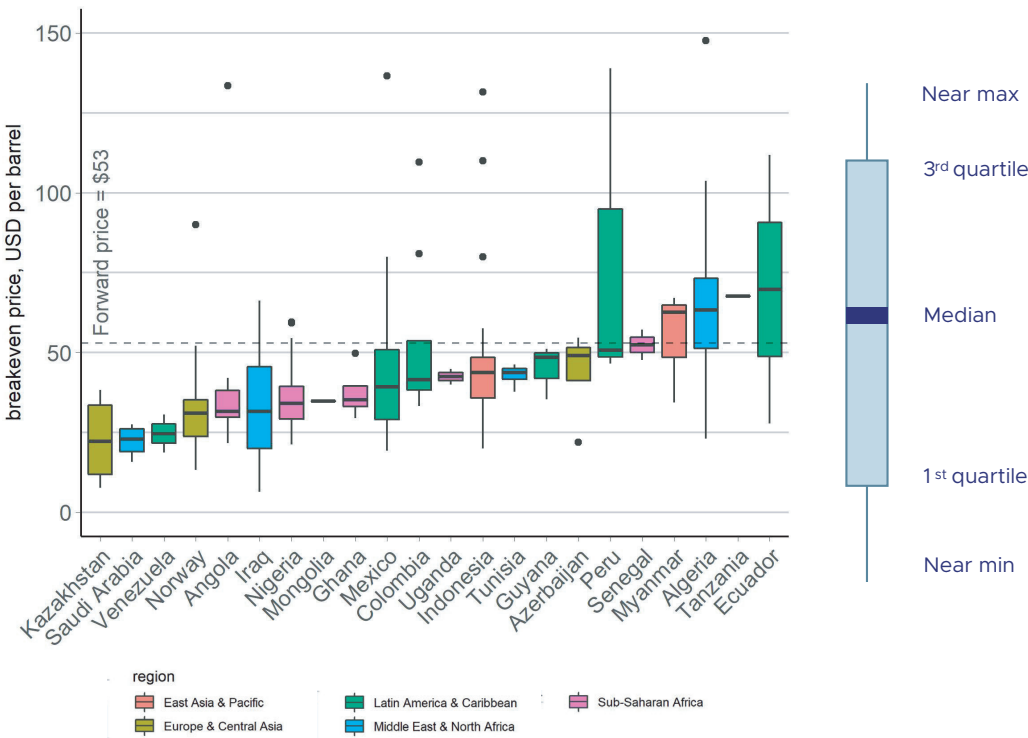
4.7 Project-level revenue reporting

5.2 Subnational transfers

6.1 Social and environmental expenditures, including carbon taxes

6.3 Contribution of the extractive sector to the economy, including employment

Spread of breakeven prices for prospective projects across our sample



Source: Natural Resource Governance Institute (NRGI)

CASE STUDY

Colombia
Impact of energy transition on local communities

In Colombia, Latin America’s largest coal producer, regional and local governments are entitled to royalty transfers from the state’s share of extractive revenues. According to EITI reporting on planned and actual subnational transfers, these amounted to almost 40% of total extractive revenues between 2014 and 2018. Should demand for fossil fuels decline as the country diversifies its energy mix, a downturn in coal revenues could have a significant and long-lasting impact on communities.

Reforms to the royalty law have been introduced to support diversification of the local economy and environmental conservation. The EITI can support analysis and dialogue on how to manage the sector in a way that is sustainable in the context of the energy transition. This could include analysis of how subnational income may be affected in the medium to long term, and how such income could be used to build resilience for local communities. Ensuring that local communities have an opportunity to participate and contribute to policy dialogue will be critical for an inclusive transition.



Key question

Do countries have legal and policy frameworks to support national energy transition?



3. Policy-making and legislation

In preparation for the energy transition, resource-rich countries should ensure that their legal and fiscal frameworks are well-positioned to address the impact on the extractive and energy sectors. Addressing gaps or risks in extractive sector legislation or contracts and aligning these to climate policies can minimise disruptions.

How EITI data can be used

EITI disclosures on the legal and fiscal framework governing the extractive industry can promote public understanding on government plans or policies related to the energy transition, helping to identify and address governance challenges related to the exploration, production and export of minerals critical to the energy transition.

The EITI requires the disclosure of contracts (including amendments), which can allow stakeholders to scrutinise potential risks posed by contractual clauses. Some contracts contain clauses determining which party bears the risk of future commodity price fluctuations. Contract publication can reinforce government and citizens' confidence, in cases where contractual terms protect both the government and companies from future climate-related risks.

Contract analysis of risky clauses

The Natural Resource Governance Institute (NRGI) has analysed 34 extractives contracts in 11 countries issued since the Paris Agreement, highlighting potential risks posed by the energy transition.⁸ The study recommends that traditional clauses like stabilisation, arbitration and force majeure should be reconsidered to address climate change risks and the need for climate policy action.

CASE STUDY

Germany

Plans to phase out coal, scale up renewable energy

Germany is one of the largest importers and consumers of mineral resources and a significant producer of lignite (brown coal), which is used for domestic energy. The country intends to scale up the use of renewables and phase out coal-fired power plants.

