



METHANE LEADERSHIP SUMMIT 2024

► Building Momentum on Methane Emissions Reductions

Location :
**THE RIMROCK
RESORT HOTEL**

Date :
**APRIL 17-18
2024**

Banff, Alberta, Canada



PTAC

**PETROLEUM
TECHNOLOGY
ALLIANCE
CANADA**

CRIN
Clean Resource
Innovation Network

PrairiesCan *Growing the Prairie Economy*

WHO WE ARE AND WHAT WE DO:

prairiescan.gc.ca



The Prairies region is an economic and energy powerhouse that supports job creation, exports, and the Canadian economy. PrairiesCan invests strategically to help our clients across the region achieve growth and seize economic opportunities. We are the go-to federal department for businesses, communities, and organizations seeking to grow their local economies and make their communities an even better place to live, work, and raise a family.



OUR ROLES:



Pathfind



Convene



Advise



Invest

PRIORITY AREAS AND ACTIONS:

NEW VALUE & COMPETITIVENESS

Accelerating economic growth through new sources of value & innovation in traditional sectors



- Helping businesses and communities seize new opportunities for our resource sectors while reducing environmental impacts.
- Working with innovative businesses to expand and adopt new technologies, bring new products and services to market, and create jobs in emerging sectors.

GREEN ECONOMY

Enabling success in a net-zero future



- Leading the implementation of the Building a Green Prairie Economy Act.
- Supporting local and regional economic diversification and place-based strategies in a net-zero future.

INCLUSIVITY

Fostering a more equitable & inclusive economy



- Supporting businesses that are majority-owned or led by underrepresented groups, such as Indigenous people, women, and youth.
- Seeking collaborative opportunities to advance Indigenous economic development.

EXPECTED RESULTS:

- Businesses are growing across the Prairies
- Communities are developing economically in the Prairies
- Prairie businesses are commercializing and adopting technology

MEASURES OF SUCCESS:

- Number of jobs created
- Value of exports
- Revenue growth rate of firms assisted by PrairiesCan programs
- Number of technologies to market
- Value of business sales growth resulting from technology commercialization or adoption
- Number of PrairiesCan-assisted entities that are majority-led by underrepresented groups
- Number of contributing partners engaged in advancing community-based projects
- Value of PrairiesCan community economic development investments
- Amount leveraged per dollar invested by PrairiesCan in community projects



Prairies Economic Development Canada

Développement économique Canada pour les Prairies



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METHANE 
LEADERSHIP
SUMMIT
2024



Montrose Environmental & GreenPath Energy – We’re Better Together

GreenPath is now part of Montrose Environmental, adding further depth and breadth to our methane emissions solutions team. Together we’re partnering with Oil & Gas firms to better track, manage, reduce and eliminate fugitive emissions, supporting clients with their regulatory compliance, ESG and progress toward a low-carbon economy.

Services Include:

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- Several Fugitive Emission Quantification Technologies Allowing for Scenario Specific Application
- Compressor Seal Measurement
- Extensive Classroom and Field-Based Emission Technician Training
- Certified Assessors for MiQ and Equitable Origin (EO)
- Leak Repair
- Locally Staffed Service Branches Across Canada
- Alternative Methane Detection Programs (Alt-FEMP) - Root Cause Analysis
- Subject Matter Expertise and Regulatory Reporting
- Emission Reduction Opportunity Assessments
- Montrose Target Online Data Management Software
- COR Approved Safety Program

WELCOME



Welcome to the 2024 Methane Leadership Summit!

Thank you for joining us at the 2024 Methane Leadership Summit, being hosted at the beautiful Rimrock Resort Hotel in Banff, Alberta on April 17 & 18, 2024.

Hosted in collaboration with the Clean Resource Innovation Network (CRIN), this two-day program is set to continue the momentum established by PTAC's annual Methane Forum first launched in 2018, bringing together diverse and knowledgeable stakeholders representing government organizations, regulatory bodies, oil and gas producing companies, transporters, service and supply companies, technology providers, research centers, and academic institutions.

Over the next two days, we will be addressing the significant challenges facing the oil and gas sector on both a national and international scale and discussing unprecedented opportunities regarding achieving methane emissions reduction targets. In an era where methane reductions are paramount, PTAC recognizes the need for urgent action within the oil and gas industry. The reduction targets set for the Canadian oil and gas sector demand aggressive and swift action from all industry players. Achieving these targets necessitates mass collaborative innovation and progressive measures, thereby helping industry create a new brand of cleaner hydrocarbon development, while allowing our clean tech industry to prosper.

The Methane Leadership Summit will play a critical role in providing a forum for necessary collaborative dialogue among key experts in the methane space. During these two days you will hear from some of industry's most leading experts as they share their thoughts on the path forward in meeting methane reduction targets. This event will also provide a platform for sharing knowledge and insights, as well as fostering tangible actions focused on technology innovation and implementing new best practices.

We thank all sponsors, partners, and organizers for their support in making this event possible. Together, we can continue to drive collaborative innovation within the methane emissions reduction space today, for a better tomorrow.

Once again, welcome to the Methane Leadership Summit, and we look forward to hosting an inspiring and impactful event with your support.

Thank you,

Soheil Asgarpour, Ph.D., FCAE, FCIM, FCSSE, P.Eng.
President & CEO
Petroleum Technology Alliance Canada



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Regulatory

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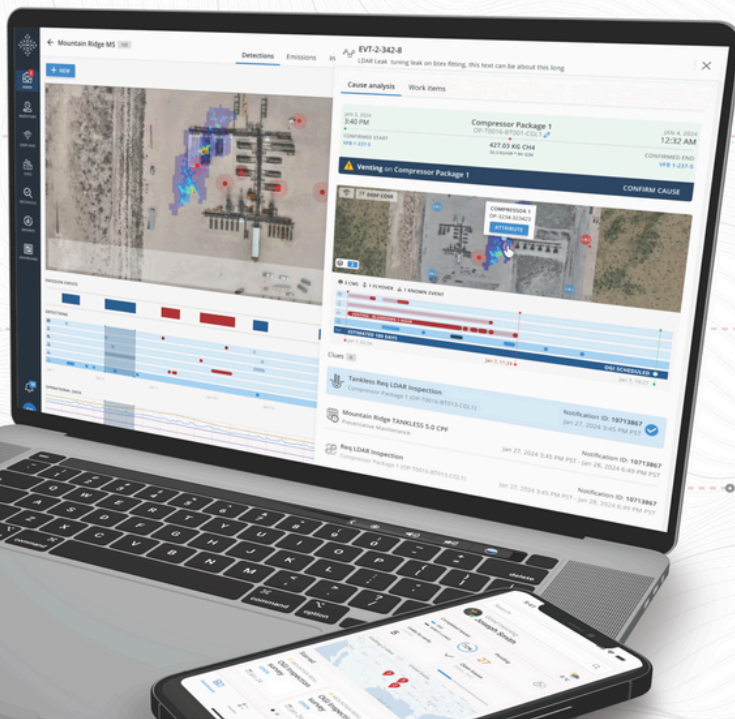
Abatement Visibility

Understand your emissions better, and discover actionable abatement opportunities.



Reduce Lost Gas

Discover fugitive emissions operational issues faster to increase retention and sale.



[\$ PER MCF]...

RSG Premium

Market/ ESG Advantage

\$/MMBTU...

\$900/TONNE (2024)...

Waste Emissions Charge, (W...

Methane Retention and Sale

[\$ PER MCF]...

Super Emitter (Large Source)

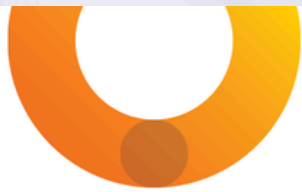
Efficient Emissions Operations

Ensure Compliance, Avoid Risk



SCHEDULE AT A GLANCE

	APRIL 16	APRIL 17	APRIL 18
REGISTRATION	4:00PM - 5:30PM	7:00AM - 8:00AM	7:00AM - 8:00AM
BREAKFAST	N/A	7:15AM - 8:00AM	7:15AM - 8:00AM
CONFERENCE	N/A	8:00AM - 4:30PM	8:00AM - 3:15PM
EXHIBITION	N/A	7:00AM - 6:00PM	7:00AM - 2:00PM
METHANE SOCIAL	N/A	4:30PM - 6:00PM	N/A



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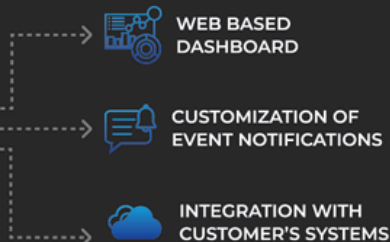
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CRIN
Clean Resource Innovation Network

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Emissions reduction through continuous monitoring

Detect, measure, and reduce greenhouse gas emissions.



CONFERENCE AGENDA

Day One - Wednesday, April 17, 2024

7:00 a.m. MST	Registration & Breakfast; Success Stories Video Showcase Sponsored by: 
7:40 a.m. MST	Student Poster Session Moderator – Nannette Ho-Covernton , Sustainability Leader, Spartan Controls and the Digital Oil and Gas Co-Theme Lead and Steering Committee Member, Clean Resource Innovation Network Student – Paola Prado , McGill University Student – Nishant Narayanan, University of Waterloo
8:00 a.m. MST	Opening Remarks and Land Acknowledgement Soheil Asgarpour , President and CEO, Petroleum Technology Alliance Canada
8:15 a.m. MST	Joy Romero , Executive Advisor Innovation, Canadian Natural Resources Limited and President, Clean Resource Innovation Network
8:20 a.m. MST	Keynote Presentation Justin Reimer , CEO, Emissions Reduction Alberta
8:35 a.m. MST	Session 1: Net-Zero This session will focus on the biggest challenges as we work towards net-zero by 2050. Moderator – Soheil Asgarpour , President and CEO, PTAC Panellist – Drew Leyburne , Assistant Deputy Minister for Energy Efficiency and Technology, Natural Resources Canada Panellist – Joy Romero , Executive Advisor Innovation, Canadian Natural Resources Limited and President, Clean Resource Innovation Network Panellist - Laura Kilcrease , Chief Executive Officer, Alberta Innovates Panellist - Justin Reimer , CEO, Emissions Reduction Alberta
9:35 a.m. MST	Networking Break
10:00 a.m. MST	Session 2: Challenges and Opportunities in the Policy and Regulatory Landscape This session will focus on the evolving policy and regulatory framework at the provincial and federal levels and discuss the necessary changes to maintain Canada's leadership. Moderator – Don McCrimmon , Manager, Air, Canadian Association of Petroleum Producers Panellist – Deborah Westerman , Executive Director, Resource Management, Ministry of Energy and Resources, Saskatchewan Government Panellist – Don D'Souza , Executive Director of Accountability, Economic and Analysis Branch, BC Government Panellist – James Diamond , Manager, Technical Operations & Upstream Regulatory Team, Environment and Climate Change Canada Panellist – Laurie Pushor , President and CEO, Alberta Energy Regulator

CONFERENCE AGENDA

Day One - Wednesday, April 17, 2024

11:00 a.m. MST

Session 3: Accelerating the Momentum in Methane Detection, Measurement, Monitoring, Big Data Analysis, and Reporting

This session will focus on recent accomplishments in methane detection, measurement, monitoring, Big Data Analysis and Reporting including application of machine learning and artificial intelligence.

