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Business and Public Administration

Regional Mobility Dialogue Series Results and Summary

The Future of Transportation Funding – Gas Tax, Per Mile Fees and Other Ideas

November 13, 2018

CSUSB, Leonard Transportation Center

Introduction

Traditionally, motor fuel taxes have been the primary source of funding for transportation projects in California and throughout the U.S. In 2017, the California legislature approved SB-1, the first motor fuel tax increase in California in 23 years. SB-1 will provide an additional $54 billion for both state and local transportation projects statewide. Proposition 6 on the November ballot threatened to repeal SB-1 and eliminate this boost to transportation funding. Even with the recent increases, there has been a long-term failure to increase fuel taxes to keep pace with inflation, the improved vehicle fuel economy, and additional electric and alternative fuel vehicles on the road that pay no fuel taxes. This has dramatically reduced the ability of fuel taxes to keep pace with demand for transportation funding.

In response to this funding need, California has led the nation in implementing alternative funding mechanisms for transportation. Twenty-four of California's 58 counties are self-help counties. They contain 88% of California's population and have enacted local tax measures to help fund transportation projects. In addition to local tax measures, the nine bay area counties have voted to enact bridge toll surcharges to fund regional transportation improvements.

In 2017, California completed the largest pilot study ever conducted of Road User Charging or Mileage Based User Fees, where motorists pay a per-mile fee regardless of fuel consumption. The Leonard Transportation Center hosted its sixth dialogue to discuss where we go from here. What is the future of transportation funding in California? During the sixth Dialogue for 2018, we invited statewide experts to discuss the history of gas taxes, the public's perception of paying for transportation infrastructure, and the next steps in transportation funding innovation. The three thought leaders participating in this discussion were:

- **Will Kempton**, Statewide expert on transportation finance, Former Executive Director, California Transportation Commission, Former Director, Caltrans
- **Asha Agrawal**, Ph.D., Director and Professor San Jose State University Mineta Transportation Institute, National Transportation Finance Center
- **Jim Madaffer**, President and CEO, Madaffer Enterprises, Commissioner, California Transportation Commission

The main takeaways from our most recent Dialogue include creating public awareness of transportation fiunding, including all of the various taxes and where those funds are going – thus allowing the public to make more informed decisions when voting. At present, there is a disconnect in the information flow and that can significantly affect how transportation taxes are perceived. Next, as we shift toward more alternative energy vehicles, , we need to find more relevant and appropriate ways of generating transportationfunds to support our growing infrastructure needs.. Finally, as transportation transitions towards multimodal, shared providers – such as Uber, Lyft and Waymo – we must make apt decisions in adjusting policy and infrastructure.

Opening Statements

Our sixth dialogue focused on the key components of transportation financing, and brainstormed how we are going to pay for the future transportation infrastructure and systems. Some estimate a $60 billion deficit in needed transportation infrastructure in California and the taxes generated from SB1 will be around $50 billion over the next 10 years. Even with this funding, the state will still need to look at other funding sources.

Will Kempton

Leading the conversation was Will Kempton, a statewide expert on transportation finance, former Executive Director of the California Transportation Commission, and former Director of Caltrans. According to Kempton, California has a ten-year backlog of transportation needs amounting to roughly $130 billion. "If we talk about actual needs, it is significantly greater than that, if we bring everything to a state of good repair and have all of our systems working very effectively, and providing not only the maintenance and rehabilitation which is needed, but the new capacity in both transit rail and highways that are needed to serve the state's quality of life and our economy, then it would be something probably in the $300 billion range," stated Kempton.

Currently, when purchasing a gallon of gas in California, we pay 18.4 cents per gallon in federal taxes and 17.3 cents state excise tax – with SB1, we pay an additional 30 cent state based excise tax. "With the rejection by the voters of Proposition 6 (preserving SB1) in November 2018, we're paying a total of 65.7 cents per gallon. Which incidentally puts us in third place behind the states of Pennsylvania and Washington," said Kempton.

