

How the Transition Away From Fossil Fuel Production Can Be Included in New Climate Commitments and Plans

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Natalie Jones
Paola Yanguas Parra



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How the Transition Away From Fossil Fuel Production Can Be Included in New Climate Commitments and Plans

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Written by Natalie Jones and Paola Yanguas Parra

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Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700

Website: iisd.org

X: [@IISD_news](#)



Executive Summary

The first global stocktake (GST) under the Paris Agreement concluded at the 28th UN Climate Change Conference (COP 28) in Dubai with a call on parties to “transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science.” With the GST decision, the starting gun has been fired on the third generation of nationally determined contributions (NDCs), expected by early 2025, well ahead of COP 30 in Belém, Brazil. Our analysis shows that current-generation NDCs and long-term low-emissions development strategies (LT-LEDS) that mention fossil fuels often, implicitly or explicitly, refer to a continuation or increase in fossil fuel production. NDCs and LT-LEDS are central to informing government plans and actions toward decarbonization and economic diversification, and they send signals to the markets regarding the future use and production of fossil fuels. Therefore, it is essential that new NDCs and LT-LEDS tackle not only the use of fossil fuels but also fossil fuel production in a way that is aligned with the GST outcome.

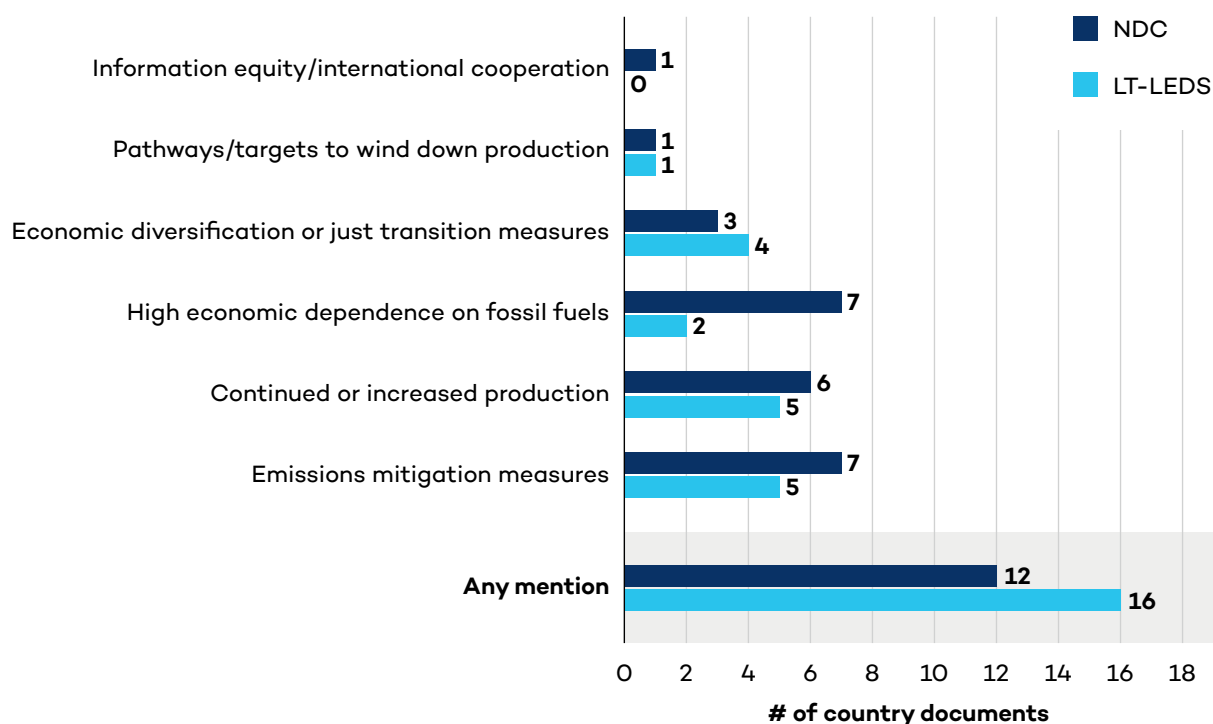
Meeting the Paris Agreement goals while avoiding an unnecessarily abrupt and disruptive transition away from fossil fuels requires that governments plan for a managed phase-out of fossil fuel production. In the next year until mid-2025, countries have a timely opportunity to reflect this in their NDCs and LT-LEDS. Updates in this area are particularly relevant for fossil-fuel-producing countries, of which the vast majority have included only limited information about fossil fuel production or have signalled a continuation or even an increase in fossil fuel production in their NDCs and LT-LEDS. Those plans for increased production stand in stark contrast with 1.5°C-compatible scenarios, under which no new fossil fuel projects are required and, if fully executed, could lead to exceeding even 2°C and higher warming scenarios.

We find that one-third of the largest fossil-fuel-producing countries do not mention transition of the fossil fuel sector in their NDCs, and more than half have not submitted an LT-LEDS (or do not mention fossil fuels in their LT-LEDS). While reporting on fossil fuel production in the climate documents submitted to the United Nations Framework Convention on Climate Change (UNFCCC) is not mandatory, this is a stark omission, particularly for those countries that are still planning expansions of their fossil fuel production, according to other official government documents.

