From the desk of the Director, Transportation Research and Development Bureau

Do you remember where you were and what you were doing September 11, 2001? I know I do, and I don’t think I will ever forget the events of that day. As we approach the anniversary of the 9/11 attacks I thought some of you would find it interesting to see what is occurring in the world of transportation security; follow the links below to see Transportation Research Board (TRB) and Cooperative Research program activities for transportation security.

I was pleased to see research and development projects from the past, present, and future highlighted in the Department’s Climate & Energy Report (copy available on our web site). As is the case with so many transportation related issues, climate change is not a problem unique to New York State. Climate change research and the need for coordination and collaboration of state and national programs was discussed at our annual AASHTO Research Advisory Committee meeting this year. There are always state specific research needs but there is research going on in other states and at the national level that we should make use of to avoid duplication of effort and to save money. Links to various climate change materials are included below.

TRANSPORTATION SECURITY UPDATES


CLIMATE CHANGE

You may be interested in finding out more of the impacts of climate change on transportation by reading the recently released report, “The Potential Impacts of Climate Change on U.S. Transportation”; Transportation Research Board Special Report 290. This report provides an overview of the scientific consensus on the current and future climate changes of particular
relevance to U.S. transportation and can be found on line at [http://trb.org/news/blurb_detail.asp?ID=8794](http://trb.org/news/blurb_detail.asp?ID=8794). The library has two hard copies available for borrowing. Five commissioned papers used by the committee to help develop the report, a summary of the report, and a National Academies press release associated with the report are available online. A summary of highlights, as published in the May-June 2008 issue of TR News, is also available online.

For more links to climate change research, please go to page 5.

**Press Release: NYSDOT, NYSERDA Fund Transportation Research to Reduce Vehicle Miles Traveled and Greenhouse Gases**

$1.5 Million in Funds Available for Proposals by September 16 Deadline

Albany, July 29- The New York State Department of Transportation (NYSDOT) and the New York State Energy Research and Development Authority (NYSERDA) are jointly seeking proposals to reduce greenhouse gas emissions and the use of petroleum fuel products in the transportation sector. The Sustainable Transportation Systems solicitation seeks strategies and enabling commercial technologies that reduce vehicle miles traveled (VMT) in New York State to enhance the State’s economy and quality of life.

New York State’s transportation sector produces fewer tons of greenhouse gases per capita than any other state. This is a result of our downstate population density and wide use of the metropolitan area’s extensive public transit system. Also in place downstate is an active Transportation Demand Management (TDM) effort, aimed at reducing single-occupancy auto trips. Upstate, New York State supports urban and rural regional transit systems and numerous suburban park and ride lots.

The research gained through this effort complements Governor David Paterson’s Renewable Energy Taskforce recommendation, which calls upon state agencies to build upon successful existing policies and programs to promote the efficient use of petroleum in the transportation sector. Specifically, the report calls for the development of an integrated plan to achieve a statewide target of a 10 percent reduction in VMT from projected levels in 10 years. An interagency team which includes NYSERDA, NYSDOT, and NYSDEC are considering various strategies as part of the planning process. The technologies and strategies that will be developed and demonstrated through this Program Opportunity Notice (PON) are expected to be important components of such a plan.

Astrid C. Glynn, Commissioner of the New York State Department of Transportation (NYSDOT) said, “The State Department of Transportation is committed to reducing our carbon footprint and encouraging those using our transportation system to do the same by offering energy-efficient travel alternatives. The funding that the department contributed to this innovative research program is yet another example of how, under Governor Paterson’s leadership, we are striving to find new methods for improving energy performance in New York State.”

Robert G. Callender, NYSERDA Vice President for Programs noted that this is the third joint solicitation. “Cooperation between NYSDOT and NYSERDA permits us to target key audiences and transportation issues. We are following Governor Paterson’s challenge to reduce overall Vehicle Miles Traveled, as he outlined in his inter-agency Renewable Energy Taskforce Report issued in February. Given the public’s attention to rising fuel prices and their desire to conserve, we expect to attract high-quality proposals,” he said.

PON 1239 details may be found listed under Funding Opportunities at [www.NYSERDA.org](http://www.NYSERDA.org). Previous solicitations in 2006 and 2007 funded 18 research and demonstration projects, including the following, already underway:

- **NYS Greenride Demonstration (Erie County)** (Lancaster, NY) One-year demonstration of an underutilized ridesharing solution designed for developing successful alternative transportation programs such as carpooling, vanpooling, bike-to-work and park-and-ride. [http://www.greenride.com/](http://www.greenride.com/)
- **Utilization of Recycled Concrete and Asphalt (Chemung County)** (Horseheads, NY) Engineering study to evaluate the performance implications, as well as the energy and environmental impacts of utilizing increased percentages of recycled materials in new road construction.

