

**Testimony of
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Chair, Climate Change Steering Committee
American Association of State Highway and
Transportation Officials**

Regarding

**Energy Reduction and Environmental Sustainability in
Surface Transportation**

**HOUSE COMMITTEE ON TRANSPORTATION AND
INFRASTRUCTURE, SUBCOMMITTEE ON HIGHWAYS
AND TRANSIT**

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Founded in 1914, AASHTO represents the departments concerned with highway and transportation in the fifty States, the District of Columbia and Puerto Rico. Its mission is a transportation system for the nation that balances mobility, economic prosperity, safety and the environment.



Good morning, I am John D. Porcari, Secretary of the Maryland Department of Transportation. Thank you for the invitation to speak today on issues of critical importance to the nation — energy dependence, environmentally sustainable transportation and global climate change.

I am appearing on behalf of the American Association of State Highway and Transportation Officials (AASHTO), where I am the Chairman of the new AASHTO Climate Change Steering Committee. I will also touch on some Maryland activities and initiatives.

Current and future transportation growth patterns and the way that we develop transportation systems are important factors in sustaining the world's limited economic, environmental, and social resources. Transportation represents 10 percent of the world's gross domestic product, is responsible for 22 percent of global energy consumption and 25 percent of fossil fuel burning across the world, and produces approximately 30 percent of global greenhouse gases. As such, the transportation sector will play a key role in addressing global sustainability concerns, including depletion of resources and global climate change.

AASHTO has acknowledged these challenges and as a result, in May 2007 brought together transportation experts from across the nation, representing users, builders and providers of our transportation system for a three-day Transportation Vision and Strategies for the 21st Century Summit in Cambridge Maryland. The resulting report, *A New Vision for the 21st Century*, recognized the difficult challenge of expanding the transportation network's capacity to serve a growing population and communities and an expanding economy while simultaneously reducing the environmental footprint of the system. To address this challenge, AASHTO adopted the "Triple Bottom Line" approach, to encourage sustainable development by evaluating performance on the basis of social, economic and environmental impacts.

The following are the elements of the triple bottom line approach and the steps required to achieve them:

1. *Robust economic growth*: Deliver a sustainable, high-performance transportation system in support of a robust economy by first optimizing existing infrastructure, then reshaping demand, and lastly expanding judiciously.
2. *Improved quality of life for all citizens*: Enhance quality of life by integrating transportation with the built environment by using the full tool kit, including land use policy, and diversified mode choice.
3. *Better-than-before health of the environment*: Embrace environmental stewardship as a preeminent approach to delivering transportation services that result in a zero carbon footprint and a "better-than-before" environment.

Success in Maryland

We have incorporated this thinking in Maryland. Taking advantage of recent changes to wetland regulations that now allow a “watershed approach” to be used for mitigation, Maryland developed a geographically diverse mitigation package for the much-needed replacement of the Woodrow Wilson Bridge that met the goals of the environmental resource and permitting agencies, while having a broad focus on providing restoration in a larger watershed, the upper tidal Potomac.

The plan to replace lost aquatic habitat through a diverse scope, from building a fish ladder on Rock Creek to creating artificial fish reef in the Chesapeake Bay, was unconventional in the sense that we did not replace wetland for wetland, stream for stream. The site had been used as an unregulated dump in the 1950's and 60's. Following creation of a new sanitary landfill and extensive excavation of the old trash, a new tidal wetland was created.

Not only did this site create new aquatic habitat in the Anacostia River, it also removed a historic source of pollution. The project mitigated man-made blockages on 4 tributaries to the Potomac using innovative stream restoration design, creating over 23 acres of wetlands and opening up approximately 30 miles of historic spawning habitat to migratory river herring and shad, as well as bringing water quality improvements, flood control, and improved aesthetics to the area. We also replaced 140 acres of reforestation in the watershed.

Maryland would like to expand the use of such creative processes to allow the State to prioritize mitigation projects to those areas with the greatest restoration potential for Chesapeake Bay. To improve the restoration effort, our Governor Martin O'Malley called for the creation of Baystat, a statewide tool designed to assess, coordinate and target Maryland's Bay restoration programs, basing decisions on the best available science, with regular reporting and accountability.

