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FINANCING OUR NATION'S ROADS

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

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C O N T E N T S

FINANCING OUR NATION'S ROADS

MONDAY, MAY 6, 2003,

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC

The Committee met, pursuant to notice, at 10:05 a.m., in Room 628, Dirksen Senate Office Building, the Honorable Robert F. Bennett, Chairman of the Committee, presiding.

Present: Senator Bennett.

Staff Present: Donald Marron, Ike Brannon, Wesley Yeo, Shaun Parkin, Colleen J. Healy, Trish Kent, Jeff Wrase, Brian Jenn, Chad Stone, John McInerney, Wendell Primus and Rachel Klastorin.

OPENING STATEMENT OF SENATOR ROBERT F. BENNETT, CHAIRMAN

Senator Bennett. The hearing will come to order. I just discovered a new piece of technology here. You have to push the button to get the loudspeaker to work.

Congress is currently contemplating the renewal of the Transportation Equity Act for the 21st Century or TEA-21. And most of the debate that is going on in Congress has to do with the details of that Act. But in the middle of that debate over spending formulas and budget problems, I think we should take some time to listen to innovative voices that can be heard suggesting new and creative ideas. And the purpose of this hearing this morning is to talk about those ideas. So those who are coming here to rehash the TEA-21 arguments, you might want to go someplace else, or you might want to open your minds to a different subject and a different look here.

The first impact of what is going on in our highways hits us all personally in the quality of life. Our roads are becoming more and more congested every day. Getting stuck in traffic has become a common experience of everyone, and it is the all-purpose excuse whenever anyone doesn't keep an appointment or shows up late. When a simple trip across town becomes a logistical nightmare, then something is seriously wrong.

Now there are those that will say this is beyond the purview of Congress, and that's true. But Congress has to address it because of the role that the Federal Government does play in our nation's highways. The average driver spends 62 hours per year in traffic. So if we can cut that down, everybody feels a little bit better. But let's put it into economic terms. Because congestion isn't just a problem for our families that keeps us away from the things we'd like to be doing. It has a very significant economic impact.

The estimated cost of traffic jams due to wasted time and fuel in 2000, the last year for which we have figures, was $67.5 billion. If we want to put that in perspective, that's enough to pay for the President's entire proposed tax cut. When you stretch it over a ten-year period and then put compound interest on it, that would give us enough money for the economic stimulus package that the President is proposing. I call this the ghost tax of congestion, and it is following us around wherever we go.

Transportation makes up roughly 10 percent of the nation's economy, but the importance of transportation far exceeds that amount, because the transportation network makes it possible for us to move the goods and services and people that are essential for the economy's activity. In a world of just-in-time delivery and customized production, if the transportation arteries become sclerotic, why the whole body pays a price for that. The old line is "time is money." We're losing a lot of time, and that means we're certainly losing a lot of money in the congestion on the roads.

Since the automobile came into existence, we have typically funded the roads through the gasoline tax. And since the interstate highway system was created in the Eisenhower Administration, the gasoline tax has meant that for interstate highways, the Federal Government provides the huge share of funding, tempting some people to shift everything over to the interstate system because they get 90 cents out of every dollar spent from the federal gas tax.

But the ability of the gas tax to finance the system of interstate highways has deteriorated over the years for a number of reasons. The cost of building roads has increased. Inflation has eaten away the value of the gas tax. It is not indexed for inflation, but was passed as a straight dollar amount. And gas tax revenues have been diverted for other kinds of transit.

We saw this dramatically in my own State of Utah. As we got ready for the Olympics, we realized that we could not hold the Olympics if we did not solve the transportation problem. And we had a serious transportation problem in Utah. In order to get it solved in time for the Olympics, we had to build it primarily with State funds. There are those who accused the Utah Olympics of taking $1.6 billion of pork barrel money in order to solve this transportation problem and use the Olympics as an excuse. Those who made that charge didn't realize that of the $1.6 billion we spent on modernizing I-15, $1.4 billion came from the State. We couldn't wait for the 90 percent in federal dollars. We had a challenge that had to be solved immediately.

The ironic thing about it is that I-15 was open and marvelous for the Olympics. The world went away saying that Utah had done a superlative job on its transportation, And as soon as the Olympics were over, we discovered major, major traffic delays at both ends of the amount of work that had been done on I-15. We had taken the congestion out of downtown Salt Lake, but re-created it 106 blocks away where the five-lane I-15 went back down to the traditional three, and there was the traffic jam all over again.

So not only has our ability to fund road construction by gasoline taxes diminished, the roads themselves have deteriorated, which means more expenditures are necessary. Again, I-15 in Utah was ready for this kind of repair whether we had the Olympics or not.

We had to do it because the previous design was for roughly 30 years. It had been over 40 years since anything had been done. And the population had more than doubled in that period of time. So many of our interstate highways have reached the end of their useful lives at the same time that ridership has increased.

So we're faced with a very serious challenge that has significant economic impacts, can slow down the entire economy and that requires tremendous financial resources. So rebuilding our interstates is going to involve much more than simply putting new asphalt where the old asphalt used to be.

For many of my colleagues, raising the gas tax seems to be the primary solution to the challenge of maintaining our infrastructure. The last time we did that was under the presidency of Ronald Reagan, and that remains an option to be looked at, but there are other options that merit serious consideration, and it is to hear those options that we are holding this hearing today.

So we've gathered a host of experts to inform us about innovative ways that communities all across the United States and really throughout the world have been using to finance and construct new roads and manage increasing traffic pressure. I'm proud to say that our witnesses today are some of the nation's leading experts on transportation issues. They publish widely on the issues that we have before us.

Before we hear from this panel, we're going to hear from Representative Mark Kennedy, who has introduced the FAST Act—Freeing Alternatives for Speedier Transportation. Did I get that title correct?

Representative Kennedy. Yes.

Senator Bennett. Good. He wants to amend toll restrictions in TEA-21. I understand that Senator Wayne Allard is expected to introduce a similar bill here in the Senate. Representative Marilyn Musgrave, a co-sponsor of the bill, was scheduled to be with us, and if her schedule allows her to come, we will hear her as well. She recently chaired the Transportation Committee in the Colorado State Legislature.

So, Congressman Kennedy, we will start with you. We welcome your insights and appreciate your willingness to share your testimony with us. We will also include in the Committee's record testimony submitted by the Congressional Budget Office and the General Accounting Office on these subjects. Congressman Kennedy, you honor us with your presence.

[The prepared statement of Senator Robert F. Bennett appears in the Submissions for the Record on page 31.]

PANEL I

OPENING STATEMENT OF REPRESENTATIVE MARK R. KENNEDY, A MEMBER OF CONGRESS FROM MINNESOTA

Representative Kennedy. Well, Chairman Bennett, thank you very much for holding this hearing on this very important issue about how do we make sure we get the resources necessary to unlock the congestion that's strangling our economy and our cities, whether they be in Utah or Minnesota. And I would like to thank you for inviting me to talk about the legislation that I introduced

with Representative Adam Smith of Washington State. This legislation, as you mentioned, will soon be introduced by Senator Allard here in the Senate, the Freeing Alternatives for Speedy Transportation, or FAST Act.

Mr. Chairman, our nation is stuck in traffic, as you clearly stated. We are badly in need of substantial investment in our road system. That is something I think everyone assembled in this room would agree on. The problem is, there's a vast gulf between the investment we need to make and the resources that we really have available. And even with a radical increase in the gas tax, even the most radical one proposed, there would still be this gulf. We have the solution to this problem. We have solutions that we are ignoring, and many of those are tried and true.

The user fee for many years was something that we used to fund many of our roads with. In fact, up until the time when we instituted the interstate highway system, this was a significant source of revenue. But in modern times, it has fallen into disfavor, at least at the Federal Government level. But despite its lack of use or prohibition from use on federal interstates, many states have been using this to provide themselves with critically needed alternative revenue streams and provide a free flow of people and commerce on their roads. But we seem to be afraid to use what has been learned at the states, at the federal level. We should not ignore the successful experimentation from these laboratories of democracies.

The bill that I introduced with Adam Smith, H.R. 1767, the FAST Act, draws on the experience of the states and opens up the federal system to the innovations they have used with great success on their own road systems. It removes the outdated prohibition in federal law that prohibits states from using new lanes funded by fee revenue on interstate systems under certain conditions. And I firmly believe that the people in the trenches are by far the people best equipped to know how to solve the problems. This really pushes a lot of that power back to the states to help them solve much of the congestion that they face.

And that is why this would provide them the maximum flexibility possible in how they use these new revenue systems but take steps to ensure the integrity of the interstate system as well as the confidence of the road user. The states must ensure that the driver has a choice to use the new FAST lane, that it is a voluntary user decision to pay a fee to use the new lanes based on the decision that the fee is worth the value received. The fee can only be collected by means of an electronic non-cash mechanism. No tolls, no toll booths to slow down traffic. Revenues collected on the FAST lanes have to be dedicated to the lanes on which they are collected. These fees can only be collected under my bill on the new lanes so that the user has the confidence that they are getting something for the fee they are paying.

The final condition is that the fees go away when the cost of the construction on the new lanes has been recouped. The collection of FAST fees on FAST lanes is temporary. And right now under our current system, there is nothing to assure that if the market says a road should be there, that a road will be there, whereas under this bill, we would empower not only the states or private entities, but counties, as in the case of the Katy Freeway down in Harris

County in Texas, can step forward and solve these critically needed needs.

Mr. Chairman, I have a prepared statement that goes into more details on the problems we are facing and why I think FAST Act is a big part of the solution, and I ask that it be accepted into the record.

[The prepared statement of Representative Mark R. Kennedy appears in the Submissions for the Record on page 32.]

Senator Bennett. Without objection, it will be put into the record. Help me understand. Under your bill, then, fees would accumulate until the cost of the lane or highway, if an entire highway is built that way, is covered. Would you include amortization of the money? That is, interest paid on the money while it was in use?

Representative Kennedy. Yes, we would. In fact, we also provide that in many cases, you may not just need to build the lane, but the interchanges may need to be adjusted in order to accommodate the lane. You may need to adjust some bridges. Every time I drive under a bridge in my own State, I always say "is there room here for an additional lane or are we going to have to do something to accommodate an additional lane?" Those costs that can be directly attributable would be allowed to be paid for by the fees, and clearly the amortization and interest thereto.

Senator Bennett. So if it costs $20 million to build a lane and it didn't get paid for ten years, the interest on $20 million would also be covered by the amount of fees collected?

Representative Kennedy. Yes it would. And I think that this also opens up the opportunity for private firms to step forward and help with this congestion relief. I think a number of private firms would consider stepping in and paying for those lanes in exchange for getting their money recouped with a preset rate of return that would be approved by the states, whether that be the MINDOT, their local department of transportation or their public utility commission. I think the idea of allowing for a return, whether it be interest or a market return to a private firm, should be part of what we incorporate into the FAST lanes.

Senator Bennett. Thank you very much.

Representative Kennedy. Thank you, Mr. Chairman. And I do look forward to hearing the testimony of not only Congressman Musgrave but Rob Atkinson and Bob Poole who are, as you stated, very strong experts in this field, and we appreciate their testimony here as well.

Thank you.

Senator Bennett. Very good.

Representative Musgrave, we welcome you and appreciate your willingness to come share your thoughts with us. The floor is yours.

OPENING STATEMENT OF REPRESENTATIVE MARILYN N. MUSGRAVE, A MEMBER OF CONGRESS FROM COLORADO

Representative Musgrave. Thank you, Mr. Chairman. I appreciate so much the opportunity to come before you today to discuss transportation, one of the most important issues that we face. Of course, this year Congress will create vital transportation reauthorization policy in TLOU, and I am very committed to working with

my colleagues to ensure that we have enough resources to match our transportation needs.

However, I have an equal desire to defend the hard-earned dollars of taxpayers in Colorado and all around the Nation. There are often simple solutions that are offered in regard to our transportation funding deficits, indexing and increasing the gas tax. And I'd just like to go on record and say I oppose those things. While they appear to offer a quick and easy solution, of course they would have long-range effects on our economy, I believe effects that would be very detrimental.

Something that I'm very excited to be working on is the FAST Act. That actually empowers state and local governments by giving them the authority that they need to problem solve. The FAST Act allows interstate users to pay a user fee, something that makes sense to almost everyone, to drive on a newly constructed interstate lane. And there wouldn't be any problem with the onerous tolls, toll booths and something that would make everyone slow down and impede the flow of traffic. The fees are collected voluntarily, and they must be dedicated to the road on which they were paid. Once the revenues are paid off, then the fee collection ends. And people love that.

This is an innovative approach that gives states, local government and citizens more options in solving our transportation problems. I'm sure everyone in this room is aware of how much people sit in their cars and wait to get to where they need to go. On a national basis, congestion costs more than $67 billion annually, more than 3.6 billion hours of delay, and 5.7 billion gallons of excess fuel is used. The average driver is losing more than a week-and-a-half of work—that's over 62 hours a year—sitting in gridlock. The average cost of congestion per peak road traveler is $1,160 a year. And for every billion dollars invested in federal highway and transit spending, we know that we have great job creation of over 47,000 jobs that are created or sustained.

My concern about increasing the gas tax is reflected in this fact right here. More than 64 percent of the nation's freight moves on highways. So what's going to happen if we increase the gas tax? What are those items that are hauled in those trucks? What's going to happen to the cost of those? We all know that it would go up.

Sadly, nearly a third of all fatal crashes each year are caused by substandard road conditions and roadside hazards. We're all concerned about saving lives on our roads. More than 42,000 Americans are killed and 3.3 million are seriously injured each year on the nation's highways. So we have to make some significant investment in the condition of our transportation infrastructure. We don't want it to deteriorate any further. We know that more and more people are in their cars for longer times, and we need some solutions.

Currently, 2.5 cents of the per gallon tax on gasohol is deposited into the general fund instead of into the HTF. Depositing this revenue into the Highway Trust Fund where it belongs would increase revenue by about $600 to $700 million each year. We also know that under TEA-21, we lost revenue. $800 million was transferred from the Highway Trust Fund into the General Fund during final negotiations of TEA-21. Absolutely, this money should be placed

back into the Highway Trust Fund. Since TEA-21 was authorized, the Highway Trust Fund is the only federal trust fund that does not have the interest credited to it. Balances in the HTF earn interest, but that is credited to the General Fund. Between fiscal year 1999 and 2003, it's estimated that the HTF lost about $5.5 billion in interest.

During my tenure in the State Legislature in Colorado, we passed some very innovative programs under Governor Bill Owens. I served as chairman of the Senate Transportation Committee, and I believe that we have some solutions that we could offer to the Federal Government respectfully offer those solutions.

Number one, public-private initiative. That allowed Colorado Department of Transportation to leverage private finances to fund transportation projects. It saved the state time and money while allowing private industries to profit from the toll user fees. We also created a tolling enterprise authority. Colorado now has the ability to establish a tolling authority to general funds for transportation projects.

During the debate in the state legislature, it was suggested that taken together, the public-private initiative and the tolling authority would generate approximately $4 billion for the state over a 20-year period. Also, we passed TRANS, Transportation Revenue Anticipation Notes. Now this was looked at very critically. We even had to get an opinion from our Supreme Court as to whether or not we could do it in Colorado. But it passed the muster of the Court, and it's been a very successful, innovative approach to highway funding. It allowed Colorado Department of Transportation to sell bonds to generate money up front at a very important time for construction projects. It saved time and inflation costs by speeding up the projects. In our State, we have a list of very high priority transportation projects, and we call those the seventh pot. The TRANS bond program has accelerated the completion of those projects in those critical areas.

We also have State Infrastructure Banks. Inspired by a Federal Government pilot program, Colorado established this bank which provides very low interest rate loans to private companies and local governments for the purpose of funding transportation projects. Separate accounts exist for highways, rail, aviation and transit projects. Colorado took this federal pilot program included in ISTEA, but limited to five states by TEA-21 and made it successful and profitable. This would be an easy program for us to duplicate at the federal level, and if implemented, each state would have more flexibility and greater opportunities to expand its infrastructure.

There are great needs in our nation for transportation funding. Again, I oppose increasing the gas tax or indexing, but I am certainly supportive and would like to compliment my colleague on the FAST Act, and I believe that that affords us some relief in this area.

Senator Bennett. Thank you very much.

Let me ask two quick questions before we go to our other panel. I used to chair the Subcommittee on Legislative Branch Appropriations, and discovered that the Taft Memorial, which was built entirely with private funds as a memorial to the late Senator Robert

Taft, is now the responsibility of the Federal Government to maintain. And the maintenance costs are now higher than the original cost to build the thing, the Taft Carillon which you hear pealing out on the Senate side from time to time.

That caused me to think about the maintenance costs of these lanes that would be built under the FAST Act. Is there a possibility that at some point charges could be reinstituted to maintain these lanes, or would they be maintained by the general tax fund once they have been paid for? Or do you address that? Do you leave that up to the states?

Representative Kennedy. Mr. Chairman, in my bill, we do provide for the maintenance of those lanes to be paid for by the fees as well. I think that's also an attractive reason why having private participation up front means that if they're going to have to pay for the maintenance, they maybe build the road better from the very beginning. But we do provide for that. And although it expires when it's paid for, there might be a small charge that may or may not make sense for the maintenance.

But I really think with the growing congestion that we have, once you get to the end of the 10 or 15 years to pay for the initial lane, that we're going to probably need to add another lane alongside that, to expand that as well, to keep the interstate system growing with the needs of the community, and the incorporation of paying for maintenance could be included with that expansion as well.

Senator Bennett. Once the lane is paid for, let's take the theoretical assumption that it is paid for and there is a sufficient endowment to cover maintenance and all charges disappear. Does that mean it is then open to all traffic?

Representative Kennedy. It would be open to all traffic and it would revert back to being a lane like any other lane today on the interstate system that has no additional cost.

Senator Bennett. I see. That's a very innovative idea, and we thank you very much for your participation here this morning. Appreciate both of you coming over.

Representative Musgrave. Thank you, Mr. Chairman.

Representative Kennedy. Thank you for your interest.

Senator Bennett. Thank you. We'll now go to the next panel.

PANEL II

Senator Bennett. We appreciate all of you being here. We have with us Robert W. Poole, Jr., who is the Director of Transportation Studies at the Reason Foundation in Los Angeles. We have Dr. Robert Atkinson, who is Vice President and Director of Technology and the New Economy Project at the Progressive Policy Institute.

We have Dr. William Buechner, who is Vice President of the American Road and Transportation Builders Association. He's Vice President for Economics and Research and their chief economist. And then we have Michael A. Replogle, who is Transportation Director of Environmental Defense.

Gentlemen, we appreciate your taking the morning with us. We'll hear from you in the order in which I have introduced you.

Mr. Poole.

OPENING STATEMENT OF ROBERT W. POOLE, JR., DIRECTOR OF TRANSPORTATION STUDIES, REASON FOUNDATION

Mr. Poole. Thank you, Senator Bennett. I appreciate very much the opportunity to be here this morning. My focus today is on a potential breakthrough idea in urban transportation. As you mentioned in your opening statement, our major cities, our major urban areas are just plagued by traffic congestion. $67.5 billion per year in lost time and wasted fuel. And that number has grown larger every single year that the Texas Transportation Institute has produced those reports, which suggests to me that what we've been doing about congestion is simply inadequate, and we need to look for better approaches.

We have been investing as a nation mostly in two forms of urban transportation in the last two decades, HOV (high occupancy vehicle) lanes and mass transit. Unfortunately, the 2000 census revealed that in most cities, a smaller fraction of people car-pooled to work in 2000 than used that mode in 1990. Likewise, a smaller fraction used transit to get to work in most cities, despite all that we've been investing in improving those modes. And since population has continued to increase, we have even more people trying to use pretty much the same amount of freeway capacity to get to work. So it's no wonder congestion has no reached record levels.

I'd like to suggest a fresh approach. Let's not abandon HOV lanes, but let's figure out a way to use them more productively. Let's not retreat from mass transit, but likewise, let's develop a form of mass transit that competes better with the automobile. And let's face the fact that we do need, just as you needed it in Salt Lake City, we need more highway capacity and figure out a way to build more. All three of these come together in an approach we call HOT (high occupancy toll) Networks.

The basic idea is as follows. We shift the operating principle from HOV lanes to HOT lanes, High Occupancy Toll lanes, convert them to high-speed premium lanes that drivers can use by paying a market price, but which truly high-occupancy vehicles like buses and van pools can use for free. Use the toll revenue stream to support large-scale issues of revenue bonds to generate the billions of dollars needed to build out the existing HOV facilities into a complete, seamless network, and then encourage transit agencies to run large-scale regional express bus service on that seamless, uncongested high-speed network.

Now this HOT Network idea of ours combines two recent innovations. One is HOT lanes and the other is Bus Rapid Transit, or BRT. Currently there are four HOT lane projects in operation, two in California and two in Texas, but another dozen are in the planning stages, including a proposal here in Washington to add them to part of the Beltway in Virginia.

The basic idea is to sell the unused capacity to paying motorists. HOT lanes use fully electronic toll collection. There's no toll booths anywhere on them. And the two in California use variable pricing to match supply and demand and control access and thereby control congestion, to keep them free-flowing at the speed limit at the busiest rush hour, which is a pretty amazing achievement.

