BACON'S REBELLION
The Op/Ed Page for Virginia's New Economy

The Oregon Solution

Don't take it on *my* word that mileage fees and congestion charges are the best replacement for the faltering gas tax. See what they're doing in the land of Birkenstocks and lumberjacks.

By James A. Bacon

I'm not normally a big fan of public policy nostrums emanating from the "left" coast of the United States, but I've got to credit the state of Oregon for some brilliant thinking about transportation funding. The fact that it bears remarkable similarities to formulations that I have advanced here in *Bacon's Rebellion* (see "The Swedish Solution," Sept. 25, 2006) hasn't influenced my opinion in the slightest... well, maybe it has *a little*.

Like lawmakers in Virginia, the legislators of Oregon realized a few years ago that they faced a long-term transportation funding problem. Like the Old Dominion, the Beaver State depends upon the gasoline tax for a significant percentage of its transportation revenues. Like us, Oregonians grasped that gas tax revenues can't keep pace with the increase in population and vehicle miles driven.

In place of the gas tax, Oregon seeks "a long-term, stable source of funding" for maintenance and road improvements. If that rhetoric sounds familiar, it echoes the justification by Gov. Timothy M. Kaine and his allies in the state Senate for higher taxes.

But where self-styled fiscal conservatives in Virginia seek to address the funding gap by proposing to raising taxes on anything they think they can slip past the voters, blue-state Oregonians are exploring an approach guided by market principles. As outlined in a June 2005 report to the legislature, the Oregon Department of Transportation is proposing to phase out the gasoline tax over 20 years in favor of a tax based upon a mileage fee and congestion pricing.

Oregon's "road user fee" would use a combination of odometer readings and satellite technology to track the number of vehicle miles that Oregon motorists drive, and to charge the tax when motorists gas up at the pump. The guiding principles of the tax are the same that I have propounded for years: *The more miles you drive, the more you pay to maintain the roads. The more you drive in rush hour congestion, the more you pay to access scarce road capacity.*

The Oregon Solution is the way to cut the Gordian Knot of Virginia's gridlocked transportation policy. It would pump more money into the system. But unlike general tax increases, which Virginians have consistently rejected at the polls and in public opinion surveys, the Oregon approach would charge people in direct proportion to which they use the transportation system. Because the underlying principles are both fair and economically rational, when they are explained clearly to voters, they will prove to be politically palatable as well.

As advocates of tax increases have argued in Virginia for years, the Old Dominion's 17.5-cent gasoline tax has failed to produce the revenue needed to fund highway maintenance and construction needs. Although the commonwealth collects a lot more gasoline taxes than it did in 1987, when the tax was last increased, it's not enough to keep pace with population growth and inflation.

These statistics* tell the tale.

71 %	Increase in Consumer Price Index (CPI) from 1987 to 2005
26 %	Population increase, 1987 to 2004
115 %	Compounded increase in CPI and population
84 %	Increase in gasoline tax receipts, 1987 to 2005
31%	The gap

These numbers actually understate the problem. Inflation in construction materials has exceeded that of general inflation by a wide margin. Meanwhile, maintenance costs are claiming an ever-climbing share of state transportation revenues. By 2018, concluded the VTrans2025 study some two years ago, there will be no state monies left for new construction.

And the situation has gotten even more dire since then: The run-up in gasoline prices in the past two years has dampened gasoline sales and tax revenues even more.

The story gets worse. As the Oregonians realize, an all-but-inevitable consumer shift to fuel-efficient hybrid vehicles and, eventually, to non-gasoline vehicles will lead to a collapse in gas-tax revenues within a 10- to 20-year time frame. As the report states. "Oregon is preparing for the day when a substantial number of motorists [is] driving highly fuel efficient vehicles and no longer paying enough gasoline taxes to support their road system."

The starting point of the Oregon analysis, written by James M. Whittey and Betsy Imholt, is that gasoline prices are likely to rise in real, inflation-adjusted terms as global oil production levels off. Additionally, they say, political instability in key oil-producing regions will create price volatility.

> Some petroleum experts predict that before 2010 the world production of conventional oil will crest and enter a permanent decline while others estimate the midpoint will be reached as late as 2030 if oil consumption growth levels increase at a 2 percent rate. Furthermore, the recent and projected increases in global demand for oil products — owing to growing economies in China, India and other emerging national economies — may well cause the peak to arrive earlier than anticipated. Whichever estimate of the "peak" is correct, it is now clear that oil supplies will become constricted in the not too distant future. After the peak, gasoline prices would increase significantly. ...
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> As the oil reserves of western democracies decline, their economies are becoming ever more reliant on the oil production capacity of nations with potentially volatile political climates. The world's nations with the largest remaining oil reserves – Saudi Arabia, Iran, Iraq, Kuwait, the United Arab Emirates, Venezuela, Russia, Libya, Nigeria — all have great potential for political volatility. Disruptive politics leads to disruptions in oil production that result in oil price hikes. … The potential for large price swings owing to political events are likely not to be stilled in the near term.

