Webinar for Potential Applicants to RFA 23-2: Assessing the effectiveness of air quality actions in historically marginalized communities

Health Effects Institute
August 14, 2023

The meeting will begin shortly.

A few logistics before we start:

• If you experience logistical difficulties, please email Quoc Pham: qpham@healtheffects.org
• You can turn on closed captioning for the event at the bottom of your screen to the right of the Q&A button
• Please put questions about the RFA or application process in the Q&A box
• The recording is for internal purposes only
• After the webinar, HEI will post the webinar slides and all questions and answers to the HEI website

www.healtheffects.org | @HEIresearch
Today’s Agenda

Introduction to HEI and the Environmental Justice Program

Overview of the RFA and Expectations for Research Proposals

Question and Answer Session
Introduction to HEI and the Environmental Justice Program
The Health Effects Institute

• An independent, nonprofit corporation chartered to produce policy-relevant, high-quality, and impartial science

• Funded jointly by government and the worldwide motor vehicle industry and, occasionally, private foundations

• Funds research that is selected, conducted, overseen, and reviewed independently of HEI’s sponsors

• Does not take policy positions

HEI

Trusted Science ● Cleaner Air ● Better Health

www.healtheffects.org
How HEI Works

to Provide Impartial Science for Decision Making and Public Understanding
EJ Workshop Hosted by HEI
October 20-21, 2022 • Atlanta, GA

- **Purpose:** identifying priorities, barriers and solutions to inform HEI’s EJ efforts

- **57 participants** from academic institutions, community organizations, federal government, industry, and NGOs

- **Key Takeaways:**
  - Need for new funding models to support:
    - Partnership building
    - Flexible research designs
    - Research translation that engages multiple sectors
  - Interest in science that does not just document disparities but can *help identify and assess actions to reduce them.*
HEI’s New EJ Program
Role and Functions

• Incorporate environmental justice concepts and HEI’s existing programs.

• Convene communities, policymakers, academics, and industry to collaborate, share data, and identify solutions to address the drivers of environmental inequities.

• Develop tools and research translation mechanisms for use in decision making.

• Create funding mechanisms to support research and other projects driven by the needs of communities disproportionately affected by environmental pollution.

• Overseen by Oversight Panel and guided by Advisory Council
Overview of the RFA and Expectations for Research Proposals
Accountability

Assess whether actions yield the demonstrable improvements in air quality and public health that were initially projected.

Characteristics:
- Compare air quality and/or health before and after action implementation.
- Challenges: disentangle action-related changes in air pollution and health from other time-varying factors; statistical power; lags between implementation and effects.

Studies have generated:
- New statistical methods
- Lessons learned that inform design and implementation of future efforts to improve air quality

Strongly recommend reviewing “Other Publications” on our Accountability page
Accountability

**Diagram:**
- **Regulatory or Other Action**
  - IMPROVED ACTION to **Emissions**
  - Compliance, effectiveness

- **Emissions**
  - IMPROVED ACTION to **Ambient Air Quality**
  - Atmospheric transport, chemical transformation, and deposition

- **Ambient Air Quality**
  - IMPROVED ACTION to **Exposure and Dose**
  - Human time-activity patterns in relation to indoor and outdoor air quality; uptake, deposition, clearance, and retention in the body

- **Exposure and Dose**
  - IMPROVED ACTION to **Human Health Response**
  - Susceptibility factors; physiologic mechanisms of damage and repair
Overall Objective of RFA 23-2

Fund studies that evaluate actions, programs, or other interventions in the United States at the national, regional, tribal, state, or local level that have affected or have the potential to affect ambient or indoor air quality, exposure, health outcomes, or all the above in historically marginalized communities.
Areas of Interest for RFA 23-2

1. Studies that evaluate *past or current* actions, programs, other interventions at the national, regional, tribal, state, or local level that were specifically designed and implemented to reduce exposures to ambient or indoor air pollutants and improve health *in historically marginalized communities*.
Areas of Interest for RFA 23-2

2. Studies that evaluate *past or current* actions, programs, other interventions at the national, regional, tribal, state, or local level that were specifically designed and implemented to reduce exposures to ambient or indoor air pollutants and improve health *in the general population* that might have benefited historically marginalized communities, had an inequitable distribution of benefits among communities, or worsened conditions in historically marginalized communities (e.g., have had unintended consequences).
Areas of Interest for RFA 23-2 Continued

3. Studies that evaluate *proposed* actions, programs, or other interventions at the national, regional, tribal, state, or local level that are being designed to reduce exposures to ambient or indoor air pollutants and improve health *in historically marginalized communities*. Studies should be designed to directly inform development and implementation of the proposed action under study.
Areas of Interest for RFA 23-2 Continued

4. Studies that evaluate *past, current, or proposed* actions, programs, or other interventions at the national, regional, tribal, state, or local level that were or are designed or implemented to achieve goals *other than decreasing air pollution exposures but indirectly affect ambient or indoor air quality in the general population or in historically marginalized populations.*

Examples:

- policies related to climate change mitigation or adaptation
- actions to increase residential greenspace
- clean mobility programs aimed at reducing greenhouse gas emissions

