

# BACON'S REBELLION

The Op/Ed Page for Virginia's New Economy

## The Swedish Solution

**If congestion pricing works in Sweden, why not in Virginia? Tolls that vary by congestion levels could dampen demand for added roadway capacity while raising new revenue.**

By James A. Bacon

The way Chris Saxman, sees it, if the residents of Stockholm, Sweden, can warm to congestion-pricing tolls as a tool to combat gridlock, so can the capitalist citizens of Virginia. Says the Staunton businessman and representative to the House of Delegates: "Stockholm can do it -- and Sweden's a socialist country!"

The Greater Stockholm region, a two million-person metropolis with numerous bridges and traffic choke points, is prone to congestion. The national government set up 23 tolling points and a system of transponder boxes, laser detectors and cameras to track cars that pass through. Tolls, varying by time of day according to the level of congestion, range from the equivalent of \$1.38 to \$2.76 per hour.

Public opinion polls indicate that the six-month trial was a success. Faced with tolls, many Swedes switched to mass transit, others to bicycles. Some changed the time of their commute. Congestion improved so much that the odds look good that Stockholm residents will vote in an upcoming referendum to make the congestion-pricing scheme permanent. (See "[Learning from the Swedes](#)," Aug. 29, 2006, on the *Bacon's Rebellion* blog.)

The Virginia Department of Transportation is entertaining the idea of similar time-of-day pricing on Interstate 95 and the Washington Beltway, but those proposals would use the revenue to finance construction of new lanes. What's remarkable about the Stockholm experiment -- and others around the world, including in London and Singapore -- is that *the purpose of the tolls is not to raise revenue but to reduce congestion and*



*maximize throughput of existing roads.*

Saxman thinks it's time that Virginia introduced congestion pricing (also referred to as "value pricing") into its toolkit of transportation strategies. He has introduced a package of bills that would solicit participation in a federally funded congestion-pricing demonstration project, temporarily offset the tolls with local reductions in the gasoline tax, and hold a referendum within 12 to 18 months of installing the tolls to ask citizens if they want to make the arrangement permanent.

People don't necessarily want more roads, says Saxman. "They want congestion relief." And a congestion-pricing scheme could deliver that relief more quickly than any transportation alternative under consideration.

Consider the widely touted option of increasing taxes and building the road projects in VDOT's capital improvement plan. The \$1 billion a year sought by Gov. Timothy M. Kaine, Senate Finance Chair John Chichester and others is *less than one fifth* of the amount that the VTrans 2025 study stated was needed under the Business As Usual, build-your-way-out-of-traffic-congestion transportation paradigm. Given the time lag in designing and building roads, Saxman adds, "Even if we passed taxes today, congestion relief would be years down the road."

By contrast, a congestion-pricing scheme could be put into place relatively quickly and have an immediate impact. Like the Swedes, Virginians could take to buses and bicycles. They could telecommute. They could leave earlier or later than normal. They could carpool and share the expense. Half the people on the road during rush hour aren't even commuting, Saxman says. There is more flexibility in the system than commonly acknowledged.

Furthermore, the dynamics of traffic congestion are such that an arithmetic decrease in the number of people on the road will lead to geometric decrease in traffic congestion. A British study showed that a five percent reduction in traffic will decrease congestion by 50 percent. "When you do that, you'll actually move *more* traffic," Saxman says. "You're managing throughput."

Let me hammer that last point home. Most people think of tolls

as a way to raise revenue. Tolls put into place as part of a congestion-pricing program are a way to *increase highway capacity*. Here's how a U.S. Department of Transportation spokesman explained it to me:

As traffic speeds grind to a crawl, a typically congested facility during peak periods in Northern VA is handling less than 1,000 vehicles per lane mile per hour, sometimes as low 800 vehicles. Free flow facilities can handle approximately 2,200-2,300 vehicles. Pricing can approximate free flow conditions, meaning that priced lanes can handle *more* traffic, not less. The two priced lanes on SR-91 in Southern Calif. handle more traffic than the four un-priced lanes combined.

Let me summarize the advantages: (1) Congestion pricing encourages drivers to use other modes of transportation. (2) It *increases* rush-hour freeway capacity. And (3) it can raise revenues that can be reinvested in the transportation system. Simply put: There is no quicker, more cost-effective way to ameliorate gridlock.

