

Supporting the Energy Transition in Oil- and Mineral-Rich Countries

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Key messages

- The energy transition—the shift from the use of fossil fuels to cleaner energy in order to avoid climate-related disaster—is imperiled by three trends in resource-rich countries:
 - Most oil and gas producers are doubling down on extracting fossil fuels
 - Oil- and gas-producing countries are lagging on switching to solar and wind electricity at home
 - Countries with the minerals needed to make electric vehicle batteries and other clean technology are underprepared for coming production booms
- Resource-rich countries have opportunities to break cycles of poor decision-making and build more resilient economies.
- NRGI will support resource-rich countries to manage the risks of dependence on oil, gas and minerals; navigate domestic energy transitions; and improve the governance of critical minerals

The Natural Resource Governance Institute (NRGI) aims to help people in oil- and mineral-rich countries make informed choices about their energy futures that protect the planet, strengthen their economies and create fairer societies.

As part of this work, we want to help oil- and mineral-rich countries make successful, just, well-managed energy transitions. By “energy transition,” we mean the shift from use of fossil fuels to cleaner energy in order to avoid climate-related disaster. Based on our work in more than two dozen countries, we believe that fossil fuel producers—especially low- and middle-income ones—risk serious long-term distress and decline if they remain dependent on money from extraction and on fossil fuel-based power. At the same time, transition offers resource-rich countries new opportunities—for example, in the switch to solar and wind electricity and expected booms in some critical minerals. This note explains how we see the issues and our approach.

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THREE URGENT PROBLEMS

Oil- and mineral-rich countries are demonstrating three worrying trends:

1. As the energy transition gathers pace, most oil and gas producers are doubling down on extracting fossil fuels

This year, as international oil companies wrote off assets and revised their assumptions about prices, many national oil companies (NOCs) planned billions of dollars in new projects as if the age of oil would never end. NOCs already produce most of the world's oil and gas. If they continue funneling huge sums into their own operations, they will undercut global efforts to scale down production. Nearly \$400 billion of their proposed spending is also incompatible with a temperature rise under 2 °C.¹

For resource-rich countries, leaving fossil fuels in the ground can be a tough proposition. Money from extraction can help meet citizens' needs, though those in charge often mismanage it. In some places, oil and gas also dominates popular narratives of a better future. Now, though, these dreams are running up against global action on climate change and the pandemic's economic destruction, both of which are weakening the outlook for fossil fuels.

Every fossil fuel producer should want action on climate change, not least because they all stand to lose something, be it wealth, security, economic and political stability, land, biodiversity, health or human life. At the same time, it would be unjust to expect some—especially lower-income producers in the global south—to move faster on energy transition than the big consumers of fossil fuels like the U.S., China, Russia or India.

Yet no matter how a country sees its own exposure, roles and responsibilities on climate, those that begin cutting their dependence on fossil fuel production now will buy themselves three opportunities:

- 1 **A choice to rely less on fossil fuels, whether economically or politically, could force countries to start building more resilient economies.** No one knows how quickly world oil demand will fall or how the coronavirus pandemic has affected “peak oil.” But as markets tighten and volume wars intensify, more oil and gas projects will become economically unviable. The most recent oil price shocks have already shown that countries ignoring this reality may become unable to offer public services, pay their bills, protect their currencies and credit ratings, or avoid crisis in related sectors like banking.
- 2 **Relying less on oil money could help governments break the cycle of bad decision-making that dependence fosters.** Too often, high revenues in boom times convince leaders to overspend, under-plan and under-save. Price booms also encourage corruption, which can deepen some of the vulnerabilities that make economies less resilient and prop up dysfunctional governments that serve only the privileged few. Then, when prices drop, the bill for this short-term thinking comes due, creating conditions that make recovery harder. Leaders spend their days firefighting to protect the status quo instead of planning for the future.²

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1 NRGi research (2021, forthcoming).

2 Past research also has found that other risks associated with fossil fuel dependence include: deeper recessions and slower recoveries; disappointing long-term growth; more unstable currencies; slower progress on economic diversification; low investment in public health and social welfare; weaker, less accountable public institutions; higher incidence of violent conflict; and more fragility.

The current double trauma of coronavirus and low oil prices isn't just an economic crisis unmatched in modern times. It's a dress rehearsal for future crises, whether caused by climate change or the decline of oil. The boom-bust leadership that dependence brings leaves countries unable to manage crisis or adapt to change. The need for new ideas is clear, yet when prices temporarily rise again, many seem set to restart the old cycle.

