



# Methane Management in the Extractive Industries

**Scott Foster**  
**Director**  
**UNECE Sustainable Energy Division**

13 July 2017  
22<sup>nd</sup> World Petroleum Congress  
Istanbul, Turkey





ENERGY



# Methane Management in the Extractive Industries: Overview

- Reducing methane emissions would slow global temperature rises.

**BUT**

- Current information is largely based on estimates, and often uneven and incomplete.
  - Not all companies measure and report leaks.
  - Technology for detecting and quantifying methane emissions is available.
  - Standard national/regional methods for reporting them exist
  - Implementation is uneven, so hard to compare data.

**THEREFORE**

- A clear need for common global approaches across each fossil energy chain and for enhanced dialogue and cooperation.



ENERGY



# What we do?

Survey

- UNECE in consultation with IGU, WCA and WPC and other industry experts prepared a survey on methane monitoring.
- Objective:
  - Provide an initial overview of how methane emissions in extractive industries are monitored, measured, recorded, and reported across the extraction, processing and transport segments of the respective value chains.
- Where we are?
  - Questions prepared
  - Survey disseminated
  - Responses collected
  - Results analyzed





- Most fossil extractive industries (gas, oil, coal) monitor CH<sub>4</sub> and report results
- Primary purposes for monitoring are compliance and safety
- The nature of emissions are fugitive leaks and controlled releases (mainly for gas and oil industries) and accumulation of gas (coal)
- Oil and gas exploration distinguishes CH<sub>4</sub> from other CH-gases. Other players do not distinguish
- Continuous monitoring is applied in all sectors, but especially in coal, plus monthly for coal and annually for oil and gas
- CH<sub>4</sub> emission standardization mandated by law more often for coal than for oil and gas



ENERGY



# GEG Session

## Key Takeaways

- Methane management attracting attention
- Information regarding methane emissions has improved
- Much effort and resources are going into remediation
- A range of practices exist

**BUT**

- The essential conclusions remain unchanged:
  - **Data collection is not rigorous nor comprehensive; estimates not verified**
  - **Procedures for MRV and remediation are variable**
  - **Enormous opportunity for knowledge enhancement and remediation**



ENERGY



# Survey + GEG Session

## Conclusions and recommendations

- Survey identified critical gaps in information on methane emissions.
- Recommended that work on best practice guidelines and methods to manage and reduce methane emissions be continued in the 2018–2019 work plan.
- Survey highlighted the need to update and refine data to reflect more accurately volumes of methane emissions.
- Future work should be carried out in close collaboration with other international mechanisms, companies, organizations and associations
- UNECE invites all interested parties to join this effort.



ENERGY



# UNECE Project

## Methane management

- Explores current practices and technologies along the value chain in key energy-related extractive industries.
- Seeks to:
  - Determine and promote best practices for measurement, reporting, and verification (MRV) of methane emissions in these industries.
  - Identify and disseminate best practices to reduce methane emissions.
- Four subject-specific pillars:
  - Coal
  - Downstream Oil (processing through distribution),
  - Downstream Gas
  - Upstream Oil and Gas (i.e. exploration and production)

# Next Steps

ENERGY



Extractive Industries				
	Upstream Oil and Gas	Downstream Oil	Downstream Gas	Coal
BPG MRV				
BPG Remediation				★ →





ENERGY



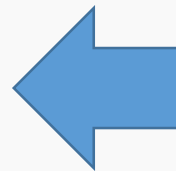
# What we do?

## Gas Project

- UNECE in cooperation with US EPA has begun implementing the project on *Methane Management in Extractive Industries*.
- Objective:
  - To increase capacity of the UNECE Member States for MRV and to reduce methane emissions in extractive industries.
- Where we are?
  - Project document prepared
  - Deliverables determined
  - Financing secured
  - Implementation started

### Selected deliverables:

- Assessment of methane emissions
- Development of **case studies** for MRV and reduction of methane emissions
- Identification of **best practices** for MRV and reduction of methane emissions



# Next Steps:

## Funded Project on Methane Management in Extractive Industries

ENERGY



4 phases, each building on existing efforts:

- 1<sup>st</sup>: identify scope and breadth of methane emissions:
  - Review existing data on sources of methane emissions;
  - Compile data related to methane emissions in UNECE member States;
  - Determine the largest-emitting sources of methane.
- 2<sup>nd</sup>: review and assess current MRV systems (at facility, national, and international levels) and strategies, practices and/or technologies for MRV of methane emissions. Identify comprehensive best practices for MRV of methane emissions.
- 3<sup>rd</sup>: Drawing from government and industry experience in addressing methane emissions, identify best practices for reducing methane emissions.
- 4<sup>th</sup>: Disseminate best practices/case studies for (1) MRV and (2) reduction of methane emissions and capacity building workshops and seminars.



**Thank you!**

