

Public Works Financing

Published monthly since 1988

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Reprinted from January 2013

Transportation Policy Review

Plan B for Virginia Highway Funding

by Robert W. Poole, Jr., director of transportation studies at the Reason Foundation.

Virginia Gov. Bob McDonnell started the New Year off with a bang by proposing to replace the state's fuel tax with an increase in the state sales tax. McDonnell correctly points out that fuel taxes are a declining revenue source and therefore not sustainable long-term as the primary source of highway funding. Numbers released with his proposal show that it starts off revenue-neutral, but over time produces significantly more revenue—which the Governor proposes to divvy up among highways, transit, ports and aviation.

Politically speaking, it's not clear if the plan will gain traction, given the considerable opposition being expressed by people who are very concerned over abandoning the users-pay concept that has been the mainstay of U.S highway funding for nearly a century. Just as it is unfair to force Virginia residents who make little or no use of highways to pay for them via regressive sales taxes, it is equally unfair to allow large numbers of non-residents to use Virginia's highways at no charge. Even worse, by abolishing the concept of user fees dedicated to transportation, the proposal would greatly increase the uncertainty of future transportation budgets. Every legislative session would put highways in competition with schools, criminal justice, Medicaid, etc.

So instead of going down that path, Virginia legislators should consider an alternate way to fix the state's broken transportation funding system—one that preserves and strengthens users-pay/users-benefit rather than junking this core principle. That Plan B, as suggested in a recent Reason Foundation policy study, is to phase in

mileage-based user fees (MBUF) to reconstruct and modernize Virginia's limited-access highway system.

Limited Rollout

This could be implemented practically right away using today's low-cost all-electronic tolling (AET): transponders (E-ZPass) and license-plate tolling. And since Virginia holds one of only three slots in the federal pilot program for toll-based Interstate reconstruction of I-95, that highway would be the place to start. First, Virginia DOT would come up with a serious plan for widening and modernizing the entire length of I-95 in the state. North Carolina (which holds one of the reconstruction slots) has set forth a \$4.4 billion plan to widen and reconstruct its 182 route-miles of I-95. A draft of such a plan is VDOT's 2012 "I-95 Corridor Vision Plan," which identifies \$6.4 billion in reconstruction and widening needs (see p. 24).

Second, VDOT would make clear that since everyone who uses the rebuilt and modernized I-95 would benefit from using it, everyone would pay, based on the number of miles they drive on it. That would require equipping the full length of the corridor with gantries mounting the AET equipment, with a gantry between each set of on-ramps and off-ramps. The electronic toll would be the toll rate per mile times the number of miles driven on I-95. This is exactly analogous to how we all pay for electricity, water, natural gas, and other utilities.

Double Taxation

A number of options would need discussion and debate before finalizing the plan. It would be much easier, politically, if the transition began without concerns over "double taxation." That would mean giving Virginia residents rebates on their state fuel taxes for the miles they drive on I-95, based on the typical mpg of their vehicle type. Virginia could not directly rebate I-95 users' federal fuel tax, but it could base the rebate amount on the total fuel tax (state + federal) attributable to miles driven on I-95. Out-of-state users of I-95 would not get rebates, on the assumption that most of them would not have bought fuel in Virginia. Another option is to decide whether to implement the AET charges at the outset of reconstruction or only segment-by-segment, after each has been rebuilt and modernized. Fairness and political feasibility both argue for doing the latter, despite the opportunity cost of pre-construction revenue flow.

Even with those provisions that limit near-term revenues, the proposal would be revenue-positive in the medium and long term. That's the case because unlike gallons of fuel consumed, which will decline in coming decades, vehicle miles of travel will increase, as long as Virginia's economy keeps growing. And the revenue generated by per-mile charges would grow even faster if the initial rates are indexed to inflation, as is already the case for a number of toll roads around the country (e.g., Florida's). In addition, out-of state I-95 users would not receive fuel tax rebates, so their toll payments would be a net revenue increase.