- 3 Reduced dependence on fossil fuels brings a chance to focus on other priorities.** Producing oil and gas isn't just capital-intensive. It eats up huge amounts of time and attention that leaders could spend elsewhere. As fossil fuels lose their grip on the world's economy, prudent governments will accept that extracting every drop of oil or cubic square foot of gas isn't always worthwhile. Those that don't will end up fighting more fires and pouring increasing amounts of money back into a sector in decline. This might be through **concessions** to companies, risky **resource-backed loans** or wasteful spending by their NOCs, which on average already **remit** less than one out of every four dollars they earn to their governments.

Dwindling fossil fuel revenues will cause pain for many countries this century—and for the poorer ones most of all. Leaders are going to face tough choices: Which other industries should they support? Which vested interests must they tackle? Should they spend or save? Those that have treated fossil fuels as their economic and political lifeblood will also need to reimagine what the money is for. Some will need to use it for short-term economic stabilization—for instance, to:

- close budget deficits while the government broadens its revenue base
- build reserves to support shifts in economic policy
- pay down debts
- increase social protection

Others may treat the money like short-term bridge funding for urgent work. Depending on a country's prospects and vulnerabilities, this could be programs that:

- adapt to climate change
- retrain oil workers
- strengthen humanitarian relief and disaster management systems
- help with economic diversification.

2. Oil- and gas-producing countries are lagging on switching to solar and wind electricity at home

Burning fossil fuels for power can seem like an obvious choice in the countries that extract them. Yet producers that bet big now on fossil fuel-based electricity could find themselves left behind as the world shifts to renewables. They could end up with outmoded, dirty domestic energy systems that make citizens sick, waste public money, scare off investors and ultimately don't meet their own needs.

In many producer countries, renewables' share of domestic energy actually shrank over the last decade, especially as governments looked more to natural gas for

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electricity.³ The focus on gas as a “bridge fuel” looks especially risky, given its uncertain market future, high sunk costs and dangerous methane emissions.

Most oil-dependent countries emit only small amounts of carbon dioxide from burning fossil fuels themselves. As a group, though, they account for nearly a fifth of the global total and include some of the world’s worst polluters per capita.⁴ Climate-wise, then, these countries’ domestic energy choices still matter in a 1.5°C scenario, even if moves by one or two of them to fast-track renewables would be drops in the bucket. A few—Nigeria, Angola, Sudan and Egypt, for instance—may also have the world’s fastest-growing populations this century, meaning their choices will matter more over time.

Yet even in places with small carbon footprints, policies and public spending that favor dirty electricity could cause them to miss out on transition’s upsides. A domestic shift to solar and wind is no magic bullet for any country’s problems, especially if citizens don’t share the new power supply in ways that are efficient and fair. And globally, if rich countries buy up the available stores of minerals and technology for their own transitions, poorer countries could be shut out. The very fact that they add little to greenhouse gases ironically deepens this risk. Nonetheless, our ongoing research suggests that in some cases, supporting a transition at home could:

- help governments reduce what they spend on the power sector
- offer cheaper, more reliable electricity to citizens
- create a more diverse, secure domestic energy mix
- address at least some energy poverty, if countries can access affordable technology
- disrupt policies and practices that allow fossil fuel industry insiders to benefit at the public’s expense
- help remove poor electricity supply as a barrier to economic growth
- reduce the environmental and social costs of fossil fuels, including pollution and its health effects.

3. Countries with the critical minerals needed to make electric vehicle batteries and other clean technology are underprepared for coming production booms

Manufacture of the electric vehicle batteries, wind turbines and solar panels that will help the world move away from fossil fuels will require huge amounts of minerals. Production of lithium, cobalt and graphite must rise by more than 450 percent in order for the world to meet a 2-degree scenario, which will also require large growth in major minerals such as bauxite/aluminum.

This presents an **economic opportunity** for mineral-rich countries, both in terms of government revenue and linkages to the wider economy. Yet past cycles of disappointment could easily repeat. In the Democratic Republic of Congo (home to half of known cobalt reserves), Myanmar (which has large deposits of rare earth

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3 Using World Bank data for the shares of total energy output and consumption produced by renewables.

4 2017 figures derived from this EU dataset, with “oil-dependent” defined as a country whose fossil fuel exports make up at least 20 percent of its total exports. The group includes a mix of countries in Latin America, Asia, Africa and Europe at different levels of economic development and industrialization..

minerals) and Bolivia (with some of the world’s largest undeveloped lithium deposits), earlier mining booms brought conflict, corruption and political infighting instead of the development gains leaders promised. Poor governance now could waste the money involved, lead to fresh unrest and disrupt the supply chains required for the global expansion in clean technology. It could also lead to situations where the “green” futures of some wealthy countries depend on exploiting others.