Next, Kempton laid out for the participants the 10 red letter dates in California transportation funding:

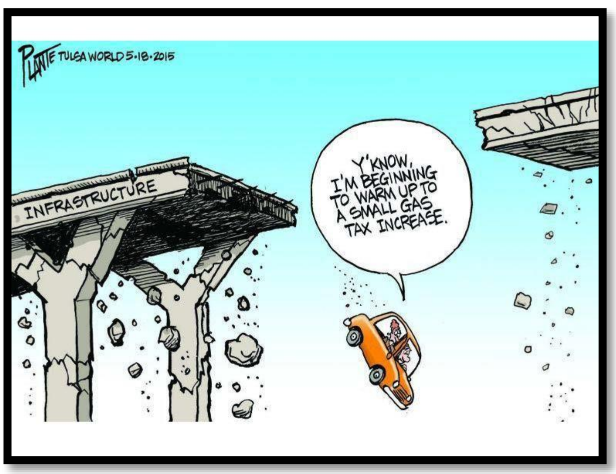
- 1923 – The State of California first instituted a gas tax of two cents per gallon.
- 1956 – The federal government imposed a two cent per gallon tax to pay for the interstate system.
- 1971 – California funds transit when Senator Jim Mills, President Pro Tem of the Senate, implemented a proposal that took one quarter cent from the general sales tax and made that available to local transit agencies.
- 1987 – Senator Quentin L. Kopp introduced legislation that devolved transportation decision-making from the state level down to the regional level, making the regional agencies responsible for how 75% of the dollars that are available would get funded and the state was left to decide how 25% in interregional facilities would be funded.
- 1990 – Under the leadership of Governor Deukmejian, the blueprint for transportation was approved by the electorate, doubling of the existing 9 cents gas tax to 18 cents.
- 1992 – The Supreme Court ruled a super majority was needed to pass any special purpose tax (two-thirds vote).
- 2001 – Governor Davis implemented the Traffic Congestion Relief program identifying over a billion dollars of needed projects. The very next year the economy collapsed, and he was left with these commitments. In trying to forestall the state budget crisis, he implemented an increase in the vehicle license fee, but in the end was recalled from office.
- 2005 – Governor Schwarzenegger put forth a five-prong infrastructure package, of which $20 billion was allocated for transportation. This was Proposition 1B. It was very effectively managed by the California Transportation Commission. All of the projects were delivered, and the funding generated has been spent.

- 2010 – A gas swap tax occurred, which eliminated gasoline sales tax and substituted it with an excise tax. The thought was that gas prices would continue to increase, but they fell, and in 2013-14, there was a $750 million deficit for designated projects in the State Transportation Improvement Program.
- 2017 – Senate Bill 1 was signed by Governor Brown.

"Transportation funding has been based on the gas tax and it has been a good source of funding through the 20th century. But then something happened, new technology came along. People like Madaffer and some others started looking at ways to make vehicles operate more efficiently," explained Kempton. With hybrid vehicles and transportation fleets becoming more fuel efficient, gas tax revenue has started to flatten out. Our main source of funding is no longer as effective due to technological developments in the transportation industry.

<u>Asha Weinstein Agrawal</u>

The next speaker, Dr. Asha Weinstein Agrawal presented her work on the opinion of the public towards raising transportation revenues and willingness to pay. Her presentation was based on 10 years of direct survey work along with survey and focus group work done by others. It began by looking at the gas tax and then reviews perspectives on mileage fees.



The surveys on the gas tax had approximately 1200 to 1500 respondents who were asked seven different variations of questions on raising the federal gas tax by 10 cents per gallon. "We asked everybody about a base case for the gas tax, specifically: would you support raising the gas tax by 10 cents per gallon for transportation. No other information was given to people," explained Weinstein. The results were 34% supported an increase in the federal gas tax. Interestingly, when the participants were asked if they supported an increase in tax if it was introduced over five years instead of all at once, an additional 20% supported the gas tax increase. "

There were also a couple of environmental options, one telling people the money would be dedicated for projects to reduce local air pollution, and in another case people were told the money will be dedicated to projects to reduce the impact of our transportation system on global warming, and in both of those cases we got an additional 25 or 26 percent of people saying yes, I would support the gas tax," said Weinstein Agrawal.