Moderator – **Kevin Stashin**, Independent

Panellist – **Amanda Harmon**, Director, Zero Emissions Systems, GTI Energy

Panellist – **Gerald Palanca**, Manager, Emissions Management Team, Alberta Energy Regulator

Panellist - **Liz O'Connell**, CEO and Co-Founder, Arolytics

Panellist – **Sarah Izant**, Deputy Secretary for Climate Policy, California Environmental Protection Agency

Panellist - **Thomas Fox**, President, Highwood Emissions Management

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High Operating Costs From:

- Valve Maintenance
- Instrument Air Break Downs
- Excessive Nitrogen Use



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CONFERENCE AGENDA

Day One - Wednesday, April 17, 2024	
12:00 p.m. MST	Lunch and Success Stories Video Showcase
12:25 p.m. MST	<p>Student Poster Session Moderator – Nannette Ho-Covernton, Sustainability Leader, Spartan Controls and the Digital Oil and Gas Co-Theme Lead and Steering Committee Member, Clean Resource Innovation Network Student – Khali El Hachem, St. Francis Xavier Student – Daniel Blackmore, University of Waterloo</p>
12:45 p.m. MST	Matthew Johnson , Professor & Head of Energy & Emissions Research Lab, Carleton University
1:00 p.m. MST	<p>Keynote Presentation John Desjarlais, Executive Director, Indigenous Resource Network</p>
1:15 p.m. MST	<p>Session 4: Methane Emissions Measurement and Reporting (Top-Down and Bottom-Up) This session will focus on recent technological progress and deployment of measurement infrastructure to improve quantification and reporting.</p> <p>Moderator – Allan Fogwill, COO, Petroleum Technology Alliance Canada Panellist – Chris Hugenholtz, Associate Professor, University of Calgary Panellist – David Risk, Government Research Chair in Climate Science and Policy, St. Francis Xavier University Panellist – Kyle Daun, Mechanical and Mechatronics Engineering Professor University of Waterloo Panellist – Matthew Johnson, Professor & Head of Energy & Emissions Research Lab, Carleton University Panellist – Scott Mundle, Great Lakes institute for Environmental Research, Department of Chemistry and Biochemistry, University of Windsor</p>
2:15 p.m. MST	<p>Technology Spotlight Josh Anhalt, Vice President of Technology, Montrose Environmental</p>
2:20 p.m. MST	<p>Technology Spotlight Glen Hay, Emissions Management Consultant, SLB End-to-end Emissions Solutions (SEES), SLB</p>
2:25 p.m. MST	Networking Break
2:55 p.m. MST	<p>Session 5: Methane Emissions Detection and Quantification Use Cases This session will provide demonstration and deployment of novel detection and quantification technologies.</p> <p>Moderator – Arvinder Kainth, Regional Director, Industrial Research Assistance Program (Prairies), National Research Council Canada Panellist – Scott Volk, Technology and Innovation Lead, Tourmaline Oil Corp. Panellist – Sheldon Owen, Vice President - SEES North America, SLB End-to-end Emissions Solutions, SLB Panellist – Stephane Germain, President, GHGSat Inc. Panellist – Mary Kang, Assistant Professor, McGill University Panellist – Mike Dizep, Senior Business Development Manager, Bridger Photonics</p>

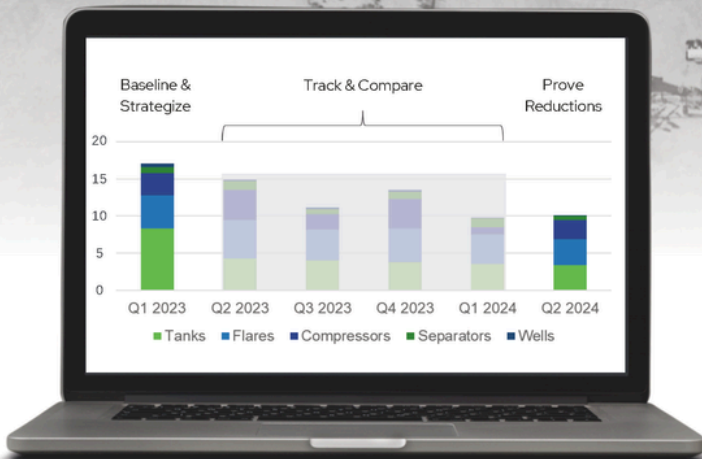
CONFERENCE AGENDA

Day One - Wednesday, April 17, 2024	
3:55 p.m. MST	Technology Spotlight Ryan Mattson, Vice President, Oil and Gas, GHGSat Inc.
4:00 p.m. MST	Technology Spotlight Brian Rawson, Senior LDAR Specialist, Grid Environment
4:05 p.m. MST	Technology Spotlight Travis Wiens, National Director Optical Gas Imaging, Automation, & Science Canada, FLIR
4:10 p.m. MST	Presentation David Bailey, President & CEO, Genome Alberta
4:25 p.m. MST	Day One Closing Remarks / Conference Proceedings Adjourned
4:30 p.m. – 6:00 p.m. MST	Methane Social Event

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CONFERENCE AGENDA

Day Two - Thursday, April 18, 2024	
7:00 a.m. MST	Registration & Breakfast; Success Stories Video Showcase Sponsored by: 
8:00 a.m. MST	Opening Remarks and Land Acknowledgement Soheil Asgarpour , President and CEO, Petroleum Technology Alliance Canada
8:15 a.m. MST	Glen McCrimmon , Director of Operations, Clean Resource Innovation Network
8:20 a.m. MST	Keynote Presentation Minister Rebecca Schulz , Minister of Environment and Protected Areas of Alberta, Government of Alberta
8:35 a.m. MST	Session 6: Global Leadership and Collaboration This session will focus on Canadian commitments and contributions to global efforts to reduce methane emissions reductions. Moderator – Monica Prabhu , Commercialization & Communications, Prabhu Energy Labs Panellist – Jack Lewnard , Program Director, ARPA-E Panellist – John Zhou , Chief Cleantech Officer and VP Clean Resources, Alberta Innovates Panellist – Mario Krpan , Director, Trade Relations – Europe and Central Asia, Government of Alberta Panellist – Nicole Harbauer , Trade Commissioner, Energy & Clean Technologies, Trade Commissioner Service
9:25 a.m. MST	Technology Spotlight Jon Rowland , Senior Sales Manager - Canada, INNIO Waukesha
9:30 a.m. MST	Networking Break
9:55 a.m. MST	Session 7: Is it Profitable to Reduce Methane Emissions? This session will focus on the economics of methane emissions reduction projects, including incentives, taxes, carbon pricing, cost efficiencies, and capital and operating expenses. Moderator – Jackson Hegland , Executive Director, Methane Emissions Leadership Alliance Panellist – Al Duerr , CEO, General Magnetic International Inc. Panellist – Brenna Barlow , Vice President, Methane Innovation, BMO Radicle Panellist – James Holoboff , Managing Partner, Process Ecology Panellist – Logan Downing , Co-Founder & CEO, Carbon Assessors
10:45 a.m. MST	Technology Spotlight Taryn Humphreys , Director, Business Development, Qube

CONFERENCE AGENDA

Day Two - Thursday, April 18, 2024

10:50 a.m. MST

Session 8: Technology Development and Field Trials – Tanks, Leaky Wells, and Catalytic Heaters.

As the journey progresses towards larger than 75% reduction, the remaining knowledge gaps need to be addressed with new technology development, demonstration, deployment, and market uptake. This session will focus on recent and relevant accomplishments.

Moderator – **Glen McCrimmon**, Director of Operations, Clean Resource Innovation Network

Panellist – **Brian Van Vliet**, Environmental Solutions, Spartan Controls

Panellist – **Claude Ghazar**, Director, Recovery Technologies, Alberta Innovates

Panellist – **Erica Emery**, Senior Research Engineer, Saskatchewan Research Council

Panellist – **Tyler Homan**, Vice President, Production, Teine Energy

MethaneTrack™

360's emissions specialists distribute NevadaNano's MethaneTrack™ in Canada, an IIoT system that enables cost-effective emission reduction by accurately locating and quantifying methane emissions. It automates documentation and reporting through high-security, cloud-based software. With battery-powered, wireless, and Intrinsically Safe endpoints, MethaneTrack™ allows for easy installation and achieves up to a 99% reduction in emissions. Compliant with Class 1, Division 1, and ATEX Zone 0 standards, it ensures real-time safety assurance and is ideal for close-proximity continuous monitoring in hazardous environments.

Learn more at:



CONFERENCE AGENDA

Day Two - Thursday, April 18, 2024

11:40 a.m. MST	Technology Spotlight John Collis, Director of Sales & Business Development, Marler Integrity Inc
11:45 a.m. MST	Lunch and Success Stories Video Showcase
12:30 p.m. MST During Lunch	Technology Spotlight Rusty Hurl, Canadian Account Manager, WeldFit
12:35 p.m. MST During Lunch	Technology Spotlight Steve Liang, CTO, SensorUp

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CONFERENCE AGENDA

Day Two - Thursday, April 18, 2024	
12:40 p.m. MST During Lunch	<p>Technology Spotlight: Close Proximity Continuous Monitoring with 360 Engineering & Environmental and NevadaNano</p> <p>Gary Collins, VP of Sales & Marketing at NevadaNano</p>
12:45 p.m. MST	<p>Fireside Chat</p> <p>Kate Rich, Assistant Deputy Minister, Policy, Alberta Environment and Protected Areas</p> <p>Soheil Asgarpour, President and CEO, Petroleum Technology Alliance Canada</p>
1:00 p.m. MST	<p>Session 9: Technology Development and Field Trials -Methane Slip, Flaring Alternatives, Novel Pneumatics, and other technologies to address the remaining sources of methane emissions.</p> <p>As the journey progresses towards larger 75% reduction, the remaining knowledge and technology gaps need to be addressed with technology development, demonstration, deployment, and market uptake. This session will focus on recent and relevant accomplishments.</p> <p>Moderator – Bryan Helfenbaum, Associate Vice President of Clean Energy, Alberta Innovates</p> <p>Panellist – Edan Prabhu, CEO, Founder, Prabhu Energy Labs</p> <p>Panellist – Frank Zahner, President, Accurata</p> <p>Panellist – Julie Wiseman, VP of Operations, Total Combustion Inc.</p>
1:40 p.m. MST	<p>Session 10: U.S. Deployment Success Stories</p> <p>Moderator - Kelly Doody, Chief Marketing Officer, Kathairos</p> <p>Panellist - B.J. Carney, VP Geoscience & Innovation, Northeast Natural Energy LLC</p> <p>Panellist - Jerry Dismukes, Air Quality Lead, Cearus Oil and Gas</p>
2:20 p.m. MST	<p>Session 11: Methane Emissions Reduction Deployment Success Stories</p> <p>This session will focus on successful deployment projects.</p> <p>Moderator – Bill Whitelaw, Managing Director, Strategy and Sustainability, geoLOGIC Systems</p> <p>Panellist – Ben Klepacki, Co-Founder & CRO, Convrq Innovations</p> <p>Panellist – Doug Bezpalko, Manager – Technical Sales, Calscan Solutions</p> <p>Panellist – Laura Kennedy, CEO and Co-Owner, Global Power Technologies</p> <p>Panellist – Steve Froehler, Owner and Director, LCO Technologies</p>



CONFERENCE AGENDA

Day Two - Thursday, April 18, 2024

3:10 p.m. MST	Closing Remarks Soheil Asgarpour, President and CEO, Petroleum Technology Alliance Canada
3:15 p.m. MST	Conference Adjourned



