

Transportation's Role in Reducing U.S. Greenhouse Gas Emissions

Volume 1: Synthesis Report

Report to Congress
U.S. Department of Transportation
April 2010





THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

April 20, 2010

The Honorable Joseph R. Biden
President of the Senate
Washington, DC 20510

Dear Mr. President:

I am pleased to present the U.S. Department of Transportation's (DOT) report, *Transportation's Role in Reducing U.S. Greenhouse Gas Emissions*. This report, which is submitted in response to the requirements of Section 1101(c) of the Energy Independence and Security Act of 2007, is intended to help inform the debate on surface transportation reauthorization and climate change legislation.

The report examines greenhouse gas (GHG) emission levels and trends from the transportation sector and analyzes the full range of strategies available to reduce these emissions. These strategies include: introducing low-carbon fuels, increasing vehicle fuel economy, improving transportation system efficiency, and reducing carbon-intensive travel activity. While the report does not provide recommendations, it does analyze five categories of policy options for implementing the strategies: an economy-wide price signal, efficiency standards, market incentives, transportation planning and funding programs, and research and development.

The Obama Administration and DOT are committed to tackling the climate change challenge. The DOT recently issued new fuel economy standards as part of the first-ever national greenhouse gas and fuel economy program for cars and light-duty trucks. Further, DOT's livability initiative and sustainable communities partnership with EPA and HUD recognize that multi-modal transportation combined with mixed-use development and smart community planning are key to reducing greenhouse gas emissions.

I look forward to working with Congress on the challenge of transportation and climate change.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Ray LaHood", with a long, sweeping flourish extending to the right.

Ray LaHood

Enclosure



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

April 20, 2010

The Honorable Nancy Pelosi
Speaker of the House of Representatives
Washington, DC 20515

Dear Madam Speaker:

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Ray LaHood

Enclosure

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About the Center for Climate Change and Environmental Forecasting

The U.S Department of Transportation (DOT) Center for Climate Change and Environmental Forecasting is the focal point in DOT of technical expertise on transportation and climate change. Through strategic research, policy analysis, partnerships, and outreach, the Center creates comprehensive and multimodal approaches to reduce transportation-related greenhouse gases and to mitigate the effects of global climate change on the transportation network. The Center was formally authorized as the Office of Climate Change and Environment in the Energy Independence and Security Act of 2007.

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Executive Summary

INTRODUCTION

This study evaluates potentially viable strategies to reduce transportation greenhouse gas (GHG) emissions. The study was mandated by the Energy Independence and Security Act (P.L. 110-140, December 2007). The Act directed the U.S. Department of Transportation (DOT), in coordination with the U.S. Environmental Protection Agency (EPA) and consultation with the U.S. Global Change Research Program (USGCRP), to conduct a study of the impact of the Nation's transportation system on climate change and strategies to mitigate the effects of climate change by reducing GHG emissions from transportation. This study also examines the potential impact of these strategies on air quality, petroleum savings, transportation goals, costs, and other factors. Each GHG reduction strategy may have various positive impacts (including co-benefits) or negative impacts on these factors. Potential tradeoffs and interdependencies when reducing GHG emissions will need to be considered in order to develop balanced solutions.

This study does not take a position as to which strategy, or collection of strategies, should be adopted to accomplish the Nation's clean energy and GHG reduction goals. Rather, the study attempts to objectively examine numerous proposed strategies and assess their potential to reduce transportation GHG emissions. The assessments are based on published scientific literature, current policy studies, and best professional estimates. Each strategy is assessed relative to projections of future transportation GHG emissions based on U.S. Energy Information Administration Annual Energy Outlook (AEO) estimates.

The study is presented in two parts: Volumes 1 and 2. **Volume 1: Synthesis Report** provides an overview of the study's findings and discusses policy options that Congress may wish to consider to reduce transportation GHG emissions. **Volume 2: Technical Report** provides the technical details of the assessment.

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