When mentioned in the climate documents of producers, common topics around fossil fuel production include a) the high economic dependence on fossil fuels, b) policies, measures, and initiatives for the mitigation of production-related emissions or economic diversification and just transition, c) energy supply security as a justification for the continuation of the fossil fuel extraction sector, and d) social and economic impacts and risks of the global transition in their national economies. All these topics are important for the individual countries but fail to address the urgent need for a transition away from fossil fuel production.



Figure ES1. Overview references to fossil fuel production in climate documents of the 20 largest fossil fuel producers



Source: Author's elaboration based on analysis of NDCs and LT-LEDS submitted until March 31, 2024.

Based on our analysis and building on previous work, we point to five elements fossil fuel-producing countries could include in their third-generation NDCs and their LT-LEDS to better reflect the outcomes of the GST:

1. **Background information on national fossil fuel production, future production plans, reserves, and support.** Understanding the current situation is the first step in aligning plans with Paris Agreement goals.
2. **Targets and pathways to wind down fossil fuel production.** This could be in the form of a commitment to reduce or phase out fossil fuel production by a target date. Countries could also include interim targets. LT-LEDS could include scenarios, modelling, and projections for phasing out fossil fuel production.
3. **Policies and measures to disincentivize or constrain fossil fuel production.** Examples of possible policies include but are not limited to the following: a moratorium on oil and gas exploration; cancellation of exploration and exploitation licensing rounds; the non-renewal or revocation of exploitation permits; a moratorium on developing new oil and gas fields; caps on fossil fuel production and exports; the reform of production subsidies; and increased taxation of fossil fuel extraction. LT-LEDS could model the effects of these measures over the longer term.
4. **Policies and measures for just transition and economic diversification.** Countries could include measures to support workers and communities affected by fossil fuel production and the shift away from it, measures to remediate former fossil



fuel production sites, and policies and plans to diversify the economy away from fossil fuel production. LT-LEDS could include modelling, scenario planning, and road mapping for a just transition and economic diversification over the longer term.

5. Information related to equity and international support and cooperation.

Countries could include a statement of how fossil fuel production reduction targets are fair and ambitious with regard to national circumstances, including quantified information on the extent of economic dependence on fossil fuel production.

They could note international support requirements to wind down (or forego the development of) fossil fuel production, including whether their targets and policies are conditional on receiving international support. Developed countries could include commitments to provide support to assist countries with low capacity to transition away from fossil fuel production. Countries could also include membership in international fossil fuel phase-out initiatives or bilateral or multilateral partnerships to support economic diversification.

Finally, countries that already include (or will include) fossil fuel production in their NDCs and LT-LEDS should report on their progress using available tools from the UNFCCC process, such as the Biennial Transparency Reports (BTRs) to increase transparency and traceability and demonstrate their ongoing efforts to achieve their targets in this area. BTRs provide information on national inventory reports, progress toward NDCs, policies, and measures, among others. They have a standardized format and reporting templates for some aspects but also allow for voluntary additional reporting on other aspects, opening the door for including information on all the five elements mentioned above. Similarly, for countries that decide to focus their NDCs and LT-LEDS on emissions reductions or demand-side efforts but still want to demonstrate their efforts to address fossil fuels production and just transitions, BTRs can become a useful tool to report and reflect increased ambition or support needs in this important area.

The science is clear: meeting Paris Agreement goals will require a managed phase-out of fossil fuel production, and there is no room for new fossil fuel projects under 1.5°C scenarios. The GST outcome calling for countries to “transition away from fossil fuels in energy systems, in a just, orderly and equitable manner”(UNFCCC, 2023, para. 28d) is a clear call to action for fossil-fuel-producing countries to revise their current production plans and align them with a Paris Agreement-compatible trajectory. We argue that countries could use their new NDCs, LT-LEDS, and BTRs to demonstrate their increased ambition, efforts, and support needs for a transition away from fossil fuel production. Including the elements mentioned here in their climate documents would allow producing countries to demonstrate increased ambition while keeping the flexibility to reflect their national circumstances.



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1.0 Introduction

The first global stocktake (GST) under the Paris Agreement concluded at the 28th UN Climate Change Conference (COP 28) in Dubai with a call on parties to “transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science” (United Nations Framework Convention on Climate Change [UNFCCC], 2023, para. 28). This was the first time in the history of international climate negotiations that such an agreement was reached, gathering momentum for initiatives and discussions around the phase-out of fossil fuel production and use. With the GST, the starting gun has been fired on the third generation of nationally determined contributions (NDCs), expected by early 2025, well ahead of COP 30 in Belém, Brazil. Indeed, the UNFCCC has urged parties to harness the momentum generated in Dubai by putting forward ambitious updated NDCs that operationalize the GST outcome (UNFCCC Secretariat, 2024).

NDCs are key documents through which governments can communicate their climate change plans within the UNFCCC process, signalling their climate action intentions and priorities internationally. The Paris Agreement (Article 4, paragraph 2) requires each party to prepare, communicate, and maintain successive NDCs on a 5-year cycle (e.g., by 2025, 2030), regardless of their respective implementation time frames (UNFCCC, 2015). To enhance the collective ambition over time, the Paris Agreement entails that successive NDCs will represent a progression of ambition, reflecting the highest possible ambition at the time of submission. Current-generation NDCs typically include targets for 2030/2035, and the next generation of NDCs will provide targets for 2035/2040. The GST showed that full implementation of current NDCs would lead to warming in the range of 2.1–2.8°C (para 18) and requested parties to revisit and strengthen their 2030 targets, as well as set new targets for 2035, informed by the outcomes of the first GST.