Collection Cost

Some may object that generating revenue via tolling is too costly, eating up 20 to 30% of the revenue in the costs of collection and enforcement. By contrast, since fuel taxes are collected only from wholesalers, the conventional wisdom puts the cost of collecting and enforcing fuel taxes at about 1% of the revenue collected. But a recent Reason Foundation study by electronic toll collection expert Dr. Daryl Fleming demonstrated that with today's all-electronic tolling (AET) and a streamlined business model, this 21st century toll collection needs as little as 5% of the revenue for collection and enforcement. Moreover, recent research on the overall cost of fuel-tax collection and enforcement puts that figure at between 4.5 and 5% of revenue.

Revenue Estimates

Now let's look at a few cost and revenue numbers for toll-financed reconstruction, just to get some idea of the magnitudes involved. The December 2012 GAO report on mileage fees as a replacement for fuel taxes estimated the rates per mile needed nationwide for all roads to maintain existing conditions and performance: 2.2 cents/mi. for cars and 8.4 cents/mi. for trucks. But since Interstates cost a lot more to build and maintain than the average of all roads, it makes sense to consider higher rates for Interstates. I used 3.5 cents/mile for cars and 14 cents/mile for trucks (lower than nearly all current Interstate toll rates in states with tolling). I built a simple spreadsheet model with a 2.5% annual CPI adjustment and about 1% annual VMT growth rate, assuming tolling begins in 2020, and projected traffic and revenue through 2054. I also put net toll revenue at 90% of gross, allowing 10% for operating and maintenance expense. The net present value of the toll revenue stream (using a 5% discount rate) was \$7.15 billion.

Virginia DOT's current fiscally constrained plan for I-95 calls for making \$1.5 billion worth of capital improvements on I-95 over the next 25 years. But as noted previously, VDOT's 2012 "I-95 Corridor Vision Plan" identifies \$6.4 billion in investment needs, which is what it would spend if it had the money. Assuming the \$6.4 billion to be 2010 dollars, the net present value of net toll revenue (baselined to 2010) of \$7.15 billion exceeds the 2010 NPV of that capital investment.

But now we must factor in the assumed rebates. Looking ahead to the impact of much higher CAFE standards, assume cars average 36 mpg and trucks 6 mpg. At current fuel tax rates (federal + state), cars would be paying about 1 cent/mi. and trucks 6 cents/mi., totaling \$103 million per year. If two-thirds of that were rebated to Virginia residents and truckers, that's \$68.7 million per year. Over 35 years the rebates would consume \$2.4 billion gross, prior to discounting to present value. After including the annual rebates in the spreadsheet, the revised NPV of revenues is \$6.4 billion, equal to the required \$6.4 billion modernization cost.

The same process could be repeated for each of the other Interstate corridors in Virginia, using the authority to toll all lanes that is available under the federal Value Pricing Pilot Program: I-64, I-66, I-77, I-81, I-85. Since these would be mega-projects,

there would be value added by doing them as some form of long-term concession (design-build-finance-operate-maintain). That would shift construction, completion, and O&M risk to the private entity under a shadow-toll or availability-pay concession, and would also shift traffic and revenue risk if done as a real-toll concession.

Preserving Public Investments

Reconstructing and modernizing all of Virginia's Interstates in this manner would lead to significantly more investment in the state's most important arteries than would be provided under the fuel-tax status quo. And in contrast with the sales tax plan, this Plan B would ensure that the money went only for this critically important purpose, rather than having large shares of the sales tax revenue diverted to non-highway purposes (as the Governor has proposed) and even worse, of having future legislatures decide to spend larger sums of the sales tax money on schools, Medicaid, and other non-infrastructure purposes.

By demonstrating the feasibility of per-mile charging on limited-access highways, this Plan B could pave the way for introducing low-tech replacements for fuel taxes (such as systems based on periodic odometer readings) for lower-level Virginia roadways.

