It’s obvious to most observers that Virginia has a significant transportation funding crisis. Perhaps the word catastrophe is more appropriate. Why?

Highway congestion costs the state severely in several ways, including as a factor in many accidents and fatalities. With highways as a key part of state infrastructure, congestion especially in Virginia’s two major metropolitan areas is a drag on the economy and quality of life. For example, in Hampton Roads in 2007 congestion was estimated to cost $501 million. In Richmond, the cost was $202 million. The Washington, D.C. metro area, of which Northern Virginia is a major part, is frequently cited as one of the nation’s most congested metropolitan areas.

In 2009, funding was so scarce that the Virginia Department of Transportation (VDOT) was unable to allocate any funding through the statutory formulas for primary, urban, or secondary roads. In 2008 and 2009, VDOT had to use bond proceeds to pay the match on federal funds, further reducing the availability of funding in future years.

Highway costs keep rising. It takes $2.09 today to buy the same goods—cement, asphalt, steel, and gravel—that $1.00 could buy in 1986. Without additional funds to pay for maintenance and construction, that’s another severe problem.

The Three P’s
The words philosophy, partisanship and power are heard over and over to help explain why there is a Virginia transportation impasse. The arguments go something like this:

• “It’s a matter of principle! Virginians should not be burdened with higher taxes when there’s an economic crisis.”

• “The legislative leadership has declared a policy of no new taxes.”

• “The legislative majority is in charge. The governor has too much power as it is, let alone be seen as a strong, successful political leader.”

Policy-makers and political leaders need to think beyond these obstacles. The transportation
funding crisis has hit gridlock. It seems that everyone, including both Democratic and Republican leaders, agrees there is a need for about $1 billion in new money for transportation, but the roadblock is how to get it. Should we use new taxes, take money from the general fund to use for transportation purposes, sell state facilities and put the profits into transportation, or do something else? There are workable options to solving the highway funding crisis. This article will suggest four—including at least two that do not require a tax vote or an immediate tax increase.

One look at the history of transportation in Virginia makes a clearly understandable point. The miles people drive in this commonwealth, and the numbers of licensed drivers and registered vehicles, have all increased dramatically. Since 1986, the last time transportation taxes were increased, and continuing through 2007, vehicle miles traveled annually increased from 51 million to 77 million miles. The capacities of our transportation systems—highways, buses, trains, airports and ports—have not kept up with demand. That creates a huge transportation policy quandary. Virginia has a transportation revenue policy that relies heavily on a cents-per-gallon tax that does not provide more revenue when fuel prices rise and is adversely affected by fuel saving vehicles. In contrast, maintenance and construction costs have risen rapidly.

The ability to purchase maintenance and construction materials from a cents-per-gallon tax decreases over time. The gas tax is a large part of our transportation revenue. Every person who buys gas in Virginia, whether a Virginia resident or just passing through, pays that tax. But the 17.5 cents we collected on every gallon of gas in 1986 has the purchasing value of just 8.4 cents a gallon today based on the Producer Price Index for Material and Supply Inputs to Highway and Street Construction.

As construction, maintenance and operating costs rise, there is less revenue for every kind of transportation expenditure if the revenue base lags in growth behind highway costs. That causes a severe structural problem.

Although there seems to be general agreement that there is a revenue shortfall of about $1 billion a year, there has been little agreement on how to fix it. During the gubernatorial campaign, the Republican candidate, Bob McDonnell (who was elected), outlined a vision that raised transportation revenues without the need for a tax increase. In fact, he pledged to veto any transportation tax increase bill that crossed his desk. His vision included, among other proposals, a wide variety of funding recommendations:

- Privatization of ABC stores with the proceeds assigned to transportation.
- Capturing revenue growth from port operations.
- Placing a percentage of sales taxes collected in Northern Virginia into a regional transportation account and investing in regional transportation projects.
- Enacting state border crossing tolls on Interstate Highways 81 and 95.
- Eliminating waste and inefficiencies from VDOT.
- Greater use of public-private partnerships.