Bus Rapid Transit refers to high quality express bus service usually on special lanes, and it's been proven in cities like Ottawa, Bo-

gota and Curitiba. BRT provides service quality equivalent to most rail transit, but at a significantly lower cost. The Federal Transit Administration is now a big supporter of BRT based on busway operations in places like Miami and Pittsburgh.

Now our HOT Networks concept would provide an uncongested right-of-way throughout the metro area for BRT service without any cost of that to the transit agency, because it would be paid for by the tolls voluntarily paid by drivers.

Last year my colleague Ken Orski and I did a detailed study of the potential of HOT Networks. We defined a network of this sort as an interconnected set of limited access lanes on an urban freeway system which buses and van pools could use at no charge and everybody else would pay an electronic variable toll. You'd begin such a network by converting the existing HOV lanes to HOT lanes, then issue toll revenue bonds based on the entire proposed future network to pay for the capital costs of building out all the missing links and connectors to make it a true network.

There would be four main benefits from such a network in an urban area like Washington, DC. or Salt Lake City. First of all, every driver in the region would have congestion insurance. In other words, they would know that whenever they really needed to get somewhere on time, they could opt to use these pay lanes and get there quickly and on time in a reliable fashion. And that's something that's simply not available today on our freeways at any price to anybody.

The second benefit is there would be much greater productivity than today's underutilized HOV lanes, because we'd have a lot more people and vehicles per hour going through them.

Third would be we'd be generating a large new funding source for urban transportation over and above what's coming in today with gas taxes, and that's very, very important at this juncture.

And finally, there would be much simplified enforcement compared to today's HOV or HOT lanes, because every valid vehicle would have to have an electronic transponder, and you can do all the enforcement electronically.

So the main question that Ken and I looked at in our study was how feasible is the idea that these things could be actually funded by toll revenues? Could they be largely self-supporting? To answer that question, we had to model actual networks or proposed networks in real cities and figure out what they would cost to build and how much revenue they might be able to generate.

We selected eight of the most congested areas in America: Los Angeles, San Francisco, Washington, DC., Seattle, Houston, Dallas, Atlanta and Miami. In each case we contacted the local metropolitan planning organization (MPO), got their long-range plan, looked at what they planned to build in HOV lanes over the next 25 years, what they already have, and then we filled in missing links and figured how much would it cost to build everything either that they plan or that we said in addition would be needed. And that gave us a basic estimate of the cost to build eight of these networks in eight large cities, and it turned out to be $43 billion. That's a lot of money, and it's not going to happen unless we come up with a new source of funding.

That was the easy part, though. The complicated part was estimating how much revenue might be generated by people voluntarily paying a premium toll to bypass congestion. And fortunately, here we had a lot of data from the operating HOT lanes in California. We had access to a lot of experts. We developed a pricing model and tailored it to each network, and we ended up with baseline estimated revenues of $2.9 billion per year over the eight metro areas.

And we talked to investment banking people who fund toll roads, and they said, well, you could probably issue about ten times that annual dollar revenue stream in revenue bonds up front. So that would be $29 billion in toll revenue bonds, which would fund about two-thirds of the $43 billion in costs to build out all of these networks. The balance of the money would come from the existing highway trust fund monies that the MPOs already plan to spend adding HOV facilities over the next 25 years. But with the up-front toll revenue bonds, these networks could be built in the next ten years, not spread out over 25 or 30 years, and we could build more because we'd have that revenue source available.

Now to us, that looks like a win-win proposition. It shows the power of market pricing to address the problem of traffic congestion. But unlike attempts from the top down to mandate a price being charged on every lane on a freeway system, our approach would be strictly voluntary. The only people who pay would be those who choose to use the lanes to bypass congestion on the days and times of their choosing. Yet those paying drivers would be making a significant financial contribution to make possible the new infrastructure that could be used for high quality Bus Rapid Transit.

Now my organization doesn't lobby, so I'm not here to advocate legislation, but I'd point out that if Congress wants to take an idea like this seriously, it would only take a few simple changes to make this possible. As Congressman Kennedy mentioned, there's a current problem with the federal ban on putting tolls on interstates, so that would need to be adjusted for these new lanes and for HOV lanes that become part of a network like this. And local officials would need the permission to exempt only buses and van pools from the pricing on these networks.

It would also be helpful if there were a joint FTA/FHWA program to actually help MPOs and state DOTS that wanted to develop these networks and get assurances of long-term stability and so forth.

But to sum up, the idea of congestion pricing or road pricing has been floating around in transportation circles for more than 25 years. It's always had a lot of promise in theory, but it's usually been considered just politically impossible or infeasible to do. Very few elected officials are willing to impose a charge on something that people have gotten used to getting for free, and motorist organizations don't want to pay twice for using existing freeways. That's why we really need to create true value pricing where people only pay if they get something better. And that's what our proposal offers, we believe. We'd get $43 billion worth of new urban transportation infrastructure, giving every driver in the region congestion insurance on the entire freeway system. At the same the peo-

ple who use transit or who might use transit if it were faster and more reliable gain a whole new kind of express bus service that operates throughout the region on uncongested lanes, and without having to pay for the cost of creating those lanes through the transit system. That appears to me to be a win-win proposition, and I certainly commend it to your attention and to the attention of those who will be reauthorizing TEA-21 this year. And I'd be happy to answer any questions that you have.

Thanks very much.

[The prepared statement of Mr. Poole appears in the Submissions for the Record on page 33.]

Senator Bennett. Thank you very much.

Congressman Kennedy, if you'd like to come up and sit here so that you can ask questions, we'd be delighted to have you be an honorary Member of the Joint Committee. That's Congressman Stark's seat, and I'm delighted to have you fill it.

[Laughter.]

Dr. Atkinson.

OPENING STATEMENT OF ROBERT D. ATKINSON, VICE PRESIDENT AND DIRECTOR, TECHNOLOGY AND NEW ECONOMY PROJECT, PROGRESSIVE POLICY INSTITUTE

Dr. Atkinson. Thank you, Senator Bennett. I appreciate the opportunity to appear before the Committee. I won't go into the details on how bad the problem is. You and the other speakers have attested to that. But I do want to start with why is the problem so bad. The problem is so bad largely because we have a highway shortfall in this country. Up until the mid-1980s, early 1980s, we were able to keep pace with population growth and demand growth for transportation with our highway system. Since then, we've fallen behind. Between 1987 and 1997, our highway capacity expanded just 9 percent in our major metropolitan areas while VMT, Vehicle Miles Traveled, expanded 42 percent. And I think it's pretty obvious to anyone who has taken microeconomics that when that happens, the result is congestion.

Why did that happen? Well, part of it is because we just had a bigger economy. We've grown. Half of the growth in VMT was simply due to the fact that there are more workers commuting to work every day. So why didn't we build more roads? There are many different reasons. One of them is opposition from people who don't want a road in their neighborhood.

But there's a more compelling reason, and that's the myth that's been perpetuated over the last 15 years that essentially says road building isn't the answer and doesn't solve congestion. This is the myth of induced demand. If you build a road, it just gets crowded again. But the reality is, when you look at the careful studies that have been done, induced demand is a factor, but only a small factor, and places that expand their highway capacity faster than their population grows actually find that they reduce congestion. We're never going to get rid of congestion. We'll never get zero congestion, but we can certainly make progress.

The other reason we haven't really dealt with this problem of expanding our highway capacity is a lack of funding. As a share of miles traveled, highway expenditures by all levels of government

fell from about 8.7 cents per mile in the early 1960s to just 3.9 cents in 1997. At the same time, our system needs have gone up as we've gotten a bigger population and more roads, and in addition, our infrastructure has aged.

Senator Bennett. If I could interrupt you. Are those constant dollar figures or are they adjusted for——

Dr. Atkinson. They are adjusted for inflation.

Senator Bennett. So what year figures are we talking about?

Dr. Atkinson. Early 1960s, with the average was about 8.7, and 1997. So these are in 1997 dollars.

Senator Bennett. In 1997 dollars. Thank you very much. I apologize for the interruption.

Dr. Atkinson. One of the reasons for that shortfall is that on a per-mile driven basis, gas taxes that the average American pays to drive their car, are about half of what they were 40 years ago. Part of that is because the gas tax hasn't kept up with inflation. The other part of it is, because our cars are just more fuel efficient even with the rise of SUVs and other cars, we have a more fuel efficient fleet, so people pay less.

Well, it's pretty clear when you look at the evidence that if we expanded our highway capacity, we could reduce congestion. To do it, it's going to cost a fair amount of money, though. DOT estimates that just to keep our highway system in the current condition is going to require a 16 percent increase in funding from $48 billion to $56 billion in 1997 dollars. Cutting congestion would require significantly more. They estimate up to $94 billion per year. Well, we can't get there from here unless we do a couple of things.

PPI supports increasing the gas tax. We feel that's an important step to take, particularly at minimum to index it to inflation, which it hasn't been. We need to get more revenues there. One idea we have proposed is a temporary increase in the gas tax for ten years where Congress would phase in a three-cent-a-year increase in the tax for five years, and then keep it at that level for ten years and then take it down to where it was after adjusting for. This would raise $25 billion a year. It would allow us to catch up and make up for this shortfall we've had for the last 20 years, but not provide a long-term burden on drivers.

Having said that, though, we also strongly support the view that we have to use other means in addition to the gas tax; in this case, tolls. In 1997, tolls accounted for less than 5 percent of current highway revenues. And so we're strong supporters of a wide variety of measures, and I commend Bob Poole and the Reason Foundation for their innovative ideas on tolls, which we fully support. The whole idea of HOT lanes and HOT Networks and other types of tolling can be used to expand capacity.

Let me just respond to some of the complaints or possible objections that people might have about road pricing. Opponents tend to make three or four different objections: they're inefficient, they're unfair, and they represent double taxation. With regard to inefficiency, we've heard from a number of speakers this morning, that may have been true 20 years ago. I still get frustrated when I drive to New York and have to stop every five miles on the New Jersey Turnpike and pay my quarter. New tolling systems employ on the fly, transponder-based tollings, so they're not inefficient.

The issue of double taxation and isn't this a new tax? Gas taxes and tolls only cover about 88 percent of highway costs. If you include the cost of maintaining other roads, including local streets, the share is significantly lower. So it's not as if the gas tax already pays its fair share. It doesn't pay enough. And as a result, other people who don't use the roads are actually subsidizing drivers.

It's even worse when you consider that the cost of adding lanes in urban areas is significant. A DOT study showed that the cost of adding an average lane in an urban area is about 30 cents per mile driven. And yet gas taxes would account for just 2 cents. So again, you can't really get there from here. If you want to expand capacity in these high-cost areas, you have to ask drivers to contribute, ask users to contribute.

Lastly, on the issue of a tax increase. I think if Congress decided this year that they were going to toll all the interstates, one might make a reasonable case that that would be a tax increase. On the other hand, a proposal like Congressman Kennedy's is not a tax increase, because it's essentially a way for consumers to buy a service that they might otherwise not have the choice to buy. As long as we're giving consumers a choice between driving on the free lane and buying a new service, just as they might want to go out and buy a plane ticket to New York. That's not a tax. It's something they've voluntarily chosen. I don't really see that as an additional tax.

And finally, there are people who would argue that these are unfair. Some people have called these Lexus lanes as a derogatory term, essentially that only people with Lexus cars and high incomes would drive on these lanes. Most of the studies, in fact all the studies, have shown that's not true. Certainly there's a mix of income of people who drive on these lanes. Although to be fair, use of the lanes are more highly correlated with higher incomes.

Now is that a problem? I would argue as someone who is affiliated with the Democratic Leadership Council and being a Democrat and being concerned with equity, that that's not a problem. I see it as just the opposite. This is a way to get higher income people to pay for infrastructure so lower income people don't have to pay for it. So I see it in some ways as a very progressive idea. Now the problem is, well, what if lower income people don't benefit? Well, I think they would benefit. All the studies have shown that by adding new capacity on existing lanes, the free lanes flow more freely, and as a result, everyone benefits.

Finally, if people are concerned about that, there are measures you can take to directly address the equity issues. For example, you could use revenues from HOT lanes to support transit. I think it's going to be a little more problematic to divert toll revenue from new construction. I think you have to use that for new construction. But on HOT lanes where you're really just tolling an existing highway, you could certainly divert some of that to transit and address some of these issues.

So in closing, let me say I think this is an idea whose time has come. There are several things that Congress can do to support this and help advance it. Clearly, H.R. 1767 is an important step forward. It would give states the ability to do this. But I would go one step further.

While I commend Congressman Kennedy on the bill, and I think we need to do it, I would also say we might want to take one additional step, and that is to give states some incentive to move more towards tolls. One of the reasons states haven't done it, they can toll their own roads and they haven't done it that much, is largely because of political opposition and bureaucratic inertia in state DOTS. It's just something that they haven't done, and so they're not going to do it automatically. Our idea is for a limited period of time of six-year reauthorization, we tell states that they can, if they build a toll road, get a 90 percent match from the Federal Government instead of the typical 80/20 split. We believe this would give states a real incentive, because they'd be getting more money, have to spend less of their money to use to build toll roads.

Once you build a system of toll roads in states essentially people get used to them, elected officials get used to them, state DOTs get used to them, and it would just become the new way of doing business in the 21st Century.

So with that, let me close and say I think we can talk for a long time about the purity of the gas tax and why we ought to fund roads with the gas tax. At the end of the day, it's not going to get us where we need to go, even if we increase it, which we advocate. We have to have other revenue sources, and tolls are a critical source.

Thank you very much.

[The prepared statement of Dr. Atkinson appears in Submissions for the Record on page 35.]

Senator Bennett. Thank you.

Dr. Buechner, I understand you were a senior economist for the JEC for 20 years.

Dr. Buechner. I was here for a long time.

Senator Bennett. Welcome home.

Dr. Buechner. And it's nice to be back. Thank you.

OPENING STATEMENT OF WILLIAM R. BUECHNER, Ph.D., VICE PRESIDENT, ECONOMICS AND RESEARCH, AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION

Dr. Buechner. Senator Bennett, thank you very much for inviting the American Road and Transportation Builders Association (ARTBA) to testify this morning on financing our nation's roads. As you mentioned, I was a senior economist here for a long time, and I'm very happy to be back to testify on this very important subject.

ARTBA is an 100-year-old association representing the transportation construction industry. Its core mission is to aggressively advocate federal capital investments to meet the public and business communities' demand for safe and efficient transportation. We have more than 5,000 members from all sectors of this industry, and so we have a consensus view on our recommendations.

Let me begin by saying that we're very heartened that the Joint Economic Committee is exploring how to generate additional revenue to meet our substantial investment shortfall in highways and public transit facilities. Of all the many policy areas that are covered by this Committee, few have as direct an impact on the nation's economy as the government's investment in transportation.

While ARTBA's focus is on financing for the core federal transportation programs, we've long been a leader in the area of public-private partnerships and leveraged financing for transportation projects. More than 60 major companies are represented in our Public-Private Ventures Division.

The Transportation Equity Act for the 21st Century, or TEA-21, established a number of financing mechanisms that were designed to foster public-private partnerships. Among them are the Transportation Infrastructure Finance and Innovation Act, or TIFIA; State Infrastructure Banks, which was carried over from ISTEA; toll road programs, provisions like that. After five years of experience under TEA-21, the results have been somewhat mixed, though. There have been a number of good projects delivered at substantial cost savings to the public, but not as much interest or private equity as had been hoped.

The TIFIA program offers federal credit assistance for up to one-third of the cost of transportation projects of national or regional significance. For the 11 projects that have been approved so far, TIFIA has provided $3.6 billion of the total project cost of $15.4 billion, but at a projected U.S. budget cost of only $190 million. So that's been a terrific leverage from this particular program.

The total, however, is far below the authorization for this program. We have a number of suggestions that we would make when this program is reauthorized after TEA-21, including lowering the threshold for the project size, permitting intermodal projects, and somehow or other getting the TIFIA office over at the Federal Highway Administration to be more enthusiastic about approving these projects.

For State Infrastructure Banks, 32 states now have them. They provide revolving funds for transportation projects. There are about 310 loans outstanding, worth about $4 billion. But only four of these State Infrastructure Banks are eligible for a TEA-21 pilot program which allows them to use federal highway funds for bank capital. We recommend that this pilot program be extended to all 50 States.

For a public-private partnership to work, though, as a source of funding, there has to be a stream of income from the project back to the private investor. Traditionally, this has meant tolling, and tolling is gaining acceptance as a source of highway funding. Congressman Kennedy's proposal, Bob Poole's proposals for HOT lane corridors, and the concept of truck-only toll lanes, which ARTBA has endorsed, are creative variations on this tolling approach that can generate new revenue sources for highway improvements. Our major caveat is that the funds should be used for further investment in transportation and not go into general funds.

There are, of course, other ways of generating a revenue stream for private investors, like development districts where businesses and developers benefitting from a highway investment will finance it through higher property or sales taxes, or programs where project investors would be compensated with land and development rights near a project, like we did with the railroads back in the 19th Century.

Initiatives such as these can be important new sources of transportation investment, but our view is that they are a supplement

to and not a substitute for the core investment that is financed by the federal-aid highway and mass transit programs. Providing and maintaining the nation's transportation infrastructure is and always has been a core function of government. More than two years ago, ARTBA began urging that the successor to TEA-21 create a presidential commission which would evaluate alternatives for financing transportation improvements in the future. It's clear that as alternative fuels and other technology developments reduce dependence on petroleum, the Congress will have to develop alternatives to the traditional transportation revenue sources.

For the past half century, though, most federal transportation investment has been user-fee financed. Revenues, for example, from the federal motor fuels taxes and taxes on heavy trucks are credited to the Federal Highway Trust Fund and are supposed to be used to finance capital investments in the nation's highways and mass transit systems.

Prior to TEA-21, this relationship was often breached, however. Congress would provide whatever amount could be carved out of the domestic discretionary budget cap for highways and transit in competition with everything else. The result would have no formal link to either Highway Trust Fund revenues or the nation's transportation investment requirements.

TEA-21 addressed half of this problem by linking highway program funding directly to Highway Account receipts. But the annual investment in highways still had no relationship to the nation's surface transportation needs. The 2002 Report to Congress by the USDOT on the Conditions and Performance of the Nation's Highways, Bridges and Transit concluded that under TEA-21, "capital investment by all levels of government . . . remained below the 'Cost to Maintain' level." And I'm quoting directly. "Consequently, the overall performance of the system declined." And that's the end of the quote.

For TEA-21 reauthorization, our organization has for more than two years urged that Congress take the next step up to a performance-based funding mechanism for highways and mass transit. What this means is financing the federal highway and mass transit programs at the level necessary, at minimum, to maintain current physical and performance conditions, and then hopefully begin improving conditions.

Based on this USDOT report, the House Transportation and Infrastructure Committee found that this minimum level of investment would total $320 billion over the next six years, or an average of $54 billion per year. That would include about $270 billion, at least $270 billion at minimum for highways and another $50 billion for transit. We've supplied a copy of the Committee's findings with our prepared statement.

The only current reauthorization proposal that will meet these investment needs is the program proposed by the bipartisan leadership of the House Committee on Transportation and Infrastructure. This proposal would provide $375 billion for the highway, transit and safety programs over the next six years, including $300 billion for highways and the rest for transit and safety. This level of investment would not only maintain current highway and transit conditions, it would begin to make some improvements.

The problem of course is that projected revenues into the Highway Trust Fund are not sufficient to finance the level of federal highway and transit investment required to meet the nation's needs. A meaningful increase in highway and transit investment will require a substantial infusion of new revenues into the Highway Trust Fund.

There are a number of proposals for this. A year ago we proposed an increase in the federal gas tax of about 2 cents a year, which would make it possible to meet our nation's needs.

The bipartisan leadership of the T&I Committee is considering a number of revenue options, including spending down the Highway Trust Fund balance, compensating the Highway Trust Fund for revenues lost to the gasohol tax incentives, reinstating interest on the Trust Fund balance and reducing motor fuel tax evasion. These would all be helpful, but when you look at the numbers, it's not much money. The revenue impact may be $3 or $4 billion a year, but it doesn't get anywhere near up to what we need to invest.

To bridge this gap, the Committee is also considering recommending a one-time 5.5 cent/gallon adjustment to the motor fuel excise tax to restore purchasing power lost since the rate was last adjusted in 1993, plus subsequent indexing of the rate to the CPI. We wholeheartedly support this approach or pretty much any other approach that comes up with new user-fee supported revenues into the Highway Trust Fund.

Our prepared statement provides a lot of details on the economic and safety benefits of increasing surface transportation investment as well as details on the cost to the economy of failing to increase federal investment in transportation infrastructure.

In summary, Mr. Chairman, there are many ways in which the private sector can help finance investment in transportation infrastructure. ARTBA has been a leader over the years in supporting public-private partnerships. The federal responsibility for supporting investment in highways and transit, however, cannot be ignored. A minimum federal investment of at least $270 billion will be needed during the next six years just to maintain current conditions on the nation's highways. An investment of $50 billion is necessary in the transit systems.

