



ASEAN Methane Insights

Vol. 1 - 2026





About

ASEAN Methane Insights serve as a compilation of status, news, and updates related to methane abatement project in energy sector in ASEAN. **This second volume is covering updates from June - December 2025.** It has benefitted from the overall guidance of ACE's Executive Director, Dato' Ir. Ts. Razib Dawood and the Fossil Fuels, Hydrocarbon and Minerals (FOM) Department's Head, Suwanto.

The publication was led by Anis Zhafran, technically supported by Muhammad Zaidan, and reviewed by Raysieo Duakin and Shania Esmeralda Manaloe from FOM Department, Dr. Zulfikar Yurnaidi as the Head of Energy Modelling and Policy Planning (MPP) Department, and Dr. Amornwan Resanond as FOM Department's Methane Expert. It is also reviewed by the ASEAN Council on Petroleum and Energy (ASCOPE) and ASEAN Forum on Coal (AFOC). Publication is also supported by ACE Communications team: Fadhiel Handira Ishaq, Muhammad Bayu Pradana Effendy Firdaus Fadhlullah Designerindy, and Amara Zahra Djamil.

This second volume of ASEAN Methane Insights is developed by ASEAN Centre for Energy (ACE) under the HORIZONS project which is funded by Global Methane Hub (GMH). Photo on the cover page is credited to Ulises Castillo from Pexels.



About HORIZONS Project

The Innovative and Harmonised Methane Emission Mitigation in the ASEAN's Energy Sector (**HORIZONS**) initiative seeks to address key methane mitigation challenges in ASEAN's energy sector, by establishing a dedicated **regional hub**.

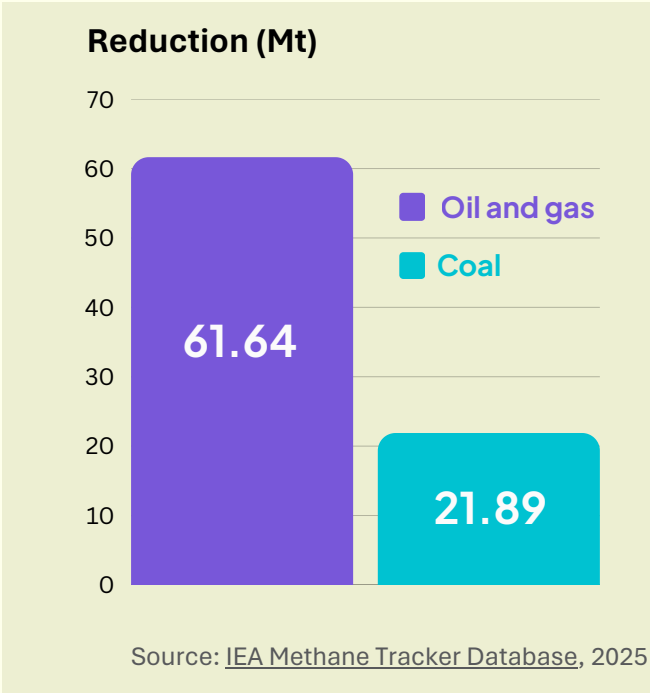
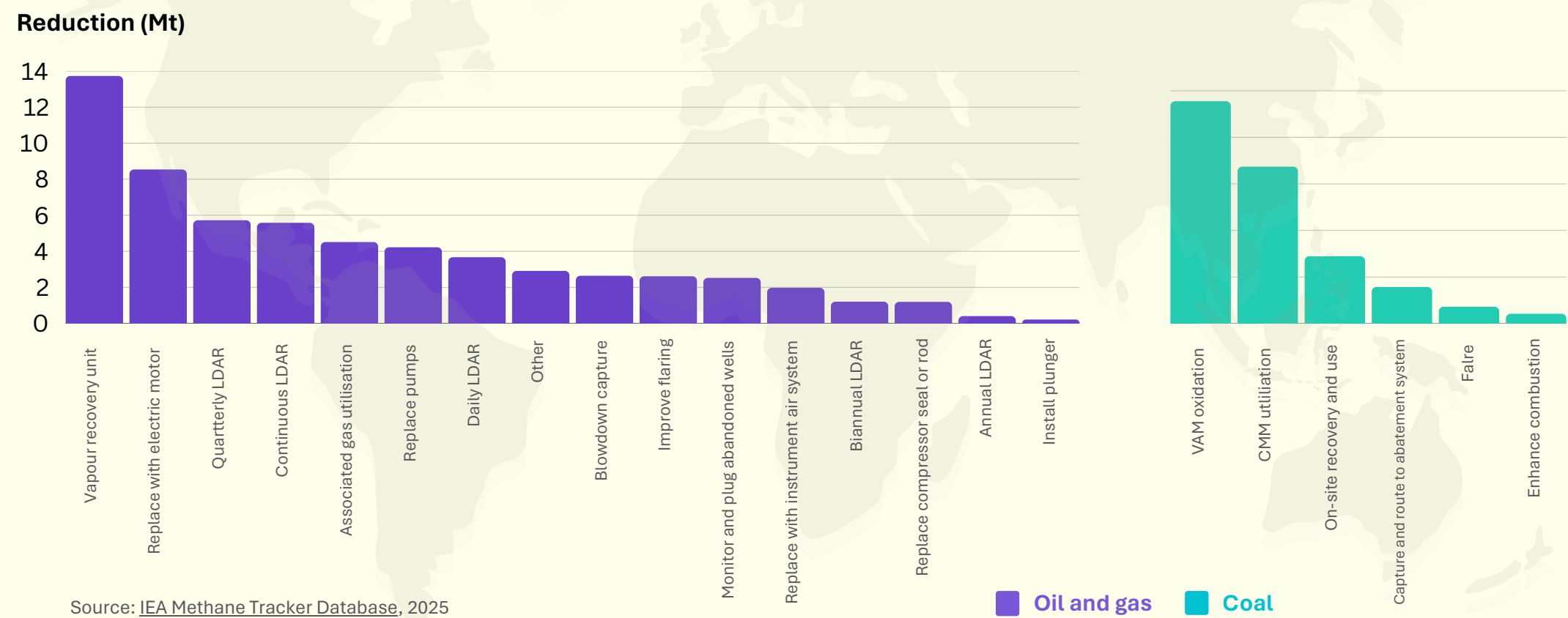
This hub will focus on **both the oil and gas, and coal sectors**, providing a comprehensive platform to advance methane emission reduction efforts through **four main pillars**, including policy, database, research and capacity building, and financial.