The COP 28 decision also urged parties that have not yet done so and invited all other parties to communicate or revise their LT-LEDS (UNFCCC, 2023) (para. 42) and encouraged parties to align their next NDCs with LT-LEDS. LT-LEDS are voluntary and submitted with a mid-century time horizon, reflecting countries’ strategies toward just transitions to net-zero emissions by or around mid-century, considering different national circumstances (UNFCCC, n.d.-b). They are intended to inform short- and medium-term action and planning, provide political certainty and enable countries to make economic transformations while also meeting development and poverty eradication goals (Espinosa, 2018; Verkuijl et al., 2019). Due to their voluntary nature, only 71 parties of the Paris Agreement (out of 195) have submitted an LT-LEDS strategy as of March 2024 (UNFCCC, n.d.-b), and the alignment of the NDCs with these long-term targets is, in most cases, unclear (Climate Action Tracker, n.d.).

Progress on the implementation of the NDCs should be submitted every 2 years under the Biennial Transparency Reports (BTRs), with the first submission due by December 31, 2024 (UNFCCC, n.d.-a). BTRs include information on national inventory reports, progress toward NDCs, policies and measures, climate change impacts and adaptation, levels of financial support, technology development and transfer, and capacity-building support, capacity-building needs, and areas of improvement. As of March 2024, only one party (Andorra)



has submitted a BTR; however, these reports will become a key source of information in the future to track progress in the implementation of targets and commitments under the UNFCCC system.

Transitioning away from fossil fuels necessarily involves transitioning away from fossil fuel production, as well as consumption; however, fossil fuel production is rarely addressed in climate plans (Jones et al., 2023). Recent research has shown that meeting the Paris Agreement goals while avoiding an unnecessarily abrupt and disruptive transition away from fossil fuels requires governments to plan for a managed phase-out of fossil fuel production (Bois von Kursk et al., 2022; International Energy Agency [IEA], 2023; Stockholm Environment Institute et al., 2023).¹ Therefore, the new-generation NDCs and LT-LEDS are a timely opportunity for fossil fuel producers to include information and commitments relating to fossil fuel production, which can, on the one hand, increase the transparency and clarity of their targets and, on the other hand, catalyze international momentum toward policies and support schemes to limit or wind down fossil fuel production. This briefing points to the type of information related to fossil fuel extraction that fossil-fuel-producing countries could include in their international climate commitments (Section 2) and assesses the extent to which the top 20 fossil-fuel-producing countries have included such information or other references to fossil fuel production in their NDCs and LT-LEDS to date (Section 3).

¹ By “fossil fuel production,” we mean such stages of project life cycles as gaining access, exploration and appraisal, field development, extraction, transportation of fossil fuels, and decommissioning of fossil fuel facilities. Refining, power generation, and distribution are excluded from this definition.



2.0 Commitments and Information Related to Fossil Fuel Production That Could Be Included in Third-Generation NDCs and LT-LEDS

Since NDCs are nationally determined, countries have a wide latitude as to what information and commitments to include (UNFCCC, 2015, 2018). The same is true for LT-LEDS. This flexibility is an asset, as it means that NDCs and LT-LEDS can be tailored to detail how the transition away from fossil fuel production can be achieved. The COP 28 GST decision, in calling on parties to “contribute to [transitioning away from fossil fuels], in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches” (UNFCCC, 2023, paragraph 28d) further reinforces that each country’s NDC and LT-LEDS will look different when it comes to phasing out fossil fuel production.

Nonetheless, we point to five common elements that all fossil-fuel-producing countries could consider in their NDCs and LT-LEDS, drawing heavily on previous work (Jones et al., 2023; Piggot et al., 2018; Verkuil et al., 2019).

2.1 Background Information About National Fossil Fuel Reserves and Current and Projected Extraction

Many NDCs and LT-LEDS include background information regarding national circumstances, such as the country’s climate and levels and sources of emissions. Alongside this, countries could include “information on countries’ fossil fuel reserves, current production, future production plans and projections, support to fossil fuel production and the carbon content of fossil fuel production” (Jones et al., 2023, p. 8). Countries could also consider including “information on fossil fuel production infrastructure, such as the key facilities associated with fossil fuel production and transport” (Jones et al., 2021, p. 11). Baseline information on countries’ fossil fuel resources and their production plans is needed to understand the current situation (and the scale of the challenge in transitioning away from fossil fuels) and to assess the extent to which current production and production plans align with Paris goals. It also represents a first step toward fully addressing fossil fuel production in NDCs and LT-LEDS.

2.2 Pathways and Targets for Phasing Out Fossil Fuel Production

NDCs commonly include targets and pathways, for example, for emissions reduction or for scaling up renewable energy. Alongside these, countries could include targets or pathways for fossil fuel production phase-out that align with Paris goals (Piggot et al., 2018; Verkuil et al., 2019). Analogously to emissions reduction targets, such targets should include



“quantifiable information on the reference point for any quantitative targets, such as: a base year; timeframes for implementation; scope and coverage; and relevant assumptions and methodological approaches” (Verkuijl et al., 2019, p. 10). LT-LEDS could include pathways and milestones over a longer time period, as well as scenario planning and modelling (Piggot et al., 2018; Verkuijl et al., 2019). They could incorporate quantitative models and/or qualitative roadmaps for a managed transition away from fossil fuel production, including modelling the longer-term effects of short-term measures.

