

Setting a Path for Ambitious Methane Action

GMI Oil & Gas Subcommittee Meeting

In conjunction with the UNECE 9th
Session of the Group of Experts on Gas

23 March 2022





Welcome!

James Diamond

Oil & Gas Subcommittee Co-Chair

Environment and Climate Change Canada

Scott Foster

Director, Sustainable Energy Division

United Nations Economic Commission for Europe (UNECE)

Francisco de la Flor Garcia

Chair, UNECE Group of Experts on Gas

Director, International Organizations, ENAGAS S.A.



UNECE

Group of Experts on Gas

Mr. Francisco de la Flor García
Chair

ENERGY



- The Group of Experts on Gas (GEG) helps UNECE member States deliver on key political commitments, such as the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change.
- We have a long history of collaborating with the Global Methane Initiative (GMI) and we welcome your participation in our upcoming meetings





Group of Experts on Gas 9th session

24-25 March 2022 Online & Palais des Nations, Geneva



March 24, 2022

Time Geneva (EST)	Agenda Topics
11:00am (6:00am)	Adoption of the agenda
11:05 (6:05 am)	Opening remarks
11:10 (6:10am)	Hydrogen: production and consumption
12:00 pm (7:00am)	Hydrogen: system development and gas asset readiness
1:00 pm (8:00am)	Break (2 hours)
3:00pm (10:00am)	Methane and hydrogen emissions in the gas sector
4:20pm (11:20am)	Impact of gas and electricity prices on UN Sustainable Development Goals Improving urban air quality
5:00 (12:00pm)	GEG Updates and Business, including Activities and priorities of the UNECE Committee on Sustainable Energy and Update on implementation of the 2020-2021 work plan

Methane and the natural gas sector: The latest in science, methane management policy, and technical resources

3:00pm (10:00am EST)

Moderators:

- **Mr James Diamond**, Chair, Global Methane Initiative Oil & Gas Subcommittee
- **Ms Denise Mulholland**, Economic Affairs Officer, UNECE

Speakers:

- **Dr Steve Hamburg**, Chief Scientist, Environmental Defense Fund
 - **Mr Tomas Carbonell**, Deputy Assistant Administrator, US Environmental Protection Agency
 - **Mr Brendan Devlin**, DG ENER, European Commission
 - **Ms Giulia Ferrini**, UN Environment Programme
- Q&A, Interventions



Group of Experts on Gas 9th session

24-25 March 2022 Online & Palais des Nations, Geneva



Time Geneva (EST)	Agenda Topics
11:00am (6:00am)	Carbon capture, utilisation, and storage: The role of gas infrastructure
12:00 pm (7:00 am)	Promoting sustainable and clean production, distribution, and consumption of gas and LNG in the ECE region
1:00pm (8:00am)	Break (2 hours)
3:00 pm (10:00am)	Gas in Transport
3:20 pm (10:20am)	Update on activities in member States, the gas industry and organizations (tour de table)
4:00pm (11:00am)	Preparations for the tenth session of the Group of Experts
4:20pm (11:20am)	Any other business
4:30 (11:30pm)	Adoption of conclusions and recommendations
5:00pm (12:00pm)	Adjourn

- For more information and to register,
 - Go to: <https://unece.org/sustainable-energy/events/ninth-session-group-experts-gas>
 - Contact us: natural.gas@un.org
- To join the session on either day:
 - <https://zoom.us/j/92694292259?pwd=Nk9FS2NXNk9XcGo1TkVTU0Z5NGo3Zz09>
 - Meeting ID: 926 9429 2259
 - Passcode: 774530

We look forward to seeing you there and to future opportunities to collaborate with GMI

Adoption of the Agenda

- Welcome and Opening
- Update on GMI Activities
- Oil & Gas Subcommittee Business
- Advances in the Management of Fugitive Emissions in the Colombian Oil & Gas Sector
- IEA Methane Tracker Update
- Planning for the Global Methane Forum 2022
- Wrap Up, Next Steps, and Adjourn

Oil & Gas Subcommittee Business:

- Action Plan 2022-2025
- Partner Country Updates
- Subcommittee Engagement

Update on GMI Activities

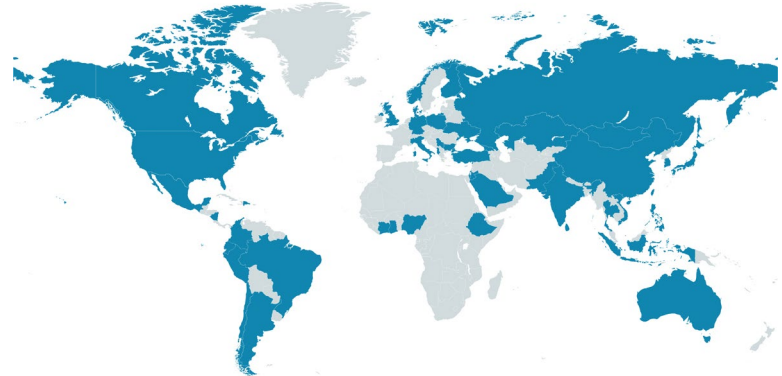
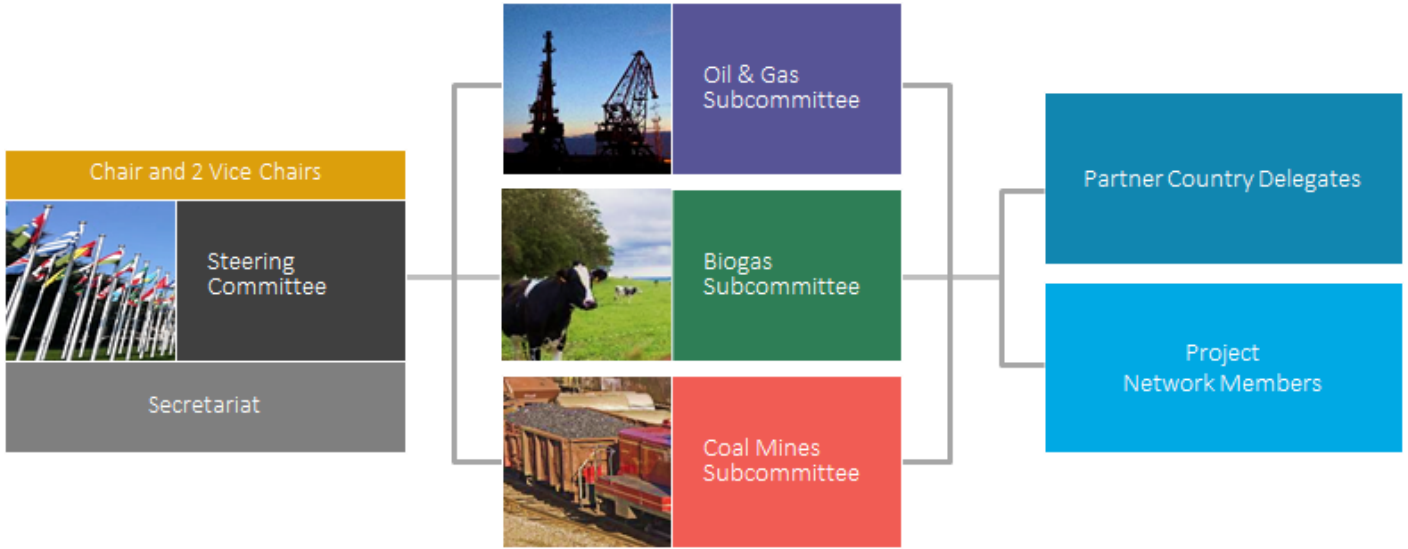
Monica Shimamura
Director, GMI Secretariat



GMI Structure and Participants

■ GMI is an international public-private partnership focused on reducing barriers to the recovery and use of methane as a valuable energy source.

- 46 Partner Countries
- 700+ Project Network members
- Alliances with international organizations focused on methane recovery and use



GMI Partner Countries represent approximately 75% of methane emissions from human activities.

GMI Accomplishments Since 2004



Grown from 14 to **46 Partner Countries**



Leveraged more than **\$650 million** in funding for projects and training



Gained more than **700 Project Network** members from around the world



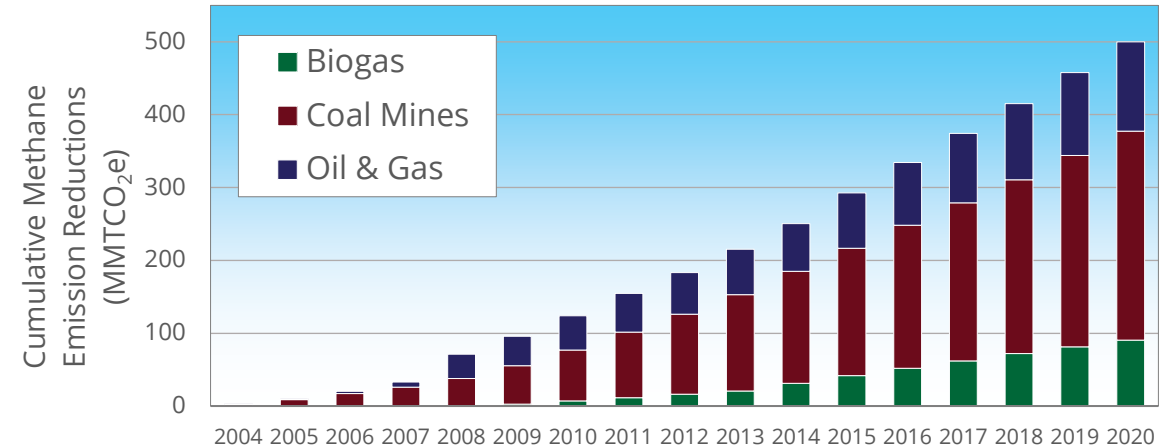
Conducted **hundreds** of assessments, pre-feasibility studies, feasibility studies, study tours, and site visits



Provided trainings for more than **50,000 people** in methane mitigation



Developed more than **60 tools and resources** for methane mitigation



500 MMTCO₂e

methane emission reductions since 2004, approximately equivalent* to the CO₂ emissions from any one of the following:



56 Billion
gallons of gasoline
consumed



550 Billion
pounds of coal
burned



60.8 Trillion
smartphones
charged

* [epa.gov/energy/greenhouse-gas-equivalencies-calculator](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)