The bipartisan leadership of the House Committee on Transportation and Infrastructure has developed a bold proposal to meet these goals, and we urge Congress to enact it. We also urge the Congress to include the TIFIA, SIB and toll road revisions that we propose in the TEA-21 reauthorization legislation.

Thank you.

[The prepared statement of Dr. Buechner appears in the Submissions for the Record on page 40.]

Senator Bennett. Thank you very much.

Mr. Replogle, you get the last word.

OPENING STATEMENT OF MICHAEL REPLOGLE, TRANSPORTATION DIRECTOR, ENVIRONMENTAL DEFENSE

Mr. Replogle. Thank you, Chairman Bennett. Good morning. I'm speaking on behalf of Environmental Defense. We're an organization with 300,000 members that links science, economics and law to try and help protect the environment.

The central point I'd like to make this morning is that when we finance, tax and price transportation in ways that favor driving and roads over transit and other travel choices, as was the case for much of the last century, it skews investment and consumption decisions, and that harms the efficiency of our transportation system, public welfare and the environment.

As we reauthorize TEA-21 and seek new means of innovative financing for surface transportation, Congress should assure a level playing field for competition between travel modes to encourage wise stewardship decisions by both consumers and officials.

The ISTEA and TEA-21 laws began to level the playing field between highways and other means of transportation after decades of overwhelmingly pro-highway policies. This slowed the long, rapid rise of vehicle miles of travel and the decline of transit ridership. In fact, in the last seven years, transit ridership grew by almost 20 percent, and vehicle miles traveled grew by only 11 percent. Yet financing problems are now dampening this recent trend. Disastrous local and state finances have prompted transit service cutbacks and increased fares with nine out of ten large transit agencies raising their fares, and a third of all transit agencies providing less service. Together with rising unemployment, this has caused transit ridership to fall slightly last year, breaking the recent trends of rising ridership, while vehicle miles traveled, which had been declining or flat, rose last year about 1.7 percent, fueled in large part by Americans driving more between cities instead of taking planes.

But Americans want more and not less transit service and travel choices. A recent poll showed eight out of ten Americans agree that increased public investment in public transportation would strengthen the economy, create jobs, reduce traffic congestion and air pollution, and save energy. I must disagree with my colleague Rob Atkinson about whether we can actually build our way out of traffic congestion. There are a whole set of studies that in fact show that we really can't. If you build roads, they fill up. Recent studies show that a 10 percent increase in lane miles of road capacity typically spurs about an 8 percent increase in vehicle miles of travel, leaving congestion in the long run little changed, but boosting traffic, sprawl and pollution.

Now this can be offset if we increase the price of driving and thereby manage rather than give away scarce and expensive road space and parking. Arid the proposals that we've heard about this morning could help to do just that. But if toll revenues go just to building more roads, we're caught in a vicious circle that harms the environment and reduces access to opportunities for those without cars.

On the other hand, if toll revenues are dedicated to expanding travel choices, like paying for better transit, then road pricing actually increases equity, reduces demand for road expansion, and enhances environmental performance.

Now there are notable examples of this. In San Diego, underused HOV lanes have been turned into high occupancy toll lanes which allow solo drivers to use those lanes if they're willing to pay a fee with an electronic toll. This finances new express bus services, pro-

viding access to jobs for those who otherwise wouldn't have it, and it trims traffic congestion.

In New York/New Jersey, the Port Authority a couple of years ago instituted higher tolls for solo drivers in the rush hour and offpeak discounts for those using electronic transponders on the Hudson River bridges and tunnels. And that experiment has cut traffic congestion in the peak hours by about 7 percent. And about 40 percent of the toll revenues from the Port Authority bridges and tunnels there that are priced like that are going to pay for PATH rail service that connects New York and New Jersey, which further expands travel choices, and trims traffic congestion in those same tolled corridors.

So as Congress considers financing, new means of financing roads, we urge you to look at such innovative approaches as a model. We urge you to reject proposals like the ones from Senators Grassley and Baucus that would raid the transit account to fund roads, leaving transit short by about $4 billion a year, destroying TEA-21's guaranteed and firewalled transit funding. This would undermine public support for the whole transportation program.

Now new proposals for toll financing, like Congressman Kennedy's proposed bill, unless modified, could further tilt an unlevel playing field by restricting billions of dollars in potential new revenues solely for the use of building more roads. This could fuel more sprawl and more traffic while inadvertently plunging our transit programs back into decline.

We need to stop financing and subsidizing roads and driving with non-user fee sources. As you've heard from earlier witnesses, these non-user fees, like local property taxes, sales taxes and other general fund revenues already bear close to 40 percent of the cost of building and operating our highways.

This is an inequitable use of money and exacerbates sprawl and environmental degradation while drawing down resources that might better be spent addressing education, health care and homeland security needs at the local level.

We urge you to assure a more level playing field through the following actions in reauthorizing TEA-21:

First, assure parity of both funding match requirements and project approval requirements for new transit and highway projects. If new transit projects only get a 50 percent federal match, the same should apply to new highways.

End the restrictions that limit tolls on interstate roads, as we've heard others support.

Ensure that toll road revenues are available for transit and traffic reduction strategies as well as paying off bonds to build roads, and ensure that toll roads are managed with public oversight to meet environmental and equity performance standards. With those significant changes, we could support Congressman Kennedy's bill.

Encourage bus rapid transit services on managed lanes to expand travel choices and boost efficiency. The posterboard that you see here to my left shows the TransMileneo Bus Rapid Transit System in Bogota, Colombia which was built in less than three years at a cost of under $8 million a mile. This is a notable and adaptable model with prefabricated stations, as you see there, that fit into the median of the highways. It efficiently separates fare collec-

tion, which you pay when you go into the station, from boarding the buses. And the buses operate on very fast reserved lanes that are free of delay.

We also need to look at creating a new flexibility incentive grant program in TEA-21 to reward states that change their constitutions or statutes to assure both transit and highway revenues are funded from state transportation revenues. More than 30 states have constitutional or statutory restrictions that limit the ability to use state gas taxes for anything other than building highways.

We need to reauthorize the value pricing program at $25 million a year for grants, technical assistance and pilot projects to evaluate innovative strategies that manage traffic or reduce driving and related pollution and other problems through pricing. This is a successful program.

We need to double funding for the Congestion Mitigation Air Quality program, expanding its eligibility to include pay-as-you-drive insurance, and dedicating about $15 million a year for a new pay-as-you-drive insurance grant program to demonstrate how motorists can save on their premiums if they drive fewer miles. This is the equivalent of having a vehicle mile of travel fee. It's like a road toll, but it's actually saying you can save on your car insurance if you drive less rather than paying basically a fixed price no matter how many miles you now drive, which is the way our insurance system typically sets rates.

We need to provide equal tax treatment of commuter benefits for transit users, drivers, cyclists and car poolers, as Senate bill 667 and House bill 1052 would provide.

And finally, we need to increase funding for metropolitan and state planning to expand routine consideration of pricing, smart growth and transportation strategies in planning and project reviews, and to support timely implementation of the new air quality standards.

We need to fund research and complete the rapid deployment of advance travel models similar to the TRANSIMS model at Los Alamos National Lab, in order to help local agencies have the tools they need to effectively consider and evaluate such strategies in a wide array of potential implementation locales.

In conclusion, innovative pricing strategies like HOT lanes could play a vital role in making TEA-21 reauthorization work. They could provide critical revenue and new approaches to enhance efficient system management and performance. We look forward to working with you and your colleagues to build support for that agenda, assuring sound accountability for equity and environmental stewardship.

I'd be happy to answer any questions.

[The prepared statement of Mr. Replogle appears in the Submissions for the Record on page 48.]

Senator Bennett. Thank you very much. Thank you all for your testimony. I need to accept for submission a letter from the National Taxpayers Union laying out their attitude on some of these issues. As one might expect, they are opposed to an increase in the gas tax.

Let me ask a few mechanical questions here. How much would it cost per car to put a transponder on each car? Who would pay

that, and how would it be monitored? What happens if a non-transponder car wanders into a HOT lane?

These are just mechanical questions that occurred to me as you describe how this is going to work.

Mr. Poole. These are relatively straightforward matters that we now have experience in half a dozen cities with. The transponders today cost about $20, $25 apiece. And in some systems, people pay a deposit and essentially lease them from the system. They pay the one-time fee and then they get it back if they move or turn it in. In other cases, they're made available at no charge simply because the desire is to spread them as widely as possible so that as many people in the metro area as possible already have them so that they don't have to use toll booths. This is for systems that are phasing in the electronic tolling in parallel with existing toll booths.

And the enforcement is very straightforward. All the toll road systems now that use the transponders are going to video license plate recognition system, so that if you drive under a gantry and there's a signal that either there is no transponder on the vehicle or there is an expired account, then automatically a video camera photographs the license plate, and that becomes a violation that is actionable with a fine or denial of registration if it's repeated offenses, that sort of thing.

It's becoming very straightforward. Generally there needs to be a state law amendment to permit enforcement by means of the video camera, but that has seemed to be no problem in most states.

Senator Bennett. Is it the front license plate or the back? Because many states don't require a front license plate.

Mr. Poole. Right. In the states like Florida where it's only the back license plate, it seems to still be workable using only the back license plate.

Mr. Replogle. Mr. Chairman, if I could just follow up on that question?

Senator Bennett. Sure.

Mr. Replogle. In Toronto, I think we see the most effective system for automated enforcement. They don't treat the customer who uses one of these toll facilities without the transponder as a criminal violator and send him a ticket with a big fine, which is what many states in the United States do. On this private toll road, a beltway around Toronto, a fully automated expressway with 40 entrances and exits, anyone who doesn't have a transponder tag simply gets a bill a month later by mail through the license plate identification, and there's a one dollar Canadian surcharge added to each toll transaction to cover the cost of having to track the person down. And the toll road company that's providing the service is making a nice profit at about 70 cents American per transaction, simply treating those people as new customers who then have an incentive to get the toll tag.

Senator Bennett. They want people to?

Mr. Replogle. It's a smart way to do it, I think.

Senator Bennett. I see. Okay.

Mr. Replogle. It's customer friendly.

Senator Bennett. I heard you say that the current user is being subsidized 40 percent out of the general fund. I think you said it

was 20 percent, or someone said it was 20 percent, Dr. Atkinson. Which is it?

Mr. Replogle. I think it depends on how you account for the costs. The 40 percent covers the costs that are attributable to police, fire and emergency services related to serving motorists on the highways and other ancillary costs and comes out of a study that was done for the Congress about half a dozen years ago.

Senator Bennett. Okay.

Dr. Atkinson.

Dr. Atkinson. 1 would agree with that. I'm basing my comments on an OTA study that was I think in 1995 that documented all of this, and it depends whether it's direct costs or indirect costs. The costs would actually be even higher if you include what are called externalities—air pollution, noise pollution—the share of gas tax would be even lower if you include those, and Michael or I did not include those. So if you just include pure costs, it's about 40 percent shortfall.

Mr. Replogle. Yes. In my testimony I go into more detail on that. There was a cost allocation study done for the Federal Highway Administration in 1999 that estimated that the health costs from traffic-related air pollution alone, not counting the cost related to air toxics, amounts to $40 to $65 billion a year, which represents a hidden cost on the average American household of about $600 per household.

Senator Bennett. Of course, if you keep traffic moving, that goes down, because a very large percent of the pollution comes from cars that idle as they're sitting at stop lights or sitting in traffic.

Mr. Replogle. The pollution level per mile driven tends to be lowest in between around 20 and 45 miles an hour. High speed driving and very low speed driving are both big pollution generators.

Senator Bennett. Do you agree with that? I had not heard that with respect to high speed driving.

Mr. Poole. I think this depends on which pollutant you're looking at. I believe nitrogen oxides do increase with speed, but I believe the other pollutants don't.

Mr. Replogle. The Volatile Organic Compounds (VOCs) also go up, but not quite as sharply as the NO_X. But both are precursors of smog. And the particulate pollution, which also comes in part from NO_X, is really the place where the biggest health care costs and impacts are found.

Dr. Atkinson. The other issue is stop-and-go traffic, which is more polluting than free-flowing.

Senator Bennett. Right. I drive a Honda Insight that turns the engine off when you're under 19 miles an hour. It drives my wife nuts.

[Laughter.]

Senator Bennett. It takes a little getting used to.

Dr. Buechner. Which I think makes a point, which is that a lot of this can be addressed by improving the technology of the automobiles. It's not the highways that cause the pollution.

Senator Bennett. Well, the congestion. And of course we know that the older cars pollute a whole lot more than the newer cars

do, simply because the technology has improved all along, so that if you are driving a classic 1963 Ford, you may get admiring glances from your neighbors, but you're really doing terrible things to the atmosphere at almost at any speed. Isn't that correct?

Dr. Atkinson. That's correct.

Mr. Replogle. Yes. New cars are much cleaner than older cars, and as we bring in the new Tier II standards, it will reduce pollution significantly further and the heavy duty diesel standard. We're making a lot of progress on the technology, but the science also shows that we still have a long way to go to protecting public health to meet the new national ambient air quality standards for fine particulates and ozone.

And even with all of those cleaner technologies that we're bringing on line with the new laws and regulations, EPA studies just in the last year are still showing that by 2015, we can still expect 20 or more of our largest metropolitan areas to face serious health threats from air pollution.

Transportation emissions will continue to be a major source of those pollution problems even 15 years from now. And so we can't ignore the growth in miles driven, even as we go out 15 and 20 years. It's still a place where we can make cost effective pollution reduction. So we do have to pay attention to the effect of building more roads on increasing the amount of driving.

Senator Bennett. Yes, Dr. Atkinson.

Dr. Atkinson. I'd just like to respond, because I think that's an important point, that there are some in the environmental community who would like us to address our air quality problems by essentially constraining demand for driving, and in large part by not building any more roads.

I don't believe that's an effective strategy, because there's no evidence that Americans will drive less. They will continue to drive because they have to drive and they choose to drive. So I don't think a strategy of constraining highway capacity is really a viable air quality improvement measure. We are much better off with measures that are more oriented towards building cleaner cars than somehow trying to make Americans' lives more miserable and hoping that there are some ancillary air quality benefits.

Senator Bennett. Just to comment on that. Of course, the effort to make cars cleaner is undoubtedly what's behind President Bush's initiative with respect to fuel cells, hydrogen fuel cells in cars. That requires an enormous amount of electricity. And so you then talk about how you deal with the emissions that come if we generate that electricity with fossil fuels. And I'll let Senator Domenici talk about nuclear power and how that solves some of those problems. We probably shouldn't go any farther than that in this hearing.

But I would note, having lived for a dozen years in Los Angeles and having lived through the alerts that used to be routine in Los Angeles, and now going back to Los Angeles to visit our grandchildren, six of whom live there with their parents, how the freeways have gotten substantially more congested than they were when we lived there, and yet Los Angeles has not had a clean air alert for several years now, that there has been a substantial decrease in the Los Angeles area, once the nation's number one post-

er child for smog, a substantial decrease in the air alert situation even as the number of people driving and the number of cars on the road have gone up.

So I think there is hope. I'm not suggesting, Mr. Replogle, that we should not continue to go in that direction. But I think as we view some of these issues, we should not refuse to recognize success that we have had in the environmental cleanup that we've been under for the last 20, 25 years. We've done frankly a remarkable job. And the only other comment and then I'll yield to my colleagues, Americans want convenience. And the one convenience you get out of driving your own car is that you can come and go whenever you like. And one of the reasons why inner city trips are predominately by automobile is that if you drive your own car, you don't have to rent one when you get there.

Now if I am going to New York City, I will take public transportation to New York City. It's quicker. It's not cheaper, but it is quicker. And when I get there, I don't have to park my car. Parking my car in New York City, the cost literally to park it is more than the cost to buy it. A monthly parking fee is higher than the monthly payment on the automobile. So I can take a cab. I can take the subway, or I can walk, and I have absolutely no desire to have a car in New York City.

But if I am driving to—if I am traveling to, let us say, St. George, Utah, I'm tempted to take my car even though it's a four-and-a-half hour drive because I have it there and there are no taxis. I would have to rent a car and then turn it in, so you make the decision on the basis of a series of circumstances. I think as we examine this issue, we shouldn't demonize people who make inner city trips by car as saying, well, they're just wasteful gas hogs. They're making rational economic decisions in terms of what it costs in both money and time.

And I think what you're all calling for is an examination of the overall transportation system taking those rational individuals' decisions into account and making the best system possible so that those who want to purchase congestion insurance—I love that term—can. I think that's a great selling point. Those who want to purchase congestion insurance can do it and make a rational decision. And, yes, Dr. Atkinson, the people who are at the lower economic level can decide getting to this appointment on time is worth this kind of an expenditure, and it is available to me even though most of the time I will make the decision to stay in the free lanes. And the people who say, I don't care. I'm going to pay it all the time, the public gets the benefit of their money to help pay for the free lanes.

All right. I apologize. I filibustered so that Congressman Hill has left. I had no intention to do that. I wanted to recognize him as a Member of the Committee.

Congressman Kennedy.

Representative Kennedy. Thank you, Mr. Chairman, and thank you, panel for your great testimony. Many of you inspired our proposal. I'd like to first talk with you, Mr. Poole, about the HOT Networks. And as I proposed through the FAST Act, if there is a corner of a beltway that's congested, we can move in there, add additional lanes and free up that.

Now in your HOT Networks example, you're I think implying a HOT lane that surrounds the whole beltway.

Mr. Poole. Yes, that's correct.

Representative Kennedy. And my question is couple-fold. Number one, if you dealt with the congestion spots with FAST lanes or HOT lanes, whatever you want to call them, isn't there a lot of parts of a beltway that if the congestion spots were dealt with would move freely without an incremental lane, and has there been any study of that?

Mr. Poole. There really hasn't been, but I think you raise a good point. We looked at really highly congested metro areas, and we didn't attempt to apply this whole network model to smaller scale and less congested cities. I'm not sure that the complete network is necessary or appropriate for metro areas of any size. It may only be something that's tailored to the most severely impacted large metro areas.

Removing bottlenecks by selective applications of pay lanes might be sufficient in many metro areas.

Representative Kennedy. So it's quite possible by using a FAST lane implementation on a phase-in basis that we may be able to achieve the same sort of goals inspired by the——

Mr. Poole. Yes. If most of the rest of the network remains largely uncongested, then you could still have a regional express bus service, for example, by letting it speed through the bottlenecks but then still operate on regular lanes elsewhere on the system, yes.

Representative Kennedy. And our FAST lanes proposal is meant to try to embrace those options, whether it be authorized car pools or bus rapid transit, because I think a lot of the reasons that make bus rapid transit less attractive to people is they think they're going to be stuck in the same congestion that the other roads are.

Mr. Poole. Exactly.

Representative Kennedy. And if they know that through those congested areas that they have sort of a free ticket at a near guaranteed speed based on variable congestion pricing, I think it can be a powerful tool and I think what bus rapid transit provides is a flexibility. The needs of transit within a community aren't always predictably to the center city and back and sometimes change over time, and bus rapid transit does provide it and clearly is part of what we're looking for.

A key concern, though, I have is I think we have to listen, and I'm a little concerned by what you said, Dr. Buechner, and that you said $320 billion is our need which, let's take that. That's about $70 billion short of what the Administration has said. But you made the comment that the only proposal that would address that need is what was put forth by the Committee as stated.

And if we looked at that difference between $320 billion and the $250 billion or so of the Administration, that $70 billion gap over six years, you know, Dr. Poole, you had mentioned that in just ten areas alone, ten metropolitan areas alone, that that was about forty-some billion dollars.

Mr. Poole. Right.

Representative Kennedy. And my question is, is not the FAST lane an alternative way to plug the gap between 320 and 247 or

250 in the Administration? Is there not really two alternatives to approach this very significant need?

Mr. Poole. I think very clearly so. I mean, there is the potential, on a project-by-project basis around the country, to plug that gap with toll-supported projects like your FAST lanes.

Dr. Buechner. These are alternative ways of providing additional funds. And ARTBA has supported the idea of tolling, public-private partnerships and ideas like that. In TEA-21, there was a pilot program provision that would have let the state DOTS test out tolling for expanding interstate construction, permitting three possible projects. In the six years, no state took them up on that.

Tolling is an excellent idea and it would be a new source of funds, but in reality, it is a very difficult decision for the political process to make to apply tolls to a highway. Connecticut a few years ago did away with their tolls on the Connecticut turnpike. So again, if that would work out, yes, that would be a terrific alternative. But, again, there are tremendous needs out there, and these needs are not just a wish list. The needs figure is based on an economic evaluation of over 100,000 highway segments and the improvements that they need. This is where these needs investment figures have come from. If we don't do something to start addressing them, our transportation system will move from something that facilitates economic growth to (where I think we already are getting to) the point where it's impeding economic growth in a lot of our major metropolitan areas.

So if this can be made to work, it would be certainly a help.

Representative Kennedy. And I agree with you that we still need the gas tax, that the gas tax, you know, you can't fund everything with a FAST lane, HOT lane, whatever, and that we are facing significant congestion.

But my concern is, is have we put too many restrictions on the ability to make these projects work? And I'm very interested in how we embrace the private industry. Because as I look around the world as much of the research put out by Dr. Atkinson and Mr. Poole would suggest, that many other countries are embracing public-private partnerships, a fee-based revenue in a much stronger way than we are. And the examples of the states around the country has shown that this can be done. So I'd be very interested in what further we need to do to facilitate public-private partnerships stepping forward to help us achieve the reality of being able to do this gap in a market-based way.

