

TRANSPORTATION POLICY AND FINANCE SUMMIT



**MARCH 13-15, 2016
WASHINGTON, DC**

REAL CHALLENGES: REAL SOLUTIONS

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TOLLING. MOVING SMARTER.

The IBTTA Transportation Policy and Finance Summit brought together colleagues in the transportation industry to discuss key policy issues and finance challenges confronting toll agencies, concessionaires and state departments of transportation.

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ROAD USAGE CHARGING – SAVIOR OR PIPE DREAM?

MOST STATES ARE LOOKING SERIOUSLY AT RUC

Five years ago, only five states were exploring road usage charging as a way to finance highway funding. Now 29 states have either asked for a task force to investigate the subject or have moved toward enacting legislation.

Barb Rohde, executive director of the Mileage-Based User Fee Alliance (MBUFA) gave IBTTA Transportation Policy and Finance Summit attendees an overview of where individual states were on the issue. Two major regional groups – an eastern and a western group of states – are doing studies as a result of the FAST Act legislation (which favors multi-state demonstrations). “You can see enormous interest as we move forward.”

To learn more, visit [MBUFA](#) and Rohdes’ [presentation slides](#).

PUBLIC OPINION RESEARCH ABOUT RUC

Public opinion is an important factor in whether road usage charging is a feasible alternative to traditional highway transportation financing. For years, Hilary Nixon, Ph.D., and her colleagues have been tracking the public’s attitudes about federal funding for transportation.

At IBTTA’s Transportation Policy and Finance Summit, Nixon summarized the result of their latest research report, [What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads: Results from Year Six of a National Survey](#).

The survey consisted of 33 questions that gauged whether individuals supported mileage-based user fees. The good news is that the research shows a slight increase of support over time for MBUF, says Nixon. Also, people engaged in pilot programs were more supportive than those who aren’t and media stories about MBUF have become more positive over time.

That said, most people don’t understand or know anything about how transportation projects are currently funded. So when they were surveyed about alternate methods, that lack of information affected their responses. “When people are giving their support or opposition to mileage fees, they’re typically doing so with very little knowledge about how these programs work,” says Nixon.

Privacy continues to be a significant concern for drivers, regardless of whether they’re using a transponder or odometer readings. “It’s a concern regardless of the tool used to report mileage” says Nixon. Other concerns center on fairness in regards to rural drivers and whether people will cheat.

When people have positive opinions about MBUF, it’s around the idea that it could be a viable funding solution, but not if the program is overly burdensome or complicated. “If you’re going to have a mileage-fee program, you need to make it simple,” says Nixon.

CALIFORNIA ABOUT TO LAUNCH MAJOR RUC PILOT

In July 2016, California is launching a road usage charging pilot program with 5,000 people. The participants will represent a diverse set of stakeholders, with a range of old cars, new cars, geographic variation and so on.

Jim Madaffer, chair of the Road Charge Technical Advisory Committee, talked with IBTTA Transportation Policy and Finance Summit attendees about the barriers to implementation.



“The word ‘freeway’ is the worst word, because the public thinks they already pay for it,” said Madaffer. When focus group participants were asked how roads are paid for, the answers ranged from income tax to bonds to Adopt-a-Highway signs. “Nobody ever mentioned the two words “gas tax,” said Madaffer.

In addition to public perception, another barrier to implementation is convenience. Currently, the gas tax is an efficient way to collect revenue. For everyone to participate in road use charging, one scenario requires each individual to have an account. How to do that poses a challenge, given concerns about privacy, for instance.

To study adoption rates for different reporting methods, the pilot program will allow participants to choose how they report – through time-based permits, mileage-based permits or automated mileage reporting with location data.

Visit the [pilot website](#) to learn more about the program and how participants sign up for it.

HOW THE TOLL INDUSTRY SHOULD ADVOCATE FOR RUC



What does this convergence of road usage charging, autonomous vehicles and other trends in transportation mean for the tolling industry? “The answer is, it depends on what we do,” said Bob Poole, director of transportation policy at the Reason Foundation.

Poole urged attendees at the IBTTA Transportation Policy and Finance Summit – and the tolling industry at large – to be actively involved in shaping the transitions that will happen, to ensure it’s done the right way.

For Poole, that means the tolling industry should support state governments as lead implementers of road usage charging, not the federal government. “States have much greater credibility and should be the lead on trying out what works and doesn’t work,” he said.

The toll industry should also be vocal that the same per-mile rate does not need to be applied to all highways. Premium highways are more expensive to maintain than rural highways, says Poole, so get away from the gas tax idea that everyone pays the same rate.

Depoliticizing the system should also be part of the toll industry’s agenda. Whether the fees go directly to departments of transportation or some other agency, the program should act more like the utility companies, where users pay directly to providers.

Finally, Poole listed additional policies that he believes the toll industry should support:

- That all limited-access highways become toll roads.
- That all toll rates are converted to a per-mile basis, so that toll rates are seen as the same as road use charges.
- That road use charges are applied to all miles driven, except on tolled facilities, which should result in a rebate to drivers.

RUC TRADEOFFS: CONSUMER CHOICE VS. USEFULNESS

Conventional wisdom says that road usage charging (RUC) won't work unless drivers are given many choices about how to pay their fees. Therein lies a conundrum: What if offering so many choices actually reduces the benefits of RUC in the first place?

That's the question Ed Regan posed to attendees at IBTTA Transportation Policy and Finance Summit. The senior vice president at CDM Smith wanted to know, is RUC just about replacing the gas tax? An optimal RUC program would enable variables like time of day and type of route, along with tolling and express lanes, said Regan. It would also allow incremental charges within and between jurisdictions, such as additional charges per mile.