Users Pay

In my view, Plan B's best feature is that it preserves and strengthens the users-pay/users-benefit principle for highway funding. That is the best way to ensure sustainable public support for highway investment, since motorist/voters know that their user payments are going directly to produce better highways for them to use. And it means that all users, but only users, will pay the costs of 21st-century Interstates in Virginia.

Gov. McDonnell wants to leave a legacy before finishing his term in the statehouse. He has correctly identified the non-sustainability of fuel taxes for highway funding. But the plan he's put forward would scrap the most important principle of U.S. highway funding, and by doing so, risk future diversions of what should have been highway investment capital into numerous other government programs.

Replacing fuel taxes with a sustainable 21st-century funding system is the number one infrastructure challenge facing every one of our 50 governors and 50 state DOTs. Gov. McDonnell could create a real legacy if, after seeking wise counsel from the transportation research and policy community, he embraced something like Plan B instead. By enacting the Public-Private Transportation Act of 1995, Virginia became the pioneer state for public-private partnerships in transportation. It could likewise become the pioneer and role model for beginning the transition to mileage-based user fees.

Discussion by PWF Editor Bill Reinhardt

FAQs: A Practical Plan For A Limited Roll-Out of VMT on I-95 in Virginia (1/1/13, p. 20)

It is the widely held view in the U.S. that distance charging based on vehicle miles traveled (VMT) costs much more than collecting gas taxes, that it involves substantial technology risk, that truckers will kill it, that personal privacy issues raise insurmountable political problems, and therefore, to most politicians VMT equals VWP—villagers with pitchforks. (A law prohibiting VMT was introduced recently in Maryland).

Those assumptions may be wrong.

The FAQ section of this special report responds to the unique opportunity created by Virginia Gov. O'Donnell to take seriously a major demonstration of VMT in the U.S. Public Work Financing consulted industry experts and published documents to substantiate its belief that the conventional wisdom on VMT should be reexamined. Here's why:

1. Are we talking about VMT tolling the entire length of I-95 in Virginia?

Yes. Gantries to identify vehicles would be placed across the facility near Virginia's borders with North Carolina in the south and Maryland in the north, and at every entry and exit ramp in between. Vehicle miles traveled (VMT) would be calculated based on distance between entry and exit points, and would be multiplied by a per-mile VMT fee to calculate the VMT fees to be charged. Another way is to place a gantry across each highway link, between interchanges, and calculate VMT based on distances between the gantries that a vehicle passes.

2. How would the VMT collection system work?

All-electronic tolling would be used. There would be no cash toll booths. Drivers without E-ZPass accounts would be able to open an E-ZPass account or a license plate-based account at specified locations (e.g., on the highway, at visitor centers or rest areas). License plate accounts would incur an extra charge to defray the extra cost of video tolling technology that would be needed. Those without E-ZPass or license plate accounts would be "violators." Their license plates would be recorded through video tolling technology, and they would be billed through agreements with states along the eastern seaboard (i.e., the I-95 Corridor Coalition). Violators would pay additional charges and penalties to defray the administrative cost. Penalties would be adequate to make up for losses incurred due to violators who cannot be found or do not pay.

3. Isn't the cost of collecting VMT tolls much higher than simply collecting gasoline taxes from wholesalers?

A recent study by the Reason Foundation found that collection costs for all-electronic tolling amount to 5 cents per transaction currently at the Fort Bend County Toll Authority in Sugarland, TX. While license plate toll collection costs for vehicles without transponders would be higher, they would be recovered through the higher administrative charges that these motorists would face. Service fees and penalties would cover the costs of “violators” who do not have accounts.

“Limited” VMT

4. Most studies of VMT, including one this month from the U.S. General Accountability Office (GAO), figure it will take a decade or more to roll out VMT in the U.S. How could it be done much more quickly on I-95 in Virginia?