List of Abbreviations

- **AKCMM:** ASEAN-Korean Cooperation for Methane Management
- **ASCOPE:** ASEAN Council on Petroleum and Energy
- **CMM:** Coal Mine Methane
- **COP:** Conference of the Parties
- **IPEF:** Indo-Pacific Economic Framework for Prosperity
- **LDAR:** Leak Detection and Repair
- **MAP:** Methane Action Plan
- **MMRV:** Measurement, Monitoring, Reporting and Verification
- **Mt:** Million tonnes)
- **MtCO₂e:** Million tonnes of carbon dioxide equivalent
- **Mtpa:** Million tonnes per annum
- **NDC:** Nationally Determined Contribution
- **NGR:** Natural Gas Roadmap
- **OGMP 2.0:** Oil and Gas Methane Partnership 2.0
- **OMEGA:** Optimising Methane Emissions Governance and Abatement in ASEAN Oil and Gas Sector
- **SLCP:** Short-Lived Climate Pollutants
- **UN CCAC:** United Nations Climate and Clean Air Coalition
- **UNEP:** United Nations Environment Programme
- **UNFCCC:** United Nations Framework Convention on Climate Change
- **VAM:** Ventilation Air Methane
- **VRU:** Vapour Recovery Units

Global Highlight

How the World is Cutting Methane?



At **COP30**, **11 member countries of UN CCAC** signed a joint statement **Drastically Reducing Methane Emissions in Global Fossil Fuel Sector** supported by European Commission, International Energy Agency, The Latin American Energy Organisation, UNEP.



In 2024, global methane abatement in the energy sector was dominated by the **oil and gas industry**, which delivered around **62 Mt** of methane reduction, compared with about **22 Mt** from **coal mining**.

Most of this abatement came from **vapour recovery unit, equipment replacement and optimisation, and LDAR programmes** in the **oil and gas sector**, while **coal sector** reductions were largely driven by **VAM oxidation** and **CMM utilisation**.

Key Takeaway: Prioritise Robust, Transparent, and Science-Based MMRV as the Foundation for All Methane Action