The problem is that when RUC programs allow manual reporting options or even low-tech options, the ability to accurately track road usage diminishes. He cited the state of Washington's preliminary investigations of RUC, which emphasize the need for consumer choice. At the same time, a regional group in the state is looking at RUC fees based on time-of-day, applicable to four counties. If the state allows manual solutions to RUC, how will regional programs function with more sophisticated business rules?

Regan called on the industry to treat RUC as an opportunity to do more than replace the gas tax. States should use the money provided by the FAST Act to run pilot programs along those lines. "What I'm proposing is that some of that money needs to be used to challenge technology and service providers to create solutions that address privacy concerns while promoting a full-service system," he said.

FOCUS ON POLICY AND GOVERNANCE

LET'S TALK ABOUT RUC'S (PERCEIVED) PRIVACY ISSUE

Privacy is one of the biggest challenges to implementing road usage charging (RUC). So how can policymakers respond to citizens' concerns?

"It's about choice," said Louis Neudorff, P.S., principal technologist at ITS CH2M when presenting at the IBTTA Transportation Policy and Finance Summit. He posited a spectrum of options that range from time-based permits to dongles that plug into a car's OBD (on-board diagnostic) port. From one end of the spectrum to the other, you gain convenience and give up privacy. The big question is, "To what extent are people willing to give up their privacy for more services," asked Neudorff.



As policymakers grapple with the question, they'll be confronted with other questions, including under what circumstances can or should personally identifiable information be shared? For instance, does law enforcement require a valid court order or simply "express consent?"

Another issue is how long data can or should be retained? In Oregon, data is held for 30 days after payment of the bill, said Neudorff, but data collected from tolls in California has been kept as long as four years, with most toll authorities having no policy on data retention at all.

To further complicate the issue is the matter of security. Establishing policies around privacy is one-half of the coin. Security is the other. If someone hacks into the database, privacy policies are moot.

CAN COMMERCIAL ACCOUNT MANAGERS BRIDGE RUC AND TOLLING?

Do road usage charging (RUC) programs signal the end of tolling? Or are they compatible? Perhaps even complementary?

Matthew Dorfman, partner at D'Artagnan Consulting believes the latter. The idea that one will replace the other is fundamentally flawed. "There really is no competition or conflict between road charging and tolling," he told attendees at the IBTTA Transportation Policy and Finance Summit.

For one thing, the two rely on fundamentally different technologies. The tags and readers used by the tolling industry are necessary for superior accuracy in lane transactions. On the other hand, RUC is aimed at universal coverage, and the technical solutions are reflecting that goal: dongles, telematics and even manual solutions are part of the RUC purview.

But more importantly, "the revenues from these two sources are used in two fundamentally different ways," said Dorfman. While tolling is used primarily for road maintenance and debt repayment, RUC is meant to replace the gas tax and to stop erosion of revenues due to more efficient vehicles. In other words, it's meant to fund the entire road network, not just the facilities on which it is located.

So how to bring the two together? Commercial Account Managers (CAM) – firms that provide the customer accounts for RUC – are a unifying trend between the two systems. Dorfman said that CAMs could potentially collect RUC payments from drivers, and pass them to the states. They would be compensated and could also earn money by selling value-added services. In theory, they would provide pathways to interoperability. To be effective, he said, they would have to have a lower cost of collection than agency-run systems and provide superior technology management. He pointed to Oregon as an example where a CAM is in play.

For CAMs, the leap from RUC collection to tolls is natural. Dorfman said they could potentially serve as a front-end for tolling agencies, focusing on account management and value-added services. They would complement, but most definitely not replace tolling agencies. "Tolling agencies will still definitely be needed under any RUC scheme that I've heard about," he said, if for no other reason than to support new infrastructure projects. "There are big new projects where the capital needs to be paid over many years, and tolling is a natural fit to pay for those projects," said Dorfman.

TOLL AGENCIES IN THE CONNECTED AND AUTONOMOUS VEHICLE FUTURE

A panel of experts spoke to IBTTA Transportation Policy and Finance Summit attendees about the future of autonomous vehicles – what they need to do to prepare, what policy changes or investment strategies they should make, what infrastructure and technology investments to consider and what liability concerns they should have.

Ken Leonard, director of U.S. DOT Intelligent Transportation Systems Joint Program Office, noted that connected vehicles are maturing and that activity around safety and infrastructure investment is reaching a critical juncture. DOT is already working on guidance to help states and localities with deploying connected infrastructure. Furthermore, DOT is poised to issue a \$40-million "Smart City" grant to one city to advance innovative technology into its transportation network, including connected vehicles and self-driving cars.



David Pickeral, consultant and chief strategy officer at TRIMETA, said that interest by investors in connected and autonomous vehicles has accelerated in the past two years. “You’re seeing a lot of investment — pretty much every car maker and tech company has venture capital (VC) arms working with other VCs to identify and fund projects,” he says. The biggest transformation is that civil engineering and IT sectors are working together. “There’s a realization that there’s a need to cooperate,” he said. “IT isn’t going into telecom, and telecom isn’t getting into IT.”

Stan Caldwell, executive director at Traffic21 Institute at Carnegie Mellon University, talked about the direction of research on autonomous vehicles. He raised the issue of data transfer – specifically where and how to transfer the voluminous information that’s transmitted between vehicles and infrastructure and vehicles-to-vehicles. Another issue is what happens if a vehicle has been self-driving for hours and then suddenly needs a human to take over? In terms of planning, he suggested that agencies start to look at what they can do in the next five years to prepare for the deployment of connected vehicles.



