

# ***OUTLINING AN INTERNATIONAL METHANE EMISSIONS CREDIT MECHANISM FOR THE OIL & GAS SECTOR***

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## **Overview**

Cutting methane emissions now can rapidly reduce the rate of warming in the near-term. By implementing readily available measures, 45% of methane can be reduced by 2030, avoiding 0.3°C increase by the 2040s, according to UNEP’s Global Methane Assessment.<sup>1</sup> At COP26 in Glasgow, over 100 countries signed onto the Global Methane Pledge (GMP), committing to a collective goal of reducing global methane emissions by at least 30% by 2030 from 2020 levels. These countries, accounting for nearly half of human-caused methane emissions, include both developed and developing nations from all regions of the world.<sup>2</sup>

A large share of methane mitigation potential is found in the oil and gas sector where it is relatively easy and cost-effective to locate and fix leaks, minimize venting and flaring (Ocko et al., 2021)<sup>3</sup>. As over 70% of methane emissions across the oil and gas supply chains come from upstream operations<sup>4</sup> (IEA’s 2022 Methane Tracker)<sup>5</sup>, responsibility for mitigating oil and gas methane emissions largely rests with the world’s oil and gas producing countries. Regulations to address these emission sources exist in a few producer countries, notably Norway, the US, Canada, and Mexico. Yet, higher ambition is needed to reduce methane emissions globally.

Besides oil and gas producing countries, the GMP also enlists major oil and gas importers such as the European Union (EU), Japan and South Korea to reduce global methane emissions. In December 2021, the European Commission put forward its methane regulatory proposal for the energy sector, including compulsory disclosure of the methane emissions from its oil and gas imports. The proposal however includes no more stringent measures to reduce the large methane “footprint” associated with these imports, which covers more than 90% of the EU’s oil and gas consumption. Currently, no credible mechanism exists to enable importers to deal with the upstream methane emissions associated with their oil and gas imports (Bose et al., 2021).<sup>7</sup>

To address this gap, we outline an international credit mechanism where oil and gas importing countries or companies would finance methane emission reduction in an oil and gas producing country and receive credits for use towards its participation in the GMP and/or its Nationally Determined Contribution (NDC) under Article 6 of the Paris Agreement. This mechanism can help raise ambition in the oil and gas producing countries that are developing economies and therefore may not be expected to raise their own ambitions without external support.

## **Methods**

The proposed mechanism is built upon the Climate Action Teams (CAT)<sup>8</sup> and the Lowering Emissions by Accelerating Forest finance (LEAF)<sup>9</sup>— two innovative models for international transfers of emission reduction and removals— but specifically designed to address methane emissions in the oil and gas sector.

A group of oil and gas corporate buyers would make a commitment to pay a developing-economy host country to reduce its methane emissions from its oil and gas sector below a crediting baseline. A higher-income partner country would join as last-resort credit buyer to provide surety and credibility to the transaction. The crediting baseline would be based on independent fly-over aerial measurements as well as projections and modeling that would reflect a level of self-funded methane reduction effort by the host country.

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<sup>1</sup> CCAC, UNEP. (2021). Global Methane Assessment: Benefits and costs of mitigating methane emissions. Climate and Clean Air Coalition (CCAC), United Nations Environment Programme (UNEP).

<sup>2</sup> For more information see <https://www.globalmethanepledge.org/>

<sup>3</sup> Ocko, I. B., Sun, T., Shindell, D., Oppenheimer, M., Hristov, A. N., Pacala, S. W., ... & Hamburg, S. P. (2021). Acting rapidly to deploy readily available methane mitigation measures by sector can immediately slow global warming. *Environmental Research Letters*, 16(5), 054042.

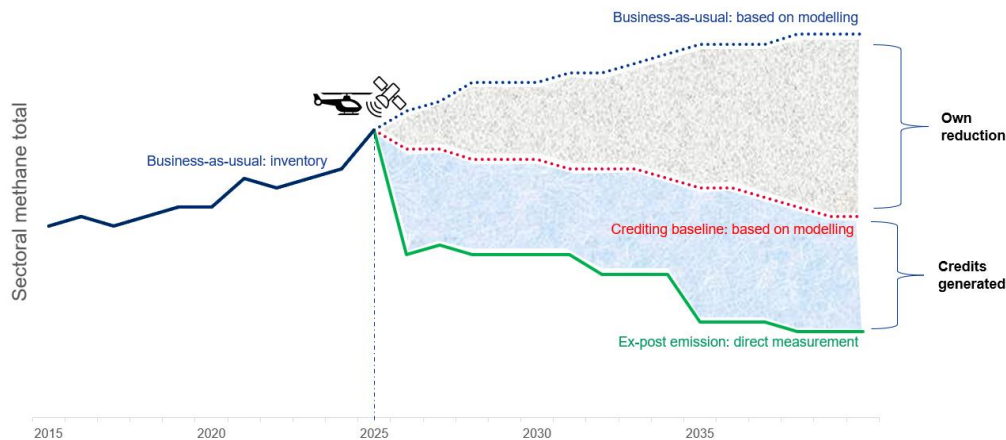
<sup>4</sup> Typically defined as the emissions “from wellhead to point of sale, referring to the emissions from production, gathering, boosting and processing, following the [definition used by the Oil and Gas Climate Initiative](#) for the metric underlying their methane emissions intensity target.

