

# Midstream Webinar

February 23, 2022

PROJECT  
**CANARY**



[PROJECTCANARY.COM](https://PROJECTCANARY.COM)

# The energy sector is under pressure from all sides of the market to disclose and prove emissions reductions.

## Financial Markets

- Differentiate vs. Divest.
- Lenders (sustainability linked).

## Regulators

- COP 26.
- Federal – EPA, FERC, PHMSA, SEC.
- States.



ENERGY  
UPSTREAM, MIDSTREAM,  
DOWNSTREAM

## Operators

- ESG Performance.
- Capital Access.
- Operational Excellence
- Permitting/Social License to Operate.
- Talent Acquisition & Retention.

## End Consumers

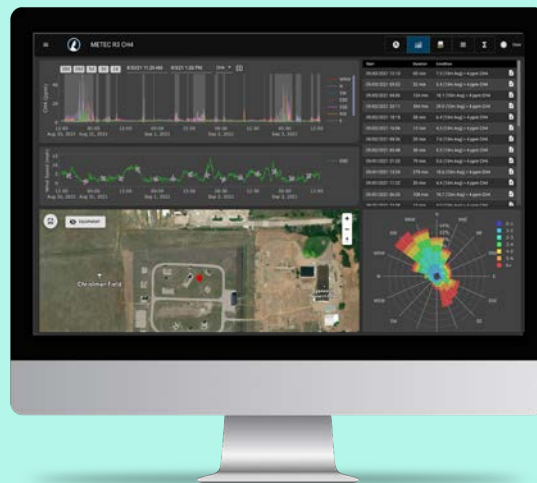
- Responsibly Sourced Gas (RSG).
- LNG (Europe & Asia).
- Utilities (N. America and Mexico).

# Our Products Bring Accuracy to Environmental, Social, And Governance (ESG) Initiatives.

## High-Fidelity Climate Impact Assessment at Facility Level



## Web-Based Continuous Emissions Monitoring Platform with Most Up-To-Date Facility Data on The Market



**Driving Measurable Operational Improvements and Emissions Reductions**

Operators

Financial markets

Regulators

End Consumers

# Certification Program and Process

Certification is developed by engineers and industry experts to help operators differentiate themselves through an independently certified commitment to operational improvements and emissions reductions.

## CRITERIA CATEGORIES

- Environmental Programs
- Operations & Maintenance
- Emergency Response & Crisis Management
- Pipeline Integrity
- Process Safety Management
- Operational Impacts & Reclamation
- Community Stakeholder Outreach

## TIMELINE

- 1) Operator submits core documentation for review
- 2) Project Canary conducts in-person site inspections of assets to be certified
- 3) Project Canary conducts interviews with key functional areas (4-5 days of FTE aggregate time)
- 4) Operator completes checklist for continued certification at each certification anniversary and other more frequent intervals



# Certification Score and Report

Certification results in an overall numerical score and recommendations for improvement.

## SCORING

- Value of 0 – 100
- Static Elements: engineering and construction
- Dynamic elements: ongoing emissions and compliance
- Impacted by emissions monitoring technology adoption and operational improvements