Larry Yermack, strategic advisor from Cubic Transportation Systems took a big-picture view. “We had a long time to get accustomed to the wheel,” he says. “We don’t have a lot of time to get

accustomed to this stuff.” He suggested that connected vehicle technology is driven primarily by the government, while autonomous vehicle technology is driven by the private sector. With that in mind, it’s imaginable that the government mandates the use of connected vehicle technology someday, just as they mandated the use of seat belts for safety reasons.

Craig Shuey, chief operating officer of the Pennsylvania Turnpike Commission, shared what his agency is doing to plan and prepare for the future. He said it’s clear that auto manufacturers are pushing hard for connected vehicles. One of the greatest challenges facing the toll industry is that connected cars will be on the road with non-connected cars for the foreseeable future. So the agency is concerned with how to match what they do on the roads to accommodate newer and older vehicles. Shuey pointed out that connected vehicles allow a connection with drivers, so one path the agency is taking is to develop apps that will communicate real-time safety information.

For example, one application would warn drivers of lane closings. Another would issue alerts and advisories around weather conditions. “We all have a sensor in our car that shows what the air temperature is,” he said. “What we really need is a sensor that tells us what the road temperature is.” To move forward, the agency has a map of what objectives to accomplish and a timeline to accomplish them, including breaking down internal and external silos, identifying short-term pilots, identifying resource requirements and working with stakeholder partners on a joint strategic plan, including the possibility of multi-state partnerships.

ADJUSTING EXPRESS LANE ENFORCEMENT: A REAL-LIFE STORY

Mike McGurk, senior corporate relations associate at Transurban, shared his company's challenges with operating and maintaining the HOT lanes in northern Virginia. Specifically, the company experienced a bout of negative media attention when drivers were issued significant civil penalties for not paying toll charges. When the express lanes opened, drivers paid an extra \$1.50 for missed tolls. They received several invoices that escalated in price. Eventually, the charge was sent to collections, at which point the fee was \$100. If a driver still didn't pay, the collection was sent to court and civil penalties were added. Drivers with a few missed tolls faced fines in excess of \$5,000 or more.

Transurban decided to adjust its enforcement process after public outcry. Since most drivers had an E-ZPass that just didn't have enough funds, the company created a first-time forgiveness program. If the customer proves they've added funds to their E-ZPass, Transurban waives the penalty fees.

It also capped the number of unpaid trips it submits to collections, so the potential civil fines are capped. Finally, they have staff on hand at the courthouse so that drivers have a chance to settle before the hearing and pay reduced fees. Moving ahead, the company is working on education efforts to help drivers use their E-ZPass and online apps to remind drivers when their account balances are low.

Natalie Kinloch, chief financial and operating officer at Federal Bridge Corporation Limited, talked about managing six toll bridges connecting U.S. and Canada. The key to working with her U.S. partners is that everyone is committed to a business-like approach. The biggest challenge is meeting expectations around safety and security, because the countries have different standards. To work out the differences, the partners aim to follow whichever standards are the highest and best. In terms of security, for instance, both sides committed to giving employees the best training. "We are not security agencies; however, our people are the best eyes and ears on our infrastructure," she said. "By joining forces with our border stakeholders, we've made progress in training, monitoring, awareness and comprehension that exceeds minimum standards for both countries."

PAYING FOR TRANSPORTATION – INNOVATIONS AT THE STATE LEVEL

CONNECTICUT COMMITS TO TRANSPORTATION FUNDING (AND PROBABLY TOLLS)

Emil Frankel, senior fellow at the Eno Center for Transportation, spoke about challenges to repairing and maintaining transportation and infrastructure at a local level. Specifically, he addressed Connecticut's Special Transportation Fund (STF). Connecticut funds transportation projects through the STF, but it's now at risk of going into deficit after declining revenues for the past 10 years.

Gov. Malloy proposed a \$100-billion, 30-year investment program. About two-thirds of the proposal is simply to bring existing infrastructure to a state of good repair. Some of the money would come from a portion of the sales tax, which would be dedicated to the STF. "That was an important step," said Frankel. Malloy also introduced a proposal for a constitutional amendment to have a lockbox for transportation, so that funds raised for transportation are used only for transportation.



He also appointed a panel of experts to look at funding the rest of the proposal. Frankel, who sat on the panel, said that it operated under the principles that the STF would remain solvent, that new revenues wouldn't adversely affect the state's delicate financial environment, that the revenue streams be sustainable, that they would seek to establish user-based revenues to support cost of construction and operation of transportation facilities, and finally, that new capacity should generate revenues from users and passengers.

The panel's recommendations included raising the state gas tax; increasing congestion mitigation electronic tolling, and others. This would be a major shift, as Connecticut has not had tolls for decades. Among the political hurdles involved in generating these revenues include the state's current fiscal crisis, historic opposition to tolls and mileage-based fees and a strong tradition of local control. "You would think Connecticut would be anxious to impose tolls," said Frankel, since 30 percent of the state's traffic comes from out-of-state vehicles.

RHODE ISLAND: TRUCKS DO THE MOST ROAD DAMAGE, SO TOLL THEM

Peter Garino, deputy director at the Rhode Island Department of Transportation talked about the state's process of developing the RhodeWorks program, which was designed to get all bridges to meet the federal minimum standard for structural sufficiency by 2025.

To start the process, RIDOT looked at every bridge and asked, if there were no funding constraints, only time constraints, what would it cost to get that bridge to be structurally sufficient? They discovered that they could save \$1 billion if they could accelerate bridge reconstruction, because some bridges could be rescued now with preservation efforts. And the cost of preservation per square foot is much less than reconstruction.

Tolling will help pay for the program. RhodeWorks includes a \$1 billion investment through tolling and other funding sources. Remarkably, the state is planning to toll tractor trailers, because tractor trailers do much more damage to a road than cars. "When you look at the percent trucks pay [in fuel tax], diesel taxes count for 19 percent, yet just tractor trailers do 70 percent of the damage," said Garino. Tolling will take place in 17 different locations throughout the state. Trucks will only pay once per gantry per calendar day per direction, with a maximum daily cap of \$40.

