

A SAFER ROAD TO TOMORROW

July 2011 Newsletter

Understanding Vehicle Miles Traveled

With more fuel efficient vehicles and alternative fuel vehicles becoming the norm, the current method of highway funding is going to become insufficient. Today, the recognized funding mechanism is the road toll (gas tax), which charges the users of the highway system. This funding mechanism has already experienced a decline in revenue as inflation and other factors increase, and that will only continue as newer vehicles replace the older fleet. With the realization that the road toll will not be able to support highway funding in the long-term, it is necessary to look at viable alternatives.



One alternative that has become popular is a vehicle miles traveled system. Like the road toll, this method charges drivers for the amount they use the road. Drivers are charged based on the number of miles driven in a given timeframe. People who use the roads more pay more, while people who use the roads less pay less. This method will be sustainable into the future because while fuel consumption is decreasing, vehicle miles traveled are increasing. In New Hampshire, vehicle miles traveled increased thirty two percent between 1990 and 2008, according to The Road Information Program (TRIP). This trend is predicted to continue over time.

Another benefit of this system is that operators of alternative fuel vehicles will be charged for their use of the road, where they aren't currently. While still in the preliminary stages, several states have explored implementing a vehicle miles traveled program, including: Alabama, California, Iowa, Indiana, Kentucky, Michigan, Minnesota, Utah, and Washington State.

Data Calculation of Vehicle Miles Traveled

Since the system relies on accurate calculation of miles driven, it is important to develop a reporting method that is reliable and resistant to evasion. Through research and pilot projects, three common methods have emerged. The first relies on a vehicle's odometer. This method can be used in old and new vehicles because no new equipment is needed. With odometer calculation, drivers can report their vehicle miles traveled during the annual registration process, or through certified stations. If certified stations are used, a time period (likely annually) would need to be established for drivers to submit their travel information.

The second and third options require a data collection point or "back office" to be formed. Vehicle Identification Devices collect data through devices attached to a vehicle that is then transmitted during the fueling process or by gantries (similar to open road tolling). Additional equipment would be needed for both the vehicle and the data collection system. The third option, On Board Units, collects data through devices that are attached to a vehicle's on-board diagnostic port. Information could be transmitted in a similar way as the Vehicle Identification Device.

Payment Methods

Payment varies with whatever data collection method is used. The method chosen will also dictate what additional infrastructure is needed for operation. The simplest is odometer calculations. Using this method, drivers could pay their vehicle miles traveled rate during the annual registration process. Certified calculation stations could be established as well, but would add an unnecessary cost.



A SAFER ROAD
TO TOMORROW

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Safer Road Partners

Associated General Contractors of NH

The Associated General Contractors is a non-profit trade organization of general contractors, subcontractors, and industry professionals dedicated to improving industry standards.

NH Good Roads Association

NH Good Roads Association is a non-profit trade organization established to encourage the development of a safe, efficient and environmentally sound highway transportation system.

Safety and Health Council of Northern New England

The Council's mission is to educate and promote safety & health policies, practices and procedures that prevent and mitigate human economic losses arising from unintended causes.

NH Association of Chiefs of Police

The Association secures a closer relationship among commanding officers all over the state, to encourage a cooperative relationship among all police officials.

NH Lodging & Restaurant Association

The Association is a non-partisan organization to promote, protect and educate the food service and lodging industries and to ensure positive business growth for our members.

Business & Industry Association

The Association is NH's leading business trade association. It advocates for business interests with state and federal legislators and regulators.

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New Hampshire's 2011 Infrastructure Report Card Released

Overall, New Hampshire's infrastructure received a C in the 2011 report card issued by the American Society of Civil Engineers. This is the same grade received in 2006, and means that overall, the state's infrastructure is in fair condition. While the grade shows that the infrastructure did not dramatically worsen, it also did not improve. Adequately maintained infrastructure is necessary to maintain quality of life. The chart below shows New Hampshire's report card broken down by types of infrastructure.

