Getting Started

on Methane Abatement Regulations

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About the Handbook

A ‘how-to’ action guide to empower legislators, ministries, regulators, and NOC officials to adopt and enforce legal instruments that will rapidly and effectivel reduce methane emissions from the oil an gas sector.

Available here:

https://cldp.doc.gov/methane-abatement-resources

Methane Abatement for Oil and Gas: Handbook for Policymakers

About the Handbook (continued)

- Sponsored by **U.S. Department of State, Bureau of Energy Resources.**
- Drafted over one week in an intense session with 13 expert co-authors.
- Co-written by authors representing:
  - Government (U.S., Sri Lanka, and Bangladesh)
  - NGOs
  - Multilaterals
  - Industry
  - Academia

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Key Takeaways

- Understanding types of measures to reduce methane emissions is a good starting point in developing new regulations.
- There are four main approaches for methane regulation — prescriptive, performance, economic, and information. They are not mutually exclusive; a regulatory regime will likely include elements from multiple approaches.
- The existing legal and regulatory framework will determine what regulatory actions are possible and who has the authority to develop new policies.
- Engaging key stakeholders in methane abatement policy development gives them a voice in decisions that affect them and informs policy-making.
- Industry actors may already be taking voluntary actions that regulatory measures can build on and reinforce.
- Looking at existing regulations in other countries can yield insights into the most effective regulatory options. For example, existing regulations commonly include leak detection and repair requirements, flaring and venting restrictions, and standards for specific equipment and processes.

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Potential Policy and Regulatory Strategies

Following a survey of existing oil and gas methane regulations, the IEA has classified different approaches that could apply to oil and gas methane emissions.

Prescriptive measures	Performance measures	Economic measures	Information measures
• Directly require entities to undertake o not undertake specific actions or procedures • Include leak detection and repair (LDAR) requirements, equipment standards, and bans or moratoriums	• Establish a mandatory performance standard for regulated entities but do not dictate how the target must be achieved • Can be set at a high scale (e.g., facility-wide performance standards) or a more limited scale (e.g., performance standards for flare efficiency)	• Induce action by applying fees or introducing financial incentives for certain behaviors. • Range from specific incentives such as taxes on flaring or direct subsidies for emissions reduction actions, to broader measures that link methane reductions to carbon markets	• May include requirements that regulated entities estimate, measure, and report their emissions to public bodies • Can range from simple reporting of sources and facilities to detailed reporting of emissions.

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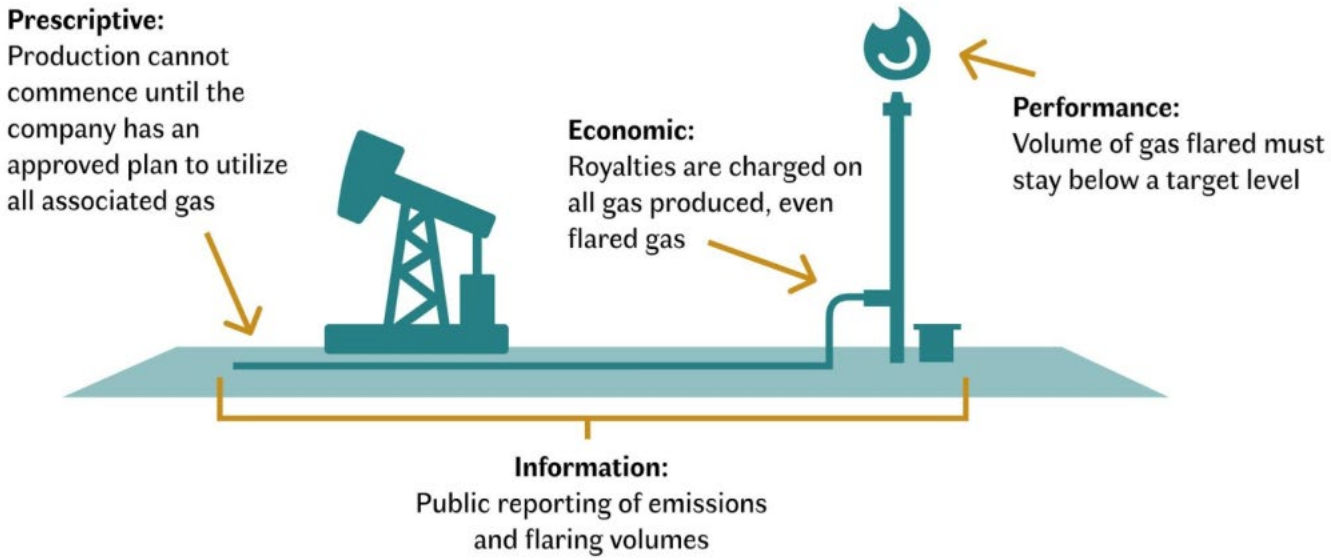
Potential Policy and Regulatory Strategies

These four approaches are not mutually exclusive and a given regulatory regime will likely include elements from multiple approaches.



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Considerations

Ease of implementation

- Well-designed, prescriptive regulations that are unambiguous can be straightforward to implement. This consideration may be crucial for jurisdictions with limited regulatory resources. Most existing methane abatement regulations are prescriptive.

- Economic instruments can be more complex to implement, particularly if they rely on external factors like a broader carbon pricing scheme or international framework for offsets.