Third-generation NDCs will cover the time period up until 2035 (and in some cases 2040), depending on whether a country adopts a 5- or 10-year time frame. For most producer countries, this extends beyond the date by which equitable scenarios suggest they should have phased out production for a 67% chance of keeping global warming to 1.5°C above pre-industrial levels. Calverley & Anderson, (2022) modelled phase-out for five groups of producer countries, ordered by their capacity to transition away from production in terms of non-oil GDP/capita, and found that Groups 1,² 2,³ 3,⁴ and 4⁵ need to phase out oil and gas production by 2031, 2034, 2037, and 2038 respectively.

2.3 Policies and Measures for Constraining or Winding Down Production

NDCs and LT-LEDS commonly identify specific policies and measures that countries intend to pursue in order to achieve their targets and pathways. In addition to doing this for emissions reductions targets, countries could include these for phasing out fossil fuel production (Verkuijl et al., 2019). By doing so, countries would show that they have achievable plans in place to meet the end goal of phasing out fossil fuel production. There is a range of such measures that countries could include (Lazarus & van Asselt, 2018). Most urgent for countries to incorporate into their NDCs is a moratorium on the licensing of new oil and gas fields, in light of the scientific finding that no new oil and gas fields are required under a 1.5°C scenario (Bois von Kursk et al., 2022; IEA, 2021). Countries could also include other regulatory approaches “such as moratoria on other types of fossil fuel infrastructure; prohibiting the development of specific resources, infrastructure, or technologies; and restricting the leasing of state-owned lands and waters for fossil fuel development” (Verkuijl et al., 2019, p. 10). Countries could also include economic instruments, such as removing fossil fuel production subsidies or implementing increased production and export taxes on fossil fuels. In addition, nations could explore funding to compensate resource owners for leaving

² Group 1 includes Ireland, United States, Denmark, Netherlands, Austria, Qatar, Norway, Germany, Australia, France, United Kingdom, United Arab Emirates, Canada, Bahrain, South Korea, Italy, Japan, New Zealand, and Israel.

³ Group 2 includes Estonia, Poland, Hungary, Romania, Croatia, Turkey, Kuwait, Chile, Saudi Arabia, Brunei, Kazakhstan, Malaysia, Russia, and Argentina.

⁴ Group 3 includes Mexico, Belarus, Oman, Serbia, Thailand, Suriname, China, Trinidad & Tobago, Colombia, Brazil, and Albania.

⁵ Group 4 includes Peru, Cuba, South Africa, Ukraine, Mongolia, Indonesia, Tunisia, Turkmenistan, Vietnam, Iran, Egypt, Ecuador, Philippines, Azerbaijan, Guatemala, Bolivia, Algeria, Gabon, and Equatorial Guinea.



reserves undeveloped, divestment from companies involved in fossil fuel production, and policies to restrict international public finance from fossil fuel production infrastructure.

2.4 Transition Planning: Just transition and economic diversification plans and measures

A managed decline of fossil fuel production means some workers and communities will be adversely affected. Just transition policies to support these workers and communities, including through the provision of decent new jobs by investing in alternative sectors, providing training and education to help affected workers get alternative jobs, promoting community development, and ensuring social protection, are essential to facilitate the adoption of climate mitigation policies (Green & Gambhir, 2020; International Labour Organization, 2015; International Trade Union Confederation, 2017; Just Transition Centre & The B Team, 2018; Solidarity and Just Transition Silesia Declaration, 2018; United Nations Conference on Trade and Development, 2018). A transition away from fossil fuel production also needs to be “attentive to the communities that have borne the negative impacts of production, as well as ensure that adequate measures are in place to clean up former production sites and restore a healthy environment for communities in fossil fuel production ‘sacrifice zones’” (Healy et al., 2019, cited in Jones et al., 2021, p. 16).

Closely connected, many countries are increasingly recognizing that economic diversification is needed for an effective transition away from fossil fuels and are taking action to do so (Al-Sarhi, 2018; Oei et al., 2020; Ulrichsen, 2016). This is of particular importance for large fossil fuel producers, whose economies are dependent on fossil fuel rents, exports, and fiscal income (Ansari & Holz, 2020; Peszko et al., 2020). Indeed, even for producers with diversified national economies, diversification of regional economies in fossil-fuel-producing regions is of key importance to achieve an effective and fair transition away from fossil fuels, considering the large share of jobs, fiscal revenue, and overall economic activity linked to the fossil fuel sector in these regions (Yanguas Parra, 2024).

In their NDCs, countries with workforces engaged in fossil fuel production could outline “policies and measures to provide for a just transition for these workers and their communities, including policies for the participation and inclusion of affected workforces and communities in decision-making” (Verkuijl et al., 2019, p. 10). Equally, “nations could incorporate policies and measures to foster economic diversification away from fossil fuel production to other sectors” (Verkuijl et al., 2019, p. 10). When devising their LT-LEDS, nations could include “modelling, scenario planning, and road mapping for economic diversification and a just transition of workers and their communities over the longer term” (Verkuijl et al., 2019, p. 10).



