

BACON'S REBELLION

The Op/Ed Page for Virginia's New Economy

A Congestion Pricing Primer

Answers? You want answers? I asked the U.S. Department of Transportation about its congestion-pricing policies. The answers were so good I had to reproduce them whole.

Bacon: Can you summarize the rationale for how Value Pricing contributes to ameliorating traffic congestion?

USDOT: For almost 50 years, economists have been advocating the concept of variable pricing (in which prices rise and fall based on available capacity), as the most effective means to balance supply and demand on highway systems. They argued that the economic and social costs of congestion are far greater than any costs associated with pricing. In addition, they asserted that pricing allows the diverse preferences of drivers to be exercised.

The current approach assumes all drivers have equivalent values of time and system reliability. This has been widely disproven. People are different, and they have different needs from the transportation system. With the development of technologies, most if not all, of the administrative and technological obstacles (long cited as one of the reasons the "theoretical" could not be pursued in practice) have been removed. The more "dynamic" the charge (varying prices regularly), the more diverse preferences can be exercised and the more benefits derived. It is a concept implemented in some fashion by telephone service providers, renters of vacation homes, movie theaters, and public utilities.

In recent years, this theory has been successfully tested in practice on the highway system both on individual facilities in the U.S. (SR-91, I-15 in San Diego and I-394 in Minneapolis) and on an area-wide basis in Europe and Asia. Two points that are typically misunderstood about pricing, but are critical:



(1) *pricing increases the number of vehicles a facility can serve in a given time period* (i.e. it dra-

matically increases highway capacity). This is counter-intuitive to people who believe that pricing is simply about kicking people off of highways. 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 unpriced lanes combined. The concept extrapolated to a major metropolitan

area will obviously produce a significant increase in the region's highway capacity.

(2) *Very small reductions in usage produce huge reductions in congestion* (and increases in travel speeds). A British study estimates that a 4-8 percent reduction in peak period usage would reduce congestion by 50 percent. In August in Washington, D.C., a 5-10 percent reduction (associated with Congressional recess and increased numbers of people taking vacation) results in significantly less congestion.

Related to that point and also not well understood, on average, over 50 percent of drivers on an urban area highway during rush hour are *not* commuting. This is not to say that all of these trips are discretionary, but there is little question that with the nature of today's workforce, a large enough percentage of people are capable of shifting trip times (even 45 minutes to an hour) to make a big difference) It is also important to understand the substantial benefits associated with ameliorating congestion. Growing congestion is not simply a nuisance. It has become a drain on the economy, badly impacts families and quality of life, drives up delivery costs to shippers, increases pollution, dis-

torts real estate markets and development patterns, reduces the labor pool accessible to employers, decreases highway safety, and increases emotional stress.

Bacon: How much money does the Department of Transportation have available to fund a Value Pricing demonstration project, and what does the DOT hope to accomplish with that demonstration project?

USDOT: There are several sources of funding the Department has identified as potentially available for use in a broad scale congestion reduction demonstration as part of our national Congestion Initiative. We are seeking to execute agreements (we are calling them urban partnership agreements) with a very small number of areas that would contain the following four elements (the four "t's"):

- Variable tolling/pricing on a region wide basis (as opposed to an individual facility)
- Transit - expansion of commuter bus service options
- Telecommuting/flex scheduling - signing up major employers to agree to expand employee work hour and place options as part of the demonstration
- Technology (expanded real time traffic and alternate route information)

There are two current pots of funding that could be fairly quickly made available in the event a metropolitan area or region is willing to participate. Those are:

(1) *Grants under the value pricing pilot program.* This program allows the Department to make up approximately \$9 million dollars in grants a year to congestion pricing demonstration projects. Those funds will be available every year through 2009. Funding priority will given to areas willing to pursue broad pricing demonstrations. More description of the program can be found [here](#).