NATURAL GAS COMPRESSION & RE-COMPRESSION

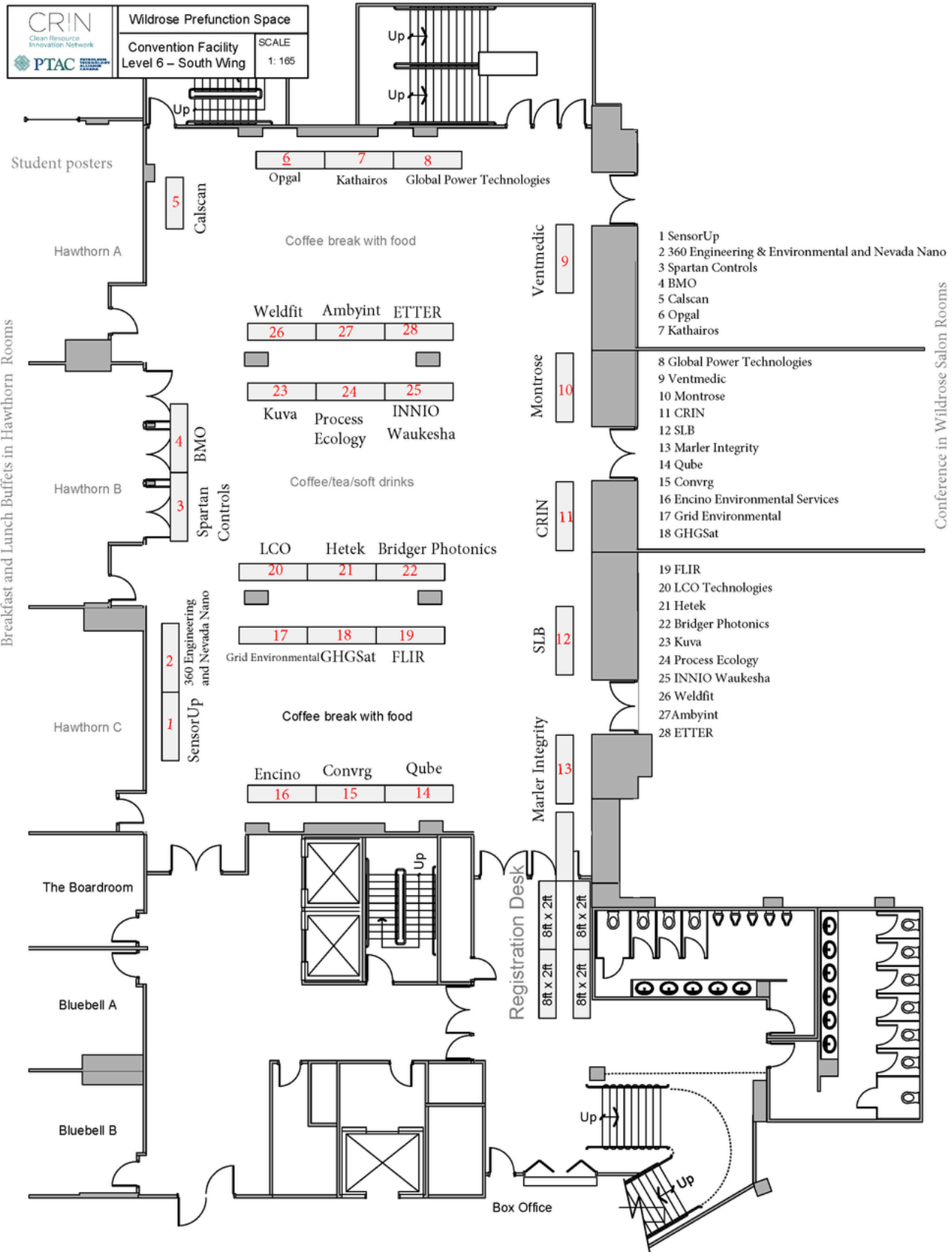
"Why vent or flare when you don't need to?"

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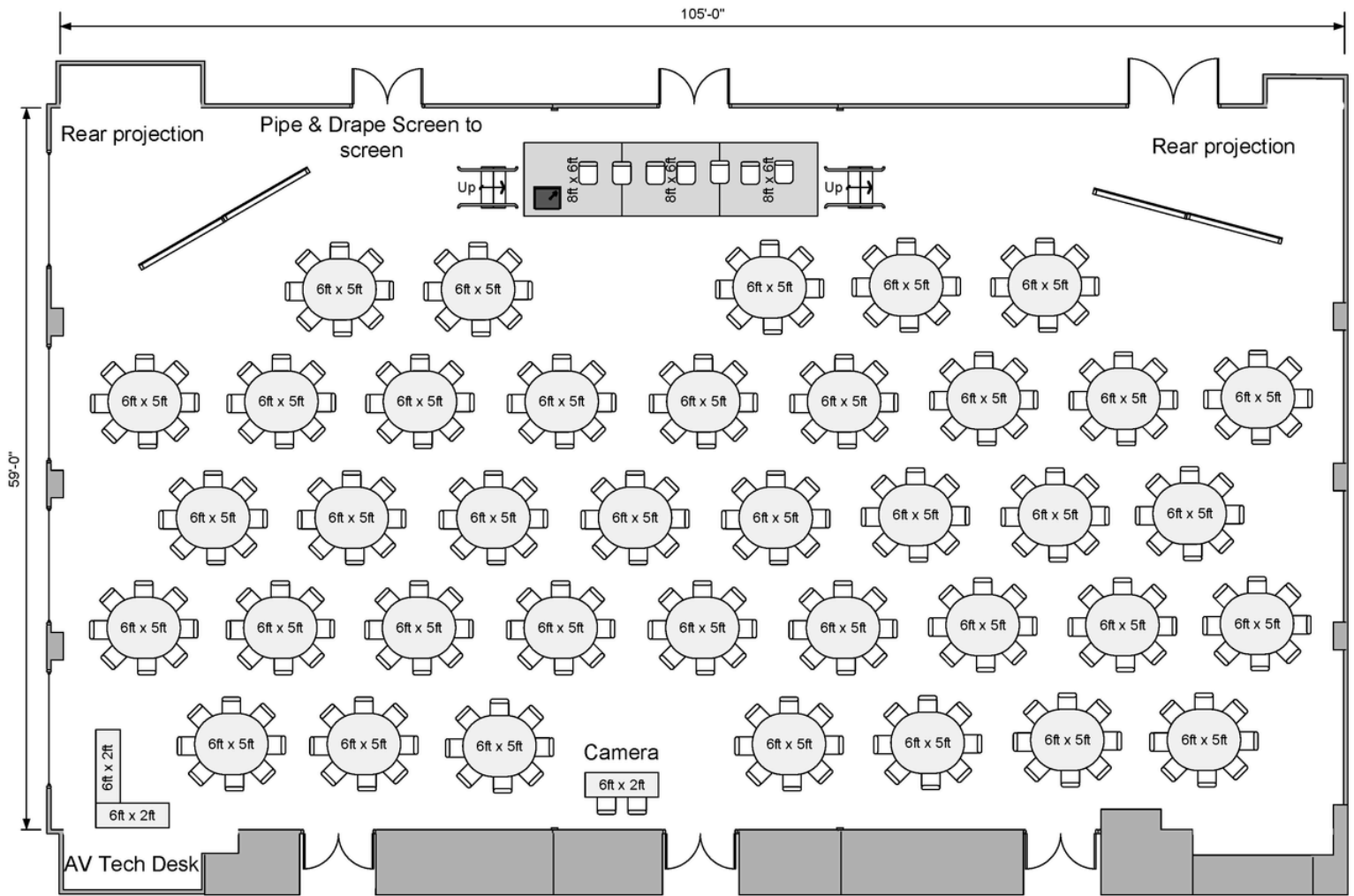
If you have any pipeline issues, call us at (403) 350-0066. We may be able to help!

FLOOR PLAN




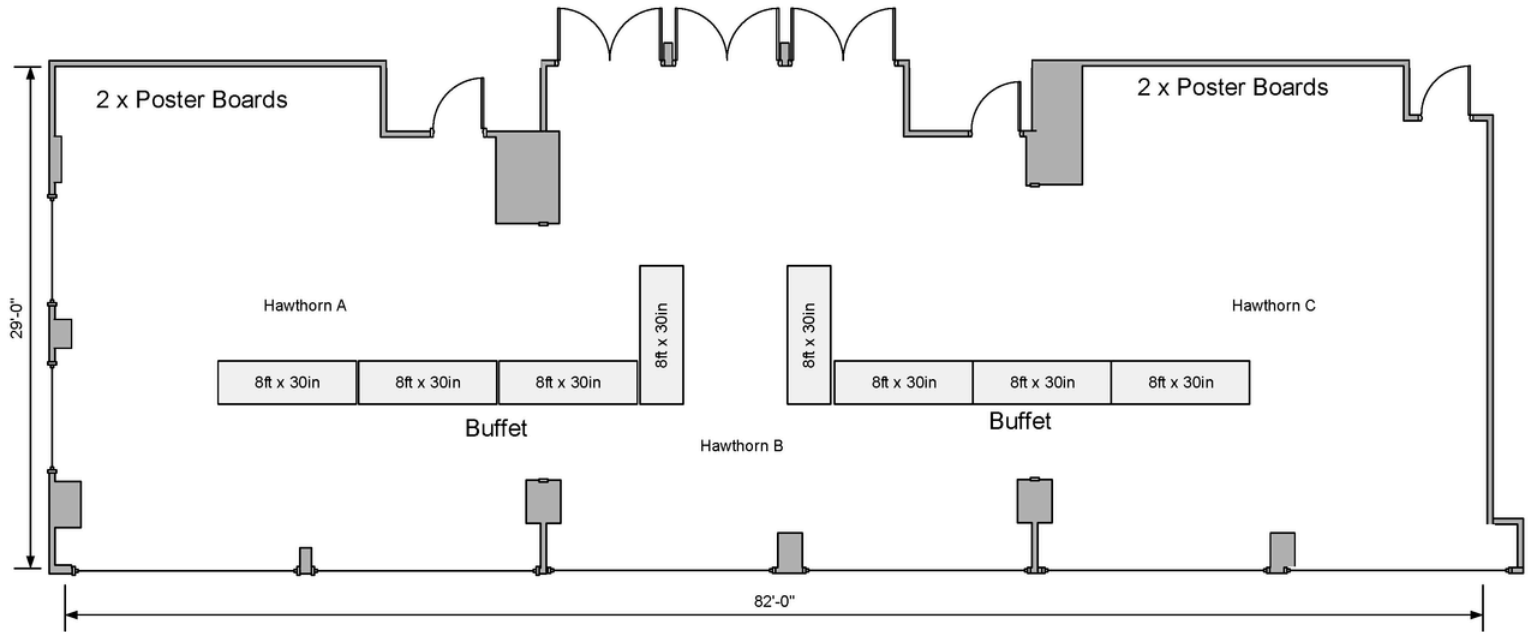
FLOOR PLAN

 	Wildrose Salon A + B + C	
	Convention Facility Level 6 – South Wing	SCALE 1:125



FLOOR PLAN

 CRIN Clean Resource Innovation Network	Hawthorn A + B + C	
	Convention Facility Level 6 – South Wing	SCALE 1:100



METHANE LEADERSHIP SUMMIT
2024



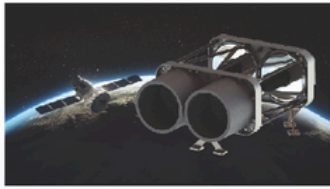
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Encino is a pioneer in emissions monitoring in the Energy sector, providing clients with a complete range of environmental services.

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Methane Detection System



Fixed QOGI



Enviromech™

Composite Thief Hatch



LDAR QOGI



Mobile Emissions Testing

Stack / Engine

METHANE DETECTION

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Mobile Emissions Monitoring

Satellite Methane Detection

Flare Monitoring

DRE (Destruction Removal Efficiency)

PRODUCTS

Fixed QOGI Cameras

LDAR OGI Cameras

Composite Thief Hatches

COMPLIANCE & ADVISORY

Stack/Engine Testing

Leak Detection & Repair (LDAR)

PRV Testing & Valve Greasing

Permitting and Reporting

ESG/GHG Reporting

Data Services & Management

As technology has evolved, so have our services, with continuous emissions monitoring systems and data systems increasingly in demand.

With more than 150 years of combined engineering, project management, and environmental compliance experience, Encino has the capability to assess, design, and implement an array of strategies for simple to complex environmental projects.



STUDENT POSTER ABSTRACTS

PAOLA PRADO, MCGILL UNIVERSITY

METHANE EMISSIONS FROM NON-PRODUCING OIL AND GAS WELLS IN WESTERN CANADA: LITERATURE REVIEW AND FIELD CAMPAIGN DESIGN

Paola Prado, Mary Kang, Civil Engineering, McGill University

Abandoned oil and gas (AOG) wells are one of the most uncertain sources of anthropogenic methane emissions in Canada and around the world. It is estimated that Canada is home to ~400,000 of these wells, which can act as subsurface leakage pathways for methane, and may cause the contamination of groundwater, soil, and the atmosphere. There currently exists only one published study with direct methane emission measurements from AOG wells in Alberta and Saskatchewan, the provinces housing 87% of all abandoned oil and gas wells in the country. Moreover, most of these measurements only provide a snapshot of the emission rates, and the extent to which the rates can vary with time remain poorly understood. We aim to further characterize this emission source by carrying out direct measurements from at least wells in Alberta, Saskatchewan, and British Columbia, including at wells we measured previously. These measurements will be conducted using static chamber methodology. Beyond improving emission estimates, there is opportunity in informing environmental policy and examining site reclamation and remediation strategies. Therefore, our study will also target a portion of specific well sites to examine the viability of conversion of these abandoned wells into geothermal energy wells.