2.5 Equity Considerations and International Support and Cooperation

Phasing out fossil fuel production has important implications for equity. By 2050, nearly 60% of remaining oil and gas and 90% of remaining coal must remain unextracted to stay within a 1.5°C carbon budget (Welsby et al., 2021), raising the question of whose fossil fuels should stay in the ground. Two factors are especially important: the extent of the country's dependence on fossil fuel production and the country's capacity to direct economic, technical, institutional, and governance-related resources toward a just transition in order to avert and manage potential disruption and absorb the costs (Muttitt & Kartha, 2020). Dependence may take the form of reliance on the fossil fuel sector for employment, dependence on fossil fuel rents for funding public services, or reliance on fossil fuel export revenues for foreign exchange. Capacity, though multi-dimensional, tends to be correlated with a country's income. According to Jones et al. (2019), “[t]ransparency about both dependence and capacity in NDCs and LT-LEDS can assist with transition planning as well as enable a robust assessment of: (1) whether countries’ approaches to fossil fuel supply are fair and ambitious, and (2) the level and type of support countries require for transitioning away from fossil fuel production” (p. 19).

NDC guidance requires countries to indicate how their NDC is “fair and ambitious, in light of [their] national circumstances” (UNFCCC, 2018, p. 7). Alongside statements about the fairness of emissions reduction commitments, countries could also include statements about how they consider their contributions on transitioning away from fossil fuel production to be equitable (Verkuijl et al., 2019). Countries could also communicate their international support needs (e.g., financial support, capacity building, technology transfer, etc.) (Jones et al., 2023). Developing countries could also clarify if the achievement of more ambitious targets and policies is conditional on international support from wealthier nations. Conversely, developed countries and countries in a position to do so could outline how they are supporting countries with less capacity toward a just transition away from fossil fuel production. Countries could also, where relevant, highlight their membership in international coalitions to phase out fossil fuel production, such as the Beyond Oil and Gas Alliance and the Powering Past Coal Alliance. LT-LEDS could also include these elements over the mid-century time frame.



6.0 How Existing NDCs and LT-LEDS Have Referenced Fossil Fuel Production

Previous research has shown that so far, “governments have not harnessed the full potential of NDCs and LT-LEDS to detail plans and targets to transition away from fossil fuels” by including the elements explained in the previous section (Jones et al., 2023, p. 4). While “more countries have explicitly addressed fossil fuel production in NDCs over time, this has mostly related to continued or expanded production, with little mention of efforts to prepare for a transition away from fossil fuel reliance” (Jones et al., 2023, p. 4).

Building on previous work, we analyzed all NDCs and LT-LEDS that countries had communicated to the UNFCCC until March 31, 2024⁶ available in the UNFCCC NDC Registry (UNFCCC, n.d.-c) and Long-Term Strategies Portal (UNFCCC, n.d.-b). Where a country submitted more than one update, we selected the most recent. We read all documents in full and identified references to fossil fuel production (and excluded references to fossil fuel consumption).⁷

Consistent with previous work, the documents were coded using five categories of fossil fuel production references: (1) background information; (2) winding down or phasing out production; (3) continuing or increasing production; (4) transition planning; and (5) equity and international support and cooperation. Additional information on those categories can be found in the downloadable database provided with this briefing.

Here, we present the results of our analysis for the largest 20 fossil fuel producers,⁸ which in 2022 accounted for 93%, 81%, and 72% of coal, oil, and gas production respectively (Energy Institute, 2023). **The full information on all the coding categories results and all the NDCs and LT-LEDS can be found in the downloadable database provided with this briefing.**

⁶ Countries that submitted new or updated NDCs in this period are the EU, Azerbaijan, Madagascar, Namibia, Oman, Brazil, Egypt, Holy See, Kazakhstan, and Türkiye.

Countries that submitted new or updated LT LEDs in this period are Armenia, Australia, Serbia, UAE, Belize, Bhutan, Bosnia and Herzegovina, Ethiopia, Georgia, Ireland, Oman, Solomon Islands, Sri Lanka, and Vanuatu.

⁷ This was complemented by a document search using the following terms: “coal,” “economic diversification,” “extract,” “fossil,” “fuel,” “gas,” “hydrocarbon,” “just transition,” “lignite,” “mine/mining,” “oil,” “petrol(eum),” “producer,” “production,” “subsidy/ies,” and “supply.”

⁸ We sorted out production of individual fossil fuels by volume and ranked the countries according to this measure. If the ranking were to be done according to energy content of the fossil fuels, Poland, Germany, and Türkiye would be excluded from the top 20 list, and Mexico, Nigeria and Kazakhstan would be included. Information for the NDCs and LT-LED of these and all other countries not included in this briefing can be found in the supplementary downloadable database provided with this briefing.


Table 1. Summary of references to fossil fuel production in climate documents of the 20 largest fossil fuel producers

Top 20 fossil fuel producers (sorted by volume)	Share of global production (% , 2022)			Mention of fossil fuel production in second-round NDC or LT-LEDS						
	Coal	Oil	Gas	Continued or increased production	High economic dependence on fossil fuels	Emissions mitigation measures	Pathways/ targets to wind down production	Economic diversification or just transition measures	Information equity/ international cooperation	Other/ comments
China	51.8	4.6	5.5	No mention	No mention	NDC	NDC (for outdated coal production)	No mention	No mention	
United States	6.1	17.2	24.2	No mention	No mention	LT-LEDS	No mention	LT-LEDS	No mention	
Russia	5.0	12.4	15.3	No mention	No mention	LT-LEDS	No mention	No mention	No mention	
Saudi Arabia	0.0	13.0	3.0	Conditionality of NDC ambition on robust contribution of oil export revenues	No mention	NDC	No mention	NDC	No mention	No LT-LEDS submitted
Canada	0.5	6.2	4.6	LT-LEDS (as global cleanest oil and gas producer)	No mention	NDC	No mention	No mention	No mention	
Australia	5.0	0.4	3.8	LT-LEDS 2.0 (for natural gas)	No mention	LT-LEDS 2.0	No mention	LT-LEDS 2.0	No mention	In 2024, Australia submitted its 2nd-generation LT-LEDS.



