



LOW-CARBON TRANSITION STRATEGIES IN RESOURCE-RICH EMERGING AND DEVELOPING ECONOMIES:

THE ROLE OF OIL AND GAS COMPANIES

BACKGROUND

Since 2013, the OECD [Policy Dialogue on Natural Resource-based Development](#) (PD-NR), hosted by the OECD Development Centre, has offered a platform for peer learning and knowledge sharing on how to use the extractive sector as a catalyst for long-term, competitive, inclusive and sustainable development. OECD and non-OECD natural resource-rich countries, all participating on equal footing, work with extractive industries, civil society organisations, and think tanks, to craft collaborative solutions to common challenges and design actionable policies, building on their collective knowledge base. This has resulted in the elaboration of guidance tools, reflecting the participants' experience and specific needs.

As part of the Work Plan for 2021-2022 for the development of an **inclusive and equitable low-carbon transition framework for natural resource-rich developing countries**, the OECD Development Centre is convening a dialogue platform to foster peer learning and knowledge sharing on low-carbon development strategies. The platform seeks to improve understanding around the specific challenges that emerging and developing economies face in transitioning to a low-carbon future, and work towards the development of tailored approaches to build resilient and sustainable development pathways.

Emerging and developing economies that are still heavily reliant on oil and gas as the main source of export revenues and/ or energy need to consider **a new toolbox** to manage a sustainable transition to a low-carbon future, in a virtuous cycle of environment and growth, and build their resilience to external shocks. The responses to the COVID-19 crisis may affect the pace of the structural changes required to sustain the low-carbon transition.

RATIONALE FOR INVOLVING IOCs AND NOCs

Natural resource-rich countries, their national oil companies (NOCs), and international oil companies (IOCs), are subject to significant risks arising from the low-carbon transition, but most of them are yet to take full account of this. Overall, only a limited number of s NOCs and IOCs have adjusted their business models to take account of climate risk to their operations, and climate impact from their operations.

For emerging and developing economies, it is crucial to preserve revenue flows from NOCs and IOCs operating on their territory, while reducing greenhouse gas (GHG) emissions from these companies' activities. IOCs play a large role in many emerging and developing economies, where their activities generate a significant share of government revenues. NOCs, for their part, account for more than half of global oil production, and about two thirds of proven-plus-probable reserves, and are in many countries the main contributor to government revenues. IOCs and NOCs are frequently a main source of GHG emissions in the countries where they operate – if not *the* main source. These companies' strategies and actions on the low-carbon transition will have a large impact on the ability of emerging and developing economies to achieve their intended nationally determined contributions (INDCs) under the Paris agreement, and mitigate climate change.

Resource-rich countries, along with their NOCs and IOCs that operate on their territory, face the risk of stranded assets. In general terms, the companies most at risk are those with high-cost reserves, whose production is least efficient, most emissions-intensive, and least resilient to climate change. Companies will deal with these challenges according to their own specific strengths and weaknesses. Although some NOCs have taken steps to mitigate this risk, whereas some IOCs lag behind, NOCs are on average more exposed than IOCs. The share of NOC investment in total upstream investment increased from 19 percent in 2012 to 25 percent in 2019¹, with a corresponding smaller share by majors and independents, and remains near record highs. The risk of stranded volumes is therefore higher for NOCs than for oil majors.

Given the extensive complementarities between NOCs and IOCs, an initiative to address transition-related challenges in emerging and developing economies should include both NOCs and IOCs. NOCs and IOCs very frequently partner in joint ventures, and in many instances the NOC is charged with managing the government's commercial relationship with the IOCs. This dynamic frequently creates close operational, administrative, and financial relationships between NOCs and IOCs. Furthermore, IOCs can draw upon transition-related experience from operations in other countries, and on more generous R&D budgets than most NOCs, whereas NOCs have the advantage of deep familiarity with the local context.

In spite of the common challenges faced by IOCs and NOCs, some challenges are specific to NOCs. Whereas IOCs and mixed ownership companies face investor pressures, NOCs report to their governments only - which generates a separate set of transition-related challenges for NOCs. Given their central role as sources of fiscal revenue, and the size of their proven-plus-probable reserves, NOCs could come under pressure to remain traditional energy producers, and to invest in infrastructure linked to fossil fuels. Such pressure could in turn inhibit NOCs' ability to adapt to the clean-energy transition, and long-term NOCs' investments in the fossil fuel sector could expose national wealth to additional risk. Oil companies' ability to adjust to the clean-energy transition depends on their capacity to develop and operationalise a long-term strategic outlook; their technical capabilities; and the size of their resource base; but also on the overall policy environment and mandate. It is thus critical for NOCs' continued competitive position that the ministries and government agencies responsible for overseeing NOCs understand and appreciate the risks and opportunities following from the low-carbon transition.