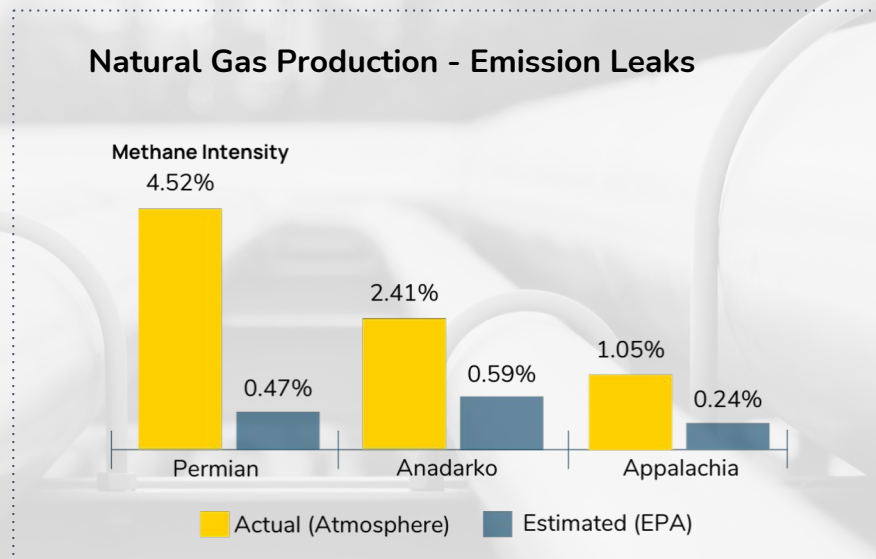
## REPORT

- Summary of localized risk factors
- Evaluation of control measures
- Prioritized list of improvement areas
- Path to higher value score

