

International Pipeline Conference & Expo

Innovations in Energy Pipelines: Fueling the Future

Conference: September 23–27, 2024

BMO Centre at Stampede Park Calgary, AB, Canada





Schedule

Schedule	Activities	Room
	Tuesday 24 September	
10:30am – 12:00pm	Emerging Fuels – Presentation Session	210/211
1:30pm – 3:00pm	International Practices for adopting innovation into standards – Panel Session	238
3:30pm – 5:30pm	Climate Change – Special Session	238
	Wednesday 25 September	14 1 T
1:30pm – 3:00pm	U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO2 Pipeline Infrastructure	214/215
3:30pm – 5:00pm	Executive Leadership Panel	214/215
	Thursday 26 September	1 al
11:30am – 12:00pm	Emerging Fuels Research	216
1:30pm – 3:00pm	Dent Panel Discussion - Industry insights on the implementation of API RP 1183	214/215
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5:30pm – 7:00pm	Women's Networking Event	221



The American Society of Mechanical Engineers ASME®



Emerging Fuels Presentation Session Tuesday Sep 24th 10:30am – 12:00pm

Room 210/211

Panel Description:

A three-part panel that delves into three different aspects of the future of the energy industry. From hydrogen in standards to hydrogen in pipelines to small modular nuclear reactors, this panel has it all!





Presenters:

- <u>Keith Leewis, PEng, President & Chief</u> <u>Engineer, Leewis & Associates Inc.</u>
- <u>Simon Slater, Principal Integrity Engineer,</u> <u>Rosen</u>
- Dr. Frank Cheng, Professor/ Canada Research Chair in Pipeline Engineering, University of Calgary, Alberta, Canada
- Jag Singh, PEng CEng MIChemE, Regional Sector Lead, Stantec



International Practices for adopting innovation into standards Panel Session Tuesday Sep 24th 1:30pm – 3:00pm Room 238

Panel Description:

Innovation and Technology Advancements are accelerating to support the safe and reliable transportation and delivery of sustainable energy globally. To operationalize these innovations efficient processes that incorporate them into industry standards and regulations are necessary. The purpose of this panel is to discuss international best practices in efficiently incorporating new technologies into standards and regulations. Regulators, Standards Development Organizations and operators from around the world will share industry leading technology transfer experiences.

Moderator:

<u>Cliff Johnson, President, PRCI</u>

Panelists:

- <u>Mervah Khan, Program Manager, Petroleum and</u> <u>Natural Gas, CSA Group</u>
- Patty Fusaro, Senior Manager, Midstream Standards, American Petroleum Institute
- <u>Richard Espiner, Pipeline Integrity Consultant, Espiner</u> Consulting
- <u>Massoud Tahamtani, Deputy Associate Administrator,</u> <u>PHMSA</u>
- Jonathan Timlin, Vice President, System Operations, Canada Energy Regulator



Return Climate Change Special Session Tuesday Sep 24th 3:30pm – 5:30pm

Room 238

Panel Description:

A four-part panel that delves into the impacts of climate change from a pipelines geohazards management perspective including special guests from the Pacific Climate Impacts Consortium at the University of Victoria, Canada and the Director National Centers for Environmental Information from the US National Oceanic and Atmospheric Administration (NOAA).

Plus, the Best Paper award winner from the 2023 Rio Pipeline Conference will be here to present their award-winning paper!

Moderator:

• Moness Rizkalla, Via+, Calgary

Presenters:

- Dr. Rod Read (RSRead Consulting, Okotoks)
- Mr. Jaime Aristizabal (CENIT, Bogota, Colombia)
- Dr. Charles Curry (Pacific Climate Impacts Consortium, University of Victoria, Canada)
- Dr. David Easterling (NOAA, Asheville, North Carolina) Chief Assessments Section and Director National Centers for Environmental Information

<u>Return</u>

U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO₂ Pipeline Infrastructure Wednesday Sep 25th 1:30pm – 3:00pm

Panel Description:

Investing in carbon management solutions and infrastructure will have a critical role in helping the United States achieve a carbon pollution-free electricity sector by 2035 and net-zero emissions economywide by 2050. This special session panel will outline how the U.S. Department of Energy's Office of Fossil Energy and Carbon Management is utilizing its resources to support the carbon dioxide pipeline industry, while also addressing challenges associated with building out infrastructure at scale. These efforts will help the nation advance toward a clean energy and industrial economy.

