SUGGESTED BREAKOUT SESSION TOPICS

CRYSTAL LEVEL SPONSOR

Celebrating its ninth year, SHALE INSIGHT™ 2019 is proud to offer continuing educational technical and public affairs breakout sessions created and presented by subject matter experts. Sponsorship is available on a first-come, first-served basis for eight sessions and four workshops from the suggested topics below or from a timely and relevant industry issue that may arise. The sponsoring company will be required to take a leading role in building the session and recommend a breakout format from those outlined beginning on page three. To inquire about sponsorship, please contact Robert Petrilli at rpetrilli@marcelluscoalition.org or 412-706-5173.

**TECHNICAL SESSIONS**

1. **Spill Management: Developing a Full Proof Spill Prevention Control and Countermeasure Plan and Implementation**  
Spills occur in every industrial process, including the natural gas industry. Industry and agency experts will provide an overview on how to develop and implement Spill Prevention Control and Countermeasure (SPCC) Plans.  
➢ Suggested Session Format: Expert Lecture or Panel

2. **Regulations and Permitting in Appalachia: Navigating Complex New Requirements and Systems**  
Over the last several years, industry regulations, permitting and requirements have become more stringent and complex. In 2018, Pennsylvania adopted electronic permitting for all required industry permits including ESGP-3, eWell, Wetland/Stream and Air Quality. This session will provide an overview on the new electronic permit processes and the updated requirements.  
➢ Suggested Session Format: Panel or Workshop / Demonstration

3. **University Health Studies: Developments on Industry Health Studies and Research**  
Universities have been working to understand “gaps” and research needs within the industry. University experts will present some of their ongoing research related to industry health studies and discuss some of the “gaps” they have discovered.  
➢ Suggested Session Format: Expert Lecture or Panel

4. **The Future of Unconventional Drilling: Technological Enhancements Leading to more Efficient Drilling and Completions**  
Over the last ten years, advances have been made in unconventional drilling completion techniques, new technologies, and efficiencies making it possible to continue operations during a low-price market. This session will focus on specific technological improvements in the basin, such as fully automated drilling processes, new gas recovery advancements, more streamlined controls and fiber optic completion packages.  
➢ Suggested Session Format: Expert Lecture, Panel or Workshop/Demonstration

5. **Water and Waste Management: New Trends in Water Procurement and Treatment**  
As the “play” has matured, trends in water procurement, management and transfers have changed with increase automation and a reduction in personnel. Similarly, water treatment technologies have improved using new technologies and larger centralized treatment facilities. Hear from industry experts on the latest trends in water management.  
➢ Suggested Session Format: Expert Lecture, Panel or Workshop/Demonstration

6. **Technology Showcase**  
The annual Technology Showcase provides suppliers of emerging technologies an opportunity to introduce their innovation to the natural gas producer, midstream/pipeline, downstream and service community. The MSC Research Collaborative solicits applications for these technologies and awards top applicants with an opportunity to present.  
➢ Suggested Session Format: Workshop/Demonstration

7. **Pipeline Development: Installation, Restoration, Monitoring and Operations**  
Developing and managing all aspects of natural gas pipeline development can be challenging in the Appalachian Basin. Industry and engineering experts will share their experiences related to pipeline construction techniques, geohazard due diligence, proper restoration practices and slip remediation, and operation and monitoring programs when pipelines are in service.  
➢ Suggested Session Format: Panel

Breakout Session Opportunities as of 3/19/2019
8. **Dissolved Methane in Groundwater: Understanding Pre- and Post-drill Water Sampling Results**

Dissolved methane in groundwater is naturally occurring in Ohio, Pennsylvania and West Virginia. Currently, there is not an accepted testing methodology that achieves consistent and predictable results. Experts will review current methodologies and studies that have focused on developing a standard to achieve focused results and provide insight on how operators and land owners can monitor changes to groundwater.

- Suggested Session Format: Workshop/Demonstration

9. **Natural Gas Storage: Understanding Current Options in the Basin**

With the abundant volume of natural gas being developed in the basin storage options are necessary. This session will provide an overview of current small and large scale CNG and LNG storage solutions and areas where they are being considered.

- Suggested Session Format: Workshop/Demonstration

10. **Induced Seismicity: How is it Caused, Measured and What do you Feel?**

Numerous human activities result in induced seismicity. It is important to understand how induced seismicity is caused, measured and felt before making a connection to operations of the oil and gas industry, specifically underground injection wells and hydraulic fracturing. This session will cover the basics of induced seismicity and specifically the connection to the oil and gas industry. In addition, technical experts will explain maximum moment data from microseismic analysis performed in the field.

- Suggested Session Format: Skill-Builder or Workshop/Demonstration

11. **A Focus on The Supply Chain: Servicing and Procuring Work in an Everchanging Industry**

As work in the Appalachian Basin has evolved through the maturity of the Marcellus and Utica Shale Plays, the supply chain that serves the industry must evolve. Hear from both procurement and supply chain experts on how they have been successful in maintaining a working relationship in a fast-paced industry and learn tips on positioning your company to develop business.