Additionally, they asked participants about tax increases that would be used for safety and maintenance, in this case 72% of people would support a tax increase for safety related reasons. The study then looked at subgroups within the population who are generally more willing to support tax increases. There were a few groups that stood out as being particularly supportive, one was the younger population, another were those who did not identify as Republican were likely to support the gas tax increase. The public either hated or loved the idea of gas tax increases, and for the participants that were somewhere in the middle, there was more variation by different population groups.

When looking at mileage fees for vehicle miles traveled, public opinion generally did not support this option. The average support level from a variety of 33 different survey questions was 24%. One finding in looking at all of the different surveys was that over time, support was increasing. For the pilot programs, those who participated and paid the imaginary fees for miles traveled were supportive. We can extrapolate from this and think that once individuals participated in and understood how the program worked, they would be more supportive.

Another factor that made a difference was framing the mileage fee based on levels of pollution. "We jumped from 27 percent in support for just the plain old mileage tax to 46 percent support if the rate was structured to account for how clean your vehicle is. So, it's not either number, 27 or 46, that makes me really excited. It's the difference that the public does not feel the same about every possible variant of the mileage tax. There seem to be ways we can structure it that will increase support," said Weinstein.

The overall key findings from Dr. Weinstein's research include:

- Six of the 10 transportation tax options tested had majority support (Weinstein & Nixon, 2018).
- Associating tax increases to safety, maintenance, or environmental benefits increased support by at least 10 percentage points among almost every sociodemographic group (Weinstein & Nixon, 2018).
- Support levels varied noticeably by the type of tax. When taxes were characterized with no information other than the tax type, a new sales tax was more popular than either a gas tax increase or a new mileage tax (Weinstein & Nixon, 2018).

When looking at all nine years of collected data, support for taxes has risen. According to Dr. Weinstein, from 2010 to 2018, growth has been modest but substantial, rising about 10 to 15 percentage points for all, but the flat-rate mileage fee. One final piece of information from this work, if we are going to switch to a mileage fee – make it simple.

Jim Madaffer

The final speaker, Jim Madaffer, provided insights on how to move forward. The first key point Madaffer discussed was that there is a disconnect between the public and their understanding of per mile fees and the gas tax. The gas tax was first created in Oregon in 1919, almost 100 years ago. The big difference between how gas taxes were then and how things are today, is back then you paid for what you used.

As an example, Madaffer explained if we are paying 65 cents a gallon, and you drive 25 miles on a gallon of gas, which is about the average these days, then we are paying 2.6 cents a mile to drive. “Once you start explaining the realities a bit more, lightbulbs start going on. I'll give you an example of a Ford F-150 or somebody that's lower-income, both have difficulties in affording a 25 mile per gallon car. Their car is only getting 10 miles per gallon. This is the disconnect: they are paying 6.5 cents a mile with the existing gas tax,” said Madaffer. In discussing this with individuals in the farming communities in the San Joaquin Valley, most said they do not want to pay by the mile as many of them drive 100 miles to get to their jobs. Madaffer then asked them what type of vehicles they are driving, the majority of them are driving Ford trucks that get about 10 miles to the gallon. From here, he explained that if we implement a per mile fee using the average, it would amount to about 2.5 cents a mile, and they are currently paying 6.5 cents a mile. We need to create equity in the systems that we have put into place.

Madaffer went on to address inadequacies in the electric vehicle infrastructure. The only way the public will adopt electric vehicles is when we mandate an electric car infrastructure in all houses and apartment complexes. Many of the charging stations available at local businesses do not charge electric vehicles fast enough. “It's good to see the charging stations here, don't get me wrong, I think that's a step in the right direction, but they're too slow,” said Madaffer.

Going back to gas taxes, Madaffer believes we should not call it a gas tax, we should call it, “A Transportation User Fee, because that’s what it is.” Thanks to SB1 we have $54 billion dollars that is severely needed in California for transportation, where we have an overall infrastructure deficit of $300 billion dollars.