Simultaneously, new technologies will make automobiles more fuel efficient than ever. States the report: "The broad range of advanced fuels and vehicles powered by non-gasoline sources is no longer exotic and distant – some are already on the roads and many others are attainable within a five to ten year time horizon."

When the report was written in 2005, every major automobile manufacturer either had hybrid models on the market or was planning to introduce them. According to J.D. Powers and Associates, 35 passenger vehicle models with hybrid electric options will enter the marketplace by 2008. Fuel efficiency will range between 35 and 70 miles per gallon.

The hybrids will be followed within a few years by a new wave of technology -- fuel cells -- that run on hydrogen. Every major automaker is working on hydrogen-fuel technology, and Toyota has indicated that it would couple fuel-cell with hybrid technologies to create ultra fuel-efficient cars requiring no gasoline at all. Fuel cell technology may take decades to deploy, the authors acknowledge, because of the length of time it will take to build an infrastructure to create, store and distribute the hydrogen fuel. But the consequences for gasoline consumption, needless to say, will be momentous if fuel-cells do become ubiquitous.

The Oregon report neglects to include one other possibility that I find entirely plausible. In a scenario sketched in the *Wall Street Journal* by R. James Woolsey, former director of the CIA and now a champion of energy independence, contended that advanced battery technologies, plug-ins and hybrid cars could represent the future of energy and transportation in the United States. Wrote Woolsey:

> The change is being driven by innovation in the batteries that now power modern electronics. If hybrid gasoline-electric cars are provided with advanced batteries having improved energy and power density -- variants of the ones in our computers and cell phones -- dozens of vehicle prototypes are now demonstrating that these "plug-in hybrids" can more than double hybrids' overall (gasoline) mileage. With a plug-in, charging your car overnight from an ordinary 110-volt socket in your garage lets you drive 20 miles or more on the electricity stored in the topped-up battery before the car lapses into its nor-

mal hybrid mode. During those 20 all-electric miles you will be driving at a cost of between a penny and three cents a mile instead of the current 10-cent-a-mile cost of gasoline.

The adoption of plug-in hybrids would be favored over fuel-cell cars by the fact that the infrastructure already exists: It's called the electric power grid. Re-charging at night, Woolsey notes, "plug-ins will not create a need for a new base load electricity generation plants until plug-ins constitute over 84% of the country's 220 million passenger vehicles."

Automobiles have run on gasoline for 100 years. The era of the gasoline-combustion engine is coming to a close. The decline in gasoline consumption -- and the taxes generated by it -- will be slow at first, and then precipitous. The decline is entirely foreseeable. Indeed, Oregon has already anticipated it and is acting upon it. There is no excuse -- none -- for Virginia to fail to do the same.

The question then becomes: How do we replace the gasoline tax?

A number of revenue-raising options have been proffered during the current transportation debate, all of them inadequate.

The Kaine plan. Gov. Timothy M. Kaine would solve the problem of declining gas consumption by raising $850 million a year from a mix of revenue sources, including: (a) dedicating existing auto insurance premium taxes to transportation, (b) raising the sales tax on vehicles from 3 percent to 5 percent, (c) imposing an abuser fee on reckless drivers, (d) increasing the vehicle registration fee by $30 a year, and (e) increasing the registration fee for heavy trucks.

However, Kaine's plan would establish only a weak link between those who drive and those who pay. The bulk of the funds would come from car sales tax, insurance premiums and registration fees. If you own a car, you pay the tax. But it doesn't matter if you drive 4,000 miles a year or 40,000. It doesn't matter if you walk, bicycle, ride the bus, carpool or stick out your thumb to catch a ride -- you pay the same as the road warriors who hog the highways with Hummers and Monster Trucks. There is no reward for doing the virtuous thing -- seeking alternative modes of transport -- and no disincentive for contributing to the problem.

Furthermore, under the Kaine plan, it doesn't matter where or when you drive. The person who racks up mileage in a tranquil small town pays taxes at the same rate as the person who clogs Fairfax County roads during rush hour.

The Senate plan. Easily dispensed with is the idea advanced by the state Senate to impose a wholesale gasoline tax. The advantage of such a tax is that, like a retail gasoline tax, it does establish a direct connection between how much people drive and how much they pay. It's not a perfect connection, mind you. The gas tax makes no distinction between someone who burns gasoline taking a Sunday drive on an empty country road and someone contributing to stop-and-go gridlock on Interstate 95 on the way to work. But at least there's a discernible link.

The trouble is, a wholesale gas tax *is still a gas tax*! Wholesale, retail, it doesn't matter -- gasoline consumption will decline, and so will revenues from a gas tax of any kind.

The House plan. The House of Delegates would fund road improvements by transferring surplus revenues from the General Fund and by issuing bonds. The chief virtue of the House plan is that it would not require raising taxes. The most frequently heard criticism, valid to some degree, is that future funding is contingent upon the General Fund continuing to run surpluses. Sooner or later, a recession will hit and the surplus will dry up.