GMI

“By the Numbers” for 2021

- Leveraged virtual platforms to maintain and increase engagement with stakeholders
- Expanded direct communications with social media
- Promoted GMI’s technical expertise

In FY 2021:

11
countries

supported activities
where more than

1,100
people

received a total of
approximately

1,000
hours

of training about
reducing methane
emissions and
capturing methane
for productive uses



Capacity Building/Information Sharing
fostering best practices

3

Workshops/Trainings

European Commission, United States, Partnership-wide

9

Manuals/Websites/Other Outreach

All Partners



Assessments

identifying opportunities for emission reductions

6

Reports/Tools/Models

United States, Partnership-wide

1

Study Tours/Other Technical Assistance

India



Partnerships

building relationships to foster action

12

GMI Meetings (Steering Committee/Subcommittees)

Online

2

Conferences

Partnership-wide Online

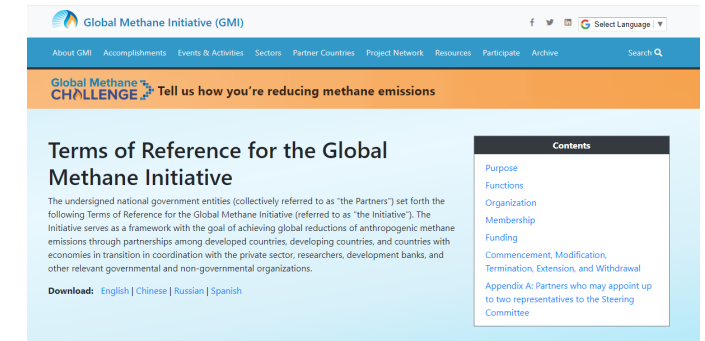
18

Webinars, Informational Meetings, and Presentations

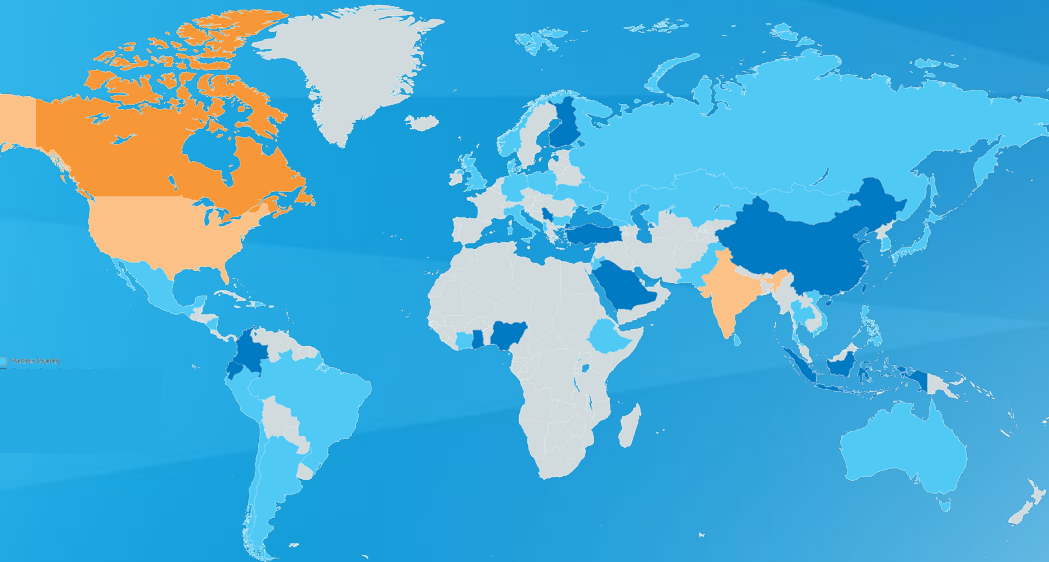
Colombia, Indonesia, Poland, Serbia, Ukraine, United States, Partnership-wide

2021 Highlights

- Rechartered GMI through May 2031
 - Raise ambition over next 10 years
 - Elevate international awareness of the critical need to take action now to reduce methane emissions
- Published New Terms of Reference (June 2021)
- Hosted “A Call to Action on Methane”
 - Influential global leaders on methane
 - More than 360 attendees, materials available online
- Developed new Steering Leadership model



Refreshed Steering Committee Participation



Chair and Vice Chairs Model

- The Steering Committee makes appointments to each position by consensus for a 2-year term
- Chair provides overall leadership for the Initiative
- Vice Chairs offer additional leadership to delegate responsibilities and improve coordination with GMI Subcommittees, delegates, and strategic partners



Acting Chair, Ms. Laura Farquharson
Director-General of Legislative and Regulatory Affairs, Environment and Climate Change Canada



Vice Chair, Mr. Vinod Kumar Tiwari
Additional Secretary, Ministry of Coal, Government of India



Vice Chair, Mr. Tomás Carbonell
Deputy Assistant Administrator, Office of Air and Radiation, U.S. Environmental Protection Agency

Steering Committee Members

- | | |
|-----------------|----------------------|
| ■ Canada | ■ China |
| ■ India | ■ Colombia |
| ■ United States | ■ Ecuador |
| | ■ Finland |
| | ■ Ghana |
| | ■ Indonesia (NEW) |
| | ■ Nigeria |
| | ■ Saudi Arabia (NEW) |
| | ■ Serbia (NEW) |
| | ■ Turkey (NEW) |

Steering Committee and GMI Partner Countries

Steering Committee Leadership

-  Canada (Chair)
-  India (Vice Chair)
-  United States (Vice Chair)

Steering Committee Members

- | | |
|--|---|
|  China |  Indonesia |
|  Colombia |  Nigeria NEW |
|  Ecuador |  Saudi Arabia NEW |
|  Finland |  Serbia NEW |
|  Ghana NEW |  Turkey |

Other GMI Partner Countries

- | | | |
|---|---|---|
|  Albania |  Georgia |  Pakistan |
|  Argentina |  Germany |  Peru |
|  Australia |  Israel |  Philippines |
|  Brazil |  Italy |  Poland |
|  Bulgaria |  Japan |  Republic of Korea |
|  Chile |  Jordan |  Russia |
|  Cote d'Ivoire |  Kazakhstan |  Sri Lanka |
|  Denmark |  Mexico |  Thailand |
|  Dominican Republic |  Mongolia |  Ukraine |
|  Ethiopia |  Nicaragua |  United Kingdom |
|  European Commission |  Norway |  Vietnam |

Steering Committee Priorities

- Provide support to countries that are working to aggressively reduce methane emissions, including signatories of the Global Methane Pledge
- Implement GMI Action Plan
 - Help Subcommittees enhance participation of Partner Country delegates
- Host the Global Methane Forum (October 2022 in Washington, DC)
- Leverage strategic partnerships to improve collaboration – for example, with United Nations Economic Commission for Europe (UNECE) and Climate and Clean Air Coalition (CCAC)



Opportunities for the Oil & Gas Subcommittee

- Expand Subcommittee membership
 - Identify sector-specific, regional, and informal organizations to partner with
- ★ Focus on opportunities to deliver technical solutions for methane mitigation

Global Methane Pledge

- GMI is a key supporter of the Pledge
- Countries joining the Pledge commit to:
 - Work to achieve a **collective goal of reducing global methane emissions by at least 30% from 2020 levels by 2030**
 - Move towards using the highest tier good practice inventory methodologies, and to provide greater transparency in key sectors.
- **111 countries** have signed, representing over 40% of global methane emissions
 - 35 GMI Partner Countries



**Global
Methane
Pledge**



Source: <https://www.globalmethanepledge.org/>

Thank you!

Monica Shimamura

Director, GMI Secretariat

shimamura.monica@epa.gov

secretariat@globalmethane.org



[**globalmethane.org**](http://globalmethane.org)



GMI Oil & Gas Subcommittee Business

James Diamond

GMI Oil & Gas Subcommittee Action Plan

- Based on priorities and needs identified by Oil & Gas Subcommittee members
- Will guide the work and activities of the Oil & Gas Subcommittee for the next four years (2022-2025)
- Shared with delegates for feedback in February 2022

Objective 1: Serve as a methane knowledge center for the oil & gas sector

- Collaborate with other organizations to host key sectoral events
- Distribute relevant materials through up-to-date websites, social media, and listservs
- Convene Subcommittee through webinars, meetings, and other gatherings to facilitate knowledge exchange

Objective 2: Facilitate policy and project implementation through capacity building and technical assistance

- Assist Partner Countries in developing, updating, and implementing country-specific planning to advance national and global methane reduction goals
- Identify policy and regulatory options/templates and provide trainings
- Provide technical assistance to identify methane mitigation projects
- Provide technical assistance to increase rigor of national greenhouse gas emissions inventories
- Conduct site tours for government and industry stakeholders

GMI Oil & Gas Subcommittee Action Plan: Discussion

- Received and considered delegate comments on draft plan
- Delegates and Project Network encouraged to review the final plan and reflect on highest value opportunities to contribute, share, and engage
- Subcommittee will finalize Action Plan by March 31
 - Final plan will be circulated to delegates and will be publicly available on the GMI website

Partner Country Updates

United States Update

Sarah Menassian

United States Environmental Protection Agency

United States Update

- Overview of US activities that will support US commitments under the Global Methane Pledge available in the [White House's U.S. Methane Emissions Reduction Action Plan](#)
 - U.S. Environmental Protection Agency
 - U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration
 - U.S. Department of Interior's Bureau of Land Management and Bureau of Ocean Energy Management
- Greenhouse Gas Reporting Program
 - Collects annual, facility-level greenhouse gas data from large industrial sources in the United States, including oil and gas
 - [2020 data are now available](#)
- National Inventory of Greenhouse Gas Emissions
 - Public review period for the [1990-2020 Inventory](#) ended last week; final report will be published by April 15
 - The draft Inventory includes post-meter and large production well blowout emissions for the first time
- Partnership Programs
 - This summer, [EPA's Methane Challenge Program](#) will publish facility-level data on voluntary actions taken by Partner companies during 2020 to reduce methane emissions

United States Update (continued)

■ Technical Resources – Natural Gas STAR “Recommended Technologies” Library

- Contains information on top O&G methane emission sources and mitigation options based on decades of Partner company experiences
- Updating to a dynamic, searchable database with information to understand mitigation opportunities as well as new graphics
- Collaboration opportunities: case studies, novel technologies/practices
- Please email gasstar@epa.gov if you have ideas

Lessons Learned from Natural Gas STAR Partners

Convert Gas Pneumatic Controls To Instrument Air

Executive Summary
Pneumatic instrument systems powered by high-pressure natural gas are often used across the natural gas and petroleum industries for process control. Typical process control applications include pressure, temperature, liquid level, and flow rate regulation. The constant bleed of natural gas from these controllers is collectively one of the largest sources of methane emissions in the natural gas industry, estimated at approximately 51 billion cubic feet (Bcf) per year in the production sector, 14 Bcf per year in the transmission sector, and <1 Bcf from processing.

