

# Submission to the COP30 Presidency Roadmap - Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner

17/03/2026

## Context

As ECODES, we have been working over 30 years to accelerate the transition toward a carbon-neutral, inclusive and responsible society, considering that fossil fuels are the major cause of climate change. We recognise the outcome of the first Global Stocktake calls on Parties to contribute to the global effort to transition away from fossil fuels in energy systems in a just, orderly and equitable manner. We consider that the COP30 Presidency Roadmap represents an opportunity to translate that political commitment into operational guidance, identifying barriers, enabling conditions and differentiated pathways that can accelerate implementation while respecting national circumstances and development priorities.

As the transition away from fossil fuels is not solely an energy sector adjustment; it constitutes a structural economic transformation affecting industrial systems, fiscal frameworks, labour markets, trade dynamics and social protection mechanisms. As such, the Roadmap should adopt a systemic approach that integrates supply- and demand-side measures, financial reform, technological deployment and governance innovation.

### **(a) What are the most critical barriers — whether physical, economic, financial, institutional, technological or social— preventing a transition away from fossil fuels?**

At the time the UNFCCC was established, a credible transition away from fossil fuels appeared technically and economically unfeasible. Today, however, this is no longer the case. Mature renewable energy technologies, significant advances in energy efficiency and sufficiency measures, electrification pathways, and emerging solutions such as green hydrogen for hard-to-abate sectors provide a technically viable foundation for deep decarbonisation. The challenge is therefore no longer primarily technological, but structural, financial and political.

One of the central barriers is structural lock-in. Fossil fuel systems are embedded in long-lived infrastructure — power plants, extraction sites, transport networks and industrial facilities — representing substantial sunk capital. This creates economic inertia and political resistance, particularly where fossil fuel value chains underpin employment, regional development and fiscal revenues.

Economic and financial distortions further slow the transition. Fossil fuel subsidies — both explicit and implicit — continue to misalign market incentives. At the same time, clean energy technologies face unequal and often prohibitively high costs of capital, especially in developing economies. Limited access to affordable finance constrains the scale-up of renewables, grid expansion and storage systems. In addition, insufficiently clear and predictable policy signals increase uncertainty, raising concerns over stranded assets and discouraging long-term low-carbon investment.

Physical and systemic constraints also remain relevant. Grid infrastructure, interconnections and storage capacity are not expanding at the pace required to accommodate large-scale renewable deployment. Resource availability — including critical minerals — raises additional geopolitical and sustainability considerations.

Institutional fragmentation represents another major obstacle. Energy policy is frequently developed in isolation from fiscal, industrial and social policies, resulting in incoherent or contradictory strategies. Regulatory instability and shifting political priorities weaken investor confidence. In many countries, transition objectives are not yet fully embedded in national development strategies and long-term planning frameworks.

Finally, social and political factors are decisive. Regions and communities dependent on fossil fuel industries face legitimate concerns related to employment, income stability and territorial cohesion. Where transition policies are perceived as socially regressive or detached from local economic opportunities, resistance intensifies. Without credible and adequately funded just transition frameworks, political feasibility becomes a binding constraint.

In sum, while the technological pathway for transitioning away from fossil fuels is increasingly clear, overcoming structural lock-in, correcting financial and policy distortions, strengthening institutional coherence, ensuring adequate infrastructure, and embedding social justice in transition strategies remain the critical barriers to implementation.

## **(b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the transitioning away commitment?**

Accelerating the transition requires coordinated and mutually reinforcing interventions across supply, demand, financial and institutional domains. No single lever is sufficient; credibility and speed depend on policy coherence and predictability.

### 1. Supply-side measures

Addressing fossil fuel supply is politically complex, given entrenched economic interests and the weight of stakeholders who perceive transition as a threat to employment, fiscal revenues and

strategic assets. Nevertheless, credible and transparent phase-down schedules for unabated fossil fuel production and consumption are essential to provide long-term investment signals.

Publicly owned fossil fuel companies can play a catalytic role by aligning capital expenditure with transition pathways and signalling strategic reorientation. Governments also retain regulatory and fiscal tools — including taxation, production limits, subsidy reform and regulated tariff structures — that can progressively shift incentives away from high-carbon activities and toward clean energy deployment.