Most of those actions will require state legislative approval or, in the case of tolls on federal interstate roads in Virginia, congressional authorization. Whether or not the governor-elect’s proposals can become law is not the point of this article. My point is to briefly explain why a revenue increase is needed, and suggest several alternative approaches to filling that $1 billion gap.
Need for Funding
The first need is to collect sufficient revenue to fund reasonable and necessary maintenance and assign funds for a six-year construction program. In Virginia, to get a sufficient amount, several revenue approaches are used. Figure 1 shows the sources of funding for FY2010.

To determine the total revenue needed, it is common practice to start the process by estimating reasonably expected revenue over a multi-year period and comparing it with transportation-relevant measures. These include, among others:

• Measuring unmet transportation needs for revenue (fiscally constrained or not);

• Measuring growth in transportation relevant statistics (population, vehicle registration, and vehicle miles of travel);

• Assessing the impact of inflation on future revenues and expenditures; and

• Comparing Virginia’s and adjacent states’ transportation taxes.

Assessing Need
The unconstrained measurement of unmet need (without considering funding availability) has become highly controversial. It has resulted in unacceptably large dollar requirements—currently somewhere above $100 billion or $5 billion annually over a twenty-year period. As a result, in past years this dollar amount has been cut by as much as half as a matter of political direction. Secondly, the methods used to accumulate unmet need are complex and tend to change from time to time, so the results are dismissed as inconsistent and not methodologically sound. Thirdly, since it is unlikely that funding can be found for anywhere near the total need identified, the result is not viewed as particularly useful for decision-making purposes.

More recently, this measurement has been constrained (to match the revenue that can reasonably become available). Although this measurement does not represent total need, it is viewed as much more realistic and more achievable.

Measuring Growth
A second approach for identifying why transportation system revenue requirements grow is to look at the stress being placed on the system due to growth in number of registered vehicles, vehicle miles traveled, number of licensed drivers, and lane-miles of road compared to transportation fund purchasing power as measured by the Producer Price Index. As shown in Figure 2 all of the highway use measures rose from 1987 to 2008, while purchasing power declined dramatically. What could be purchased for $17.50 in 1987, the year after the gas tax was last raised to 17.5 cents, cost $36.42 in 2009.

Figure 2: Cumulative Change in Highway Growth Factors from 1987 to 2008

Source: Virginia department of Transportation, Virginia Department of Motor Vehicles, and Bureau of Labor Statistics.

* Note: Data unavailable for 2008

“The unconstrained measurement of unmet need without considering funding availability has become highly controversial.”
Comparing Gasoline Tax Rates

The notion of comparing gasoline tax rates with those of adjacent states is used as a benchmark for Virginia in setting a new gasoline tax rate. If the adjacent state’s tax rate is lower than in Virginia, it is assumed the lower rate will attract Virginians near the state border to buy their gas in the state having the lowest rate. However, the actual cost of gasoline can vary state by state and day by day for lots of reasons other than taxes.

The recent volatility of gas prices demonstrates how global conditions can affect gas pricing. A cents-per-gallon tax does not take advantage of these global conditions. Table 1 shows current gas tax rates for adjacent states and the District of Columbia. Virginia’s 17.5 cent tax rate is 3.9 to 12.7 cents lower than rates of its neighbors. Three of the states have both cents-per-gallon (CPG) and percent of purchase usually collected at the wholesale level.

