Belém Mission to 1.5°C

Accelerating energy sector methane abatement to keep 1.5°C within reach

Submitted by: Environmental Defense Fund (EDF)

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Introduction

Environmental Defense Fund (EDF) is a global environmental NGO operating in more than 30 countries. EDF pioneered methane science and advocacy first in the United States more than a decade ago and has since grown its science and policy work globally in partnership with governments, industry, and civil society. EDF's advocacy transformed methane from a climate footnote into a top global priority. This submission responds to the call for inputs to the Belém Mission to 1.5°C, focusing on energy sector methane as a near-term mitigation priority. Methane's warming potency makes it a critical lever for climate action: a single tonne has the same warming impact over 20 years as approximately 84 tonnes of CO_2. Pricing and reducing super-pollutants, including methane, could cut up to 8 GT CO2 equivalent annually from the global 53 GT emissions problem. This submission also lands as the UN Secretary-General places methane at the centre of the near-term climate agenda. His June 2026 Call to Action on Methane: three sectors, nine actions by 2030 singles out the fossil fuel sector as the immediate priority, offering the largest, fastest and most cost-effective methane reductions available this decade.

Executive Summary

The Belém Mission to 1.5°C arrives at an important moment. The Global Mutirão Decision from COP30 acknowledges there has been collective progress on the Paris Agreement temperature goal while recognising that action remains insufficient. Closing the ambition and implementation gap requires acting on the fastest, cheapest, and most proven near-term mitigation opportunities. Cutting methane waste from the energy sector is a crucial example of such an opportunity that also bolsters energy security and affordability.

Methane is responsible for approximately 30% of the warming experienced today, and the oil, gas, and coal industries collectively account for around 35% of anthropogenic methane emissions. The IEA estimates that around 70% of fossil fuel sector methane emissions can be eliminated using technologies available today, with a large proportion of those reductions achievable at no net cost. This opportunity remains underexploited in Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) worldwide. The Secretary-General's Call to Action reinforces why this sector should come first: its mitigation technologies are mature and often inexpensive so the barriers to abatement are no longer technological but regulatory, financial and political. That makes fossil fuel methane the most immediate lever available to governments, industry and investors to slow warming this decade while accelerating the broader energy transition.

This submission focuses on five areas where international cooperation can drive the fastest near-term gains:

- **Enhanced measurement to accelerate abatement**: deploy and scale monitoring and measurement technologies to resolve uncertainty in methane emissions from fossil fuel supply chains. Generating transparent, independently verifiable, and internationally comparable emissions data ensures that mitigation, regulation and market action can be targeted and validated.
- **Drive mitigation with targeted regulation:** use emissions data to differentiate high- and low-emitting assets and apply regulatory pressure. Well-designed, prescriptive and performance-based standards (such as those already in force in the EU, Canada and states like Colorado in the U.S.) can rapidly reduce emissions intensity across oil, gas, and coal supply chains while providing operators with clear compliance pathways.
- **Build sector-specific, multi-stakeholder coalitions:** support the formation of alliances modelled on key initiatives such as the Coalition for LNG Emission Abatement towards Net-Zero (CLEAN), that bring together producer and consumer countries, industry, multilateral organisations and civil society. These coalitions should align on shared measurement standards, and chart coordinated pathways for equitable transition that respect the needs of affected communities and economies.
- **Integrate methane reporting on a 20-year basis:** national and IPCC frameworks should incorporate methane reporting based on a 20-year Global Warming Potential to reflect the value and urgency of methane reductions for limiting climate impacts.
- **Finance and institutions:** Sustainability-linked bonds and blended finance can channel capital to methane abatement at NOCs in lower-income countries.

1. Improve measurement to accelerate mitigation

Accurate, independent measurement provides an important basis for methane mitigation because it ensures emissions can be identified and accounted for through regulation, emissions pricing and market knowledge. Measurement efforts can be strengthened through global cooperation in the form of protocols and translation of domestic action into international standard-setting.

High-resolution emissions data across fossil fuel production sites and supply chains allows facility operators and policymakers to identify the emissions sources that are most critical to address first. Modern emissions monitoring and measurement technologies now provide unprecedented visibility to detect emissions, locate key methane leaks to focus on, and generate consistent, comparable data across countries and operators.

Global collaboration between the United Nations Environment Program (UNEP), oil and gas companies, governments and NGOs led to the development of the Oil and Gas Methane Partnership 2.0 (OGMP), a flagship program at UNEP which provides principles and technical guidance on the best practice for methane monitoring, reporting and verification. OGMP now has over 150 member companies and is increasingly being incorporated into domestic regulation. For example, the European Union's Energy Methane Regulation requires use of/alignment with OGMP reporting protocols pending the development of European-specific standards, and New Mexico is reducing the inspection frequency for OGMP member companies.

Domestic action can also play a crucial role in establishing international norms. The EU's Methane Regulation has initially set standards for methane reporting domestically, but from

January 2027 those standards will also apply to imported fossil fuels, which should build momentum globally for better methane performance.