Companies can achieve significant cost savings and methane emission reductions by converting natural gas-powered pneumatic control systems to compressed instrument air systems. Instrument air systems substitute compressed air for the pressurized natural gas, eliminating methane emissions and providing additional safety benefits. Cost-effective applications, however, are limited to those field sites with available electrical power, either from a utility or self-generated.

Natural Gas STAR Partners have reported savings of up to 70,000 thousand cubic feet (Mcf) per year per facility by replacing natural gas-powered pneumatic systems with instrument air systems, representing annual savings of up to \$490,000 per facility. Partners have found that most investments to convert pneumatic systems pay for themselves in just over one year. Individual savings will vary depending on the design, condition and specific operating conditions of the controllers.

Technology Background
The natural gas industry uses a variety of process control devices to operate valves that regulate pressure, flow, temperature, and liquid levels. Most instrumentation and control equipment falls into one of three categories: (1) pneumatic; (2) electrical; or (3) mechanical. In the vast majority of applications, the natural gas industry uses pneumatic devices, which make use of readily available high-pressure natural gas to provide the required energy and control signals. Pneumatic instrument systems powered by high-pressure natural gas are used throughout the natural gas industry. In the production sector, an estimated 400,000 pneumatic devices control and monitor gas and liquid flows and levels in dehydrators and separators, temperature in dehydrator regenerators, and pressure in flash tanks. Most processing plants already use instrument air, but some use gas pneumatics, and including the gathering/booster stations that feed these processing plants, there are about 13,000 gas pneumatic devices in this sector. These devices control and monitor estimated 85,000 pneumatic valves and regulate gas stations, pipelines, and pneumatic devices are used where they regulate flow and pressure.

Exhibit 1 depicts a pneumatic control system powered by natural gas. The pneumatic control system consists of the process control instruments and valves that are operated by natural gas regulated at approximately 20-30 pounds per square inch (PSI).

Economic and Environmental Benefits

Method for Reducing Natural Gas Losses	Volume of Natural Gas Savings (Mcf/year)	Value of Natural Gas Savings (\$/year)			Implementa-tion Cost (\$)	Payback (Months)		
		\$3 per Mcf	\$5 per Mcf	\$7 per Mcf		\$3 per Mcf	\$5 per Mcf	\$7 per Mcf
Replace Gas with Air in Pneumatic Systems (per facility)	20,000	\$60,000	\$100,000	\$140,000	\$60,000	12	6	6

General Assumptions:
*Cost of monthly compressor, dryer and other accessories, and annual electricity requirements.

EPA United States Environmental Protection Agency

Search EPA.gov

Environmental Topics ▾ Laws & Regulations ▾ Report a Violation ▾ About EPA ▾

Natural Gas STAR Program

- Natural Gas STAR Home
- Methane Challenge Program
- Natural Gas STAR Program
- Outreach and Events
- Industry Overview
- Recommended Technologies
- Technical Presentations
- Equipment and Service Directory
- Videos
- International Activities

Recommended Technologies to Reduce Methane Emissions: Mitigation Option

Instrument Air Controllers

Introduction/Disclaimers

Summary | Description | Applicability | Methane Emissions Reductions | Other Benefits | Lessons Learned | References

Summary

Companies can achieve significant methane emission reductions by converting natural gas-powered pneumatic control systems to compressed instrument air systems. Instrument air systems substitute compressed air for the pressurized natural gas, eliminating methane emissions and providing additional safety benefits.

Description

Many Partners have found that it is cost-effective to substitute compressed air for natural gas in pneumatic systems. The use of instrument air eliminates methane

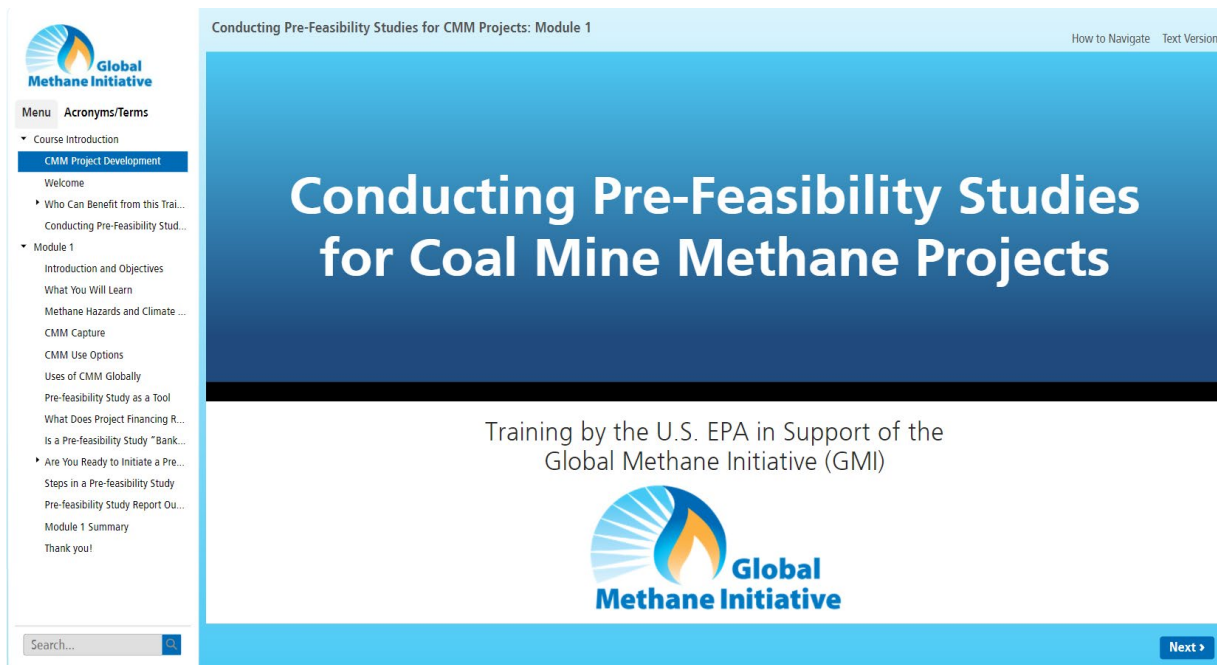
Additional Resources

Learn more about the emission sources that can be mitigated with this technology:

- [Natural Gas Powered Pneumatic Controllers](#)

United States Update *(continued)*

Example Training from Coal Sector



The screenshot shows a web-based training interface. At the top left is the Global Methane Initiative logo. Below it is a navigation menu with a search bar. The main content area has a blue header with the title 'Conducting Pre-Feasibility Studies for Coal Mine Methane Projects' in white text. Below the header, it says 'Training by the U.S. EPA in Support of the Global Methane Initiative (GMI)' and features the GMI logo again. At the bottom right of the main content area is a 'Next >' button.

■ Technical Resources - Trainings

- In support of GMI, U.S. EPA plans to develop on-demand technical trainings, like those developed for coal
- Knowing specific topics/emission sources/etc. of interest will be very helpful
- Please share topics of interest during the feedback session today, and via email to menassian.sarah@epa.gov

Canada Update

Diane De Kerckhove

Environment and Climate Change Canada

United Kingdom Update

Jane Durling
UK Environment Agency



Turkey Update

Emre Özgür, Ph.D.

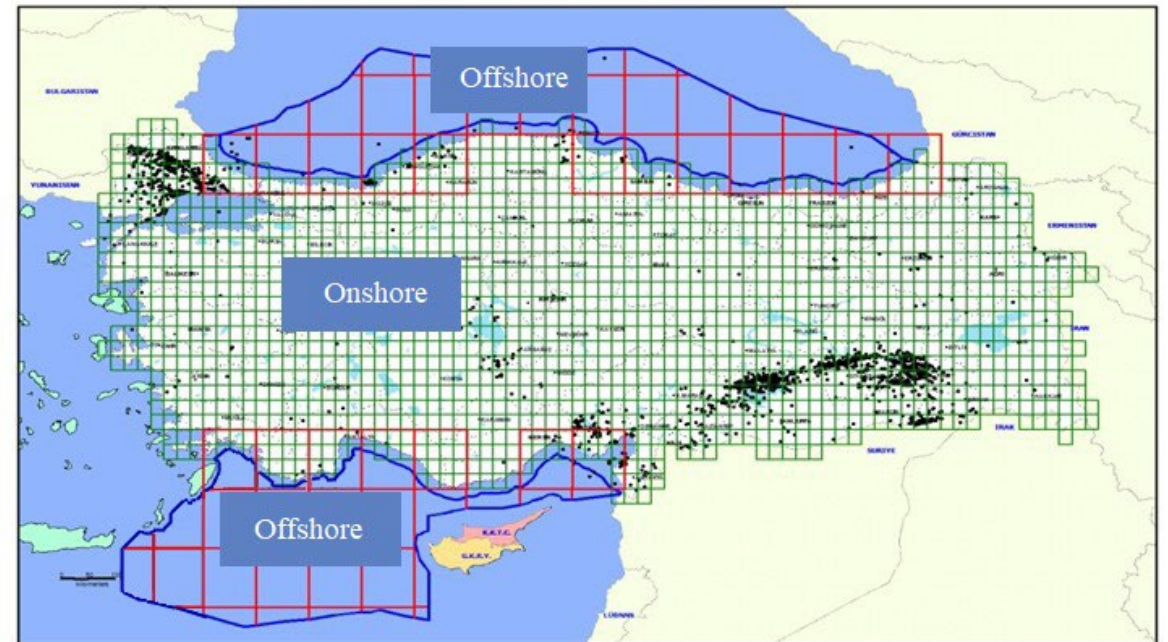
Turkish Ministry of Energy and Natural Resources

Oil & Gas Subcommittee Meeting
23 March 2022

Turkey Update

■ Upstream Petroleum Sector of Turkey

- 22 million barrel crude oil production (annual)
- 0,5 billion m³ natural gas production (annual)
- Sakarya gas field discovery (540 bcm), world's largest offshore discovery in 2020



Turkey Update (*continued*)

■ Emission Data of Turkish Upstream Petroleum Sector

Greenhouse Gas Emissions

Parameter	Amount
Flared methane, m ³	15,000,000
Utilized methane at power plants, m ³	20,000,000
Emitted (vented) methane, m ³	3,000,000
Emitted CO ₂ , (100% flare efficiency), m ³	15,000,000

Flare hotspots of Turkey



Turkey Update (*continued*)

■ Evaluations

- Contrary to the increasing crude oil production tendency there is a decreasing trend in the flared gas amounts of Turkish upstream petroleum sector because of the utilisation of associated gas as feedstock in new small power plants at the high-GOR-fields.
- The methane emission of Turkey based on the upstream petroleum activities is low due to the production level and the characteristics of crude oils, forming the one in 10,000 of the global flared amounts.