Mitigation projects were developed with multiple parties, including local governments, interest groups, and regulatory agencies at state and federal levels. Areas that had been identified for restoration but previously lacked funding were incorporated into the mitigation program, providing the opportunity for projects to be built or areas preserved - goals long been sought after by scientists and concerned partners of the Potomac watershed.

The state resource and regulatory agencies and MDOT are partnering in developing a process to use the Bay watershed as the scale for locating mitigation with the intent to provide high quality cost effective restoration projects that target State resources to the Bay restoration effort. This is the kind of flexibility we'd like to see in the implementation of federal programs and use of federal funding for states that have the data to support an ecosystem approach.

Unfortunately, the federal regulatory community has not traditionally supported states' desire to carry out compensatory mitigation for construction projects outside the immediate vicinity of the impacts, and we are still limited by federal interpretation of our authority to place mitigation within a larger ecological context. The linking of impacts and mitigation can have the unintended consequence of mitigation sites being chosen for their proximity to the impact site rather than their ecological value, while an opportunity is lost to further a state's strategic plan for restoration. We urge Congress to support data driven decisions that reflect states' needs and statewide environmental goals.

AASHTO and Climate

AASHTO further recognized that to make a positive contribution to the issue of global climate change, transportation policies need to reduce dependence on foreign oil, reduce energy consumption, and reduce travel demand, relative to current trends. To achieve these goals AASHTO called for:

- Reducing oil consumption by 20 percent in 10 years,
- Doubling the fuel efficiency of new passenger cars and light trucks by 2020, and the entire fleet by 2030, and
- Reducing the national rate of growth of vehicle miles traveled from the predicted 2 percent per year to 1 percent per year.

To achieve the proposed reduction in VMT growth, AASHTO proposed:

- Doubling transit ridership by 2030,
- Significantly expanding the market share of passengers and freight moved by rail rather than automobiles and trucks,
- Reducing the percentage of commuters who drive alone to 1980 levels, and
- Increasing the percentage of those who ride transit, carpool, walk, bike and work at home.

Environmentally Sustainable Transportation

AASHTO and its members are working diligently to promote environmentally sustainable transportation in a holistic and integrated manner to ensure that key concerns such as depletion of resources and global climate change are effectively addressed. In 2007, the Center for Environmental Excellence by AASHTO published *Above and Beyond: the Environmental and Social Contributions of Americas Highway Programs*. This report describes programs and projects that illustrate how transportation agencies are going beyond regulatory requirements to contribute to the environmental, social, and economic well-being of their communities. The report provides important facts on how transportation makes a real difference to our quality of life through investments in areas including context sensitive solutions, historic preservation, recycling, clean air, integrating transportation and land use, walking and biking trails, wetlands and water quality, wildlife preservation, sound barriers, scenic byways, and wildflowers and native vegetation.

Trends cited in the report include the following:

- 27 state transportation agencies have implemented or are in the process of developing environmental management systems.
- 41 states have made significant progress in implementing context sensitive solutions.
- 43 transportation initiatives in 30 states have been identified as exemplary ecosystem initiatives.
- State agencies have identified more than 100 actions taken to help wildlife along roadways.
- Since 1992 the transportation sector has invested more than \$14 billion for more than 17,000 projects to reduce air pollution from motor vehicles.
- Transportation agencies are providing 2.6 acres of wetland mitigation for every acre of wetlands impacted by federal-aid highway projects. At the same time, improved technologies and broad-based watershed approaches are improving efforts to protect and restore water resources and address highway runoff.
- Since 1992, transportation programs have provided more than \$7.8 billion to fund more than 22,000 transportation enhancement projects aimed at improving America's communities.
- Transportation represents the largest single source of federal funding for state and local historic preservation efforts. From 1992 through 2006, Transportation Enhancement activities provided \$347 million for historic preservation, \$804 million for rehabilitation of historic transportation facilities, \$37 million for archeological planning and research, \$101 million for transportation museums, \$218 million for acquisition of scenic and historic easements, and \$504 million for scenic and historic highway programs.
- Transportation programs provided almost \$3 billion in funding for bicycle and pedestrian initiatives from 1999 to 2006.
- Highways continue to be a nationwide leader in recycling, with transportation agencies stepping up efforts to reuse road-building materials and incorporate recycled products into the nation's highway surfaces.
- Transportation agencies are increasing efforts to manage vegetation on some 12 million acres of land on America's roadsides, working to control invasive weeds and cultivate native grasses with wildflowers.
- Through the end of 2004, 45 state departments of transportation and the Commonwealth of Puerto Rico constructed over 2,205 linear miles of noise barriers at a cost of over \$2.6 billion.
- Since 1992, the National Scenic Byways Program has provided over \$275 million in funding for more than 2,100 state and nationally designated byway projects in 50 states, Puerto Rico, and the District of Columbia.
- States are working with communities using new technologies and strategies that integrate transportation and land use planning to promote mobility as well as environmental and economic sustainability.