By investing money now into bridge repair, eventually it frees money for additional projects, a key selling point to other transportation and transit stakeholders. "RhodeWorks is about more than just bridges," he said. "If we don't do something about the bridges, all the money will be consumed by the bridges. But if we do something about the bridges, there will be money to allocate to other things," such as bike paths, etc.

WHAT WISCONSIN IS DOING ABOUT TOLLS

Casey Newman, director of the Office of Policy, Finance and Improvement (OPFI) at the Wisconsin Department of Transportation talked about his state's investigations into tolling. The state doesn't have tolls and never has, but is now considering additional funding sources. In 2012, a commission was created — "Wisconsin Moving" — whose mission was to identify how to balance revenues and services over a 10-year period.

The Commission settled on a figure of \$4.8 billion and reviewed 14 or 15 funding options, said Newman, including the possibility of tolling. Following the report, the DOT submitted a budget proposal that included the recommended funding options. Legislators balked but finally granted money to conduct a tolling feasibility study. The aim of the study is to produce a tolling resource document (what's entailed, what's involved); specific statutory language; and traffic analysis (What is the appropriate system?).



In the next budget cycle, Newman said, the governor and legislature will consider all budget options, including tolling. "We want them to fully understand what steps they need to take and what can be done and how to do it," he said.

A TASK FORCE SOLVES THE PUGET SOUND PROBLEM

Two bridges connect the metropolitan area of Puget Sound with the suburbs. One of the bridges needed replacing. Tolls were implemented to pay for the replacement, but there was still a budget shortfall. A plan was developed to add tolls to the second bridge to support the first bridge's replacement, but users of that bridge were vocally against the plan. "People had difficulty wrapping their head around tolling one facility to make improvements on another facility," said Ben Bakkenta, program manager strategic initiatives for the Puget Sound Regional Council. "There was a lot of angst about tolling one bridge to repair another." A special task force was convened to review how the region would implement system-wide tolling.

The task force included people from outside of government, including labor leaders and social justice advocates although mayors and county executives also participated. The group met over a year-long period and agreed that traditional funding sources were no longer capable of maintaining or improving mobility for a growing region.

In February 2016, the task force finalized its recommendations and is about to issue a report. Although public outcry has been vocal regarding other transportation issues, the task force made its recommendations based on what is necessary to develop an effective system, said Bakkenta. "We wondered would they be able to hold onto their strong recommendations, and they are."

WASHINGTON STATE EXPLORES ROAD USAGE CHARGE

Washington is one state that's investigating the feasibility of road usage charging (RUC). Reema Griffith, executive director of Washington State Transportation Commission, updated IBTTA attendees on their progress.

In 2012, the Commission, under the guidance of a steering committee, answered the question "is it feasible?" The short answer: It is, Griffith said, but it's complicated.



In 2013, the Commission addressed how RUC would compare to the gas tax. Because it's so efficient to collect, Griffith said the gas tax would be tough to beat in terms of revenue, at least in the early years of RUC, but eventually RUC would generate more revenue.

In 2014, the Commission developed a concept of operations, a "simplified blueprint" that says who would pay for RUC and how it would be tested.

In 2015, the Commission proposed that they conduct a demonstration. The basis of the assessment has been to identify and develop a long-term sustainable revenue source, Griffith said. It is also meant to ensure that there is consumer choice, an important lesson they learned from Oregon's initiatives. So they are looking at various ways to collect a RUC – from no-technology options to high-technology options.

Regarding tolling, Griffith said that because the State Transportation Commission is also the centralized tolling authority, it would provide some consistency in policy decisions. Specifically, as it evaluates road usage charging, it can evaluate how tolling would act as a complementary funding stream, particularly as a tool to fund mega-projects.

SOUTHERN CALIFORNIA GRAPPLES WITH MANAGED LANES, TOLL ROADS AND RUC

To make road use charging, tolls and managed lanes work together seamlessly will take a lot of work. A panel of experts at the IBTTA Transportation Policy and Finance Summit addressed the ways that these different functions could be coordinated.

Michael Kramen, P.E., CEO of Transportation Corridor Agencies said that the modern day purpose of toll roads is to complete the transportation network and reduce congestion where federal or state funding is not available. Given that toll facilities are conceptualized as ongoing sources of transportation funding, is that realistic? In California, he said, 75 percent of funding comes from local sources. Customers can pay the gas tax, developer impact fees, sales tax and income tax – on top of tolls on certain highways. “We need to understand and be part of the conversation,” he said. “Toll roads are not a singular answer to all of the funding challenges we face today...but they should be part of the toolbox.”

Anne Mayer, executive director of the Riverside County Transportation Commission (RCTC), said their county got into the toll business out of necessity.” In the past, voters have agreed to a sales tax increase in order to pay for infrastructure projects. “As we started looking toward the future, it became clear we couldn’t serve the county just with the sales tax measure,” she said. The county, which is roughly the size of New Jersey, is expected to double in size because the housing is affordable compared to adjacent counties – where many residents commute to work. Those counties have their own toll facilities, so the different governance, business practices and financial considerations make it challenging to coordinate efforts, but the goal is seamless connectivity between all the counties. One possibility for improving intercounty coordination is to consolidate governance.

