

# HEI Energy Research Program

## Workshop Objectives and Charge Questions

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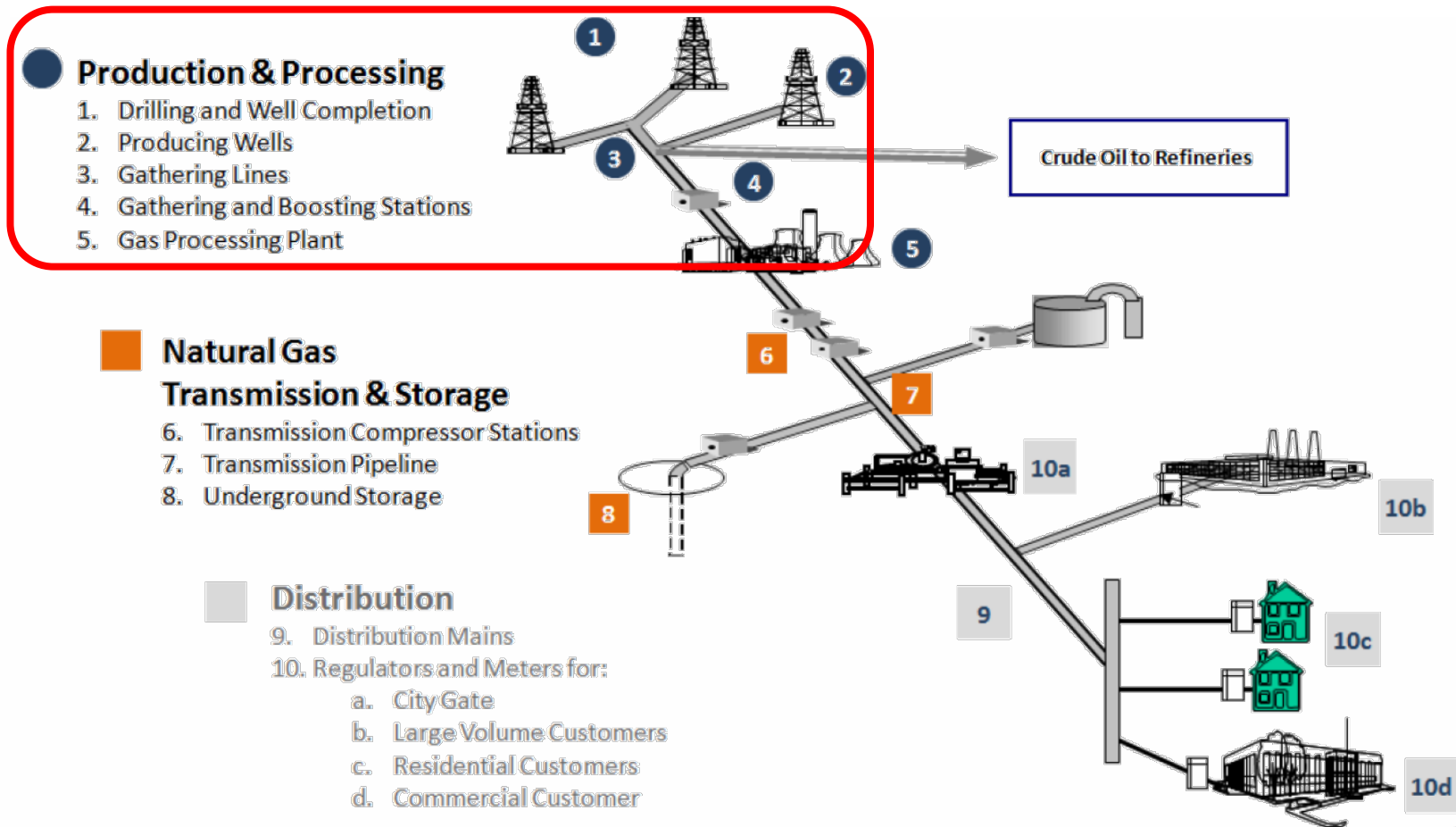


# Workshop Objectives

- Convene a broad range of experts seeking input to ongoing planning or population-level research to understand potential exposures associated with onshore development of unconventional oil and natural gas resources (UOGD) in the United States
- Build on discussions from July workshop
  - Regulatory framework already in place to protect human health:
  - Data mining: How can existing data be leveraged to understand potential exposures from UOGD?
  - Refined breakout group discussions to further define research options and priorities



# Schematic of Oil and Gas Operations



Source: Adapted from American Gas Association and EPA Natural Gas STAR Program



# Why Take Time for Workshops?

- **UOGD and its regulation are changing over time**
  - The information isn't neatly packaged in the peer-reviewed literature or gray literature; need thoughtful exchange with knowledgeable people
- **Highlight relevant ongoing research**
  - Seek a pathway of communication to learn about and complement this work, learn from one another, and identify possible opportunities for collaboration
- **Seek input on the research most beneficial to policy decisions that many of you need to make**
  - For example, what research will best help regulators, local community leaders, industry, and others to protect the health of people near UOGD over the near-term and longer-term?



# Workshop Charge Questions

- How can existing data be leveraged to understand potential exposures from UOGD?
- What potential UOGD exposures are not well understood with existing data and merit original research?
  - What exposure pathways and phases of UOGD should be the focus?
  - In conducting such research, what are your recommendations for considering regulatory, environmental, and industry practice variability over time and across regions?
  - What is the value of the research for decision-makers (e.g., regulators, industry, community members, and scientists conducting research)?



# Conceptual Model of Exposure to Support Research Planning