However, supply-side measures alone are unlikely to deliver transformation at the required pace without complementary demand-side action.

## 2. Demand-side transformation

Demand-side instruments are often more immediately actionable and politically feasible. Carbon pricing mechanisms, regulatory performance standards, and green public procurement frameworks can shift consumption and investment patterns, thereby influencing supply decisions indirectly but effectively. The legitimacy and durability of tariff instruments such as carbon pricing increase when revenues are transparently used to support vulnerable households, finance clean infrastructure and enhance public acceptance.

Electrification strategies in transport, buildings and industry are central to reducing fossil fuel demand, provided they are coupled with decarbonised power generation, expanded storage capacity and modernised grid infrastructure. In parallel, a structural reflection on energy efficiency and sufficiency is indispensable. Reducing overall energy demand — through efficiency standards, behavioural incentives and regulation of excessive consumption — lowers system costs and facilitates a faster phase-out of fossil fuels.

## 3. Financial system alignment

Reform of the financial architecture is critical to avoid carbon lock-in, particularly in developing economies. Improved access to concessional and blended finance is necessary to enable clean energy deployment without reinforcing fossil-based development pathways.

International financial institutions and multilateral development banks must align their portfolios with 1.5°C-compatible trajectories and actively reduce the cost of capital for renewable energy, grid expansion and efficiency projects. Science-based transition finance taxonomies are also essential to ensure that financial flows support genuine decarbonisation and do not prolong high-emitting assets under ambiguous or overly flexible criteria.

## 4. Institutional coherence and governance

Finally, institutional coordination enhances the effectiveness of all other levers. Aligning energy, fiscal, industrial and social policies within a coherent long-term transition strategy reduces uncertainty, strengthens investor confidence and improves political feasibility.

### **(c) What country, regional or sector roadmap experiences, best practices, and lessons learned can be shared?**

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Since the mid-2000s, Spain has pursued an energy transition combining policy planning, social dialogue and regulatory frameworks. One notable milestone has been the progressive phase-out of coal. Spain is among the few countries that began closing coal mines and coal-fired power plants in a coordinated manner. After COP21, the process accelerated and was largely completed by 2025, following agreements between the government, energy companies and trade unions. These agreements were embedded within broader energy planning instruments, including the National Energy and Climate Plan (PNIEC).

A key feature of Spain's approach has been the emphasis on social dialogue. Coal mine closures included early retirement schemes and support measures for workers, while employees from coal power plants were largely relocated to other facilities. The process also led to the creation of the Institute for Just Transition (Instituto para la Transición Justa), which supports economic diversification and local development projects in affected regions.

Spain has also expanded renewable energy rapidly, reaching around 56% renewable electricity generation. The country's strong renewable resource base and relatively low electricity costs are positioning it as a potential hub for green hydrogen and low-carbon industrial development.

However, Spain's experience also highlights several challenges. While direct workers in fossil industries were largely protected, indirect employment and local economies linked to mining activities—such as small businesses and services—faced greater disruption. Women and young people were often more vulnerable to these economic shifts. In addition, the rapid expansion of renewable projects has sometimes faced social resistance due to limited territorial planning, insufficient local participation and uneven distribution of economic benefits.

Spain also faces structural challenges related to grid integration and storage capacity. Although the electricity system is among the most advanced in Europe for integrating renewables, limited storage and the continued operation of other generation sources can lead to renewable curtailment.

Overall, Spain provides an important case study showing that fossil fuel phase-out can be achieved through coordinated planning, strong social dialogue and renewable expansion, while also underscoring the importance of territorial planning, equitable benefit sharing and infrastructure investment.

Although the Spanish case reflects significant progress — notably in renewable energy expansion, coal phase-out and the implementation of just transition agreements in former mining regions — it also illustrates that transition processes are neither linear nor complete. Spain continues to face challenges in reducing gas dependence, accelerating electrification and strengthening demand-side measures. A key lesson is that even comparatively advanced economies must maintain policy consistency and long-term ambition to avoid backsliding.