- Suggested Session Format: Panel

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**PUBLIC AFFAIRS SESSIONS**

1. **Site Safety and Benchmarking: Best Practices for Robust Site Security and Worker Safety**

A high level of safety and security is important to the industry and it is good to understand best practices operators are employing. This session will include industry experts discussing these best practices and how they use benchmarking as a tool to improve their overall performance for both security and worker safety.

- Suggested Session Format: Expert Lecture or Panel

2. **Marketing Natural Gas: Successful Campaigns Promoting the Natural Gas Industry**

Public education and marketing is necessary to advance the understanding and use of natural gas. Public relations and marketing experts will describe successful marketing campaigns, through case studies, they have used to promote the natural gas industry. The use of different types of media are a critical component to this effort to educate those with limited knowledge of the industry.

- Suggested Session Format: Expert Lecture, Panel or Workshop/Demonstration

3. **Workforce Development: An Evolving Industry needs an Evolving Workforce**

As the Marcellus and Utica Shale development matures and focuses on downstream and end use development, the needs of the workforce change. This session will include presentations from colleges and universities in the region and how they are evolving and preparing their students to meet these needs. In addition, industry and labor experts will provide input on where future workforce needs will be.

- Suggested Session Format: Panel

4. **Realizing the Potential: Expanded Natural Gas Use through Effective Public Policies**

Overcoming challenging market conditions requires identifying and advancing public policies aimed at increasing domestic use of our natural gas resources. This session will provide an opportunity to hear directly from leading decision makers and influencers on what Ohio, Pennsylvania and West Virginia need to do and how to do it.

- Suggested Session Format: Expert Lecture, Panel

5. **Municipal Ordinances: Mounting Local Government Regulatory Challenges to the Industry**

This program will provide an overview of the increasingly aggressive (but still uncertain legal authority of) local government efforts to restrict unconventional shale development throughout the Appalachian Basin. It will address the continued fallout from Pennsylvania’s Robinson Township and Ohio’s Munroe Falls decisions, as well as increasing attempts to limit and even ban industry activity through the adoption of “Community Bill of Rights” ordinances and Home Rule Charter referenda.

- Suggested Session Format: Expert Lecture, Panel
Session Formats

Workshop/Demonstration (1 Hour and 45 Minutes)

Demonstrations are presentations including hands-on visual aids that show how to use or apply an evaluation concept or tool. The presenter will walk attendees through a clear, step-by-step explanation of the concept or tool, how it compares to other evaluation concepts or tools, its strengths and weaknesses, and how it can best be applied. Various workstations manned by subject-matter facilitators may aid in the hands-on learning experience. Question and answer will be facilitated throughout session.

Required: 1-2 Presenters; Hands-on visual aids | Optional: 2-5 facilitators; PowerPoint; Handouts

Expert Lecture (75 Minutes)

Expert Lectures are presentations by a SINGLE acknowledged expert in the field who will share conceptual or methodological innovations through a lecture followed by response to audience questions. The lecturer must be able to demonstrate and provide proof of expertise on suggested topic.

Required: 1 Presenter | Optional: PowerPoint; Handouts; Hands-on visual aids

Panel (75 Minutes)

Panels are structured, thematic presentations focusing on an issue facing the field of evaluation. A moderator will introduce two to three panelists delivering coordinated presentations within set timeframes. The moderator will observe each presentation and offer a brief response to the content, and facilitate question and answer at the end of the session. Others employ a more discussion-oriented format with the panelists responding to each other and to audience inquiries throughout the session. The sponsor/moderator is responsible for coordinating the presentations in advance.

Required: 1 Moderator; 2-3 Panelists | Optional: PowerPoint; Handouts; Hands-on visual aids

Roundtable (75 Minutes)

Roundtables are presentations that include in-depth discussion with attendees. Roundtable presentations typically include 45 minutes of presentation on 1-2 pertinent topics, followed by 30 minutes of feedback and engaging in in-depth discussions. Roundtable presenters should bring targeted questions to pose to others at the table and audience in order to learn from and with those attending.

Required: 1 Moderator; 2-3 Presenters | Optional: PowerPoint; Handouts; Hands-on visual aids

Skill-Builder (75 Minutes)

Skill-builders teach a specific skill needed by many in the field and include one or more exercises that let attendees practice using this skill. This session differs from a Demonstration in that attendees will have a hands-on opportunity to practice the skill. Attendees should be ready to get involved as these sessions are not passive, but rather active opportunities for learning.

Required: 1-2 Presenters; Handouts; Hands-on visual aids (for demonstration and attendee use) | Optional: PowerPoint

Think Tank (75 Minutes)

A think tank is a session focusing on a single, pre-determined issue or question. Initially, a subject expert/moderator orient attendees to the issue or question and relevant context. Then, attendees break into small groups to explore the issue or question and finally reconvene to share their enhanced understanding through a discussion facilitated by the subject expert/moderator. The roles of the individual breakout groups will be pre-determined and executed on-site (Will they each address the overall topic or question? A particular facet of the topic or question? Or examine the topic or question from a particular viewpoint?). Each breakout group may have individual facilitators pre-appointed by the subject expert/moderator.

Required: 1 Subject expert/Moderator | Optional: 2-5 facilitators; PowerPoint; Handouts; Hands-on visual aids