Mr. Poole. Since you asked, Congressman, one thing that I think you had mentioned in other contexts is the idea of Chafee bonds, of creating a level playing field for toll revenue bonds that private partners in a public-private partnership could issue tax-exempt toll revenue bonds on the very same basis as a public agency. That would be an enormous boost to making more projects feasible to be done as true public-private partnerships.

Representative Kennedy. And we do intend to bring out a second bill to complement the FAST bill to help facilitate public-private partnerships of what a Chafee bond would be an example. But I would invite all the participants if there are other restrictions that are preventing the full embrace of other entities to participate in this, to let us know so that we can incorporate those, because

I think unlocking this potential at the state and local areas for them to address problems as they see fit with creativity and new innovations and embracing the private sector is a way that we can really solve the congestion that's been bedeviling us for a long time.

Mr. Replogle. The political challenges of implementing time of day pricing and road pricing in many communities have been rather formidable. We need to assure continued support for investment in programs like the Value Pricing Program which have funded public education and research efforts to help communities develop local leadership coalitions to look at all of the issues around implementing things like HOT lanes or FAST lanes, and to put together a broad-based consensus to support those initiatives.

Representative Kennedy. And I agree. And I appreciate the fact that back in Minnesota, our governor and lieutenant governor, who is also the head of the Department of Transportation, as well as those that are fighting over the gas tax, I have both the transportation alliance and the chamber, as well as the taxpayers league, supporting this back in Minnesota, and they are thinking, as you mentioned, Dr. Atkinson, that this can apply to state roads as well, that there aren't restrictions, and that ought to be considered.

And I think embracing things like congestion pricing, like Bus Rapid Transit, and potentially also certain forms of HOV, is a great way to build that community support around something that I think needs to really happen.

Thank you, Mr. Chairman, for your time.

Senator Bennett. Thank you. We appreciate your testimony and your questions.

In conclusion, I have a few observations that I'll simply get on the record. I was in the Department of Transportation when ground was broken for the Metro here in Washington, and one of the things that we considered and were unable ultimately to deal with but that I think has a place in this discussion, was the possibility of taxing the increased property value of those buildings that were close to Metro stops. Because there was a tremendous boost in property values if you have access to a Metro stop. And I remember saying to the then-Undersecretary, "Why don't we get them to pay for it? Because they're going to get the value." And he was intrigued with that idea, but we ultimately couldn't really make that happen.

In a way, however, that justifies some of the subsidy for mass transit that comes out of general funds. The money going into general funds is property tax based on increased property tax value, and the mass transit system that created that increased value is getting some of the value of that, getting the benefit of that.

But we have to recognize, and you've made this point I think, Dr. Buechner, you've made it most specifically, the economic cost of clogged arteries of transportation is very high. And when the economy becomes less efficient, everything else suffers. I am one who believes very strongly in the importance of getting the most efficient use of the economy that we possibly can.

Just pick a subject that's very much in the debate right now, capital gains tax acts as a barrier to prevent capital from flowing from mature investments to entrepreneurial investments. Now if it's so

high a barrier that no money flows, which it would be if it were 100 percent, you would clearly lower it. Alan Greenspan, every time I ask him about the capital gains tax rate, he says the best capital gains tax rate is zero. I don't think we're going to get there. You test the water the same way businessmen do when they raise prices on a pair of shoes. Is this price sensitive? Can I go from $50 to $55 and see any dropoff in sales? And if I don't see any dropoff in sales, I'll take the extra five bucks. And you should experiment I think with capital gains tax.

Okay. I used that as an example because to make the economy efficient, you want capital to flow to where it produces the greatest return. You want labor mobility, that labor can flow where it can produce the best benefit, and you want goods and services and people to flow. We've been talking about primarily trucks, but we are also talking about people getting to work. And at some point in this whole debate, we've got to talk about our highest level talent spending a lot of time sitting in high mileage crown rooms or ambassador rooms at airports, because we haven't built a new airport in this country, other than the Denver Airport, for maybe half a century. And the inefficiency that comes with keeping that high quality talent sitting around waiting for better schedules is something that the economy pays for.

So the more we can do to grease and make efficient the flow of goods and people going to work, the more economic benefit overall that we get. And we come back to the fundamental question, which is I keep saying to my colleagues, money does not come from the budget. Money comes from the economy. And the more efficient the economy is, the more likely we are at the federal level to get revenues coming in in a way that then makes it possible for us to do the kinds of social requirements that as a modern society we all have.

So I think you've made a contribution with your testimony here this morning. We will do our best to spread the word to our colleagues who were not wise enough to join us and see what we can do to move down this road.

Thank you, all of you, for your preparation and your presentation here today.

The hearing is adjourned.

[Whereupon, at 11:50 a.m. the hearing was adjourned.]

Submissions for the Record

PREPARED STATEMENT OF SENATOR ROBERT F. BENNETT,
CHAIRMAN

Good morning and welcome to today's hearing. Congress is currently contemplating the renewal of the Transportation Equity Act for the 21st Century (TEA-21), the federal surface transportation program. Amidst the routine debate over the program's budget and spending formulas, some voices can be heard suggesting innovative and creative ideas. They suggest an approach that could eventually lead to a seismic change in how we fund our nation's roads. The purpose of this hearing is to examine some of these ideas.

Our roads are becoming more and more congested every day, and getting stuck in traffic has become a primary quality of life issue in many communities. When a simple trip across town becomes a logistical nightmare that chews up a good portion of a person's day, something has gone seriously wrong.

Many of the problems that challenge families today fall beyond the purview of Congress. But something as mundane as roads has real life consequences. One study found the average driver spends 62 hours each year in traffic. If we can alleviate traffic congestion so people can spend more time at home, we could go home at the end of the day having strengthened American families.

Congestion isn't a problem just for our families, it wreaks havoc with our economy. The estimated cost of traffic jams due to wasted time and fuel in 2000 was $67.5 billion. This cost is what I call "the ghost tax of congestion," always following us around where ever we go.

Transportation makes up roughly ten percent of our nation's economy, but the importance of the transportation sector far exceeds its share of output. In a world of "just-in-time" delivery and customized production, companies cannot afford to wait for their parts to arrive or for their finished products to be delivered. Despite the heralded information revolution, businessmen still need to come together to do work. If time is money, we are certainly losing a great deal of money due to congestion on our roads.

Since the invention of the automobile our roads have been typically funded by the gasoline tax, with the federal government providing the lion's share of the money needed to build and maintain interstate highways. The ability of the gas tax to finance our network of interstate highways has deteriorated in recent years for a number of reasons. The cost of building roads has increased, inflation has eaten away the value of the tax, and gas tax revenues are not always used for roads.

Not only has our ability to fund road construction via gasoline taxes diminished, the roads themselves have deteriorated. Many of our interstate highways are nearing the end of their functional life and need to be replaced. This process will not be cheap; since the advent of the interstate highway system our understanding of how to build safe roads has increased greatly. Rebuilding our interstates will involve much more than simply putting the new road where the old one used to be.

For many of my colleagues, raising the gas tax seems to be the only solution to the challenge of maintaining our infrastructure and dealing with the problem of congestion. However, other options merit further exploration. Today we have gathered here before us a host of experts to inform us about innovative ways that communities all across the United States and the world have used to finance and construct new roads and manage the increasing traffic pressure on them. Our witnesses today are some of the nation's leading experts in transportation issues and have published widely on the issues facing our transportation system today.

Before we hear from them, a few of our colleagues have joined us to explain their legislative approach to solving this problem. Representative Mark Kennedy has introduced the FAST Act, Freeing Alternatives for Speedier Transportation, to amend toll restrictions in TEA-21. I understand Senator Wayne Allard is expected to soon

introduce a similar bill here in the Senate. Representative Marilyn Musgrave, a co-sponsor of the bill, can give us a state perspective as she recently chaired a transportation committee in Colorado's state legislature. We welcome your insights and we will be sure to share your testimony with the committees of jurisdiction. To our distinguished panelists, welcome, and I look forward to your testimony.

PREPARED STATEMENT OF REPRESENTATIVE MARK R. KENNEDY, A MEMBER OF CONGRESS FROM MINNESOTA

We are spending too much time stuck in traffic, away from our families. Federal transportation statistics put numbers to some of the more tangible costs of our congestion crisis. Traffic congestion costs the United States more than $67 billion annually. We waste almost 6 billion gallons of fuel and 3.6 billion hours idling, while polluting the environment, in traffic jams. For the average person, this means $1,160 and 62 hours wasted by congestion every year.

In my own home state of Minnesota, our problems are getting worse by the day. According to the 2000 Census, Minnesota, and the Minneapolis/St. Cloud Mega-Corridor in my own sixth congressional district, are experiencing one of the highest rates of increase of traffic congestion in the country.

The latest 10-year plan out of the Minnesota Department of Transportation does not offer much room for hope that we will be able to wake-up from our traffic jam nightmare any time soon. Approved road construction does not come anywhere near to meeting demand.

This is not to criticize MnDOT. They are doing as much as they can with what they have. The problem is one of resources. There is simply not enough money available to build the roads we need. Even the most radical calls for a gas tax increase will not provide the money we need. We need new ideas.

We do not have to look far to find them. In this country, our laboratories of democracy, the states, have been highly innovative about solving traffic problems. Over the last few years, states like Virginia, Texas, California, and Colorado, to name a few, have done admirable work to solve the congestion problems facing their driving public. And we should also be mindful of work being done overseas. In countries like Japan, China, Australia, Canada, and Italy, leaders have not relied on obsolete thinking in transportation policy as we have in America. We take much pride in this country on being the embodiment of freedom, and allowing the individual room to thrive in this country. Yet, at least in transportation, we are falling behind.

That's why I introduced the bipartisan Freeing Alternatives to Speedy Transportation—FAST—Act (H.R. 1767) in the House of Representatives. This legislation, which I have introduced with Democratic Representative Adam Smith of Washington State, and its companion bill in the Senate soon-to-be introduced by Senator Wayne Allard of Colorado, will help relieve congestion on the nation's interstate highway system.

The FAST Act facilitates the construction of desperately needed new lanes. It does so by eliminating an outdated federal prohibition that prevents states from implementing a user fee-based revenue stream to provide the resources they need to expand their congested interstate systems. At the time of its inception, this prohibition in Section 301 of Title 23 of the United States Code may have made sense. But in the 21st century, with modern technologies, the only thing it does is to stand in the way of proven solutions to the congestion that is threatening to bring our economy to a standstill.

The FAST Act includes three important conditions to promote fiscal responsibility and driver confidence. First, fees will only be collected using non-cash electronic technology. No tolls and no tollbooths. Second, the voluntary fee is for new lanes only, and the revenue collected is dedicated only to those new FAST lanes. This leads to the third point, when the revenues collected from FAST lane users have repaid the costs of the FAST lanes, the fees expire.

The FAST Act will provide states and users numerous benefits. The FAST Act empowers states with a new revenue stream they can use to solve their own problems so that they do not have to come to Washington D.C. every time they need to build a road. FAST lanes also will free up critical dollars for other state priorities, so that high-dollar projects on congested metropolitan roads do not absorb all of the resources of a state. Projects get completed FASTer using FAST lanes; and when roads get built quicker, they cost less and get people moving sooner.

Every driver will benefit when FAST lanes are constructed. Drivers will have the choice to determine if FAST lanes make sense for them. Those who choose to use them will be able to to get where they are going a little quicker for a small fee.

Those who choose not to use the FAST lanes will benefit from having fewer cars in the existing lanes at no additional expense.

The FAST Act's benefits are not limited to drivers and states. States have the flexibility to allow Bus Transit systems and carpools to use the FAST lanes free of charge, providing more alternatives to commuters. Even the environment will benefit from having fewer cars stuck on congested roads, burning six billion gallons of gasoline each year just by idling in traffic.

In my home state of Minnesota I have been gratified that this idea has received a groundswell of support. Leaders like Governor Tim Pawlenty and Lt. Governor/MnDOT Commissioner Carol Molnau recognized the benefits of FAST and heartily endorsed this legislation. Likewise, the Minnesota Chamber of Commerce, the Minnesota Associated General Contractors, Minnesota Taxpayers League and the Minnesota Transportation Alliance also support the bill.

The FAST Act is a new approach to solving our critical federal transportation needs based on state-proven programs. It is time to get our country moving FAST again.

PREPARED STATEMENT OF ROBERT W. POOLE, JR., DIRECTOR OF TRANSPORTATION STUDIES AND FOUNDER, REASON FOUNDATION

Mr. Chairman and members of the Committee: My name is Robert Poole. I am the Director of Transportation Studies at the Reason Foundation, a nonprofit research and educational organization based in Los Angeles. We've been researching market-oriented transportation policies for the past 15 years, and several of our policy proposals have been implemented in a number of states.

The focus of my comments today is a potential breakthrough idea for addressing the transportation needs of America's large urban areas. These areas are plagued by traffic congestion. The latest report from the Texas Transportation Institute estimated that the cost of congestion in the largest 75 urban areas is $68 billion per year in lost time and wasted fuel. That number has grown larger every year for the past two decades. That suggests to me that what we've been doing to address congestion is inadequate.

As a nation, we have been making major investments in two forms of urban transportation: HOV lanes and mass transit. Unfortunately, the 2000 census figures revealed that in most cities, a smaller fraction of people carpooled to work in 2000 than in 1990. Likewise, a smaller fraction used transit to get to work in 2000 than in 1990. And since population has continued to increase, we have even more people trying to use pretty much the same amount of freeway capacity to get to work. No wonder congestion is at record high levels.

I would like to suggest a fresh approach to urban transportation. Let's not abandon HOV lanes, but let's use them in a more productive way. Let's not retreat from mass transit, but let's develop a form that competes better with the automobile. And let's face the fact that we need more urban highway capacity and build more. All three of these changes are part of our new approach called HOT Networks.

The basic idea is as follows. Shift the operating principle of HOV lanes to HOT lanes—that's high-occupancy toll lanes. Convert them to high-speed premium lanes which drivers can use by paying a market price and which truly high-occupant vehicles—buses and vanpools—can use for free. Use the toll revenue stream to support large-scale toll revenue bond issues, to generate the billions of dollars needed to build out the existing HOV facilities into a complete, seamless network spanning most of the metro area's freeway system. Encourage the transit agency to operate large-scale regional express bus service on this seamless, high-speed network.

The HOT Network idea combines two recent innovations: HOT lanes and Bus Rapid Transit (BRT). Currently four HOT lanes are in operation, two in California and two in Texas. Another dozen or so are in the planning stages, including here in Washington for a portion of the Beltway. The basic idea is to sell the unused capacity to paying motorists. They use fully electronic automated toll collection, and the two in California use variable pricing. We now have solid evidence that variable pricing is a powerful tool to match demand with supply on such lanes, to keep them flowing at the speed limit even at the busiest rush hours.

Bus Rapid Transit refers to high-quality express bus service, usually offered on special lanes. In cities like Ottawa, Bogota, and Curitiba (Brazil), large-scale BRT systems provide transit service quality equivalent to far more costly rail transit systems. The Federal Transit Administration has become a big booster of BRT, based in part on studies of very promising busway operations in U.S. cities, including Miami and Pittsburgh. Our HOT Networks concept would provide an uncongested

right-of-way for BRT service spanning the entire metro area without cost to the transit system.

Last year, my colleague Ken Orski and I carried out a detailed study of the potential of HOT Networks. We defined such a network as an interconnected set of limited-access lanes on an urban freeway system. Buses and organized vanpools would use these lanes at no charge; all others would pay a variable toll, collected electronically. Such a network would begin by converting the area's existing HOV lanes to HOT lanes. Toll revenue bonds based on the entire network would be used to pay the capital costs of filling in missing links and building costly flyover connectors at freeway interchanges, to make the network truly seamless.

If such networks could be created, they would offer many benefits:

1. "Congestion insurance" for all drivers in the metro area, ensuring that when they really needed to bypass congestion and get somewhere on time, they would have the option to do so—something simply not available today at any price.
2. Much greater productivity than today's underutilized HOV lanes, as measured by people and vehicle throughput per hour, thanks to extensive express bus service as well as paying vehicles.
3. A major new funding source for urban transportation infrastructure, to supplement the declining real value of today's fuel taxes.
4. Greatly simplified enforcement compared with HOV or HOT lanes, since every valid vehicle would be required to have a transponder, and this can be detected electronically. Enforcement would be via video recording of the license plate number, just as on most toll roads today.

The main question we addressed in our study was: How feasible is the idea that HOT Networks could be largely self-supporting from toll revenues? To answer that question, we needed to model hypothetical networks in real urban areas and estimate what it would cost to build them out. And we also needed to get a handle on how much revenue they might generate.

We used TTI data to select eight metro areas with the highest intensity of congestion: Los Angeles, San Francisco, Washington, Seattle, Houston, Dallas, Atlanta, and Miami. In each case, we obtained the long-range transportation plan of the local metropolitan planning organization (MPO) and reviewed their plans for adding HOV facilities over the next 20-25 years. We put these on a map showing already existing HOV lanes and then filled in missing links that were not in the plans, usually for reasons of cost. We also checked for missing flyover connectors—and there were many of those, because they tend to be very costly. We then conferred with federal and state DOT experts, as well as engineering firms, to develop current cost estimates for at-grade lane additions, elevated lane additions, and flyover ramps. That enabled us to estimate the cost of building out each network. That total was $43 billion for the eight metro areas.

That was the easy part. More complicated was estimating the revenue that might be generated by people voluntarily paying premium tolls to bypass congestion. Fortunately, we had access to extensive data from the two California HOT lanes that use variable pricing. We also had access to one of the leading traffic and toll revenue forecasting firms, which has done many studies of existing and proposed HOT lanes. We developed a pricing model and applied it to the eight metro areas, taking into account the length of rush hour in each one, the extent of the HOT Network (in lane-miles), and a set of assumptions about the variable pricing structure. Overall, we came up with baseline revenues of $2.9 billion per year over the eight metro areas.

We then used a simple rule of thumb that says you can probably issue toll revenue bonds in the amount of approximately 10 times that annual revenue stream. Hence, we estimated that $29 billion in revenue bonds could be issued in support of these HOT Networks. That would fund two-thirds of their capital costs. The rest would come from conventional state and federal highway trust fund monies—the same funds the MPOs would be using anyway as they added more HOV lanes over the next 25 years. Except that building out the system as a HOT Network, with the bonds issued up front, would mean building it out 10 to 15 years sooner than would otherwise be possible. And more of the trust fund monies would be available for other needed transportation projects.

To us, that looks like a truly win-win proposition. It illustrates the power of market pricing to address what has been considered an intractable problem: traffic congestion. Unlike attempts to mandate "congestion pricing" from the top down on all freeway lanes, our approach would be strictly voluntary. The only ones who paid would be those who freely chose to do so, on those days and at those times when it was worth it to them to bypass congestion and get somewhere on time. Yet those

paying drivers, in making their individual choices to pay, would be making possible the creation of a vast new infrastructure for high-quality bus rapid transit.

My organization does not lobby, so I am not here to advocate legislation. But I will simply point out that if members of Congress like this idea, only a few simple changes in TEA-21 would make it possible. There would need to be some further easing of the general federal ban on putting tolls on currently free Interstates, for the new and existing lanes in urban areas that become part of a HOT Network. There should be clear federal permission to permit paying vehicles to make use of former HOV lanes that get incorporated into a HOT Network. And local officials should be free to exempt only buses and vanpools from the pricing on the HOT Network.

It would be even more helpful if there were to be a joint FTA/FHWA program to help MPOs and state DOTS that wanted to develop HOT Networks. Investors in large-scale HOT Network bond issues would want assurances that the whole network would actually get built, and that variable pricing would be used, as planned, for a very long time. Mechanisms like a Full Funding Grant Agreement could be helpful in that regard.

To sum up, let me remind you that "road pricing" or "congestion pricing" has been floating around in transportation policy for more than 25 years. It has always had great promise in theory, but has usually foundered on the shoals of political reality. Very few elected officials are willing to impose a charge for using what people have traditionally used without paying. And motorist organizations have an understandable negative reaction to being asked to "pay twice" for existing freeways.

That's why it's essential to create true value pricing, in which people pay only if they get something much better in exchange for paying. That's what HOT Networks offer drivers: $43 billion worth of new urban transportation infrastructure, giving them congestion insurance across the entire freeway system. And at the same time, those who use transit or who might want to use transit if it were faster and more convenient, will get the benefits of high-speed regional express bus service operating over this entire network. And those responsible for urban transportation gain a major new funding source, at a time when funding constraints threaten to put off many needed projects for a long time.

I believe HOT Networks to be one of those rare opportunities: a truly win-win proposition. Thanks you for the opportunity to explain this concept, and I look forward to any questions you may have.

Note: The complete HOT Networks policy study is available online at the Reason Public Policy Institute website. The URL is *www.rppi.org / ps3O5.pdf*. Robert Poole may be reached by email at *bobn@reason.org*.

