



October 20-21, 2022

Colorado State University's
Lory Student Center

Fort Collins, Colorado

Methane Emissions in the Spotlight – From Measurement to Mitigation

2022 PROGRAM



GTI ENERGY

solutions that transform



**ENERGY
INSTITUTE**

Colorado State University



Protecting Life, Property, and the Environment from **HAZARDOUS GASES**

FIND GAS LEAKS FAST

For Natural Gas Distribution, Transmission, Exploration and Production Applications:

- ✓ Methane Emission Monitoring Systems
- ✓ VOC Monitoring Systems
- ✓ Portable Gas Leak Detectors
- ✓ Mobile Methane Detection Systems
- ✓ Associated mapping & analytics software

SENSIT CONNECT.NET

is a web-based application portal for viewing and managing SENSIT Environmental Monitors. This portal allows remote access to: real-time and archived data, data visualization tools, sensor health and settings, device location and/or tracking information, notification options and parameters, and can assist with leak location identification and quantification estimates.

GAS•TRAC LZ
REMOTE METHANE GAS DETECTORS

GAS•TRAC® LZ30 + **SMART CONNECT**
METHANE GAS DETECTOR

- ✓ GPS- tablet/smartphone provides GPS data
- ✓ Datalog- receives & records a reading every 1/10sec
- ✓ Picture/Video- the application support pictures & video
- ✓ Survey Logs- automatically stored to the tablet/smartphone

SENSIT® SPOD
VOC EMISSIONS & AIR POLLUTANT MONITOR

- ✓ PPB & PPM Range VOC Options
- ✓ Remote Cellular Data Upload
- ✓ Real-Time Data via Secure Website
- ✓ Targeted Sample Acquisition

GAS•TRAC® FPL
FIXED-POINT LASER METHANE EMISSIONS MONITOR

- ✓ Methane Selective
- ✓ Dual Optical Assembly for Detection
- ✓ Up to 50 Meter Standard Detection Range
- ✓ Solar Powered with Built-in Rechargeable Battery

GAS•TRAC® FMD
FIXED METHANE DETECTOR

- ✓ Methane Selective Internal Optical Assembly for Local Detection
- ✓ Built-in Sampling Pump
- ✓ Built-in Rechargeable Battery
- ✓ Wireless Communication to Secure Server

GAS•TRAC® LZ50
METHANE GAS DETECTOR

- ✓ Methane Selective Internal Optical Assembly for Local Detection
- ✓ TargetGPS for Unmatched Data & Location Accuracy
- ✓ Enhanced Datalogging, Visualization
- ✓ Photo, Video Capabilities w/Zoom

WELCOME!

GTI Energy and the Energy Institute at Colorado State University are proud to host the 9th annual CH4 Connections Conference, October 20-21, 2022.

CH4 Connections 2022 "Methane Emissions in the Spotlight – From Measurement to Mitigation" will spotlight the national focus that has escalated around characterizing and managing methane emissions. Better measurement of methane emissions is an essential first step, but we also want to highlight the importance of measurement data being understandable and usable by the operators that are going to have to mitigate those emissions. We will emphasize how to effectively decarbonize our energy systems and the role of methane emission mitigation in these efforts.

The conference promotes the open exchange of ideas from leading thought leaders, academic researchers, industry experts, regulators, policymakers, and environmental advocates. Speakers will address current research on methane emissions, technologies to detect and mitigate emissions, policy and regulatory frameworks, and business implications and opportunities.

Join us in a conversation targeted at reducing methane emissions and carbon impacts through innovative technology solutions and methane emissions policy. We're happy you're here!



Ron Snedic
Senior Vice President
Corporate Development & President,
GTI International



Dr. Bryan Willson
Executive Director
Energy Institute
Colorado State University



New in 2022: The CH4 Connections App

- Receive alerts on current and upcoming sessions
- See sponsors' company bios and links
- Find speaker bios

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Be social!
Share your CH4 Connections experience with photos and posts using **#CH4Connections** and tag us on LinkedIn and Twitter!

AGENDA

Day 1
THU 10/20

7:00 AM – 6:00 PM

Registration and Information Desk

7:30 AM – 8:30 AM

Continental Breakfast and Networking

8:30 – 8:40 AM

Opening Remarks:

Ron Snedic, Senior Vice President of Corporate Development, GTI Energy

Bryan Willson, Executive Director, Energy Institute, Colorado State University

SECTION 1 – Using Science to Inform Policy and Regulation

8:40 – 9:30 AM

Fireside Chat

Moderator:

Erin Blanton, Managing Director, Zero Emissions, GTI Energy

Panelists:

Tim Reinhardt, Director Division of Methane Mitigation Technologies, Office of Resource Sustainability, Office of Fossil Energy & Carbon Management, U.S. DOE

Jared Ciferno, Program Manager, Methane Mitigation Technologies, U.S. DOE, NETL

Michael Ogletree, Director of Air Quality at CDPHE, Colorado

Tricia Pridemore, Chairman, Georgia Public Utilities Commission

9:30 – 10:20 AM

Panel Session #1: Regulatory Standards for Methane Emissions

Moderator:

Hon Xing Wong, GTI Energy

Panelists:


Ned Shappley, Physical Scientist, US EPA, Measurement Technology Group, Office of Air Quality Planning and Standards

Claudia Borchert, Climate Change Policy Coordinator, New Mexico Environment Department

(all times in U.S. Mountain Time Zone)

Lesley (Fleischman) Feldman, Research & Analysis Manager, Methane Pollution Prevention, Clean Air Task Force (CATF)

Pam Lacey, Chief Regulatory Counsel, American Gas Association

 10:20 – 10:40 AM
BREAK, NETWORKING, and EXHIBITS

10:40 – 11:10 AM

Keynote:

Paula A. Gant, PhD, President & CEO, GTI Energy

Moderator:

Ron Snedic, Senior Vice President of Corporate Development, GTI Energy

SECTION 2 – Agriculture and Waste Methane Emissions Mitigation

11:10 – Noon

Panel Session #2: Cross Compatible Detection Technologies Between Energy and Agriculture/Waste

Moderator:


Dan Zimmerle, Director, Methane Emissions Program – METEC, Remote and Distributed Energy Center (RADEC), Energy Institute, Colorado State University

Panelists:

Ag 101 – *Dr. Sara Place*, Assoc Professor of Feedlot Systems, AgNext Research Faculty, Department of Animal Sciences, Colorado State University

Landfills 101 – *Roger Green*, Director of Engineering Science, Environmental Management Group, Waste Management

Renewable Natural Gas 101 – *Sam Wade*, Director of Public Policy, Coalition for Renewable Natural Gas

 Noon – 12:10 PM
Gold Sponsor Technical Presentation
Drew Pomerantz, Schlumberger

 12:10 – 1:00 PM
LUNCH, NETWORKING, and EXHIBITS

(all times in U.S. Mountain Time Zone)

SECTION 3 – Methane Accounting: Reconciling Real vs. Reported Emissions

1:00 – 1:50 PM

Panel Session #3: Role of Methane Accounting for a Low Carbon World

Moderator:

Chris Moore, Program Manager, GTI Energy

Panelists:

Arvind Ravikumar, UT Austin

Thomas Fox, President, Highwood Emissions Management

Lara Owens, Manager Climate Intelligence, RMI

1:55 – 2:45 PM

Panel Session #4: Role of Methane Measurements in a Low Carbon World – Aerial Measurements: What Have We Learned?

Moderator:


Keily Bouchentouf, Manager, Energy Transitions, GTI Energy

Panelists:

Matthew Johnson, Professor, Carleton University

Riley Duren, CEO Carbon Mapper, Research Scientist, University of Arizona

 2:45 – 3:25 PM
BREAK, NETWORKING, EXHIBITS

 3:25 – 3:35 PM
Gold Sponsor Technical Presentation
Vineet Aggarwal, Heath Consultants

SECTION 4 – Making Emissions Data Actionable

3:35 – 4:25 PM

Panel Session #5: Operationalizing Data – the only way to move the needle

Moderator:


Bryan Willson, Executive Director, Energy Institute, Colorado State University


Panelists:

Maria Lozano, Emissions Management Product Manager, Baker Hughes

Zach Weller, Data Scientist, Pacific Northwest National Laboratory

Shannon Katcher, Vice President, Digitalization, GTI Energy

 4:25 – 4:35 PM
Gold Sponsor Technical Presentation
Jacob Melby, Sensit

 4:35 – 5:25 PM
Panel Session #6: Sponsor Showcase Rapid-Fire
Moderator:
Amanda Harmon, Senior Manager, Programs – Zero Emissions Systems, GTI Energy

 5:25 – 6:30 PM
NETWORKING RECEPTION and EXHIBITS

7:00 – 8:30 PM

Speaker/Sponsor Dinner

AGENDA

Day 2
FRI 10/21

7:30 AM – 1:00 PM
Registration and Information Desk

7:30 AM – 8:30 AM
Continental Breakfast and Networking

8:30 – 8:40 AM
Opening Remarks:

Ron Snedic, Senior Vice President of Corporate Development, GTI Energy

Bryan Willson, Executive Director, Energy Institute, Colorado State University

8:40 – 9:30 AM
Panel Session #7: Production Leak Mitigation

Moderator:
Joe von Fischer, Professor of Biology, Colorado State University

Panelists:
Vanessa Ryan, Manager, Carbon & Climate Policy, Chevron
JD Holt, Principal Advisor to Responsible Energy Solutions (RES)
Daniel Palmer, Director of Deployment and Commercialization, OGCI
Matt Harrison, Senior Principal, SLR Environmental

9:30 – 9:50 AM
BREAK

9:50 – 10:00 AM
Gold Sponsor Technical Presentation
Pete Roos, Bridger Photonics

(all times in U.S. Mountain Time Zone)

10:00 – 10:10 AM
Gold Sponsor Technical Presentation
Angel Esparza, GHGSat

10:10 – 11:00 AM
Panel Session #8: Sponsor Showcase Rapid-Fire Session

Moderator:
Bryan Willson, Executive Director, Energy Institute, Colorado State University

11:00 – 11:10 AM
BREAK

11:10 – Noon
Panel Session #9: Transmission and Distribution Leak Mitigation

Moderator:
Amanda Harmon, Senior Manager, Programs, Zero Emissions Systems, GTI Energy

Panelists:
Greg Jones, Director, Climate & Environmental Policy, Southern Company Gas
Ed Newton, Gas Engineering Programs Manager, Southern California Gas Company
Brian Halchak, Environmental Program Manager, Williams Companies
Rob Tremberger, Section Manager of Leak Survey and Corrosion, Con Edison

Noon – 12:10 PM
Wrap up

12:10 – 1:00 PM
Lunch for all participants

MEET OUR SPEAKERS



Erin Blanton
Managing Director of Zero Emissions Systems, GTI Energy

Erin Blanton is the Managing Director of Zero Emissions Systems at GTI Energy. Erin Blanton leads GTI Energy's methane emissions mitigation solutions strategy and focuses on the role of natural gas infrastructure in facilitating energy transitions towards a net-zero future. Erin joined GTI Energy from Columbia University's Center on Global Energy Policy, where she led the Natural Gas Research Initiative and the Center's ESG research. She has extensive experience advising financial professionals on energy markets and investments. Erin holds a Master's degree from Columbia University's School of International and Public Affairs and a B.A. in economics from Cornell University.

Collaboratory to Advance Methane Science (CAMS). She brings extensive experience at the intersection of technology, economics, and policy with previous roles in energy analysis, corporate strategy, technical marketing and innovation product development. As an oil & gas industry specialist with global management consulting firm McKinsey & Company, she served dozens of clients across the energy value chain on strategy, mergers and acquisitions, portfolio transformation and operational efficiency. Prior to joining GTI Energy, she led research projects to advance deployment of low-carbon energy solutions including carbon capture and storage, hydrogen, and soil carbon storage at the Center for Energy Studies at Rice University's Baker Institute. Keily graduated magna cum laude from Yale University.