Turkey Update

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Turkish Ministry of Energy and Natural Resources

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Oil & Gas Subcommittee Meeting
23 March 2022

Indonesia's Plan & Strategies in Methane Emission Reduction in Oil and Gas Sector

Directorate General of Oil and Gas
Ministry of Energy and Mineral Resources
Indonesia

INDONESIA'S CONDITION OF ENERGY AND COMMITMENT

As mandated by the Energy Law and the Electricity Law, the supply and utilization of NRE must be improved

SDG and NDC TARGETS



TARGET NDC 2030

No	Sector	GHG Emission 2010 (million Ton CO ₂ e)	GHG Emission 2030			Decline	
			BaU	CM1	CM2	CM1	CM2
1.	Energy	453,2	1.669	1.335	1.223	314	446
2.	Waste	88	296	285	256	11	40
3.	IPPU	36	70	66,85	66	3	3,25
4.	Agriculture	111	120	110	116	9	4
5.	Forestry	647	714	217	22	497	692
TOTAL		1.334	2,869	2.034	1.787	834	1.185

PRESIDENT'S DIRECTION



UNFCCC - COP21, DECEMBER, 2015
 Reduce GHG emissions by **29%** (own capacity) or **41%** (international assistance) by 2030 according to the NDC



LEADERS SUMMIT ON CLIMATE, APRIL 2021
 Opening up investment in the **energy transition** through the **development of biofuels, lithium battery industry, & electric vehicles.**



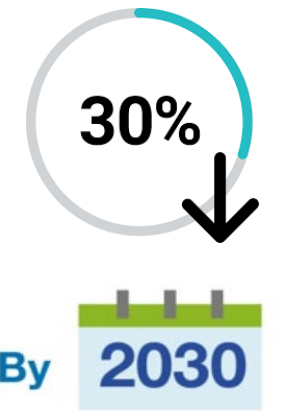
STATE SPEECH, AUGUST 16, 2021
 The transformation towards **NRE**, as well as the acceleration of a **green technology-based economy**, is an important change in our economy.



COP 26, 2nd NOVEMBER 2021
 Indonesia will be able to **Contribute Faster To The World's Net-Zero Emissions.**

GLOBAL METHANE PLEDGE

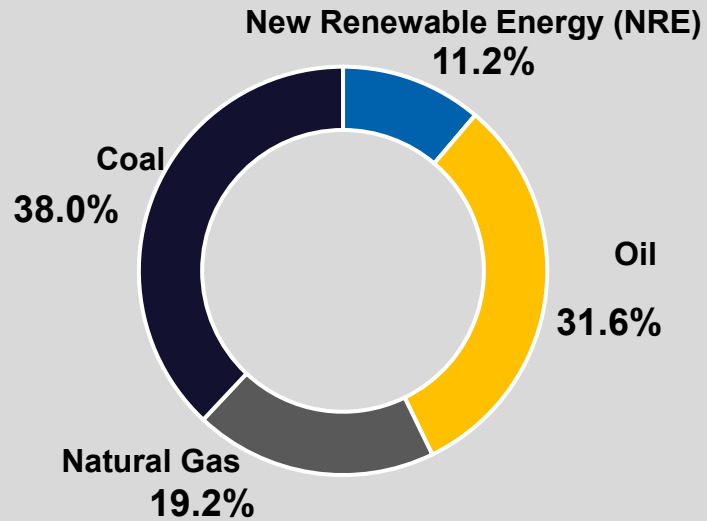
Reducing Global Methane Emissions



"Successful implementation of the Pledge would reduce warming by at least 0.2 degrees Celsius by 2050."

INDONESIA'S CURRENT POSITION AND PLANNING FOR METHANE MANAGEMENT

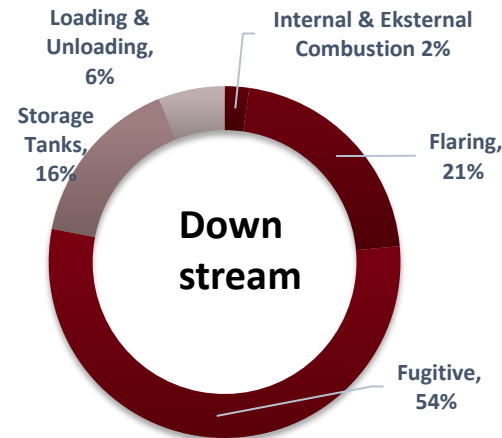
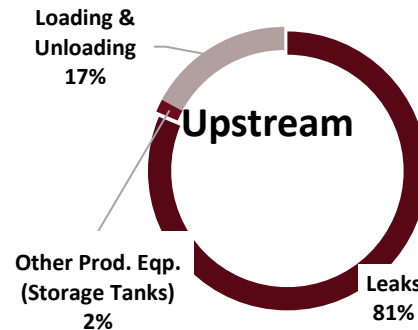
THE PRIMARY ENERGY MIX IS STILL DOMINATED FOSSIL ENERGY



01 Coal dominates the share of national energy use. However, the carbon emissions released by coal are very large (not environmentally sustainable).

02 Utilization of NRE as an environmentally friendly energy source is still low.

METHANE EMISSION OIL & GAS SECTOR



- Currently, Indonesia has **priority to building reliable GHG (include methane) database**. This is important for us to make valid identification in methane mitigation.
- We are planning to **develop guideline in emission measurement and quantification for GHG and flaring activities**. We are open to international assistance in the development of this guidance.
- **Capacity building for our stakeholder and transfer technology** related to emission reduction from developed countries is highly expected.
- We are open to **collaborating with any international methane emission reduction initiatives** (Global Methane Initiatives, Climate and Clean Air Coalition, etc) to achieve significant methane reduction in Indonesia's O&G sector.

OPPORTUNITY FOR INTERNATIONAL COOPERATION

- Energy sector shall be one of the key tools in enhancing national development and economic recovery in the post pandemic era.
- Reducing methane emission and CCS/CCUS deployment will help accelerating the transition to clean energy in Indonesia.
- To achieve GHG's emission reduction target, we need a strong international collaboration.



Building National GHG Monitoring Network

- Data assessment
- Baseline set up
- Identify mitigation opportunities
- Supporting Development of GHG Database

Capacity Building for O&G Stakeholders

- Approaching new technology related to GHG mitigation
- Training
- Site/Facility assessment
- GHG reduction project

Cooperative Research Initiative

- Improving measurement of GHG sources and emissions
- Supporting Development of New Technologies to Reduce Emissions
- Development of blue ammonia

Thank you

THANK YOU



migas.esdm.go.id

Saudi Arabia Update

Hamoud AlOtaibi
Ministry of Energy

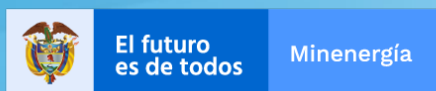
Enhancing Subcommittee Participation

James Diamond

- Subcommittee Participation
 - Share information on Partner Country methane management activities and plans
 - Interest in generating projects and connecting with other Subcommittee members
- Opportunities for leadership
 - Seeking new Subcommittee Co-Chair

Advances in the Management of Fugitive Emissions in the Colombian Oil & Gas Sector

Lina Maria Castaño Lujan
Ministry of Mines and Energy



La NUEVA
ENERGIA

Background on Colombia action on methane

Colombia – CCAC member

- Currently part of its Steering Committee
- Ongoing study to assess health co-benefits of air quality and climate change mitigation actions; study to support City of Cali for an organic waste management project.
- Oil and Gas Peer to Peer regulatory support.
- Study on deducing black carbon and methane emissions through cost-effective flaring mitigation opportunities in Colombia

Resolution 40066

By which technical requirements are established for the detection and repair of leaks, the use, burning and venting of natural gas during hydrocarbon exploration and exploitation activities

2004

Colombia joined GMI

- Landfill Gas Model Spreadsheet
- Coal Mine Methane Investigation Study
- Coal Mine Methane Market Study

2012

2018

PIGCCme

- Res 40807
- Strategyc line – fugitive emissions

2018

2020

2022

NDC Colombia

Colombia revised its Nationally Determined Contribution to reduce GHG emissions 51 % by 2030 and become carbon neutral by 2050

MADS published

National Short Lived Climate Pollutants Mitigation Strategy. This included a goal to reduce fugitive methane emissions

Comprehensive climate change management plan for the mining and energy sector (PIGCCme2050)

2019

Formulation of a methodology so that companies can certify emissions reduced in mitigation projects and development of a top-down model for estimating fugitive emissions in hydrocarbon production in Colombia and their uncertainty