Moderator:



Amanda Raddatz, Division Director Carbon Transport and Storage, U.S. Department of Energy

Presenters:

- Kevin Dooley, Carbon Transport Engineer, U.S.
 Department of Energy
- <u>Robert Smith, Carbon Transport Program Manager,</u> <u>U.S. Department of Energy</u>
- Kelly Rose, Senior Fellow, Computational Science & Engineering ,U.S. Department of Energy

Room 214/215



Executive Leadership Panel Wednesday Sep 25th 3:30pm – 5:00pm

Panel Description:

Room 214/215

Moderator:

 Jan Frowijn, Chief Operating Officer (COO), ROSEN Group for North & Central America

Panelists:

- Joe Zhou, TC Energy
- Steve Elliott, Enbridge
- Tracy Sletto, CER
- Tristan Brown, PHMSA
- Abdullah M. Al-Ajmi, Saudi Aramco

Emerging Fuels Research Wednesday Sep 25th 11:30am – 12:00pm

Room 216

Panel Description:

A thirty-minute mini-session that will include a presentation overview of the current state of emerging fuels research in industry.

Presenter:

<u>Cliff Johnson, President, PRCI</u>



Dent Panel Discussion - Industry insights on the implementation of API RP 1183 Thursday Sep 26th 1:30pm – 3:00pm R

Room 214/215

Panel Description:

As the development of the second edition of API PR 1183 is underway, this panel discussion seeks to gather valuable insights and practical experiences from the application of the 1st edition, published in 2020. Panelists will share learnings, highlight key areas for improvement, and discuss the successes and challenges encountered by operators and consultants during the implementation of the first edition. The objective is to gather constructive feedback that will contribute to refining the second edition, ensuring it more effectively addresses the evolving needs of the industry.



Moderator:

 Joe Bratton, Principal Engineer, DNV, API RP 1183 Cochair

Panelists:

- Jake Haase, Director, Asset Integrity, Colonial Pipeline Company, API RP 1183 Co-chair
- Brian Leis, Principal, B N Leis, Consultant, Inc, USA
- <u>Aaron Dinovitzer, President, ADIM Consulting Ltd, Canada</u>
- Shanshan Wu, Principal Engineer, DNV
- Rick Wang, Pipeline Integrity Engineer, TC Energy, Canada
- Huang Tang, Integrity Risk Assessment Specialist, Enbridge GTM, USA



Leading in the Technical Space Thursday Sep 26th 3:30pm – 5:00pm

Panel Description:

To inspire attendees who are focused on the progression of their technical abilities and to present a clear pathway to technical leadership.

Host:

 Claudia Soriano Vazquez, Engineering Specialist, Enbridge GTM

Moderator:

Kevin Tsang, Engineering Supervisor, Enbridge GTM

Room 238

Panelists:

- Eunice Yin, Director GTM Engineering Data and Systems Strategy, Enbridge GTM
- <u>Shahani Kariyawasam, Executive Director, Knowledge</u> <u>Transfer, PRCI</u>
- Chioma Izugbokwe, Acting Vice President of Energy Adjudication, Canada Energy Regulator



Women's Networking Event Thursday Sep 26th 5:30pm – 7:00pm

Event Description:

Host:

 Jasmen Atwal, Supervisor TIS Demand Management, TIS Infrastructure Operations, Enbridge/FEMINEN

Room 221



The American Society of Mechanical Engineers ® *ASME* [®]



Panelists Bios



Dr. Keith Leewis

PEng., President and Chief Engineer, Leewis & Associates Inc.