Jared Ciferno
Program Manager, U.S. Department of Energy, Fossil Energy Carbon Management

Jared Ciferno is a program manager within the Methane Mitigation Technologies division of the U.S. DOE Fossil Energy Carbon Management Office.

In this capacity, Mr. Ciferno manages an R&D portfolio focused on developing accurate, cost-effective and efficient technology solutions and best practices to identify, measure, monitor, and eliminate methane emissions across the natural gas value chain—production through utilization. Methane mitigation research and development efforts include advanced materials of pipeline construction, monitoring sensors, data management systems, and more efficient and flexible compressor stations. Program efforts for methane emissions quantification focus on developing technologies to detect, locate, and measure methane emissions. The program is also working on creating innovative solutions to reduce associated gas flaring and venting, including alternative uses for the “stranded” natural gas through modular, catalytic technologies designed to convert the gas into higher-value solid and liquid products. Mr. Ciferno has 20 years of diversified engineering and management experience that spans a broad spectrum of technology areas including: electric power generation, advanced greenhouse gas control, process control, fossil energy conversion processes, water management, alternative fuels and simulation/systems analysis. Mr. Ciferno holds B.S. and M.S. degrees in chemical engineering from the University of Pittsburgh.



Claudia Borchert
Climate Change Policy Coordinator, New Mexico Environment Department

Claudia Borchert joined the New Mexico's Environment Department in November 2020 as the Environmental Protection Division's Climate Change Policy Coordinator. As a member of the leadership team of New Mexico's interagency Climate Change Task Force, Claudia is developing a suite of climate action strategies for the state's 5-year climate action plan to achieve the statewide greenhouse gas emission reduction goal of at least 45% below 2005 levels by 2030. Claudia is implementing climate actions specified in New Mexico's Governor Lujan Grisham 2019-003 Executive Order on Addressing Climate Change and Energy Waste including cleaner tailpipe emission standards for passenger cars.



Keily Bouchentouf
Manager of Energy Transitions, Program Administrator for the Collaboratory to Advance Methane Science (CAMS), GTI Energy

Keily Bouchentouf serves as Manager of Energy Transitions at GTI Energy and Program Administrator for the

MEET OUR SPEAKERS



Riley Duren

Chief Executive Officer, Carbon Mapper

Riley Duren is Chief Executive Officer of the non-profit organization Carbon Mapper with a public-good mission to deliver actionable methane and carbon dioxide emissions data globally. Additionally, he is a Research Scientist

at the University of Arizona and Engineering Fellow at NASA's Jet Propulsion Laboratory. From 2008 to 2019 he served as Chief Systems Engineer for JPL's Earth Science Directorate spanning NASA satellite and airborne programs, research, applied science, and technology development. His research team continues to develop and test multi-scale greenhouse gas monitoring frameworks that integrate earth observations from the surface, air and space to address multiple decision support applications. One offshoot of that research program is the Carbon Mapper public-private partnership to launch a constellation of satellites capable of monitoring at least 80% of the world's high emission methane and CO2 point sources at facility scale.

Prior to joining CATF, Lesley worked at the Union of Concerned Scientists as an analyst in the Energy Program, where she conducted analysis and wrote reports on coal plant retirements and the role of natural gas in electricity production. She also worked for the Environment, Social, and Governance (ESG) Ratings team at MSCI, Inc., where she analyzed the social and environmental performance of a portfolio of energy and mining companies. Lesley received a Masters in Public Policy from the Harvard Kennedy School. She also holds a B.A. from Haverford College in History and Economics.



Lesley (Fleischman) Feldman

Research and Analysis Manager, CATF

Lesley (Fleischman) Feldman is a Research and Analysis Manager on the Methane Pollution Prevention team. She conducts technical analysis to support policies that will reduce methane emissions from the oil and gas industry.

She has managed the program's research on the health impacts of air pollution from oil and gas. Lesley has provided technical comments in rule-making proceedings in Colorado, New Mexico, California, and at the Federal level. Internationally, Lesley manages the Country Methane Abatement Tool (CoMAT), which helps

countries estimate oil and gas methane emissions and develop strong policies.

Prior to joining CATF, Lesley worked at the Union of Concerned Scientists as an analyst in the Energy Program, where she conducted analysis and wrote reports on coal plant retirements and the role of natural gas in electricity production. She also worked for the Environment, Social, and Governance (ESG) Ratings team at MSCI, Inc., where she analyzed the social and environmental performance of a portfolio of energy and mining companies. Lesley received a Masters in Public Policy from the Harvard Kennedy School. She also holds a B.A. from Haverford College in History and Economics.



Dr. Thomas Fox

President, Highwood Emissions Management

Dr. Thomas Fox is President of Highwood Emissions Management. He completed a Ph.D. at the University of Calgary, where he worked at the interface of industry, government, and academia to develop,

evaluate, and deploy novel methane measurement technologies. At Highwood, Thomas works with O&G clients to design and implement integrated emissions management strategies. His team specializes in emissions data analytics, alternative LDAR, emissions inventories, differentiated gas, abatement project optimization, and both regulatory and ESG disclosure. With expertise in evaluating methane detection and quantification solutions, Thomas' team also works with innovators and solution providers to build, demonstrate, and deploy new technologies.



Paula A. Gant, PhD

President and CEO, GTI Energy

As the President and CEO of GTI Energy, Dr. Gant drives organizational impact to accelerate economy-wide decarbonization and transition energy systems by deploying and scaling energy and environmental solutions.

Previously, she served as Vice President of Strategy & Innovation at GTI Energy, using technology-based efforts to enable safe, efficient, clean and affordable energy supplies in the U.S. and around the globe. In private and public sector roles, Dr. Gant has

focused on the technology, market and policy solutions needed to transition energy systems. She has a strong track record in addressing complex business and policy challenges through building effective teams, communicating science and technology impacts and organizing diverse interests around a common goal. Dr. Gant is a respected voice in global natural gas and broader energy discussions.

