

ENERGY EMISSIONS MODELING AND DATA LAB

Methane Emissions Estimation Tool (MEET)

Methane emissions from oil and gas production facilities are due to releases from diverse sources. Sources can be anticipated based on facility design and operations (routine) or may be due to malfunctions or process excursions (unintended). Within each of these categories, emissions may be continuous or intermittent and emission rates can range from g/h to Mg/h. Small emission rate sources are typically more numerous while large emission rate sources are typically short in duration and are frequently unintended. These different sources lead to source and site level emissions that vary widely over time. If these emissions are to be compared to short duration snapshot measurements, intermittency needs to be accounted for.

Methane Emissions Estimation Tool (MEET)

Objective:

To provide a tool that will generate emission time series for a diverse range of emission sources and sites.

Functionality:

- **Equipment and operation level:** Individual equipment modules (e.g., pneumatic controllers, tanks, compressors) are available to characterize individual emission sources and to design and interpret source level measurements.
- **Site level:** Individual equipment modules can be coupled into site/facility level simulations of emissions.

Use Cases

Source analysis:

- Assess event frequency and duration across a defined geographic area, aiding in regional emission management and planning.

Site analysis:

- Individual equipment modules can be coupled into site/facility level simulations of emissions and can be used in OGMP Level 5 reporting.

Basin analysis:

- Simulations of thousands of individual sites have been assembled into datasets that can be compared to regional estimates.

Status

Demo Development:

- A working version of the tool is currently available. We are currently developing a demo of a user interface for the tool.