- **Ithaca Carshare (Tompkins County)** (Ithaca, NY) A pilot program where members share a limited number of vehicles on an as-needed, hourly basis, allowing them to defer personal vehicle ownership. [http://www.ithacacarshare.org/](http://www.ithacacarshare.org/)

- **Railroad Wheel Inspection (Albany County)** (Selkirk, NY) Validation of an automated wheel inspection system installed at the CSX Classification Yard. The advanced non-destructive testing system is capable of inspecting more than 10,000 wheels daily and identifying defects in real time.

- **Demonstration of School Bus Coolant Heaters (Montgomery County)** (Amsterdam, NY) Idling of school buses waste fuel and exposes children to harmful diesel emissions. This project funded a one-year demonstration of advanced coolant heaters which allow school bus engines to be shut down and still maintain cabin heat and window defrosters.

- **NYS Traffic Video Network (Statewide installations)** (Statewide) One-year demonstration of an advanced digital video network providing real time traffic conditions from over 350 existing cameras to the general public, police and first responders, and television and other media providers. [http://www.trafficland.com/](http://www.trafficland.com/)

Please visit [http://www.nyserda.org/funding/1239pon.asp](http://www.nyserda.org/funding/1239pon.asp) for more information on Program Opportunity Notice (PON) 1239 - Sustainable Transportation Systems. Proposals are due September 16, and $1,500,000 of New York State funds are available.

NYSDOT seeks to ensure that their customers - those who live, work and travel in New York State - have a safe, efficient, balanced and environmentally sound transportation system. For more information, please go to [www.nysdot.gov](http://www.nysdot.gov).

NYSERDA uses innovation and technology to solve some of New York's most difficult energy and environmental problems in ways that improve the State's economy. To learn more ways to save energy, visit [www.nyserda.org](http://www.nyserda.org) or call 1-866-NYSERDA.

**COMMERICAL VEHICLE INFRASTRUCTURE INTEGRATION (CVII)**

One of the most promising transportation technologies currently under development is the 5.9 GHz dedicated short range communication (DSRC) technology, commonly referred to as VII, or vehicle infrastructure integration. This advanced ITS technology uses similar infrastructure as 915 MHz based systems such as E-Z PASS but has the capability of very high speed, high capacity data communication using an on-board communication device that is integrated with the electronic information and control systems of the vehicle. Visual and audible information is available to the driver from the VII network, and the vehicle can communicate information to the VII roadside infrastructure as well as other vehicles, creating smart vehicles operating along a smart highway and transportation system. Information such as road and weather conditions, accident information, traveler and transit information, disabled vehicle locations and emergency vehicle warnings can be provided as well as more sophisticated vehicle to vehicle and vehicle
to roadway applications such as lane departure correction and crash avoidance. The vehicles can also be used as probes, broadcasting information to the network for a variety of traffic operations and planning purposes. The system can also provide toll collection as well as other electronic payment operations involving both public and private sectors.

Over the last few years various demonstrations of VII based operations have been successfully conducted in California and Michigan. NYSDOT is also deploying VII infrastructure along the Long Island Expressway I-495 from the Mid Town Tunnel in Manhattan to Hauppague and is supporting the NYS Thruway Authority’s Spring Valley VII Corridor deployment along I-87 between Suffern and the Tappan Zee Bridge. Throughout the years of development, VII has focused almost exclusively on passenger vehicles. While a number of major light vehicle manufacturers have been directly involved with the VII technology development under the leadership of the USDOT, the commercial vehicle industry has not been sufficiently represented.

To address this situation, the New York State Department of Transportation, in partnership with the I-95 Corridor Coalition, Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), New York State Thruway Authority (NYSTA) and various public and private sector stakeholders, is advancing a commercial vehicle infrastructure integration (CVII) program to develop and demonstrate VII compliant commercial vehicle on-board equipment (OBE). Under the CVII program, commercial and NYS maintenance vehicles will have VII equipment installed to demonstrate various VII based applications using the multi-agency, 5.9GHz Dedicated Short Range Communication (DSRC) based systems being developed in NYS.

Building upon previous VII efforts, the CVII program will assist with the integration of the commercial vehicle industry’s operational requirements into the development of VII system applications.

