

## Addressing Greenhouse Gas Emissions in Planning and Programming

### *Understanding, estimating, and reducing greenhouse gas emissions*

Transportation policy makers and members of the general public are expressing increasing concern over the effects of greenhouse gas (GHG) emissions. With elements of the transportation sector producing more than a quarter of all these emissions, transportation planners and agencies are often asked how their projects can assist in reducing these emissions. Systematic procedures for integrating GHG screening and analyses into the transportation planning and project development processes are now available.

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#### *Greenhouse Gas Analysis Guide*

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### The Solution

Developed through the second Strategic Highway Research Program (SHRP2), the new guidebook illustrates how GHG emissions calculations can be incorporated into transportation planning and decision making. Four decision contexts—long-range planning, programming, corridor planning, and National Environmental Policy Act/permitting—are described, along with questions that analysts should ask if interested in incorporating GHG emissions calculations into key decision points. A technical framework is presented for the models, data sources, and methods that can be used to conduct GHG emissions analysis. This application can be used to develop transportation plans and projects that both improve efficiencies and reduce vehicle miles traveled (VMT).

An appendix to the report provides more detailed technical information. Examples of states with legislation to reduce GHG emissions, regional climate action plans, and GHG analysis in environmental review are provided.

### The Benefits

**The guidebook and website enables an agency to demonstrate that it has fully considered GHG issues throughout the project development and planning process.** The agency can document that it has relied upon current and recognized analytic procedures and that it has integrated GHG issues from the earliest stages of its decision making.

Addressing greenhouse gases (GHGs) at all stages of project development

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**FOCUS AREA:**  
Capacity (C09)

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Technical framework consists of a guidebook, website, and step-by-step procedures for considering, estimating, and reducing greenhouse gas emissions.

#### Save Money

- The guidebook provides procedures for systematic consideration of GHG emissions, avoiding the need to develop new GHG protocols.

#### Save Time

- The processes allow transportation agencies to anticipate strategies to answer public and regulatory issues related to GHG emissions.

## How can you learn more?

The guidebook website [http://transportationforcommunities.com/shrpc01/ghg\\_application\\_kdps/26/0](http://transportationforcommunities.com/shrpc01/ghg_application_kdps/26/0) allows a user to navigate the key decision points in a project and see how GHGs can be considered at each point. It also includes links to analytical tools for estimating GHG emissions from various transportation strategies. A pre-publication version of the practitioner's guide is available at <http://www.trb.org/Main/Blurbs/166940.aspx>. A pre-publication version of the final report is available at <http://www.trb.org/Main/Blurbs/166936.aspx>. The guidebook and website are components within the larger *Transportation for Communities: Advancing Projects through Partnership* (TCAPP) project, with information available at <http://transportationforcommunities.com/shrpc01/>. For more information, contact Larry Anderson at FHWA, [larry.anderson@dot.gov](mailto:larry.anderson@dot.gov); Jennifer Brickett at AASHTO, [jbrickett@aaashto.org](mailto:jbrickett@aaashto.org); or Steve Andrle at TRB, [Sandrle@nas.edu](mailto:Sandrle@nas.edu).



### About SHRP2 Implementation

The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

### Strategic Highway Research Program

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