Steven Abendschein, principal at Stantec Consulting Services, talked about forecasting for different facility types by using southern California as a case study. Route 91 is a land bridge between Riverside, Orange and L.A. counties, he said. There’s a significant jobs and housing imbalance. The cost differential between a house can be as much as \$300,000 to \$400,000. So there is pronounced traffic – about 285,000 vehicles across the county on a workday, he said. To improve capacity, three new facilities are in operation or coming soon. The challenge has been customizing policies for each of the new routes. The way rates change and how cars use the different facilities on each route is different. To ensure seamless integration, the planning process began early. “We think it’s a great idea to have an operational model so you can look at the design and help you figure out if all your proposals and policies will work in lockstep,” he said.



Lisa Bartlett, chairwoman of the Orange County Board of Supervisors and a member of the CTC Road Charge Technical Advisory Committee, noted that the county is working with California’s road usage charging (RUC) pilot program. When people ask why they don’t raise the gas tax, she tells them it’s not a long-term solution. In fact, the governor is so concerned about plummeting gas tax revenue in California that he moved the pilot program schedule up. She said RUC is a huge paradigm shift. “When you pump your gas, you don’t think about having to pay a gas tax,” she said. “For people to shift, it has to be evident that what you’re paying for is a replacement of a gas tax.”

Brian Annis, undersecretary at the California State Transportation Agency, gave a statewide view. He said that California is challenged like everyone else in maintaining and building new infrastructure. “One thing is for certain; we’re not going to have enough money,” he said and agreed that the state needed to look at new models, new funding sources and new partners from the private sector –all while looking at how different transit modes work together. One piece is to utilize

existing transit more effectively by filling empty seats. “We still need new capacity as well,” he said. And it makes sense in that case to look at pricing, because pricing can affect capacity. He pointed out that a bill was passed last year to normalize tolling as an accepted tool in California, making it possible to add HOT lanes, and convert HOV lanes to HOT lanes without going back to the legislature.

FLORIDA AGENCIES PARTNER TO SPEED THINGS UP



Joe Waggoner, executive director of the Tampa-Hillsborough Expressway Authority said that as a regional authority, he has seen local agencies pitted against each other, but when they work together, there are opportunities to address critical mobility challenges. One benefit of working together is the ability to develop and test new ideas with minimal risk to any one agency. An example is the financing of new toll roads. In models where the toll agency is part of the DOT, the DOT typically makes a significant upfront capital contribution. Florida has developed a lease purchase agreement model. If revenue

is insufficient to pay O&M costs, DOT provides a backstop. This allows local jurisdictions to build sooner without waiting in line for funds. “The benefits can flow in both directions,” he said. Another example is a bus toll lanes pilot project. The worst case scenario is that the lane will not be a dedicated lane, but if it works out, then there will be more partnership opportunities going forward.

FOCUS ON FINANCE

TRENDING IN FINANCE

In a special session on financing infrastructure, expert speakers discussed trends in finance with Transportation Policy and Finance Summit attendees.

Mike Parker, U.S. Infrastructure Advisory Leader at Ernst & Young gave an overview of TIFIA, P3 market and emerging credit considerations his group sees as impacting toll roads.

As far as TIFIA loans, Parker noted that the volume of loans is still high but dropped somewhat recently. Reflecting that drop, the FAST Act decreased funding levels for TIFIA, but the program wasn't really spending the money anyway. Parker also said he sees expansion in project eligibility.

Regarding P3 projects, Parker said there's been an uptick in recent years: “From our perspective, PPPs are part of the conversation for any project over \$500 million dollars,” he said. A trend is also developing to use P3 methods as a way to lock in long-term operation and maintenance agreements.

Parker briefly summarized secondary market transaction activity for the past several years. He said there over \$9 billion in closed secondary market transactions. In the past year, valuations have been exceeding 30x EBITA (Earnings before interest, taxes and amortization). “The story on these facilities isn't just that the debt is fairly cheap. The story is that equity is cheap,” he said. Two bidders might have the same debt package but their expectation for return is different.

Then Parker brought attendees up to speed on credit considerations for toll road projects. Although ratings agencies report that the overall outlook for toll roads in the U.S. is positive, individual projects have different degrees of construction complexity and revenue risk.

For the time being, it doesn't seem that consumption of roads has fundamentally changed, but the story about millennials is an important one to keep an eye on, Parker said, along with autonomous vehicles.

He listed some trends in rating agency criteria for toll road projects:

- Credit fundamentals remain unchanged.
- Movement to document ratings with an algorithm scoring methodology has not resulted in wholesale rating changes.
- Standardization of global rating methodologies places stress on some project ratings outside the U.S.
- Movement to include state DOT PPP obligations in state general obligation debt ratios is recent and its impact remains uncertain.

He also listed some credit-related developments to watch:

- Significant increase in historic operating data from new U.S. managed lane projects could provide support for industry forecasts
- Rating agencies' methodology for incorporation of PPP obligations into state debt metrics will continue to develop
- Projects in countries and regions facing economic challenges will see analysts seek to forecast through current economic cycles
- Federal funding levels will likely remain a source of uncertainty
- States' efforts to increase state tax funding for transportation will both complement and compete with toll revenue as a source for funding new projects

Cory Czyzewski, director at Bank of America Merrill Lynch, gave attendees a "Municipal Market Update." The dominant theme is that rates are low, he said. In the tolling sector, there have been a mix of larger and smaller transactions. He talked about current market opportunities, including 40-year debt (not typical), capital appreciation bonds and convertible CABs (Capital Appreciation Bonds), bank direct purchases, TIFIA and more. Czyzewski concluded that interest rates will go up, so plan accordingly. He also suggested that attendees be "refunding ready." Although there's some risk to that position, there are also advantages when market conditions allow.

Alexandra MacLennan, partner at Squire Patton Boggs gave a presentation on the SEC's Municipalities Continuing Disclosure Cooperation (MCDC) initiative, which invited voluntary self-reporting about potentially misleading statements regarding prior compliance with continuing disclosure undertakings. "It's not about compliance, it's what you said about your compliance," said MacLennan.