NISHANT NARAYANAN, UNIVERSITY OF WATERLOO

Nishant S. Narayanan¹, Paule Lapeyre¹, Martin Chamberland², Marc-Andre Albert², Jim Cormack³, Kyle J. Daun¹

¹ Department of Mechanical and Mechatronics Engineering, University of Waterloo, Canada

² Telops, Canada

³ Lidar Services Inc., Calgary Canada

Operators and regulators require accurate techniques that can detect fugitive methane emissions. Particularly in view of emerging methane emissions regulations, it is also increasingly important to also quantify these emissions. Airborne technologies are attractive as they can scan large areas and multiple sites at once and access locations that are otherwise difficult to reach by ground.

Current commercial airborne systems use the absorption of ground-reflected, near-infrared (NIR) radiation to generate column density maps for methane. The incident light may come from a passive source (e.g., GHGSat's SatD system) or using a tunable diode laser (e.g., Bridger's GML system). An alternative is to use long-wave infrared (LWIR) hyperspectral imaging, in which methane column densities are inferred by thermal radiation emitted by the ground and absorbed by the gas, or thermal radiation emitted by the gas directly. This technique does not require incident irradiation from above and is therefore robust to ground cover that may be highly absorbing.

We evaluate the performance of this technique through a controlled release field trial campaign carried out at Carbon Management Canada's Newall County facility. The Telops Hyper-Cam Airborne Mini was used operating between 760 cm⁻¹ to 1365 cm⁻¹. The results highlight the capability of the system to detect methane emissions, and particularly the accuracy of a tool used to predict the minimum detection limit for a given set of environmental conditions. The estimated methane emissions underestimate the true releases, highlighting the need for further development of the measurement model.

KHALI EL HACHEM, ST. FRANCIS XAVIER

CONJUNCTIVE ANALYSIS OF MEASUREMENTS OF SOIL EMISSIONS AND SURFACE CASING VENT FLOWS FROM OIL AND GAS WELLS IN ALBERTA

Khalil El Hachem^{1, 2}, Sarah Kennedy¹, Meghan Flood¹, Mark Argento¹, Scott A. Mundle³, David Risk¹

¹ Department of Earth and Environmental Sciences St. Francis Xavier University, Antigonish, Nova Scotia, Canada

² Department of Civil Engineering, McGill University, Montreal, Quebec, Canada

³ Department of Chemistry and Biochemistry, University of Windsor, Windsor, Ontario, Canada

Oil and gas wells can lose their integrity leading to emissions from surface casing vents and surrounding soils. Measurements of methane emissions from soils surrounding oil and gas wells have been limited, and estimates of oil and gas well soil emissions in Canada's greenhouse gas inventory are based on measurements collected in the 1990's. Here, to obtain a sample representative of the different well operational statuses, we conduct and present 1241 measurements of soil emissions near 15 active, 28 unplugged abandoned, 10 plugged abandoned and 7 other oil and gas wells in Alberta and British Columbia and analyze this data with detections of methane from 41 surface casing vents. Relative to distance from the well we find that more than 85% of soil emissions occur within 3 meters from the well. We find that plugged and unplugged abandoned wells have higher soil emissions compared to active and other wells, where point level emissions reach upper limits of 1126.06, 1012.87, 22.68, and 0.16 mg CH₄/hour/m² for plugged abandoned, unplugged abandoned, active, and other wells, respectively. Of the 41 wells where we tested surface casing vents, we find that 38 wells (92%) have methane detections above background. Our data and analysis provide valuable insights into soil emissions near oil and gas wells and can be used to inform Canada's greenhouse gas inventory. Moreover, our analysis of detections of surface casing vent flows in conjunction to soil emissions allow for a more comprehensive understanding of well leakage.

STUDENT POSTER ABSTRACTS

DANIEL BLACKMORE, UNIVERSITY OF WATERLOO

A BAYESIAN APPROACH TO TRUCK-BASED METHANE EMISSIONS ESTIMATES UNCERTAINTIES

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Canada's oil and gas industry is committed to the regulatory requirements of a 75% methane emissions reduction compared to 2012 levels by 2030. To achieve this, a variety of different technologies have been developed and employed to quantify methane emissions. Understanding the uncertainties associated with these emissions estimates is crucial in the application of regulations, and in knowing what actually occurs with respect to emissions and the environment. Understanding uncertainty can help explain discrepancies between reported emissions inventories, and recent measurements made with these technologies. Key to uncertainty is the nature of the error of models these technologies employ to obtain their emissions estimates.

This poster presents the application of a Bayesian statistical framework to understand the uncertainty of emission estimates provided by a truck-based tunable diode laser absorption spectroscopy technology. Concentration data from a controlled release study in April 2022 is compared to the predictions of a Gaussian plume model to investigate the model error. A large eddy simulation of similar release conditions is used for further model error investigation. The results are used within a Bayesian framework, where the model error is key in shaping the likelihood function. This framework is applied to data from a second controlled release campaign from September 2022, to obtain posterior distributions of emission rates. Uncertainties associated with emissions estimates can be quantified using credibility intervals on the posterior distributions. Additionally, a deeper understanding of the model error is obtained, including the shape and form of the likelihood function when using this method.



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PTAC
PETROLEUM TECHNOLOGY
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Calgary, Alberta, Canada

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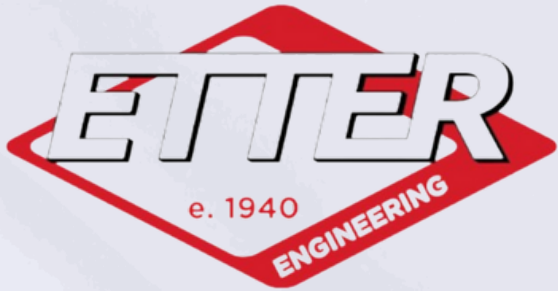


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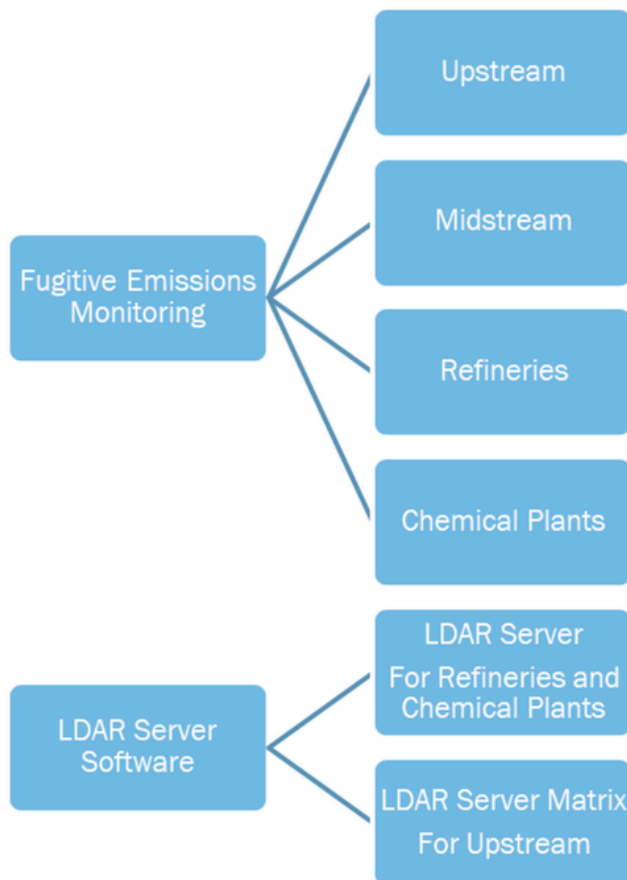


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AL DUERR - SESSION 7

CEO, GENERAL MAGNETIC INTERNATIONAL INC.



ALLAN FOGWILL - SESSION 4

COO, PETROLEUM TECHNOLOGY ALLIANCE CANADA

Allan Fogwill joined PTAC in October 2021 as Chief Operating Officer. An energy sector executive with over 30 years of experience in the public and private sectors, Mr. Fogwill's background has focused on economic, technical and market analysis of energy sector issues and policy development related to energy supply and demand issues and climate change transitions.

Mr. Fogwill has previously worked for natural gas distribution companies in BC and Ontario and the Ontario Energy Board dealing with market analysis and the analysis of distribution costs. Before assuming his role at PTAC, Mr. Fogwill was the President and CEO of the Canadian Energy Research Institute, providing leading research into the economic impacts of energy transition issues. Allan has a Master's degree from Simon Fraser University in Natural Resources Management and a Bachelor of Science degree from the University of Saskatchewan in Geography. He was a commissioned signals officer in the Canadian military and has also served as the Chair and CEO of the Canadian Energy Efficiency Alliance and the Canadian Gas Research Institute.



AMANDA HARMON - SESSION 3

DIRECTOR, ZERO EMISSIONS SYSTEMS, GTI ENERGY

Amanda Harmon is Director, Zero Emissions Systems at GTI Energy and Executive Director of Veritas: GTI Energy's Methane Emissions Measurement and Verification initiative. She leads a cohort of engineers and scientists focused on decarbonization pathways for the energy sector and supports strategy development of emission measurement to mitigation research and development opportunities. As a research microbiologist, Amanda's research has focused on infrastructure integrity. Amanda also serves as the Environmental Impacts Lead for Operations Technology Development and subcommittee co-chair for Renewable Fuels in the Low Carbon Resource Initiative.



ARVINDER KAINTH - SESSION 5

REGIONAL DIRECTOR, INDUSTRIAL RESEARCH ASSISTANCE PROGRAM (PRAIRIES), NATIONAL RESEARCH COUNCIL CANADA

The National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) is Canada's leading innovation assistance program for small and medium-sized businesses. NRC IRAP provides advice, connections, and funding to help Canadian small and medium-sized businesses grow, increase their innovation capacity, and take ideas to market. Arvinder is Regional Director at NRC IRAP, based in Calgary and can be reached at Arvinder.Kainth@nrc-cnrc.gc.ca.



B.J. CARNEY - SESSION 10

VP GEOSCIENCE & INNOVATION, NORTHEAST NATURAL ENERGY LLC

BJ Carney is the Vice President of Geoscience and Innovation at Northeast Natural Energy (NNE), where he has been a partner since 2009. His role at NNE is broad ranging, from coordinating all scientific endeavors of the company to leading ESG and natural gas certification efforts and innovations. B.J. has a BS in Geology and an MS in Geophysics, both from Virginia Tech and is currently completing his MBA at Liberty University. B.J. has over 25 years of oil and gas experience and has held leadership and technical positions at Chesapeake Energy, Marathon Oil Company, and Columbia Natural Resources. His broad experience ranges from natural gas and oil exploration and development in multiple US basins, where he was a part of the team that discovered, and began development of, the Marcellus shale play, to leading NNE in becoming the first EO certified upstream company in the United States and first company to achieve "A" grades for both EO and MiQ certifications.



BEN KLEPACKI - SESSION 11

CO-FOUNDER & CRO, CONVRG INNOVATIONS

Ben Klepacki is the Co-Founder and Chief Revenue Officer of Convrq Innovations. A mechanical engineer by education, Ben's career has focused on both alternative energy and oil and gas. The combined experience led to the development of Convrq's proprietary solar hybrid power generation technology, which helps support Convrq's efforts as they continue to chase emissions reduction technology and opportunities to support the industry in catalyzing the energy evolution.



BILL WHITELAW - SESSION 11

MANAGING DIRECTOR, STRATEGY AND SUSTAINABILITY, GEOLOGIC SYSTEMS

Bill Whitelaw is Managing Director, Strategy and Sustainability at geoLOGIC systems, a Calgary-based global energy intelligence company. Whitelaw is active with many industry groups. Currently, he is chair of the Canadian Society for Evolving Energy (formerly, the Canadian Society for Unconventional Resources), an advisor to the Energy Futures Lab and a member of the Clean Resource Innovation Network's digital theme committee. He is also a director on the Agriculture for Life foundation board. He speaks frequently on sustainability, ESG, Net Zero dynamics and energy literacy.