The time frame for implementation that GAO has estimated (i.e., ten years) as well as the costs for implementation it estimated do not apply to the proposed “limited” version of VMT fees proposed for I-95. The key deficiency of the GAO report is that it did not consider the “limited” VMT fee concept that would only apply to limited-access highway systems such as I-95.

The GAO considered three approaches to implement a VMT fee system—a GPS-based system; a pay-at-the-pump system; and a prepaid, manual system. The first two systems would require a new (and unproven) device to be installed in the vehicle, increasing costs, and all three would require a new (and unproven) back-office system, which would also raise costs. By restricting the VMT fee to the limited-access highway system, the proposed VMT concept for I-95 can use existing E-ZPass devices and existing back-office systems, thus eliminating the need for new devices and new back-office systems and the risks in setting up these new systems.

The proposed “limited” VMT fee concept, applied only to limited-access highway facilities, would achieve all the benefits listed in the GAO report for the three systems it considered, without any of the drawbacks it listed. The proposed “limited” VMT fee concept also provides these benefits:

- Opportunity to improve the efficiency of road use through variable pricing, i.e., charging road users a higher rate during peak traffic times and a lower rate during times with light traffic;
- Ability to improve equity by accurately pricing road use for all users and vehicle types consistent with the costs imposed; and
- Alleviation of privacy-related concerns of tracking privately owned vehicles, by not requiring the use of a GPS system which collects information on exact trip origin and destination (vs. only interchange location with E-ZPass).

The proposed “limited” VMT fee concept, applied only to limited-access highway facilities, would also avoid the various drawbacks listed by GAO for the three systems it considered:

- Privacy concerns and high costs for the GPS-based system;
- Logistical issues, inability to charge alternative fueled vehicles, and inability to charge variable fees for the pay-at-the-pump system; and
- Odometer tampering and inability to charge variable fees for the prepaid manual system.

The GAO report provides estimates of VMT fee rates required to provide the federal share of funding needed to maintain existing conditions and performance nationally—2.2 cents per mile for autos and 8.4 cents per mile for trucks. The proposed “limited” VMT fee concept for I-95 envisions higher rates (3 to 4 cents per VMT for autos, and 9 to 14 cents per VMT for trucks, depending on time of travel) for two reasons:

- The VMT fees would also cover the state’s share of costs, not just the federal share;
- Limited-access highways are more expensive to reconstruct and maintain, although they also have more traffic and therefore generate more revenue than non-Interstates.

VMT As A Value-Pricing Pilot

5. How could a “limited” VMT approach on I-95 and other limited-access roads be done in Virginia under current federal law and regulations?

The federal Value Pricing Pilot Program (VPPP), first enacted under the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, provided funding for value pricing pilot programs. The programs allow tolls or other fees to be imposed on existing free federal-aid facilities for the purpose of reducing congestion. The law remains in place until specifically rescinded by Congress.

MAP-21 did not rescind the pilot program, although it did not authorize any new funding for it. Under the law, 15 value pricing programs are permitted, which FHWA has interpreted to mean that 15 states may participate in the VPPP, with 15 state programs. Virginia has been allocated one of the 15 slots available under the VPPP. There are 14 other states that have also been allocated slots.

All the states that have VPPP slots may amend their existing VPPP agreements with FHWA to add as many facilities as they wish to toll. FHWA only requires that variable tolls be imposed, i.e., higher tolls during peak hours.

6. If other states want to follow Virginia’s lead, what change of law or regulation would be required to allow that?

The 14 other states that have VPPP slots do not need any change in Federal law or regulations to impose VMT fees on all their limited access facilities. They will,

however, need to impose higher fees during peak periods. The remaining 35 states will only be able to use the VPPP program to impose VMT fees if the 15-slot restriction under the VPPP is eliminated, i.e., the program will need to be mainstreamed – converted from a pilot program to a regular program codified under Title 23 USC.