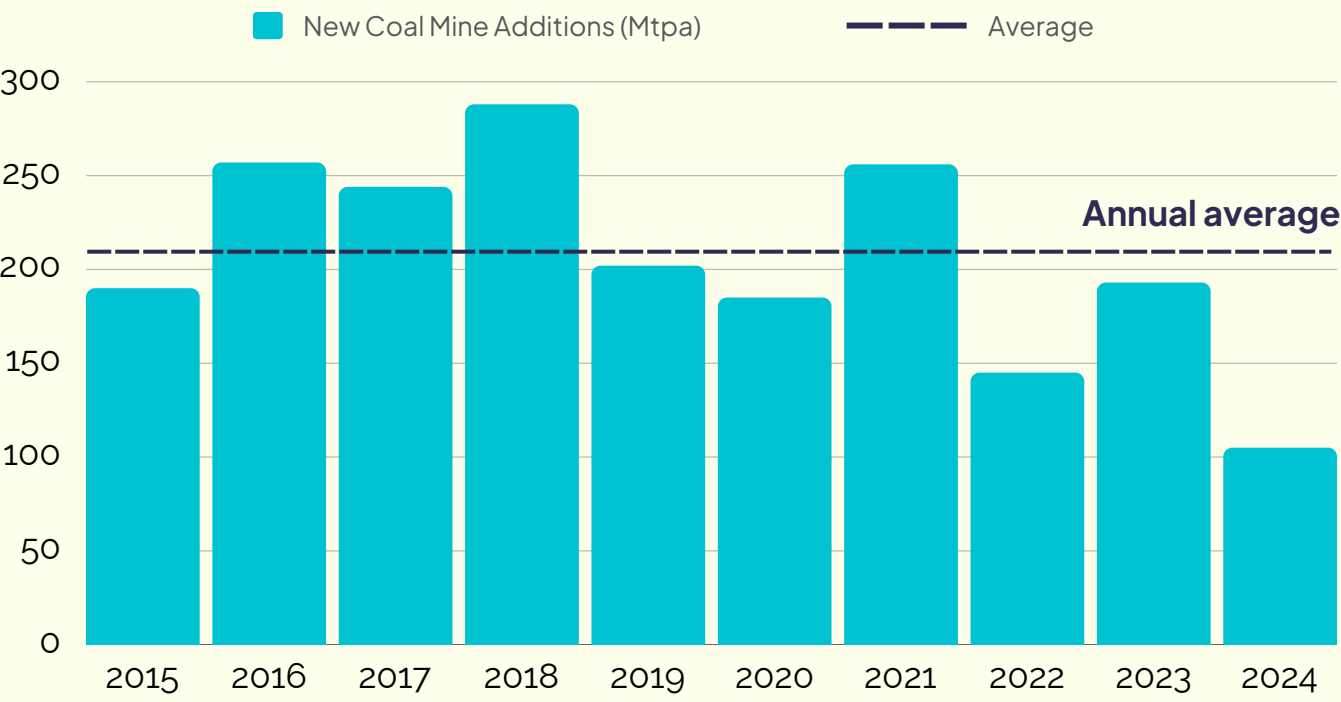
Source: Climate & Clean Air Coalition, 2025

Disclaimer: Analysis uses 2024 data released after June 2025 and is therefore treated as a post-June 2025 update.

Coal Sector: Methane from the Sector Remains an Undervalued Risk



New coal mine development slowed sharply in 2024, reaching the lowest level in ten years

