EVERSOURCE
ENERGY CENTER

Gas Technology Institute

Remote Sensing and Reliability of Gas and Electrical Infrastructure Systems

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Scope

Reliability of Gas and Electrical Infrastructure Systems against Natural Forces

Objectives

- Discuss risks to natural gas and electrical infrastructure and their resiliency against natural forces such as earth movement, landslides, floods, wind, and fire.
- Identify state-of-the-art remote sensing research and technology, and
- Explore recent advancements in remote sensing technologies for use in identifying risks to utility infrastructure and opportunities for enhancing their resiliency.

Workshop Agenda

The workshop is structured to be both informative and collaborative. Speakers from DOT-PHMSA, DOE-ARPA.E, academia, utilities, professional organizations, and industry.

Presentations and discussions on the development and implementation of remote sensing technologies and risk management of natural forces.

Session 1 - Regulatory and Utilities Presentations

(8:00 AM- 11:30 AM)

- ***Research Activities and Needs - Regulatory Perspective***

  [Robert Smith, U.S. DOT, PHMSA]

- ***Natural Gas Industry and How Remote Sensing Can Assist in Reducing Risk***

  [Christina Sames, AGA]

- ***Utilities Implementation and Needs***

- *Aerial LiDAR Data Acquisition and Use for Ground Movement Detection*

  [Jeffrey Bachhuber, PG&E]

- *Natural force Threats, Monitoring and Research Needs*

  [Karina Gregorian, SoCal Gas]

- *Exploring Remote Sensing Technologies for Applications in Electric Utilities*

  [Jason Parent, UConn-Eversource]

Session 2 - Technical Presentations

(12:30 PM-3:30 PM)

- ***Research and Application of Remote Sensing in ROW Monitoring***

  [Vivien Lecoustre, DOE ARPA-E]
- ***Post-Event Evaluation of Natural Gas Pipeline System After Hurricane Sandy***

  [Khalid Farrag, GTI-Rutgers University]
- ***Applied Geohazard Assessments, Field Monitoring, and Engineering Remediation for Resiliency and Performance***

  [Golder, GSI, IDS GeoRadar, and Juniper Unmanned]
- ***Risk Analysis and Threat-Mitigation of Natural Gas Transmission Systems***

  [Ernest Lever, GTI]
- ***Decision Support Systems for Geohazard Management***

  [Mark Vessely & Sarah Newton, BGC Engineering, Inc.]
- ***Situational Awareness and Risk Assessment in Natural Gas and Electric Infrastructure***

  [Michael Barnett, Smart Cloud Inc.]

Session - 3

- *Group Discussion: Developments and Applications Road Map*

[3:45 PM– 5:00 PM]