

Integrated Strategies to Reduce Transportation's Greenhouse Gas Emissions:
A Research Scoping Workshop

The research scoping workshop will design a research initiative to assess strategies to significantly reduce carbon emissions within the transportation sector. Building upon the work of *Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions* and other key studies, a diverse group of technical experts and sponsors will design the next phase of research to reduce greenhouse gas (GHG) emissions from surface transportation. The proposed study will investigate the effectiveness of integrated regional strategies and explore the national implications of these findings.

Earlier studies have focused on the effectiveness of travel activity strategies in reducing GHG emissions. This new project will expand on this work by analyzing integrated bundles of carbon reduction measures that include vehicle efficiency and alternative fuels, in combination with demand-side strategies such as pricing, land use, and investment. The study assumes that different combinations of GHG reduction strategies are likely to be most promising and feasible in different regions. Therefore the study proposes to work with a selected set of regions to examine regionally-tailored technological and infrastructure pathways to decarbonization. This analysis will evaluate the potential carbon reductions, cost-effectiveness, and financial viability of these integrated scenarios.

Key research questions:

- What is the range of effectiveness of integrated vehicle technology, fuel technology, system efficiency, and travel activity strategies in reducing GHGs? What are the potential synergies or antagonistic effects of different combinations of strategies?
- Does the effectiveness of different combinations of strategies vary by region of the country, depending on energy resources, development patterns, and other socioeconomic and environmental factors?
- What are the potential socioeconomic and environmental benefits and disadvantages of integrated approaches?
- What are the relative costs to implement different GHG reduction strategies, and what financing options would enable states and regions to implement action plans?
- What institutional resources and barriers currently exist?

The final product will include these regional assessments, as well as a national analysis complete with findings and policy recommendations grounded in these regional analyses.