The SEC initiative targeted issuers and underwriters. So far the SEC has settled with 72 underwriters and is now contacting issuers. "If there's anything to learn from MCDC, it's how to enhance your own internal processes, how to facilitate compliance," said MacLennan. She also updated attendees on the Municipal Advisor Rule and ongoing industry initiatives.

Todd Cooper, partner at Squire Patton Boggs, talked about accounting and allocation regulations, including the new partnership rules from the IRS. He said there are two ways to look at a partnership from a tax perspective. One is the partnership as a whole. The second is through the partnership to the partners – the aggregate or the entity.

If there's a joint venture like a P3, for tax purposes you're in partnership with them. If you're a 50/50 partner with the private sector, the IRS isn't going to try to figure out which mile marker to which mile marker is the government's versus the private entity's. It's going to look at all of it as 50/50 and let you finance 50 percent on a tax basis, even though there is private use for every mile.

HOW HAVE P3 AND MONETIZATION CONCEPTS CHANGED AND WHERE ARE THEY HEADED?

P3 projects have developed into a sophisticated market in the past few years, with increased diversity in the types of projects and transactions being procured as well as an active secondary market. Although they're primarily a financing mechanism for transportation projects that local and state governments can't fund on their own, they also offer opportunities to unlock hidden value – by helping governments monetize underutilized assets, for instance.

At IBTTA's Transportation Policy and Finance Summit, Douglas Koelemay, director of the Virginia Office of Public-Private Partnerships, VDOT, said that the state learned many lessons from deploying P3 projects. One was that the state needed an office dedicated to P3s. "We realized we better get good at this and professionalize our effort, to structure the benefits and administer them. We are trying to be imaginative. We are trying to use the expertise we've built to think creatively about what we might do."



He used the I-66 corridor in northern Virginia as an example. On one stretch, there's an underutilized park sitting on top of the interstate, just outside the Washington, D.C. border. "The private sector indicated the potential for a building on that site," he said, but in terms of leasing air rights, VDOT wouldn't generate significant direct revenue. What matters, though, is the tangential value created by this kind of partnership including job creation, income tax revenue, property tax revenue and so on. "It's a way to think about the value proposition, how you unlock value and capture potentially indirect benefits for the state," he said.

Jordi Graells, senior advisor at the Missouri Transportation Alliance, said that interest from investors in P3 tolling projects is high. The expectation of long-term, clearly visible cash flows is enticing to investors; at the same time, there are relatively few toll road projects coming online. That means there's a significant amount of investment dollars waiting for more projects. It's an environment conducive to P3s. States have an opportunity to get projects started more quickly and leverage the massive amount of equity waiting to pour into them.

Jennifer Chang, assistant vice president of Moody's Investors Service, said one change in P3 projects is simply that there is greater market participation on all levels. The investor base is more familiar with the concept. From a risk perspective, she said that the biggest failures have been when actual traffic on the toll road was much lower than forecast. Because of the risk that the demand-risk model carries, she said there has been a progression to different models. In terms of utilizing non-core assets, the biggest questions from a credit agency perspective will be whether they generate sufficient cash flow to be separately financed, and what kind of support will they get if not?

David Horner, partner at Hunton & Williams said he expects to see modifications in the tolling schedules set forth in concession agreements in order to accelerate the escalation of tolls that can be assessed, specifically to lift caps. He also told attendees to look for the emergence of secondary markets for toll roads. Under the federal highway statutes, toll authorities have a right to substitute a toll credit for locally matched new construction that receives Title 23 assistance. He said there's a movement among some state DOTs to convince the U.S. DOT to allow, on an administrative basis, the disposition of toll credit for pennies on the dollar by jurisdictions that have a super-abundance of toll credits to jurisdictions that could benefit from the acquisition of toll credits (i.e. a market for excess toll credits).



Another trend in monetization is toward multi-asset projects. He cited some recent P3 infrastructure projects that were multi-asset procurements, including Michigan DOT's highway lighting P3 and PennDOT's compressed natural gas facility procurement. "They're for the creation of a network or the replacement of a legacy, structurally deficient network by means of a long-term concession, privately financed," he said. The same language and architecture of these agreements could be applied to highway projects.

THE DRIVE TOWARD ALL-ELECTRONIC TOLLING...FROM A FINANCE PERSPECTIVE

"Although the financial implications of all-electronic tolling (AET) are better known now than in the past, there still isn't enough data to make firm conclusions," said David Klinges, managing director at Piper Jaffray & Company. He told attendees at the IBTTA Transportation Policy and Finance Summit that even as agencies consider going cashless, the majority of systems still use cash tolling.

In other words, it's not clear from the data available that AET is the best system. He reviewed what the data does currently show. First, that transaction costs have declined over the last decade because of on-board units (OBUs). "It has a significantly lower cost than cash. Cash is expensive, but it's not more expensive than video pay-by-plate," he said. "This is part of the dilemma of 'do you go all-electronic, or do you still keep the toll collector there to collect the cash option?'"

He said that the industry data on operating expenses is flawed, but it nonetheless suggests that toll facilities are controlling their cost per transactions if they're all-electronic better than toll roads that are not.

He said that toll roads that go all-electronic are more inclined to index their rates, which is good from a finance perspective. "If you're doing your debt management and can say we know we'll have toll increases that track inflation, your future has a greater degree of certainty," he said.

Ultimately, whether a road is AET or if there are some lanes for collecting cash, the worst-case scenario is electronic lanes manned by toll collectors. "From a finance perspective, what I really hate seeing is you come up to the old traditional toll plaza. It says cash or ETC, you're all going through with your tags, and we're paying that guy or girl to sit in that toll plaza to watch people go by," he said.