Global cooperation in methane measurement can be strengthened through support of UNEP's International Methane Emissions Observatory (IMEO), which conducts methane science research and measurements in collaboration with country-specific researchers. For example, the Australian Government has commissioned IMEO to coordinate a controlled release study to measure methane emitted from open-cut coal mines. This will enable development of the world's first scientifically validated methane reporting method from open-cut coal mines.

In addition to helping target mitigation opportunities, accurate measurement also strengthens accountability. If emissions pricing is in place, accurate measurement provides a foundation for appropriate emissions costs. It also provides important data to help markets decide on investment risks and opportunities.

Recommendation: *Parties should promote international cooperation in methane measurement standards, including through engagement with initiatives such as OGMP and IMEO. By aligning domestic regulations with robust measurement frameworks and supporting the development of consistent global standards, Parties can improve transparency, strengthen accountability, facilitate emissions pricing and investment decision-making, and accelerate methane emissions reductions worldwide.*

2. Accelerate emissions cuts through regulation

The value of methane emissions data is predicated on the mitigation action that follows, and currently, detection runs far ahead of response. As the Secretary-General's Call to Action notes, UNEP's Methane Alert and Response System had issued over 5,000 alerts on major emission events across 33 countries by February 2026, yet the global response rate reached only around 12% in 2025. The world can increasingly see large emission events as they happen, making continued inaction a choice rather than a function of missing data.

Regulation to reduce Scope 1 emissions, such as domestic carbon pricing, emissions intensity standards, and prescriptive rules can accelerate methane mitigation. By connecting quantified emissions directly to financial or regulatory liability, producers are incentivised to adopt mitigation technologies, improve operational practices, and prioritise lower-emissions fuel supply. Coupled with robust measurement, Scope 1 incentives ensure that data drive tangible emissions reductions.

Market mechanisms (incorporating methane emissions, such as Australia's Safeguard Mechanism and Norway's carbon tax) are an economically-efficient way to ensure measurement translates into action. They encourage parties across the supply chain, including energy exporters and domestic energy consumers, to find the most cost-effective ways to address emissions pricing constraints. When combined with emissions border adjustment mechanisms, such as the EU Carbon Border Adjustment Mechanism, they can incentivise trade partners to accelerate decarbonisation policies. Norway illustrates the scale of the potential impact: it banned routine flaring in 1971 and has taxed petroleum-sector CO_2 and methane emissions since 1991, and the Secretary-General's Call to Action notes that if every country matched Norway's upstream oil and gas methane intensity, global oil and gas methane emissions could fall by roughly 90%.

In EDF's experience, the most effective supply-side methane abatement occurs when market-based policy is combined with direct regulation. For example, the EU's Energy Methane Regulation includes restrictions on venting and flaring of methane, while also

setting methane emissions intensity thresholds for fossil fuels (Articles 15 and 29). Canada's recently-finalised Methane Regulations allow fossil fuel operators to choose between a prescriptive or performance-based compliance pathway. Leakage detection and repair (LDAR) programs can also complement performance standards to accelerate emissions cuts at oil and gas facilities. At underground coal mines, mandatory ventilation air methane (VAM) abatement can fast-track mitigation. For example, the State of New South Wales in Australia recently introduced requirements for most underground coal mines to install technology to mitigate VAM emissions from 2032. Coal mine methane regulation still lags oil and gas, and the Secretary-General's Call to Action frames coal as a near-term opportunity, calling for mine-level measurement and public reporting, time-bound mitigation plans for high-emitting sites, and enforceable post-closure methane management. It singles out Australia's Safeguard Mechanism, which now applies to 59 of the country's largest mines and requires their emissions to decline steadily to 2030 or be offset with carbon credits, as an example of the kind of action needed.

The energy security case for reform is compelling. Analysis by S&P Global commissioned by EDF found that venting, flaring, and fugitive curtailment reforms in the Aussie-ASEAN region could unlock around 9 billion cubic metres (bcm) of additional gas supply. Globally, the IEA estimates that methane abatement from oil and gas could make nearly 100 bcm of gas available to markets each year, and addressing flaring could unlock a further 100 bcm. The total unlocked volume is nearly twice the annual volume of gas that passes through the Strait of Hormuz.

Recommendation: *Parties should advance methane mitigation by integrating mitigation into their NDCs through market mechanisms and regulations, providing flexibility in implementation pathways for countries to achieve their methane targets.*

3. Promote sector-specific collaboration

Building on existing sectoral initiatives can help drive coordinated and well-planned decarbonisation work. Existing multi-country collaborations such as CLEAN and the European Union's Methane Regulation help align incentives for measurement and mitigation across supply chains. CLEAN is an initiative launched by major LNG buyers in Japan and South Korea and supported by the European Union, Australia and Canada to improve LNG supply chain emissions transparency and mitigation. As outlined above, the EU's Methane Regulation gradually applies domestic requirements around methane measurement and mitigation to imported fossil fuels.