BRENNA BARLOW - SESSION 7

VICE PRESIDENT, METHANE INNOVATION, BMO RADICLE

As BMO Radicle's Director of Methane Innovation, Brenna works to connect clients, regulators, GHG programs and technology suppliers to progress and develop new ways to monetize methane emissions reductions in energy and industrial sectors. This work spans several industries, including energy, electricity, waste management and livestock/agricultural production services. Brenna's experience with emissions research, LDAR programming, methane detection and quantification technologies, environmental services, offset project development and carbon markets expertise brings a unique view to any organization on a pathway to understand, reduce and monetize their emissions. Brenna is based in Alberta, Canada, but works with clients and industry organizations in the United States, Australia, the Middle East and Africa.



BRIAN RAWSON - TECHNOLOGY SPOTLIGHT

SENIOR LDAR SPECIALIST, GRID ENVIRONMENT

Mr. Brian Rawson is an Air Emissions Specialist, with expertise in air emissions data collection, analysis, reporting, validation, and verification. He has +25 years experience in the environment field, primarily on greenhouse gas (GHG), volatile organic compounds (VOCs), and fugitive methane emissions issues. He has worked extensively with oil and gas facilities from wellheads to gas plants, upgraders, and refineries, as well as pipelines, power generation, chemical manufacturing, carbon sequestration, and other industries.



BRIAN VAN VLIET- SESSION 8

ENVIRONMENTAL SOLUTIONS

Brian is a Mechanical Engineer that lives in Calgary, Alberta and helps folks waste less with an enviro focused team at Spartan. In collaboration with customers, Spartan currently provides expert services, applied technologies and integrated solutions to industry in western Canada that have resulted in a million cars off the road. Brian has been with Spartan Controls for over 18 years in roles including Manager – Environment Solutions, Technical Specialist, Project Manager and Application Specialist for Petrochemical, Oil Sands and Oil and Gas industries. He is also actively involved with industry organizations and his community.

Brian is passionate about improving field efficiencies and enjoys finding resourceful means to do so. His efforts to reduce vented fuel gas have helped meet increasingly stringent environmental regulations, while improving process performance, reliability and safety.



BRYAN HELFENBAUM - SESSION 9

ASSOCIATE VICE PRESIDENT OF CLEAN ENERGY, ALBERTA INNOVATES

Bryan Helfenbaum is the Associate Vice President of Clean Energy at Alberta Innovates, where he oversees programs in Advanced Hydrocarbons and Clean Technology with key initiatives in hydrogen, CCUS, digital energy, methane emissions reduction, energy storage, and bitumen beyond combustion. Prior to joining AI, he spent 20 years in a variety of technical, business, and innovation roles in the private sector. Bryan's passion for innovation extends outside the office, where he has taught courses at the University of Calgary and worked on innovative community residential development projects. Bryan has a Bachelor's degree in Environmental Engineering from Waterloo and an MBA from Calgary.



CHRIS HUGENHOLTZ - SESSION 4

ASSOCIATE PROFESSOR, UNIVERSITY OF CALGARY

CLAUDE GHAZAR - SESSION 8

DIRECTOR, RECOVERY TECHNOLOGIES, ALBERTA INNOVATES



Claude Ghazar is the Director of Recovery Technologies & Methane Emissions Reduction programs for Alberta Innovates Clean Resources division. He is responsible for strategic programming that aligns with Alberta's targets on advanced hydrocarbon innovations and GHG reductions by leveraging private sector investments with public grant funding programs.

Mr. Ghazar is a registered Professional Engineer with a diverse background in technical and managerial roles in the upstream petroleum industry. His private industry and consulting career spans over 25 years in exploration, asset development and technology innovation.

Claude holds a B.Sc. in Mechanical Engineering from the University of Calgary and is a registered Professional Engineer with APEGA and a member of the Society of Petroleum Engineers (SPE).

DAVID BAILEY - PRESENTATION

PRESIDENT & CEO, GENOME ALBERTA



David has been a long-time champion for advancing research and innovation across key sectors of Alberta's economy. He became the first permanent President and CEO of Genome Alberta in 2006, bringing Alberta's priorities to the national stage and leveraging significant federal investment towards Genome Alberta's enabled portfolio which today is almost \$575M.

David holds an ICD.D designation and also provides leadership to the broader innovation community, through service on a number of advisory boards and committees including Livestock Gentec (University of Alberta), Manning Innovation Awards Southern Chapter (AB), PrioNet Canada (founding member), Alberta Prion Research Institute Management Board (founding member), and currently serves on the Board of Canadian Agri-Food Automation and Intelligence Network (CAAIN).

Dr. Bailey obtained his Ph.D. in Genetics and Animal Breeding at the University of Alberta in 1985, and began his career with Agriculture and Agri-Food Canada as a research scientist in Lethbridge, Alberta. He was later appointed to management postings as Research Centre Director in Charlottetown P.E.I. and Lacombe, Alberta before his appointment as Director General – Food Safety (national) in 2003. David has also served as an adjunct professor at Texas A&M University, and the University of Calgary (current). Throughout his career he has received several awards for excellence in research and transferring research into commercialization, including the CSAS's Young Scientist Award and NRC-IRAP's Federal Partners in Technology Transfer.

DAVID RISK - SESSION 4

GOVERNMENT RESEARCH CHAIR IN CLIMATE SCIENCE AND POLICY,
ST. FRANCIS XAVIER UNIVERSITY



Dave Risk (PhD) is the Brian Mulroney Institute for Government Research Chair in Climate Science and Policy at St. Francis Xavier University (StFX). He is a specialist in gas emissions measurement and data processing techniques, to quantify emissions in natural and industrial settings. Risk's 'Flux Lab' team at St. Francis Xavier University consists of almost 30 students and professional researchers. They have been involved in ecological gas measurement projects from pole to pole, monitoring design for CO₂ deep injection sites, but most of their work has focused on quantifying methane emissions from Canadian industry. In recent years the FluxLab team has made gas emission measurements at over 15,000 oil and gas facilities across North America, both onshore and offshore, and at landfills from coast to coast. At the present time they are working on air quality issues, on a new assessment of gas migration, and a large multi-technology regional methane observation initiative in Alberta called ReACH4. The Flux Lab helps create data and insights needed by industry and regulators for managing greenhouse gas emissions. Risk is always interested in moving important expertise into the world and is co-founder of two successful Canadian-based companies – Arolytics and Eosense.



DEBORAH WESTERMAN - SESSION 2

EXECUTIVE DIRECTOR, RESOURCE MANAGEMENT, MINISTRY OF ENERGY AND RESOURCES, SASKATCHEWAN GOVERNMENT

Debby has over 25 years of experience in energy regulation and currently serves as the Executive Director of the Resource Management Branch for Saskatchewan's Ministry of Energy and Resources. The branch is responsible for managing subsurface resource development as well as storage, disposal, measurement, and emissions. Debby has extensive experience working on strategic initiatives and business projects, including joining Petrinex (Registry Inclusion Project), playing a lead role in developing and implementing the Integrated Resource Information System (IRIS), and most recently, as part of the team to successfully implement Saskatchewan's Methane Action Plan. Debby has a degree in Environmental Systems Engineering and is a registered professional engineer in the province of Saskatchewan.



DON D'SOUZA - SESSION 2

EXECUTIVE DIRECTOR OF ACCOUNTABILITY, ECONOMIC AND ANALYSIS BRANCH, BC GOVERNMENT

Don D'Souza, P.Eng., is the Executive Director of the Accountability, Economics and Analysis Branch at the Climate Action Secretariat in British Columbia's Ministry of Environment and Climate Change Strategy. His team leads the development of the province's climate strategy (CleanBC), and coordinates across various ministries and agencies in the province during its implementation. His team is also responsible for the provincial GHG inventory, assessing progress towards the province's climate targets, and reporting publicly on that progress. Don has previously led the development of key provincial programs, including the CleanBC Program for Industry, B.C.'s Carbon Offset program, regulations to reduce methane emissions in the oil and gas sector, and B.C.'s industrial GHG reporting program. Prior to joining the B.C. government, Don worked in engineering consulting, international development, and at environmental non-profits, all in roles focused on climate change and greenhouse gas management. He has a B.A.Sc. in Chemical Engineering from the University of Toronto and a Master of Environmental Management degree from Yale University. Don is a licensed professional engineer in British Columbia.



DON MCCRIMMON - SESSION 2

MANAGER, AIR, CANADIAN ASSOCIATION OF PETROLEUM PRODUCERS

Don McCrimmon is the Manager of Air and Major Projects Regulations at the Canadian Association of Petroleum Producers. He has been engaged on methane emissions research and regulatory implementation and development, provincially and federally since 2018.



DOUG BEZPALKO - SESSION 11

MANAGER - TECHNICAL SALES, CALSCAN SOLUTIONS

As a farm boy who understands the importance of the environment, being a dedicated supporter of applying cost effective and innovative solutions to reducing emissions while increasing your profits. He currently holds the position of Manager of Technical Sales at Calscan Solutions. Doug has held positions as a President of an Instrumentation Construction, Commissioning and Maintenance Company, Automation Department Manager (EPCM) here in North America. Doug has also held positions as Location Director of Quality Saudi Arabia (EPCM), and Global Director of Assurance Major Projects & Alliances (EPCM). Currently, a member of APEGA (Association of Professional Engineers & Geologists Alberta) and holds a Red Seal as a Journeyman Instrument Mechanic.

With over 20+ years of experience, Doug is a valued contributor to business objectives of domestic and international projects including well sites, power plants, pipelines, hydrocarbon, and Petro-chemical facilities, he provides innovative solutions with expertise and proven results."



DREW LEYBURNE - SESSION 1

ASSISTANT DEPUTY MINISTER FOR ENERGY EFFICIENCY AND TECHNOLOGY, NATURAL RESOURCES CANADA



EDAN PRABHU - SESSION 9

CEO, FOUNDER, PRABHU ENERGY LABS

Edan Prabhu is an entrepreneur, inventor and the founder and CEO of Prabhu Energy Labs, which is dedicated to harnessing weak methane emissions. Edan has spent a lifetime on energy innovation, including extensive experience with wind, solar, nuclear and fossil fuels. His most recent innovations focus on use or oxidation of very weak sources of methane. He has a Master's Degree in Mechanical Engineering from the University of Michigan and an MBA from Loyola University of Chicago. He has been granted 10 US patents on weak methane and other waste fuels.



ERICA EMERY - SESSION 8

SENIOR RESEARCH ENGINEER, SASKATCHEWAN RESEARCH COUNCIL

Erica Emery is a Senior Research Engineer in the Process Development group at the Saskatchewan Research Council. She received both a B.Sc. in Chemical Engineering and an M.Sc. in Chemical Engineering from the University of Saskatchewan. Erica has experience in greenhouse gas mitigation research, particularly methane emission reduction, as well as technology assessment and validation, process design and simulation, and project management.



FRANK ZAHNER - SESSION 9

PRESIDENT, ACCURATA

Frank Zahner is president of Accurata Inc located in Calgary, Alberta, Canada which provides diverse consulting services to industry for engineering service and business solutions. Frank specializes in packaged and rotating equipment reliability and failure analysis. Engineering design services for rotating equipment are also provided. Frank has practiced in the oil and gas industry since 1990. Accurata Inc was formed in 2003 to provide consulting services. Prior to that he worked in the compressor packaging sector, serving in a variety of engineering and management capacities. Frank earned a diploma in Civil Engineering from SAIT, a Bachelor of Science in Civil Engineering from U of A, and an MBA from U of C.



GARY COLLINS - TECHNOLOGY SPOTLIGHT

VP OF SALES & MARKETING, NEVADANANO

Gary Collins, VP of Sales & Marketing at NevadaNano, is an Electronic & Software Engineer with 25 years of global experience in heavy industries, specializing in Oil & Gas, Steel, and Mining. His extensive background includes key roles such as Business Development Director at Rolls Royce, where he focused on predictive diagnostic systems for rotating equipment, International Operations Director at Honeywell overseeing gas detection control systems, and Global Sales Director at OptaSense leading sales efforts for Fibre Optic Gas Detection systems on pipelines. Gary's presentation will illuminate the crucial theme of "Close Proximity Continuous Monitoring," leveraging his wealth of practical knowledge and insights garnered from navigating diverse industrial landscapes.



