Methane Emissions Measurement & Mitigation

Strategies, Technologies &
Best Management Practices

UN-ECE 5th TFTEI Annual Meeting
23 October 2019
Ottawa, Ontario, CANADA

Methane Emissions Measurement & Mitigation

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Responding to a Low-Carbon Economy

Founded in 2016, the Alliance is comprised of companies serving the oil & natural gas production, processing, and transmission sector. Serves as a hub for businesses that offer innovative and accessible solutions to methane emissions reductions.

The Alliance is a partner to government, industry, and other key stakeholders, focused on building a clean economy and generating new jobs. We collaborate with Federal and provincial governments & regulators to design policies and regulatory mechanisms that support the deployment of readily available technologies and the deployments of emerging technologies.

MELA works to build comprehensive methane emissions management plans. We believe that efficient and effective outcomes can be achieve through strong partnerships.

Our Mission

North America’s most complete source of data, technologies and solution providers that monitor, measure, and reduce methane emissions from oil and gas operations.

Our Members:
Global Opportunity. Local Expertise.

The Canadian oil and gas industry has been leading the world in carbon emissions reduction activities as a result of robust regulations and strong environmental management practices. Other producing jurisdictions are developing methane and carbon emissions regulations in line with those recently developed in North America. These emerging markets are expected to develop over the coming years.

Market Creation

INVESTORS
Sustainable Business

REGULATORS
License to Operate

ENVIRONMENTAL
Social Impact

FINANCIAL
Carbon Pricing

Impact

Influence
Strategies & Solutions

Equipment Inventory  Emissions Quantification  Data Management  Projects
Priorities

- Gas Conserve & Destruct Equipment
- Well Completions
- Tank Vents
- Well Surface Casing
- Bitumen Batteries
- Glycol Dehydrators
- LDAR/Fugitives
- Annual Reporting
- Pneumatic Devices
- Compressors
- Site Vent Limit

45% by 2025

MELA Compliance Coverage

01. Analysis & Compliance
   Planning, Systems, Measurement & Reporting

02. Clean Combustion
   Combustors, Power Generation

03. Compressors
   Vent Gas Capture, Seals

04. Fugitive Emissions
   Leak Detection & Repair

05. Glycol Dehydrators
   Data Management Platforms

06. Pneumatic Devices & Pumps
   Solar, Retrofits, Measurement
MELA Compliance Coverage

01 Analysis & Compliance
Altus, Calscan, CNTRAL, Envirosft, Envirotech, Greenpath, Modern West, Process Ecology, SRC, Sysene

02 Clean Combustion
Black Gold Rush, Gentherm, PTW Roska, Simark Controls, Total Combustion

03 Compressors
John Crane, Process Ecology, Spartan

04 Fugitive Emissions
FLIR, Eosense, GHGSat, Greenpath, Kairos, MultiSensor, Surface Solutions, Target

05 Glycol Dehydrators
Envirosft, Envirotech, Process, Spartan

06 Pneumatic Devices & Pumps
Airtek, Calscan, Caron, Crossroad, PTW, Roska, Simark, Sirius, Spartan, TriCore

Strategies & Solutions

Equipment Inventory  Emissions Quantification  Data Management  Projects
High-Impact Solutions

- Pneumatic Device Change
- Pneumatic Part Swap
- Solar Chemical Pump
- Zero emission separator
- Slipstream
- Moderate VRU
- Small VRU
- LDAR

CAPEX ($) vs. Impact Solutions

- Solar Powered Linear Actuator
- Vapour Combustor
- Zero Emission Separators
- Hawk Vent Gas Meter
- Slipstream
Strategies & Solutions

- **Design New Facilities**: Low-Emissions well-site design includes solar chemical injection pumps and instrument air. Cost efficiencies.

- **Cost Efficiency Future Compliance**: Evaluate economics under consideration of future cost of regulatory compliance and risk mitigation.

- **Reporting Data Management**: Use stakeholder reporting requirements as a guide to pre-compliance action and implementation.

- **Revenue Carbon Offsets**: Pursue carbon offsets to generate annual revenue and use as guide for compliance planning.

- **Habits Internal Knowledge**: Support employee engagement & build long-term habits regarding carbon management.

- **Performance Investor Confidence**: Build a resilient, sustainable business strategy that supports the ongoing growth of our industry.

Performance To Date

- **EEA Program LDAR Inspections**: 2,500+ sites inspected. Offsets opportunities identified. Improved provincial inventory.

- **High to Low I Common Conversion**: Switch out Fisher 4150 (pressure controller) to C1 device. $1,500 CAD; 120 tonnes CO₂ e/y

- **High to Low II Low-cost Conversion**: Relay change on L2 level controller. $500 CAD; 50 tonnes CO₂ e/y

- **High to No System Conversions**: Zero emission separator package, solar chemical injection pumps and instrument air conversions.

- **Opportunity Carbon Offsets**: Revenue generating projects minimize future cost of compliance.

- **Performance Ongoing Studies**: Emission rates; field inventories; actuation frequency; data collection; emerging technologies (i.e.: fuel cell)
Questions

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