Top 20 fossil fuel producers (sorted by volume)	Share of global production (% , 2022)			Mention of fossil fuel production in second-round NDC or LT-LEDS						
	Coal	Oil	Gas	Continued or increased production	High economic dependence on fossil fuels	Emissions mitigation measures	Pathways/ targets to wind down production	Economic diversification or just transition measures	Information equity/ international cooperation	Other/ comments
India	10.3	0.7	0.7	No mention	No mention	No mention	No mention	No mention	No mention	
Indonesia	7.8	0.7	1.4	LT-LEDS (for oil production and refineries)	No mention	No mention	LT-LEDS (slow coal production decline)	No mention	No mention	
Iran	0.0	4.0	6.4	No mention	NDC (1st)	NDC (1st)	No mention	No mention	No mention	No LT-LEDS submitted
United Arab Emirates	0.0	4.1	1.4	NDC and LT-LEDS (to satisfy the global energy demand in the mid-term)	NDC	NDC and LT-LEDS	No mention	NDC and LT-LEDS	No mention	
Iraq	0.0	5.0	0.2	NDC (1st)	NDC (1st)	No mention	No mention	No mention	No mention	No LT-LEDS submitted
Qatar	0.0	1.7	4.4	NDC	NDC	No mention	No mention	NDC	No mention	No LT-LEDS submitted
Norway	0.0	2.0	3.0	No mention	LT-LEDS	NDC and LT-LEDS	No mention	LT-LEDS	No mention	Only incidental references to fossil fuel production in NDC



Top 20 fossil fuel producers (sorted by volume)	Share of global production (% , 2022)			Mention of fossil fuel production in second-round NDC or LT-LEDS						
	Coal	Oil	Gas	Continued or increased production	High economic dependence on fossil fuels	Emissions mitigation measures	Pathways/ targets to wind down production	Economic diversification or just transition measures	Information equity/ international cooperation	Other/ comments
Brazil	0.1	3.7	0.6	No mention	No mention	No mention	No mention	No mention	No mention	No LT-LEDS submitted
Kuwait	0.0	3.3	0.3	NDC (continuation of current trend)	NDC	No mention	No mention	No mention	No mention	No LT-LEDS submitted
Algeria	0.0	1.4	2.4	No mention	NDC (1st)	NDC (1st)	No mention	No mention	No mention	No LT-LEDS submitted
South Africa	2.6	0.0	0.0	LT-LEDS (for coal)	NDC and LT-LEDS	No mention	No mention	No mention	NDC (need for support for coal transition)	References to G20 pledge to phase out fossil fuel subsidies in LT-LEDS
Poland	1.2	0.0	0.1	No mention	No mention	No mention	In EU NDC	No mention	No mention	No LT-LEDS submitted
Germany	1.5	0.1	0.1	No mention	No mention	No mention	In EU NDC	No mention	No mention	
Türkiye	1.1	0,09	0.0	No mention	No mention	No mention	No mention	No mention	No mention	No LT-LEDS submitted
Total	93.1	80.8	77.5							

Source: Author's elaboration based on analysis of NDCs and LT-LEDS submitted until March 31, 2024.

Note: The full information on all the coding categories results and all the NDCs and LT-LEDS can be found in the downloadable database provided with this briefing.



Our analysis confirms the previous findings that “the vast majority of fossil-fuel-producing countries have included only limited information about fossil fuel production” in their NDCs and LT-LEDS (Jones et al., 2023, p. 9), and that “an increasing number of countries are signalling, implicitly or explicitly, a continuation or even an increase in fossil fuel production” in their NDCs and LT-LEDS (Jones et al., 2023, p. 5). In particular, natural gas is repeatedly referred to as a low-carbon fuel (or transition fuel) that is expected to play a role in global climate mitigation efforts in an effort to justified continued investments in expansion of extraction and export capacity (see, for instance, climate documents from Australia, Argentina, Qatar, and the United Arab Emirates, among other large natural gas producers).

As shown here, only three of the 20 world’s largest fossil-fuel-producing countries (counting the EU NDC double as it covers Poland and Germany) mention references to fossil fuels wind down in their NDCs. In general, policies mentioned in the NDCs analyzed are limited to production emissions (e.g., methane) mitigation, or transition planning. China, the world’s largest coal producer, makes reference to continuing its efforts to close outdated coal production capacity; however, the country avoids committing to targets or policies for overall production reduction. For LT-LEDS, many large fossil fuel producers have not yet submitted a long-term strategy, and of those who have, if at all mentioned, fossil fuels are only referred to in in the context of transition planning and extraction emissions mitigation. Explicit targets or policies to restrict or wind down fossil fuel production are still not present in any of the LT-LEDS of the largest producers.