HEI seeks to fund studies that can accomplish at least one of the objectives listed.
Key Study Design Features

Study Design
- Past or current actions (Objectives 1, 2, or 4): prospective or retrospective epidemiologic or exposure study
- Proposed actions (Objectives 3 or 4): health impact assessment or similar study
  - Ideally collect baseline data to enable future evaluation of the action

Study Population (U.S only)
- May use different methods to identify (e.g., CEJST, EJScreen, or as defined under action)
- Identify relevant control or reference group

Health outcomes
- Relevance for policy
- Association with air pollution
- Community concerns
Key Study Design Features

Exposure Estimation
• Monitoring and modeling
• Existing data: monitoring networks, satellite data, previous measurement campaigns
• Preference for use of standardized sampling methods

Analytical Methods and Statistical Power
• Traditional or novel epidemiologic and statistical methods
• Environmental inequality indicators
• Must demonstrate sufficient power to detect changes in exposure, health outcomes, or inequalities
Community Engagement

**Outreach**
- Some Community Involvement
  - Communication flows from one to the other, to inform
  - Provides community with information.
- Entities coexist.
- Outcomes: Optimally, establishes communication channels and channels for outreach.

**Consult**
- More Community Involvement
  - Communication flows to the community and then back, answer seeking
  - Gets information or feedback from the community.
- Entities share information.
- Outcomes: Develops connections.

**Involve**
- Better Community Involvement
  - Communication flows both ways, participatory form of communication
  - Involves more participation with community on issues.
- Entities cooperate with each other.
- Outcomes: Visibility of partnership established with increased cooperation.

**Collaborate**
- Community Involvement
  - Communication flow is bidirectional
  - Forms partnerships with community on each aspect of project from development to solution.
- Entities form bidirectional communication channels.
- Outcomes: Partnership building, trust building.

**Shared Leadership**
- Strong Bidirectional Relationship
  - Final decision making is at community level.
  - Entities have formed strong partnership structures.
- Outcomes: Broader health outcomes affecting broader community. Strong bidirectional trust built.

Reference: Modified by the authors from the International Association for Public Participation.

Criteria for Evaluating Research Applications

1. **Relevance** to the objectives of the RFA.
2. **Scientific merit** with respect to study design, data collection and analysis methods, modeling approaches, data evaluation, and overall quality assurance.
3. **Experience, competence, and diversity of the research team**, including principal investigator, scientific staff, and collaborating investigators.
4. **Adequacy of facilities**, including (1) access to study sites, instrumentation, and relevant data sets; and (2) adequacy and validity of facilities to implement the proposed research.
5. **Reasonableness of the proposed budget**. Community partnerships and community engagement should be reflected in the proposed budget.
6. **Well-developed plan for research translation** to inform decision-making.
Research Team

Principal Investigators

- Researchers with advanced degrees (PhD, MD, or equivalent)
- Affiliated with an eligible established research organization that can accept funds to conduct research from external organizations

If the application includes partnership with a community-based organization, community partners are expected to be included as part of the research team.

We encourage diverse research teams (we adopted the National Institute of Health definition on populations underrepresented in the scientific workforce).
Eligible Organizations

• Lead organization must be an academic or independent, non-profit, free standing research institution

• Scientists from non-regulatory government agencies can participate but not lead a study

• For-profit companies can participate as consultants
Budget

Between $2 and $3 million will be available for this RFA

- Maximum study budget $800k
- Indirect costs are capped at 30% (cannot be waived)
- Includes preparation of the final report

HEI expects to fund a small number of studies (2 to 3 years in duration)
Investigator Commitments

• HEI issues cost-reimbursement contracts (not grants)

• Follow guidelines for Quality Assurance / Quality Control and data sharing

• Require biannual progress reports, webinars and site visits

• Present a poster at HEI’s Annual Conference (between March and May)

• Changes to proposed work or budget require Oversight Panel approval to ensure the study stays true to its original goals and the RFA

• Final reporting requirements

PLEASE REVIEW HEI’S PROCESS BEFORE APPLYING: https://www.healtheffects.org/research/investigators/commitments
## Important Dates

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<tr>
<th>Date</th>
<th>Action</th>
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<tr>
<td>September 29, 2023</td>
<td>Preliminary applications due</td>
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<tr>
<td>Early-November 2023</td>
<td>HEI EJ Panel reviews preliminary applications</td>
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<td>End of November 2023</td>
<td>Decisions and feedback to Investigators</td>
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<td>Mid-February 2024</td>
<td>Invited full applications due</td>
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<tr>
<td>March 2024:</td>
<td>HEI EJ Panel reviews full applications</td>
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<td>April 2024</td>
<td>Winner(s) notified</td>
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<td>Spring 2024</td>
<td>HEI Board approval, IRB approval, contract negotiations, and preliminary QA/QC plan</td>
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<tr>
<td>Summer 2024</td>
<td>Studies begin</td>
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Send submissions to [funding@healtheffects.org](mailto:funding@healtheffects.org)
Question & Answer Period

Please type your questions about the RFA and application process via the Q&A function.

If you have additional questions, please contact Anna Rosofsky: arosofsky@healtheffects.org

For general questions related to the HEI application process, please visit: https://www.healtheffects.org/faqs