These partnerships play an important role in energy transition discussions that balance global energy needs, harmonize MRV and methane intensity standards, and align global fossil fuel trade with climate imperatives.

The Secretary-General's Call to Action points to a further collaborative lever: a common, globally recognised methane intensity benchmark to anchor a marketplace for near-zero-methane fossil fuels. Such a benchmark would define what qualifies as near-zero production, ensure comparability across producers, guard against greenwashing, and allow importers, financiers and regulators to tie market access, capital and contracts to methane performance. The COP30 statement on Drastically Reducing Methane Emissions in the Global Fossil Fuel Sector, signed by 11 countries, similarly calls for the use of market levers through performance standards that reflect local needs and contexts.

Recommendation: *Parties should consider expanding existing trade-based and multilateral initiatives for driving down methane emissions with a view to expanding their role in the energy transition.*

4. Integrate methane reporting on a 20-year basis

Currently, methane is usually reported at a corporate and national level only on a 100-year Global Warming Potential (GWP) basis, even though methane's atmospheric impacts are best measured on a 20-year timeframe (because of its short-lived but potent nature).[1] While this meets the Intergovernmental Panel on Climate Change (IPCC)'s requirements for reporting, other jurisdictions are starting to incorporate a 20-year GWP. For example, the European Union's Methane Regulation preamble states 'a 20-year and a 100-year time horizon for global warming potential should be used' for reporting methane emissions under the Regulation. New York State's Climate Leadership & Community Protection Act requires methane-CO2 equivalence to be calculated on a 20-year timeframe.[2]

Reporting methane on a 20-year GWP could improve the recognition of methane reductions as an effective use of capital, leading to prioritising of methane mitigation. Productivity and economic efficiency would in turn be lifted by signalling to markets that capital should be directed to the highest impact emissions mitigation projects. EDF understands that some fossil fuel companies already calculate methane emissions impacts using both GWP100 and GWP20.

Recommendation: *Parties should encourage national and IPCC reporting frameworks to incorporate GWP20 for methane emissions. This shift would highlight the value of methane reductions for limiting climate impacts, and more accurately reflect return on investment for abatement action within the fossil fuel industry.*

5. Bridge the financing gap through sustainable finance instruments

The IEA estimates the financing gap for fossil fuel methane abatement in low- and middle-income countries to be approximately USD60 billion, of which USD40 billion relates to active operations and USD20 billion to abandoned facilities. External financing deployed to date totals less than USD1 billion.

EDF's analysis of sustainable finance instruments for methane abatement identifies several mechanisms relevant to NOCs and smaller operators, such as:

- **Use of proceeds instruments and green bonds:** Use of proceeds instruments make up the largest group of sustainable debt instruments and are dominated by green bonds, representing nearly half of the sustainable debt market. Proceeds from green bonds must be allocated to eligible uses with quantifiable sustainability benefits.
- **Sustainability-linked bonds and loans (SLBs/SLLs):** borrowing costs could be tied to methane-specific KPIs such as OGMP 2.0 Gold Standard attainment or a quantified methane intensity reduction target. The Methane Finance Working Group, launched at COP28, published guidance on issuing methane-related financial instruments, including use-of-proceeds bonds and key performance indicator-linked debt.

[1] A paper in Science by EDF scientists elaborates on the merits of a two-value reporting standard for GWP 'Unmask temporal trade-offs in climate policy debates'.
[2] ECL § 75-0101(2).

- **Blended finance:** development finance institutions (DFIs) and multilateral banks could use concessional capital to de-risk NOC abatement projects and crowd in private investment.

Another initiative is the World Bank Global Flaring and Methane Reduction (GFMR) Partnership which launched at COP28 in December 2023 with over USD 250 million committed and a mandate to mobilise billions more. GFMR provides catalytic grant funding, technical assistance, and policy advisory services to developing country governments and state-owned operators. It is active in over 12 countries accounting for about one quarter of oil and gas sector methane emissions.

Recommendation: *The Belém Mission should call on multilateral development banks, Green Climate Fund, and bilateral DFIs to scale up dedicated financing for NOC methane abatement in lower-income producing countries, and encourage development of standardised SLB/SLL frameworks with KPIs aligned to OGMP 2.0 or equivalent national standards.*

Conclusion

The Belém Mission to 1.5 it requires a coherent supply-side framework to match demand-side action. Accurate emissions data, and verification of reported emissions, improves understanding of emissions profiles across facilities, companies, countries and regions, providing an important basis for mitigation action. From that base, performance-based standards and direct regulation create real incentives for producers to reduce emissions, especially if internationally connected. Sector-specific coalitions can align these efforts across borders, and a shift to GWP20 reporting would strengthen the case for urgent action to cut methane. Along with boosted financing for abatement, these actions would form a mutually reinforcing and data-informed framework for delivering on the Mission to 1.5.