At a deeper level of analysis, the House plan has a more grievous flaw. There is no connection -- not even a tenuous one -- between those who pay the taxes and those who benefit from the transportation improvements. Under the House plan, taxes paid from a variety of sources -- income taxes, lottery profits, ABC sales, corporate taxes, etc. -- would be applied to transportation. All mediated by the politicians, of course. The Kaine plan at least would tax people who own automobiles. The House alternative would obliterate any nexus between roads and automobiles, taxpayers and beneficiaries.

The Oregon plan. By contrast, Oregon's "mileage fee" would establish a direct connection. Not only would it halt the erosion of transportation revenues, but by increasing the cost of driving in a direct and transparent way, it would incentivize people to drive less. News flash: When people drive less, they reduce the need for road and highway spending!

Here's how the Oregon plan would work: All new vehicles would be equipped with manu-

facturer-installed instruments that record the odometer and synchronize with a GPS satellite system. Motorists driving older (or out-of-state) vehicles would continue to pay the fuels tax at the pump. New car drivers also would pay at the pump, but they would pay on the basis of the number of vehicle miles they'd driven, and their user fee would be bundled with the gas payment -- just like now. "Motorists would experience no change in the payment process."

The Oregon task force has taken pains to address the obvious objections. Yes, the technology has been vetted. No, privacy would not be invaded -- no one could trace you, for instance, when you pull your car into the No-Tell Motel for an afternoon tryst.

I'll leave it to others to decide whether the Oregon system will work as the authors claim it will. No one is suggesting that Virginia adopt Oregon's system lock, stock and tailpipe. New technologies undoubtedly will become available and new solutions engineered. The point is that we start examining an Oregon-like alternative now.

The Bacon plan would differ somewhat from the Oregon plan by applying the user-pays logic with relentless consistency. As described in "The Swedish Solution," I would propose a two-cylinder solution: a mileage fee that funds maintenance costs only, and a congestion fee that funds corridor-specific transportation improvements only.

Conceptually, the mileage fee would go like this: The Virginia Department of Transportation would estimate each year how much money it would need to maintain state and local roads. Virginia's 5.4 million licensed drivers would pay their pro rata share of the maintenance budget based upon the number of miles they drive, adjusted, as deemed necessary, by the size and weight of their vehicles to reflect the wear and tear they put on roads. The system would be completely transparent. The mileage fee would be widely publicized, and taxpayers would understand that there is a direct connection between how many miles they drive and what they pay into the system.

The tax would be adjusted annually to reflect rising or falling maintenance costs. If raw material costs surged one year, the mileage fee would go up. If VDOT successfully implemented an asset-management plan that cut maintenance costs, the fee would drop. If a plethora of expensive-to-maintain subdivision roads were admitted into the state road system, the cost would go up. The burning issue of where to raise the money for maintaining Virginia’s roads would be relegated to the musty, General Assembly archives, but the transparency of the mileage-fee system would increase accountability to taxpayers.

The second part of the solution would be to charge congestion fees. VDOT and/or local governments could set up congestion zones -- either along corridors like Interstate 95 or cordons around congested areas like Tysons Corner. (See my companion piece, “When All Else Fails, Try Capitalism.”) Motorists would be charged an additional fee for entering these zones during congested periods of the day. The fee would vary according to the level of congestion, and the prices would be set to reduce congestion to a level that allowed maximum throughput of traffic. Traffic capacity would increase -- and as a bonus, VDOT would generate funds for traffic improvements.

Now this is crucial: The congestion fees would not be dumped back into the VDOT slush fund to be divvied up for projects around the state according to the dictates of the outmoded funding allocation formula, or as modified by lobbyists and politicians. Funds would be plowed back into improvements in the congestion zone from which they came. That way, taxpayers who paid congestion fees to a Tysons Traffic Authority could be reassured that their payments weren't being used to build a circumferential highway around Richmond or a bridge across Hampton Roads for the purpose of local "economic development."

Politically, mileage fees and congestion fees are the closest things there are to a perfect funding solution. An Oregon-like schema would treat all regions of the state fairly. No one would be taxed for improvements they don't need, and those who are taxed would be assured that the money stays close to home -- not sent to the other end of the state.

It's a solution, too, that environmentalists, conservationists and smart growthers could love. It would dry up funds for extending roads into virgin territory for the benefit of builders, land speculators and the politicians on their payroll. Furthermore, if people paid the full costs of their driving, they would choose to drive less and ride-share more -- a big environmentalist goal.

It's a solution that the Big Roads lobby should love -- it injects more money into the system. But it's also a system that fiscal conservatives should love. Mileage fees and congestion fees really, truly are different from taxes -- the users get direct benefits in exchange for what

they pay. The road-funding system is transparent and less subject to abuse by scheming lobbyists and politicians.

The Oregon solution is not a complete transportation solution. We still need to reform land use and governance structures, and we still need to creatively apply new technologies. But it is a complete transportation *funding* solution.

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* These numbers can be found on the Virginia Petroleum, Gasoline and Convenience Association website.

Read more columns by Jim Bacon at
www.baconsrebellion.com.