The diversity of experience and knowledge base, where some IOCs and NOCs have advanced further than others on the energy transition, provides an opportunity for peer learning and knowledge sharing. The main challenge for governments in natural resource-rich countries and their NOCs, as well as for IOCs operating on their territory, is the **uncertainty** about the characteristics of **future energy markets**, and about the **speed of the transition**. Different companies have responded to the challenge of the transition in different ways, in terms of strategy, technology, business models, financial solutions, and contractual arrangements. Although companies compete amongst themselves, and may face constraints on sharing knowledge and technology with other companies, they are also frequently partners on joint ventures. For the benefit of future collaboration, as well as for the common good of curbing GHG emissions from the sector, companies would benefit from sharing knowledge and experience on transition-related issues.

In emerging and developing countries, the role of oil & gas companies in the low-carbon transition is critical for several reasons:

- The revenues that oil & gas companies provide are critical to resource-rich countries' fiscal and economic sustainability. In a low-carbon world, resource-rich countries need their energy sectors to continue to generate fiscal revenue, within sustainable business models that take account of the clean-energy transition.

¹ This does not include international NOCs, NOCs that have a significant share of their activities outside the home country.

- Since oil & gas companies operating in resource-rich countries are frequently amongst the largest emitters of greenhouse gases (GHGs) in the country, their emissions policies are central to the countries' ability to achieve their national determined contributions (NDCs) under the Paris Agreement.

PROPOSED ACTIVITIES

Peer learning and knowledge sharing platform: The platform will bring together governments of natural resource-rich emerging and development economies, their NOCs, and IOCs, to exchange experiences on specific and strategic challenges related to the low-carbon transition and how they can be addressed. In this way, the dialogue platform will build a common knowledge base for resource-rich countries, their NOCs, and IOCs operating in emerging and developing economies, to identify workable approaches to adapt to the low-carbon transition. This may range from reducing emissions intensity of production (curbing methane emissions, CO₂ venting, and flaring; increasing the energy efficiency of production; and using renewable energy in production) through the deployment of technologies to reduce emissions (CCS/CCUS; hydrogen from natural gas with CCUS or by electrolysis), to becoming energy companies with a diversified business portfolio including investments in renewable energy sources.

The platform will address frontline **transition-related issues** faced by resource-rich emerging and developing economies, their NOCs, and IOCs. The issues will be collectively identified through an iterative process ahead of each bi-annual meeting of the Policy Dialogue on Natural Resource-based Development, in consultation with relevant government agencies, NOCs, and IOCs.

Topics for **discussion and in-depth analysis** may include:

- **Technology options for decarbonising extractives**, assessing their technical feasibility, maturity, speed of adoption in different markets and potential for deployment at scale, taking into account concerns regarding security of supply.
- **Ways to foster technology transfer, including through contractual arrangements.** The World Bank found that low-income countries account for just 0.01 percent of low-carbon technology (LCT) export, and 0.3 percent of low-carbon imports. High-income countries produced 80 percent of all LCT innovations between 2010 and 2015.
- **Enabling policies**, taking into account **affordability** and **distributional impact**. Developing and emerging economies need to design and deploy enabling policies for the low-carbon transition that take account of these countries' specific constraints and circumstances. Such enabling policies may be different from those that are available and appropriate to high-income countries. Similarly, distributional effects and equity considerations are particularly important in developing and emerging economies, and may play out differently in these contexts compared to high-income countries.
- **Mobilising the financial resources to support the low-carbon transition.** Given the very limited fiscal resources of many resource-rich emerging and developing economies, the transition to low-carbon development pathways will crucially depend on private sources of finance, and on development finance. Many of these countries were already heavily indebted before the Covid-19 crisis, and have as a result of the crisis incurred even higher levels of debt. The tight limits on fiscal space require bold and innovative financial solutions. According to OECD's research, state ownership of enterprises can have a positive impact on investment in renewables. This points to an opportunity for governments to use their ownership of NOCs to ensure NOCs' sustainable transition to a low-carbon economy.
- **Business models.** Moving beyond current core business is risky, because it implies large investments in less familiar and fast evolving technologies. Yet, a "wait-and-see" strategy could also be costly, if it fails to put resource rich countries and their NOCs in a competitive position in future energy markets.

A successful adaptation strategy therefore requires understanding of, among others, new energy technologies, and the speed of their uptake in different markets, energy policy, and the likely future energy mix.

- **Corporate governance reforms.** The low-carbon transition will place high demands on the responsiveness, dynamism, and knowledge base of extractive sector governance structures.

The proceedings from each meeting of the platform will be written up and made available to participants, based on Chatham House rules of attribution.