**S**axman says he first started thinking seriously about congestion pricing in February when the Reason Foundation made a presentation to the House Cost Cutting Caucus, which he chairs. The federal government, it turns out, is pushing congestion pricing aggressively. The feds, he says, are looking for a place where they can deploy a pilot project in a less-than-a-year time frame.

Tyler Duvall, the deputy assistant secretary who oversees that initiative for the U.S. Department of Transportation, is an

evangelist for congestion pricing. There is a disconnect, Duvall observed during a November 2005 forum on road pricing and travel demand modeling, between transportation agencies and roadway users. "Roadway operators cannot glean information about travelers' preferences based on their willingness to pay. This often results in highway investments that do not meet users' needs. ... Pricing can be a good way to take decisions on transportation investment out of the political realm and into the hands of the travelers, who 'vote' with their willingness to pay."

Also, noted Duvall, the lack of congestion pricing leads to inefficient land use. "Subsidizing the cost of travel allows road users to travel farther and more often, making the cost of living far away from one's job artificially low and discouraging dense land use."

The Department of Transportation has made it a high priority to establish a congestion-pricing demonstration project that combines the "four 't's": tolls in a variable pricing scheme, transit, as an alternative to cars, telecommuting/flex schedules, and technology in the form of expanded, real-time traffic information.

The feds have various pots of money they could draw upon to help a state transportation department fund a pilot program. ([Click here](#) to see the DOT's description of the various programs that could be tapped.) It's not clear to me, however, that there would be enough to fund a project entirely with federal monies. The state might have to kick in some as well.

If Virginia could qualify, the demonstration project most likely would be located in North-

ern Virginia or Hampton Roads, where congestion is worst. Duvall's office says that there is a "tremendous opportunity" in Northern Virginia to successfully deploy a congestion-pricing experiment. But the Virginia Department of Transportation has made the greatest progress in laying the groundwork for congestion pricing in Hampton Roads.

Virginia is one of 15 states already funded by the federal government to study value pricing, says Marsha Fiol, VDOT project manager. It takes a lot of prep work to put a congestion pricing program into place. The Commonwealth needs legal authority for SmartTags and EZPass, for instance. It needs to set up real-time congestion information, such as message boards, traffic cameras and the capability to download images of traffic conditions to the Web.

Likewise, says Fiol, it takes considerable study to select a traffic corridor that lends itself to congestion pricing. The state can't just drop a toll into place. Also, the public needs to be educated about how it works. In Hampton Roads, VDOT has conducted meetings with local agencies and organizations, and it's planning a series of focus groups with the public.

**I**f a demonstration project worked, it could provide the basis for a wholesale transformation of Virginia's transportation policy. I can envision value-pricing tolls on all transportation corridors that experience severe traffic congestion.

Saxman's idea of suspending the gasoline tax during the length of the trial is a good one for purposes of a demonstration trial: It would ease the fears of motorists that they're getting hosed with a double tax. But in the

long run, congestion tolls should be used not only to encourage people to adopt other modes of transportation, not only to maximize the throughput of existing arteries, but to inject new revenue into the transportation system.

Establishing congestion pricing along major transportation arteries certainly makes more sense than the regional tax schemes that a number of legislators in Northern Virginia and Hampton Roads are trying to cobble together. The problem is that any figure picked, such as the \$1 billion in new taxes advocated by the Governor and the state Senate, is inherently arbitrary. Also, there's a disconnect between those who pay the taxes, such as auto insurance premiums or auto sales taxes, and those who use the roads.

The beauty of congestion-pricing tolls is that they are a self-regulating mechanism that incorporates feedback from the marketplace. If congestion is severe, the tolls are higher. Higher tolls means more revenue to plow back into transportation improvements -- whether new lane-miles of roadway, transit stations and bus fleets, park-and-ride lots, traffic-light synchronization, incident response systems -- in the same corridor. Declining congestion translates into lower toll rates and less money for improvements.

With congestion-pricing, drivers pay tolls in direct proportion to the stress they place on the transportation system. Combine this with a fee based on annual Vehicle Miles Driven and the size/weight of the automobile to cover roadway maintenance, and Virginia could have the ultimately fair and rational transportation funding mechanism. (See "[Roads and Reason](#)," Jan.

3, 2006.)

Congestion pricing, says Saxman, "is not a panacea, not a silver bullet. But it should be part of any long-term strategy."

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