Emerging Fuels Tuesday Sep 24th 10:30 – 12:00p

Bio: Dr. Keith Leewis PEng. brings over forty years of extensive and comprehensive experience in pipeline safety: in engineering, design, materials, operations, welding, inspections, risk, integrity, and safety management, to the energy industry. Dr. Leewis provides technical assessments that assist clients in achieving comprehensive and timely regulatory approvals. As an active ASME committee executive member, he improves the international standards for the design and integrity management of energy pipelines, including those API & NACE standards related to integrity assessment. In prior years, Dr. Leewis was a tenured professor - TUNS, Director of Technology -Welding Institute of Canada, Project R&D Manager - PRCI, GTI & GRI, Senior Engineer - TCPL, and an R&D engineer – DOFASCO. He is currently semi-retired.



Deline

Simon Slater

Principal Integrity Engineer, Rosen, Columbus, Ohio, USA

Emerging Fuels Tuesday Sep 24th 10:30 – 12:00p



Simon Slater is a Principal Integrity Engineer working for ROSEN Integrity Services, based in Columbus, Ohio. He has been working for ROSEN Integrity Services for 13 years. His areas of expertise are structural Integrity assessment, metallurgy, material properties and testing, welding engineering, and In-line Inspection. Prior to joining ROSEN, he worked in the steel industry for 12 years, involved with pipe manufacturing and research and development. Simon is an active member of PRCI, serving on the research steering committee, and also a member of ASME B31.8 and is the deputy chair for the ASME B31.8 hydroegn task group.



Dr. Frank Cheng

Professor, Canada Research Chair in Pipeline Engineering, University of Calgary, Alberta, Canada

Emerging Fuels Tuesday Sep 24th 10:30 – 12:00p



Dr. Frank Cheng is a Professor and Canada Research Chair in Pipeline Engineering at the University of Calgary. He serves as the Director of the Strength Area in Advanced Materials & Manufacturing. Frank is a world-renowned leader in energy pipeline research, with specializations in corrosion, stress corrosion cracking, hydrogen embrittlement and defect assessment technology. He has authored four influential books, including Stress Corrosion Cracking of Pipelines (Wiley, 2013), Pipeline Coatings (NACE, 2017), AC Corrosion of Pipelines (AMPP, 2021), and Defect Assessment for Integrity Management of Pipelines (Wiley, 2024). Frank was named the Canadian Distinguished Materials Scientists in 2019. He has also received numerous awards from international associations and leading agencies in recognition of his contributions to the fields of corrosion science and pipeline engineering. Frank was elected as a Fellow of the Royal Society of Canada (RSC) in 2023 and the Canadian Academy of Engineering (CAE) in 2024. He is also a Fellow of NACE, ICorr, CSCP, IMMM, and IAAM. Frank serves as the Editor-in-Chief of the Journal of Pipeline Science and Engineering. He obtained his Ph.D. in Materials Engineering from the University of Alberta in 2000.



Future

Jag Singh

Regional Sector Lead - Clean Generation, Stantec, Calgary, Alberta, Canada

Emerging Fuels Tuesday Sep 24th 10:30 – 12:00p



With extensive global experience in the nuclear energy, renewable, and oil and gas sectors, Jag provides industry leading solutions that result in a secure, sustainable, and clean energy future. His passion for solving complex challenges is evident in his approach to high quality project delivery and strategic advisory services. As a team leader, he establishes highly skilled teams that provide both client satisfaction and growth in a rapidly changing market.

Drawing from his chemical engineering background, Jag specializes in nuclear energy and small modular reactors (SMR)—he was the technical director for first-of-a-kind, grassroots SMR molten salt facility. He has excellent engineering, project, commercial, and leadership skills in the fields of new nuclear build, plant lifetime extension and nuclear decommissioning and waste management. If you're looking to transition to a high output, stable energy source, give Jag a call!

What energizes Jag outside of his work with clean energy? He enjoys playing the guitar, archery, and trying to maintain his mixed martial arts skills.