Germany EITI has been exploring issues relating to the energy transition and provides an overview of the government's energy transition policies and measures, such as the decommissioning of coal projects. EITI reporting also included information on subsidies and on the share of renewable energy in Germany's energy mix. Germany's multi-stakeholder group has been addressing the role of minerals in low-carbon technologies, including commissioning a review of the government's energy transition scenarios and their implications for mineral demand.

EITI Requirements

2.1 Legal framework and fiscal regime

2.4 Contracts



4. Climate impacts

CO₂ emissions from extractive projects are increasingly a matter of public interest. In many countries, the oil, gas and mining industries are one of the most significant contributors to national emissions. Most governments and companies are taking measures to reduce carbon emissions related to their extractive activities and supply chains. However, the availability and comprehensiveness of emissions data at a project level varies significantly.

How EITI data can be used

The EITI encourages member countries to disclose information related to the environmental impact of the extractive industries, which can be used to track and plan for climate impacts of extractives projects. MSGs can consider whether there is data available on fossil fuels reserves and emissions, the intensity of production, and how reductions in emissions from the industry can support national commitments.



Key question

How are countries incorporating climate change considerations in their extractive sector management?

CASE STUDY

Trinidad and Tobago

Reporting on climate impacts of the extractive industry

Trinidad and Tobago is a small, resource-rich island state and one of the world's largest exporters of liquefied natural gas. Trinidad and Tobago EITI (TTEITI) has improved the availability of extractive sector data and plays an important role in developing public awareness around climate change and energy transition. It encourages civil society to look beyond financial reporting and towards the extractive industries' broader environmental and social impacts. TTEITI has established an environmental subcommittee to oversee further work on environmental reporting, including on CO₂ emissions, which are currently not part of EITI's environmental reporting requirements.

TTEITI has developed a voluntary process for companies to report on resource impacts – including electricity, water usage, CO₂ and methane – as well as statutory requirements related to air and water pollution. The environmental subcommittee aims to incorporate environmental and climate considerations in the management of the sector, including a natural capital approach, in conjunction with the Central Bank of Trinidad and Tobago and other agencies.

EITI Requirements

6.4 Environmental impact of extractive industries

Looking ahead: Potential lessons for the renewable energy sector

EITI implementation has shown that multi-stakeholder engagement has a key role to play in promoting greater transparency and accountability. To this end, the multi-stakeholder platform can be also a vehicle for high-level advocacy on governance issues pertaining to the transition from high carbon energy sources to renewables. There is potential to use EITI Standard and multi-stakeholder forum to address governance challenges and seize opportunities for collective action in the renewable energy sector.

Key areas of relevance to address potential risks and challenges in the renewable energy industry include transparency in contracting, beneficial ownership of companies, revenues and social and environmental impact. Drawing on lessons learned from member countries and supporting companies, the EITI will explore the potential to build on relevant lessons to support improved renewable energy governance.

CASE STUDY

Albania

Building on lessons from EITI in the renewable energy industry

Hydropower ranks as the second most important energy source in Albania after petroleum. Hydropower plants provide the main source of low-carbon electricity generation. Albania EITI reporting goes beyond the EITI Standard with a detailed section on hydro energy. The most recent report presents the legal and regulatory context of hydropower, disclosure of production and revenue data, and reconciliation of subnational payments. This analysis identified significant losses of power in the distribution system, which Albanian authorities are working to address.

Albania EITI intends to build on this work with a scoping study to evaluate other renewable energy technologies. The context for this effort is the government's programme to expand clean energy production, including an innovative new floating solar demonstration. Future EITI reporting could align with these developments to take a broader view of the energy transition in Albania.

Endnotes

- 1 Note that the energy sector includes electricity, heat and transport. Refer to Hannah Ritchie and Max Roser (2020), "CO₂ and Greenhouse Gas Emission", <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>.
- 2 Siân Bradley (2020), *Transparency in Transition: Climate Change, Energy Transition and the EITI*, Chatham House, p. 4, <https://www.chathamhouse.org/sites/default/files/2020-06-15-transparency-in-transition-eiti-bradley.pdf>.
- 3 For more information, refer to UNFCCC, "Nationally Determined Contributions (NDCs)", <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs>.
- 4 A 2021 Energy Transition Country Mapping by the EITI International Secretariat showed that 45 of the 55 countries implementing the EITI Standard have energy transition-focused laws and policies, and that all 55 EITI countries have climate change legislation in place.
- 5 EITI (2020), *Subsidies at what cost? Shedding light on state support for fossil fuel consumption*.
- 6 At least nine EITI countries have introduced carbon pricing regimes (Argentina, Colombia, Germany, Kazakhstan, Mexico, the Netherlands, Norway, Ukraine and the United Kingdom).
- 7 Natural Resource Governance Institute (2020), *A Race to the Bottom and Back to the Top: Taxing Oil and Gas During and After the Pandemic*.
- 8 Natural Resource Governance Institute (2021), *Tying Their Hands? How Petroleum Contract Terms May Limit Governments' Climate Policy Flexibility*.



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