Jodi Hecht, credit advisory and fixed income analyst at JEH Advisory, spoke about credit issues surrounding AET. “The bottom line is, it’s really not a significant concern,” she said, because conversions have been done successfully and the industry is good at sharing best practices.

That said, every toll road is different. The costs for one can be different from another, whether it’s based on conversion or deployment of a new system. She pointed out that although AET reduces labor costs by eliminating manual collection, there will be costs added to the back-end administration, particularly for complex systems with legacy platforms.

Nicola Liquori, deputy executive director and chief financial officer of Florida’s Turnpike Enterprise, shared her agency’s experience with AET. One of the most important considerations is that 96 percent of the vehicles using their system have Florida license plates, and a large customer base that already use the SunPass ETC program.

Labor costs were 62 percent before implementing AET, and 57 percent after AET. The primary reduction was in the in-lane staff, which went from 1,300 in 2010 to just over 600 at the end of 2015. Liquori acknowledged that there was a need for additional back-office labor to handle the increased volume of payment processing, customer service inquiries and so on. Maintenance costs have also gone up slightly, along with transponder costs because they subsidize that cost for their customer base, which has grown.

She told attendees that the collection rate for toll-by-plate (i.e. video) is 70 percent, but that it’s important to remember that toll-by-plate only accounts for five percent of revenue. Most revenue comes from SunPass customers. Practically speaking, she advised agencies considering AET to strive for at least 80 percent adoption of their ETC program before looking at AET.

STAKEHOLDER PERSPECTIVES

A CBO REPORT IS BULLISH ON VMT AND TOLLING

A report recently issued by the Congressional Budget Office (CBO) offers approaches that government could take to improve federal highway spending, including charging drivers directly for their use of roads, whether that’s through tolls, congestion charging, a vehicle-miles-traveled charged (VMT) or some other mechanism.

Federal spending on highways simply doesn’t go as far as it used to and is not always allocated optimally. “The relationship between how highway funds are being spent and how highways are being used is not necessarily syncing well,” said co-author Chad Shirley, deputy assistant director at CBO.

For instance, the amounts of money spent on roads with lots of congestion is comparable to amounts spent on roads with much fewer miles traveled. In other instances, roads with poorer pavement quality, like urban and interstate roads, receive less money than rural roads. Similarly, spending to repair obsolete bridges is less than spending on bridges that are in better condition.

Shirley reviewed some of the report’s considerations in detail with attendees at the IBTTA Transportation Policy and Finance Summit. “CBO is a nonpartisan agency. We don’t technically make recommendations, but we’re glad to discuss advantages and disadvantages of different policies,” he says.

On charging drivers, Shirley says the CBO sees economic advantages to a policy that charges drivers in more situations for actual road use. “You’ll allow higher value transportation to move across the road more quickly and reliably,” he says.

Another advantage would be to provide revenue to fund projects, and more widespread use of pricing would provide information about how much users value the roads. To read the report, visit the [CBO website](#).

A HALF-HOUR WITH CHRIS BERTRAM, CONGRESSIONAL STAFFER

Chris Bertram, staff director for House Committee on Transportation and Infrastructure, walked IBTTA Transportation Policy and Finance Summit attendees through some of the highlights of the FAST Act.



First of all, he highlighted a new entity in the Department of Transportation called the National Surface Transportation and Innovative Finance Bureau. The Bureau will consolidate a number of previous offices into one, with the goal of helping transit agencies facilitate large-scale projects.

When the Denver Regional Transportation District planned a redevelopment of commuter rail, they sought help from the DOT. “It was only due to their persistence that they were successful in getting a TIFIA loan and grant,” said Bertram. The many different offices they had to work with weren’t coordinating their efforts. The new Bureau seeks to eliminate that problem by serving as a concierge-type entity that will administer the TIFIA program and help coordinate other relevant administrative efforts. “The idea is to have a focal point for people to go,” said Bertram.

Bertram also noted that the Act created a new competitive grant program, funded through the Highway Trust Fund. The Nationally Significant Freight and Highway Project Program (NSFHP), will provide \$4.5 billion over five years for competitive grants to fund large, expensive freight and highway projects that are nationally significant.

Both the Bureau and NSFHP are attempts to refocus federal funding and financing on national projects rather than just locally significant projects, Bertram said.

On financing and tolling, Bertram noted that the Act reauthorized the TIFIA program for another five years for an average \$287 million each fiscal year. The program now formally allows availability payments and advance construction.

But what happens when the next reauthorization period approaches? Bertram acknowledged that it has been challenging to get long-term bills passed by Congress. He said that funding a future bill with road usage charges was something that Congress is looking at but it would be tough to finance a national program with the next authorization bill. “Eventually we’ll have to look at it but it’s probably not going to happen in five years,” he said.



FOUR TRANSPORTATION REPORTERS SHARE THEIR WISDOM

During IBTTA’s Transportation Policy and Finance Summit, a panel of reporters from print, TV and radio shared their experiences communicating with the public about tolling projects. One question they addressed is what the public knows and thinks about paying for transportation.

The general consensus is that the public doesn’t know how transportation projects are funded and/or they don’t like paying for them. “Asking people how they feel about paying

for transportation is like asking how do you feel about going to the dentist and having a tooth pulled? Nobody's excited about it," said Danielle Leigh of King 5 Television in Seattle. On the other hand, people like the effects that toll roads have on traffic. Bob Thomson, who writes the "Dr. Gridlock" column for the Washington Post told attendees "My readers are determined to improve their commutes, and equally determined not to pay for it."