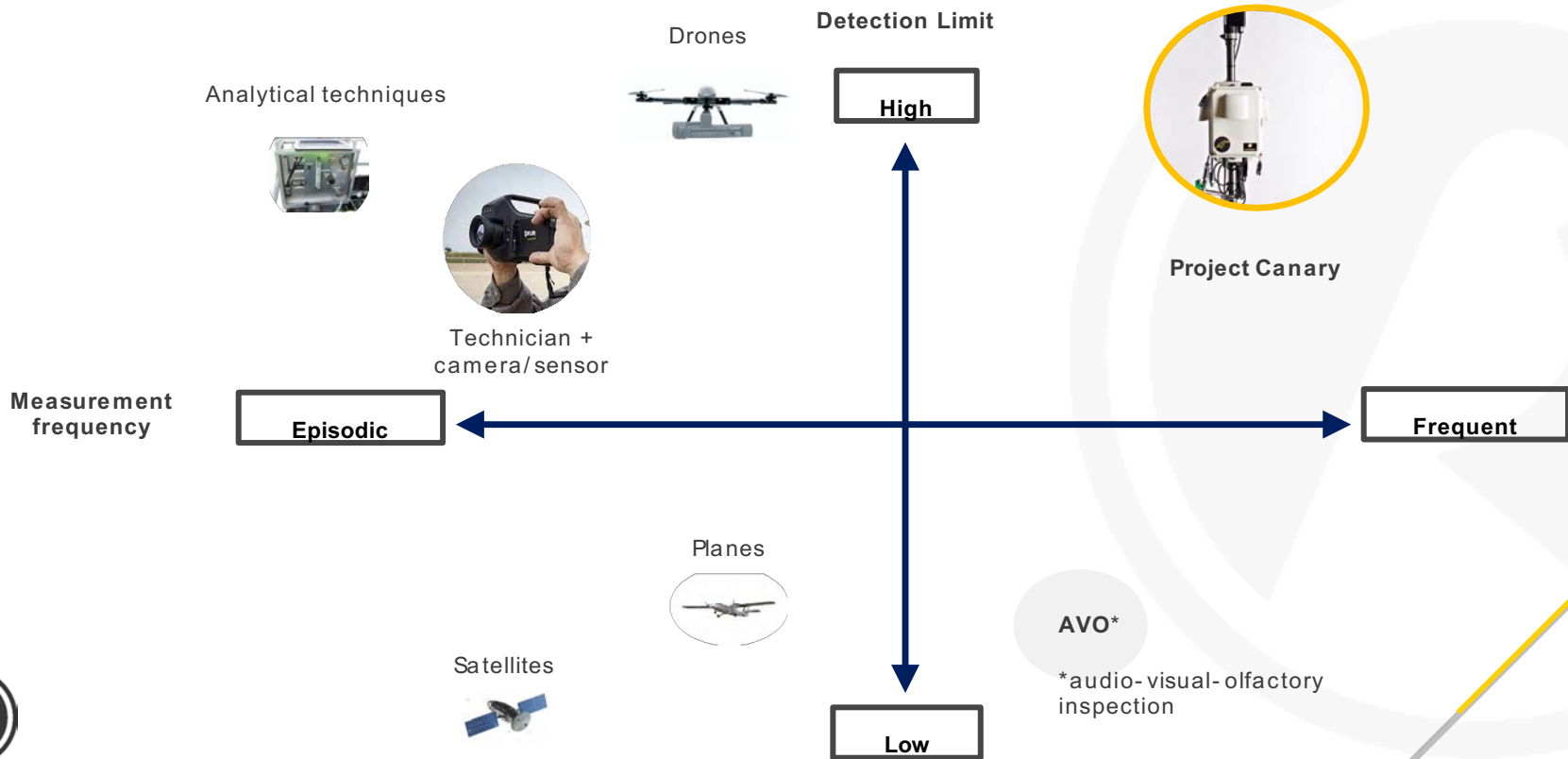


# Accurately Measuring Emissions Is Now Possible With Project Canary's Continuous Monitoring Devices.

- If you don't measure it, you can't improve it.
- Actual site-level emissions in the upstream sector may be 10x higher than EPA estimates.
- Site-to-site emissions vary.
- Fugitive methane leaks are preventable.



# Continuous Emissions Monitoring



# Canary X Monitoring Unit

## Canary Unit

Modular & affordable, cellular connection, 10+ days of backup battery power, 1year of data storage. AWS encrypted to dashboard.

## Anemometer

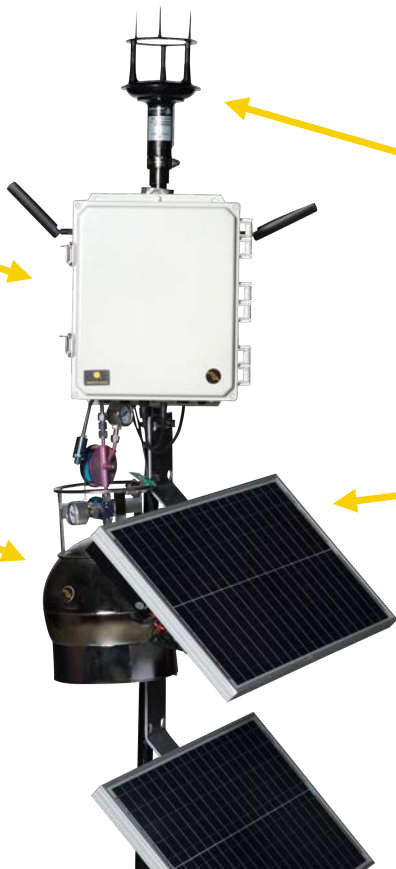
Precise wind speed & direction. Key to mass quantification and source attribution

## Summa Canister

Patented approach to automated “grab” air samples. Allows for parts per trillion clarity about a plume’s composition.

## Solar Power

20W – 30W solar panels





# The Canary X Advantage

## CANARY X

- Lower detection limit captures small, intermittent leaks
- Facilitates accurate mass quantification for emissions
- Device designed to remove moisture to ensure reliable data in humid climates
- Limited frequency of calibration due to use of TDLAS sensors

## OTHER SENSOR TECH

- Poor detection limit leads to large error in mass quantification models
- Interference from absolute humidity impacts accuracy
- Drift requires regular calibration increasing field maintenance and costs to customers
- Lower quality requires more frequent replacement



# CONTINUOUS MONITORING & REAL-TIME DATA ANALYTICS DASHBOARD



# PROJECT CANARY IS DEVELOPING THE MARKET FOR A CERTIFIED ENERGY VALUE CHAIN.

**Value Chain**

**Upstream**

**Gathering/Processing**

**Transmission**

**End User**

**Certification  
and  
Monitoring**

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**Utilities  
LNG buyers**