Future

Cliff Johnson, CAE

President PRCI

International Practices for adopting innovation into standards Tuesday Sep 24th 1:30pm – 3:00pm





Cliff Johnson, CAE joined Pipeline Research Council International (PRCI) as President in September 2010. He previously served as Director of Public Affairs at NACE International. Mr. Johnson's legislative career includes positions with Texas State Senator Gregory Luna, US Congresswoman Connie Morella, US Senator Kay Bailey Hutchison, and the Governor of Texas Ann Richards. Under Mr. Johnson's leadership, PRCI's membership has grown to over 75 members across the globe. In 2015, he led the creation of the Technology Development Center– a state-of-the-art pipeline research facility in Houston. In 2019, he developed the Strategic Research Priority (SRP) to enable PRCI members to drive the execution of strategic research efforts. In 2021, he launched the Emerging Fuels Institute, a consortium of industry members driving research to enable the energy transition.

Mr. Johnson earned his Master of Public Affairs from the Lyndon Baines Johnson School of Public Affairs at the University of Texas at Austin, and a Bachelor of Arts in Political Science from Austin College in Sherman, Texas. He has obtained his Certified Association Executive (CAE) designation and is active in the American Society of Association Executives. He resides in Northern Virginia with his wife, Courtney, and five children (Emma, Oleg, Vivian, Lena, and Hana).



Mervah Khan

Program Manager, Petroleum and Natural Gas, CSA Group

International Practices for adopting innovation into standards Tuesday Sep 24th 1:30pm – 3:00pm



Mervah is currently Program Manager of the Petroleum and Natural Gas program at CSA Group. In this role, she is responsible for providing strategic and execution leadership in the development of standards-based solutions for the oil and gas sector. Prior to this Mervah was Manager, Strategic Initiatives -Power Generation / Petroleum and Natural Gas. In this role, Mervah led strategic initiatives related to hydrogen production, storage, and delivery; small modular reactors; and various innovation topics.

Mervah Khan graduated from Carleton University in Ottawa with a Master's and a Bachelor's degree in Electrical Engineering.



Patty Fusaro

Senior Manager, Midstream Standards, American Pipeline Institute

International Practices for adopting innovation into standards Tuesday Sep 24th 1:30pm – 3:00pm

Patty manages the portfolio of over 200 standards in measurement, pipeline, security, and transportation for the American Petroleum Institute (API). Previously Patty worked as Manager of Standards Development at ASIS, a standards development organization for security professionals and served as the ISO TC 204 Intelligent Transport Systems Secretary for over 6 years.

With over 14 years of experience in standards development, Patty has worked with the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO) on various projects. Patty is currently a member of ANSI's ISO Council (AIC) and the ANSI ISO Forum (AIF) and serves as program manager for the Unted States Technical Advisory Group (USTAG) to ISO TC 193 - Natural Gas and Iso TC 28/SC 2 and SC 5 – Measurement of Petroleum and related products.

Patty manages joint initiatives with other industry or standards developing organizations and provides procedural and organizational guidance and assistance to committees to effectively manage groups that are active in maintaining and developing industry standards. Patty identifies opportunities, creates and manages programs that provide advocacy value to the industry.

She ensures that high-value standards receive the appropriate resource priority, as well as collaborating in developing strategies for APIs in the measurement and pipeline sector. Patty has a bachelor's degree on International and relations and holds a Master's degree in International Commerce and Policy from George Mason University.



Richard Espiner

CEng, Chair UK National Standards Committee, Espiner Consulting

International Practices for adopting innovation into standards Tuesday Sep 24th 1:30pm – 3:00pm

Richard is the chair of the UK national standards committee (PSE/17/2 Transmission Pipelines) responsible for the PD 8010 series of standards and for UK input to international pipeline standards via ISO/TC 67/SC 2. He has extensive experience in the development of company, national and international standards for pipelines, including membership of BSI, CEN and ISO committees.

He spent 25 years in senior pipeline engineering roles in British Gas and BP, working on many aspects of integrity management including defect assessment, structural reliability analysis, integrity management plan development and in-line inspection (ILI), and is now an independent consultant in pipeline integrity.

