



Fiscal Year 2024-2025 Research Solicitation Public Meeting

May 8, 2024

CARB Research Project Priorities



Strategic Research Plans

- Public process
- Priorities
- Strategic
- Project selection
- Racial equity and environmental justice
- Planning
- 5 Year Plan – 2025-2030



5-Year Plan – Engagement Opportunities

- April 16
 - Comment/concept survey closed
- Summer 2024
 - Individual topical meetings: Reach out if interested research@arb.ca.gov
- August 2024
 - Public meeting: Proposed research initiatives presented
- December 2024-January 2025
 - Full Draft Plan available to the public, 30-day comment period
 - Submit comments through public docket
- January-March 2025
 - Tune into Board hearing on Plan

Find a Partner on EmpowerInnovation.net

- **Empower Innovation** provides easy access to funding opportunities from the CEC and other providers, curated resources, events, and connections to people and organizations
- CARB's projects are available on the EI site
- You can use the EI platform to find a partner by announcing your interest in a funding opportunity and message other interested parties
- Questions: https://www.empowerinnovation.net/en/contact_us

Projects included in FY24-25 solicitation

- Impacts of toxic air contaminants from residential appliances \$900,000
- Estimating the community level health benefits from air pollution control programs \$800,000
- Collaborating with Communities to Find Ways to Cope with Heat and Reduce Health Impacts \$600,000
- Determining energy use patterns and battery charging infrastructure for zero-emission heavy-duty vehicles and off-road equipment \$750,000
- Evaluating alternative charging solutions for zero-emission off-road equipment \$350,000
- Additional projects going out at a later date

Important Dates

Date	Milestone
Wednesday May 15	Letters of interest requested – email to research@arb.ca.gov
Friday June 7	Pre-proposals due – email to research@arb.ca.gov
Monday July 1	All pre-proposal submitters notified of the status of their application
Monday July 15	Full proposals due – email to research@arb.ca.gov
November-March, 2024/2025	Kickoff executed contracts

Pre-Proposal Requirements

- Use template provided on solicitation landing page
- Pre-proposal
 - Not to exceed 5 pages
 - Include approach for conducting research
 - Tip: check scoring criteria
 - Tip: Do not copy solicitation text
- CV or Statement of Qualifications for entire project team
- Describe relevant experience
- Preliminary Budget
- Equity components
 - Differs by project

Line Item Number	Line Item Description	Cost
	Direct Costs	
1	Labor & Employee Fringe Benefits	\$0
2	Subcontractor(s)/Consultant(s)	\$0
3	Equipment	\$0
4	Travel & Subsistence	\$0
5	Electronic Data Processing	\$0
6	Photocopying & Printing	\$0
7	Mail, Telephone, and Fax	\$0
8	Materials & Supplies	\$0
9	Analyses	\$0
10	Miscellaneous	\$0
	Total Direct Cost	\$0
11	Indirect Cost (Overhead: Rate 27%)	\$0
	Total Indirect Cost	\$0
	Total Direct and Indirect Cost	\$0

Equity Deliverables

- Common to all projects
 - Racial equity training (implicit bias training or similar) within first few months of contract execution
 - Plain-language outreach materials
 - Quarterly updates for website
 - Equity implications, plain-language summary in final report
 - If equity analysis is required, an equity expert should be part of team
 - Publicly available peer-reviewed articles
 - Final seminar geared toward a wide audience

Contracting

- Contracts – not grants
- Required by H&S code to look for expertise in UC/CSUs
 - Inter-agency agreement with UC/CSU
 - 27% overhead rate (see FAQ for details)
 - Sub-contractors can come from any other university, private research institution or firm, community-based organization, etc.
 - Sub-contractors can receive up to 25% of budget
 - Up to 50% if it can be demonstrated that no expertise exists within the UC/CSU and the contract requirements call for it

Contracting (Continued)

- Advisory Board Transparency Rules
 - No members (or alternatives to the advisory body members who are appointed by the Board) of CARB advisory groups can be signatories to the contract or communicate with CARB regarding CARB's decision on the contracts without significant legal risk per government code 87104.
- Advisory Boards affected
 - AB32 Environmental Justice Advisory Committee
 - AB 617 Consultation Group
 - Scientific Toxic Review Panel
 - Research Screening Committee
 - Natural and Working Lands Expert Advisory Committee (new, under AB 1757)

Project Descriptions

Impacts of toxic air contaminants from residential appliances \$900k

- Objective
 - To evaluate the impacts of toxic air contaminants (TAC) emitted by residential appliances on indoor air, outdoor air, and public health.
- Main Desired Outcomes
 - Determine the potential composition, concentration, and emission rates of TACs in fuel leakage and combustion exhaust sampling.
 - Assess the contributions of these TAC emissions on indoor and to outdoor air quality.
 - Estimate the health impacts of indoor and outdoor exposures to these TAC emissions.
 - Evaluate the exposure and health impact disparity among communities associated with TAC emissions from these appliances.
- Contact for Questions
 - Qunfang (Zoe) Zhang; qunfangzoe.zhang@arb.ca.gov

Collaborating with Communities to Find Ways to Cope with Heat and Reduce Health Impacts \$600k

- Objective
 - This project will evaluate local health benefits of extreme heat adaptation strategies associated with state climate-related programs (e.g., urban/community greening and cool roofs programs). Additionally, it will incorporate community perspectives through ground-truthing efforts.
- Desired Approaches and Outcomes
 - The study will apply a community collaborative approach, use both quantitative and qualitative assessments of health benefits, and address community's concerns and needs.
 - A project team with a long-term community-academic partnership is needed, who can leverage existing resources and their work.
 - This project will incorporate community input into the evaluation process through ground-truthing efforts.
 - The contract will assist state efforts to prioritize heat adaptation strategies based on health benefits and community needs and to inform state programs to build resilience in climate-vulnerable communities.
- Contact for Questions: Feng-Chiao Su; feng-chiao.su@arb.ca.gov

Estimating the community level health benefits from air pollution control programs \$800k

- Objective
 - Improving CARB's health analysis method to account for impacts in overburdened communities through the utilization of community characteristic information, as well as exposure assessment methods and health estimates at higher spatial resolution.
- Desired Outcomes
 - Utilizing air quality modeling to investigate exposure disparities between communities. Ground-truthing for quality control of the exposure data in consultation with community experts.
 - Estimating baseline disease rate data at a local level using statistical models.
 - Investigating the role of socio-economic and community factors in modifying the health impacts of air pollution.
 - Developing adjustment factors that quantify the increased health risks in overburdened communities.
- Contact for Questions
 - Arash Mohegh Arash.Mohegh@arb.ca.gov

Determining energy use patterns and battery charging infrastructure for zero-emission heavy-duty vehicles and off-road equipment \$750k

- Objective
 - Characterize Zero-Emission Vehicles (ZEVs) real-world activity, energy consumption, charging needs and patterns, air quality co-benefits, and pollution burden equity due to lower greenhouse gas and air pollution emission with ZEV adoption.
- Desired Outcomes
 - Evaluate emission reductions and other-co-benefits associated with ZEV adoption and equity in ZEV transition and charging accessibility in and around disadvantaged communities
 - Characterize operational characteristics, location, and charging patterns for the different available ZEV technologies compared to their conventional technology counterparts
 - Develop a numerical model to simulate energy and charging requirements for ZEV as more advanced and energy-efficient technologies emerge in the market
- Contact for questions
 - Georges Saliba (georges.saliba@arb.ca.gov)