In leadership roles at the U.S. Department of Energy, she administered natural gas export regulation and R&D programs executed by the National Energy Technology Lab, along with orchestrating the implementation of international clean energy deployment initiatives. Prior to that, Dr. Gant led policy, regulatory affairs and strategy at the American Gas Association, and directed policy and government affairs for Duke Energy Corporation. She has served on the economics faculties of the University of Louisville and Louisiana State University.

Dr. Gant is a graduate of McNeese State University in Louisiana and Auburn University in Alabama.



Roger Green

Director, WM

Roger Green is Director of Engineering Science in WM's corporate Environmental Management Group. His current responsibilities include developing solutions for the chemical and biological treatment of wastes and the

measurement and modeling of landfill emissions.

Roger is the technical lead for WM's efforts in developing and demonstrating methane measurement approaches at landfills. He has served as PI/co-PI on cooperative research and development projects for landfill processes with USEPA, academia and industry. Roger is a member and past chairman of the Environmental Research and Education Foundation's Research Council. He received his BS in Biology and Biochemistry and MS in Environmental Science from the University of Cincinnati.



Brian Halchak

Environmental Program Manager, Williams Companies, Inc.

Brian Halchak is an environmental program manager for the Williams Companies, Inc. who has been with the company since 2014. In his role, he is responsible for the development

and execution of Williams' quantification, monitoring, reporting, and verification (QMRV) program and advancing Next Gen Gas for the company and the oil & gas midstream space. He holds a master's degree in Geotechnical Engineering and has two

bachelor's degrees in Civil Engineering and Geomatics Engineering. Throughout his career Mr. Halchak has worked in many areas throughout the company, including landslide susceptibility mapping, remediation, and design, trenchless engineering & construction including horizontal directional drilling (HDD), Direct Pipe®, and complex conventional boring, and developing an unmanned aerial systems (UAS) program for Williams that now has pilots and drone operations throughout the entire company. Brian has been involved in many operating areas within Williams, performing work in all regions of the country.



Amanda Harmon

Senior Manager, Programs – Zero Emissions Systems, GTI Energy

Amanda Harmon, Senior Manager-Programs at GTI Energy's Zero Emissions System oversees the research, development, and deployment of solutions for environmental matters

including emissions and renewable energy. As a microbiologist, Ms. Harmon also has a decade's worth of experience researching pipeline integrity. Current research programs Amanda manages are the Risk, Integrity, and Environmental working group for Operations Technology Development, renewable fuels for the Low Carbon Resource Initiative, and will direct Veritas post 2022.



Matthew Harrison

Senior Principal, SLR Environmental

Mr. Harrison began his career with Exxon in refinery and chemical operations, including management roles in Exxon's Major Projects group. As a Senior Principal at SLR, Matt manages technical services for a variety of energy industry

clients. He is responsible for teams that provide GHG emissions inventory and protocol development, field research, regulatory compliance, and emission reduction strategies for public and private sector clients. His work on GHG and methane spans several decades, and includes published and peer reviewed work on national emission measurements and method analysis. His teams have also written many strategic documents for the industry, including the Methane Guiding Principles Best Practices, the protocol of the ONE Future group, the protocols for GTI Veritas, and the protocols for Cheniere's Quantification, Monitoring, Reporting, and Verification (QMRV) program. His experience includes executive level positions at several companies.

MEET OUR SPEAKERS



J.D. Holt

Principal Advisor, Responsible Energy Solutions (RES)

J.D. Holt is a Principal Advisor to Responsible Energy Solutions (RES), with over 35 years of diversified experience primarily in the energy sector. He is an approved auditor for both Independently

Certified Gas (ICG) under the MiQ Standard for Methane Emissions Performance and Responsible Energy Development under the Equitable Origin E0100TM Standard.

Over his career, Mr. Holt has collaborated on strategic energy solutions from front line to C-Suite. His field experience includes management of health and safety programs, air quality permitting and compliance, and environmental programs for upstream and midstream oil and gas assets. His corporate expertise includes management of environmental legacy liabilities; air and environmental programs; air compliance data integrations; corporate reporting of GHG, CSR, and global performance metrics; and service on technical boards for various research studies regarding methane, regulated air pollutants, and targeted equipment emission sources.

Prior to joining RES, Mr. Holt served as an air quality and HSE manager over multiple US operations and led corporate HSE teams for an S&P 100 energy company. His audit expertise stems from analytical chemistry and process engineering knowledge, combined with technical and managerial experience in upstream and midstream air quality processes and emissions accounting.

JD has a B.S. in Chemistry from Stephen F. Austin University and an MA in Human Dimensions of Organizations (HDO) from the University of Texas.



Matthew Johnson

Research Professor, Carleton University

Professor Matthew Johnson is a research professor at Carleton University, where he heads the Energy & Emissions Research Laboratory (EERL) focused on quantifying and mitigating pollutant emissions in the upstream energy sector. 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 results into practice. His

research contributions include large-scale aerial methane surveys and protocols for 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. Matt is also the Scientific Director of the NSERC FlareNet strategic network, a collaboration of five Canadian Universities and several partners to quantify and mitigate flaring in the oil and gas sector. Matt holds a Ph.D. from the University of Alberta, worked previously as a Postdoctoral Fellow at Lawrence Berkeley National Laboratory in California, and served the full 10-year term as a Canada Research Chair at Carleton University from May 2006 – May 2016.

Greg Jones

Director, Climate & Environmental Policy, Southern Company Gas



Shannon Katcher

Vice President of Digital Innovation, GTI Energy

Shannon Katcher is GTI Energy's Vice President of Digital Innovation. Shannon develops a strategic approach to digital transformation and directs research efforts, product and service

developments, and investment initiatives in the data services and analytics space related to energy systems. She holds deep knowledge of connecting the industry's operational experiences and needs with research programs.