GERALD PALANCA - SESSION 3

MANAGER, EMISSIONS MANAGEMENT TEAM, ALBERTA ENERGY REGULATOR

Gerald Palanca is the manager of the Alberta Energy Regulator's Emissions Management Team. His team is responsible for ensuring that the implementation and maintenance of the air emissions framework is achieved through regulatory development, stakeholder engagement, surveillance and related enforcement process activities. Gerald has over 19 years of oil and gas experience. He worked extensively on regulatory projects, flaring and venting operations. Before joining the AER, Gerald held various positions for a major oil and gas producer in acquisitions and divestments, energy efficiency, and regulatory compliance roles. Gerald has an applied bachelor's degree in petroleum engineering and a technical diploma in Chemical Engineering. Gerald served as chair of the Canadian Standards Association emissions committee, chair of the Western Regulators Forum emissions committee, and various Clean Air Strategic Alliance and Petroleum Technology Alliance Canada committees.



GLEN HAY - TECHNOLOGY SPOTLIGHT

EMISSIONS MANAGEMENT CONSULTANT, SLB END-TO-END EMISSIONS SOLUTION, SLB

Glen has spent more than two decades working on downstream, petrochemical, and new technology projects around the world.

He drives change at the intersection of science, new tech and operations. As early as 2006, Glen was involved in industrial CCS projects, first in Canada and then globally.

He joined the SLB methane team in late 2021 as an emissions management consultant, and is now applying his deep technical knowledge, including expertise in thermodynamics and simulation, to methane elimination challenges.



GLEN MCCRIMMON - SESSION 8

DIRECTOR OF OPERATIONS, CLEAN RESOURCE INNOVATION NETWORK

Glen McCrimmon is currently the Director of Operations at the Clean Resource Innovation Network (CRIN).

He is a senior energy sector leader and influencer with extensive experience in corporate innovation, subsurface technical, portfolio management, strategic planning, stakeholder relations and governance. He inspires much needed change by reminding all that "... better is always different."

Appointed Husky Energy's Chief of Innovation in 2018, Glen built on the expertise of technical leaders and out-of-the-box thinkers from across the industry, providing a coordinated approach to foster innovation. Prior to this role, he had been appointed Chief Geologist in 2016 and started with the company in 2013 as Manager of Frontier Exploration. He began his career as a geoscientist with Imperial Oil in 1996. Over his career Glen has held multi-year assignments based out of Houston, Texas, St. John's, Newfoundland and Labrador, and in Calgary.

Glen received a BSc in Geology from the University of Regina and an MSc in Earth Sciences from the University of Ottawa.

Outside of work Glen is an avid cross-country skier and runner.



JACK LEWNARD - SESSION 6

PROGRAM DIRECTOR, ARPA-E



JACKSON HEGLAND - SESSION 7

EXECUTIVE DIRECTOR, METHANE EMISSIONS LEADERSHIP ALLIANCE

Jackson is President and CEO of the Modern West Group of Companies, including Modern West Advisory, the hallmark organization with a focus on building decarbonization pathways through greenhouse gas accounting, and corporate ESG strategy. The company has unique expertise in carbon markets, life-cycle analysis, and scenario analysis used to evaluate the core components of the energy transformation to 2050.

He also serves as Executive Director of the Methane Emissions Leadership Alliance: an industry association composed of methane reduction technology and service providers from throughout Canada, providing methane mitigation solutions to the world. He is a co-founder of the Modern West Climate Finance Group, an investment vehicle for nature-based carbon removal projects and clean technology. He is a partner with Carbon Connect International whose focus is on GHG mitigation funded program delivery, international technical training, and climate implementation with governments & multinational organizations.

Jackson has over 15 years of experience as an oil and gas professional building carbon management and ESG strategies from the ground up, collaborating with industry and government on climate change policy design, and working with emerging clean technology companies to scale their business domestically, and internationally. He graduated from Princeton University with a degree in Environmental Economics, followed by five years of professional hockey in the United States and Japan.



JAMES DIAMOND - SESSION 2

MANAGER, TECHNICAL OPERATIONS & UPSTREAM REGULATORY TEAM,
ENVIRONMENT AND CLIMATE CHANGE CANADA



JAMES HOLOBOFF - SESSION 7

MANAGING PARTNER, PROCESS ECOLOGY

James has over 25 years of experience in process engineering and emissions management for the chemical and petroleum industries. He brings a strong background in the development and application of computer simulation models to oil & gas industry challenges. James has been a Managing Partner for Process Ecology since 2007, during this time providing process engineering services, emissions reporting, project management, and software development support. Prior to that he worked in various capacities including Global Technical Support Manager and Business Development Manager at Aspen Technology, and also providing process engineering and simulation consulting. His current focus is to develop the air emissions business at Process Ecology, helping energy companies efficiently manage their air emissions reporting and reduction obligations.



JERRY DISMUKES - SESSION 10

AIR QUALITY LEAD, CAERUS OIL AND GAS

Jerry currently serves as the Air Compliance Manager for Caerus Operating LLC where he manages the air quality permitting and compliance activities for Caerus' operations in the Piceance Basin, Colorado and the Greater Natural Buttes, Utah. He is responsible for coordinating and executing the policies, programs, and procedures necessary to authorize and operate facilities in compliance with relevant state and federal regulations. He is also heading many of the ESG efforts at Caerus, primarily around championing methane reduction strategies, continuous monitoring and other emission measurement efforts.

Prior to joining Caerus, Jerry held a number of positions at various oil and gas companies where he was and is still considered, an industry expert on air issues.

Jerry graduated from Cornell University and has a master's degree in atmospheric science from Purdue University. In his free time, Jerry enjoys snowboarding, skiing, running and is a closet weather nerd who provides weather forecasts often free of charge.



JOHN COLLIS - TECHNOLOGY SPOTLIGHT

DIRECTOR OF SALES & BUSINESS DEVELOPMENT, MARLER INTEGRITY INC

John has over 20 years' experience in the Oil & Gas and Pipeline Industry. John has worked in Canada and overseas in various roles from his start in the field, to Project and Operations Management through to various Sales Management roles.

John is currently the Director of Sales and Business Development for Marler Integrity, the owners of the MarComptm line of natural gas compressors and a leading company in the Inline Inspection Support Business.



JOHN DESJARLAIS - KEYNOTE PRESENTATION

EXECUTIVE DIRECTOR, INDIGENOUS RESOURCE NETWORK



JOHN ZHOU - SESSION 6

CHIEF CLEANTECH OFFICER AND VP CLEAN RESOURCES, ALBERTA INNOVATES

Zhihong (John) Zhou, Ph.D., P.Geol., ICD.D, is the Chief Cleantech Officer and VP Clean Resources at Alberta Innovates. He is responsible for developing strategic programs and investment in agrifood, cleantech, energy, environment, and bioindustry materials. Previously, John served as Executive Director, Chief Technical Officer, and Acting CEO at Alberta Innovates - Energy and Environment Solutions. He is a director for the Petroleum Technology Alliance Canada and a guest director for the Alberta Chamber of Resources. John co-chairs Steering Committee for Alberta's Hydrogen Centre of Excellence. John is an inventor with seven U.S. patents. He led initiatives in CCS, LCA, and water conservation, and founded a 25-member industry consortium Materials and Reliability in Oil Sands. John developed the vision for Bitumen Beyond Combustion (BBC) in 2016 and has been leading the effort to create a multibillion-dollar advanced materials industry in Alberta and Canada.



JON ROWLAND - TECHNOLOGY SPOTLIGHT

SENIOR SALES MANAGER, CANADA, INNIO WAUKESHA

Jon Rowland brings over 20 years of oil and gas industry experience to his role as Regional Sales Manager for INNIO's Waukesha Engine, covering Canada. Jon got his start in the industry on the services side and completed his apprenticeship as a Journeyman Red Seal Heavy Equipment Technician in 2008. He later began and expanded his own parts and service company covering southern Alberta, which was acquired by Ironline Compression in 2018. Jon brings a unique perspective and deep knowledge to his role for both gas compression and power generation and currently serves as a liaison between local regulatory groups and the industry.



JOSHUA ANHALT - TECHNOLOGY SPOTLIGHT

VICE PRESIDENT OF TECHNOLOGY, MONTROSE ENVIRONMENTAL

Certainly, Joshua's role as founder & President has evolved after GreenPath Energy's acquisition by Montrose Environmental. He now serves as the VP Technology - Emission Solutions, bringing his expertise to drive technological advancements in methane emission solutions within the company. His journey from founding GreenPath Energy to this new role highlights his continued dedication to advancing sustainable practices in the industry.



JOY ROMERO - SESSION 1

EXECUTIVE ADVISOR INNOVATION, CANADIAN NATURAL RESOURCES LIMITED AND PRESIDENT, CLEAN RESOURCE INNOVATION NETWORK

Joy Romero is an engineer with over 30 years of experience in the energy sector. She is currently the Executive Advisor for Innovation at Canadian Natural, President of the Clean Resource Innovation Network, Vice Chair of the Petroleum Technology Alliance of Canada and an active volunteer on advisory committees at the University of Calgary, the University of Alberta, Athabasca University and SAIT. Joy serves on the Boards of the Canadian Museum of Nature Foundation and Calgary's Heritage Park. In 2018, Joy was inducted into the Canadian Petroleum Hall of Fame for her contributions to the sector, in 2021 she was recognized by Foresight Canada as one the top 20 women leading clean tech in Canada, she recently received the Queen Elizabeth II's Platinum Jubilee Medal for her dedication to advanced education and is Fellow of the Canadian Academy of Engineers.



JULIE WISEMAN - SESSION 9

VP OF OPERATIONS, TOTAL COMBUSTION INC.

Julie Wiseman serves as the Vice President of Operations at Total Combustion Inc, a leading player in the combustion industry for the past 25 years. With a background in operations management, Julie has been a driving force behind the company's sustained growth and operational excellence over the last 12 years. Julie holds a bachelor's degree in business management, and under her leadership, Total Combustion Inc has developed a distinct company culture built on the reliability of its people and the patented incineration technology they build, sell, and rent. As the company continues to grow and navigate the complexities of the energy sector, Julie remains at the forefront, steering TCI towards further technology development and ensuring continued growth in new markets.



**JUSTIN REIMER -
SESSION 1 & KEYNOTE PRESENTATION**
CEO, EMISSIONS REDUCTION ALBERTA

An Albertan through and through, Justin Reimer has dedicated his career to strengthening the province he loves. Now the Chief Executive Officer of Emissions Reduction Alberta (ERA), Justin leads the team dedicated to advancing innovations that are reducing Alberta's greenhouse gas emissions and diversifying its economy. He has earned a reputation for skillfully navigating Canada's innovation system, building relationships inside and outside of Alberta, and developing a strong network in support of innovation and economic development. For more than 25 years, he has achieved results in regional economic development, industry expansion, investment attraction, and innovation. Before joining ERA, he led the Alberta Region of Prairies Economic Development Canada in the federal government to support economic development across the province. Prior to that, he held several senior positions focused on innovation and investment attraction at the Government of Alberta and briefly at Alberta Health Services. Justin graduated from the University of Alberta with a Bachelor of Arts (Honours) in Political Science and went on to earn a Master's Degree in International Affairs from Carleton University. Justin is happily married, has two grown boys and a daughter in law.



KATE RICH - KEYNOTE PRESENTATION
ASSISTANT DEPUTY MINISTER, POLICY, ALBERTA ENVIRONMENT AND
PROTECTED AREAS



KELLY DOODY - SESSION 10
CHIEF MARKETING OFFICER, KATHAIROS

Kelly brings extensive business development and marketing communications expertise to the energy transformation and decarbonization space, with a passion for merging powerful technology with the most pressing challenges of our time. A seventh-generation Albertan, Kelly is honoured to play a role in bringing impactful climate solutions to the world through Kathairos while supporting the oil and gas industry as it meets ambitious emission reduction targets effectively and affordably.