PREPARED STATEMENT OF ROBERT ATKINSON, PH.D., VICE PRESIDENT, PROGRESSIVE POLICY INSTITUTE

Mr. Chairman, members of Subcommittee, I am Rob Atkinson, Vice President and Director of the Technology and New Economy Project of the Progressive Policy Institute. PPI is a think tank whose mission is to define and promote a new progressive politics for America in the 21st century. It is a pleasure to testify before you on the issue of the role of road pricing in solving America's surface transportation challenges. PPI has been keenly interested in promoting public policies to help address the central problem facing our nation's transportation system-high levels of congestion. We strongly advocate the increased use of road pricing as a way to meet that goal. While technologies enabling no-hassle road pricing have advanced dramatically, federal and state laws and resistance by transportation agencies hold back this promising innovation.

How Bad Is Congestion?

Once upon a time, cars and highways represented freedom. Now, for most Americans, they represent constraint, as drivers crawl along in stop-and-go traffic hoping to get home at a reasonable hour. Traffic congestion just keeps getting worse. According to the 2000 census, commuters spent an average of 25.5 minutes to get to work, more than two-and-one-half minutes longer than they did in 1990, and more than double the 40-second rise of the 1980s. While this may not sound like a lot, the increase alone adds up to an additional 10 hours a year stuck in traffic. The problem is even worse in large and mid-sized metropolitan areas. According to Texas A&M's Texas Transportation Institute (TTI), the average commute time during rush hour is almost 40 percent longer in the nation's 75 largest metro areas

than during non-rush periods.[i] This is up from about 15 percent longer in 1982. Drivers now waste an average of 62 hours per year stuck in traffic, the equivalent of more than one-and-one-half weeks of work.

Why Is Congestion So Bad?

Traffic congestion has gotten worse for two reasons: The demand (vehicle miles traveled) has increased while the supply (miles of roads) has stagnated.

Why are people driving more? Unlike what some opponents of expanding roads claim, the main big contributor is the growth of the economy. The 15 percent increase in employment in the 1990s accounts for more than half of the increase in vehicle miles traveled (VMT). Moreover, because incomes went up so much during the 1990s (and cars are lasting longer), driving has become more affordable. As a result, for the first time m our history over 90 percent of households own a car. Moreover, because more people face increased time pressures and fewer work standard 9-to-5 hours, car-pooling has declined. Put it all together and you get a 28 percent increase in VMT in the last decade.[ii]

Even with an increase in VMT, congestion should not get worse if roads are expanded by an equivalent amount. Unfortunately, between 1987 and 1998, while VMT on freeways or principal arterials in urban areas increased 42 percent, lane miles increased only about 9 percent.[iii] This is why even though we added 40 percent fewer drivers in the 1990s than we did in the 1980s, travel times increased three times faster.[iv] Confirming what the average American would see as common sense, the bottom line is best stated by TTI: "Road construction has been shown to play a key role in holding the line against urban mobility decline."

One of the main reasons for this infrastructure shortfall is that while highway funding has increased in the last several years, as a share of miles traveled, highway expenditures by all levels of government fell from a high of 8.7 cents in the early 1960s to 4.6 cents in 1985, to 3.9 cents in 1997 (in constant dollars).[v] At the same time the systems needs have increased as population has grown and much of the infrastructure has aged.

In 2000, DOT estimated that overall highway funding would need to increase 16 percent from $48.7 billion to $56 billion per year (1997 dollars) just to maintain the physical conditions of existing highways and bridges over the next 20 years.[vi] Expanding and improving the highway system so that road congestion won't get worse will cost $76 billion per year, a 56 percent increase.[vii] Cutting travel time by 1 percent per year will require annual surface transportation investments of $94 billion per year. However, projected amounts of transportation funding will fall significantly short of these levels. As a result, if we want to make significant progress in improving the performance of our surface transportation system, we will need to invest more.

Tolls Will Have to Play an Increased Role In Financing our Transportation Infrastructure in the 21st Century

Even if it were raised a modest amount—a necessary, but politically difficult task—the gas tax simply will not provide enough revenue to make the investments needed to reduce congestion. The problem may get even more acute as cars become more fuel-efficient and gas tax revenues decline. Moreover, many regions spend most of their limited transportation dollars on maintenance; they have little remaining to fund system expansion. As a result, toll roads will be the only way for many regions to finance lane and highway expansions. Tolls accounted for less than 5 per-

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[i] Schrank, David and Tim Lomax, "2002 Urban Mobility Study," Texas Transportation Institute, June 2002, *http: / / mobility.tamu.edu / ums /*.

[ii] Bureau of Transportation Statistics: *http: / / WWW.transtats.bts.gov*.

[iii] The actual increase was 13.1 percent expansion, but over 30 percent of this is due to reclassifying rural counties as urban.

[iv] Source: Alan Pisarski, personal communication.

[v] "Highway, Bridge and Transit Finance," Chapter 6 in "1999 Status of the Nation's Highways, Bridges, and Transit Conditions and Performance Report," U.S. Department of Transportation: Federal Highway Administration, *http: / / www.jhwa. dot.gov / policy / 1999cpr / index.htm.*

[vi] Preliminary data from the 2002 Conditions and Performance Report indicate that a 17 percent increase in highway spending, from $64.6 billion to $75.9 billion per year (2000 dollars), will be needed just to maintain the physical conditions of existing highways and bridges over the next 20 years. Source: Statement of Mary E. Peters, Administrator, Federal Highway Administration, Department of Transportation, before the Committee on Transportation and Infrastructure Subcommittee on Highways and Transit, House of Representatives, Hearing; on the Status of the Nation's Highway and Transit Systems, September 26, 2002.

[vii] Preliminary data from the 2002 Conditions and Performance Report indicate that a 65 percent increase in highway spending, from $64.6 billion to $106.9 billion per year (2000 dollars), will be needed to improve the system. *Ibid.*

cent of total highway revenues in 1997. Expansion of toll systems, including high-occupancy toll (HOT) lanes, value express lanes, truck-only lanes, and congestion pricing of existing lanes, could significantly increase revenues to offset the costs of new construction.[viii]

One promising approach to implementing road pricing would be to convert existing high-occupancy vehicle (HOV) lanes to HOT lanes. The development of HOT lanes can bring new revenues and pricing incentives to road use by essentially auctioning off space on existing HOV lanes. HOV lanes spread throughout most of America's largest metro areas in the 1980s and 1990s as an effort to encourage commuting by carpool and bus. But years later, the common spectacle of little-used HOV lanes adjoining jamned "regular" lanes is creating a backlash, with lane restrictions being loosened or eliminated in five states. A number of regions have come up with a better idea: HOT lanes currently operate in two parts of California (San Diego and Orange Counties) and in Houston, Texas, and additional projects are currently in development in eight other states.[ix] The concept is simply to open up existing underutilized HOV lanes to voluntary toll traffic, resulting in a reduction of traffic congestion in the "regular" lanes, generation of revenue for other transportation projects, and an option for commuters who are willing to pay-or who urgently need-to get down the road. HOT lane tolls can and should also be used for the broader purpose of reducing traffic congestion and pollution, while making transportation more affordable. In San Diego, tolls are used to subsidize express bus service in the corridor, which promotes all three purposes.

The concept of road pricing can go beyond HOT lanes to value express lanes, whereby new roads or lanes are built and supported in all or part through the use of tolls.[x] These new roads and/or lanes would offer reliable, free-flowing travel throughout metropolitan areas for a fee. As roads continue to get more congested, there is an increasing number of people who would gladly pay extra to drive on uncongested roads. By adjusting the fee in real time, a free flow of traffic could be maintained. Robert Poole of the Reason Institute has proposed value express lanes throughout entire metro areas.

The Orange County, Calif., 91 Express Lane is an example of such a value express lane project. Opened in late 1995, it is one of four private toll road ventures permitted by legislation passed in 1989. Project development and operating procedures are delineated in a franchise agreement signed by the state and the facility's operator, the California Private Transportation Company. Four lanes (two in each direction) were built in the median of State Route 91, an extremely congested, six-lane highway. The amount of the toll varies by time of day to ensure that traffic flows smoothly. To keep the lanes free of congestion at rush hour, express lane tolls have been raised more than once a year since 1995. The current cost of traveling the entire 10-mile span of HOT lanes ranges from $1.00 to $4.75, and it is estimated that drivers save an average of 12 minutes in commuting time.

Finally, with the recent implementation of congestion pricing in central London there has been renewed interest in using pricing to manage congestion. Economists have long argued that drivers do not pay the full social cost of driving when they drive during peak periods and that because of this that drivers over-consume peak period travel. The notion is that if drivers traveling at peak periods were charged a fee (or a higher fee than at other times of the day), that travelers who had other choices (e.g., transit, time shifting) would not drive then. The experience so far in London has proven this point, as traffic is down approximately 20 percent and average speeds are up considerably. It's important to note, however, that in this case the congestion tolls are used not to raise revenue to pay for new capacity to alleviate congestion, but rather to induce people to not drive. It's unlikely that a similar scheme will be introduced in the U.S., nor is such an approach needed except perhaps in the few most congested urban cores. However, tolls easily could and should be varied on roads (and bridges) to adjust to demand conditions in order to not only maximize the efficient utilization of our limited transportation infrastructure but also pay for infrastructure expansion.

[viii] Other nations are further ahead than the United States. For example, the Netherlands recently instituted a comprehensive mobility plan to keep traffic moving in the areas of Amsterdam, Rotterdam, The Hague, and Utrecht. They plan to institute a two-year road pricing test period and construct new toll roads with express toll lanes. Several cities in Norway, including Trondhiem, Oslo, and Bergen, instituted tolls to build new roads and widening existing ones.

[ix] These include Arizona, Colorado, Florida, Georgia, Minnesota, Oregon, Virginia, and Washington. Prior to Governor Glendening's veto of the idea, Maryland was also on the list.

[x] Orski, Ken, "Financing Future Transportation Needs, Part III: Long Term Alternatives-New Funding Concepts," Innovation Briefs, vol. 13, no. 5., September/October 2002, *http: // www.innobriefs.com / abstracts / 2002 / sepO2. html#2.*

Objections to Road Pricing

Opponents of road pricing make a number of objections, charging that it is inefficient, unfair, and represents double taxation.

It is true that paying tolls at staffed tollbooths is inefficient and costly. However, electronic toll collection systems that use vehicle-mounted electronic transponders to automatically debit funds from drivers' pre-paid accounts enable road pricing without slowing traffic or requiring toll collectors. This technology also enables governments to easily institute a variety of road pricing approaches, including pricing based on time of day, level of congestion, number of passengers, and type of car (e.g., electric-gas hybrid cars ride for free).

Some oppose tolls because they believe that drivers have already paid for roads through gas taxes and that tolls represent a form of double taxation. However, gas taxes do not cover the full costs of driving. Gas taxes (and tolls) cover only about 88 percent of the cost of highways. If the costs of maintaining other roads and local streets are factored in, the share of road costs paid by gas taxes is even lower. In short, gas taxes do not come close to paying for the costs of the nation's surface transportation system. Moreover, gas taxes do not cover the costs of adding lanes or expanding roads. One study found that the average construction costs for adding lanes in urban areas is over 30 cents per mile driven during peak periods, yet gas taxes amount to only about 2 cents per lane mile.[xi] Likewise, drivers pay nowhere near the total cost of driving when they use, roads during peak congestion periods.[xii]

Some conservatives oppose road pricing because they see it as a tax increase. While this could be true if existing roads were tolled, it's not true if tolls are used to finance new road capacity and if current gas tax revenues continue to be spent on transportation and not diverted to the general fund. Tolls are simply a way to charge the user for their use of a service. Clearly when a consumer pays to buy a service, neither they nor we see that as a tax. The same holds true for transportation. If used to support new capacity expansion, tolls would simply be the price people would voluntarily pay for a new service. If consumers did not want to "buy" this increased mobility, they could remain on "free" lanes.

Finally, road pricing is opposed by some, particularly on the left, who believe that roads are a public good which should be provided equally to all. For example, some liberal groups have criticized HOT lanes as unfair, calling them "Lexus lanes." They argue that all Americans should be treated equally and that charging some for premium service creates a two-tiered society with the privileged getting to cruise along at 65 mph while everyone else sits in traffic. There are several problems with this view.

First, as a representative of an organization affiliated with the Democratic Leadership Council, I am sympathetic to concerns about equity. However, I believe that in this case, well-intentioned equity concerns are misplaced. Studies have shown that HOT lanes are used by a representative mix of commuters, not just the wealthy.[xiii] But even taking into account the fact that higher income travelers do use the lanes more than lower income travelers, one can make a compelling case that using tolls to expand infrastructure is in fact highly progressive—since higher earners are actually paying more for public infrastructure. But opponents will argue that unless you pay, you don't benefit. In reality, everyone benefits from charging those willing to pay for additional lanes or using underutilized lanes, since this means there will be fewer drivers in the free lanes. Second, road pricing can be explicitly designed to address these equity concerns. For example, some of the revenue generated can support transit, and people who take transit could get credits (through smart cards) that let them use toll lanes on days they need it most.[xiv] Finally, it's one thing to raise equity concerns, it's another to propose realistic alternative solutions. We can ask Americans to wait a very long time until the gas tax is finally increased on all drivers so it raises enough revenues to add new capacity, or we can just move ahead now and expand capacity, drawing revenues from those

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[xi] DeCorla-Souza, Patrick and Anthony Kane, "Peak Period Tolls: Precepts and Prospects," *Transportation,* vol. 19, no. 293, p. 311, 1992, Kluwer Academic Publishers.

[xii] While the cost to each additional driver on a congested road increases, the cost to the rest of the drivers from the incremental addition of more cars increases even more. As a result, drivers on congested roads do not pay the full social costs.

[xiii] Analysis by Edward Sullivan and Joe El Harake of the 91 express lanes in southern California found that while upper-income drivers use lanes more, the difference; is not too pronounced. Fifty percent of households with incomes of higher than $100,000 stated that they rarely or never use the lanes, while 25 percent of individuals with incomes below $25,000 use them frequently.

[xiv] DeCorla-Souza, Patrick: and Anthony Kane, "Peak Period Tolls: Precepts and Prospects," *Transportation,* vol. 19, no. 293, p. 311, 1992, Kluwer Academic Publishers.

that are willing to pay. In most cases, arguing that roads should be funded solely by the gas tax means that new roads will simply not be built.

How the Federal Government Can Boost Road Pricing

While a number of new road pricing projects have emerged in the last decade, overall progress is slow. In 1997, Congress created an Interstate Toll pilot project and a road pricing pilot program within DOT. No funds were devoted to the former project and the road pricing program received just $11 million per year for FY2000 to FY2003 to support up to 15 new state and local value pricing programs. In spite of energetic efforts by the DOT program managers, the results have been disappointing largely because the incentives for states to try a new and potentially controversial proposal were minimal. Moreover, DOT itself has been ambiguous about road pricing. As a result, if Congress wants to kick-start new road pricing projects it will have to provide much stronger incentives.

1. *Repeal the limitation on tolls on interstate highways, as long as toll collection is electronic and the tolls are used to support road or lane expansion or major rebuilding.*[xv] To enable states to generate more revenues for road expansion, Washington needs to remove the regulatory barriers to road pricing. In order to ensure that states do not simply slap tolls on sections of interstates that carry large numbers of out-of-state drivers, any new tolls should be allowed only on new roads or expanded lanes. The Freeing Alternatives for Speeding Transportation (FAST) Act, H.R.1767, introduced by Mark Kennedy (R-MI) and Adam Smith (D-WA) would do this.

2. *For a limited period of time, raise the required federal share on road projects involving pricing by at least 10 percent.* While reducing restrictions on tolling federally funded highways is an important step, it may be not be enough to convince states to take the somewhat politically risky step of using tolls to add capacity. However, if the federal government provided states with incentives to use tolls to fund new capacity, this would help states overcome their inertia and political caution. One way to do this is to raise the federal share of funding for toll roads. Currently, the federal government provides 80 percent of funds for most road projects. To jump-start road pricing projects, Congress should provide a 90 percent match on these projects. While this will not provide additional funds to states, it will let them stretch their own state funds further. Some will argue that since road-pricing projects raise revenue, federal funds should be used instead for maintenance and construction of roads that are not priced. However, the revenues from the road can be used to support other transportation projects in the state. Until toll roads become more widespread, it makes sense for the federal government to provide incentives for their creation.

3. *Change the tax laws to allow private corporations to issue tax-exempt bonds for toll roads as long as they get approval from the state DOT.* Under current law, certain types of privately funded projects, such as public transportation facilities, airports, waste disposal facilities, and water and sewage facilities, are eligible for tax exempt financing with private activity bonds.[xvi] However, privately built toll roads are not eligible. In contrast, publicly funded and operated road projects can obtain tax-exempt bonds. Additionally, the fact that a private operator cannot own a publicly funded project reduces the incentive for private companies to operate roads. Moreover, private toll roads compete against publicly provided roads. Changing the tax laws to enable private toll roads to be eligible and raising the state cap on private revenue bonds to reflect this change would enlist new innovative public-private partnerships.

4. *Make the receipt of federal highway funding contingent upon the states adopting an interoperable national toll system so that any toll transponder can be used anywhere. Allow states to use federal highway funds to offer free transponders to all drivers when they register their vehicles.*[xvii] Toll roads will expand if it is easier to use electronic toll transponders. While a number of East Coast states adopted a shared E-ZPass standard, other states use different systems.[xviii] But even for states with the same standard, unless they are linked to the same system, drivers cannot use one state's transponder in another state. For example, a commuter in Washington, DC. would have to get a "Smart Tag" to drive on the Dulles Toll Road in

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[xv] Section 1216 of Transportation Equity Act for the 21 st Century (TEA-21) says that with the exception of a limited pilot program, states cannot put new tolls on interstate highways. States should be able to add new lanes to interstates and charge all electronic tolls on them.

[xvi] "Issue Brief: Private Activity Bond Volume Caps," June 2002, *http: // WWW.gfoa.org/flc/briefs/062702/volcaps.06.02.pdf.*

[xvii] Transponders cost anywhere between $15 and $35, and are often free since they save the toll road authority money by avoiding the use of expensive human toll collectors.

[xviii] For example, Florida, South Carolina, Texas, and Kansas use a different standard.

Virginia and an E-ZPass for the Chesapeake Bay Bridge in Maryland, not because the transponders are different, but because Virginia is not linked into the E-ZPass system. As a result, transponder interoperability is needed. In addition, to encourage the use of toll transponders, it needs to be much easier for Americans to get low-cost transponders.[xix]

Conclusion

If we do not want to see even higher levels of congestion when Congress revisits the TEA-21 Act in 2009, moving forward this year to remove restrictions and provide incentives for the greater use of tolls to expand our nation's infrastructure will be critical.

PREPARED STATEMENT OF WILLIAM R. BUECHNER, PH.D., VICE PRESIDENT, ECONOMICS AND RESEARCH, AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION

Mr. Chairman, Congressman Stark, and Members of the Committee, thank you very much for inviting the American Road and Transportation Builders Association to testify this morning on "Financing Our Nation's Roads".

I am Dr. William Buechner, ARTBA's Vice President for Economics and Research and chief economist. Prior to joining ARTBA in 1996, 1 served 22 years as a senior economist for the Joint Economic Committee, and I have a doctorate in economics from Harvard University. I am very pleased to be here this morning to present ARTBA's views on this important subject.

ARTBA marked its 100th anniversary last year. Over the past century, its core mission has remained focused on aggressively advocating federal capital investments to meet the public and business community's demand for safe and efficient transportation. The transportation construction industry ARTBA represents generates more than $200 billion annually to the nation's Gross Domestic Product and sustains more than 2.5 million American jobs. ARTBA's more than 5,000 members come from all sectors of the transportation construction industry. Thus, its policy recommendations provide a consensus view.

Importance of Transportation Investment. This committee deals with issues that directly relate to the development and management of material wealth of the federal government and the nation. Few issue areas have a bigger impact on the U.S. economy than transportation investment.

Transportation infrastructure is the catalyst for new development. It provides the platform necessary to perform virtually all of the activities of both government and the private business sector.

Without transportation infrastructure, people cannot get to and from work. Raw materials cannot be sent to manufacturing facilities . . . products and food stuff cannot be sent to market. The travel and tourism industry that so many of our states depend on would not exist.

Emergency response is a meaningless term without uncongested transportation infrastructure. While usually overlooked in federal budget and policy discussions, transportation investment—or the lack thereof—impacts public health and insurance costs borne by government and society.

Without our complex transportation infrastructure system, our military would still be mustering for an action in Iraq . . . and literally hundreds of thousands of Americans would have died over the years in hurricanes, floods and other natural disasters.

Clearly, providing and maintaining the nation's transportation infrastructure is—and always has been in most civilized and progressive societies—a core function of government. We are heartened that the Joint Economic Committee is exploring this issue area with the intention of providing recommendations to the Congress on how to generate additional revenue to meet the very substantial investment shortfall in highway and public transit facilities that the U.S. Department of Transportation outlined in its 2002 report to Congress.

Significant new investment in transportation improvements is critical to job creation and future economic growth in America. We need not only to maintain the transportation infrastructure we have, but also to build more capacity into the system to ensure that the system is not retarding economic growth.