Beyond Europe, several countries provide relevant examples of fiscal and structural adaptation. In fossil-dependent economies, reducing reliance on hydrocarbon revenues has required deliberate efforts to diversify fiscal bases and strengthen tax systems. Nigeria’s attempts to broaden revenue collection, as well as the introduction of value-added taxes in Saudi Arabia and the United Arab Emirates in 2018 and tax reforms in Oman the same year, demonstrate the importance of building alternative public revenue streams to enhance economic resilience during transition. These measures do not in themselves constitute decarbonisation strategies, but they create enabling conditions for reducing structural fossil fuel dependence.

Colombia’s 2024 investment plan, mobilising approximately USD 40 billion for fossil fuel transition and adaptation, offers another instructive experience. By articulating national priorities through a structured platform and seeking to attract blended international public and private finance, Colombia has illustrated how domestic planning can be linked to international capital mobilisation. This approach underscores the importance of credible roadmaps combined with financing mechanisms capable of supporting implementation.

China’s trajectory also provides an important case study. The rapid decline in renewable energy costs has altered the economic calculus of coal-intensive systems, even in a country with substantial domestic coal reserves. While coal remains present in the energy mix, the increasing competitiveness of renewables has reduced its structural advantage. This experience demonstrates the transformative potential of technological and cost dynamics, while also highlighting the need to integrate social and environmental safeguards to ensure that the transition remains orderly and equitable.

At the international level, cooperative initiatives often referred to as “climate clubs,” such as the Beyond Oil and Gas Alliance, the Powering Past Coal Alliance and the Clean Energy Transition Partnership, have created platforms for knowledge exchange, coordinated commitments and technical cooperation. These mechanisms can accelerate ambition and reduce first-mover risks by

aligning participating countries around shared objectives. At the same time, recent developments illustrate their vulnerability to shifting domestic political priorities, underscoring the importance of governance robustness and sustained political commitment.

Taken together, these experiences suggest that successful transition pathways require fiscal restructuring, credible long-term planning, access to finance, technological competitiveness and strong institutional frameworks. They also demonstrate that progress is contingent on political durability and on embedding social justice considerations within transition strategies.

#### **(d) How can a just, orderly and equitable transition best reflect the diverse realities of countries at different stages of development and with different degrees of dependence on fossil fuels?**

A just, orderly and equitable transition requires that equity be operationalised through concrete policy differentiation rather than treated as a declaratory principle. This differentiation should reflect historical responsibility, economic capacity and development needs, in line with the principles of the Paris Agreement.

Developed economies bear a particular responsibility to lead in the rapid phase-down of unabated fossil fuels and to provide scaled-up support to developing countries. This includes predictable climate finance, concessional lending, technology transfer and capacity-building. Without credible international support, accelerated transition expectations risk undermining development objectives and exacerbating inequality.

Furthermore, international cooperation is indispensable to ensuring that transition occurs “in a fair, orderly and equitable manner.” Beyond bilateral and multilateral finance, cooperative platforms — including climate clubs and sectoral alliances (e.g. coal phase-out or clean energy partnerships) — can facilitate knowledge exchange, policy coordination and technical support.

For fossil fuel-dependent developing economies, transition pathways must reconcile climate ambition with macroeconomic stability, poverty eradication and social cohesion. Fiscal space, access to affordable capital and technological cooperation are essential enabling conditions. To do so, in countries highly dependent on fossil fuel revenues, orderly transition requires proactive fiscal and economic diversification strategies. Gradual rebalancing of public revenues away from oil and gas dependence must go through a strengthening domestic tax systems and broadening the tax base (e.g. VAT introduction or reform, as seen in parts of the Gulf region). National transition investment platforms can also play a critical role in defining priorities and attracting blended international public and private finance. Recent examples demonstrate how structured investment plans can mobilise substantial capital for transition and adaptation objectives.

National transition roadmaps should be clearly articulated and aligned with Nationally Determined Contributions (NDCs) and Long-Term Low Emission Development Strategies (LT-LEDS). Monitoring frameworks must track not only emissions reductions and fossil fuel phase-down progress, but also social and economic indicators to ensure that equity objectives are being met. Hence, a just transition framework requires comprehensive workforce strategies, including retraining programmes, social protection schemes and local economic diversification initiatives. Territorial approaches are particularly relevant for regions structurally dependent on fossil extraction or refining activities. Participatory governance mechanisms — involving workers, local authorities, civil society and the private sector — enhance legitimacy, reduce resistance and improve long-term policy durability.