The next point moved on to the changing nature of car ownership. We are in the midst of a transition from where we own cars or lease them, to where transportation becomes a service. A study was done that said the gain in net disposable income to the American people will be over a trillion dollars that will go back to the consumers’ pockets as a result of the savings the public will get from switching from car ownership where they pay for gas, pay for insurance, pay to park, to where customers are using vehicles that do not have a driver because it is now an autonomous system. Madaffer believes within the next 25 years this will become our reality. “What's going to happen 25 years from now that tax revenue goes away? Well that's a different topic for a different day, but it is something that needs to be thought out. VMT will continue to go up, and vehicle miles traveled will continue to increase,” said Madaffer. According to Madaffer, the road charge options are where we need to make the changes. The California Transportation Commission did a pilot in California where 5,000 vehicles participated, over 30 million miles were driven, and they were able to test to see what worked and what didn’t when it comes to mileage taxes.

There are additional changes coming our way in the near future, “Number one is all autonomous vehicles will get a license to operate on the road whether it's Waymo, Uber, Lyft. They're going to be the first to be required to pay by the mile, and then you will see GM and other car companies preparing for the future. They should be required to pay by the mile," stated Madaffer. New vehicles should be equipped with an onboard telematics systems in order to pay the per mile fees, somehow we need to figure out an inexpensive way to incorporate those fees. Madaffer concluded with, "Just keep in mind one thing, we're going to have to still stay creative because we know that the gas tax isn't sustainable for the long term. The revenues will continue to drop as fuel efficiency continues to increase and that's the challenge we have folks."

Moving the Dialogue Forward: Ideas from the Participants

After the presentations, Dialogue attendees discussed the ideas presented and worked together in groups to discuss solutions to move the discussion forward. The top three ideas from each table have been categorized and summarized below.

Per mile and gas tax fees. There were a number of participants that were surprised to hear how much we pay for gas taxes, and how uniformed the public is about it. A few ideas and suggestions were made in regards to per mile fees and gas tax:

- Leaders in the transportation industry are looking for ways to make fees fair for all people. Things will change in the future but it is up to us today to allow that to happen by educating ourselves and others on these issues.
- How will the future of the economy be affected by implementation of the mileage fee instead of gas tax, how will we prepare for this?
- The gas tax is regressive, we need to find a way to efficiently collect the mileage fee so that we can replace the gas tax quickly and seamlessly.
- It is important that we educate the public, because it clearly makes a difference in their opinion when they fully understand what is happening.
- How does gas tax/mileage fees relate to bus service or possible expansion of service?
- Our current gas tax is inequitable, how do we solve this?

Electric vehicles and charging stations. Many participants were interested in discussing how to ease the transition to electric vehicles, and how to build out the infrastructure to support them. There were a few comments and suggestions:

- Many of the charging stations do not charge a fee to charge electric vehicles, this is something that could help create revenue.
- Our infrastructure is inefficient and does not charge our electric vehicles fast enough, how can we fix this?
- Have a mileage fee incorporated at charging stations.
- We need to consider infrastructure updates to ease the transition from gas usage.
- Think about possibly incorporating charging stations at typical gas stations to help with the transition from petroleum to electricity.

The Leonard Transportation Center (LTC) at California State University San Bernardino (CSUSB), presented a bi-monthly dialogue series on topics relevant to the future of transportation in the Inland Empire. The series, which was open to the public, was sponsored by HNTB Corporation and was held every other month starting in February 2018.

Dialogue topics ranged from understanding the current mobility dilemma and its causes to potential solutions like congestion pricing, transit; emerging technologies such as autonomous and connected vehicles and new ways of funding transportation infrastructure. Attendees had the opportunity to hear from transportation experts and engage in vigorous discussion about the transportation challenges facing the Inland Empire.

About Leonard Transportation Center

The Leonard Transportation Center (LTC) at California State University, San Bernardino opened in 2006 with a focus on regional transportation needs. The vision of Bill and Barbara Leonard was to create a center that focuses on the unique transportation opportunities and challenges the Inland Empire faces. Today, the LTC is working to expand its research and student engagement programs. Focal points include transportation management and governance issues, development of new technologies, and transnational studies. Their vision is to work collaboratively to seek solutions to assist residents, businesses, government and nonprofit agencies, and international partners to work together on improving sustainability and quality of life in the Inland Empire. For more information, visit www.csusb.edu/ltc.

About HNTB

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