THE IMPORTANCE OF BETTER NATURAL RESOURCE GOVERNANCE

Fossil fuel-rich countries that mismanage their extractives sectors bet against their own chances for a successful energy transition. In many of the [countries where we work](#), we already see signs that extractives policy, investment and governance choices are prolonging fossil fuel dependence, holding back solar and wind power and undercutting returns from critical minerals. For example, we see officials:

- Committing to almost \$400 billion of oil and gas projects that would be economically unviable if the world limits temperature rise to 2 ° C.
- [Over-spending on “emergency” fossil fuel-based power](#) in ways that balloon public debt and crowd privately owned renewables projects out of the local electricity market.
- [Over-hyping](#) extraction’s “transformative” potential to the public, while the benefits of switching to solar and wind power get less attention.
- [Bailing out](#) cash-strapped NOCs while imposing new restrictions on investment in clean energy.
- Offering costly fiscal and environmental [concessions](#) to private fossil fuel companies instead of planning for oil’s decline.
- [Refusing to buy](#) cheaper renewable electricity from private companies when doing so could weaken demand for state-owned fossil fuels.
- Choosing to support extractives projects over renewables partly because some leaders see the higher rents from extraction as key to their [political survival](#).
- Awarding mineral contracts to political cronies rather than the best-qualified companies, impeding the effective development of these resources.
- Ignoring citizen concerns about the impacts of mining projects on local communities, creating tensions that can harm development and delay projects.

As long as decisions like these remain common, successful transitions in fossil fuel-rich countries will require independent, reformist voices that:

- question extractives sector policies, investments and governance decisions
- help stakeholders imagine more sustainable, diverse energy futures
- plan for just, managed declines in extraction that minimize harm to citizens
- hold politicians accountable for bad decisions
- build new narratives and constituencies that support change.

At NRGI, we aim to be one such voice—and to help amplify and enrich the voices of others.

NRGI'S APPROACH

Drawing on our expertise in oil, gas and mining governance, our work on energy transition has focused on three main topics:

- 1 *Avoiding dependence risks.* Building on our work on “stranded nations,” and with a focus on high-risk NOC spending and debt, we will use policy research, economic analysis and scenario planning to help countries and investors better understand and guard against the long-term risks of fossil fuel dependence. Internationally, we will also push for a stronger approach to disclosing and debating NOC spending and other climate-related financial risks.
- 2 *Supporting domestic energy transitions.* Working closely with local partners, we will help fossil fuel-rich countries make extractives sector policy, investment and governance choices that allow them to benefit from greater use of solar and wind power. We plan to do this through applied research, advocacy and convening. The dangers of over-investing in gas-fired power is one early focus.
- 3 *Improving the governance of critical minerals.* We aim to help mineral-rich countries—including current critical minerals reserves holders and prospective producers that are still exploring—meet the scale-up in demand for these minerals through policies that promote sustainable economic benefits for citizens, ensure public oversight and reduce risks of corruption. We also seek to advance international initiatives focused on effective supply chain governance by enriching their approach to accountability as a key to long-term sustainability.

Working closely with local partners, we will to help fossil fuel-rich countries make extractives sector policy, investment and governance choices that allow them to benefit from greater use of solar and wind power.

In 2021, we will roll out a new tool for assessing country-level corruption risks around energy transition, and explore the good governance lessons that renewables can learn from the extractive sector.

Providing stakeholders with clear, evidence-based content is the foundation of our energy transition work. Because decisions around energy are so political, though, we must think and work politically, finding real openings for reform and the right actors to work with on the ground. For all of our country and regional work on energy transition, then, we start by identifying a live extractives sector policy, investment or governance decision that could help or hinder transition. Next, using consultation and the tools of political economy analysis, we work to understand the decision-making context, the decision’s likely outcomes and which partners we should work with. Then, we agree a plan of action with our partners, including what information or other support we can best provide.

We don’t have all the answers for this work. Progress will require collaboration with many others. But we remain committed to bringing what NRGi does best—cutting-edge thinking and action on natural resource governance—to the unprecedented challenges oil- and mineral-rich countries and their citizens face. The work is complex but the end goal is simple: Better energy choices for better futures.

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The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries’ oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
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