Shannon graduated from the University of Illinois, Urbana-Champaign with a B.S. in Atmospheric Science and an M.S. in GIS & Remote Sensing. She is licensed as a GIS Professional (GISP) and a Project Management Professional (PMP).



Pam Lacey

Chief Regulatory Counsel, American Gas Association

Pam Lacey is the American Gas Association's chief regulatory counsel, with over 35 years of experience in energy and environmental law. She is staff executive for AGA's environmental

advocacy committee and has staffed Board-level task forces on climate, sustainability, and clean energy issues. She represents AGA in environmental matters at the White House, EPA, SEC, and other federal agencies, and has been actively involved in advocacy and research on methane measurement and reporting. She leads AGA's environmental, social, governance (ESG) initiatives. She is co-chair of the ASTM International E50.07 ESG Climate Disclosures Work Group.

Before joining AGA, Pam Lacey was a Partner in the Washington office of Coffield, Ungaretti & Harris. In private practice, she represented gas and electric utilities and manufacturers in a broad range of air, water, waste, and site remediation matters.

Ms. Lacey received her J.D. from George Washington University's National Law Center and an A.B. cum laude from Bryn Mawr College in Pennsylvania.



Maria Lozano

New Solutions Product Manager, Baker Hughes

As New Solutions Product Manager at Baker Hughes, Maria is responsible for developing and growing the suite of solutions to enable customers to identify and reduce their emissions across O&G

and non-traditional O&G sectors. She is also an internal advisor at Baker Hughes for Responsibly Sourced Gas "RSG" and Voluntary Industry Initiatives such as OGMP 2.0. Prior to being part of the Emissions Management team Maria joined Baker Hughes as part of the ASPIRE Sales & Commercial Leadership Program and has taken a variety of roles in Oilfield Services & Equipment in Business Development, Commercial and Marketing roles.

Prior to this, Maria started her environmental career in Mexico, where she participated in multiple projects across a variety of industries such as Energy in collaboration with PEMEX, Pulp & Paper, Textile, Mining and Fast-moving consumer goods while she worked at ABInBev where she applied scientific principles to reduce emissions and mitigate climate impact. She has a BSc Chemical and Environmental Engineering and completed an MSc Energy Engineering from The University of Sheffield in the UK. Maria has proudly been recognized at the National Environmental Award Ceremony by the Ministry of Environment and Ministry of Youth in Mexico due to her work in industrial projects to reduce pollution in air, water and soil.



Dr. Chris Moore

Program Manager, Zero Emissions Systems, GTI Energy

Dr. Chris Moore is currently a Program Manager in the Zero Emissions Systems group at GTI Energy. In his current role he leads efforts to evaluate new technologies and study methane

emissions from natural gas transmission, storage and distribution, and serves as the Principal Investigator for the GTI Energy Center for Methane Research, the technical segment lead for the Transmission and Storage segment in GTI Energy's Veritas Differentiated Gas Initiative, and the Environmental Aspects and Safety Technical Subcommittee in GTI Energy's Low Carbon Resources Initiative. Chris's research has been published in a wide variety of scientific journals including Nature and the Proceedings of the National Academies of Science. Dr. Moore holds a BS in Chemistry from WVU Tech, an MS in Environmental Science from the University of Virginia, and a PhD in Environmental Science from the University of Maryland.



Ed Newton

Gas Engineering Programs Manager, Southern California Gas Company

Ed has worked in the Natural Gas Industry for 38 years and with Southern California Gas for the last 20 years. He has held various positions at SoCalGas with increasing levels of responsibility

including Sr Polymer Engineer, Materials & Equipment Team Leader, Pipeline Integrity Manager, and Research Manager. In his current position as Gas Engineering Programs Manager Ed oversees 4 program teams: 1) Gas Operations RD&D Program; 2) Leakage Abatement RD&D program; 3) Aviation Services Department; and 4) Plastic Piping Systems.

Prior to joining SoCalGas Ed worked for a leading manufacturer of Natural Gas Distribution Pipeline Products in various roles with increasing levels of responsibility including Product Development manager and Director of Quality Assurance.

Ed has a degree in Industrial Engineering and has served in leadership positions for the AGA Piping Materials Committee, ASTM F17.60 Natural Gas Sub-Committee, and ASME B31.8 Distribution Sub-Group. He also is an FAA Certified Private Pilot.

In his free time Ed enjoys spending time with his family and three grandkids and volunteering for his church in youth ministry and helping those in extreme poverty. Ed also enjoys woodworking and a variety of outdoor activities.

MEET OUR SPEAKERS



Michael Ogletree

Division Director, Colorado Department of Public Health and Environment (CDPHE)

Michael Ogletree is the Division Director for the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE) where he is responsible for the

supervision of the APCD. Before becoming Division Director, Mr. Ogletree was the air quality program manager for the City and County of Denver, where he led Denver's overall efforts to improve air quality with a special focus on the disproportionate impacts of air pollution and poor air quality on communities of color. He also served as secretary of the Air Quality Control Commission (2020-2021) and chaired the Air Quality Enterprise Board (2021). Mr. Ogletree has also served as a chemist and laboratory manager in the private sector. Mr. Ogletree serves on the Regional Air Quality Council as the representative for APCD.



Lara Owens, PhD

Director, MiQ

Lara Owens, PhD, is Director of Science and Technology for MiQ, a not-for-profit organization looking to differentiate and certify all natural gas based on methane emission performance. Lara is based out of Boulder Colorado for RMI's Oil

and Gas Solutions Team, focused on emissions visibility and tracking greenhouse emissions throughout the global supply chain. Lara has over 15 years experience working in exploration, development and production, renewable energy integration, carbon sequestration, environmental compliance and process chemistry.



Daniel Palmer

Director of Deployment and Commercialization, OGCI Climate Investments

Daniel Palmer is director of deployment and commercialization at OGCI Climate Investments. In this role he works to scale and accelerate the adoption of new technologies to reduce GHG emissions in the oil and gas industry.