The price of gas is considered a detriment to increasing the state tax even though, when inflation is taken into account, gas prices were high in 1986 as well.4 For the sake of clarity I’ll assume there is agreement on the need for an additional $1 billion annually to provide revenue sufficiency. There are other important characteristics beyond revenue sufficiency—structural considerations should be taken into account. These include:

- The revenue structure must be dependable over time. A long-term dependable revenue source is needed in order to schedule long-term construction projects, consistent levels of maintenance, reliable revenues to maintain state support of local transit providers and city street payments, sufficient revenue to match federal funds, and, most importantly, a reliable and stable source of funding for debt service on bonds. Virginia looks ahead 20 years for planning purposes and allocates funds for the well-known and often unfairly criticized six-year program. One reason for the extended timeline is that many construction projects can take five to seven years to complete the preliminary engineering (right-of-way acquisition, environmental studies, and preparation of construction plans) and actual construction processes.

- The revenue structure should be responsive to inflationary cost increases. The most obvious purpose of these characteristics is shown in Figure 1. The latest tax increase in 1986 was set at 17.5 cents per gallon. Today the comparable purchasing power for maintenance and construction is 8.4 cents.5 The addition of a 0.5 percent general sales tax for transportation added a component that matched inflation. However, the gas tax is such a large part of transportation revenue that it too should be responsive to price changes in the general cost of living as measured by the Consumer Price Index and preferably, to changes in the cost of materials for highway maintenance and construction as measured by the Producer Price Index. A cents-per-gallon tax considers only the number of gallons purchased. A percent of sales tax takes the value of the gas purchased into account.

Table 1: Transportation Tax Amount and Approach for Adjacent States

<table>
<thead>
<tr>
<th>State</th>
<th>Total State &amp; Federal (18.4 CPG) Gas Tax</th>
<th>Total State Gas Tax (¢)</th>
<th>Cents per Gallon</th>
<th>Variable Tax Basis</th>
<th>Virginia (17.5 CPG) Compared to Other States</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>41.9</td>
<td>23.5</td>
<td>23.5</td>
<td>None</td>
<td>6¢ lower</td>
</tr>
<tr>
<td>KY</td>
<td>40.9</td>
<td>22.5</td>
<td>15.0</td>
<td>10% + 1.4¢ + 3.6¢</td>
<td>5¢ lower</td>
</tr>
<tr>
<td>MD</td>
<td>41.9</td>
<td>23.5</td>
<td>23.5</td>
<td>None</td>
<td>6¢ lower</td>
</tr>
<tr>
<td>NC</td>
<td>48.6</td>
<td>30.2</td>
<td>17.5</td>
<td>7% average wholesale or 12.4¢</td>
<td>12.7¢ lower</td>
</tr>
<tr>
<td>TN</td>
<td>39.8</td>
<td>21.4</td>
<td>21.4</td>
<td>Special 1¢/gal plus 0.4¢ environmental assurance fee</td>
<td>3.9¢ lower</td>
</tr>
<tr>
<td>VA</td>
<td>37.4</td>
<td>17.5</td>
<td>17.5</td>
<td>0.6¢/gal, petroleum storage tank fee</td>
<td></td>
</tr>
<tr>
<td>WV</td>
<td>49.9</td>
<td>32.2</td>
<td>20.5</td>
<td>5% average wholesale tax floor @ $2.20</td>
<td>4.7¢ lower</td>
</tr>
</tbody>
</table>


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4 1986 prices ranged from a low of $1.54 to a high of $2.80 according to www.api.org. Based on data from the Bureau of Labor Statistics, the average U.S. price of gasoline rose from 96 cents per gallon of unleaded fuel in June 1986 to $2.63 in June 2009.

A basic characteristic of most transportation taxes is that they are primarily related to the users of the transportation systems. Gas taxes and vehicle registration taxes have traditionally been viewed as fees for users of the highway systems. Trip ticket sales for rail and bus transit have traditionally been viewed as fees for personal mobility.

Ideally, there should be some attempt to have equity between various classes of vehicle users. For example, there are a variety of additional tax assessments for heavy trucks that cause more damage to the roadway than cars.