Customer Buy-In

7. How would you convince the entire I-95 corridor to buy into this plan?

Since off-the-shelf technology would be used, the technical issues are not as critical as the public outreach and communication issues. There has been only one prior implementation of pricing on an existing free highway facility in the U.S.—on SR 520 in Seattle, WA. The outreach conducted by Washington State DOT to support public understanding was critical to the success of that project, which has been operating for over a year now. Outreach to the public in the entire state of Virginia would be more challenging, but VDOT will have the experience of Washington State DOT to build upon. No public or private entity knows more than Transurban right now about public outreach in the I-95/495 corridor where it conducted 960 public meetings to explain its congestion pricing system to its customer base. Public outreach and communication would need to begin at least one year before start of operations.

Truckers

8. Truckers in Virginia are dead set against tolling I-95. How could they be convinced that VMT is an acceptable alternative to either a sales tax or continued reliance on a gas tax?

The main benefit of the VMT fee for truckers is that the revenues will all be spent on the facility—the VMT fee is calculated based on actual needs to pay for I-95 capital and operating costs. With a diesel tax, truckers have no assurance as to where the money will be spent. A sales tax, however, may actually benefit them since it is borne by a broad base of taxpayers, many of whom may not use the roads to the extent and intensity that trucks do. For example, damage imposed by trucks on roads is several orders of magnitude higher than the damage imposed by passenger cars, yet the sales tax paid by truckers will not be very much higher than that borne by other road users. And out-of-state truckers will not pay any sales tax at all if they don't purchase anything as they drive through the state.

9. How would the VMT system address the problem of trucks diverting to local roads?

Diversion will not be a big issue on I-95 for two reasons. First, there are few viable alternatives to using I-95. Second, the VMT fees will be relatively low. Off-peak drivers would pay 3 cents per mile, and would save about 1 minute per mile relative to using surface arterials in the vicinity, assuming an average speed of 60 mph on I-95 vs. 30 mph on alternative routes. This means that only those who value their time

at \$1.80 per hour or less (i.e., 3 cents x 60 minutes) would divert during off-peak hours, and only those who value their time at \$2.40 or less would divert during peak hours when the VMT fee would be 4 cents per mile.

Truck drivers would not only save time, but also fuel. At 9 cents per mile during off-peak hours (i.e., 3 times the auto VMT fee), truck drivers driving the entire 178 miles through Virginia would spend \$16 in VMT fees, while the cost of fuel alone for that trip would amount to over \$100 at 6 mpg. Thus, an increase of just 16% in fuel consumption using alternate routes would make diversion uneconomical. In addition, truckers would save their time by using I-95, providing additional value.

Double Taxation

10. In the event that the state gas tax is not abolished, would I-95 users pay both state and federal gas taxes and VMT?

No, neither the state gas tax nor the federal gas tax would have to be eliminated for the concept to succeed. Of course, it would be an easier sell to the public if VDOT can say to them that it is replacing the gas tax with a VMT fee, thus putting to rest the issue of “double taxation.”

If the state gas tax is not eliminated, the issue of “double taxation” could be addressed through rebates on the VMT fees charged to the accounts of Virginia drivers. The in-state drivers could be credited on their accounts for state and federal gas taxes paid on fuel used on I-95, based on a standard mpg rate for the class of vehicle used. This rate would reflect the current fuel efficiency, so that the rebates per VMT would get smaller into the future.

It could be assumed that out-of-state drivers have bought the gas they used on I-95 outside the state, so no rebates would be owed to them. While the rebates would result in a reduction of total revenue from VMT fees, the shortfall would be made up by a proportional allocation from federal funds received by the state and from statewide gas tax revenues, which would exactly equal the total amount of the rebates issued.