<sup>5</sup> IEA (2022), Methane Emissions from Oil and Gas, IEA, Paris <https://www.iea.org/articles/methane-tracker-data-explorer>

<sup>7</sup> Bose, A., Cohen, J., Fattouh, B., Johnson, O., & Spilker, G. (2021). *Voluntary markets for carbon offsets: Evolution and lessons for the LNG market* (No. 03). OIES Paper: ET.

<sup>8</sup> For more information, see <https://climateteams.org/>

<sup>9</sup> For more information, see <https://leafcoalition.org/>



The host country would implement policies and regulations to achieve emission reduction in its oil and gas sector below the crediting baseline or the host country National Oil Company (NOC) would directly take on this commitment. Required activities as part of the mechanism would include the implementation of methane monitoring, reporting and verification (MRV) in line with Level 5 (combination of source- and site-level measurements) of the OGMP 2.0 methane emissions reporting framework.<sup>10</sup> Furthermore, the host country or NOC would be required to implement no less than bimonthly leak detection and repair (LDAR) on all oil and gas infrastructure as well as stop any routine venting and flaring practices. These measures would provide for a foundation of emission reduction that could be part of the self-funded methane reduction effort in the host country.

The corporate buyers would in turn compensate the host country for verified (i.e., based on independent methane measurements) emission reduction below the crediting baseline and receive credits for the reduction. These credits would be able to count towards offsetting their corporate GHG footprints. Credits bought by the partner country however could count towards its participation in the GMP. In the longer term, if the reduction also meet the criteria for Internationally Traded Mitigation Outcomes (ITMOs) under Article 6 and the host country agrees to make a corresponding adjustment in its GHG inventory, the credits could also count towards meeting the NDC of the partner country.

This arrangement requires a pre-commitment of total funds available for payments for credits from the corporate buyers and/or partner country and a pre-agreed price range for payments per credit in tonnes of methane reduction beyond the crediting baseline. These buyers could partially disburse committed funds when criteria set in the agreement are achieved. However, the methane reduction credits are transferred to the corporate buyer or partner country only when measured emissions fall below the crediting baseline.

Potential host countries for this mechanism include Malaysia, Indonesia, Egypt, Nigeria and Iran. Importantly, this mechanism is not intended to be used with wealthy oil and gas producing countries as host countries because ambitious methane mitigation should already be part of their own NDC. Instead, the intention with the mechanism is to help raise ambition in developing oil and gas producing countries that would serve as host countries. The mechanism should also not be used to support private or publicly traded oil and gas companies who should take responsibility through their own methane reduction commitments. The methane reduction credits generated could however be used to meet corporate commitments for GHG offsetting. Potential partner countries include Japan, South Korea, New Zealand and Switzerland.

## Results

This project will include a qualitative analysis of the oil and gas sector (infrastructure and policy landscape) of key potential host countries to assess the potential for methane emission reduction. It will also assess the extent to which the host country's methane emissions are already covered by its NDC under the Paris Agreement.

## Conclusions

No credible mechanism currently exists to enable importing countries or companies to address the upstream methane emissions associated with their oil and gas imports. We therefore outline what an international credit mechanism for oil and gas methane emissions could look like to help these importers deliver on their Global Methane Pledge and GHG commitments. With this mechanism, oil and gas importing companies or countries could finance methane emission reduction in an oil and gas producing developing country and thereby leverage lower-cost methane mitigation opportunities. Such a mechanism could contribute to putting our world on a path to reducing methane emissions by 45% by 2030 and thereby getting closer to achieving our Paris climate goals.

<sup>10</sup> The Oil and Gas Methane Partnership's reporting framework is further described here: <https://www.ccacoalition.org/en/resources/oil-and-gas-methane-partnership-ogmp-20-framework>