



Global Climate Change



This series of fact sheets highlights our expertise in Transportation and covers the following topics:

- Commuter Choice and Transportation Demand Management
- Environmental Analysis and Assessment
- Freight Transportation
- **Global Climate Change**
- Hazardous Materials
- Land Use and Transportation Systems
- Strategic Congestion and Mobility
- Sustainable Development

Global climate change is one of the most serious problems confronting the international community. Policy makers around the world are developing strategies to reduce greenhouse gas (GHG) emissions in an effort to address this problem. Transportation, accounting for roughly thirty percent of GHG emissions in the United States, is an important focus given its magnitude and rapid growth, yet it also poses unique challenges. Limiting travel demand, shifting travel to more efficient modes, improving fuel efficiency, or switching to alternative fuels could reduce emissions. However, developing policies to achieve these goals has been difficult despite the potential for substantial benefits to society, such as reduced fuel costs and improved air quality.

The threat of climate change also poses considerable uncertainties for transportation agencies, including more frequent extreme weather events, and a rise in sea level due to increasing temperatures. Understanding the potential impacts of climate change on the transportation system, and raising the awareness of policymakers about opportunities to reduce GHG emissions and mitigate against possible consequences, are important issues for the transportation community.

ICF International's Experience

ICF brings a unique combination of experience in both transportation and climate change, helping private and public sector clients meet the myriad challenges faced with these issues.

With more than 15 years' experience in global warming science, policy, and framework mechanisms, ICF has unparalleled expertise in developing multidisciplinary strategies for addressing climate change. Our qualifications are based on experience accumulated over the course of more than 200 projects related to climate change and energy use, with clients ranging from multilateral organizations to government agencies to private companies. Our climate team has helped design and implement an array of innovative GHG emission reduction programs, and includes top experts in science, engineering, economics, policy, transportation, business, communications, and information management.

Our transportation practice focuses on assisting clients by applying complex transportation, economic, environmental, planning, and energy assessment methodologies to evaluate the direct and

indirect impacts of infrastructure projects, service programs, and government policy. In harnessing the expertise of both of these groups, ICF is uniquely suited for cutting edge work on issues at the intersection of climate change and transportation.

Our staff has assisted a diverse set of clients on these issues, including the U.S. Environmental Protection Agency (EPA), the Intergovernmental Panel on Climate Change (IPCC), the World Bank, the U.S. Department of Energy (DOE), the U.S. Department of Transportation (DOT), the U.S. Agency for International Development (USAID), and the Canadian Climate Change Process. Our work in climate change and transportation can be categorized into four primary areas:

- Emissions inventories, projections, and analyses
- Program implementation and evaluation
- Market incentives and emissions trading
- Communication of information on transportation and climate change

Featured Projects

Emission Inventories, Projections, and Analyses

- For EPA, developed a transportation report providing a detailed inventory of GHG emissions from the transportation sector.
- Developed recommendations for improved transportation forecasting within the U.S. DOE's National Energy Modeling System (NEMS), and applied updated forecasts. This work has had an important influence, raising annual transportation GHG emission estimates by ten percent by 2020.
- Developed and implemented the Atmospheric Stabilization Framework (ASF), a system of economic sector (including transportation), emissions, and atmosphere/ocean models that project nine world regions' GHG emissions and emission reductions.
- Developed a protocol and spreadsheet tool for calculating corporate-wide transportation-related GHGs. The protocol and tool are part of EPA's "Climate Leaders" program, in which companies can voluntarily report emissions for a number of sectors.

Program Implementation and Evaluation

- Provided analytic support to the Presidential Advisory Committee on policy options to reduce transportation sector GHG emissions.
- For the U.S. Initiative on Joint Implementation (USIJI), served as technical reviewers for project proposals in several nations. Projects included transit investments, alternative fuel vehicles, and transport control measures.
- For USAID, we analyzed actions being taken in the transportation sector in developing countries to reduce GHG emissions.
- For the Canada Climate Change Process, we analyzed the potential of more than a dozen demand management strategies to reduce GHG emissions from transportation in the urbanized portions of Canada.

- Working with EPA to develop and implement voluntary programs to reduce GHG emissions, including the National Commuter Choice Leadership Initiative, Pay-as-you-Drive Auto Insurance program, and the Ground Freight Transportation Initiative.
- For EPA's State and Local Capacity Building Branch, developing a "climate-friendly decisions guide," which targets those decisions that have important GHG consequences.
- Provided comprehensive programmatic and analytic support to EPA's Transportation Partners Program (established under the Climate Change Action Plan), including developing annual evaluation reports quantifying the GHG reduction effects associated with local actions.

Market Incentives and Emissions Trading

- For EPA, developing a framework for carbon emissions trading within the transportation sector and across sectors, and assessing modeling systems for evaluating flexible mechanism effectiveness.
- Analyzed opportunities to reduce air pollutant and GHG emissions through a variety of available transportation pricing strategies for EPA.
- Analyzed the potential cost savings from various transportation GHG emissions trading frameworks for the Canada Climate Change Process.

Communication of Information on Transportation and Climate Change

- For the FHWA, developed a report on the relationship between transportation and global climate change, as a primer to state, local, and federal decision-maker.
- For EPA, developed a hand-held "wheel card" calculator and web-based "Household GHG Calculator," to estimate a household's GHG emissions from transportation, home energy use, and waste/recycling activities.
- Developed the structure and content for much of EPA's Global Warming Web Site (www.epa.gov/globalwarming).

About ICF International

ICF International (www.icfi.com) partners with government and commercial clients to deliver consulting services and technology solutions in defense, energy, environment, homeland security, social programs, and transportation. Combining passion for our work with industry expertise and innovative analytics, we deliver compelling results throughout the entire program life cycle, from analysis and design through implementation and improvement. Since 1969, ICF International has been serving government at all levels, major corporations, and multilateral institutions. More than 1,600 employees serve these clients worldwide.

For more information, contact:

Diana Pape
1.202.862.1123
DPape@icfi.com

Sergio Ostria
1.703.934.3013
SOstria@icfi.com

ICF International
9300 Lee Highway
Fairfax, Virginia 22031
Fax: 1.703.934.3740