The Growing Crisis
The 1986 transportation initiative raised revenue that Governor Baliles stated would satisfy funding requirements for a 10-12 year period. For at least the last 12 years, Virginia has faced a growing funding crisis. At first it was a problem with cash flow to ensure that cash was available in line with the maintenance and construction bills. For at least the last eight years the nature of the crisis deepened to significant revenue shortfalls. Fallout from this crisis requires prompt action. There is no money to allocate to the commonwealth’s primary, secondary, or urban systems this year or for the foreseeable future! In order to provide the state match for federal funds, Virginia must use bond debt—comparable to mortgaging the future—and limiting funding flexibility in future years. Congestion, deteriorating roadways, risk of bridge failures, risk to the commonwealth’s AAA bond rating and VDOT’s AA revenue bonds, and lack of construction projects “on the shelf” when funds do become available are all possible outcomes when funds are in short supply.

Unfortunately the Virginia House of Delegates and the Senate have been at odds about the need for new revenue and especially how to raise it. The position of the House, and now that of the governor-elect, is clear—no new taxes. Some legislators have traditionally viewed as fees for users of the transportation systems. Trip ticket sales for rail and bus transit have traditionally been viewed as fees for personal mobility.

Where Do We Go From Here?
Given the magnitude of the shortfall and the need for funding, the question remains: are there possible ways to gain additional revenue without a tax increase? It is interesting to note that, in modern times, no tax increase has ever passed the Virginia General Assembly without the support of the governor. But highway-related fees or taxes in Virginia have traditionally been viewed as user charges rather than outright taxes. Table 2 on the next page shows the most typical options used in Virginia along with advantages and disadvantages.

Although not used in Virginia, it should be noted that a vehicle miles traveled (VMT) tax has become a popular idea elsewhere to replace the gas tax. Oregon, for example, had a voluntary 12-month pilot program with a VMT tax from 10 cents to 43 cents per mile depending on certain pricing zones. The advantage of a VMT tax is that it taxes actual use of highways and can be very precise in measuring road usage. The technology is available to implement a VMT tax. The disadvantages are primarily difficulty of administration, enforcement, and costs of conversion. The impact of a VMT tax on vehicle usage is unknown.

It would be possible for the General Assembly to raise revenue from any of these sources, but the declaration of the governor-elect of a potential veto and the House of Delegates’ position of passing any new gas taxes would render effort on any of the tax options in Table 2 unlikely to succeed.

A gasoline tax that adds cents per gallon, commonly viewed as a user fee approach to increasing revenue, has both advantages and disadvantages. It is administratively simple; collections are at the “rack” from the wholesaler. This involves only a few businesses in contrast to the numerous retailers involved in a tax on them. It is also desirable because everyone that both uses Virginia highways and purchases gas in Virginia pays it. This adds a high degree of equity since Virginians pay only for their use and do not subsidize out-of-state users. Such a tax also applies indirectly to

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6 http://leg1.state.va.us/cgi-bin/legp504.exe?071+ful+CHAP0896

7 http://www.courts.state.va.us/opinions/opnscvwp/1071959.pdf

8 Rack sales are wholesale truckload sales or smaller of gasoline where title transfers at a terminal.
consumers of goods that are shipped on Virginia highways since truckers pass on the tax in their freight charges.

Disadvantages are threefold. First, the cents-per-gallon buying power is reduced by the corresponding amount of inflation. Second, the advent of hybrids and other alternative fuel vehicles and the higher mileage of vehicles in general is a growing detriment to a cents-per-gallon tax. Third, the introduction of alternative vehicles and vehicles with higher gas mileage along with the higher price of gas is such that it would take a very significant and direct tax increase to obtain any major portion of the $1 billion revenue needed. There are other options. For example:

