



IMPLEMENTING A TARGETED, TIMELY RESEARCH PROGRAM ON THE POTENTIAL FOR POPULATION EXPOSURE AND HEALTH EFFECTS FROM THE DEVELOPMENT OF OIL AND NATURAL GAS FROM UNCONVENTIONAL RESOURCES

ANSWERING KEY QUESTIONS

The purpose of HEI's new energy research program is to identify and conduct highest 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.

HEI initiated the new research program in January 2018, beginning with an impartial critique of the health literature.

WHO WILL BENEFIT?

THOSE WHO NEED HIGH-QUALITY IMPARTIAL SCIENCE TO INFORM DECISIONS ABOUT UNCONVENTIONAL OIL AND NATURAL GAS DEVELOPMENT

HEI expects results from this research program to be used by government officials, communities, industry, environmental and public health organizations, and other stakeholders to inform policy development in this important area.

TECHNICAL SCOPE

YEAR 1 – CRITICALLY REVIEW THE LITERATURE AND IDENTIFY KNOWLEDGE GAPS THAT MERIT RESEARCH

The research program will commence with an impartial, critical review of the exposure and health literature to:

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

YEARS 2 THROUGH 5 – CONDUCT ORIGINAL POPULATION-LEVEL RESEARCH

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

- How might people be exposed to UOGD-related health stressors in air, water, and other media at major UOGD regions across the United States?
- How might any potential 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



Health Effects Institute's Energy Research Program

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STRUCTURED TO DELIVER IMPARTIAL SCIENCE RELEVANT TO DECISION MAKING

The new research program is modeled after HEI's existing successful model for providing high quality, impartial scientific information about air quality

- *Independent governance* of the research program with members having no direct ties to, or interests in, sponsor organizations
- *Balanced funding* from the oil and gas industry, governmental agencies, and foundations
- *High-quality science* with research oversight by committees of knowledgeable scientists that have been vetted to eliminate bias and conflict of interest
- *Open and extensive communication* of all results, including both positive and negative findings, in the context of other relevant research
- *Without advocating policy positions*, provide the best science, targeted to make better informed decisions.

Research under this new program will be:

- Carefully designed and of the highest quality
- Focused on the most time-sensitive issues relevant to policy decision-making
- Coordinated with past and ongoing research efforts for efficiency
- Collectively informative on a regional and national scale
- Flexible to technological innovation and changing industry practice, regulation, and market conditions

EFFECTIVE ENGAGEMENT AND COMMUNICATION OF RESEARCH

The best designed and implemented research program can go for naught if plans for effective engagement and communication with a wide variety of stakeholders are not built in from the very start of the program. The credibility and acceptance of results depend on widespread understanding of where the research came from, and the care and independence with which it was conducted and reviewed.

Key components of HEI's communication plan are to:

- *Identify and engage* with regulators, opinion leaders, stakeholders, and others 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

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SPONSORS

Consistent with the funding model for its current research program, HEI anticipates balanced funding from government, industry, and foundations

Webpage:

<https://www.healtheffects.org/energy>