[xix] Most likely, the next generation of transponders for which there is an agreed North American standard will be built into vehicles by the manufacturers. In addition to permitting automatic tolling, they could support a wide range of new applications, such as allowing police to download license and registration data if they pull a car over, give the driver a dashboard display of the fog warning one-half mile ahead, and download a movie at the gas station for the kids in the backseat. (Source: interview with Peter Samuel, editor, Toll Roads Newsletter).

This year, traffic congestion in America will cost our economy nearly $70 billion in lost productivity and wasted motor fuel costs, according to the Texas Transportation Institute. Motor vehicle crashes will cost the American economy $230 billion this year, according to the National Highway Traffic Safety Administration. Poor road conditions or outdated alignments are a factor in a third of those incidents.

That $300 billion drain on the American economy is 10 times what the federal government is investing in capital improvements to the nation's surface transportation system during 2003.

With the federal highway, transit, airport and rail investment programs all due for reauthorization by the Congress this year, a window of opportunity exists to take the bold financial actions that are necessary to ensure the nation has the safe and efficient transportation network we need for the new century.

As detailed in our testimony, the investment shortfall we face will need more than "innovative" financing. There is no "silver bullet." There is no easy answer or way out. The inescapable fact is that it will be necessary to increase federal highway user fee rates to meet the challenge that the federal government itself has quantified.

Public-Private Partnerships and Innovative Financing. While ARTBA's core focus is on the federal programs that finance investment in highways, mass transit, airports, rail and water transportation, we have long been a leader in the area of public-private partnerships and leveraged financing for transportation projects. More than 60 major companies in the industry are represented in our Public-Private Ventures Division, which has developed a set of recommendations for increasing the ability of private companies to build and operate transportation facilities in the United States. To further this effort, we conduct an annual conference each fall in Washington where hundreds of participants meet to discuss public policy and business opportunities in the public-private partnership area.

We are very encouraged that this committee is taking a lead role in bringing ideas for additional mechanisms for financing investment in the nation's infrastructure, to the Congress.

Let me summarize some of our ideas for increasing the role of the private sector in financing transportation investment.

First, public-private partnerships can supplement the core federal transportation investment programs, but not replace them. The core programs are funded through what in essence are user fees. While not perfect, this method has proven effective in financing transportation projects aimed at meeting general public needs and facilitating economic growth, defense and emergency response activities and environmental objectives for almost half a century. Public-private partnerships are best suited for "mega" projects that, due to expense, could not otherwise be financed in a timely manner through normal user fee revenue streams without either very large increases in those fees or curtailing investment in the overall core maintenance, rehabilitation and new construction programs.

The Transportation Equity Act for the 21st Century (TEA-21) established a handful of financing mechanisms—the Transportation Infrastructure Finance and Innovation Act (TIFIA), State Infrastructure Banks (SIBs), and toll road provisions—that were designed to foster public-private partnerships. After five years experience, the results have been mixed. There have been a number of good projects delivered at substantial cost savings to the public. But these mechanisms have not attracted as much interest and private equity as had been hoped.

There are a number of ways TIFIA, SIBs, and toll funding could be improved to make them more attractive to potential private-sector investors.

TIFIA Program. Under the TIFIA program, which offers federal credit assistance for up to one-third of the cost of transportation projects of national or regional significance, 11 projects have been approved so far worth a total of $15.4 billion. Federal TIFIA loan commitments have totaled $3.6 billion and the projected U.S. budget cost is $190 million. But certain provisions of the program have erected barriers to project submissions.

We would suggest the following changes to the TIFIA program in TEA-21 reauthorization legislation:

1. Lower project eligibility to $50 million from the current $100 million;
2. Permit intermodal projects;
3. Eliminate the "springing lien" provision, under which junior federal debt becomes senior debt under a default, because it raises the perceived risk and cost of private financing and discourages private equity; and
4. Require the TIFIA office at FHWA to become more active in encouraging project applications.

State Infrastructure Banks. Currently, 32 states have established State Infrastructure Banks, which provide revolving funds for transportation projects. Currently,

SIBs have 310 loans outstanding worth $4.1 billion. Only four of these SIBS, however, are eligible for a TEA-21 pilot program allowing them to use federal highway funds for bank capital.

ARTBA recommends that the pilot program be extended to permit all 50 states to use some federal funds to capitalize the SIB revolving funds.

Toll Roads. For a public private partnership to work as a source of funding for a highway project, there has to be a stream of income from the project back to the private investor.

The traditional option for generating a revenue stream has been tolling, and tolling is gaining acceptance as a source of highway funding. The HOT lane corridor proposal that Bob Poole has developed and the proposal for truck only toll lanes, which ARTBA has endorsed, are two creative variations on the tolling approach that can generate new revenue sources for highway improvements that would provide needed additional capacity and higher levels of safety.

But there are other ways to generate a revenue stream for private investors. For example, development districts can be established where businesses and developers who would benefit from a highway investment would finance it through higher property or sales taxes. Investors could also be compensated with land and development rights near a project, similar to what was done to foster development of land-grant railroads in the 19th century.

Financing the Federal Highway Program. As I said earlier, initiatives such as those discussed earlier in our testimony or suggested by other witnesses this morning are important potential new sources of highway investment, but they are a supplement to and not a substitute for the core investment financed by the federal-aid highway program and the federal mass transit program.

For the past half century, most federal transportation investment has been user-fee financed. Revenues from the federal motor fuels taxes and certain taxes on heavy trucks are credited to the federal Highway Trust Fund. These revenues are supposed to be used to finance capital investments in the nation's core highways and mass transit systems.

Prior to the enactment of TEA-21 in 1998, this relationship was often breached. Congress would provide whatever amount could be carved out of the domestic discretionary budget cap for highways and transit, with no formal link to Highway Trust Fund user fee revenues or the nation's surface transportation investment requirements.

TEA-21 addressed half this problem by linking highway program funding directly to Highway Account receipts and using Mass Transit Account receipts to finance 80 percent of federal transit investment. But the annual investment still had no relationship to the nation's surface transportation investment needs. The *2002 Report to Congress on the Conditions and Performance of the Nation's Highways, Bridges and Transit* by the U.S. Department of Transportation states bluntly: "Capital investment by all levels of government between 1997 and 2000 remained below the 'Cost to Maintain' level. Consequently, the overall performance of the system declined."

For TEA-21 reauthorization, ARTBA has for more than two years urged that Congress fund the federal highway and mass transit programs at the level necessary to meet our nation's highway and transit investment requirements. At minimum, this should be the amount required to maintain current physical and performance conditions and, hopefully, begin improving conditions.

Highway and Transit Investment Needs. There are a number of ways to determine highway and transit investment needs, but the only methodology that is actually based on economic principles is the method used by the U.S. Department of Transportation for its biannual *Conditions and Performance Report.*

The U.S. DOT's report is based on a sample of 113,000 highway segments from around the country. For each of these segments, the state DOTS provide details on physical conditions and traffic volume, as well as traffic projections. The U.S. DOT model then projects forward physical and performance conditions and examines up to 28 alternatives for addressing any problems identified. For each alternative improvement, the model computes the sum of the economic benefits, including the impact on travel times, crash costs, and vehicle maintenance costs, and compares the benefits to the cost of the improvement. It then ranks potential projects according to the benefit/cost ratio. Similar models are applied to bridge and transit investment needs.

Based on this model, the *2002 Conditions and Performance Report* found that an annual investment of $82.6 billion in constant 2000 dollars will be required by all levels of government during the 20-year period from 2000-2019 just to maintain current physical and performance conditions on the nation's highways and bridges.

When the Transportation and Infrastructure Committee factored in projected inflation of about 2.2 percent per year for the next six years and assumed that the federal government should continue providing the approximately 43 percent share of total public highway capital investment that it has assumed over the past decade, the Committee found that the minimum federal surface transportation investment needed for the next six years just to maintain current highway and transit conditions totals over $320 billion or an average of almost $54 billion per year. Highway investment by the federal government would have to total more than $270 billion or $45 billion per year, while transit investment would have to total more than $48 billion. To improve highway and transit conditions by making all economically justified investment would require more than $400 billion, or $72 billion per year. A copy of the Committee's findings is attached at the end of my statement.

I should note that these are conservative estimates because they assume a significant slowdown in travel growth over the next two decades. Similar forecasts have been made in the past but have always been wrong.

The following table shows the number of highway miles in each state with pavement surfaces that are rated "unacceptable" by the Federal Highway Administration and need resurfacing or reconstruction. The table also shows the number of bridges in each state that U.S. DOT has determined are either structurally deficient or functionally obsolete. The bottom line is that almost 18 percent of core highway pavements currently need resurfacing or reconstruction, and 27 percent of all bridges need to be replaced. These percentages will continue to grow in the years ahead if Congress funds the highway program in reauthorization below the level needed to maintain current conditions.

Reauthorization Proposals. Three weeks ago, Congress finalized a FY 2004 budget resolution that would provide a total $218 billion for the federal highway program over the next six years and $49 billion for transit. Not only are both figures far short of the minimum investment needed to maintain current conditions, the highway figure is barely sufficient to accommodate projected inflation and it is well below the amount needed to increase the return to donor states to the proposed 95 percent.

The only current reauthorization proposal that will meet the nation's highway and mass transit investment needs for the next six years is the program proposed by the bipartisan leadership of the House Committee on Transportation and Infrastructure.

This proposal would provide $375 billion for the highway, transit and highway safety programs over FY 2004-2009. The modal split would likely be approximately $300 billion for highways, about $65 billion for transit and the remainder for the highway safety programs. This investment level would not only maintain current highway and transit conditions, it would begin to make some improvements.

The problem, of course, is that projected revenues into the Highway Trust Fund are not sufficient to finance the level of federal highway and transit investment required to meet the nation's needs. With current revenues, there would be virtually no growth.

It is clear that a meaningful increase in highway and transit investment will require a substantial infusion of new revenues into the Highway Trust Fund.

Highways Needing Resurfacing or Reconstruction, and Deficient Bridges

State	Miles of Highway Needing Resurfacing or Reconstruction 1/: Interstates and express ways	Other major roads	Total miles needing resurfacing or reconstr.	Total Federal aid highway miles	Percent needing resurfacing or reconstr.	Bridges: Total number of bridges in the state	Structurally deficient or functionally obsolete	Percent deficient or obsolete
Alabama	18	2,814	2,830	23,654	12.0%	15,597	4,897	31.1%
Alaska	101	673	774	2,986	25.9%	1,437	427	29.7%
Arizona	17	591	608	11,106	5.5%	7,066	750	10.6%
Arkansas	532	7,081	7,613	19,973	38.1%	12,438	3,380	27.2%
California	3,814	16,187	20,001	50,725	40.8%	23,764	6,784	28.5%
Colorado	154	1,833	1,987	16,027	12.4%	8,105	1,450	17.9%
Connecticut	289	850	1,139	5,799	19.6%	4,177	1,316	31.5%
Delaware	31	289	320	1,438	22.3%	835	135	16.2%
Dist. of Columbia	85	16	101	452	22.3%	244	166	68.0%
Florida	165	895	1,060	23,348	4.4%	11,376	2,125	18.8%
Georgia	10	20	30	30,044	0.1%	14,459	3,307	22.9%
Hawaii	75	358	433	1,467	29.6%	1,089	522	47.9%
Idaho	90	2,843	2,933	8,862	33.1%	4,096	754	18.6%
Illinois	592	4,083	4,675	23,940	19.8%	25,512	4,546	18.1%
Indiana	233	2,936	3,169	21,701	14.6%	18,067	4,172	23.1%
Iowa	404	1,181	1,585	24,252	6.5%	24,955	7,027	28.2%
Kansas	172	7,556	7,728	21,686	35.6%	25,518	6,376	24.9%
Kentucky	84	849	933	14,486	6.4%	13,461	3,997	29.7%
Louisiana	562	2,545	3,107	14,478	21.5%	13,366	4,487	33.5%
Maine	19	342	361	6,409	5.6%	2,383	846	35.5%
Maryland	298	272	570	4,965	11.5%	4,950	1,403	28.3%
Massachusetts	862	1,729	2,591	10,731	24.1%	4,925	2,505	50.9%
Michigan	1,554	6,251	7,805	32,006	24.4%	10,799	3,318	30.7%
Minnesota	73	2,105	2,178	30,582	7.1%	12,845	1,780	13.9%
Mississippi	111	4,206	4,317	20,775	20.8%	16,808	4,986	29.7%
Missouri	1,092	10,017	11,109	30,011	37.0%	23,465	8,579	36.6%
Montana	78	729	807	12,322	6.5%	4,986	1,092	21.9%
Nebraska	363	1,586	1,949	15,353	12.7%	15,462	4,188	27.1%
Nevada	21	393	414	4,862	8.5%	1,563	222	14.2%
New Hampshire	51	352	403	3,295	12.2%	2,355	792	33.6%
New Jersey	573	1,160	1,733	9,608	18.0%	6,375	2,336	36.6%
New Mexico	198	1,299	1,497	9,779	15.3%	3,800	727	19.1%
New York	1,622	2,175	3,797	25,869	14.7%	17,389	6,501	37.4%
North Carolina	465	2,358	2,823	22,596	12.5%	17,116	5,252	30.7%
North Dakota	59	885	944	13,801	6.8%	4,517	1,119	24.8%
Ohio	421	2,401	2,822	27,985	10.1%	27,988	7,072	25.3%
Oklahoma	489	7,252	7,741	23,533	32.9%	22,989	9,228	40.1%
Oregon	148	1,177	1,325	16,846	7.9%	7,252	1,730	23.9%
Pennsylvania	808	5,621	6,429	27,160	23.7%	22,153	9,407	42.5%
Rhode Island	112	211	323	1,890	17.1%	749	394	52.6%
South Carolina	138	2,577	2,715	17,346	15.6%	9,061	2,079	22.9%
South Dakota	274	2,247	2,521	14,242	17.7%	5,979	1,590	26.6%
Tennessee	104	363	467	16,846	2.8%	19,467	4,506	23.1%
Texas	1,396	12,781	14,177	77,160	18.4%	48,202	10,508	21.8%
Utah	104	849	953	7,586	12.6%	2,791	548	19.6%
Vermont	64	815	879	3,859	22.8%	2,718	959	35.3%
Virginia	298	1,229	1,527	20,986	7.3%	12,832	3,420	26.4%
Washington	107	1,976	2,083	17,780	11.7%	7,524	2,027	26.9%
West Virginia	70	3,570	3,640	10,240	35.5%	6,821	2,546	37.3%
Wisconsin	569	2,400	2,969	21,737	13.7%	13,562	2,601	19.2%
Wyoming	22	135	157	7,421	2.1%	3,077	662	21.5%
U.S. Total	20,488	139,672	160,160	908,940	17.6%	589,111	161,960	27.5%

Sources: Highway - Federal Highway Administration, Highway Statistics 2001, Tables HM-63 and HM-64.
Bridge - Federal Highway Administration, Office of Bridge Technology, Internet site www.fhwa.dot.gov/bridge/britab.htm
1/ Roads with "Unacceptable" ride quality (IRI over 170) or in "Poor" or "Mediocre" condition (PSR under 2.5)

It costs $100,000 to resurface a highway lane-mile and $1,000,000 to replace a two-lane bridge

Last year, in our "Two Cents Makes Sense" proposal, ARTBA showed how the nation's highway and transit needs could be met with an annual two cent-per-gallon increase in the federal motor fuels user fee over the next six years, even if no other new revenues sources were adopted. An annual rate adjustment of less than two cents per gallon would be sufficient if other revenue enhancements were enacted.

To achieve the same goal, the bipartisan T&I Committee leadership is considering a number ofrevenue options, including spending down the Highway Trust Fund balance, compensating the Highway Trust Fund for revenues lost to the gasohol tax incentive, reinstating interest on the trust fund balance, and reducing motor fuel tax evasion. These would be helpful but the revenue amounts are small. To bridge the gap, the Committee is also considering a 5.5 cent/gallon adjustment to the motor fuels excise to restore purchasing power lost since the rate was last adjusted in 1993, plus subsequent indexing of the rate to the CPI. ARTBA wholeheartedly supports this approach.

There have been suggestions that, in lieu of an increase in user fees, revenues to increase federal investment in highways and mass transit be raised by issuing bonds—that is, by borrowing the money. Some find this an attractive idea. But before Congress considers such a sweeping change in the financing of surface transportation investment, it should pay attention to the observations presented in an excellent article by Dr. Martin Wachs, Carlson Distinguished Professor of Civil & Environmental Engineering at the University of California, Berkeley, titled "A Dozen Reasons for Raising Gasoline Taxes." Dr. Wachs writes:

"In the end, borrowed money is not really revenue at all, because it must later be repaid using revenues from taxes or user fees. In addition to repaying the borrowed funds, the state must bear the cost of interest, which, if funds are held for 20 or 30 years, often exceeds the value of the principal."

A copy of Dr. Wachs article is attached to my statement.

Consequences of Inadequate Investment. Let me turn to another issue, the economic consequences of failing to meet our highway and transit needs.

Highway and Bridge Conditions. The *2002 Conditions and Performance Report* is very clear about the consequences of failing to increase highway investment—highway conditions will deteriorate substantially. The average quality of highway pavements will deteriorate by 26 percent by 2019 at the current level of highway investment, while the backlog of structurally deficient or functionally obsolete bridges—currently over 160,000 bridges—will likely grow by a similar amount.

Safety. Safety conditions will also deteriorate. The National Highway Traffic Safety Administration projects that traffic fatalities will increase from 42,000 per year currently to more than 50,000 per year by the end of the decade without further increases in highway safety investment. Increasing the use of safety belts and reducing the incidence of drunk driving will help reduce fatalities, but highway conditions are implicated in one-third of all highway fatalities each year, which can only be cut by investing in highway improvements.

According to a recent report from the National Highway Traffic Safety Administration, highway crashes cost $230 billion each year, including hospital costs, lost productivity and wages, legal costs, property damage and a host of related costs. One-third of this is $75 to $80 billion, or more than double the annual federal investment in highway improvements. Highway crashes are one of the most serious public health issues in the United States. Highway crashes are the number one killer of young people under the age of 25. Congress should not ignore the safety consequences of highway investment when setting funding levels in TEA-21 reauthorization.

Congestion and Mobility. Finally, at the current level of highway investment, congestion will inevitably get worse. The U.S. DOT report calculates that failure to increase highway investment will reduce average highway speeds by 2 miles per hour by 2019, raise the amount of travel under congested conditions from 33 percent today to 36.4 percent and increase annual delay from 31 hours per capita to 36 hours.

Congestion is already having a serious economic impact. According to the Texas Transportation Institute's *2002 Urban Mobility Report*, traffic congestion in the nation's 75 largest cities costs an annual average of $67.5 billion, including the cost of 3.6 billion hours of delay and 5.7 billion gallons of wasted fuel.

A recent study by ARTBA based on data from the Census Bureau's latest *Commodity Flow Survey* showed that more than three-quarters of the value of all freight traffic in the U.S. is transported by truck. During the 1980s and 1990s, many U.S. businesses adopted the "just-in-time" delivery system, which freed up billions of dollars of warehouse and inventory funds for more productive investments. Congestion threatens to undo these gains to the detriment of our economic growth.

And there is growing evidence that congestion is impairing small business growth. Many small businesses in urban areas have cut growth plans because they can't work around the congestion, while management time is being absorbed by logistical problems at the cost of growth. Tax cuts will not stimulate growth in areas where highway congestion is the limiting factor.

There are social and health consequences to congestion as well, including the impact on family life, the amount and quality of time parents get to spend with their children, and the impact on health of the stress of driving under congested conditions.

The proposal by the bipartisan leadership of the House Transportation and Infrastructure Committee will address these problems. It will also have a powerful stimulative impact on the economy. A study of the Committee proposal by Global Insight, Inc. (formerly DRI-WEFA) found that the highway and transit investment and fuel tax increase would together generate $290 billion of Gross Domestic Product over the next six years, for a return of more than $2.80 of additional output for every federal dollar invested. It would generate a net gain of over $800 per household of disposable income after paying the increased motor fuels tax, as well as more than $100 billion of federal income and payroll tax revenues.

Conclusion. With an ever-growing U.S. population and, hopefully, an ever-growing U.S. economy to sustain and improve American quality of life, saying as we enter the 21st Century that "our priority now should be just maintaining the transportation infrastructure that we already have" or "we can't afford to invest more in new transportation capital assets" is like saying "America can't afford to defend itself anymore—the planes and tanks we used in World Wars I and II can serve all our needs if just maintain them."

Those people are wrong. Transportation investments, like defense investments, are what ensure America will be strong now . . . and in the future. It's an investment for our children and grandchildren.

In summary, Mr. Chairman, there are many ways in which the private sector can help finance investment in transportation infrastructure, and ARTBA has been a leader in supporting public-private partnerships. The federal responsibility for supporting investment in highways and transit, however, cannot be ignored. A minimum federal investment of at least $270 billion will be needed during the next six years just to maintain current conditions on our nation's highways. An additional federal investment of about $50 billion is necessary to maintain the nation's mass transit systems. The bipartisan leadership of the House Committee on Transportation and Infrastructure has developed a bold proposal to meet those goals. We urge the Congress to enact that plan. We also encourage the Congress to include the TIFIA, SIB, and toll road revisions we propose in the TEA-21 reauthorization legislation.