11. How would the transition to statewide VMT be handled?

The transition could be handled using the rebate process explained above. VDOT could start with instituting VMT fees on I-95. Under the Federal Value Pricing Pilot Program, VDOT could then implement VMT fees one by one (with the same or different concessionaires) on I-81, I-66, I-64, I-85, and so on. Once all the Interstates have VMT fees, VDOT could eliminate all rebates as well as the state gas tax at the same time. (Perhaps it could opt out of the Federal Highway Trust Fund program, so federal gas tax rebates would no longer be needed).

Net Revenue Gain

12. If I-95 VMT fees were dedicated to meet capital and maintenance needs on I-95 alone, how would that impact funding for other roads in Virginia?

The VMT fee concept as proposed would ring-fence all VMT fee revenue on I-95, and the revenue would be sufficient to pay for all I-95 costs. If fuel taxes paid by E-ZPass account holders are not rebated, this would free up for use on other roads all the state's funds that are currently being spent on I-95. Gas taxes paid by I-95 travelers would help pay for other roads in Virginia.

To estimate how much the subsidy would be, consider the following. Gas taxes (including both state and federal taxes) amount to a little less than 40 cents per gallon on average nationally. In Virginia, they are 18.4 cents federal plus 17.5 cents state, for a total of almost 36 cents per gallon. Assuming auto drivers on a freeway driving at 60 mph free-flow speed get about 36 mpg, they pay about 1 cent per mile in gas taxes for each mile traveled on I-95. (At 18 mpg, they would pay 2 cents per mile.) And trucks, at 6 mpg, pay about 6 cents per mile.

Based on the numbers in the I-95 Corridor Vision Plan, annual auto VMT on I-95 amounts to 5.5 billion miles, and truck VMT amounts to 0.8 billion miles. So revenue from auto gas taxes on I-95 amounts to about \$55 million from autos (at 1 cent per mile) and \$48 million from trucks (at 6 cents per mile), for a total of \$103 million annually.

If fuel taxes paid by E-ZPass users are not rebated, this entire amount (more than \$2.5 billion over 25 years) would go to pay for other roads if the VMT fee is implemented, either directly through the state portion of the gas tax or indirectly through federal funds that are supported by the federal portion of the gas tax.

Based on current levels, VDOT estimates in its I-95 Corridor Vision Plan that it would only be able to support \$2.5 billion in capital and O&M spending on I-95 over a 25-year period, while projected needs are over \$12 billion (i.e. \$6.4 billion capital plus \$5.7 billion O&M).

The close comparison between the amount that would be generated from gas taxes on I-95 over 25 years and the amount that VDOT would spend over 25 years on I-95 (\$2.5 billion at current levels) suggests that VDOT does not currently subsidize non-Interstate roads using revenue from gas taxes paid by I-95 travelers.

But if it implements the VMT fee concept, there would be a \$2.5-billion subsidy for non-Interstate 95 roads if the state gas tax continues and gas taxes paid on I-95 by E-ZPass account holders are not rebated to their accounts. If Virginia gets rid of its 17.5-cents-per-gallon gas tax, the subsidy would be about half of \$2.5 billion, since the federal tax would still be collected and returned to Virginia through federal funds.

13. Is there an estimate of the I-95 costs that would need to be funded from VMT fee revenues over the first 25 years?

The attached table on p. 24 provides estimates of the revenue that would be generated with an auto fee of 3 cents per VMT off-peak, and a fee of 4 cents per VMT during peak hours (i.e., 6am to 10am and 3pm to 7pm). Truck VMT fees are assumed to be 3 times auto VMT fees, i.e., a surcharge of 200%. All vehicles would pay the base VMT fee, but only peak travelers would pay the 33% peak surcharge.

If VDOT chooses to use peak pricing, this concept could be implemented on all of Virginia's Interstate highways, since Virginia has a toll pilot slot under the Federal Value Pricing Pilot Program. That program allows tolling of all Federal-aid highways in Virginia. If gas taxes were to be terminated in Virginia (as proposed by Gov. McDonnell), VMT fees could be extended to the entire Interstate system to replace the gas tax revenue previously expended to rehabilitate, maintain and operate the Interstate system. Vehicle registration fees and vehicle property taxes could be raised to replace revenues for non-Interstate highways.