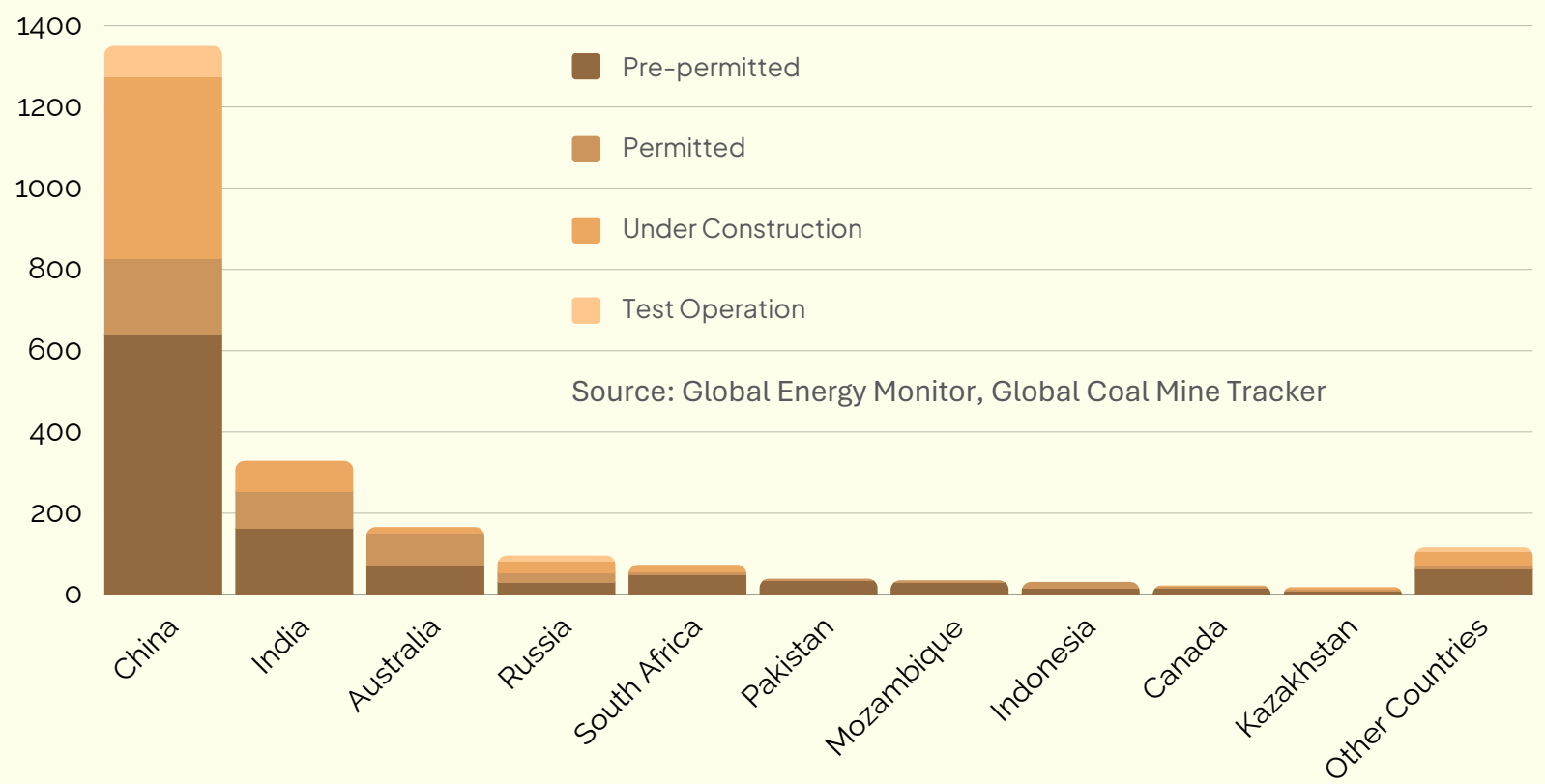


Source: Global Energy Monitor, Global Coal Mine Tracker

New coal mine capacity additions **fell to a decade low in 2024**, around **100 Mtpa** below the historical average. This decline is linked to **slower expansion in China and India**, caused by **approval delays, long mine development timelines**, and **easing supply-demand pressure after a pandemic-driven surge in capacity** over the previous two years.

Source: Global Energy Monitor, 2025

Coal capacity under development in over 30 countries could expand to more than seven times current capacity from 2025 onward



If fully developed, proposed coal mines would emit an estimated **15.7 Mt** of methane annually. Of this, **744 Mtpa** of late-stage projects **already under construction** and **in test operation** would account for 6 Mt of methane emissions that are effectively locked in.

Global Methane Status Report: What Do Current Trends and Data Show About Global Methane Emissions?



Policy and Regulation

- Assumes **implementation of all legislation affecting methane emissions** as of December 2024, annual methane emissions from the energy sector are **projected to decline slightly** in this decade but will then **increase by 8%** in 2050, compared to 2020 levels.



Finance

- Methane abatement financing increased by **18%** to **US\$13.7** billion per year on average in 2021 and 2020.
- At current/near-current growth rates, methane abatement finance **will fall well short** of even conservative estimates of what's required by 2030.



Technical

- Implementation of measures in **Nationally Determined Contributions (NDCs)** and **Methane Action Plans (MAPs)** would cut 2030 emissions by up to **8%** below 2020 levels, **the largest and most sustained decline** since the industrial revolution, but short of the GMP target.

Source: UNEP, 2025

Advancement: Policy, Finance, and Technical

Policy

Despite pressure from the U.S. and industry groups to delay or ease compliance requirements—originally set to take effect in 2027, with proposals to postpone them until 2035—the EU has reaffirmed that the EU Methane Regulation will proceed as planned, with no exemptions or withdrawal of the legislation under consideration.

Source: [Rinnovabili](#), 2025



Technical

Ember's Coal Mine Methane (CMM) Data Tracker enables analysis and visualisation of the most comprehensive national-level CMM dataset available. It offers country-by-country insights into methane commitments, reported emissions, independent estimates, and projections through 2027. The dataset covers all major coal-producing countries, combining UNFCCC-reported data with independent estimates from the IEA and Global Energy Monitor, supplemented by Ember's own gap-filling analysis.

Source: [Ember](#), 2025

EMBER

Finance

1. GMH x GGGI: **Strengthen Nigeria's gas flare recovery program** by developing robust measurement, reporting, and verification (MRV) systems and enabling access to carbon finance, targeting up to **\$300 million** in investment.



Source: [GGGI](#), 2025

2. WB GFMR: In Uzbekistan, GFMR is mobilising **US\$11 million** to support a complete methane survey for Uztransgaz, the state-owned gas transmission company, and kick-start a leak repair facility in the Ministry of Economy and Finance. This work will quickly eliminate around **100 thousand** tonnes of methane emissions per year (over 2 MtCO₂e/yr). GFMR aims to expand this model to other countries, including in Central Asia, and is in the advanced stages of setting up a similar program in Azerbaijan.



Source: [World Bank](#), 2025

Lesson Learned from Big Emitters: Coal Mine Methane Capitalisation



Credit Information	Canada 	United States 	Australia 	
CMM Credit Program	Quebec Cap-and Trade System	California Cap-and- Trade System	Australian Carbon Credit Unit (CMM is a covered sector)	Safeguard Mechanism Credit Unit (CMM is a covered sector)
Average Allowance Credit Price	CAD 48.22/tCO ₂ e	USD 35.21/tCO ₂ e	AUD ±\$35.00/tCO ₂ e	AUD ±A\$35.00/tCO ₂ e
Type of Mine Covered	Underground mines, Surface Mines, and Abandoned Mines			
Credit Qualifier	1 credit is earned per tCO ₂ e captured or removed			

Source: ICAP, ICAP, Clean Energy Regulator

Key Enablers:

- **Carbon markets drive action:** Integrating CMM into national crediting or compliance systems unlocks investment in methane management.

► **Cover all mine types:** Including underground, surface, and abandoned mines maximises mitigation potential.