Daniel has worked for technology startups in solar energy, mining geoscience and previously spent more than 20 years at Schlumberger in various roles across the globe, working across operations, marketing and technical positions. He led the global marketing and technology function for Schlumberger Wireline and holds numerous patents and has widely published in oil and gas, solar and mining technology. Daniel holds a master's degree in engineering from the University of Cambridge.



Dr. Sara Place

Associate Professor of Feedlot Systems, AgNext Research Faculty, Department of Animal Sciences, Colorado State University

Dr. Sara Place is an expert in livestock systems sustainability with over a decade of experience in academia, industry

associations, and private industry. Most recently, Sara has been the Chief Sustainability Officer at Elanco Animal Health where she provided technical expertise on sustainability issues to customers and supported Elanco's Healthy Purpose. Prior to Elanco, she was the senior director for sustainable beef production research at the National Cattlemen's Beef Association and an assistant professor in sustainable beef cattle systems at Oklahoma State University. She received her PhD in Animal Biology from the University of California, Davis, and a BS in Animal Science from Cornell University. Sara is a native of upstate NY where she grew up on a dairy farm.



Tricia Pridemore

Commissioner, Georgia Public Service Commission

Tricia Pridemore joined the Georgia Public Service Commission in 2018. She was unanimously voted Chairman of the Commission by her peers in 2021.

Commissioner Pridemore is a businesswoman with a background in technology, consulting and workforce development. Since the acquisition of Accucast, the software company she founded with her husband, she served on the Georgia World Congress Center Board of Governors, the 2011 Transition team of Governor Deal and co-chaired both of Governor Nathan Deal's Inaugural Committees in 2011 and 2015 and she was a member of the Cobb Galleria

Authority Board of Governors. Pridemore is a member of the Rotary Club of Marietta, established in 1919.

Commissioner Pridemore earned a bachelor's degree from Kennesaw State University. She and her husband, Michael, reside in Marietta, Georgia.



Dr. Arvind Ravikumar

Director, Sustainable Energy Transition Lab in the Petroleum & Geosystems Engineering Dept., University of Texas, Austin

Dr. Arvind Ravikumar directs the sustainable energy transition lab in the Petroleum & Geosystems

Engineering department at The University of Texas at Austin. His interdisciplinary research examines technical and economic approaches to sustainably meet global energy demand while addressing its climate impacts. Specifically, Dr. Ravikumar's work focuses on the role of technology and innovation in reducing the carbon footprint of global oil and gas operations. He routinely advises and serves on the advisory boards of state and federal government agencies and companies to advance effective policy solutions to reducing emissions. Dr. Ravikumar is a non-resident fellow with the Payne Institute for Public Policy at the Colorado School of Mines and graduated with a Ph.D. in Electrical Engineering from Princeton University.



Tim Reinhardt

Director, Department of Energy (DOE)

Tim Reinhardt is currently at the Department of Energy (DOE) serving as the Director for the Division of Methane Mitigation Technologies in the Office of Resource Sustainability (ORS) within Fossil Energy and Carbon Management

(FECM). There he oversees programs related to methane mitigation and quantification, hydrogen and natural gas decarbonization and undocumented orphaned wells. Tim previously worked within DOE in the Geothermal Technologies Office (GTO) as the Program Manager for the Systems Analysis and Low-Temperature (SALT) Programs; and also served as the International lead.

Tim received his bachelor's degree from Northwestern University. He served in the United States Navy for nine years as an officer and Naval Aviator, and holds Master's Degrees from the University of Oklahoma and the University of Texas at Austin.



Vanessa T. Ryan

Manager, Methane Reduction, Chevron

Vanessa T. Ryan is Manager, Methane Reduction. Previously she served as Manager Carbon and Climate Policy responsible for enterprise policy positions, and Manager, Carbon

Reduction, responsible for supporting business unit carbon reduction initiatives, including methane strategy. She also serves as Chair of the Steering Committee of The Environmental Partnership, an industry group committed to continuously improving the industry's environmental performance. Previously, she was Senior Advisor for Shale Issues. She also served as Chevron Asia-Pacific Exploration and Production, responsible for providing advice to Chevron's Asia-Pacific business on government and public affairs issues. She has served as Coordinator for Policy, Government, and Public Affairs for Chevron Vietnam in Ho Chi Minh City. Ms. Ryan joined Chevron as a Public Policy Adviser at Chevron Corporation, where she was responsible for the corporate responsibility report and advised on environmental, social, and geopolitical issues. Prior to joining Chevron she worked in social marketing firm focused on health and environment issues. She holds a Masters of Public Policy from the University of Southern California and a B.A. in Political Economy from UC Berkeley.



Ned Shappley

Physical Scientist, Environmental Protection Agency (EPA)

Ned Shappley is a Physical Scientist in EPA's Measurement Technology Group in the Office of Air Quality Planning and Standards, located in Research Triangle Park, NC. Ned's primary role at the EPA is

in method development of point-source measurements of criteria pollutants, air toxics, and GHG, concentrating on the evaluation of next generation monitoring solutions. Ned serves on several of EPA's rule development teams, serving to integrate the appropriate measurements/methods into these standards for compliance purposes, including EPA's Oil and Gas Sector NSPS where he functions as one of the technical leads for the incorporation of alternative methane monitoring technologies into that rule. Ned has extensive experience in air quality policy and measurements, spending 15 years in the private world, providing air measurement and compliance support for the energy and chemical sectors before moving to the EPA in 2015.