Box 1. Have other countries outside the top 20 referenced fossil fuel production wind down?

Of all the NDCs submitted until March 2024,⁹ only four (EU, Costa Rica, North Macedonia, and Pakistan) mention policies or targets to limit fossil fuels production. Also, we note with concern that two first- generation NDCs that mentioned policies for limiting fossil fuels supply (India and Nigeria) have removed these references in their second-generation NDCs, representing a step backwards in ambition.

Regarding LT-LEDS, a small number of countries (Denmark, France, New Zealand, Slovakia, North Macedonia, and the United Kingdom) have mentioned measures or targets to limit fossil fuel production in the LT-LEDS, with most mentions to fossil fuels production-related policies and measures remaining in emissions mitigation measures and transition planning.

Of concern is that among the top 20 largest fossil fuel producers, nearly half of the NDCs and around one-third of LT-LEDS communicate plans to continue or increase fossil fuel production, either explicitly or implicitly. Similarly, smaller producers or countries without significant fossil fuel production also express their intentions to increase fossil fuel production in their NDCs or LT-LEDS (e.g., Indonesia’s vision to increase its domestic oil and gas

⁹ While the focus of this briefing are the top 20 fossil fuel producers, we reviewed all the NDCs and LT-LEDS submitted until March 31, 2024. For a full overview of all the NDCs and LT-LEDS, please consult the database published together with this briefing.

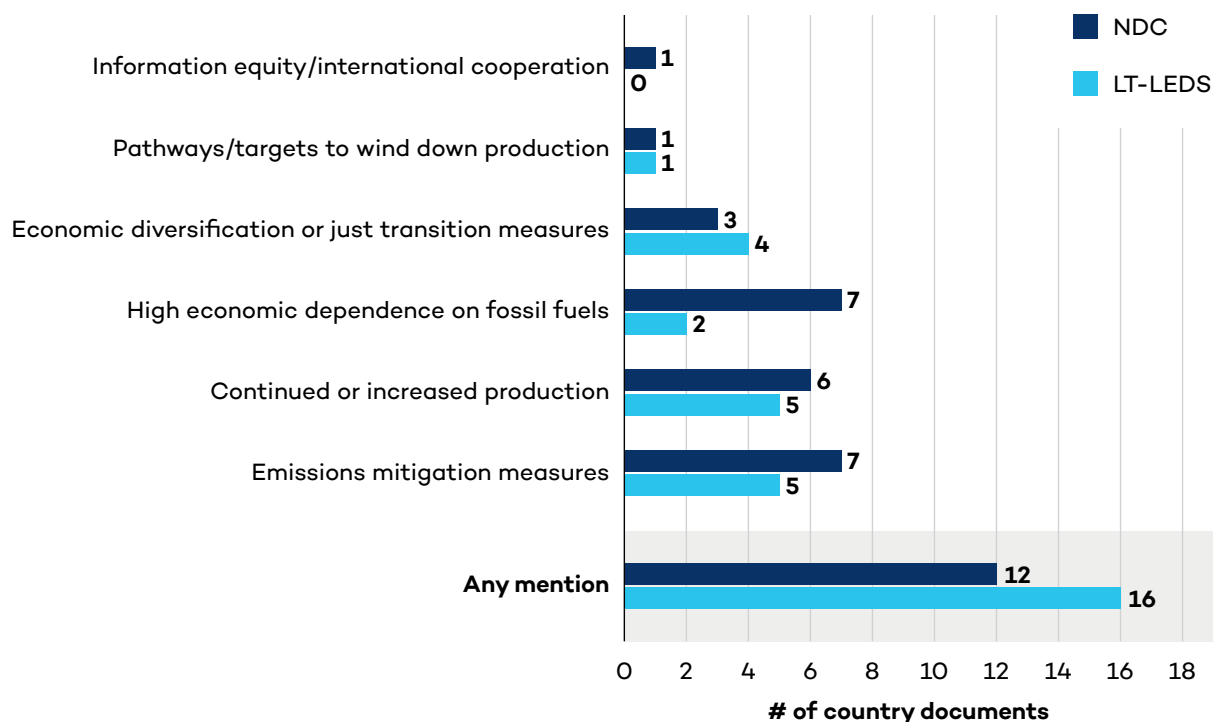


extraction and refinery capacity). Those plans for increased production stand in stark contrast with net-zero scenarios, under which no new fossil fuel projects are required (Bois von Kursk et al., 2022; IEA, 2023) and, if fully executed, could lead to exceeding 2°C and even higher warming scenarios (SEI et al., 2023).

There are common topics when fossil fuels are referenced in the NDCs and LT-LEDS of producers:

1. The high economic dependence on fossil fuels is usually highlighted as a key challenge to overcome (in terms of GDP contribution, export shares, government income, jobs, etc.). Here, most countries refer to efforts or intentions to diversify their economies, but none makes explicit reference to actively reducing the size of the fossil fuel sector.
2. Most of the policies, measures, and initiatives mentioned in relation to fossil fuel supply are exclusively restricted to the mitigation of production-related emissions (e.g., from methane leakage and flaring, carbon capture and storage and utilization, fossil fuel consumption of extraction facilities, etc.) or to economic diversification and just transition measures in fossil fuel-dependent regions and communities.
3. Energy supply security is mentioned as a justification for expanding the domestic fossil fuel extraction sectors, but concrete scenarios to compare with alternatives, such as renewable-energy-based systems, are not provided or referenced.
4. Transition risk or vulnerability to the global energy transition is acknowledged in some cases, where the social and economic impacts are highlighted or even estimated.

