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**Mineta Transportation Institute Releases Research Report on Greenhouse Gas Emission Impacts of Car Sharing in North America**

*Researchers Martin and Shaheen find that car sharing can help reduce greenhouse gas emissions, though results cannot be generalized.*

**San Jose, Calif., July 13, 2010** – The Mineta Transportation Institute (MTI) has just released *Greenhouse Gas Emission Impacts of Car Sharing in North America*, the results of a study that evaluated the greenhouse gas (GHG) emission changes that can occur when people participate in car-sharing organizations. Principal investigators were Elliot W. Martin, PhD, and Susan A. Shaheen, PhD.

The research showed that, while car sharing does facilitate lower emissions, the reduction cannot be generalized across all participating individuals or even a majority of those individuals. Rather, car sharing as a system facilitates large reductions in the annual emissions of some households, which compensates for the collective small emission increases of other households. The results also show that respondent households significantly reduced vehicle ownership after joining car sharing.

"Car sharing is a simple concept," said Dr. Martin. "People typically access vehicles by joining an organization that maintains a fleet of cars and light trucks deployed in lots located within neighborhoods, public transit stations, employment centers, and colleges or universities. They benefit from private vehicle use without the costs and responsibilities of ownership. Car sharing is most common in major urban areas where transportation alternatives are easily accessible."

In this study, the authors surveyed car sharing members in the US and Canada to develop a robust estimate of GHG emission impacts from car sharing. The research results illustrate the annualized change in GHG emissions among members within the largest car sharing organizations. These emissions are lower due to car sharing. The average change in emissions across all respondents is -0.58 t GHG per household per year for the observed impact, and -0.84 t GHG per household per year for the full impact.

While it may seem logical that car sharing reduces emissions, it also can increase them because it provides automotive access to people who were previously carless. These households drive more than before they joined car sharing. The researchers took these factors into account when coming to a "net effect" conclusion across the 6,281 respondents that were applied in the final analysis. They also included less-obvious "full impact" factors, such as people who would have purchased a car but joined a car sharing group instead.

The authors found that on balance, net car sharing emissions are negative and statistically significant for both the observed impact and full impact. Hence, GHG emissions from transportation are lower due to car sharing.

The full report includes charts, survey samples, and policy implications. It may be downloaded at no charge from http://www.transweb.sjsu.edu/project/0911.html

**ABOUT THE RESEARCHERS**

Elliot W. Martin, PhD, is a post-doctoral research engineer at the Transportation Sustainability Research Center (TSRC) within the Institute of Transportation Studies at UC Berkeley. He holds a PhD in civil and environmental engineering from UC Berkeley, a dual Masters in transportation engineering and city and regional planning at UC Berkeley, and two undergrad degrees from Johns Hopkins University in economics and computer science. During his time as a graduate student, Dr. Martin contributed to a variety of projects at TSRC and the Innovative Mobility Research (IMR) group. Dr. Martin has co-authored several publications in peer-reviewed journals and conference proceedings. He also has been an assistant economist at the Federal Reserve Bank of Richmond.

Susan A. Shaheen, PhD, holds a joint research appointment at the Transportation Sustainability Research Center (TSRC) and at the Institute of Transportation Studies-Davis. She is co-director of the transportation track of the Energy Efficiency Center at UC Davis and was the first Honda Distinguished Scholar in Transportation in 2000. In 2007, Dr. Shaheen became a research director at TSRC. She has been a research associate with the Mineta Transportation Institute since 2004. Dr. Shaheen earned a PhD in ecology, focusing on technology management and the environmental aspects of transportation, from the University of California, Davis and an MS in public policy analysis from the University of Rochester. She completed her post-doctoral studies on advanced public transportation systems at UC Berkeley in 2001. Dr. Shaheen has earned a variety of professional honors.

**ABOUT THE MINETA TRANSPORTATION INSTITUTE**

The Mineta Transportation Institute (MTI) was established by Congress in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) and was reauthorized under TEA-21 and again under SAFETEA-LU. The institute is funded by Congress through the US Department of Transportation's (DOT) Research and Innovative Technology Administration, by the California Legislature through the Department of Transportation (Caltrans), and by other public and private grants and donations, including grants from the US Department of Homeland Security. DOT selected MTI as a National Center of Excellence following competitions in 2002 and 2006. The internationally respected members of the MTI Board of Trustees represent all major surface transportation modes. MTI's focus on policy and management resulted from the Board's assessment of the transportation industry's unmet needs. That led directly to choosing the San José State University College of Business as the Institute's home. MTI conducts research, education, and information and technology transfer, focusing on multimodal surface transportation policy and management issues. Visit www.transweb.sjsu.edu