	GRADES		Description
	2006	2011	
Aviation	B-	C+	New Hampshire's airports need stable, long-term funding programs at the State and Federal level.
Bridges	C+	C	Many steps have been taken toward addressing priority and red list bridges in the State. With continued funding and support of the state and federal level, NH has goals in place to substantially improve the bridge system.
Dams	C-	C-	Although inspection programs have improved, there needs to be a long term plan and funding to assist repair on privately and municipally owned dams.
Drinking Water	C	C-	State population continues to grow, putting more strain on urban systems. Lack of a national funding source and aging infrastructure continue to lower the grade.
Energy	B-	B-	Diversification of Energy Supply and continued investment in the transmission network are required to meet the future demand.
Hazardous Waste	C	C	Progress continues on cleaning up contaminated sites. Funding is barely adequate to sustain the current level of cleanups, and will not permit more rapid remediation of the State's contaminated sites.
Mass Transit	C-	C-	Funding and state-level funding mechanisms limit the feasible options for improved service in heavily populated parts of the state. Ridership has generally continued its slow, steady rise.
Railroads	C-	C-	Recent legislative initiatives and federal grants will enable the State to explore the viability of intercity/commuter passenger rail service. Freight rail service continues to languish from declining traffic and poor maintenance of some of the privately owned lines.
Navigable Waters	D	D+	State and federal budget concerns will reduce the funding that will be dedicated to improvements in the State's waterways. However, several critical projects have been completed and/or are underway. Needs continue to outpace available funds.
Roads	C	C-	The completion of many recent safety, resurfacing, and congestion mitigation projects have benefited NH's road system greatly, but long term revenue and funding solutions are sorely needed for future highway maintenance and improvement.
Schools	C	C-	School facilities continue to age faster than investment is being made. The lack of a recent assessment prevents a complete understanding, but the current moratorium on new project funding will continue to make worse.
Solid Waste	C+	C	Securing new landfills and increasing levels of recycling are top priorities as current landfill capacity is expected to fill up by 2021.
Wastewater	C	C-	State population continues to grow, putting more strain on urban systems. Lack of national funding source and aging infrastructure continues to lower the grade.

Study Shows Public Health Cost of Traffic Congestion

The Harvard Center for Risk Analysis recently released a study that estimates 2,200 people died prematurely from pollution caused by traffic congestion. The related public health cost was approximately \$18 billion. The study was conducted in 83 urban areas, and only considers the cost of related mortality, and not the costs that could be associated with other health effects of congestion (morbidity, health care, insurance, accidents, etc.).

In addition to the cost to the public health, the study also predicts that congestion will rise over thirty percent between 2000 and 2030. While the number of premature deaths related to traffic congestion are high, the fatality rate has been declining over the last ten years. In 2000, it was estimated that approximately 4,000 premature deaths could be attributed to traffic congestion.



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Payment for either the Vehicle Identification Device or On-Board Units could be made at the fuel pump, or electronically. New technology would need to be installed at the pump to charge the correct amount, or if gantries are used, these would need to be constructed. Payment at the pump would entail transmitting the miles traveled data to the fuel pump. Then the vehicle miles traveled fee would be calculated and that amount would be added to the bill, or given as a credit if already paid.

Each option presents its own advantages and disadvantages. While requiring payment during the time of registration requires the least amount of initial investment, it also limits the vehicle miles traveled system. Information collected from the vehicle miles traveled system can help future transportation planning, and provide valuable information on the travel trends of America. Therefore, choosing a more advanced system may be in the better interest of governments. The disadvantages include gaining public support, protecting against evasion, and a potentially large initial investment.

Program Implementation- State or Federal

Vehicle miles traveled can be implemented at either the state or Federal level. Just as the different data and payment collection methods have advantages and disadvantages, implementation does as well. With Federal implementation, the benefit is that there will be a cohesive system across the country. States will be able to use the Federal model as a guideline in the development of their own system. However, there may be stronger public support if introduced at the state level first. Additionally, the state's legislature would be able to tailor the system to meet the needs of the state's citizens. Drawbacks of state implementation include a lack of cohesion from one state to the next.

