Decision Support and Innovation to Understand Risks and Opportunities

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Measuring, reporting and verifying (MRV) product sustainability metrics

A case study of natural gas differentiated based on the greenhouse gas emissions associated with its production and delivery

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MRV for differentiated natural gas

Global marketplaces, particularly the EU, are demanding natural gas produced with low greenhouse gas emissions, with a focus on methane emissions.

Why methane?

~2% of methane, a potent greenhouse gas, is emitted between production at the wellhead and burner tip; emissions are highly variable by region.

Eliminating 100 Tg/yr of methane emissions from the global oil and gas sector is equivalent of removing the carbon dioxide emissions from billions of cars.

Source: EPA
Challenges with labeling for supply chain emissions

• No measurable feature of the end product verifies a low emission supply chain

• Emissions have high spatial and temporal variability
  
  but

• Rapid advances in remote sensing and data analytics make global scale, high resolution measurements and reporting possible

What’s needed in an MRV program?

Who leads a global reporting initiative?

Department of Energy is launching a joint effort of natural gas importing and exporting countries that will establish guidelines for a global reporting framework.

NASEM reports make key contributions to the structure of MRV systems

Greenhouse Gas Information for Decision-making (2022)