

Greenhouse Gas Supply Chain Emissions Measurement, Monitoring, Reporting and Verification (MMRV) Framework

Frequently Asked Questions

Q. What is MMRV?

Measurement, Monitoring, Reporting and Verification (MMRV) is a multi-step process used to account for the greenhouse gas (GHG) emissions and emissions intensity across the supply chain. There is considerable activity underway related to MMRV of methane, carbon dioxide, and other GHG emissions associated with delivered natural gas. However, there is currently no consensus regarding what purchaser, regulator, or other stakeholder expectations should be for a company making a claim about the GHG intensity of delivered or contracted gas.

Q. Why are countries working together on a MMRV Framework?

The lack of a consistent MMRV Framework today impedes the ability to verify emissions reported and limits the ability of buyers to demand and suppliers to provide natural gas with a lower greenhouse gas profile. Major natural gas importing and exporting countries are working together to advance a shared and broadly credible global framework for methane and carbon dioxide MMRV in the natural gas value chain. This type of global framework could facilitate GHG emissions reductions in the fossil energy sector through allowing differentiation of natural gas supply chains by GHG emissions. Such a framework could later be expanded to include other fossil fuels.

Q. Who comprises the MMRV Framework Working Group?

The MMRV Framework is being developed by a Working Group comprised of government officials. The Working Group is supported by a Technical Group of government technical staff. In addition, the Working Group has convened a group of external organizations, called the Stakeholder Representative Group, to ensure that the Technical Group has the benefit of input from a diverse group of stakeholders with global perspectives and technical expertise. Each participating country was asked to nominate 3-4 stakeholders to the Stakeholder Representative Group. The Stakeholder Representative Group provides feedback directly to the Technical Group; it is not a mechanism for direct feedback to individual governments.

Q. What countries are involved in this effort?

Australia, Brazil, Canada, Colombia, Egypt, the European Commission, France, Germany, India, Italy, Japan, Korea, Malaysia, Mozambique, Norway, the United Arab Emirates, the United Kingdom and the United States have representatives who participate in the Working Group as participants or observers along with the Eastern Mediterranean Gas Forum.

Q. How will the international MMRV Framework for natural gas lead to reductions in greenhouse gas emissions?

Ensuring comparable and reliable information on GHG emissions is critical to efforts to reduce those emissions. The MMRV Framework will not only help buyers of natural gas better understand supply chain GHG gas emissions but will also incentivize companies to take action to reduce GHG emissions. The MMRV Framework will enable credible verification of methane and other GHG emissions across the supply chain and provide market participants with verified information about life cycle GHG emissions and intensity from production through delivery. The MMRV Framework will enable buyers to value low GHG natural gas directly through contracting and purchasing decisions, providing incentives to upstream and midstream operators to engage in strong MMRV and reduce emissions. This approach to reducing GHG emissions is a voluntary market-driven approach that will incentivize industry to reduce emissions beyond regulatory compliance. The lack of a consistent MMRV Framework today impedes the ability to verify emissions reported and limits the ability of buyers to demand and suppliers to provide natural with a lower greenhouse gas profile.

Q. How does this Framework compare to already existing programs and initiatives for measuring and reporting greenhouse gas emissions from natural gas operations internationally?

The majority of existing reporting frameworks focus on publication at the country-level and corporate-level. The type of information provided today by country-level and corporate-level reporting does not result in comparable and representative information at a level of detail that a natural gas buyer could use to differentiate supply chain greenhouse gas emissions. The MMRV Framework will build on the strengths of well-established and recognized frameworks, while minimizing additional measurement and reporting burdens to the extent practical and avoiding duplication.

Q. What non-government stakeholders have been involved?

A Stakeholder Representative Group made up of a diverse group of global and local industry, environmental and technical stakeholders with broad expertise and technical knowledge related to MMRV and the oil and natural gas industry has provided input to the MMRV Framework Working Group. These include global and national industry associations, NGOs, and academic experts. Individual governments have also been encouraged to undertake their own outreach to stakeholders in their respective countries.

Q. How can a U.S. stakeholder participate in the MMRV Framework?

The U.S. DOE will be continuing to create opportunities for U.S. stakeholders to provide input on the MMRV Framework development. The best way to track these opportunities is to send an email to FE-30correspondence@hq.doe.gov to be added to the MMRV Framework mailing list.

Q. When will the MMRV Framework be available for use?

An international Working Group was established in May 2023. Coordination and technical development work was initiated in 2023 and will continue through 2024. Products of the Working Group could include guidance, protocols, and tools for voluntary use in natural gas markets in 2025.

Q. Where can one find additional information on the MMRV Framework project?

The U.S. Department of Energy (DOE) has established a website to communicate MMRV Framework project objectives, progress, and provide opportunities for the public to participate in domestic (U.S.) stakeholder webinars. Link to U.S. DOE website:

www.energy.gov/fecm/greenhouse-gas-supply-chain-emissions-measurement-monitoring-reporting-verification-framework