BIOGRAPHIES

KEVIN STASHIN - SESSION 3

INDEPENDENT



Kevin has 40 years of industry experience with junior and major oil and gas companies. Most recently, he was President and CEO of NAL Resources, a private intermediate oil and gas company that operated in Western Canada. He retired in January 2021 after over eight years guiding the company through significant growth and cost reduction phases. Prior to NAL, Kevin was the Vice President, Exploitation at Devon Canada Corporation during which he had oversight in areas of capital budget, exploitation, drilling and completions, and acquisitions and divestitures. His career at Devon began in 1992 with predecessor Anderson Exploration Ltd. where he rose within the organization to Vice President, Operations. Kevin also enjoyed an 11 year career at Petro-Canada in various operations and engineering roles.

Kevin graduated from McGill University with a BEng. and holds an MBA from the University of Calgary. He is a member of APEGA and APEGS in good standing. Mr. Stashin currently serves as the past Chair of the Board of the Petroleum Technology Alliance of Canada (PTAC) and is a director of E3 Metals, a lithium developer including the chair of the governance committee. He was also a director of the Clean Resource Innovative Network Board (CRIN), the Board of Governors with the Canadian Association of Petroleum Producers (CAPP), served as a Director of the Petroleum Society of CIM, Chair of the Board for the Calgary French & International School, the University of Calgary Engineering internship Council and was the oil and gas industry representative on the Alberta Water Council.

KYLE DAUN - SESSION 4

MECHANICAL AND MECHATRONICS ENGINEERING PROFESSOR,
UNIVERSITY OF WATERLOO



Kyle Daun is a Professor in the Department of Mechanical and Mechatronics Engineering at the University of Waterloo. He received his PhD from the University of Texas at Austin in 2003, and was then a postdoctoral fellow at the National Research Council in Ottawa before joining UW in 2007. Daun's main research interests are radiative transfer, spectroscopy, and statistical data analysis, which he has leveraged into the development of new quantitative optical gas imaging (QOGI) techniques for measuring methane emissions. Over the past three years Daun has led a research project focused on uncertainty quantification for methane emissions estimates, in partnership with PTAC, Arolytics, Inc. and Carbon Management Canada. He has coauthored two textbooks on radiative transfer: *Thermal Radiation Heat Transfer*, 7th Ed. (2021) and *Thermal Radiation: An Introduction* (2023).

LAURA KENNEDY - SESSION 11

CEO AND CO-OWNER, GLOBAL POWER TECHNOLOGIES



Laura Kennedy is CEO and Co-Owner of Global Power Technologies, a provider of ultra-reliable and earth-friendly systems to power the energy transition. We believe in finding solutions that balance the need for reliability, sustainability and affordability for our clients around the world. In addition to ThermoElectric Generators, our product families include Combined Heat and Power generators, hybrid solar power systems, instrument air packages, and collaborative projects to further reduce methane emissions. Laura holds a B.A.Sc (Mech Eng) from the University of Waterloo, Master of Science in Mechanical Engineering from Massachusetts Institute of Technology (MIT) and a Master of Science in Management from MIT Sloan.

BIOGRAPHIES

LAURA KILCREASE - SESSION 1

CHIEF EXECUTIVE OFFICER, ALBERTA INNOVATES



Laura Kilcrease is the Chief Executive Officer for Alberta Innovates, including its subsidiaries InnoTech Alberta and C-FER Technologies.

Laura Kilcrease brings a track record and laser-focus to innovation ecosystem performance and design. Since her appointment in 2017, she has steered Alberta Innovates restructuring, spearheaded assessment of programs with an eye to the future, and launched Inventures, the flagship gathering of innovators, investors, industry leaders and global researchers, which PwC estimated catalysed some \$200M in potential deal flow in 2019.

Born in London, England, and recruited from Austin, Texas, Laura served as a member of the Alberta Research and Innovation Advisory Committee for seven years prior to joining Alberta Innovates.

She is widely recognized as a key figure in changing Austin's economy from oil dependency to high-tech prosperity to become the #1 city for entrepreneurs to live and work in the U.S..

She has more than 25 years of experience in commercializing technology, including:

- founding the venture capital fund Triton Ventures, LP;
- founding the Austin Technology Incubator, among the earliest in the United States;
- co-founding the Austin Technology Council, a premier economic networking organization; and
- launching the Capital Network, one of the largest angel investor networks in the U.S. with over \$150M in completed transactions.

A dedicated community builder, Laura served on various for-profit and non-profit boards, including the Women's Leadership Advisory Board of Harvard University's Kennedy School of Government, the Beyster Institute, World Congress for Information Technology 2006, the IC² Institute at The University of Texas, and is currently on the board of the University Federal Credit Union, one of the top 100 credit unions in the U.S..

She has been often recognized for outstanding achievements, including the Ernst & Young Entrepreneur of the Year Award, the Austin Business Journal's Profiles in Power Award, and the University of Texas McCombs School of Business Trailblazer Award.

Laura is a Chartered Management Accountant and has an MBA from the University of Texas.

LAURIE PUSHOR - SESSION 2

PRESIDENT AND CHIEF EXECUTIVE OFFICER, ALBERTA ENERGY REGULATOR



Prior to joining the AER, Laurie Pushor served as Deputy Minister for the Saskatchewan Ministry of Energy and Resources for two years, from 2018 until 2020. He served as the Deputy Minister for the former Ministry of the Economy from 2014 to 2018, and served four years as Chief of Staff for several government departments in Saskatchewan, including Social Services, Energy, and Health.

Mr. Pushor's previous roles include Director of Recruitment and Admissions for the University of Saskatchewan, where he was responsible for Canadian and international recruitment and activities. Prior to this, Mr. Pushor and his family spent three years in Nova Scotia where he played a similar role for St. Francis Xavier University.

Mr. Pushor and his family lived in Edmonton for many years before relocating to Nova Scotia.

In Edmonton, Mr. Pushor worked with the provincial government in a number of roles, including with the Ministry of Economic Development. Early into his career, he worked for the Lougheed government as well as the Klein administration.

Mr. Pushor's private sector experience includes managing a consulting operation involved with marketing, public opinion research, and fundraising counsel.

Mr. Pushor's wife Debbie is a Professor at the University of Saskatchewan with research interests in parent engagement and parent knowledge. They have three sons.

LIZ O'CONNELL - SESSION 3

CEO AND CO-FOUNDER, AROLYTICS



Liz O'Connell is CEO and a Co-Founder of Arolytics, a methane software and analytics company that leverages data to support lower carbon energy production. Liz previously spent multiple years as a research scientist working to quantify, monitor, and reduce greenhouse gas emissions from >5,000 energy sites across Canada, and has authored numerous peer-reviewed publications on the topic of oil and gas methane emissions. Liz's efforts have been recognized by groups such as Forbes, Clean50, and the SPE.



LOGAN DOWNING - SESSION 7

CO-FOUNDER & CEO, CARBON ASSESSORS

Logan Downing co-founded Carbon Assessors in 2021 after his consulting clients began asking for advisory services on carbon markets. Seeing an opportunity, Logan built on his Downstream Oil and Gas marketing and trading experience to develop saleable supply/demand modelling, policy analysis, and price intelligence. Prior to Carbon Assessors, Logan ran his own consultancy working with large North American integrated Oil and Gas corporations. Most notably, he helped a client develop a new global trading practice from scratch that consistently delivers \$120M CAD in profit per year. Logan is a trained economist and his machine learning price setting algorithms can be found selling seven refineries worth of production across Canada and the USA.



MARIO KRPAN - SESSION 6

DIRECTOR, TRADE RELATIONS - EUROPE AND CENTRAL ASIA, GOVERNMENT OF ALBERTA

Mario Krpan is an energy enthusiast with over twenty-five years of international experience as a business developer, lawyer, and trade and investment promoter in the energy industry.

During his career, he was involved in international energy and infrastructure projects and initiatives in Europe, Africa and North America.

For the last 18 years, he has resided in Canada, working for the Alberta Government on energy-related files on cleantech, power generation, oil and gas upstream and midstream sectors.

In his current role in the Government – Director, Trade and Export Development – he is working with his team on promoting Alberta businesses in Europe, and Central Asia.

He is also a member of several boards, including The Centre for Gas and Liquids Monetization.



MARY KANG - SESSION 5

ASSISTANT PROFESSOR, MCGILL UNIVERSITY

Mary Kang is an assistant professor in the Department of Civil Engineering at McGill University. Her research focuses on energy transition, climate and environmental impacts of energy systems, and subsurface hydrology. Her current projects are on characterization and mitigation of methane emissions from oil and gas wells and urban infrastructure. Previously, she was a postdoctoral fellow in the Earth System Science department at Stanford University working on measurements of methane emissions from oil and gas systems and groundwater resource studies. She received a Ph.D. in Civil and Environmental Engineering from Princeton University and a Science, Technology, and Environmental Policy certificate from the Princeton School of Public and International Affairs, where she developed analytical-numerical models for multiphase flow through porous media with applications to geologic storage of carbon dioxide and led first measurements of methane emissions from abandoned oil and gas wells. She also earned a M.A.Sc. and a B.A.Sc. in Civil Engineering from the University of Waterloo. Between her time at Waterloo and Princeton, she developed and applied groundwater models as a consultant based in Reston, Virginia, U.S.A.

BIOGRAPHIES

MATTHEW JOHNSON - PRESENTATION & SESSION 4 PROFESSOR & HEAD OF ENERGY & EMISSIONS RESEARCH LAB, CARLETON UNIVERSITY



Dr. Matthew Johnson is a professor of Mechanical & Aerospace Engineering at Carleton University in Ottawa, Canada where he heads the internationally renowned Energy & Emissions Research Laboratory (EERL). A two-time winner of the Natural Sciences and Engineering Research Council's (NSERC) prestigious accelerator award, Matt has worked extensively to translate peer-reviewed research results into practice. His EERL combines advanced experimentation, simulation, and statistical analysis in both large-scale controlled lab experiments and field work and employs a suite of advanced optical diagnostics, analytic tools, and experimental capabilities this is unparalleled in Canada. As of 2023, EERL has successfully completed field measurement studies on four continents with research contributions that include large-scale aerial methane surveys, comprehensive protocols for creating measurement-based inventories, novel "VentX" technology for quantifying unsteady methane flows, "sky-LOSA" technology for measuring black carbon emissions from flares, techno-economic analysis of methane mitigation potential, and quantitative analysis of regulatory equivalency. His work is cited in Canada's National Inventory Report, incorporated in provincial and federal standards and regulations, and regularly cited in international methane and black carbon mitigation efforts.

MIKE DIZEP - SESSION 5 SENIOR BUSINESS DEVELOPMENT MANAGER, BRIDGER PHOTONICS



Mike Dizep is part of the business development team at Bridger Photonics, and is responsible for the Canadian market. Mike is an experienced engineering professional and has been in the oil and gas industry for over 20 years. Prior to joining Bridger, Mike held senior roles at Schlumberger, Validere and Qube. Mike holds a Bachelor of Geomatics Engineering from the University of Calgary and is a registered Professional Engineer with APEGA.

MONICA PRABHU - SESSION 6 COMMERCIALIZATION & COMMUNICATIONS, PRABHU ENERGY LABS



Monica Prabhu is the Commercialization Officer for Prabhu Energy Labs, which is dedicated to harnessing weak methane emissions to slow the pace of climate change. She is responsible for translating technical advances into business opportunity and climate impact. She has two decades of experience in strategic communications for breakthrough technology companies. Born and raised in Alaskan oil country, she resides in the San Francisco Bay Area, California.

BIOGRAPHIES



NICOLE HARBAUER - SESSION 6

TRADE COMMISSIONER, ENERGY & CLEAN TECHNOLOGIES, TRADE COMMISSIONER SERVICE

Nicole Harbauer is a Trade Commissioner with Global Affairs Canada, where she helps Alberta-based companies in the Energy Transition and Clean Technologies sectors seize international opportunities. Her key areas of focus include methane emissions reduction and CCUS. She is a member of the PTAC Board of Directors, and the CRIN Steering Committee. Previously based in the UAE, Nicole led the development of Canada's commercial program at Expo 2020 Dubai. She was also a member of the Executive Committee of the Canadian Business Council in Dubai and the Northern Emirates. Prior to joining the public sector, Nicole served as the Director of Operations at the Economic Club of Canada, Canada's leading public affairs forum. Nicole holds an MA from the Munk School of Global Affairs and Public Policy at the University of Toronto.