That concludes my remarks. Again, ARTBA appreciates your invitation to testify this morning. I would be happy to answer any questions.

Committee on Transportation and Infrastructure – Majority Summary*
U.S. Department of Transportation's
2002 Report to the U.S. Congress on the Nation's Highway and Transit System
Performance Levels, Physical Conditions and Annual Investment Requirements

The U.S. highway and bridge network and transit systems are the nation's economic lifeline. The mobility these systems facilitate impact American quality of life daily. It is for these reasons—and others, like emergency response and evacuation—that this critical network must be vigilantly repaired, maintained and expanded to meet the needs of a growing U.S. population and economy.

The U.S. Department of Transportation (USDOT) is required by law to prepare a biennial report for Congress on the needs of the Nation's highway and transit systems and the financial investments necessary to meet them. The most recent report was published in 2002[1]. It is based on Year 2000 data collected from state and local transportation departments and agencies. The report offers sobering assessment for those concerned about highway-related public health issues, homeland security and American productivity: **"Capital investment by all levels of government between 1997 and 2000 remained below the 'Cost to Maintain' level. Consequently, the overall performance of the system declined."**

Data in the report also show:

- **The number of Americans killed annually in motor vehicle crashes remained virtually unchanged from 1997-2000, at just under 42,000**—the equivalent of a commercial airliner crashing and killing 225 passengers almost every other day. Motor vehicle crashes now cost **the American economy $230 billion a year** in lost productivity, medical expenses and property damage.
- **Traffic congestion affects 33 percent of all travel on America's major roadways and currently costs the U.S. economy $67.5 billion annually in lost productivity and wasted motor fuel.** The average "rush hour" grew more than 18 minutes between 1997 and 2000, robbing time from working Americans and increasing transportation costs for U.S. business, contributing to reduced profits and higher consumer prices.
- **More than 160,000 miles of highway** on the federal aid system (18%) are in "poor" or "mediocre" condition and need repair, replacement or resurfacing. **162,000 U.S. bridges** (29%) are either "structurally deficient" or "functionally obsolete." (See attached for state data.)
- **Transit infrastructure and rail rolling stock** are also losing ground. 36 percent of the Nation's urban rail vehicles and maintenance facilities and 29 percent of the Nation's bus fleet and maintenance facilities are in substandard or poor condition.

USDOT's report states that just maintaining the Year 2000 highway and transit performance levels and physical conditions noted above would require a 20-year financial investment of $60.7 billion per year by all levels of government—federal, state and local. Making all economically justified improvements to the system, the agency reported, would require a 20-year combined investment of $127.5 billion per year. These figures, however, understate the magnitude of the problem.

To determine the "real world" investment requirement necessary over the anticipated six-year TEA-21 reauthorization period, the Committee on Transportation & Infrastructure asked the USDOT to recalculate the needs estimates applying three critical assumptions that were not factored into the original presentation to Congress. They are: (1) the projections for annual inflation assumed in the President's FY 2004 budget request to Congress; (2) adding an additional percent to the total to reflect the average historic federal cost to administer the program; and (3) assume that the federal share of total government investment through FY 2010 would remain at the average federal share over the past decade. Recalculating with these assumptions produced the following results:

Annual Federal Share of Investment Needed to Meet:	Highway/Transit
To Maintain Year 2000 System Performance & Physical Conditions	$53.4 billion
To Begin Making Significant Improvement to the System	$71.8 billion

These adjusted numbers underscore the $35 billion, six-year TEA-21 reauthorization highway and mass transit program investment that has been proposed by the T&I Committee.

Total investment, by ALL levels of government, on highway system improvements during 2000 was only $64.6 billion—almost 18 percent less than the "cost to maintain" investment requirement and 45 percent less than the investment necessary to make significant safety, mobility and physical improvements. The investment in mass transit was just over $6 billion. The U.S. Department of Transportation has quantified a serious—and growing—investment shortfall in the nation's vital surface transportation network.

*Prepared by T&I Majority Staff
[1] 2002 Status of the Nation's Highways, Bridges and Transit: Conditions & Performance Report to Congress. U.S. Dept. of Transportation. December 2002.

PREPARED STATEMENT OF MICHAEL REPLOGLE, M.S.E., TRANSPORTATION DIRECTOR, ENVIRONMENTAL DEFENSE

Good morning Mr. Chairman and members of the committee. I am speaking on behalf of Environmental Defense, an organization with 300,000 members that seeks to integrate law, science, and economics to find practical solutions to environmental problems.

Wise stewardship of our transportation system, economy, environment, and communities demands a level playing field between highways and other transportation choices. When financing, taxation, and pricing systems favor driving and roads over transit, walking, biking, and other choices, it skews consumer and agency investment and consumption decisions, harming efficiency and public welfare. We urge your action in the reauthorization of America's key federal transportation law, TEA-21, to make the playing field more, not less level, so Americans can be wise stewards of transportation.

How we finance our nation's transportation has a powerful influence on our travel choices, communities, public health, equity of access to opportunities, transportation system performance, and quality of life. For much of the last century, government funding for transportation, tax policy, and transportation pricing policies have strongly favored private motor vehicle use. While spurring unprecedented mobility, this also led to sprawl, induced traffic, degraded air and water quality, reduced access to opportunities for the millions of Americans who don't drive. It diminished transportation choices and made it harder to walk safely where we live and work, diminishing routine physical activity. Scientists now link our dependence on cars with asthma and other respiratory diseases, cancer, obesity, and impaired mental health.

The great progress we've made in producing cleaner cars has been significantly offset by growth in driving. The growing supply of "free" roads and highways, especially high-speed motorways with little local access function, supported by deep subsidies to motorists from general revenues, is a key factor in rising traffic and congestion. From 1970 to 1998, vehicle miles traveled (VMT) increased by 136 percent, or more than three times the rate of population growth. Other indicators of driving activity—vehicle trips per person, average vehicle trip length, and number of motor vehicles per person—have also risen sharply, in no small part due to the major expansion of highways in the past half century.

Over 160 million Americans still live in areas with poor air quality. Fourteen million with asthma gasp for air when ozone levels rise. Those living near high volume roads face cancer risks of 1 in 500 from air toxics. Emissions from cars and trucks are increasingly linked to cancer, childhood asthma and other respiratory illnesses. And transportation greenhouse gas emissions—up 9 percent since 1990—bring new threats to our health and environment. Indeed, U.S. DOT estimates the health effects of air pollution from motor vehicles costs us $40 to $65 billion annually, dwarfing the $27 billion in federal transportation spending, and this doesn't consider the effects of air toxics. This is a hidden tax of over $600 a year on each U.S. household, and is disproportionately borne by our children, elders, and the infirm. TEA-21 reauthorization represents an opportunity to improve our accounting for these hidden costs and to align the strategies we use to finance transportation with the goals of minimizing these burdens while maximizing the efficiency of our mobility system.

A LEVEL PLAYING FIELD BETWEEN ROADS AND OTHER TRAVEL CHOICES?

The 1991 ISTEA reforms—reaffirmed and extended in the 1998 TEA-21 law—began to level the playing field between highways and other means of transportation after more than a half century of overwhelmingly pro-highway policies. Uneven local match requirements to get federal transportation funding, which once favored Interstate highway construction over transit and local street improvements, were leveled at an 80:20 federal-local match. The door opened for state and local governments to begin exploring new transportation financing and management strategies, such as High Occupancy Toll (HOT) lanes and electronic time-of-day road pricing. Federal transportation funds were made more flexible to support transit, pedestrian safety, and market incentive programs, such as promoting employer-paid transit benefits. Accountability was expanded for states and regions to consider the short and long term effects of transportation decisions on air quality and transportation system performance.

Thanks in no small part to these reforms, the long rapid rise of vehicle miles of travel began to slow and more Americans began choosing alternatives to driving. From 1996-2002, transit ridership grew 19 percent, compared to an 11 percent increase in vehicle miles of travel. Yet transportation finance problems now dampen this recent positive trend. Disastrous local and state finances caused by the reces-

sion and rising homeland security costs have prompted transit agencies to cut back service, increase fares, or both to compensate for funding shortfalls. Nine in ten large transit agencies have implemented or are planning to implement fare increases and one-third of all agencies are providing less frequent service. Rising unemployment—now at more than 8.4 million Americans—combined with these transit fare increases and service cutbacks caused transit ridership to fall slightly last year, while vehicle miles driven rose 1.7 percent over 2001 levels as more Americans drove to avoid air travel for many intercity trips.

A shortage of funding in the federal Transit New Starts program—a primary source of financing for new rail transit—has led to sharp reductions in the federal snatch provided for transit expansions sought by dozens of cities across America. Now there are proposals to write into law a requirement for local sponsors of new transit projects to come up with $5 for every $5 US DOT provides (a 50:50 match), while highway project sponsors still only need to come up with $1 for each $5 from the US DOT for new roads (an 80:20 match). Such an unlevel playing field is a recipe for unwise investment choices. The Progressive Policy Institute proposes a 70:30 match for both highways and transit, a fair and sensible suggestion, given that all transportation dollars are scarce. But new proposals for road toll financing threaten to restrict billions of additional dollars for building new roads, cutting out transit, which may be thus cast into another spiral of decline.

A transit proposal floated by Senators Grassley and Baucus would reallocate federal gas tax funding, which now is divided so 15.44 cents goes to the "highway" account and 2.86 cents goes to the "mass transit" account. Under the Grassley-Baucus proposal, the mass transit account revenue would be reduced to 0.50 cents, thereby raising the highway share to 17.9 cents. This would leave the transit program short by nearly $4 billion a year, to be made up by some sort of borrowing, modeled on the AASHTO proposed Transportation Financing Corporation. Large scale borrowing through a new class of federally sponsored debt would substitute expensive tax credits for direct appropriations and leave transit funding in a highly precarious indebted position entering the next funding authorization cycle. As a means around the budget caps, it falls short of the AASHTO proposal, which relied on a tax increase through indexing to generate revenues to offset the tax credit revenue losses. With no revenues, the transit program could not generate these offsets. In short, this proposal would destroy TEA-21's guaranteed and firewalled transit funding support, putting roads first at the expense of travel choices and wise system stewardship. Americans want more, not less transit service and travel choices. According to a recent poll conducted for the American Public Transit Association, 81 percent of Americans agree that increased public investment in public transportation would strengthen the economy, create jobs, reduce traffic congestion and air pollution, and save energy. Nearly three-quarters of Americans support the use of public funds for the expansion and improvement of public transportation. Unfortunately, according to the 1995 Nationwide Person Transportation Survey, only 49 percent of all Americans have easy access to public transportation, living within one-quarter mile of a transit stop. If we are to avoid repeating the mistakes of the past, highway financing innovations need to recognize these broader public demands for transportation choices and ensure that increases in transportation funding benefit all travelers and transportation stakeholders, rather than reinforcing our already overwhelming dependence on driving.

STATES TRANSPORTATION FINANCING: A VERY UNLEVEL PLAYING FIELD

While the federal government has invested more in transportation since 1991 under ISTEA and TEA-21, states have lagged behind, both in the amount of financing they have provided and in the flexibility of the funds made available to meet diverse transportation needs. Since 1991, only six states increased their gasoline taxes faster than the rate of inflation—most didn't increase gas taxes and five states actually decreased them. At the same time, the growth in non-user fee revenues outpaced even the growth in state motor fuel tax revenues.

Contrary to popular impression, America's roads and highways are only partially funded by "user fees"—taxes on fuels, tires, vehicle sales, registrations, and the like. Sales taxes, property taxes, and general revenues provide a major share of the funding to build and operate highways and roads—as much as 4 out of 10 dollars of the costs, according to some studies. And of the 41 transportation funding measures on the ballot in 2002, only four attempted to increase state gasoline taxes on users, with all of the other measures proposing to increase general taxes directly or indirectly in support of future transportation improvements.

Since state governments have been reluctant to pursue increases in traditional transportation user fees, local governments have been forced to turn to the general

taxpayer—and often the voter—to support transportation infrastructure. Historically, most local governments and transit agencies have not been given access by their states or road tolling agencies to user fees, such as motor fuel taxes, to finance transportation improvements. In addition to the difficulty local areas confront in gaining access to user fees, in more than 30 states constitutions or statutes limit the expenditure of transportation user fees for anything other than highway improvements (see Table 1). This skews transportation decisions in favor of road construction, rather than balanced transportation investments and pursuit of strategies that lead to more efficient system management and expanded travel choices. It particularly hurts transit agencies because they thus often end up relying on appropriations from the state's shrinking general fund.

In light of this development many local officials, transit agencies, environmental and labor groups are asking state governments to open up state gasoline tax revenues, transportation trust funds, and toll revenue streams for public transit and other local transportation. There is an increasing belief that states and road toll agencies should not continue to sequester state transportation trust funds or toll revenues for their own uses, excluding the legitimate transportation needs of local governments and transit users, while asking local governments and transit users for additional project funding; and general tax revenues to support the state highway system.

Table 1

States with Constitutional Provisions Restricting Expenditure of Gasoline Tax Revenues to Highways	States with Statutory Provisions Restricting Expenditure of Gasoline Tax Revenues to Highways
Alakama	Alaska
Arizona	Arkansas
Colorado	Florida
Georgia	Hawaii
Idaho	Indiana
Iowa	Mississippi
Kansas	Montana
Kentucky	Nebraska
Maine	New Mexico
Minnesota	South Carolina
Missouri	Tennessee
Nevada	
New Hampshire	
North Dakota	
Ohio	
Oklahoma	
Oregon	
Pennsylvania	
South Dakota	
Utah	
Washington	
West Virginia	
Wyoming	

Towards this end, Congress should support the creation of a new Flexibility Incentive Grant Program that would allocate flexible federal transportation funds to those states that amend their state constitutions or statutes to (1) create a transportation trust fund that distributes transportation dollars for both highways and transit; or (2) unlock their existing highway trust fund by distribution transportation dollars for both highways, and transit; or (3) increase the percentage or level of spending dedicated towards alternative transportation such as the dedication of new state gas tax revenues, interest on existing highway funds, motor vehicle excise taxes, tolls, loans to be made out of highway funds, or other resources, for transit use—to encourage states to unlock their own transportation resources for transit use and efficient total transportation system management.

FOSTERING EFFICIENT TRANSPORTATION AND FINANCING WITH NEW PRICING STRATEGIES

Some automobile manufacturers are beginning to offer more fuel efficient vehicle options for motorists, including new higher efficiency hybrid gasoline-electric vehicles like the Honda Impact, Toyota Prius, Honda Civic, and Ford RAV-4. Efforts to develop natural gas, electric, and fuel cell vehicles offer some promise for a reduc-

tion in petroleum dependence before the end of the 20-year transportation plans adopted by regions under TEA-21. While these will not immediately impact federal and state revenues from gasoline taxes, which comprise the major source of transportation funding, it would be prudent for Congress to support efforts by states and regions to develop transportation user fees other than the gas tax to assure stable future financing of transportation systems.

An array of pricing innovations could play a valuable role in helping America meet financing, system management, and environmental goals, but most face regulatory or market entry barriers. ISTEA and TEA-21 both provided support for the Federal Highway Administration to support pilot projects and research in pricing innovations through what has most recently been known as the Value Pricing Program. This program merits reauthorization at a level of at least $25 million a year.

BENEFITS OF ALTERNATIVE PRICING STRATEGIES

Congestion pricing and road tolls, mileage or emission based registration fees, VMT fees, Pay-AsYou-Drive (PAYD) auto insurance or other use-based auto insurance, and gasoline tax increases could all produce significant revenues as well as traffic and pollution reduction. Expert analysis of likely impacts of such strategies in many other metropolitan areas have found substantial traffic and corresponding emission reductions possible as a result of any one of these strategies.

For example, a study by the California Air Resources Board found that congestion pricing fees of $0.10 a mile would yield a NO_X reduction of 2.5 percent in the South Coast region of California under 1991 conditions, increasing to 3.6 percent with a $0.19 per mile fee under 2010 conditions. They found that a $0.50/gallon fuel increase would yield NO_X reductions of 3.33.8 percent in various California metro areas under 1991 or 2010 conditions. They found a $.02/mile VMT fee would reduce NO_X emissions by 3.64.3 percent in various California metro areas under 1991 or 2010 conditions. They found emission fees reducing NO_X emissions by 4.2-17.3 percent depending on assumptions in various California metro areas. Combining congestion pricing of $0.09/mile in peak, a $1 a day employee parking charge, a $0.50/gallon fuel tax increase paid at the pump, and a mileage and emissions based fee of $40-400/year, with current transit service, they found NO_X emissions reduced by 9.9-12.1 percent in San Francisco, Sacramento, San Diego, and Los Angeles under 1991 or 2010 conditions.

Combining the same congestion pricing with a $3/day employee parking charge, a $2/gallon gas increase paid at the pump, and mileage and emission fees of $10-1000/year, with extensive transit investment would cut NO_X emissions in these same cities by 32.0-34.9 percent under 1991 or 2010 conditions. The EPA states that "VMT fees of $0.01 to $0.05 a mile alone would reduce gaseous emissions and VMT by about 4 to 11 percent, while a VMT fee weighted for emissions was estimated to have a significantly greater impact on emissions, particularly for VOC and NO_X." EPA summarizes various studies to conclude that added fuel taxes of $0.40 to $2 a gallon usually reduce NO_X emissions 1.2-6.9 percent. At the pump VMT fees of $0.01 to $0.05 per mile usually reduce emissions 5-8.6 percent. Traffic reductions correspond closely to these reported NO_X reductions, and generate proportionally greater congestion reduction benefits.

PAYD INSURANCE

A recent study by the Federal Highway Administration showed that by converting fixed motorist costs of car insurance, taxes, and fees to variable costs that allow motorists to save money if they drive less, consumers would save billions of dollars a year and experience substantially less traffic delay. A element in this, Pay-As-You-Drive (PAYD) car insurance, could cut air pollution and traffic congestion by 10 percent to 12 percent or more. Under current term-based insurance pricing, motorists who drive less than the average pay much higher costs per mile for car insurance than those who drive more than average, which encourages more driving and pollution. For example, for an intermediate size car, insurance premiums typically represent a cost even greater than fuel and oil costs, about one-fifth of the typical total financial costs of owning a car. When insurance premiums are converted to distance-based charges, motorists can save money by driving less and combining trips.

Newly available data indicate that distance-based insurance pricing is more actuarially accurate, and therefore more equitable and economically efficient than current pricing. Distance-based insurance provides specific benefits including reduced accidents, traffic congestion, and pollution, facility cost savings, insurance affordability, and increased consumer welfare. Vehicle travel foregone consists of low-value trips that consumers willingly give up in exchange for financial savings. Distance-based premiums would use "odometer audits" to provide accurate mileage

data, which is estimated to have incremental costs averaging $7.50 per vehicle year. Research suggests total benefits of distance-based insurance to be many times greater than costs, with a benefit:cost ratio of 50:1 estimated for the case of British Columbia. Motorists are expected to reduce their average mileage by about 10 percent under distance-based pricing, providing net savings to the vast majority of consumers. Even high mileage drivers experience virtually no increase in total vehicle costs if they reduce their mileage as predicted. Higher-mileage drivers would also benefit most from reduced traffic congestion, accident risk, and pollution.

The state of Texas enacted in May 2000 HB 45, which authorizes insurance companies to offer distance-based motor vehicle insurance policies. The Oregon House has passed a bill to offer a $100 state tax credit for insurance companies writing distance-based motorist policies. US EPA and the Federal Highway Administration have in recent years cooperated in promoting, use-based car insurance strategies, including PAYD insurance. FHWA's Value Pricing program supported important research and pilot projects for use-based insurance in Georgia and Massachusetts, but unfortunately cut off funding for these in 2002.

Market incentives like PAYD insurance face significant state and local regulatory and institutional costs and barriers. Insurers express a strong desire for additional actuarial data to support PAYD policies. Government support is needed to foster public-private partnerships, share risks, collect and evaluate data, educate and inform consumers and service providers, and incubate and demonstrate alternative marketing, pricing, and business models.

Congress should also provide $15 million a year for a PAYDAYS (Pay-As-You-Drive-And-You-Save) Grant Program to support expanded research and pilot testing of this market based strategy, including risk sharing with insurance companies pilot testing this approach to policy pricing, paying for expanded actuarial research, marketing, partnership development, evaluation, and promotion. This would allow a designated university or non-profit entity to act as a research clearinghouse, capacity-building center, and catalyst for public-private partnerships, supporting efforts by governments, non-profit entities, and companies to design, test, and evaluate innovative mileage and parking pricing strategies. The potential payoff—a reduction of 10 percent in traffic while saving consumers money and reducing accidents and casualty losses to insurers—is well worth such up-front investment to help jump start this market innovation.