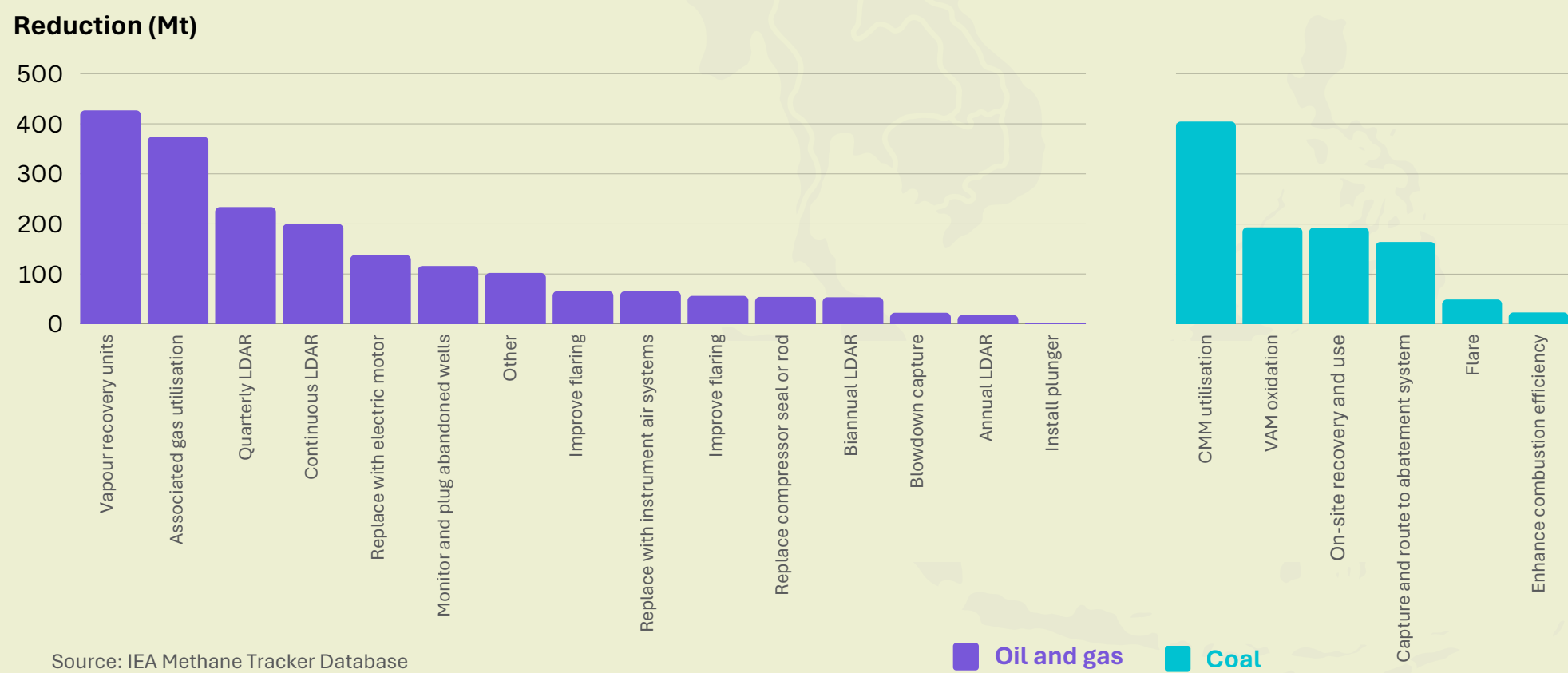
► **Keep crediting rules simple:** “1 credit per tCO₂e captured or removed” reduces administrative burden and encourages operator participation.
- **Explore market alignment:** Linking or harmonising carbon markets increases liquidity, stabilises prices, and improves investor confidence.

► **Ensure price stability:** Predictable credit prices (USD 33–35/tCO₂e in the U.S. and Australia) provide certainty for project developers.

► **Combine incentives with regulations:** Including CMM in compliance systems, while offering credit pathways, balances climate ambition with industry competitiveness.

Regional Highlight

How ASEAN is Cutting Methane?



Across ASEAN, the pattern of methane abatement **largely mirrors** the global picture. **Reduction is led by the oil and gas sector through the application of VRUs** providing the largest contributions to methane cuts, followed by **associated gas utilisation** and **LDAR measures**. In the **coal sector**, abatement is mainly driven through **CMM utilisation**, **VAM oxidation**, and **on-site recovery and use**.

With methane now embedded across **APAEC’s Oil and Gas and Clean Coal priorities in 2026-2030**, ASEAN has created a powerful regional mandate that aligns policy, investment, and technology. It turns methane abatement from a peripheral issue into a central pillar of the region’s energy transition.