- Thousands of environmental stewardship practices, policies, and programs are currently in use by state transportation agencies for highway construction and maintenance.
- Over 550 state stewardship and streamlining programs, policies, and initiatives have been documented by the Federal Highway Administration.

Global Climate Change

State DOTs want to be part of the climate change solution. States are already leading the effort to reduce the carbon footprint for future generations. This fall, incoming AASHTO President Alan Biehler adopted as one of three areas of emphasis for his term: *Sustainability: Addressing energy security and climate change*. In addition, AASHTO has undertaken a number of climate change activities, including:

- Publishing, in April 2008, a Primer on Transportation and Climate Change;
- Adopting a comprehensive climate change policy statement; and
- Developing a Climate Change Steering Committee to provide climate change policy direction to AASHTO and to supply AASHTO members with timely information, tools and technical assistance to assist them in meeting the difficult challenges that arise related to climate change.

The AASHTO Transportation and Climate Change Primer was developed to provide AASHTO members with an introduction to the issue of climate change and its implications for transportation policy in the United States. The paper is organized into five parts:

- *Part I summarizes the current state of scientific knowledge concerning the causes and impacts of climate change*
- *Part II provides an introduction to climate change policy issues*
- *Part III discusses trends in greenhouse gas emissions from road transportation*
- *Part IV reviews potential measures to reduce greenhouse gas emissions from road transportation*
- *Part V identifies issues for further study*

The Primer is based on the most recent research in the field. Its purpose is to outline for AASHTO members the current thinking of governmental agencies, researchers, and advocacy groups on the issue of climate change and transportation.

With the current surface transportation authorizing legislation expiring in September, 2009 and climate change being a top priority for the new Administration as well as Congress, we have a unique opportunity to put all of the pieces on the table and look at climate change holistically, through both climate change and new transportation legislation. The challenge in this transportation authorization will be to institute effective national policies and guidelines for reducing GHG emissions and adapting to the impacts of climate change, while also minimizing regulatory burdens and ensuring that the

transportation system continues to deliver a high level of mobility and safety for passengers and freight traffic.

AASHTO adopted a comprehensive climate change policy related to both transportation authorization and climate change legislation. In the transportation sector, we must look broadly at opportunities to reduce GHGs, including through vehicle technology, alternative fuels, reducing travel demand, transportation system operation and driver behavior, and reducing the State transportation agency's own carbon footprint. When looking at the bigger picture, you see the necessity of achieving not only national, but global goals and the great importance that vehicles and fuels will play in achieving those global goals. The greatest potential for greenhouse gas emission reductions from the transportation sector will come from CAFÉ standards to encourage better vehicle fuel efficiency, and advances in vehicle technology. Comprehensive climate change legislation should include a major national research and development initiative to transition the entire transportation vehicle fleet to zero-carbon fuels. Such technological breakthroughs can help not only the U.S., but countries around the world achieve greenhouse gas reductions.

Improved operation of our highway system can help to improve mobility while reducing GHG emissions. Emissions are highest, on a per-mile basis, when vehicles are sitting in traffic congestion, are moving at stop-and-go speeds, or when operating at very high speeds – above 60 mph. A new Operations and Management Program should be established at \$3 billion per year to direct funding toward activities that maximize the efficiency of the transportation system, through effective management of available road capacity and reducing delays. Broader deployment of ITS technology should be a major focus of the Operations Program. Additionally, a Transportation System Improvement and Congestion Reduction Program should be established at \$11 billion per year. Bottleneck relief would be an eligible activity under this program.