Part of what drives an unwillingness to pay is a mistrust in government, said Martine Powers of Politico. After talking to readers, she says, "... the sense of we've already paid for this comes from this feeling of, okay, I've given money in the past to pay for this road, and if the government were operating responsibly and using my money responsibly, then they wouldn't have this problem. And if they have run out of money to take care of the road at this point, that is their problem, not my problem."

From the media's perspective, telling transportation-related stories can be challenging. For one thing, the time and space a reporter can devote to telling a story is limited. Max Smith from WTOP Radio in Washington, D.C., pointed out that his stories are 35 seconds long. "If you can't explain it on a sign, you can't explain it in a radio story," he said.

Another issue is that projects can take years to develop. And even if reporters file stories about those projects, most readers don't pay attention until they're directly affected. "What I have found quite strikingly is that despite the fact that in the D.C. region we now have a HOT lanes network in Northern Virginia of 40 miles, and Virginia is planning to add 30 miles on I66, eight miles on 395...if you don't live in that particular corridor, you don't sweat the details," said Thomson. "You do not learn about these lanes until you think they're going to hurt you."

A TRANSPORTATION CONSULTANT SAYS RUC AND TOLLING ARE COMPATIBLE

It's time for a change, whether you like it or not. That's the message Jack Opiola served to IBTTA Transportation Policy and Finance Summit attendees. The managing partner and president of D'Artagnan Consulting said that he couldn't remember another time in the industry when there's been so much constant change.



Knowing there will be change is one thing. Predicting what it will be is another. On the topic of RUC and tolling, he told attendees there are more dissimilarities than similarities, including scale. Tolls only account for a small percentage of the total network. The rest is general use roads. Another difference is that engagement with legislation is different. Tolls deal with local officials. But RUC needs to address the entire state (or federal government). Finally, the accounting methods are different. In terms of charges, for instance, tolling deals with dollars and RUC deals with cents. "We can still have toll roads. We can still have managed lanes. And the rest of the roads can be RUC," he said. The revenue from RUC goes to pay for all roads. Tolling goes to pay for the toll road.

The only way to shore up the Highway Trust Fund is to move to a distance-based fee, he said, but the tolling industry will have to battle the perception that RUC is a type of tolling, because people imagine they'll be charged dollars per mile. RUC is not universal tolling, stressed Opiola. It's network-wide and generates revenues to rebuild the network.

AN ENO FELLOW'S REVIEW OF THE FAST ACT

If their number one priority was more funding in and of itself, then supporters of the FAST Act succeeded, said Jeff Davis, senior fellow at Eno Center for Transportation and editor of Eno Transportation Weekly. The flip side, he said, is that "by and large, they robbed the banks to fund this transportation bill. We're good to go on the money side until 2020, and then if they want to pass a similar bill, they'll have to find \$120 billion," he told attendees at the IBTTA Transportation Policy and Finance Summit.

Likewise, aspects of the bill that seemed negative turned out to be not that big of a deal. For example, the reduction in TIFIA funding won't have much of an impact because the TIFIA program wasn't spending the money in its budget anyway. "There weren't enough worthwhile projects in the pipeline that met the criteria and could be submitted on time," said Davis. "It's bad policy to give money to a program that it can't spend in five to 10 years."

UP CLOSE AND PERSONAL – A MULTI-MODAL PARTNERSHIP



Washington, D.C. is home to one of the nation's premier multi-modal partnerships. During IBTTA's Transportation Policy and Finance Summit, attendees took the opportunity to see it in-person. The group boarded a bus the day before the conference began and traveled I-66 to the Dulles Toll Road, out to Dulles Airport and back again. They observed construction of the new transit rail line and listened to presentations from Metropolitan Washington Airports Authority (MWAA) staff about how an airport authority came to operate a toll road.

Sixty years ago, the transportation planners in the Washington, D.C. region had a vision for a connected transportation system. To realize their vision, they knew that strong partnerships would be critical. "It has taken this long for all the partnerships to merge together and become a cohesive agency," said Cindy Ward, director of the Dulles Toll Road.

The process began in 1986, with the creation of the Metropolitan Washington Airports Authority (MWAA). A year later, MWAA assumed operating authority for the Dulles airport and Reagan National airport. The federal government leased the land to MWAA. When VDOT built the Dulles Toll Road, MWAA leased the rights to the toll road to VDOT. In 2008, the toll road was transferred to the operational control and maintenance authority of the MWAA. "Why an airport with a toll road?" Ward asked. "It all goes to funding."

Currently, a new rail line is being built that will extend from Washington, D.C. to the airport. Revenue from the toll road and additional partners is funding construction. "We will take a lead in ensuring that the transportation plan envisioned so many years ago is finalized," said Ward.

Although the Washington Metropolitan Area Transit Authority (WMATA) operates the rail lines, it is not a funding partner for this project. As a project partner, they're involved in the design and development of the system, but "at the end of the day, we pick up the entire project and transfer it lock, stock and barrel to the Metro," said Ann Field, controller for MWAA. That means MWAA keeps none of the transit revenue but assumes all the project's debt.

To finance construction of Phase II of the project, MWAA secured a TIFIA loan for up to \$1.278 billion, with a 3.21 percent interest rate. The Interest does not accrue until loan proceeds are drawn and no debt service payments are required before April 1, 2019, said Field. The first mandatory principal payment is not due until after the project is finished and goes live.

"I want to warn you ahead of time that TIFIA has a lot of requirements," said Field, including a toll road revenue study, construction updates, and so on. "It's been a win-win for everybody but it does have a lot of things that go with it," she said. One requirement is the maintenance of all project documentation, until five years after the loan's maturity, which in this case means record keeping until 2049. "We're trying to figure out what we do with these 2,000 boxes of documents we have and all this electronic storage," she said.