The commercial vehicle VII based operational functionalities to be pursued include various driver and vehicle based data exchanges that build upon previous and ongoing research efforts involving wireless based technologies which have identified data element requirements regarding driver, vehicle and cargo based information for communication between vehicle and the roadside for safety and security benefits.

The CVII program will demonstrate driver identification and verification using transportation workers identification cards (TWIC) and biometric readers which will utilize the appropriate heavy vehicle SAE J1708/J1587 and J1939 data bus and network protocols, as well as the SAE J2735 DSRC WAVE message sets. This will allow only authorized drivers to operate the vehicle.

Additional VII based applications to be developed include expanding previously demonstrated wi-fi based dashboard light indicators with more direct vehicle safety systems information including tire pressure and brake status, and real-time roadside safety warning information to the driver such as work zone location and reduced speed zones.

The goal of the CVII effort is to establish commercial vehicle requirements for use in the national VII effort and to advance the development and field demonstration of potential CVII-based applications under real world conditions using permanently deployed VII corridors.

The VII corridors to be used for the demonstrations include a 13-mile test site along the NYSTA’s I-87 Spring Valley Corridor and a 42 mile test site along NYSDOT’s I-495 Long Island Expressway. Both corri-
dors are currently under development, and there is potential to use additional VII sites in the greater NYC region including those on the New York State Bridge Authority’s (NYSBA) Newburgh-Beacon Bridge along I-84. With additional funding from the I-95 Corridor Coalition, the NYSBA is managing a VII based tolling application development and demonstration project for the NBB. The CVII effort anticipates building upon this ongoing VII electronic toll collection project and it will be coordinated with this and other national IEEE 802.11P based 5.9GHz DSRC technology developments.

NYSDOT is currently beginning contract negotiations with the winning team selected by NYSDOT based on recommendations of an evaluation group as part of a competitive request for proposal (RFP) process. The evaluation group included representatives from NYSDOT, NYSTA, I-95 Corridor Coalition, FHWA, USDOT’s Joint Program Office, and the Michigan and Washington State Departments of Transportation. The winning proposal was submitted by a team led by Volvo Technology of America, Inc. which includes Booz Allen & Hamilton, TechnoCom, Cambridge Systematics, Southwest Research Institute and Fitzgerald & Halliday.

The CVII program is scheduled to begin this Fall, and a program advisory team will be created that will include representatives from various federal, regional and state transportation agencies as well as the NYS Motor Truck Association.

If you would like additional information about the CVII program please contact Richard McDonough, rmcdonough@dot.state.ny.us

Climate Change Research, Continued From Page 2

TRB’s Research in Progress (RIP) data base, http://rip.trb.org/, currently lists 26 projects under “Climate Change.” Links to several national studies from this data base are listed below.

NCHRP 20-24(59); Strategies for Reducing the Impacts of Surface Transportation on Global Climate Change http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2113

TRB study; Potential Energy Savings and Greenhouse Gas Reductions from Transportation http://rip.trb.org/browse/dproject.asp?n=15224

NCHRP 25-25/Task 44; Development and Implementation of a Transportation and Climate Change Clearinghouse http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=1662

NCHRP 25-25/Task 24; Climate Change and U.S. Transportation http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=1296

Research and Innovative Technologies Administration study; Transportation Planning, Policy and Climate Change: Making the Long Term Connection http://rip.trb.org/browse/dproject.asp?n=14396


National Transportation Library Climate Change web resource: http://climate.dot.gov

Climate Change; At The National Academies http://dels.nas.edu/basc/climate-change/index.shtml
New York State DOT Strategies for Climate Change - a power point presentation on NYSDOT’s Climate Change Team and other NY actions to reduce GHG by John Zamurs, Office of the Environment, Chairman of the AASHTO Standing Committee on Environment, Subcommittee on Air Quality and Energy, at the June 2008 NASTO annual meeting.  https://www.nysdot.gov/portal/page/portal/nasto/repository/WS4d_Zamurs_AASHTO_0.ppt

The Transportation Research Board annual meeting is expected to have a special focus on climate change at the January 2009 meeting. The spotlight theme is Transportation, Energy, and Climate Change. TRB’s Technical Activities Division Planning and Environment Group is holding its second annual competition to find top methods for communicating transportation concepts to non-professional audiences; Communicating Energy and Climate Change Concepts Related to Transportation to John and Jane Q. Public http://www.trb.org/news/blurb_detail.asp?id=9163. The winner will be announced at the 2009 TRB 88th Annual Meeting, January 11-15, 2009, in Washington, D.C. The top ten entries will be showcased in a poster session at the TRB Annual Meeting and featured in an article in TRB’s TR News.