In the near term, emissions reductions can be achieved by slowing the rate of growth in vehicle miles traveled. Through policies and investments we can encourage more ridesharing, telecommuting, trips by transit, by bike, or on foot, rather than by car. For example, AASHTO supports doubling the level of transit ridership by 2030 and increasing transit funding 80% to \$93 billion over six years. AASHTO recommends doubling Transportation Enhancement funding to \$1.1 billion per year to support bicycle and pedestrian programs and projects. AASHTO also supports establishing a Transportation and Land Use Program, funded at \$100 million per year to support better coordination of transportation and land use policies between state DOTs and local governments to reduce travel demand. AASHTO supports encouraging more long-haul freight to be moved by rail, rather than by truck, federal support for intercity passenger rail, and encouraging an increased market-share of regional travel to be carried by intercity passenger rail rather than by car.

The challenge of addressing climate change should be addressed as part of the existing statewide and metropolitan transportation planning process, not on an individual project level. The planning process provides the appropriate venue for states and MPOs, under

uniform federal guidance, to develop strategies for reducing GHG emissions from the transportation system, adapting the transportation system to the impacts of climate change, and increasing the absorption of GHGs.

AASHTO recommends creating a new Climate Change and Air Quality Program to Replace the Congestion Mitigation and Air Quality (CMAQ) program. The new program would provide funding for existing CMAQ eligibilities and addressing climate change, including dedicating \$1.7 billion per year to planning and actions to reduce greenhouse gas emissions from the transportation system, adapt the transportation system to the impacts of climate change, and increase absorption of greenhouse gases.

If carbon taxes or a cap and trade system is enacted to reduce overall emissions, including exacting fees from oil refineries, AASHTO believes that a share of revenues proportionate to the transportation sector contribution to greenhouse gas emissions should be directed to transportation-related solutions. This could provide substantial funding for: (1) reducing GHG emissions from the transportation system, (2) adapting the transportation system to the impacts of climate change, and (3) increasing the rates of GHG absorption.

Maryland's Energy and Climate Actions

Recognizing the importance of addressing climate change in a state that is so vulnerable to rising sea levels, Maryland is taking action on climate change now. As part of the State's Smart, Green, and Growing legislative package, Governor Martin O'Malley is pursuing state legislation to commit Maryland to reduce its greenhouse gas emissions 25 percent by the year 2020.

Recent State initiatives include participation in the new Regional Greenhouse Gas Initiative cap-and-trade program, adoption of Clean Cars legislation, and Empower Maryland. We are strengthening our Renewable Portfolio Standards to increase our share of clean energy; enacting "living shorelines" requirements; strengthening the Critical Areas Act to protect sensitive shorelines; adopting new green building standards for public buildings and investing in green technology for schools; transitioning the state auto and bus fleets to hybrids; fully funding land conservation programs; reinstating the Office of Smart Growth; supporting transit-friendly development; improving mass transit options; encouraging smart growth BRAC zones; and providing technical and financial assistance to Maryland's coastal counties to adapt to sea level rise. These actions, along with the Maryland Climate Change Commission Climate Action Plan, which details 42 options to reduce greenhouse gas emissions in the transportation and energy sectors, demonstrate that our reduction goals are achievable and beneficial.

Introduced by the Governor in October 2008, Maryland's Smart, Green & Growing initiative was created to strengthen the state's leadership role in fostering smarter, more sustainable growth and inspire action among all Marylanders to achieve a more sustainable future. The Initiative brings together state agencies, local governments, businesses and citizens to create more livable communities, improve transportation

options, reduce the State's carbon footprint, support resource based industry, invest in green technologies, preserve valuable resource lands and restore the health of the Chesapeake Bay.

Conclusion

Today, the mission of the nation's transportation sector goes beyond ensuring mobility to achieving the larger societal goal of integrating economic, social, and environmental sustainability through transportation design and investment. Approaches such as context sensitive solutions and integrated planning provide transportation agencies the tools to consider economic, social, and environmental factors as they develop transportation solutions.

Mr. Chairman, Members of the Subcommittee, the importance of the subject you have under discussion today is of vital national importance. It is in the interest of us all to take on the challenge as vigorously and effectively as we can. On behalf of Maryland and of the AASHTO member states, I promise that we will continue to work with you in that effort.