Objective: To bring industry, academics, government and non-government entities, and other interested stakeholders together to: discuss the current understanding of methane emissions across the natural gas supply chain; share ideas to increase knowledge and inform policies; and foster stakeholder interaction on current research and promote dialogue for next steps for reducing methane emissions in the natural gas system.

Monday June 6, 2016
8:15-9:10am Opening Session
   Agency Priorities (Richard Corey, ARB; Karen Douglas, Commissioner, CEC; Tim Sullivan, CPUC)
   Symposium Overview (Kathleen Kozawa, ARB)
9:10-10:10am Session 1. Research Initiatives and Needs
   Moderator-Kathleen Kozawa, ARB)
       Methane Research Initiatives and Needs (Jorn Hener, ARB)
       Investigating Methane Emissions from California’s Natural Gas System (Yu Hou, CEC)
       U.S. Federal Strategies to Cut Methane Emissions from Natural Gas Systems (James Bradbury, DOE)
       Stanford Natural Gas Initiative (Adam Brandt, Stanford)
10:10-10:20am Break
10:20-12:00pm Session 2. Methane Emissions and Measurements (AM)
   Moderator-Laurie ten Hope (CEC)
       California Methane Inventory-Needs and Gaps (Anny Huang, ARB)
       EDF Studies Overview (Ramon Alvarez, EDF)
       Methane Emissions from Natural Gas Distribution Pipelines in California (Kristine Wiley, GTI)
       Distribution systems, pipeline replacement, and abandoned wells (Robert Jackson, Stanford)
12:00-1:15 Lunch (lunch will not be provided)
Joint Symposium and IEPR Workshop
Methane Emissions from California’s Natural Gas System: Challenges and Solutions
June 6-7, 2016
Cal EPA Byron Sher Auditorium

1:15-2:55pm Session 2. Methane Emissions and Measurements (PM)
Moderator-Bart Croes (ARB)

Improvement of an Airborne Natural Gas Leak-Detection System for Transmission Pipelines (Steve Conley, UCD)
From Wells to Burners: Methane Emissions from California Natural Gas (Marc Fischer, LBNL)
Methane Hot Spots in California (Chip Miller, JPL)
Aerial mass balance studies throughout the US and implications for policy (Colm Sweeny, NOAA)

2:55-3:05pm Break

3:05-4:45pm Session 3. Current and Emerging Technologies-Methane Measurements
Moderator-Tim O’Connor, EDF

From Mobile to Stationary: Current and Emerging Technologies in Methane Measurements (Tim O’Connor, EDF)
Advanced Research Projects Agency-Energy (ARPA-E) MONITOR Projects (Methane Observation Networks with Innovative Technology to Obtain Reductions) (Nate Gorence, DOE)
sUAS (small unmanned aerial system) and application for methane measurement (Lance Christensen, JPL)
Assessing Emissions from the Natural Gas Distribution System Using Mobile Methane Techniques (Chris Rella, Picarro)

4:45 Day 1 Wrap Up

Public Comment Period-CEC IEPR WORKSHOP ONLY

End Day 1
Tuesday June 7, 2016
9:00-11:00pm Session 4. Big Gas, Big Data, and Methane: Building a Monitoring, Verification and Performance Management System to Meet Climate Goals
Moderator-Martin Kurtovich, CPUC
The Interaction of Methane Emissions Data and Mitigation, and an Investor’s Perspective on Risk (Tim O’Connor)
Perspectives and Successes in Mitigating Methane Emissions from Energy Pipeline (Robert Smith, PHMSA)
NETLs Natural Gas Midstream Research Program (Cynthia Powell-National Energy Technology Lab)
Converting Challenges into Opportunities: Software for Distributed Methane Abatement (Keith Driver, CapOp Energy) (San Gunawardana, Enview)

All Day Showcase (2nd floor lobby and courtyard)
- ABB
- Aeris Technologies
- ARB Research Division (GHG Mobile Platform)
- ARB Monitoring and Laboratory Division
- Heath Consultants
- FLIR
- LDAR Tools
- NASA Jet Propulsion Laboratory
- Picarro
- Pipeline Research Council International
- Pixel Velocity
- Physical Sciences
- Providence Photonics
- Thermo Fisher Scientific

11:00-12:30pm Showcase and Lunch (lunch will not be provided)
Joint Symposium and IEPR Workshop
Methane Emissions from California’s Natural Gas System:
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12:30-4:30 Session 5. Policy Panel(s) Current and Emerging Policies: Reducing Emissions of Natural Gas Used by Californians
12:30-2:00pm Regulatory Panel
   Moderator-Saul Gomez, California Natural Resources Agency
   Trina Martynowicz, Clean Energy and Climate Change Office, U.S. EPA Region 9
   Arthur O’Donnell, Supervisor, Risk Assessment, Office of Utility Safety and Reliability, Safety and Enforcement Division, CPUC
   Elizabeth Scheehle, Chief, Oil and Gas and GHG Mitigation Branch, ARB
   Laurie ten Hope, Deputy Director, ERDD, Energy Commission
   Additional Panelist Pending
2:00-2:10pm Break
2:10-3:40 Stakeholders Panel
   Moderator-Arthur O’Donnell, CPUC
   Christine Cowsert, Senior Director of Asset Knowledge and Integrity Management, Pacific Gas and Electric
   Deanna Haines, Director-Gas Engineering, Gas Engineering and System Integrity, Sempra Utilities
   Kevin Hamilton, Central California Asthma Collaborative
   Briana Mordick, Senior Scientist, NRDC
   John Shears, Center for Energy Efficiency and Renewable Technologies
3:40 Closing Remarks, Next Steps (Elizabeth Scheele, ARB)
4:00 Public Comment Period-CEC IEPR WORKSHOP ONLY
End Symposium