2020

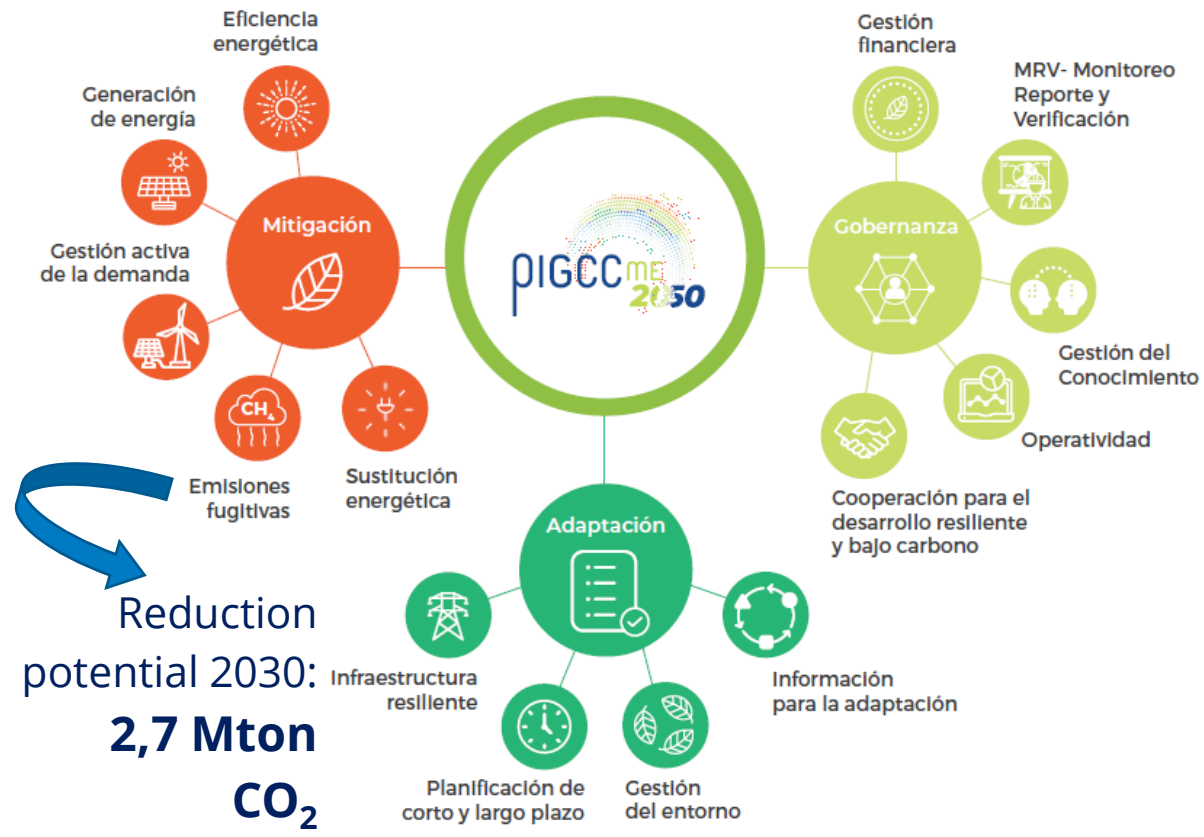
The Directorate of Hydrocarbons and the Office of Environmental and Social Affairs of the Ministry of Mines and Energy, began the development of the regulation of fugitive emissions to increase operating efficiency and reduce fugitive emissions.

2021

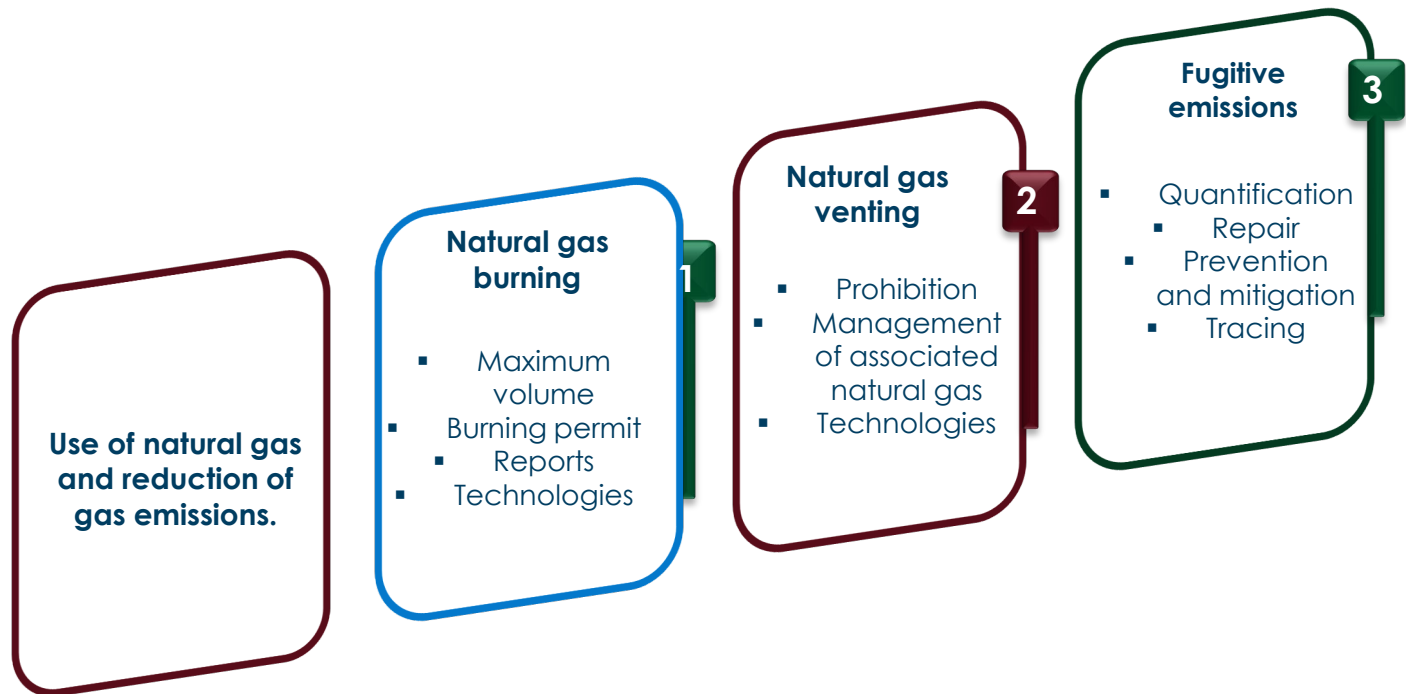
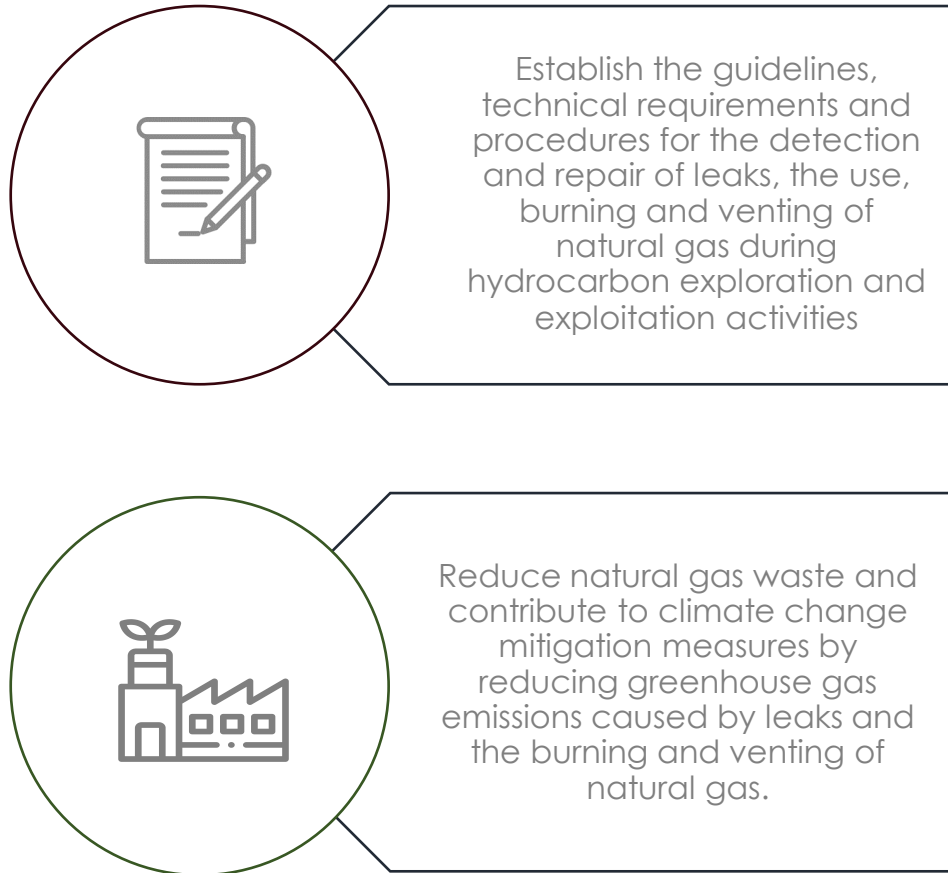
The draft regulation was published for citizen comments and workshops were held with the industry to prepare the final version

2022

Consolidation of the Regulation "By which technical requirements are established for the detection and repair of leaks, the use, burning and venting of natural gas during hydrocarbon exploration and exploitation activities"

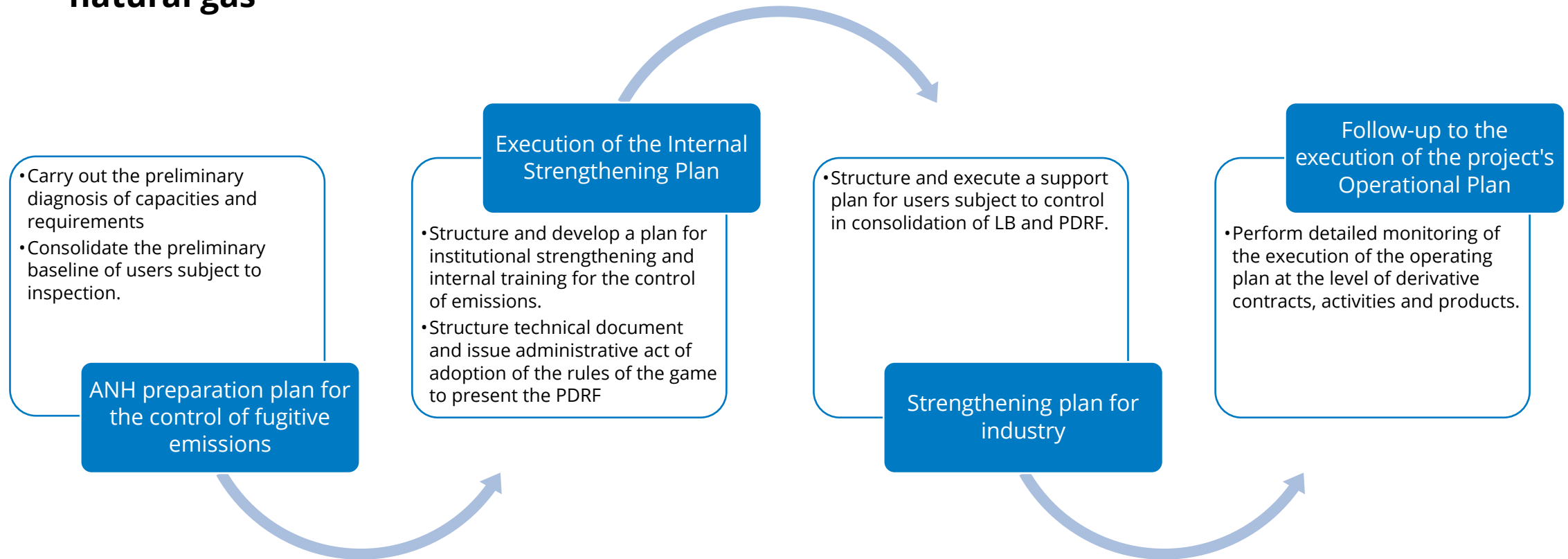


Object and structure of the regulation



NEXT STEPS

Implementation of the national regulation on leaks, use, burning and venting of natural gas



THANK YOU !