Richard holds a Master's degree (MEng) in Engineering Science from the University of Oxford. He is a UK Chartered Engineer (CEng) and Member of the Institution of Mechanical Engineers (MIMechE).



Massoud Tahamtani

Deputy Associate Administrator, Policy and Programs, OPS, PHMSA

International Practices for adopting innovation into standards Tuesday Sep 24th 1:30pm – 3:00pm





As the Deputy Associate Administrator for Policy and Programs with the US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), Mr. Tahamtani supports PHMSA's mission of protecting people and the environment by developing and implementing regulatory policy initiatives governing the safe operation of the nation's hazardous liquid and natural gas pipeline systems. He advises the PHMSA Administrator and the Associate Administrator for Pipeline Safety on all policy and program matters. He directs education and outreach efforts to promote safety initiatives by all stakeholders to enhance pipeline safety. He guides PHMSA's pipeline safety research and development program with a focus on solutions to help enhance the safety and reliability of our pipeline systems. He provides support to the state pipeline safety programs to ensure effective oversight of intrastate pipeline systems and oversees the development and delivery of technical training programs for federal and state compliance staff.

Before joining PHMSA, Mr. Tahamtani served the Commonwealth of Virginia for over 38 years. As the Director of the Division of Utility and Railroad Safety with the Virginia State Corporation Commission, he administered programs overseeing the safe operation of thousands of miles of underground utility lines, railroad track and equipment throughout Virginia. He actively promoted underground utility damage prevention, pipeline safety and railroad safety on the national stage by testifying before Congress and the National Transportation Safety Board, fostering strategic partnerships with industry and government groups, and served on numerous national task forces and committees including the American Petroleum Institute's Committee on Pipeline Safety Management Systems. Mr. Tahamtani has served on the Common Ground Alliance (CGA) Board of Directors, representing the states. He has received numerous awards for his distinguished public service including the CGA's Jim Barron Award for his dedication and commitment to reduce excavation damage to underground facilities. He was appointed by the Secretary of Transportation to serve on PHMSA's Liquid Pipeline Advisory Committee for multiple terms. He is the past Chairman of the National Association of Pipeline Safety Representatives (NAPSR) and received and the NAPSR Lifetime Leadership award in 2013 and again in 2017.



Amanda Raddatz

Division Director Carbon Transport and Storage, U.S. Department of Energy

U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO₂ Pipeline Infrastructure Wednesday Sep 25th 1:30pm – 3:00pm



Amanda Raddatz is the Director of the Carbon Transport and Storage Division for the Department of Energy Office of Fossil Energy and Carbon Management. Her experience is in geologic exploration and carbon management, and she has contributed to the development of Carbon Capture, Utilization and Storage (CCUS) projects across the globe. Amanda has provided subject matter expertise for the full value chain of CCUS projects, including Class VI permitting, policy guidance, and risk assessments for integrated transport and storage projects. She has a Master of Science in Geology from the University of Illinois, Urbana-Champaign.



Kevin Dooley

Carbon Transport Engineer, U.S. Department of Energy U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO₂ Pipeline Infrastructure Wednesday Sep 25th 1:30pm – 3:00pm



Kevin is currently a Carbon Transport Program Manager, working with teams administering \$2.2 Billion of Bipartisan Infrastructure Law appropriations for carbon transport infrastructure loans, grants, and Front-End Engineering Design (FEED) and Pre-FEED studies at the Department of Energy's Office of Fossil Energy and Carbon Management. He graduated from the University of Texas at Austin in 2013 with a BS in Chemical Engineering. Kevin has over 10 years industry experience ranging from downstream refining, upstream major capital project development, midstream pipeline design and integrity management, and marine scheduling in support of international crude trading.



