

Implementing a research program on the potential for population exposure and health effects from unconventional oil and natural gas development

ANSWERING KEY QUESTIONS

The purpose of HEI’s energy research program is to identify and conduct high-priority research on the potential population exposures and health effects from development of oil and natural gas from shale and other unconventional resources (UOGD) across the United States.

With resource development projected to continue, alongside growing efforts to switch to renewables and conserve energy, a source of high-quality, impartial science is needed to support decisions about how best to ensure protection of public health in the oversight and implementation of this development.

WHO WILL BENEFIT?

Decision makers in need of high-quality, impartial science about unconventional oil and natural gas development including:

- government officials
- communities
- industry
- environmental and public health organizations
- other stakeholders

TECHNICAL SCOPE

PHASE 1 Critically Review the Science Literature and Identify Knowledge Gaps That Merit Research

The program will begin with impartial reviews of the health and exposure literature to:

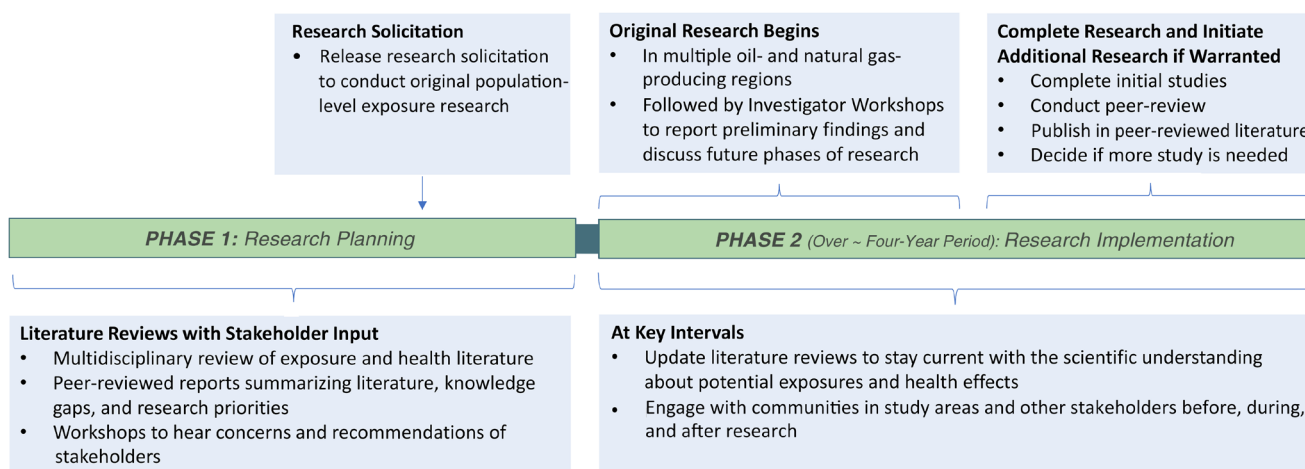
- Determine what current studies do and do not tell us about potential exposures and health effects
- Focus research on exposures of potential significance for health

PHASE 2 Conduct Original and Population-Level Research

The program will be designed to answer the following key questions as quickly as possible, while maintaining high standards of quality and credibility.

- How might people be exposed to UOGD-related agents in air, water, and other media at major UOGD regions across the United States?
- How might potential UOGD exposures harm people’s health? Targeted research to assess potential health effects will be pursued as feasible and appropriate based on findings from the population exposure studies.

Early and Longer-Term Products



IMPARTIAL SCIENCE RELEVANT TO DECISION MAKING

The HEI-Energy research program is structured after HEI's existing model for providing high-quality, impartial scientific information about the health effects of air pollution through:

- **Independent governance** of the research program with leadership by an independent board of directors not affiliated with sponsors
- **Balanced funding** from the oil and gas industry, governmental agencies, and, occasionally, foundations
- **High-quality science** with research oversight by committees of knowledgeable scientists that have been vetted for bias and conflict of interest
- **Open and extensive communication** of all results, in the context of other relevant research
- **Science targeted** to make better informed decisions without advocating policy positions.

Research under this new program will be:

- Conceived, overseen, and reviewed by experts who are independent of HEI-Energy's sponsors
- Carefully designed and of the highest quality
- Coordinated with past and ongoing research efforts for efficiency
- Informative on a regional and national scale
- Responsive to technological innovation and changing industry practice, regulation, and market conditions

EFFECTIVE ENGAGEMENT AND COMMUNICATION OF RESEARCH

The credibility and acceptance of results depend on the quality and independence of the research and its review, together with transparency in methods, data, and the funding underlying the research.

Key components of HEI's communication plan are to:

- *Identify and engage* with regulators, communities, and other stakeholders at the federal, state, and local levels during research program planning
- *Engage periodically* at important programmatic intervals, with opportunities for review and comment
- *Use a variety of communication vehicles and forums* to engage with the broadest possible audience

The success of the effort depends strongly on cooperation among government, industry, and other stakeholders to create an environment of trust in which literature reviews and research can be relied on to support sound decision making.



Participants at an HEI-Energy Exposure Workshop

FOR MORE INFORMATION:

Email: energy@healtheffects.org
<https://hei-energy.org/>

HEI-ENERGY

75 Federal St., Suite 1400 • Boston, MA 02210,
USA +1-617-488-2300

SPONSORS:

This program is supported with balanced funding from HEI-Energy's government and industry sponsors: U.S. Environmental Protection Agency, Chevron, ConocoPhillips, Equinor, ExxonMobile, Halliburton Energy Services, Inc., Noble Energy, Schlumberger, and Shell Oil Company.