(2) *Grants under the Intelligent Transportation Systems program.* The Department is currently assessing how much of the approximately 90-100M-a-year program to make available. Much will depend on the level of interest and potential scope of a possible demonstration. The program does have other important commitments, so the full amount would not be available, but the Department's highest levels are committed to promoting a major congestion reducing demonstration. These funds also would be available through 2009. In addition to these funds, the Department has also proposed giving priority rating in the Small Starts transit program. This new program was intended to fund smaller scale projects such as express bus/BRT. Up to 75M per project can be allocated under this program. The interim Small Starts guidance can be found on the Federal Transit Administration [website](#).

Finally, if a Small Starts project is proposed as a significant element of a comprehensive congestion reduction strategy in general, and pricing, in particular, this information should also be reported to FTA as an "Other Factor." Inclusion of this infor-

mation as an "Other Factor" will result in a project's rating being increased. The Department also has substantial flexible lending capacity in something called the TIFIA program. Over \$2 billion a year in credit assistance is authorized. The program has been used effectively by toll road developers in other parts of the country and may be utilized on the 495 HOT lanes project.

Here is a brief overview of the program:

Overview: The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA), enacted as part of the Transportation Equity Act for the 21st Century (TEA-21), established a new Federal program under which the U.S. Department of Transportation (USDOT) provides credit assistance to major surface transportation projects of national or regional significance. TEA-21 authorized up to \$10.6 billion in TIFIA credit assistance over the FY 1999-2003 period. This was continued at a rate of \$2.4 billion per year prior to the passage of SAFETEA-LU in August 2005. SAFETEA-LU continues the TIFIA credit program established under TEA-21.

The TIFIA program provides Federal credit assistance to nationally or regionally significant surface transportation projects, including highway, transit, and rail. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt. A total of \$610 million is authorized through 2009 to pay the subsidy cost of supporting Federal credit under TIFIA.

Finally, a new provision of Federal law allows private investors to benefit from the same tax exempt treatment as the public

sector in connection with public use highway projects. The Department has up to \$15 billion in authority to allocate nationwide under this new provision. A lengthier description can be found [here](#).

Bacon: Does Virginia have a good shot at getting money for a demonstration project in Northern Virginia? Or is there a lot of competition among states? Are there hurdles that Virginia needs to address in order to qualify?

USDOT: We believe there is a tremendous opportunity in Northern Virginia given the severely high congestion levels, the importance of the region's economy, and the growing experience of transportation officials in the state with pricing and system management concepts. We are also talking to other major metropolitan areas across the U.S. who may be interested. We stand ready to work with any state and metro area willing to consider such a demonstration. The technology hurdles have been eliminated. The main hurdle that remains is interest in conducting such a demonstration given the magnitude of the undertaking.

Bacon: Cities like Stockholm and Singapore have shown that Value Pricing (congestion pricing) can work. But is the strategy transferable to Northern Virginia? Do the right conditions exist there? (I think, in particular, of the major investment both Stockholm and Singapore had made in mass transit bus systems, providing commuters an alternative to driving in cars. NoVa's mass transit service is not nearly as good.)

USDOT: We do believe the right conditions exist in Northern VA

to pursue a demonstration. To the extent there are gaps in public transportation services (some places obviously have very good service, other places not so extensive), we believe targeted commuter bus services could be expanded at a relatively modest cost (as was done in Stockholm). We believe that people will be far more willing to utilize bus services on highways that are close to free flow (people don't like sitting on a bus in traffic any more than sitting in their car).

We have stressed that pricing is an idea that can be implemented in a multitude of fashions. Our main objective is a regional implementation, not simply an individual facility. There are four to five different ways one could implement pricing (low tech and high tech) in Northern Virginia, ranging from conversion of HOV lanes, varying the prices of existing toll roads more effectively, pricing just arterials, pricing all roads, etc. Stockholm pursued a true cordon charge, whereas London implemented an area-wide charge. Singapore has pursued a blend of cordon charging and arterial charging.

The nature and scope of any demonstration will be driven largely by state and local experts. We do not pretend to know more about Northern VA transportation systems than those who own and operate those systems every day.

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