Why Choose E-ZPass?

14. The satellite-based GPS system used for tolling trucks in Germany is commercially proven. Why use a transponder system with gantries on I-95?

It comes down to cost. Most European countries are implementing countrywide tolls for trucks using a low-cost transponder, which cost about 5% as much as a GPS unit.

The German satellite-based system is much more expensive to set up and operate. The on-board units (OBU) of the German system have all the bells and whistles in them—GPS mapping computer, regularly updated toll rates and rules. They also have an antenna to receive messages from support beacons to improve on the accuracy of position finding by satellite.

The GPS savings is supposed to be on the ground in fewer gantries. Many links in the autobahn system are without a gantry. But to check the OBUs you need either gantries or mobile enforcement that can detect and classify the trucks there on the road—check with the OBU, count axles, assess weight.

Without enforcement on the road there is no way to be sure trucks have the required OBU and that it is set to correctly report number of axles, weight, emission class etc. In addition, the German system must be able to trigger a camera to establish the identity of the vehicle so its owner can be traced and taken to court if necessary for nonpayment.

Since you need all this infrastructure and enforcement capability regardless of the basic location-finding technology, the question becomes: why not just use simple E-ZPass-style communications to establish a link with the vehicle and its account number as it runs under the gantry and have the back office compute the tolls? The alternative is to have 700,000 OBUs in trucks computing the tolls from digital maps. There is considerable opportunity for fraud when you rely on the accuracy and integrity of OBUs outside your control.

Most of the vehicles traveling on I-95 already have an E-ZPass transponder on their windshields for use on tollroads in the Richmond area and Hampton Roads. To go to VMT, you'd simply put a gantry over each link—between each interchange—and the system would identify the vehicle going under each gantry and the back-office computer would do the usual lookups of distances covered by the link and toll rates for the different links and compute the toll for the trip. You have this operating on many tollroads around the world. n

Readers Respond to “Plan B for Virginia Highway Funding”

In Bob Poole's column last month “Plan B for Virginia Highway Funding,” the Reason Foundation's director of transportation studies proposed a phase-in of mileage-based user fees on Virginia's limited access highways, starting with I-95, in order to preserve the users-pay/users benefit principle. What follows are comments on that proposal from transportation professionals:

Anthony Bruzzone, Arup

“In order to move from an interesting policy debate among industry experts to eventual implementation, what is needed are pilot programs in critical interstate corridors to test the policy design, the funding allocation and pricing model, the delivery mechanism, and the technical issues needed for efficient implementation. I-95 in Virginia, as proposed by Bob Poole, would be an excellent pilot project. In California, as another example, the I-80 corridor has many of the same characteristics. The key issue, in our view, underpinning the success of pilots such as these is the buy-in of the local communities and how the funding allocation models address their concern – this, of course, in addition to having sufficient political appetite at the federal level to create the conditions for innovative pilot programs.”

A key first step in this vision is for Congress to allow tolling on the federal aid system nationwide.”

Emil Frankel, Bipartisan Policy Institute

“Whatever the political obstacles, it seems inevitable that America will slowly, steadily, and incrementally transition to greater reliance on forms of mileage-based funding mechanisms, combined with greater reliance on forms of general taxes dedicated to surface transportation, in order to support the operations of, and investments in, transportation systems and facilities. I believe that this transition will be characterized by the following elements:

- “First, the introduction of forms of mileage-based fees and greater reliance on tolls will be a ‘bottom-up,’ rather than a ‘top-down,’ process, that is, these funding mechanisms will be introduced in various states and metropolitan regions by the

action of state and local officials before comparable action is taken at the national level;

- “Second, in order to further greater reliance on mileage-based fees and tolls at the state and local levels, federal barriers to the introduction of such mileage-based systems (such as the federal prohibition on tolling the Interstate Highway System) should be eliminated; ideally, federal policy should establish incentives for states and regions to move in this direction;
- “Third, the mileage-based funding systems introduced by various states and metropolitan regions will resemble tolls, that is, they are likely to be limited to specific limited-access facilities and to rely on technologies resembling EZPass (with transponders and receivers, located in gantries over open highways), rather than on GPS capability. Almost certainly, these systems will also involve variable tolling, related to time of day and/or traffic congestion conditions.