MEET OUR SPEAKERS



Ron Snedic

Senior Vice President, Corporate Development, GTI Energy

As the Senior VP of Corporate Development at GTI Energy, Ron leads the effort to expand GTI Energy's customer base and increase revenues from technology-based product and

service offerings. Snedic is responsible for GTI Energy's M&A activities and serves as President of GTI International, a holding company for GTI Energy's for-profit entities including Frontier Energy and SunGas Renewables. Snedic also oversees GTI Energy's marketing communications team, the human resources department, and a wide range of education and training programs. He is the President of Operations Technology Development, NFP and Utilization Technology Development, NFP. Both companies focus on the development of new technology for the natural gas industry. Snedic joined GTI Energy as the Regional Manager of Customer Relations for the Southern Gas Association in April 1997. Prior to GTI Energy Ron held various positions at Nicor Gas Distribution and UtiliCorp United. Snedic earned a B.S. in marketing and an M.B.A. from Northern Illinois University, and has completed the Stanford Executive Program at Stanford University's Graduate School of Business.

Rob Tremberger

Section Manager of Leak Survey and Corrosion, Con Edison

Rob Tremberger has been at ConEd in New York for the last 11 years. He has held various positions within the company including Emergency Supervisor, Quality Control Manger and Compliance

Manager. He currently serves as the Section Manager of Leak Survey and Corrosion where he focuses on finding areas of leak prone pipe and locating all leaks within Con Edison's Gas territory to ensure they can be safely repaired. Rob received a bachelor's degree in Accounting from the Fordham Gabelli School of Business and a Master of Law Degree from Fordham Law School. He also holds Project Management Professional (PMP) certification.



Sam Wade

Director of Public Policy, Coalition for Renewable Natural Gas

Sam Wade serves as the Director of Public Policy at the Coalition for Renewable Natural Gas. Previously Mr. Wade worked as Chief of the Transportation Fuels Branch at the

Californian Air Resources Board, where he oversaw the Low Carbon Fuel Standard Program for four years.

In other roles at CARB, Mr. Wade served as Deputy Director of Legislative Affairs, developed the Cap-and-Trade rule, and authored portions of California's first Greenhouse Gas Scoping Plan. He's also worked in energy policy at Pacific Gas and Electric and with a bioenergy/biochar start-up.

Sam holds a B.S. in Mechanical Engineering from U.C. Davis, a M.S. in Mechanical Engineering from the University of Hawaii, and an M.P.A in Environmental Science and Policy from Columbia University.



Dr. Zachary Weller

Statistical Data Scientist, Pacific Northwest National Lab

Dr. Zachary Weller is a statistical data scientist at Pacific Northwest National Lab where he applies his statistical expertise to solve applied problems in energy, environmental, and national

security domains. Dr. Weller holds a PhD in statistics from Colorado State University and has several years of experience studying methane emissions from natural gas distribution. Dr. Weller's work includes creating data processing algorithms, studying patterns of urban natural gas leaks, developing bottom-up inventory estimates, and studying environmental justice aspects of distribution infrastructure.



Dr. Bryan Willson

Executive Director, Energy Institute, Colorado State University

Dr. Bryan Willson is Executive Director of the Energy Institute at Colorado State University, where he also occupies the Bryan Willson Presidential Chair

in Energy Innovation and serves as a Professor of Mechanical Engineering. CSU's Energy Institute comprises over 200 faculty members working in energy and works closely with the Colorado energy startup community to help grow clean energy companies. The Energy Institute is headquartered at CSU's Powerhouse Energy Campus, a 100,000 sq ft research facility that also houses over 15 early stage energy companies; it's work on cleantech commercialization has been honored by the Economist, Scientific American, the Smithsonian Institution, university technology transfer associations, and the governments of Denmark, Spain, and China. Dr. Willson served as a Program Director at ARPA-E (Advanced Research Projects Agency – Energy, from 2012-2016 and continued as a consultant / advisor to the agency until early 2019. He has worked for over 30 years to develop and deploy large-scale technology solutions related to energy, air quality, and human health. As an entrepreneur, Dr. Willson is co-founder of Envirofit International, Solix BioSystems, Factor(e) Ventures and Xpower. His research laboratory, the Engines & Energy Conversion Laboratory, has made important contributions in many areas, including: internal combustion engines, advanced vehicles, oil & gas production technology, advanced electrical grids, advanced biofuels, energy access for the developing world, and advanced building technologies. Dr. Willson is a Fellow of the Society of Automotive Engineers and has worked in over 40 countries.



Joe von Fischer

Professor, Department of Biology, Colorado State University

Joe von Fischer is a professor in the Department of Biology who studies how the function of ecosystems is structured by the interactions among humans, plants, the soil and soil microbes, with

particular focus on how these factors influence the emissions of greenhouse gases like methane. Joe's research seeks to characterize the physical and biological diversity of systems that give rise to micro-sites with exceptional influence on overall system function. Joe's lab maintains two primary research areas. One is the study of how biological diversity among the bacteria that consume methane within soils leads to spatial and temporal patterns in soil methane fluxes. The other is in collaboration with the Environmental Defense Fund to use Google Streetview Cars to measure the leakage rate of natural gas from urban distribution systems around the country.



Hon Xing Wong

Senior Analyst, GTI Energy

Hon Xing Wong is a Senior Analyst at GTI Energy in the Zero Emissions Systems team and Deputy Director of Veritas GTI Energy's Methane Emissions Measurement and Verification Initiative.

He was previously a researcher at Columbia University's Center on Global Energy Policy where he supported the Natural Gas Research Initiative and researched climate and energy transition risks, and electrification of the transportation sector. He also consulted for New York City's Metropolitan Transportation Authority (MTA) on electric bus projects. Previously, he was a chartered chemical engineer at BP and held various engineering and site-operations roles Angola, Egypt, and the North Sea, UK. He holds a Master of Public Administration from Columbia University's School of International and Public Affairs and a Master of Engineering in chemical and environmental engineering from Nottingham University.



Dan Zimmerle

Director, Methane Emissions Program – METEC, Remote and Distributed Energy Center (RADEC), Energy Institute, Colorado State University

Daniel Zimmerle is a Senior Research Associate in the Energy Institute at Colorado State University (CSU).