Another important potential source of funding for developing, evaluating, and mainstreaming these activities is the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. This program should be reauthorized at twice its current funding level to account for anticipated growth in air quality non-attainment areas and for an expanded program targeted to deal with air toxics problems. Suballocating CMAQ funds to local areas and assuring air agencies a greater role in project selection will foster fuller and more effective use of these funds. Congress should explicitly authorize use of CMAQ funds for promotion and demonstration of PAYD insurance, permitting use of funds for pilot project start-up, marketing, risk-sharing, mileage-based rebates, other related incentives, and evaluation activities serving both attainment and non-attainment area motorists, provided that pilot projects focus on producing substantial emissions reduction benefits in air quality nonattainment or maintenance areas. Congress should encourage of the use of CMAQ funds for "parking cash-out" pilot programs as well, including start-up program incentive, payments to commuters and risk guarantees for developers who reduce parking and instead establish dedicated transportation incentive programs for site access.

Congress should support initiatives to expand the use of automated time-of-day road pricing on existing tolled facilities and when such systems are managed to reduce the need for added roads and direct new revenues substantially to support expanded means of access to jobs and public facilities for people without cars. Accountability for environmental, community, and equity impacts must not be weakened through increased reliance on bond and private road financing.

MANAGED TOLL LANES: A ROAD TO GREATER SYSTEM EFFICIENCY AND EXPANDED CHOICES

A promising option for unclogging roads, especially in more congested metropolitan areas, is automated time-of-day tolls and High Occupancy Toll (HOT) lanes, which allow solo drivers to pay to use High Occupancy Vehicle (HOV) lanes, while giving a free ride to buses, vans, and sometimes carpools. These can put to work unused capacity in HOV lanes and low efficiency general purpose lanes, helping to pay for expanded transportation choices. A network of HOT lanes on existing highways is likely to provide more effective congestion relief than building new roads,

especially if revenues are used to expand travel choices for all. But new outer beltway roads—even if built as toll roads—are likely to exacerbate sprawl and put more jobs out of reach for those without cars, hurting the poor and the environment. Wise policy will avoid the latter, instead giving time-stressed travelers a way to buy relief from growing congestion delays in existing freeway and travel corridors.

New non-stop electronic toll technology means motorists don't need to slow down to pay tolls. And HOT lane fees—higher in rush hour and discounted at other times—can keep traffic flowing without wasting scarce road capacity like some HOV lanes do. This makes it possible to contemplate future conversion of some existing general-purpose lanes to HOT lanes, particularly where new capacity is being added to existing roads. But HOT lanes should not be created at the expense of effective HOV or bus lanes, where these provide efficient services, as in the Shirley Highway Corridor of Washington, DC, or the approaches to the Lincoln and Holland Tunnels connecting New York and New Jersey, or some Seattle HOV lanes.

HOT lane experience indicates this strategy can garner popular support. In the most recent survey of the I-15 Express Lane corridor in San Diego, 91 percent of I-15 commuters agreed with the statement, "it's a good idea to have a time saving option on the I-15 always available."

On California's Route 91, diversion of traffic onto HOT lanes has reduced congestion on the entire road and increased the number of passengers per car to 1.6, compared to the average of 1.2. Similar road toll related incentives have been implemented or are being considered in Texas, Florida, Colorado, Georgia, New Jersey, New York, and other states.

The Port Authority of NY-NJ in March 2001 introduced time-of-day tolls on Hudson River bridges and tunnels and Staten Island bridges, giving discounts for electronic toll payers who avoid rush hours and charging a premium in the time of most concentrated demand, just like movie theaters and many other services. This helps reduce congestion by shifting the time of day of traffic. Regional agency officials have estimated the Port Authority's modest time-of-day toll system has cut traffic in the peak hours by 7 percent, saving tens of thousands of hours of travel delay. Toll revenues support better PATH rail transit and regional transportation infrastructure and services. The NJ Turnpike, NY Thruway Authority, and other tolling agencies have implemented time-of-day tolls to manage traffic.

HOT lanes in existing road corridors—if developed appropriately—can expand both travel choices and equity, but if revenues are dedicated solely to road construction, these benefits can disappear. HOT lane critics often unfairly bash them as "Lexus Lanes," serving only the rich. Several real-world HOT lanes look more like "Lumina Lanes," used by people of widely varying incomes who occasionally need to bypass traffic delays that disrupt their social, family, or work life. A working class mom who is facing a $1 a minute penalty for picking her kids up late at daycare is happy to pay $4 to save 20 minutes by using the HOT lane on those several days a month when she needs it. The typical users of California HOT lanes spend less than $20 a month on HOT tolls, using them on days they are in a real rush.

The real issue is what happens to the toll revenue? If HOT lane revenues fund new transit, as on San Diego's I-15 HOT lane, everyone wins. Lower income transit users and carpoolers can get access to otherwise inaccessible suburban jobs. Drivers benefit from reduced road congestion and better services and choices. If a portion of HOT lane revenues help pay for the road, then those who drive most are paying more of their fair share, helping all taxpayers win, since road user fees don't cover the cost of building and operating America's roads. And with new accounting rules forcing fuller disclosure of deferred maintenance, transportation providers need new sources of revenue to maintain systems, expand choices, and cope with growing travel demand.

But if HOT lane revenues, or other road tolls and motorist user fees are dedicated solely to building more highways, or if the tolls are dismantled once the bonds used to pay for the road capacity have been retired, then the net impact of this financing system is likely to be increased traffic, pollution, sprawl, and unequal access to opportunities and public facilities that hurt those without cars, especially people of low incomes, minorities, the disabled, the very young, and the very old. If HOT lanes and toll-supported road privatization and bond financing schemes are used to evade environmental and public accountability laws, these impacts are not likely to even be recognized until it is too late to do anything about it. The externality costs of imprudent investment choices will accrue to those least able to afford it, while the profits from road construction, sprawl development, and subsidized motor vehicle use accrue to a narrower set of private interests. The result would be an unlevel playing field for roads vs. transit, fostering imprudent stewardship of transportation resources, the environment, and communities.

Reauthorization of TEA-21 offers new opportunities to remove barriers and provide new support for more widespread development of equitable value pricing strategies and market incentives. Clearly, Congress should support proposals to eliminate restrictions that have limited the ability of agencies to impose tolls on federal-aid Interstate highways but it should look closely at what restrictions and performance measures are placed on the system and how toll revenues may be used.

H.R.1767. Rep. Mark Kennedy recently introduced a FAST Lane bill (H.R. 1767) which would allow the use of tolls on the Interstate System to finance the construction and subsequent improvement of designated FAST (Freeing Alternatives for Speedy Transportation) lanes. Many environmentalists would support this bill if it is changed to:

- Drop the provision that lane fees expire when costs have been recouped;
- Provide for the authorization of such fees to be collected on existing as well as new lanes, at local option, if this provides for improved traffic flow or maintenance of capacity in the corridor;
- Permit the use of revenues not just for new lane construction, but also to support transit, vanpool, walk and bike transit access, and other transportation capital and transportation operating expenses in the affected travel corridor; and
- Require establishment of local performance goals for maintenance of capacity, efficient traffic flow, and fair access to jobs and public facilities for low income and minority residents in the travel corridor, with periodic evaluation and consideration of adjustments to toll levels and apportionments of net toll revenues to meet these performance goals.

Without these changes, H.R. 1767 would facilitate rapid expansion of sprawl, traffic, and pollution—increasing highways, exacerbating inequity of access to jobs and public facilities for people without cars and benefiting higher income travelers while discriminating against low-income people. With the changes above, however, it could result in improved equity of access and net environmental benefits.

REASON FOUNDATION HOT NETWORKS PROPOSAL

The Reason Foundation's recent report, *HOT Networks: A New Plan for Congestion Relief and Better Transit*, offers a somewhat broader vision than H.R. 1767 as it links HOT lane development to substantial expansion of Bus Rapid Transit (BRT). While this report has been valuable in spurring discussion of the concepts it advocates, it falls short of presenting a balanced proposal. It would create new sprawl and traffic inducing outer beltways, such as the Inter-County Connector around Washington, DC, using a combination of HOT revenues and Highway Trust Fund resources. It would dedicate HOT lane revenues to paying off bonds for the new road capacity and rely on the severely oversubscribed and under-funded Federal Transit Administration New Starts Program to finance purchase of transit vehicles to operate on the HOT/BRT lanes, diminishing federal support for locally-supported new rail transit investments across America. It does not include the costs of BRT stations, access, or maintenance facilities in the cost estimation for the HOT/BRT system. And nowhere does the report address the critical limitation on BRT and transit systems across America today—a steady funding source for operating assistance. With this set of ingredients, the Reason Foundation's proposal would, if adopted wholesale, contribute to significant sprawl and traffic growth, while failing to address the transit funding crisis that is causing transit service cutbacks and fare increases across America.

If these shortcomings were addressed, however, the proposal could garner support from many in the environmental community. BRT does constitute a more viable and cost-effective strategy than rail for many communities where transit services are now severely limited, but to be effective, it must be adequately financed and supported with land use plans for transit-oriented development, improvements to pedestrian and bicycle access, and a dedicated source of operating assistance. But BRT should not be regarded as a simple add-on to a HOT network.

To be effective, as in the outstanding example provided by Bogota's TransMileneo system, BRT needs to encompass reforms in transit fare collection systems, transit route structures, and transit access systems, with well designed stations, high-level boarding, separation of fare collection from boarding, and a high level of priority in traffic. BRT is probably best operated in the environments created by high level urban arterial streets. But BRT is adaptable to suburban environments and freeway medians when supported by appropriate access and land use coordination strategies.

DRAFT ADMINISTRATION SAFETEA BILL

The February 2003 draft of the Administration's SAFETEA bill, still undergoing interagency review and modification, proposes a number ofpositive steps in the pricing arena:

• Variable tolling projects for roads, bridges, and tunnels, would be "mainstreamed" as a part of the regular Federal-aid program.

• The numerical limit on the number of variable pricing projects would be eliminated, ending a major barrier to wider consideration and adoption of road pricing.

• The purpose for variable road pricing would be broadened to include air quality improvement in addition to congestion mitigation.

• Revenues from variable pricing projects could be used for any purpose authorized under Title 23, which could include support for transit capital and at least some operating expenses of transit, vanpool, and other projects.

On the other hand, the bill would eliminate important elements of the Value Pricing program:

1. The legislative mandate for active Federal support for State and local pricing initiatives would be significantly diminished.

2. Specific federal funds to support State and local pricing initiatives, including pre-implementation and operational activities, would be eliminated.

3. The scope of project activity supported would be significantly narrowed from what was included under the TEA-21 program.

4. The reauthorization proposal focuses exclusively on toll pricing initiatives, with other non-toll market-based congestion reduction initiatives, such as parking pricing and pay-as-you-drive insurance, not included in the scope of the proposed legislative language.

What other elements need to be part of a sound and balanced TEA-21 reauthorization value pricing program?

• Congress should encourage automated time-of-day tolls as a promising tool for transportation facility management and financing.

• States and transportation facility operators should be encouraged to replace obsolete toll booths that cause congestion and pollution with new barrier-free customer-friendly tolling systems using toll transponders and image processing and billing systems.

• Congress should encourage state motor vehicle agencies to issue toll transponders with motor vehicle registrations to encourage their widespread availability in states where tolls are used.

• Congress should eliminate restrictions on tolling highways that were constructed with federal aid, which can now only be tolled under limited pilot projects authorized by TEA-21.

• Congress should reauthorize the Federal Highway Administration's Value Pricing Program at a level of at least $25 million a year and assure a well funded broad-based program to encourage state and local research and pilot testing of transportation user fee incentive strategies and other voluntary market incentive strategies. This should explicitly authorize support for initiatives such as Pay-As-You-Drive (PAYD) car insurance.

FEDERAL TAX TREATMENT OF COMMUTER BENEFITS: STILL NOT A LEVEL PLAYING FIELD

Federal and state tax policies are a part of the recent story of transit resurgence and part of the story of the unlevel playing field. For the vast majority of working Americans, a free parking space at work has for decades been the sole commuter benefit offered by employers because that was until recently the only tax-free commute benefit worth speaking of.

So if you drive alone to work you gain the benefit. If you take transit, carpool, walk, or bike, you lose the benefit and likely pay your own daily transit fare. With this kind of incentive, it's no surprise that on any given day nine out of ten American commuters drive to work and nine out of ten of the cars driven to work have one occupant. Yet the 85 million "free" or subsidized employer parking spaces actually cost American business more than $36 billion per year. By spurring more driving, these subsidies exacerbate traffic congestion and air pollution. A 1995 congressional study found that "free" parking of all kinds costs our society over $250 billion per year.

In 1998, Congress took steps to make tax policies more equal for all commuters, allowing employers to offer tax-free transit and vanpool benefits of up to $100 a month, with taxable cash-in-lieu-of-parking benefits allowable for the first time. Tax-free benefit limits for employerprovided parking were set; at $175 per month—a practice which still leaves solo drivers at an advantage. Allowing employee-paid pre-tax transit benefits saves transit-using employees over $400 a year while saving

employers a smaller amount on withholding. Having employers pay for transit is a bigger incentive for employees. Offering such a benefit to federal executive agency employees in the national capital region induced 11 percent of employees who used to drive to work to switch to transit, taking 12,500 cars off the region's crowded roads every workday. At firms in California and Minnesota offering a $2 a day incentive instead of free parking, one out of eight who used to drive are finding another way to get to work. Such benefits help employers attract and retain employees and provide the greatest help to low and moderate wage workers who spend the largest share of their incomes commuting and often ride transit, carpool, bike, or walk to work.

The cost of such employer provided transit benefit programs to employers is very small and can easily be fit within the scope of ordinary cost-of-living increases offered by most employers to their employees on a periodic basis. State tax credits can make this cost even smaller. For example, in Maryland, if an employer offers an employee a cost of living increase, for each $1 in after-tax cost to the employer, the employee typically receives $0.53 in after-tax income. If that same $1 in after-tax employer expense is instead devoted to an employer-paid qualified transit benefit of $60 a month, the typical Maryland employee who receives it ends up gaining $1.76 in after-tax benefits, thanks to the leveraging effect of federal and state tax provisions.

The savings for employees offered by the federal tax law changes are significant and make a high level of employer and employee participation in the next several years realistic across America. For example, an employee earning $50,000 per year who spends $780 annually on transit ($65/month) could realize a tax savings (at 42 percent) of $328 as a result of paying their transit cost using pre-tax dollars, exercising one of the new Commuter Choice options, while their employer would gain payroll tax savings (at 7.65 percent) of $60 per employee. Even if the cost to set up and administer the program equals 2 percent of the transit benefit, the employer will still enjoy payroll savings of $44. Employers are likely to face new costs to offer transit passes or added cash income in lieu of parking, but these can also translate into substantial cost savings of several types. It is much cheaper for an employer to boost non-taxable employee benefits than to offer added taxable income or cost-of-living increases to retain or attract workers. If the employer is able to expand employment without adding more parking spaces or to otherwise avoid the cost of building, leasing, or maintaining parking spaces for workers, capital cost savings can amount to $5,000 to $20,000 per avoided space and operating costs can amount to $750 to $3,000 or more per year per avoided space. Such savings are often significant enough to more than pay for a cash-in-lieu-of-parking or transit pass benefit. But additional financial incentives and support by transportation agencies and other government bodies are essential to rapid adoption of Commuter Choice voluntary incentives. These can be highly cost-effective in reducing congestion and pollution.

DOT and EPA are promoting Commuter Choice, but Congressional action is needed to further expand efforts to foster widespread adoption of these voluntary incentives. EPA estimates that if half of all U.S. employees were covered under these commuter benefits, traffic and air pollution could be cut by the equivalent of taking 15 million cars off the road every year, saving American workers about $12 billion in fuel costs. For every 10 percent of U.S. employees participating, commute VMT would be cut by 3.2 percent, or 20 billion miles, with emission reductions of 54,000 tons VOC, 480,000 tons CO, 33,600 tons NO_X, and 2.36 million tons $C0_2$. EPA estimates reductions of 26-30 percent in commute vehicle trips for a full Commuter Choice program. Los Angeles research shows that those who receive free parking at work drive 72 cars per 100 employees, while those who paid for parking at work drove 53 cars per 100 employees, or 26 percent less.

Congress should take further steps to encourage employer support for such "Commuter Choice" initiatives by adopting:

- The Commuter Benefits Equity Act (S.667) would provide equal tax-treatment for parking and transit benefits with $190 per month in qualified tax-exempt benefits.
- The Bike Commuter Act (H.R.1052) would allow employees who bike to work the same financial incentives as transit users.
- The Mass Transit Tax Credit Act of 2001 (H.R. 906) would provide a 25 percent tax credit to employers for the cost of providing transit: benefits to their employees. This is modeled after measures adopted by several states—including Maryland, Minnesota, Oregon, Washington, Georgia, New Jersey—that have begun offering tax credits of up to 50 percent and up to $50 per employee per month for employer-paid non-driving commuter benefits.

REFORMING TRANSPORTATION PLANNING AND PROJECT REVIEWS TO CONSIDER PRICING AND SYSTEM MANAGEMENT OPTIONS FOR EFFICIENT TRANSPORTATION

Increased reliance on motor vehicle user fees could provide a powerful means of meeting the rising demand for transportation investment and services and for matching that demand with transportation supply. But metropolitan and statewide transportation planning in most places currently gives only cursory attention to this capacity. Few areas consider the effects of different pricing schemes on travel demand and consider the effects of various transportation investment options on travel behavior, land use, and transportation system efficiency and operations.

Such evaluation typically requires use of metropolitan computer travel simulation models as used for project planning studies, regional and state transportation and air quality planning and programming, and environmental permitting decisions. Unfortunately, many of the analysis tools in widespread use fail to reflect current scientific knowledge and best practice methods. This can lead to serious errors in forecasts, in performance evaluation measurement, and poor investments that fail to meet their objectives. When road tolls are relied upon to service bonds, poor analysis can lead to failure to meet debt obligations, and taxpayers can be left holding the bag, as has happened with projects such as the Dulles Greenway in Northern Virginia. Congress should assure adequate funding for improving these computer models across America, funding the TRANSIMS model development and research effort at $25 million a year and funding a $35 million annual program to support timely deployment of best practice travel and emission models at metropolitan planning organizations and state agencies.

A number of scientific studies in recent years have documented the common sense adage: "If you build it they will come," that building more roads generates more traffic, often to a degree that the increased highway capacity does little or nothing in the longer run to abate congestion. A recent paper by two former EPA scientists, attached by reference, summarizes the literature, and shows that for every 10 percent increase in road lane miles, it is typical to find a 3 to 11 percent increase in vehicle miles traveled, with 8 percent being a typical median value.

A 2002 analysis by the Metropolitan Washington Transportation Planning Board showed that by deferring 100 lane miles of highway expansion projects—a 0.5 percent reduction in lane-miles of road capacity—Virginia saved $800 million in capital costs while cutting NO_X emissions by more than 1 percent, or nearly 2 tons per day, and reducing vehicle miles of traffic by 0.6 percent. This illustrates how expansion of new highways often produces a growth in air pollution emissions and congestion by spurring more traffic, rather than a reduction in emissions and congestion as often claimed by the road lobby. This illustrates how reducing expenditures on new roads is often the most cost-effective emission and congestion reduction strategy, because it avoids generating costs, traffic, and air pollution. This also illustrates why it is imprudent for motorist user fees to be dedicated solely to investments in highways, rather than to make these revenues available for what are often more efficient and effective forms of public investment that accomplish transportation-related purposes, whether for transit, the revitalization of walkable neighborhoods where people can live without generating so many car trips, affordable housing close to jobs, or public health services that help offset the hidden costs of our transportation system.

Considering those costs and choices will require improvements to the metropolitan transportation planning process which today expends little effort to consider transportation pricing and growth management strategies that could provide attractive alternatives to the current plan of business-as-usual deeply subsidized road system expansions that accommodate and support sprawl and driving while neglecting the needs of pedestrians, bicyclists, and those without cars. Improved data collection and impact analysis tools and planning requirements are needed to help state and local agencies evaluate and advance effective pricing and management strategies. These will also help address demands to streamline the project review process in a manner that delivers better projects that also protect the environment, public health, and the ability of the public and local officials to know about the effects of major decisions before they are final, a core principal of the National Environmental Policy Act of 1969.

TEA-21 reauthorization should strengthen accountability, transparency, and performance-oriented planning requirements, assuring consideration of transportation pricing reforms. State and metropolitan areas should be required to develop and periodically update integrated transportation, natural resource protection, and growth management plans that consider at least one alternative scenario that considerably reduces traffic growth through better system management. Agencies should regularly report on the current and projected performance of their transportation system

management, investment, and proposed programs and plans, accounting for cumulative and secondary impacts on growth patterns, public health, greenhouse gas emissions, the achievement of natural resource planning; goals for air, water, and habitat protection, and the provision of equal access to jobs and public facilities for all residents, including those without cars, without undue time and cost burdens.

CONCLUSION

Across America, we are on a crash course with worsening traffic congestion, crumbling roads and bridges, and investment levels that can't even keep up with maintaining the infrastructure we've got. Throwing more money into road building and streamlining project reviews to curtail consideration of environmental factors in transportation decisions won't solve congestion. But better accountability, planning, consideration of pricing and system management alternatives, and support for new smart incentive strategies can help local and state agencies, business, and citizens cut their way through our traffic mess and boost transportation equity. Congress has a key role in helping state and local governments and their private partners make this transformation from trying to build our way out of congestion and into the new information era, where we manage congestion and expand choices and smart incentives.