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Considerations

Effectiveness

- Different approaches may be more effective depending on specific national circumstances. For example, information-based regulations can enable economic or performance-based instruments, but they do not generally lead to reductions in and of themselves.

Need for high-quality data

- The type of data needed, whether emissions or other data, is an important consideration. A tax on flaring only functions to reduce emissions if companies can be sure that reducing flaring will reduce their tax bill. Such a program could require the metering of flare volumes and reporting that metered data to the relevant government agency.

Comparative Advantages

Flexibility or rigidity in the regulatory scheme

- Prescriptive approaches tend to be limited to technology options that exist when the regulation is finalized.
- In contrast, performance and economic approaches allow companies to choose how to comply as new technologies become available.

Other factors related to international norms, market dynamics, geopolitical shocks, domestic complications, and stakeholder acceptability can also be considered

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Considerations

Regulatory approach	Transaction costs	Rigidity	Preconditions	Consider when...	Examples
Prescriptive	**Low** Simple to administer for both regulators and firms	**High** Only prescribed changes will take place	**Moderate** Knowledge of facilities' emissions needed	You have identified key abatement opportunities	Prohibition (Equatorial Guinea[28])
Performance- or outcome-based	**Moderate** Monitoring, measurement, and follow-up are needed	**Low** Encourages different solutions	**High** Requires information on baseline and overall emissions	You have a reasonable understanding of emissions and monitoring capabilities	Facility limits (Alberta, Canada[29])
Economic	**High** Requires robust verification systems	**Low** Enables company-specific abatement strategies	**Moderate** Requires knowledge of baseline emissions and related methane contributions	A monitoring system is in place and you want to mobilize different solutions	Royalties (Brazil[30])
Information-based	**High** Demands collecting, analyzing and transmitting information	**Moderate** Allows for other solutions in some cases	**Low** No need of previous information	You need a better understanding of methane emissions and abatement opportunities	Measure and report (Saskatchewan, Canada[31])

Often different approaches are combined. For example, Vietnam has put in place a regulation with restrictions on flaring (prescriptive), entitling the government to grant the right to use, free of charge, gas that would be flared (economic) and requiring gas loss reporting (information-based).

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Assessing Existing Laws and Institutions

- Some countries may already have laws, regulations, standards, or other policies that address or could address methane abatement in the oil and gas sector.
- These legal frameworks, however, may vary in the type of legal instruments, procedures, and standards for addressing methane emissions.
- Some countries may need to develop new regulations to address methane emissions.
- In some countries, the inherent authority to protect national resources and their beneficial use may be particularly broad. Other jurisdictions may need precise statutory provisions to provide legal authority to address specific sources of methane emissions.
- Some countries may pilot interim policies to inform the development of legislation to address methane emissions from the oil and gas sector.

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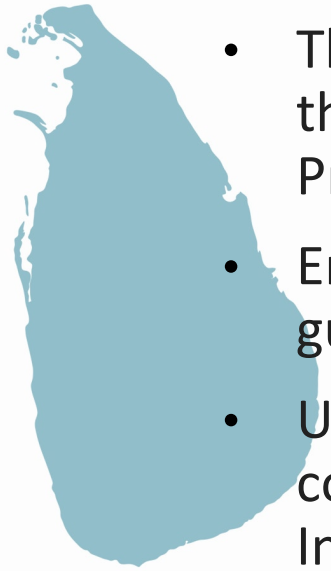
Case Study: Sri Lanka



- The Government of Sri Lanka (GOSL) promoted use of best oilfield practices through their review and approval process for the operators' Standards of Procedures (SOP).
- Encouraged by the outcome, GOSL enacted legislation and adopted new guidelines for petroleum operations.
- Under those regulations, several offshore 2D and 3D seismic surveys were conducted, and four offshore wells were drilled, resulting in two gas discoveries. In 2020, the Sri Lankan Cabinet approved its National Policy on Natural Gas of Sri Lanka to support the natural gas commercialization process.
- The GOSL has recently enacted a new Petroleum Resources Act No. 21 of 2021 and established a new entity to regulate all upstream petroleum operations in Sri Lanka, the Petroleum Development Authority of Sri Lanka.

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Stakeholder Engagement

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Leveraging Voluntary Action by the Industry

- Countries with fewer resources and lower initial capacity may begin their methane policy journey by working with the industry to promote voluntary actions and learn about methane policy options and best practices.

- Joint industry efforts introduce standard guidelines, standards, and codes to share best practices and improve industry performance.

- Many governments are actively considering all available tools for methane abatement, voluntary and otherwise. Governments should consider the possibility that policy choices have unintended consequences on voluntary methane emissions activities.

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Common Approaches in Existing Regulations

- Regulators can learn from examples from other jurisdictions: Canada, Colombia, Mexico, Nigeria, Norway, the United States, and the European Union
- Most methane regulations focus on prescriptive or information approaches.
- Methane regulations commonly include
  - LDAR requirements
  - flaring and venting restrictions; and
  - standards for specific equipment and processes.
- Project approval procedures can be critical for assessing methane emissions management options, feasibility, and impacts.
- The effectiveness of these and other measures are supported by an evolving inventory of methane (and GHG) emissions founded on a program of monitoring, reporting, and verification (MRV).

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