Contact: Imcastano@minenergia.gov.co



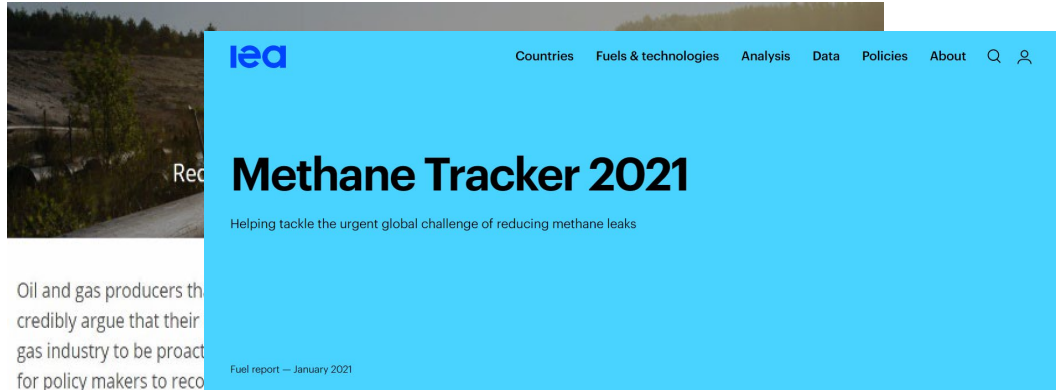
La **NUEVA**
ENERGIA



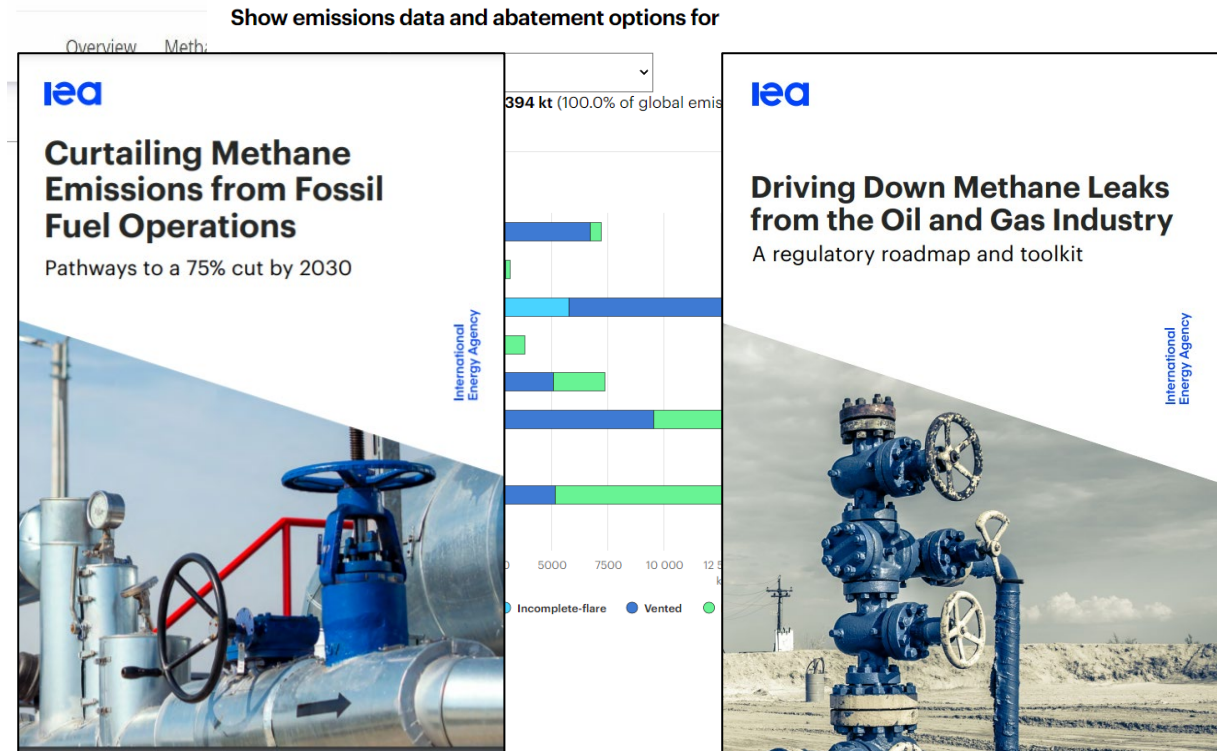
The Global Methane Tracker 2022

Tomás Bredariol, Energy and Environmental Policy Analyst

GMI Oil & Gas Subcommittee Meeting, 23 March 2022



Oil and gas producers that credibly argue that their gas industry to be proactive for policy makers to reco



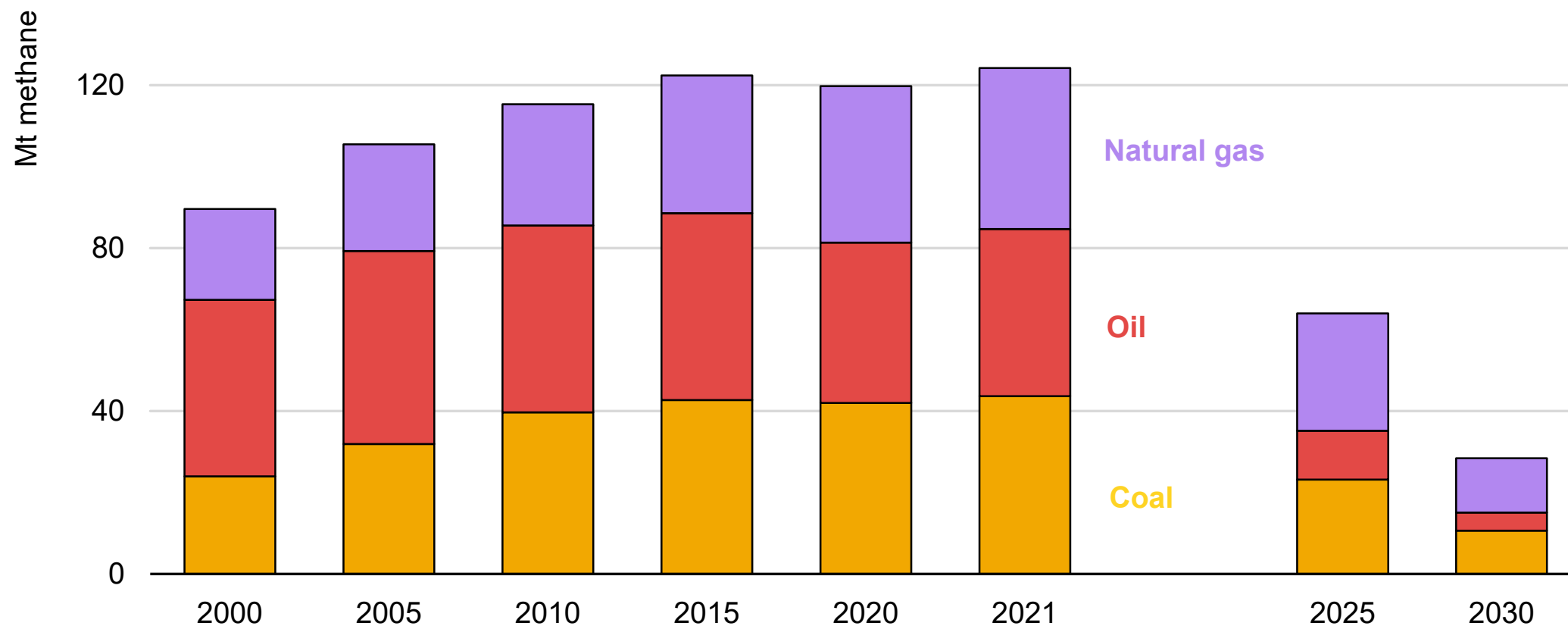
- The updated [IEA Global Methane Tracker 2022](#) provides detailed estimates for 2021 that incorporate the latest evidence from scientific literature & measurement campaigns

- [Curtailing Methane Emissions from Fossil Fuel Operations](#) identifies the different actions & initiatives that can deliver a 75% cut in these emissions by 2030

- The [Regulatory Roadmap and Toolkit](#) is a detailed ‘how-to’ guide for policy makers and regulators seeking to cut methane emissions