Robert Smith

Carbon Transport Program Manager, U.S. Department of Energy U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO₂ Pipeline Infrastructure Wednesday Sep 25th 1:30pm – 3:00pm



Robert is currently a Carbon Transport Program Manager, working with teams administering \$2.2 Billion of Bipartisan Infrastructure Law appropriations for carbon transport infrastructure loans, grants, and Front-End Engineering Design studies at the Department of Energy's Office of Fossil Energy and Carbon Management. He graduated from the Pennsylvania State University in 1997 with a BS in Petroleum and Natural Gas Engineering. He managed offshore pipeline and human factors research for 6 years at the Bureau of Safety and Environmental Enforcement (formerly U.S. Minerals Management Service). He was also the Senior R&D Program Manager and led several other strategic initiatives for the Pipeline and Hazardous Materials Safety Administration for nearly 20 years.



Kelly Rose

Senior Fellow, Computational Science & Engineering ,U.S. Department of Energy

U.S. Department of Energy presents Tools for Removing Challenges & Investing in CO₂ Pipeline Infrastructure Wednesday Sep 25th 1:30pm – 3:00pm



Kelly Rose, PhD, is a senior research scientist and group leader with over 20 years of service and research experience at the U.S. Department of Energy's National Energy Technology Laboratory (NETL). She NETL's Senior Fellow for Computational Science & Engineering. Her research focuses on developing novel science-based, data-driven methods and advanced computing solutions for addressing energy and environmental challenges. Rose also serves as the 1st Technical Director of of NETL's Science-based Ai/MI Institute (SAMI), a cross-disciplinary research institute focused on accelerating and enabling explainable and trustworthy, science-based artificial intelligence research. Her research has been applied to many scientific and societal domains including Earth science, geoinformatics, research data management and virtualization, climate and metocean, oil spill prevention, mineral and groundwater resources, geohazards, social and environmental justice, materials innovation, and energy infrastructure resiliency. She is coauthor on more than 100 public datasets, models, tools, journal publications, and technical studies. Rose has also mentored more than 50 STEM research interns and fellows.



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Jake Haase

Director, Asset Integrity, Colonial Pipeline

Dent Panel Discussion - Industry insights on the implementation of API RP 1183 Thursday Sep 26th 1:30pm – 3:00pm

Jake has been active in the Pipeline industry for over 25 years, having worked for Colonial Pipeline and Enterprise Products, primarily in the areas of Pipeline and Asset Integrity. Over the years, he has been heavily involved in revisions to API RP 1160, RP 1176 and most recently RP 1183. He graduated from the Georgia Institute of Technology with Bachelor's and Master's degrees in Materials Science and Engineering.



Aaron Dinovitzer

President, ADIM Consulting Ltd, Canada

Dent Panel Discussion - Industry insights on the implementation of API RP 1183 Thursday Sep 26th 1:30pm – 3:00pm

Aaron Dinovitzer holds a MASc in Civil (Structural) Engineering from the University of Waterloo and an MBA from Queen's School of Business. Aaron is a Professional Engineer in the Provinces of Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. Aaron has worked since 1992, providing research and engineering services for pipeline systems including contributions to the development of mechanical damage assessment techniques. He regularly contributes to technical associations (e.g., CSA, API, PRCI); conferences and workshops (e.g., International Pipeline Conference, CanWeld); and the engineering community (e.g., Carleton University, Mechanical Engineering Industrial Advisory Board).



Dr. Shahani Kariyawasam

Executive Director, Knowledge Transfer, PRCI

Leading in the Technical Space Thursday Sep 26th 3:30pm – 5:00pm





Shahani has led innovative engineering projects on all continents (except Antarctica) collaborating with international operators, vendors, regulators, standards committees, and industry organizations. She graduated from University of Alberta with a Ph.D. focused on risk and reliability.

She has worked with PRCI, TC Energy, GE Oil & Gas, C-FER Technologies, and Universities. She has published over 60 papers and is the inventor of several patents. She is a recipient of the APEGA gold medal, TC Energy CEO Safety Awards, CEPA quality Award and the Global Pipeline Award for the innovations she has led. Presently with PRCI, she is the Executive Director of Knowledge Transfer.