Another factor that must be taken into consideration is the transition time between the road toll and vehicle miles traveled. There will be time where both funding mechanisms are necessary in order to allow the public time to transition to the new system. With this in mind, the easiest way to implement the system would appear to be a method that involves paying at the pump. This system allows users to pay for their use of the road in the same manner as they do now. It also will allow transportation officials to collect valuable information for future transportation planning.

Questions For Consideration

This article provides a general overview of what a Vehicle Miles Traveled system is. Many questions need to be explored before a new highway funding mechanism can be employed. These questions include:

- Where/How would the data be stored/collected?
- What level of investment are legislative leaders prepared to make?
- How would the fee be determined?
- How would fraud and evasion be prevented?
- What would the transition from the road toll to vehicle miles traveled look like?
- Would the government mandate data collection devices for all new vehicles?

There are several reports that provide more information on establishing a vehicle miles traveled including ones produced by the states of Oregon, Virginia, and Minnesota.

**Highway Funding:
State & Federal**

With budget proposals in both the New Hampshire State Legislature and the Federal Government currently being discussed, one important area is transportation and highway funding. In New Hampshire, Governor Lynch proposed to fund the highway system with the previously enacted registration fee surcharge. The surcharge was passed during the 2009 budget session as a way to fund the highway system, but was set to sunset in June 2011. It was anticipated that during the two years a new highway funding plan would be developed, and a highway funding study commission recommended maintaining the registration fee surcharge, increasing the gas tax, or a combination of the two. The Governor chose to keep the registration fee surcharge, but the House removed it from their budget proposal. The Senate followed the House lead and did not reinstate the registration fee. Without the funding, New Hampshire's highway system will lose a significant amount of funding.



In the Federal government, Republicans have revealed their Budget Resolution, which includes substantial cuts in highway funding. If passed, New Hampshire stands to lose almost \$60 million in funding. Currently, the state receives \$157,856,187, and the proposal would bring that level down to \$99,692,079.

Inspector America Highlights Importance of Infrastructure

The History Channel is shedding new light on America's infrastructure. With the help of a host who has over thirty-five years of experience inspecting roads and bridges, **Inspector America**, highlights the country's worst infrastructure problems. Senior Vice President of Development and Programming, Dirk Hoogstra, said the following, "America's infrastructure is in need of attention, but this series isn't about pointing fingers. Local officials all over the country are doing their best to fix degrading infrastructures, some of which go back to the turn of the last century, and this show can be an advocate for them."

The host, Timothy Galarnyk, will show viewers the up close signs of decay and the potential destruction. He will also show how infrastructure works, and how it outlives its usefulness. The show airs Sundays at 10 PM.



A Safer Road to Tomorrow
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DOT Installs Electronic Message Signs

The New Hampshire Department of Transportation (DOT) will be installing electronic message boards on several state highways to alert drivers of important notifications. Additionally, installation of traffic cameras will improve incident response, work zone safety, and reduce traffic congestion.

A total of six “Dynamic Message Signs” (DMS), eight closed circuit television cameras, and four variable speed limit signs at three locations are being installed. Each DMS will be mounted on overhead sign structures and used to convey important electronic traffic messages. The Traffic Management Center (TMC) in Concord will control the system. Currently, the planned locations for the DMS’ are:

- I-93 northbound between Exits 8 & 9
- I-93 southbound between Exits 8 & 9
- I-293 southbound, south of Exit 1
- I-93 northbound between Exits 3 & 4 (Weigh Station)
- I-93 southbound between Exits 3 & 4 (Weigh Station)
- I-93 northbound, north of MA state line

The design-build project will cost \$3.8 million. For more information, visit www.nhdot.com.

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