Methane Emissions from the Oil & Gas Supply Chain in Europe

CATF

Emissions come from all segments of natural gas and oil development.

Reducing methane emissions from the oil and gas industry is critical if we are to stay within the 1.5 degree warming target. There's no time to wait: methane emissions are 80x more damaging than CO_2 in the short term. Existing technologies and best maintenance practices can dramatically slash oil and gas methane emissions at low cost.

- PRODUCTION & PROCESSING
- TRANSMISSION SECTOR
- DISTRIBUTION

→ METHANE EMISSIONS

PRODUCTION & PROCESSING

ONSHORE

Gas Well

Methane emissions come from leaks, unloading liquids from wells, well completions, pneumatic devices, compressors, storage tanks, and dehydrators. CO_2 emissions come from fuel combustion at well pads.

Oil Well

Methane emissions come from leaks, unloading liquids from wells, well completions, pneumatic devices, compressors, storage tanks, and dehydrators. CO_2 emissions come from flaring of associated gas and fuel combustion at well pads.

OFFSHORE

Offshore Production Platforms

Methane emissions come from leaks and equipment venting. CO_2 emissions come from flaring and combustion.

IMPORTS

LNG Regasification Import Terminals

Receiving terminals regassify LNG, a necessary step to add it to the transmission pipelines (production happens overseas).

Methane emissions can come from leaks and incomplete combustion.

Gathering Pipeline

Pipelines collect gas from various wells in a production region and deliver to a processing plant.

Methane emissions can occur from leaks along the pipelines and maintenance blowdowns.

Gathering and Boosting Compressor Stations

Compressor stations maintain gas pressure along gathering pipelines.

Methane emissions come from leaks, pneumatic devices, compressors, and tanks. CO_2 emissions come from flaring and combustion.

Processing Plants

Large plants are used to clean and pressurize gas.

Methane emissions mainly come from leaks, compressor venting, and maintenance blowdowns. CO_2 emissions come from flares and CO_2 removal from raw gas.

TRANSMISSION SECTOR

Transmission Pipelines

Long pipelines move gas into Europe from Asia and Africa and transport gas throughout the continent.

Methane emissions can occur from leaks along the pipelines and maintenance blowdowns.

Transmission Compressor Stations

Compressor stations are located every 70-120 kilometers along a pipeline to maintain gas pressure.

Methane emissions can come from leaks, pneumatic devices, and compressors. CO_2 emissions come form flaring and combustion.

Underground Gas Storage

Gas is often stockpiled in underground storage facilities in order to stabilize energy demand during peak consumption periods.

Methane emissions come from come from venting, compressor units, and leaks. CO_2 emissions come from flares.

DISTRIBUTION

Decompression Station

Gas is measured, decompressed, and odorized (if not already odorized) by the local distribution company before it is put into final distribution lines.

Methane emissions can come from leaks.

Natural Gas Power Plant

Power plants convert gas to electricity that enters the grid and is sent to consumers.

Methane emissions can come from turbine startups and shutdowns as well as leaks.

Distribution Pipeline

Gas is distributed throughout a city network of low pressure pipelines to various end users.

Methane emissions can come from leaks in underground pipelines.

Residential

Industrial

Commercial

Methane emissions can come from leaks at gas meters and end-use equipment.