**ASEAN Power Grid (APG)**

**Oil & Gas, Connectivity, Security, and Sustainability (OGCSS)**

**Clean Coal Transformation (CCTR)**

**Energy Efficiency and Conservation (EE&C)**

**Renewable Energy (RE)**

**Regional Energy Policy & Planning (REPP)**

**Civilian Nuclear Energy (CNE)**

**Relevant Action Plan**

- OGCSS:** Promote and set initiatives to reduce methane emissions in oil and gas activities
- CCTR:** Build awareness and knowledge of emissions management across the coal value chain





Cambodia: Phasing down coal-fired power plants



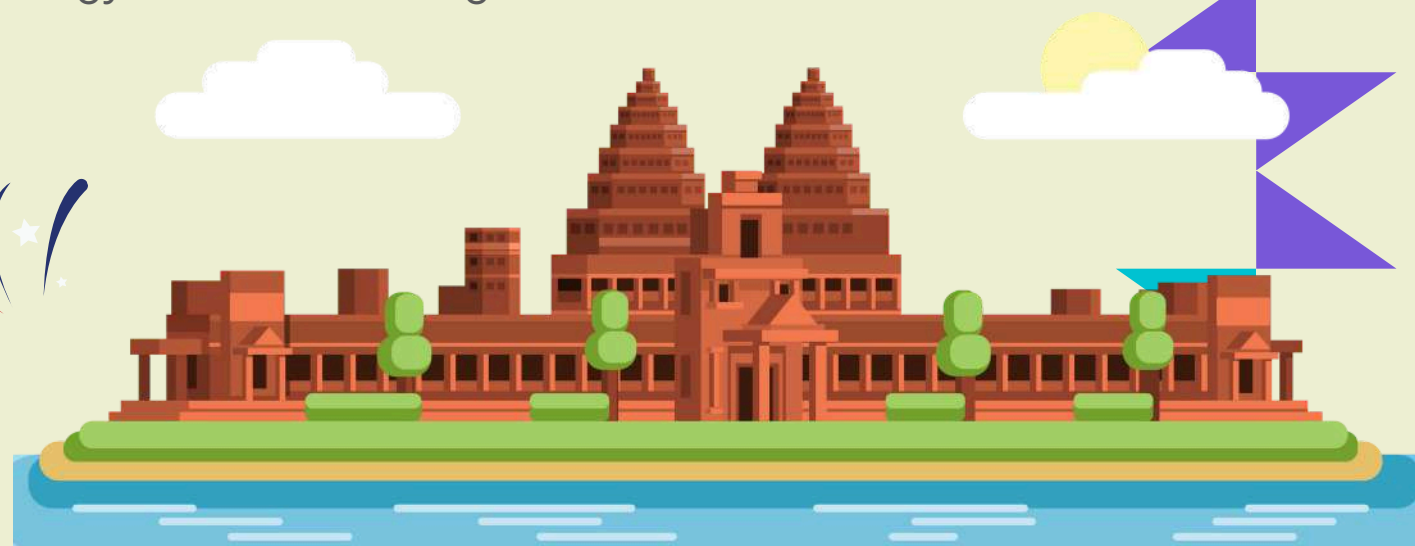
In its **Third Nationally Determined Contribution (NDC 3.0)**, released in July 2025, Cambodia addresses methane emissions linked to coal primarily through the **planned phase-down of coal-fired power generation**, positioning this transition as a key pathway for reducing associated methane and broader fossil-fuel emissions.

The strategy involves:

- **Implementing a coal moratorium on new projects**
- **Accelerating the retirement of older inefficient plants**
- **Transitioning some existing facilities to cleaner alternatives like biomass co-firing or LNG as transition fuels.**

These measures represent a **positive and pragmatic** step toward limiting future methane growth from the power sector while aligning Cambodia's energy transition with regional decarbonisation objectives.

Source: UNFCCC



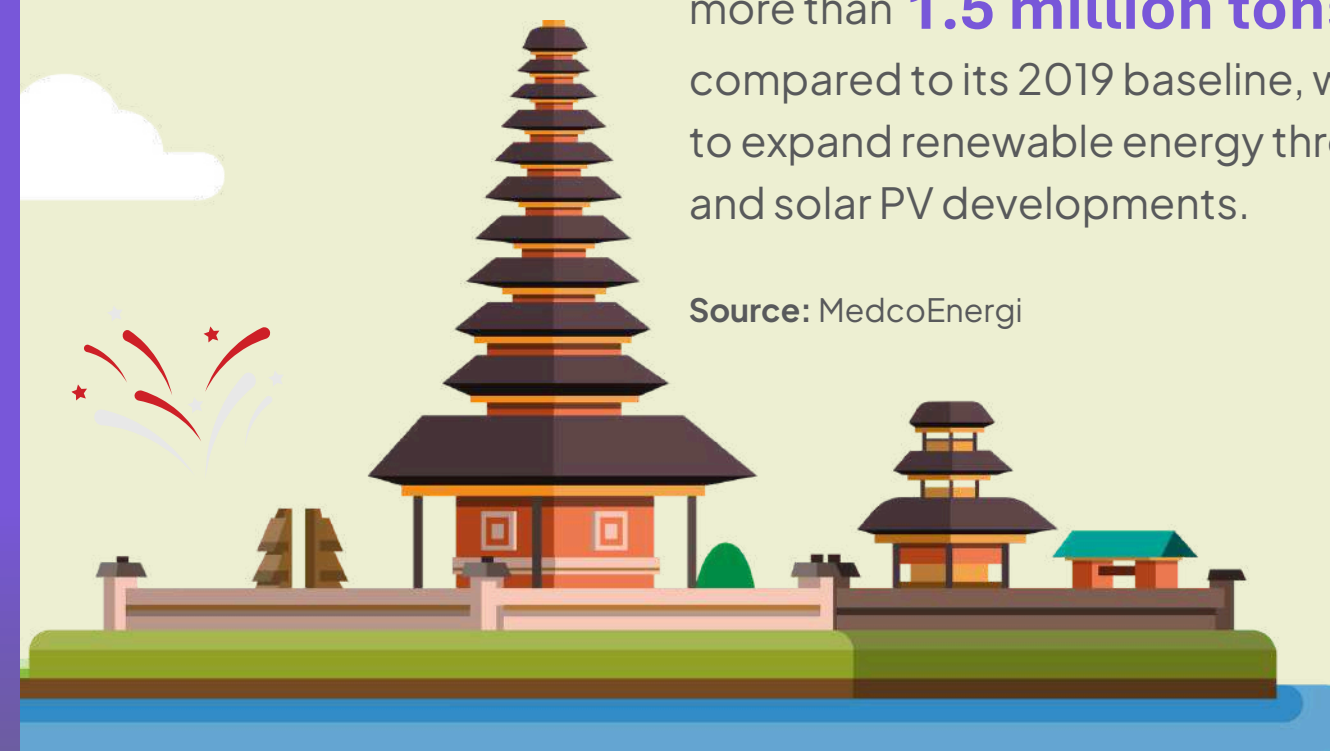
Indonesia: More firms join the OGMP 2.0 membership

