

State of California  
Air Resources Board

**BOARD ITEM SUMMARY**

**ITEM # 20-11-2:      Public Meeting to Consider Proposed Research Contract with the University of California, Davis, Titled "Developing a Comprehensive Framework for Estimating the Social Costs of Emissions of Criteria Pollutants and Air Toxics in California, and Identifying Other Direct and Indirect Benefits of California's Climate and Air Quality Programs"**

**STAFF RECOMMENDATION:**

The California Air Resources Board (CARB or Board) staff recommends that the Board approve funding of the proposed research contract with the University of California, Davis Titled "Developing a Comprehensive Framework for Estimating the Social Costs of Emissions of Criteria Pollutants and Air Toxics in California, and Identifying Other Direct and Indirect Benefits of California's Climate and Air Quality Programs." The execution of this contract will help to support CARB staff by providing an easy-to-use model to compile the existing information on a broad range of societal costs and benefits of its air-quality and climate-change programs.

Note: This item is listed on the agenda due to the contract amount and to comply with Board approval requirements in Government Code section 1091, since Board Members Berg and Sperling are affiliated with the proposed contractor, the University of California, Davis.

**DISCUSSION:**

Achieving California's challenging air quality and climate objectives will require accurate information about the health benefits (and avoided negative impacts) of relevant policies. Metrics on the impact of policies on the health and well-being will make it easier for communities and decision-makers to understand and track the effect of aggressive climate and air quality policies and measures. The current Cost of Carbon metric is not sufficient to meet these needs and new metrics are needed to better quantify climate, air quality, health, and other co-benefits of California's climate programs. This project will address that need by qualitatively assessing the environmental, energy, economic, and social benefits related to California's climate and air-quality programs. This project will, to the extent possible, develop methods for estimating air-quality health benefits for additional health endpoints and include a detailed analysis of the impacts of the emissions of toxic air contaminants. This work will also include estimates of the agricultural and visibility benefits of improvements in air quality and ecosystem benefits, and incorporate the interaction of the nitrogen cycle with air quality. The project will produce a spreadsheet model to answer the question: What is the value of reductions in emissions and related health, visibility and

ecosystem benefits from climate and air quality policies through the year 2050? In addition to accounting for the benefits to Californians generally, this project aims to answer questions regarding equity, for example: How can CARB factor in environmental justice indicators, including socioeconomic conditions, into the quantification of health benefits?

**SUMMARY AND IMPACTS:**

The information that will be gained through this contract will support the CARB's ability to evaluate the effects of policies and programs including a wide range of impacts such as those on public health. This research will help develop new quantification methods to estimate the toxics and criteria pollutant benefits of CARB policies and rules. The health outcomes that will be quantified are expected to include up to 2 dozen respiratory, cardiovascular and other health outcomes as well as cancer outcomes, and include more consideration of vulnerabilities in disadvantaged communities. This work will contribute to expanding quantified health outcomes from rules like At-Berth beyond the 3 current outcomes that are calculated. The final report will be available to the public in June 2023. Approximately \$456,000 is requested to fund this contract. Approval by the Board will authorize staff to put this contract in place to undertake the activities described.