Figure 1. Overview references to fossil fuel production in climate documents of the 20 largest fossil fuel producers



Source: Author's elaboration based on analysis of NDCs and LT-LEDS submitted until March 31, 2024.



Figure 1 summarizes the number of countries that reference fossil fuel production in their climate documents in each of the categories we analyzed for the top 20 largest fossil fuel producers.

Finally, nearly one-third of the largest fossil-fuel-producing countries do not mention fossil fuel production in their NDCs, and more than half have not submitted an LT-LEDS or do not mention fossil fuels in their LT-LEDS. This is a stark exclusion considering the large share of emissions related to fossil fuel extraction and burning for those countries, even if emissions for exported fossil fuels are excluded. This exclusion becomes even more concerning for the countries that are still planning considerable expansions of their fossil fuel production (SEI et al., 2023) (e.g., Brazil, which is planning to double its oil and gas production by 2030) and have communicated those plans in other official government documents.



7.0 Conclusion

The science is clear: meeting Paris Agreement goals will require a managed phase-out of fossil fuel production, and there is no room for new fossil fuel production capacity. There is a significant opportunity for countries to use NDCs and LT-LEDS to communicate plans to phase out or restrict fossil fuel production. As they are bottom-up plans, countries have flexibility to reflect their national circumstances. This paper builds on previous work to propose five key elements for inclusion in new-generation NDCs or LT-LEDS. It confirms the findings of previous work that so far, countries by and large have not fully utilized this potential. Indeed, of the largest fossil fuel producers, most references to fossil fuel production in NDCs and LT-LEDS explicitly or implicitly relate to continuing or increasing production, not winding it down.

There is a window of opportunity, with countries expected to submit their third-generation NDCs by early 2025. Following the outcomes of COP 28, COP 29 represents an opportunity for countries to begin to align fossil fuel production with Paris Agreement goals. New NDCs and LT-LEDS will be central to informing new government plans and actions and sending signals to the markets regarding the future use and production of fossil fuels; therefore, it is important that the climate documents of fossil fuel producers tackle not only the use of fossil fuels, but also their production. Fossil-fuel-producing countries—and civil society organizations working in these countries—can thus use this timely window of opportunity to include (or push for the inclusion of) information and commitments relating to fossil fuel production. On the one hand, this can increase the transparency and clarity of their climate targets. On the other hand, it could catalyze international momentum toward policies and support schemes to limit or wind down fossil fuel production

Fossil-fuel-producing countries that have signalled, implicitly or explicitly, a continuation or increase in fossil fuel production in their NDCs and LT-LEDS should reconsider these plans and reflect increased ambition in this regard in their new-generation climate documents. This holds true for fossil-fuel-producing countries that do not mention fossil fuels in their climate documents but are still planning expansions of their fossil fuel production according to other official government documents.

In addition, fossil-fuel-producing countries could include in their new-generation NDCs and LT-LEDS:

- **Background information on national fossil fuel production, future production plans, reserves, and support.** Understanding the current situation is the first step to aligning plans with Paris goals.
- **Targets and pathways to wind down fossil fuel production.** This could be in the form of a commitment to reduce or phase out fossil fuel production by a target date, including interim targets. LT-LEDS could include scenarios, modelling, and projections for phasing out fossil fuel production.
- **Policies and measures to disincentivize or constrain fossil fuel production.** Examples of possible policies include but are not limited to the following: a



moratorium on oil and gas exploration; cancellation of exploration and exploitation licensing rounds; the non-renewal or revocation of exploitation permits; a moratorium on developing new oil and gas fields; and the reform of fossil fuel production subsidies. LT-LEDS could model the effects of these measures over the longer term.

- **Policies and measures for just transition and economic diversification.**
Countries could include measures to support workers and communities affected by fossil fuel production and the shift away from it, measures to remediate former fossil fuel production sites, and policies and plans to diversify the economy away from fossil fuel production. LT-LEDS could include modelling, scenario planning, and road mapping for a just transition and economic diversification over the longer term.
- **Information related to equity and international support and cooperation.**
Countries could include a statement of how fossil fuel production reduction targets are fair and ambitious with regard to national circumstances. They could note international support requirements to wind down (or forego development of) fossil fuel production, including whether their targets and policies are conditional on receiving international support. Developed countries could include commitments to provide support to assist countries with low capacity to transition away from fossil fuel production. Countries could also include membership of international fossil fuel phase-out initiatives, or bilateral or multilateral partnerships to support economic diversification.

Finally, countries that already include (or will include) fossil fuel production in their NDCs and LT-LEDS should report on their progress using available tools from the UNFCCC process, such as the BTRs to increase transparency and traceability, and demonstrate their ongoing efforts to achieve their targets in this area. BTRs provide information on national inventory reports, progress toward NDCs, policies, and measures, among others. They have a standardized format and reporting templates for some elements, but also allow for additional reporting on other aspects on a voluntary basis, opening the door for including information on all five elements mentioned above. Similarly, for countries that decide to focus their NDCs and LT-LEDS on emissions reductions or demand-side efforts but still want to demonstrate their efforts to address fossil fuels production and just transitions, BTRs can become a useful tool to report and reflect increased ambition or support needs in this important area.



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Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

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