On 6 November 2025, PT Medco Energi Internasional Tbk (MedcoEnergi) announced that its Oil & Gas subsidiary **PT Medco E & P Indonesia has joined the Oil & Gas Methane Partnership (OGMP) 2.0.**

MedcoEnergi's participation in OGMP 2.0 is a **positive signal of growing private-sector leadership** in strengthening methane measurement, reporting, and mitigation practices in Indonesia's oil and gas sector.

The company has **already surpassed its interim 2025 target** as emissions have decreased by more than **1.5 million tons of CO₂e** compared to its 2019 baseline, while continuing to expand renewable energy through geothermal and solar PV developments.

Source: MedcoEnergi



Malaysia:

Methane abatement as a component in the recently approved Natural Gas Roadmap

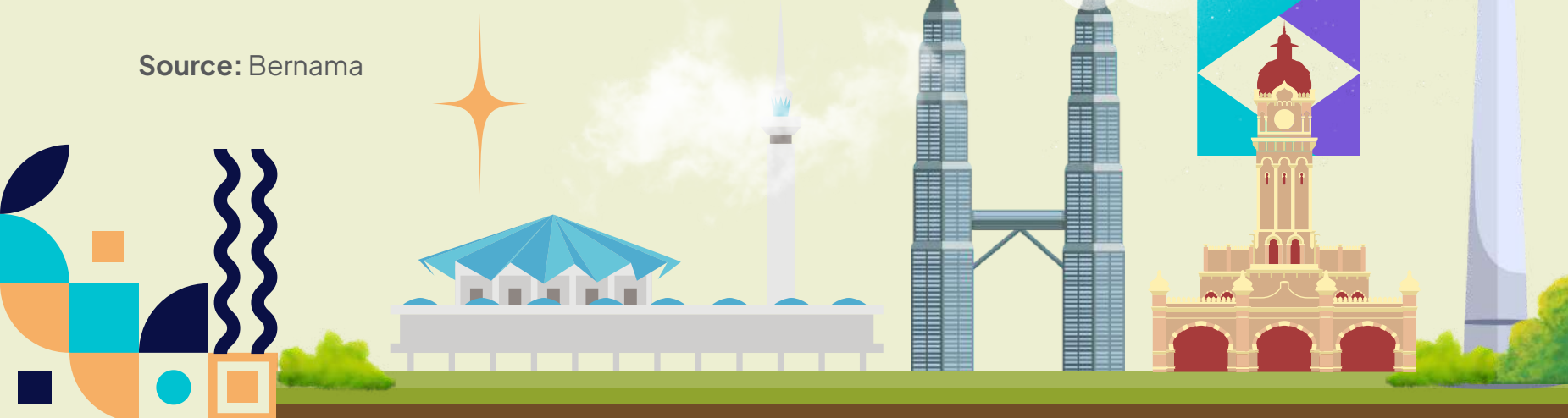


Malaysia's Natural Gas Roadmap (NGR), approved in late 2025, aims to secure energy supply, support economic growth, and transition to a low-carbon economy by balancing gas's role as a transitional fuel.

The roadmap and related initiatives support the adoption of policies and measures to **eliminate routine flaring and venting**, as well as **regular leak detection and repair campaigns** in oil and gas operations.

Malaysia's sustained efforts to build a **coherent and structured policy framework** for gas and methane management serve as a **key lesson for regional policy development**.

Source: Bernama



Philippines:

A new chapter in the country's climate and air control through the finalisation of SLCP National Plan and Methane Roadmap

The Philippines' Short-Lived Climate Pollutants (SLCPs) National Action Plan serves as an **evidence-based methane roadmap**, guiding mitigation actions across key sectors, including waste, agriculture, **energy**, and transport.