“Variable mileage-based highway user fees or tolls, related to specific facilities, will increasingly be augmented by dedicated portions of general taxes to support other elements of the surface transportation system, such as arterials and other major roads, transit and commuter rail, and bicycle/pedestrian facilities.

“As to this last element, it should be noted that current policy at all levels of government has demonstrated a growing shift to general funding to support transportation, even if legislators and voters have not acknowledged that they are moving, at least to some degree, away from user-based funding for transportation. Examples of this unspoken (one might describe it, as absent-minded) policy shift are the transfer (and authorized transfer) of almost \$55 billion from the federal general fund to the Highway Trust Fund, in order to maintain authorized program levels in the face of stagnant (or even declining) revenues from federal motor fuels taxes; by the passage of scores of state and local initiatives to dedicate portions of state and/or local sales taxes to transportation (particularly, but not only, to transit) projects; and by Virginia Governor Robert McDonnell’s proposal to eliminate the state gasoline tax and to replace it with the dedication of a increase in the general sales tax to transportation purposes.”

Ray Tillman, traffic consultant

“A general comment that applies to many funding discussions and proposals is simply that assuming that only a single funding source or mechanism should be used is often incorrect. Particularly for a complex use of funds such as infrastructure financing, a combination of sources may be not only reasonable (so that those who benefit pay a fair share) but also politically wise. For Virginia, and many other states, this combination could include: the continuation of motor fuel taxes at some level; a dedicated state sales tax; mileage-based user fees on major highways using existing electronic technology; and others such as registration fee increases or surcharges. Other sources and combinations will be more appropriate elsewhere, of course.

“Mileage-based user fees could vary by: frequency of vehicle use to favor commuters; aggregate in-state mileage per month to produce volume discounts and selective partial tax relief; HOV use reductions; and/or other measures to achieve social or political objectives. The ratio of fee rates by vehicle category must be carefully addressed in addition.

“The share of infrastructure funding needs met by each source will be the subject of legitimate debate, but the important thing is that the burden is being more broadly shared and the amount hitting each funding category will be very substantially reduced. The target shares can vary over time or be reviewed and possibly modified every few years (nothing is absolutely permanent).”

Barry Schulz, Atkins Transportation

“The use of VMT on I-95, while presenting many challenging but solvable issues in dealing with out-of-state users, maintains the correct focus on the “user pay” approach to funding transportation. Implemented in a similar fashion to all electronic tolling, this approach establishes a strong connection to the user pay approach, allowing both resident and out-of-state users to contribute to the improvement, operation, and maintenance of this major east coast north-south corridor.”

Ron Utt, Virginia transportation advisor

“My focus has always been on how the money is spent, and a focus on raising more money to be misspent on what passes for “transportation” today just seems silly. I figure that with most transportation policy people on the right focused largely on finance, the spending side seemed to be a vacuum in need of filling, since that is where the left devotes it energy, with considerable success.

“Gov. McDonnell’s plan does what I think are a number of troublesome things beyond his financing schemes. These include (1) a guaranteed, off the top, \$300 million for Dulles rail, (2) the creation of a dedicated stream of revenues to transit, (3) the creation of a dedicated stream of revenues for passenger rail, and (4) an increase in the share of state spending for transit. These four provisions are included in the compromise legislation that’s on the governor’s desk for signing.”n