Zimmerle was a principal investigator on three major studies of methane emissions in the natural gas supply chain, and for METEC, the ARPA-E MONITOR test facility at CSU. Additionally, Zimmerle also has major research programs looking at microgrids for remote communities and the integration of distributed generation into power systems. Zimmerle also leads research programs for remote community microgrids and the integration of distributed generation into power systems. Additionally, Zimmerle has been (or is) PI on four major studies of methane emissions in the natural gas supply chain, and leads the CSU METEC test facility for the ARPA-E MONITOR program. Prior to CSU, he served as the Chief Operating Officer at Spirae, Inc. and worked 20 years at Hewlett Packard and Agilent Technologies including experience as both a division general manager and R&D manager. He has lead organizations in several business areas, including computer systems, test systems, and consumer products. Organizations included personnel in the US, Ireland, Singapore and other countries. He holds a BSME and MSME from North Dakota State University.



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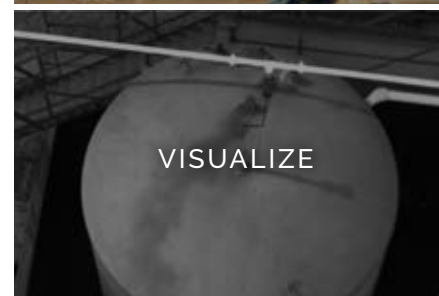


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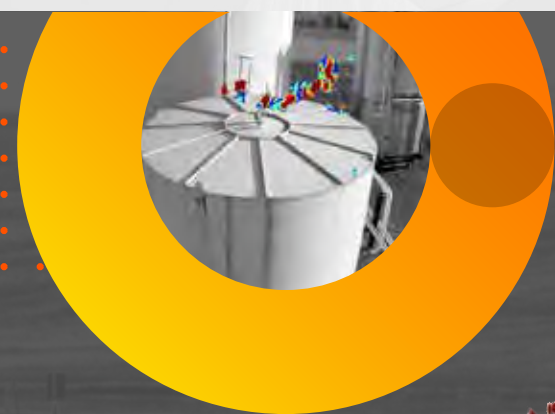
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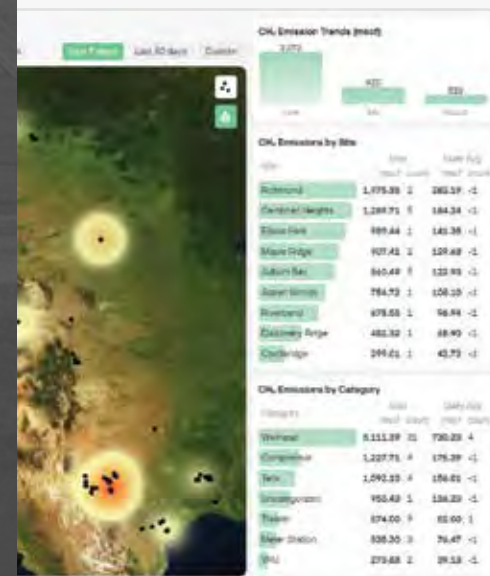
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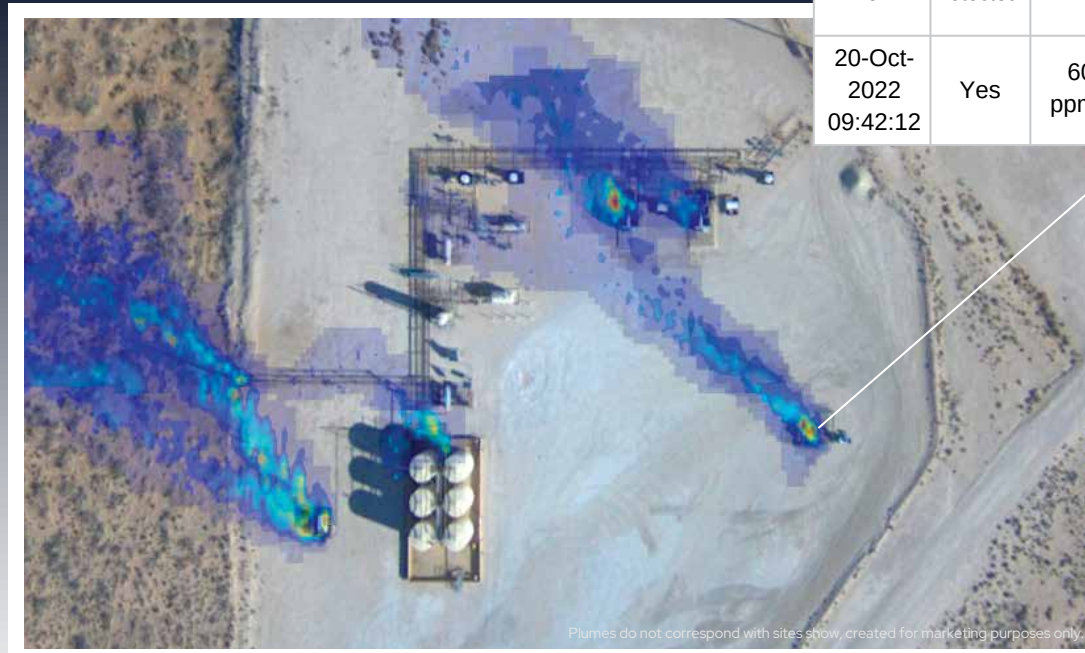
Methane (CH₄)
230 px - 16.88 m² - 7.31 g
GPS: 46.8054, -71.3327

Datacube ID: 165126918
Measurement Time (UTC): 2022-04-29 1:53:09.296
Image Size: 192 x 192 px, 52.02 x 52.02 m
GPS: 46.8054, -71.3327
AGL: 358.34 m
Bearing: -23.67°
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Date / Time	Gas Detected	Max Conc.	Emission Rate	Lat/Long	Emitter Height
20-Oct-2022 09:42:12	Yes	604 ppm-m	295 scfh 5.69 kg/hr	45.6556974, -111.0485611	2 meters



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FOR MORE INFORMATION, CONTACT:



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