The plan **identifies priority measures**, **addresses implementation barriers**, and **supports coordination, monitoring**, and **evaluation**, while also **highlighting opportunities** to integrate methane and other SLCP actions into the forthcoming NDC 3.0 and related national strategies.

The project underpinning this action plan was **completed in Q2 2025** and will serve as guidance for policymakers in developing **an evidence-based policy framework** to address climate change related issues, including methane.

Source: Clean Air Asia



Thailand:

Joins economic agreement to improve its capacity in abating methane in the energy sector



Thailand joined the **Clean Economy Agreement under the Indo-Pacific Economic Framework for Prosperity (IPEF)** in June 2024, strengthening its commitment to cleaner and more resilient energy systems.

Notably, the agreement is expected to enhance Thailand's capacity for **advanced methane leak detection and repair (LDAR)**, alongside support for solar, battery, and hydrogen technology development.

This engagement presents a positive opportunity for **piloting advanced methane mitigation approaches** and offers valuable lessons that could be shared with other AMS.

Source: UNDP



Viet Nam

Pilot phase of its carbon market in 2025 to be formally launch in 2028

By the end of 2025, **Viet Nam's domestic carbon market has entered its pilot phase**, following the implementation of **Decree No. 06/2022/ND-CP** and its amendment, **Decree No.119/2025/ND-CP**, which require more than **2,000** large emitting facilities to conduct and submit GHG inventories.

The government has begun allocating **free emission quotas** to selected companies, laying the groundwork for full market operation, including **trading, transferring, and offsetting emissions**, scheduled for **formal launch in 2028**.

The **inclusion of methane** within Viet Nam's emerging carbon market framework is a **positive signal** that strengthens incentives for methane abatement and **provides encouragement** for **similar market-based approaches across the region**.

Source: OECD



Regional Initiatives



Optimising Methane Emissions Governance and Abatement in ASEAN Oil and Gas Sector (OMEGA)

The OMEGA project, led by the ASEAN Centre for Energy and funded by the Climate and Clean Air Coalition, aims to **assist ASEAN Member States in strengthening their methane policies, regulations, measurement, reporting and verification (MRV) systems**, as well as enhancing **capacity building** across the oil and gas sector.



Methane Management Roadmap

The ASEAN Methane Management Roadmap for Oil and Gas, released in mid-2025 by the ASEAN Centre for Energy, ASCOPE, and the World Bank Group’s Flaring and Methane Reduction Initiatives. This framework outlines strategies for reducing methane emissions from the oil and gas sector across ASEAN Member States. It focuses on four key areas: **enhanced monitoring, standardised reporting, certification programs, and cost-effective abatement strategies.**



ASEAN-Korean Cooperation for Methane Management (AKCMM)

The AKCMM is a regional program is funded by the **ASEAN-Korea Cooperation Fund (AKCF)** to help ASEAN Member States strengthen four strategic areas:

- 1. Developing enabling policies and institutions;
- 2. Improving the measurement of methane emissions;
- 3. Designing, financing, and implementing methane reduction projects; and
- 4. Promoting regional dialogue and partnership across key sector such as agriculture, waste and energy.

Malaysia and **Lao PDR** are among the first countries to begin implementing AKCMM activities.



Methane in NDCs and Sustainable Finance Taxonomy

- **10 out of 11** ASEAN Member States **include methane** as one of the targeted greenhouse gases under their **Nationally Determined Contributions (NDCs)**, reflecting strong recognition of methane as a priority climate pollutant.
- **5** ASEAN Member States **recognise methane** in their **Sustainable Finance Taxonomy**, but only **3 (Indonesia, Thailand, and Singapore)** explicitly **address methane in the energy sector**. This observation shows that ASEAN still has room to improve in aligning financing with methane mitigation efforts.
- **Indonesia's Sustainable Finance Taxonomy** requires **methane monitoring or leak detection and repair (LDAR)** during **construction** and **physical measurement reporting** for energy generation from fossil gaseous fuel.
Source: Sustainable Banking and Finance Network
- **Thailand's Taxonomy for Sustainable Finance** requires **methane measurement** equipment for **retrofitting facilities** that produce energy from **natural gas**, and **requires LDAR** for **transmission** and **distribution pipelines**.
Source: Bank of Thailand
- **Singapore-Asia Taxonomy for Sustainable Finance** requires **LDAR of existing gas pipelines** and other network elements to **reduce methane leakage** in transmission and distribution of renewable and low-carbon gases.
Source: Monetary Authority of Singapore

Country	NDC	Sustainable Finance Taxonomy
Brunei Darussalam 	✓	✗
Cambodia 	✓	✗
Indonesia 	✓	✓
Lao PDR 	✓	✗
Malaysia 	✓	✓
Myanmar 	✗	✗
Philippines 	✓	✓
Singapore 	✓	✓
Thailand 	✓	✓
Timor leste 	✓	✗
Viet Nam 	✓	✗



... and many more to come.
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