MINISTER REBECCA SCHULZ - KEYNOTE PRESENTATION

MINISTER OF ENVIRONMENT AND PROTECTED AREAS OF ALBERTA, GOVERNMENT OF ALBERTA

Rebecca Schulz was first elected as the Member of the Legislative Assembly for Calgary-Shaw on April 16, 2019 and was re-elected on May 29, 2023. She was sworn in as Minister of Environment and Protected Areas on June 9, 2023, previously serving as Minister of Municipal Affairs and Minister of Children's Services.

A communications professional with a master's degree from Johns Hopkins University, Minister Schulz previously worked for the Government of Saskatchewan, as well as the University of Calgary. Minister Schulz is eager to advocate for the types of common-sense policies that will grow Alberta's economy, protect our beautiful landscapes, and encourage investment and innovation in Alberta.

As a wife and proud mother of 2 young children, Minister Schulz has seen first-hand the challenges that Alberta's families have faced during the last few years and uses her experiences to connect with and advocate for Albertans on the issues that matter to them.



RUSTY HURL - TECHNOLOGY SPOTLIGHT

CANADIAN ACCOUNT MANAGER, WELDFIT

Rusty Hurl has been in the energy industry since 2016. Rusty takes great pride in helping to make our Canadian energy industry more productive, by connecting industry operators with beneficial specialty services and products. In his current role, Rusty is developing Canadian operations for WeldFit and its suite of emission reduction and pipeline performance products and services.



RYAN MATTSON - TECHNOLOGY SPOTLIGHT

VICE PRESIDENT, OIL AND GAS, GHGSAT INC.

Ryan Mattson is the Vice President of Oil and Gas at GHGSat based in Calgary. He's responsible for GHGSat's Oil and Gas business supporting the industry's needs for remote methane monitoring solutions.

Ryan joined GHGSat in 2021 but has worked in the Oil and Gas business for two decades, holding roles in operations, sales, strategy, and management, as well as working in several different markets including Canada, the US, Singapore, and Russia. Ryan holds a Bachelor of Science degree in Mechanical Engineering from the University of Alberta.



SARAH IZANT- SESSION 3

DEPUTY SECRETARY FOR CLIMATE POLICY, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Sarah Izant was appointed by Governor Gavin Newsom in November 2023 to serve as Deputy Secretary for Climate Policy at the California Environmental Protection Agency. Prior to joining CalEPA, Izant served the City and County of San Francisco as Mayor London N. Breed's Manager of State and Federal Affairs, Environmental Policy Advisor, and Deputy Press Director. She has worked in both state and federal government, as an advisor at the California Public Utilities Commission and Executive Fellow at the California Air Resources Board, and as a Constituent Services Representative in the Office of U.S. Senator Dianne Feinstein. Sarah holds a Bachelor of Arts in Public Policy Analysis and Hispanic Studies from Scripps College.



SCOTT MUNDLE - SESSION 4

GREAT LAKES INSTITUTE FOR ENVIRONMENTAL RESEARCH, DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY, UNIVERSITY OF WINDSOR

Scott Mundle is an Associate Professor of chemistry and Director of the Energy Forensics Isotope Laboratory at the University of Windsor (MundleLAB). He is an internationally recognized subject matter expert with over 12 years' experience in the energy and helium sectors. He specializes in source identification of gas migration and well integrity issues in conventional, CO₂-EOR, and thermal recovery operations; and exploration and production of low carbon intensity helium.



SCOTT VOLK - SESSION 5

TECHNOLOGY AND INNOVATION LEAD, TOURMALINE OIL CORP.

Scott Volk is the Director of Emissions and Innovation at Tourmaline Oil Corp., Canada's largest natural gas producer. Mr. Volk and his team are focused on developing and implementing sustainable innovation. In addition, he sits on a number of methane emissions research and innovation committees, where he brings more than 20 years of oil and gas engineering experience with companies such as Athabasca Oil Corp. and Talisman Energy.

Mr. Volk has a Bachelor of Science in Industrial Systems Engineering from the University of Regina and a Master of Science in Drilling and Well Engineering from Robert Gordon University in Aberdeen



SHELDON OWEN - SESSION 5

VICE PRESIDENT - SEES NORTH AMERICA, SLB END-TO-END EMISSIONS SOLUTIONS, SLB

Sheldon Owen is vice president of the SLB End-to-end Emissions Solutions (SEES) business for North America, based in Houston. He has held this position since September 2022.

Sheldon began his career with SLB in Canada. During his 25-year tenure with SLB, he has held several operational, functional, and digital roles in cementing, coiled tubing, fracturing, vessels, and sand control. In 2014, he moved to Aberdeen to manage the company's North Sea, UK, Northern Africa, and Europe Well Services operations. He returned to Canada in 2017 as vice president of the SLB OneStim business, then relocated to Houston in 2019 to lead one of the company's largest internal projects—global implementation of SAP enterprise resource planning software to facilitate effective data processing and information flow across the organization. Sheldon graduated as a mechanical engineering technologist in Saskatoon, Saskatchewan.



SOHEIL ASGARPOUR - SESSION 1

PRESIDENT AND CEO, PTAC

A Fellow of the Canadian Academy of Engineering (CAE), the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM), and the Canadian Society of Senior Engineers (CSSE), Dr. Asgarpour has over 35 years of diversified technical, business, and operations experience in the oil and gas industry, marked by providing strong leadership to several profit and not-for-profit organizations. Soheil has served Petroleum Technology Alliance Canada (PTAC) as President since 2007. Prior to joining PTAC, Soheil successfully led the overall management of the Crown's oil sands interests in his position as Business Leader of Oil Sands for the Alberta Department of Energy (ADOE). Prior to working for the Department of Energy, he held executive positions with mid- and large-size oil and gas companies. Soheil earned his Ph.D. in Mechanical Engineering from Rice University in Houston, Texas. He completed the Western Executive Program at the Western Business School of the University of Western Ontario and the Leadership Program at Yale University.

He is currently serving PTAC as President & CEO, CAE as President-Elect, the Council of Canadian Academies (CCA) and CAE as a director. He has served the Petroleum Recovery Institute (PRI) as First Vice Chairman, CIM as President, the Petroleum Society of CIM (PSC) as Chairman, and the Canadian Institute for Photonic Innovations, CIM, PRI, PSC, and Clean Resources Innovation Network (CRIN) as a Director. He is a life member of the Society of Petroleum Engineers (SPE), and a member of CIM, CSSE, CAE, Association of Professional Engineers and Geoscientists of Alberta (APEGA), and the Institute of Corporate Directors.

STEPHANE GERMAIN - SESSION 5

PRESIDENT, GHGSAT INC.



Stephane Germain is the Founder and Chief Executive Officer of GHGSat whose technology provides actionable greenhouse gas emissions data and insights to various industries. Stephane founded GHGSat in 2011 to answer a market need for consistent, high quality measurements of greenhouse gas emissions from industrial facilities worldwide. Mr. Germain has been passionate about applying space technology for the good of the Earth for over 30 years.

Prior to founding GHGSat, he held senior management positions in SMEs and large Canadian aerospace corporations. He started his career as an engineer and project manager at Spar Aerospace and had then the opportunity to work for several years as a consultant at Bain & Company, a leading international strategy consulting firm, working for Fortune 500 companies in industries ranging from forestry to aerospace. He then held senior management positions in both small and large Canadian companies before turning to entrepreneurship in the 2010's.

Mr. Germain graduated from Queen's University (Canada) with a B.Sc. (Engineering Physics) and a Master's in Business Administration from INSEAD (France).



STEVE FROEHLER - SESSION 11

OWNER AND DIRECTOR, LCO TECHNOLOGIES

Steve has been involved with the Oil and Gas industry since he was 21 years old. He started out as a journeyman pipe fitter, steam fitter, and instrument tech. Steve then got involved in sales, becoming a branch manager for Tyco valves and controls and later global business development manager for Anderson Greenwood, a division of Tyco. 20 years ago, he started LCO Technologies with the idea of providing high-quality products at the least cost option.



STEVE LIANG - TECHNOLOGY SPOTLIGHT

CTO, SENSORUP

Dr. Steve Liang, a global influencer for the Internet of Things (IoT), serves as the Chief Technology Officer and Founder of SensorUp. His academic excellence is anchored in his position as a professor at the University of Calgary, where he specializes in geospatial technologies and IoT systems. Dr. Liang's expertise extends to his significant contributions as an author of numerous international sensor web standards, a role he has fulfilled for the International Telecommunication Union (ITU-T) and the Open Geospatial Consortium under the auspices of the United Nations.

At SensorUp, Dr. Liang's role involves steering the company's product strategy. He is crucial in bridging the gap between customer needs, standards development groups, and SensorUp's internal engineering teams. This synergy is critical in developing and refining SensorUp's platform, SensorUp GEMS.

SensorUp GEMS is a software solution designed to address the complex challenges in the oil and gas industry, focusing on methane emissions management. The platform exemplifies innovation in handling Measurement, Reporting, Verification, and Repair (MRVR) processes, facilitating efficient and effective mitigation of methane leaks. Its unique capability to integrate and organize vast amounts of disparate data from multi-sensor sources makes it an indispensable tool for oil and gas enterprises striving to achieve their net zero emissions goals. By providing a comprehensive view of emissions data, SensorUp GEMS enables companies to coordinate their efforts across all levels of their organization, ensuring sustained methane reduction and adherence to environmental standards.



TARYN HUMPHREYS - TECHNOLOGY SPOTLIGHT

DIRECTOR, BUSINESS DEVELOPMENT, QUBE

Taryn Humphreys is the Director, Business Development at Qube Technologies where she leads and manages a diverse portfolio of projects and stakeholders to deliver environmental solutions for emissions monitoring. Taryn is an experienced engineering professional and has led and supported the development, operations, strategy, and growth of North American and International assets for over 15 years with Canadian Oil and Gas producers. Taryn holds a Bachelor of Science in Materials Engineering from the University of Alberta and is a registered Professional Engineer with APEGA.



THOMAS FOX - SESSION 3

PRESIDENT, HIGHWOOD EMISSIONS MANAGEMENT

Thomas Fox is President of Highwood Emissions Management. His expertise is in methane detection and quantification technology, low carbon differentiated commodities, and forecasting emissions management strategies through simulation. At Highwood, Thomas works at the interface of industry, regulators, and innovators to evaluate and deploy cutting-edge emissions management solutions. He holds a PhD from University of Calgary and an MSc from McGill University.



TRAVIS WIENS - TECHNOLOGY SPOTLIGHT

NATIONAL DIRECTOR OPTICAL GAS IMAGING, AUTOMATION, & SCIENCE CANADA, FLIR

Travis Wiens is an accomplished professional in the field of optical gas imaging. As the National Sales Manager at Teledyne FLIR, he plays a pivotal role in advancing the use of cutting-edge technology to detect and visualize gas emissions. His expertise lies in the development and implementation of optical gas imaging solutions that enhance safety, improve inspection efficiency, and prevent costly production shutdowns.



TYLER HOMAN - SESSION 8

VICE PRESIDENT, PRODUCTION, TEINE ENERGY

Experienced in all facets of Operations engineering including the following: Completions – Design and Execution, Production Engineering – Well Optimization and Artificial Lift Design, Facility/Pipeline Construction – Design, Execution, Cost Control, Project Management. Well versed in Joint Ventures, Marketing, and Commercial Contracts. Help direct and manage GHG emission reduction efforts within Teine.



Meeting the challenges of the oil and gas industry FLIR offers a complete range of thermal imaging, gas detection, and test equipment for diagnosing potential problems before they turn into expensive failures. By using FLIR optical gas imaging technology to its full potential, the industry can create a safer and more efficient environment for its staff and clients alike.



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