**Option 1: Index the gas tax.** The General Assembly could consider a conversion of all or a part of the 17.5 cent per gallon tax to a percentage tax rate based on price. In many states, the legislature sets a wholesale base price for tax purposes, however in others the tax is levied on the actual price charged retail sellers. There would not be a tax increase if the initial percentage tax were set at a base price equivalent to the amount of tax revenue under the current tax. Then, in future transactions, the tax revenue would float...
with the actual wholesale price. This action would not produce an immediate revenue increase, but in the future it would help keep pace with fuel price increases. For example, a 1 percent tax on the wholesale price of gas (and diesel) today (assuming a wholesale price of $1.90 per gallon) would produce an equivalent of about $84.8 million based on sales volume—increasing the revenue of a comparable one-cent per gallon by some $35 million or more. Does this approach meet the test of no tax increase? Future tax revenue is not based on a tax increase, but is based on an increased wholesale price. This would better reflect increases based on global events, including the impact of speculation on oil prices. Virginia actually had a percentage tax on gas briefly during the 1980s.9

In 1982 the General Assembly levied a 3 percent gross receipts tax on oil companies to fund construction and maintenance. The tax was repealed in 1986 when the wholesale price of gas dropped below $1.00 and in anticipation of the impending transportation initiative proposed by Governor Gerald Baliles.

Option 2: Extend the Sales Tax to Gas Purchases and Include Certain Other Sales. The 1986 inclusion of 0.5 percent on the general sales and use tax gave a big boost to revenue for transportation and it started to address the problem with inflation. Including gasoline in the sales tax base would raise substantial new revenue for transportation. Two areas that are exempted from sales taxes are Internet sales and other “tax expenditures” (exemption or reduction from a class of taxes). Eliminating or reducing tax expenditures has been frequently raised as a new funding source. Tax expenditures such as the exemption of motor vehicle repair labor costs could be eliminated with the added revenue used for transportation. Whether this is a tax increase or a tax expansion would need to be determined by the General Assembly and the governor-elect.

Option 3: Create a Statewide Transportation District. HB 3202 allowing the creation of regional transportation districts passed the 2007 legislature and was signed into law. Its central provision permitting a local tax may suggest another approach. With a bit of tweaking, a similar approach could be considered by creating a statewide transportation district. This action would not involve any new vote on taxes. Using the current example of the Northern Virginia Transportation District and the Potomac-Rappahannock Transportation District, Virginia could conceivably create a new statewide transportation district.

Sections 15.2-4505 and 58.1-1720 of the Code of Virginia now permit any single jurisdiction, any group of jurisdictions, or the General Assembly to create a transportation district. If the district is adjacent to the Northern Virginia Transportation District, it can levy a 2.1 percent tax on the price distributors charge their retail customers. That is existing law. The constitutional issue could be resolved in another way. The General Assembly could designate how a governing board representing elected officials from each jurisdiction should be selected or the political jurisdictions that are members of the district could appoint an elected member to represent that jurisdiction. With an executive committee selected from among participating jurisdictions, and all tax levies approved by a majority of the participating jurisdictions, the constitutional requirement might also be satisfied. Transportation districts have all the powers needed to carry out a transportation program. They have the power to:

• Prepare transportation plans;

• Construct, purchase, lease facilities and issue bonds;

• Enter into agreements with private companies;

• Enter into agreements with other counties and cities for contiguous transit services;

• Hire staff; and

• In some cases levy a 2.1 percent tax on the distributor’s sales of gas, as is the case in Northern Virginia and the Potomac and Rappahannock transportation districts.

One relatively quick way to organize the district might be to name the Commonwealth Transportation Board (CTB) as the governing body for all purposes except authority to levy a tax. To address that constitutional requirement (that taxes have to be levied by locally elected persons) any proposal for a tax would have to be approved by a majority of the governing bodies of the member jurisdictions; in effect, a local government referendum. The constitutional issue could be resolved in one of several ways. The General Assembly could designate a governing board and fix the tax levy, or perhaps it would be constitutional if the political jurisdictions that became members of the district could decide on which elected members to choose as a governing board.

9 1982 Acts of Assembly, Chapter 671 and codified as Section 58-730.9. In 1984 the tax was recodified as 58.1-2303. It was repealed in 1986 in Chapter 553.