Methane emissions from the energy sector rebounded in 2021

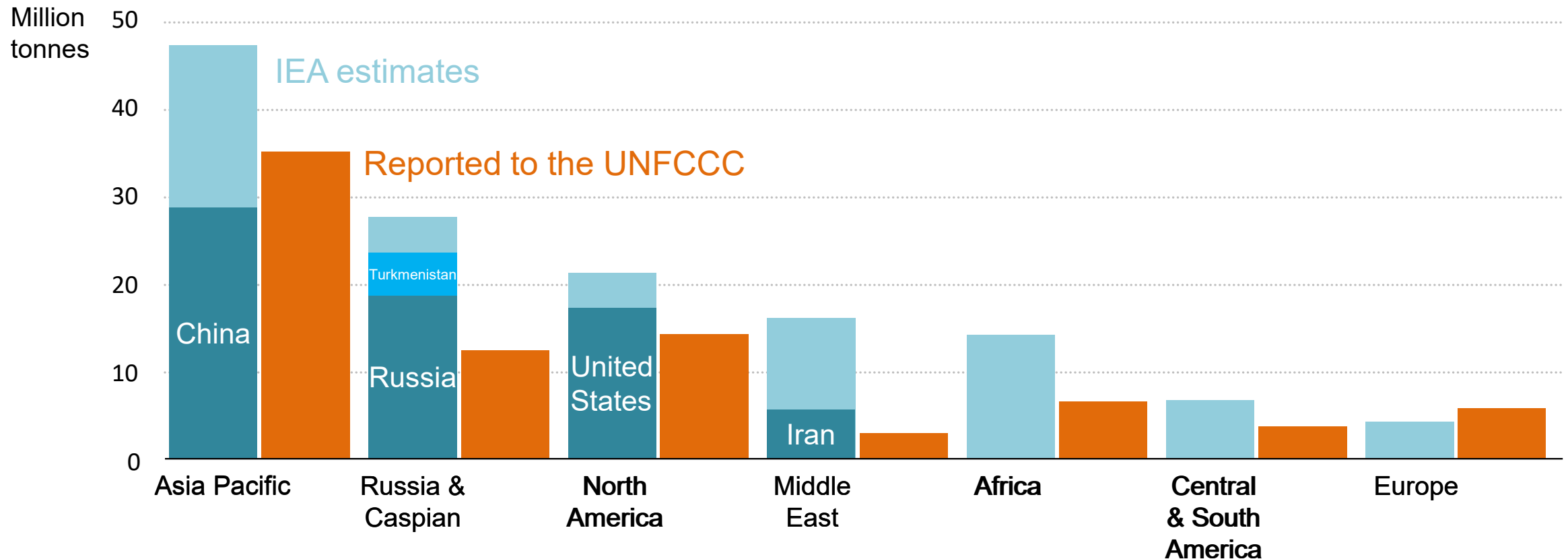
Methane emissions from fossil fuel operations in the Net Zero Emissions by 2050 Scenario



Methane emissions from the global energy sector increased by almost 5% in 2021. Estimated emissions remain slightly below 2019 levels even though energy demand and fossil fuel production are back above pre-crisis levels.

Global energy methane emissions are 70% higher than reported

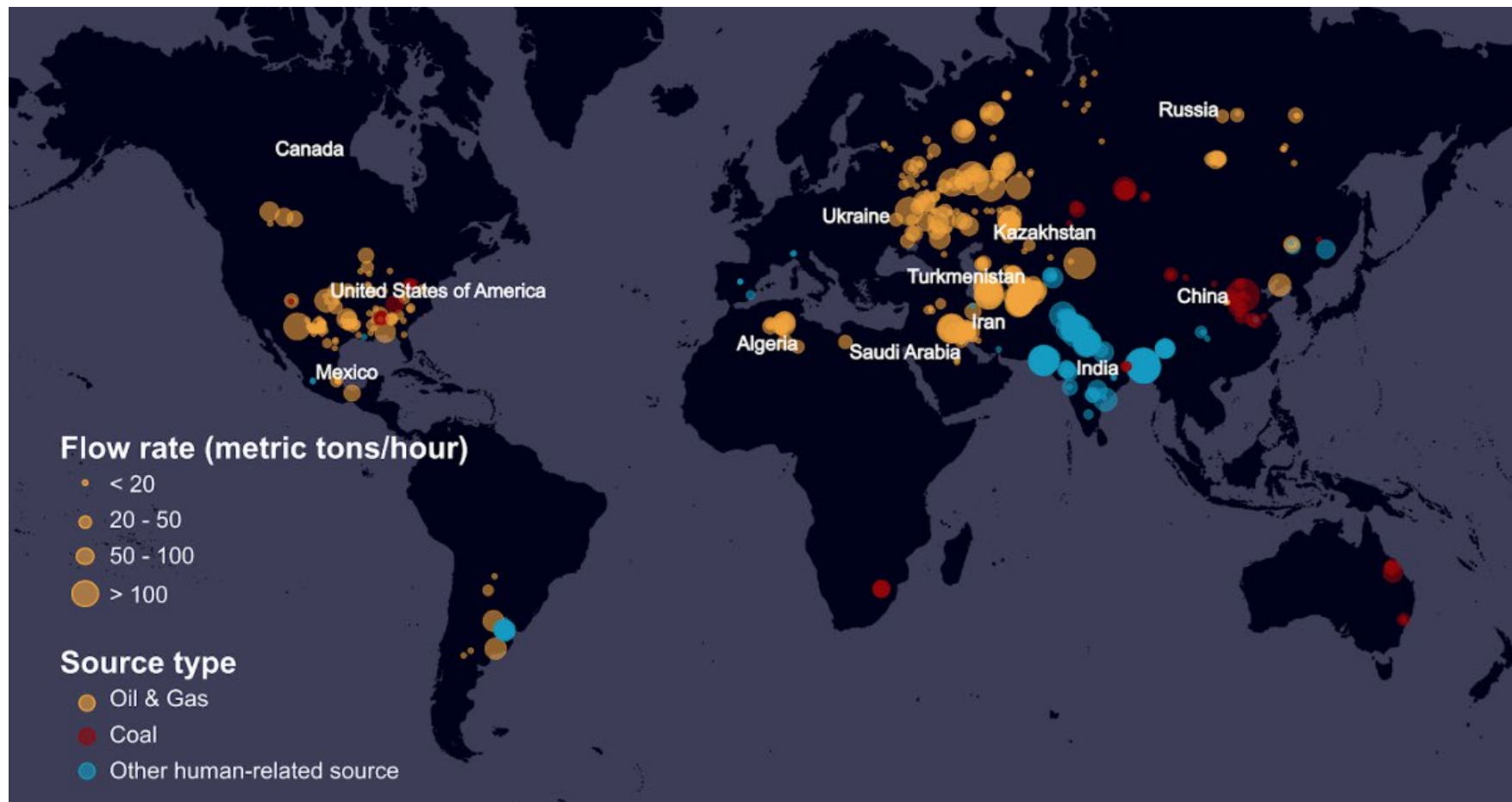
IEA estimates of methane emissions from the energy sector compared with emissions reported to the UNFCCC



As more measured data becomes available, it is increasingly clear that many national inventories significantly underreport methane emissions levels, particularly those from oil and gas operations

Satellites are boosting transparency and understanding of emissions

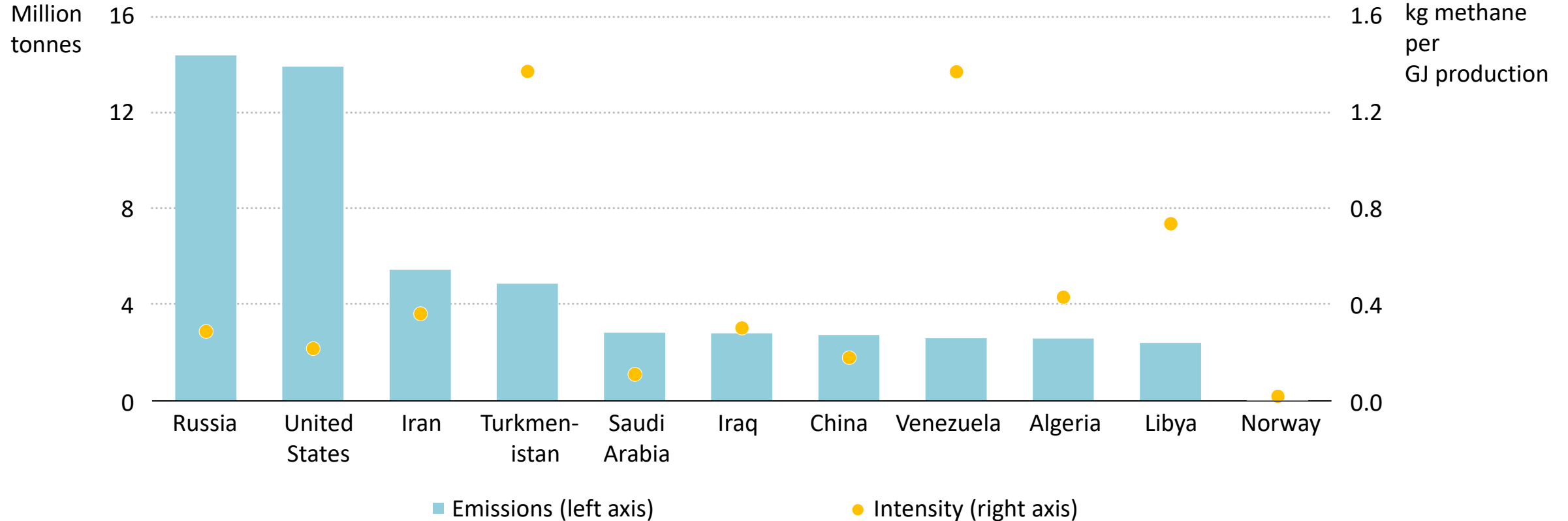
Satellite-detected methane leaks from human activities, 2021



Very large leaks from oil and gas operations were detected by satellite across 15 countries in 2021. The areas open to observation by satellite are increasing, although the coverage they provide today is still far from complete

The emissions intensity of oil and gas production varies widely

Methane emissions from oil and gas operations and the emissions intensity of production

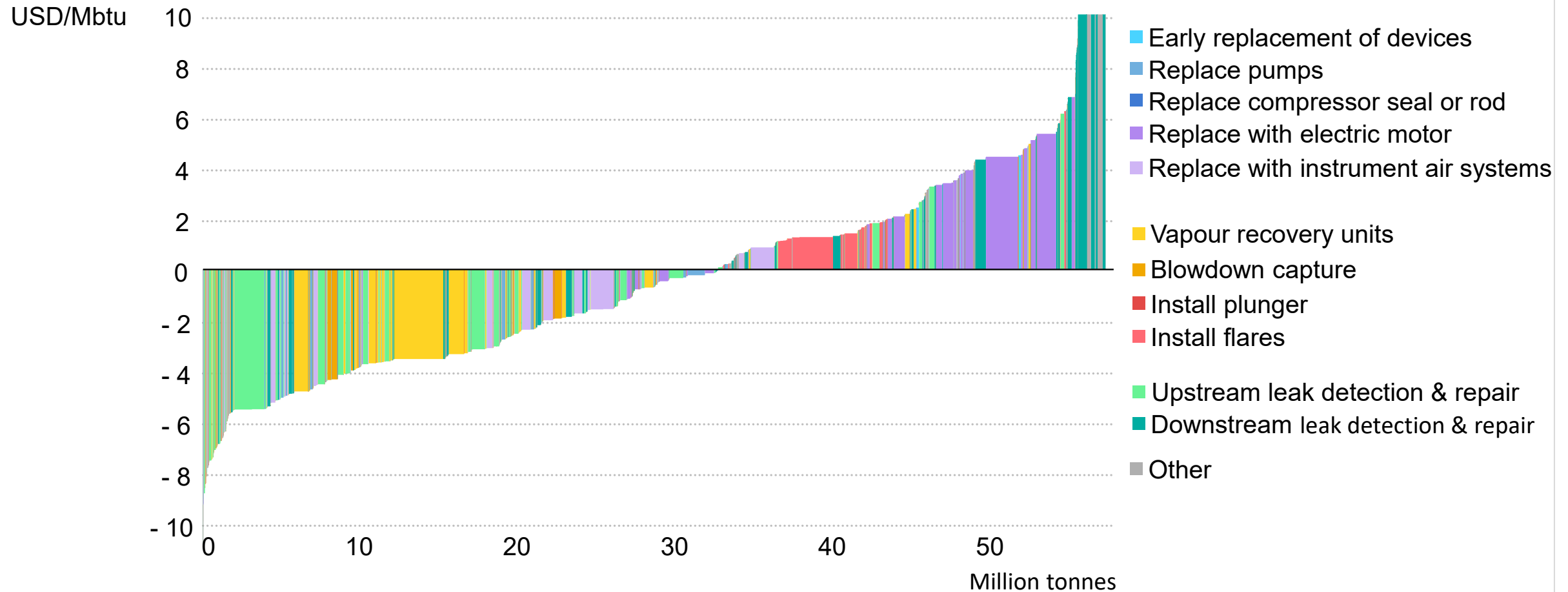


The emissions intensity of the best performers is 100 times lower than the worst. If all countries were to perform as well as Norway, methane emissions from oil and gas operations globally would fall by more than 90%

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Today's gas prices make an overwhelming case for action

Methane marginal abatement cost curve for oil and gas emissions, 2021

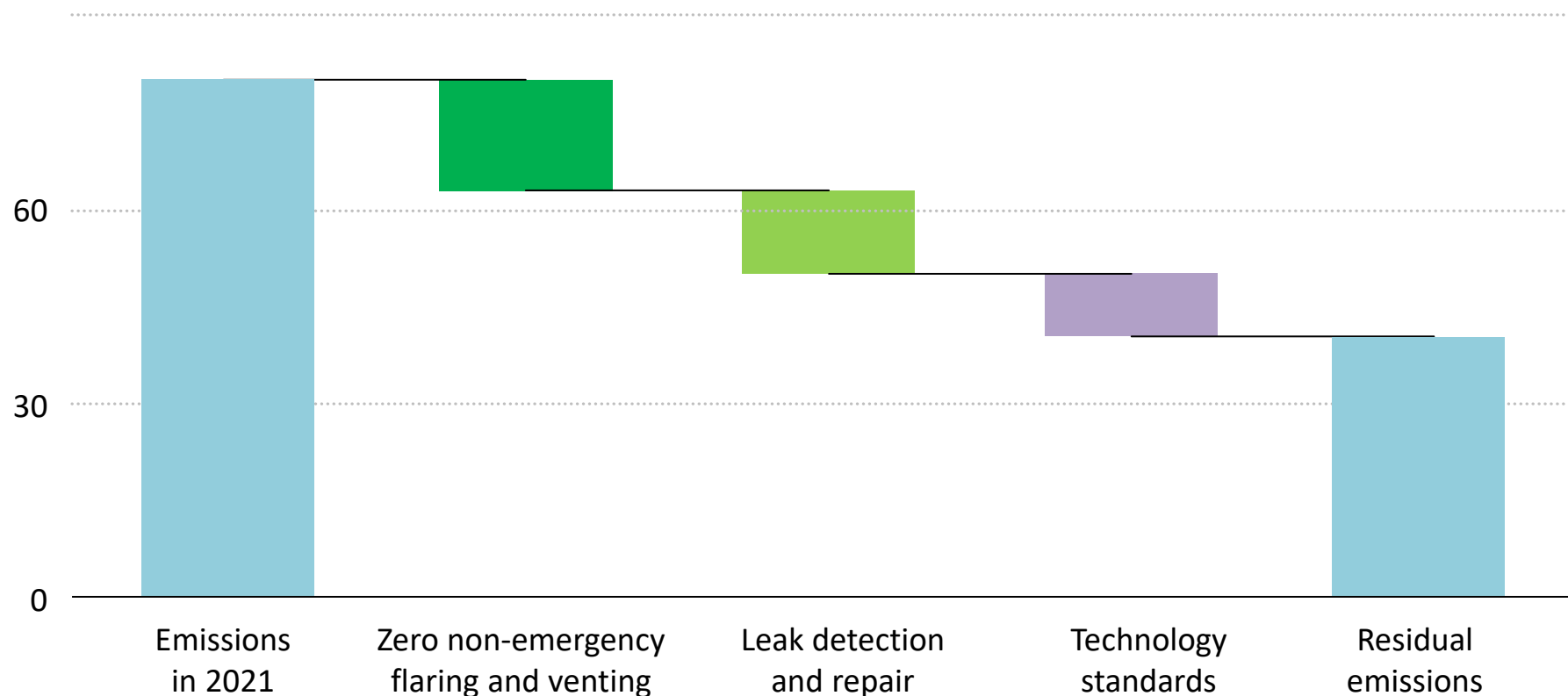


Around over 40% of oil and gas emissions could be reduced at no net cost using well-known existing technologies based on gas prices in recent years. At today's elevated prices, nearly all abatement options are cost effective.

Implementing tried & tested policies would halve oil & gas emissions

Reductions in global methane emissions from oil and gas operations from implementing tried and tested policies

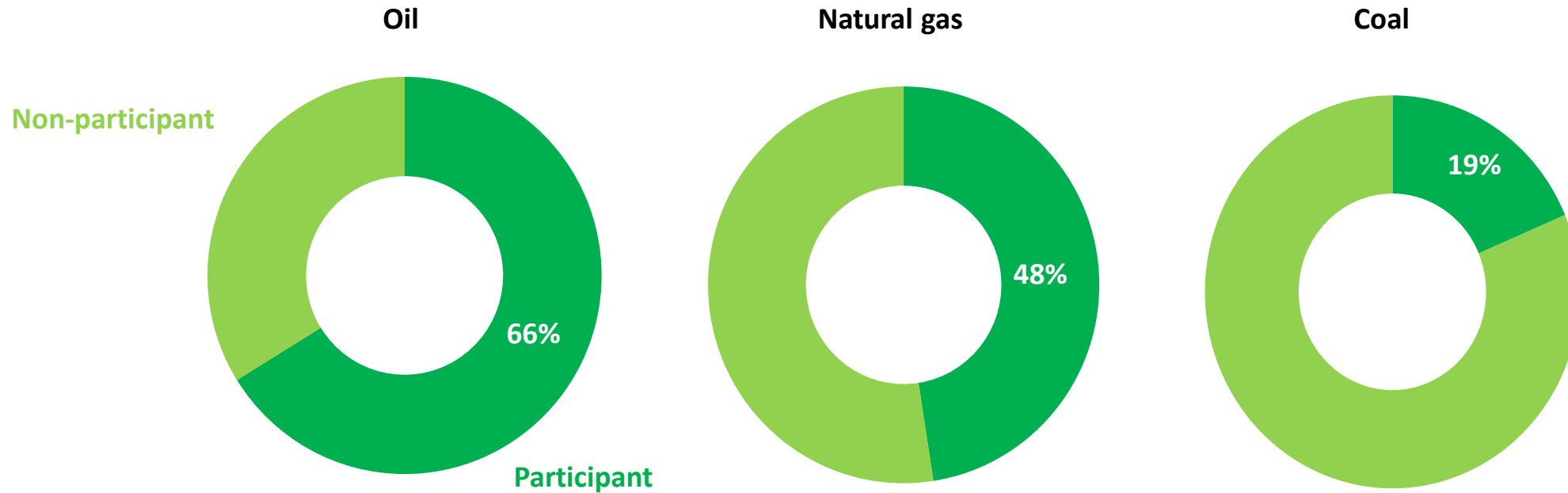
Million tonnes



Uncertainty over emissions levels is no reason to delay action to reduce emissions. There are multiple success stories that countries seeking to implement new policies and regulations can look to for inspiration

The Global Methane Pledge could be a vital step forward

Oil, natural gas and coal produced by participants in the Global Methane Pledge



Over 110 countries have committed to reduce methane emissions by 30% by 2030: achieving this would have the same effect as shifting the global transport sector to zero emissions. But broadening the coalition is essential.

Planning for the Global Methane Forum 2022

James Diamond

Plans for 2022

- Tentatively planned for 3-6 October 2022 in Washington, D.C.
- Collaborating with the Climate and Clean Air Coalition (CCAC)
- In-person meeting with hybrid live streaming sessions
- Agenda:
 - High-level plenary sessions
 - Topic-specific plenary sessions on finance and planning policy
 - GMI and CCAC joint technical sessions
 - GMI Steering Committee and Subcommittee meetings
 - Optional site visits to wastewater, landfill, and agriculture facilities

Incorporating Your Ideas into the Global Methane Forum Agenda

- Do you have any suggestions for topics at the Global Methane Forum ? For example:
 - Are there specific emission sources and/or industry segments of interest?
 - Are “renewable natural gas” topics of interest to the Subcommittee?
- What do you need for your policy work?
- Where do you look for your monitoring, reporting, and verification (MRV) references? Are you getting what you need?

Email ideas or speaker suggestions to secretariat@globalmethane.org

Thank You!

Send ideas, questions, or concerns
to the GMI Secretariat
at secretariat@globalmethane.org.



globalmethane.org