“Including gasoline in the sales tax base would raise substantial new revenue for transportation.”
Option 4. Local Governments Can Create Their Own Transportation District, Statewide or Local without General Assembly involvement. As long as the district has contiguous statewide connections and is adjacent to the Northern Virginia Transportation District, even if it is full of holes like Swiss cheese, it would have all the same powers. Is this a solution the General Assembly can live with? It fits with many aspects of the previous compromise in HB 3202, using local districts and permitting them to levy their own taxes.

In Virginia more than 3.8 billion gallons of gas are sold each year. With a pump price over $2.50 a gallon, a 2.1 percent tax collected on the distributor’s sales could clearly close the gap between need and revenue, raising an estimated $199 million. The tax would keep pace with the price of fuel, and it would have statewide impact with regional focus. Local taxes would be used for local projects.

Obviously there are numerous political and logistical problems with this approach as there are with any revenue measure. As with the previous law, the General Assembly would shift new transportation tax responsibility to the local level. Unlike HB 3202, which limited registration and abusive driver fees to Virginia residents, the tax burden would fall on both in-state and out-of-state motorists, and it would essentially be a statewide measure.

An objection often raised is that gas prices are already too high to raise an additional tax. However, average gas prices in each of the adjacent states are not much different from Virginia’s even though some have much higher state gas taxes. For example, as I write this, the price for regular gas in Raleigh, NC ranges from $2.48 to $2.69. The gas prices in Richmond range from $2.34 to $2.67.

There is an argument that total motor fuel tax collections will diminish due to the high cost of gas, a perception there will be reduced travel, and the likely conversion of the automobile fleet to high mileage and alternate fueled vehicles. That is a point worth addressing.

As part of any legislation, why not mandate a long-term study to find alternative revenue sources that are not based on a gas tax, determine when they will become available, and set out a strategic plan on ways to transition from a gas tax to an alternate revenue source?

Summary and conclusion
Virginia has a significant transportation-funding crisis. Road congestion and highway maintenance and construction costs keep rising, while state transportation revenues are declining during a time of severe economic hardship. A widespread anti-tax philosophy, political partisanship involving both parties, and struggles for power between branches of government all contribute to the impasse. It is generally agreed that Virginia needs an additional $1 billion per year to fund transportation needs appropriately. Whatever the sources, the revenue must be dependable over time and responsive to price changes. Governor-elect McDonnell has proposed several alternatives for funding without a tax increase but most would require legislative (and in some cases, congressional) approval and could not be implemented quickly or easily. There are other workable options to solving the highway funding crisis. This article suggests four—at least two that do not require a tax vote or an immediate tax increase. (Admittedly, each option involves some “political gamesmanship”—but isn’t that what legislatures and governors engage in frequently?) Some involve changes in the structure of various taxes but this may be necessary, given the scope of the crisis. Another option would be to create a statewide transportation district. If Virginians hope to maintain their quality of life, some compromises about the “three P’s” of philosophy, partisanship and power are in order. State policy-makers must make some hard choices to end the transportation funding crisis.

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Ray D. Pethel is the director of the Transportation Policy Group at the Virginia Tech Transportation Institute. He was the founding director of the Joint Legislative Audit and Review Commission, holding that position from 1974 to 1986. He served as Commonwealth Transportation Commissioner and Chairman of the Commonwealth Transportation Board from 1986 to 1990 under Governor Gerald Baliles and Commissioner and Vice-Chairman of the board from 1990 to 1994 under Governor Douglas Wilder. He was Interim Commissioner from January to April 2002 as part of Governor Warner’s administration. Pethel has seen both sides of the transportation revenue picture. During his first term as Commissioner he worked to market the 1986 initiative that raised $450 million for transportation. In 2002 he was responsible for cutting $2 billion from the six-year transportation program in recognition of the revenue consequences of the economic downturn and because of over-programming.
