ClimatePlan

What You Need to Know on Road Pricing

Introduction

This factsheet provides an overview on road pricing. The following will be covered.

- Defining Road Pricing
- Road Pricing Strategies
- Equity Considerations for Road Pricing
- Current CA Statewide Efforts
- Road Pricing in Action: Case Studies

Defining Road Pricing

Road pricing describes the different ways of charging the use of a road. The implementation of road pricing will depend on the goals for transportation planning. For the purpose of this factsheet, pricing will be thought about in two ways; one as a way to change behavior and the other as a way to replace the fuel tax. However, there are other important reasons to implement road pricing.

Road Pricing Strategies

The following are a few types of road pricing.

- **CORDON PRICING**
  Drivers pay a fee to enter (and/or leave) a certain area, typically used for a downtown. Once the driver pays the fee, they are free to drive around the downtown area. The fee may be fixed or variable depending on the time of day, congestion level, or vehicle type.
- **DISTANCE-BASED CHARGING**
  Vehicles are charged based on distance traveled. Sometimes referred to as VMT fee or road user charge.
- **AREA PRICING**
  This strategy is like a combination of cordon and distance-based charging. Drivers pay a distance-based or trip-based fee based on how much driving they do within a particular area, usually for a downtown.

Road Pricing Strategies (cont).

- **MANAGED LANES**
  These are various strategies that restrict lane access with the goal of reducing congestion. Two common strategies are high-occupancy toll lanes and express lanes. **In California, there isn't a differentiation between HOT and Express lanes, and these terms are often used interchangeably.*
  - **High-Occupancy Toll lanes (HOT)**
    HOT lanes are used to incentivize carpooling and ride-sharing because they can use the lane for free or at reduced price. If drivers are alone and want to use a HOT lane, they have to pay a fee.
  - **Express lanes**
    Express lanes provide an option for drivers to pay a toll and travel in a separate lane outside of typical traffic. The toll may be set to maintain a target speed or traffic flow.
- **FLAT-RATE TOLLING**
  Drivers pay a fixed price for driving through a bridge, tunnel, highway, or other transportation facilities of these types.
- **FULL FACILITY TOLLING**
  Similar to the flat-rate toll where drivers pay to use a transportation facility, but the toll varies according to congestion. An example is the SR 520 Bridge in Washington State. To drive on the bridge from 7:00am to 9:00 am, it is $6.30. From 10:00 am to 2:00 pm, it costs $4.70.

Equity Considerations For Road Pricing

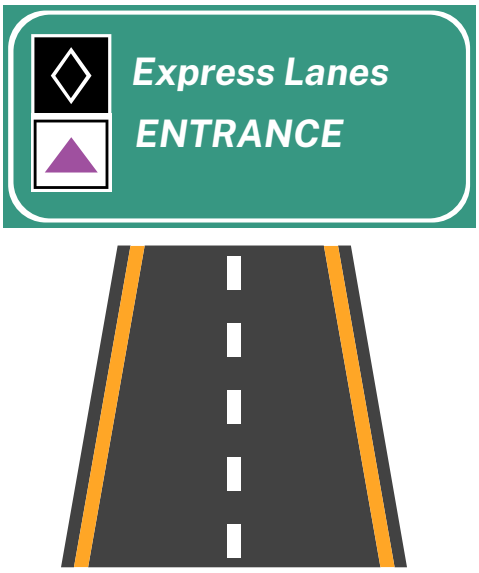
Equity considerations need to be a part of the road pricing conversations. As TransForm's report notes, this new cost has the potential to burden low income commuters with new costs, when high housing costs are forcing them to move further away and rely on cars for more and longer trips. This section summarizes the equity concerns and ways to address it.

EQUITY CONSIDERATIONS FOR CORDON/ AREA/DISTANCE-BASED CHARGING

Cordon pricing, area pricing, and distance-based charging are road pricing strategies that will need major scrutiny. This is because these road pricing strategies charge everyone. Without careful planning, these charges can make it extremely challenging for low-income drivers to afford their current trips to important necessities, like groceries or jobs.

EQUITY CONSIDERATIONS FOR HOT/EXPRESS LANES

Express/HOT lanes are used to reduce congestion. Unlike the strategies listed above, drivers have access to free options to opt-out of congestion: they can wait, carpool and use HOT lanes, or pay to access express lanes. While research has shown that all drivers (regardless of income) like the option of HOT/ Express lanes, middle and upper income drivers use them more frequently because it has less impact on their budget. This kind of flat fee is regressive and more likely to penalize low-income communities and communities of color. These communities are often displaced by high housing costs, and forced to live farther from job centers, good schools, health care, etc. Charging a flat fee can make essential trips more expensive. However, these costs can be mitigated. Some strategies include covering the cost of tolls for low-income earners, using discounts and more.



Equity Concerns with the Investment all Road Pricing Revenue

It is also important to consider how to invest the revenue collected. Transportation planning has created long-last inequities where highway lanes have divided communities of color. There also has been disinvestment in these communities, so they rarely have the infrastructure to walk or bike. Thus, they lack alternative options to driving. Therefore, revenue from road pricing should be invested back in these communities, like using the revenue to build the multimodal infrastructure in these communities.

Equity in Road Pricing (continued)

To fully address equity in road pricing strategies, transportation planners need to incorporate process equity and outcome equity

PROCESS EQUITY

Process equity is the way that transportation decision makers reach out to communities to get their feedback. Communities should not only have awareness around a road pricing project, they should have decision making power.

OUTCOME EQUITY

Outcome equity is a way for transportation planners to measure who and how communities were impacted. *Pricing Roads, Advancing Equity (2019)* outlines what should be considered with road pricing: **affordability, access to opportunity, access to technology, and community health.**

Affordability

Transportation planners should evaluate the expensiveness of a strategy to the budget of low-income households. To address affordability, transportation decision makers often explore subsidies, discounts, and exemptions for drivers.

Access to Opportunity

This metric that evaluates how pricing strategies would affect how communities are able to get to essential places, like jobs, medical services, and schools. Road pricing can be harmful because it may make trips longer, if drivers are avoiding routes that are priced. Longer trips can be more costly in terms of time or gas prices, not to mention the potential environmental impacts of having drivers on the roads longer. Again, when designed with access to opportunity in mind, road pricing can allow for smooth traffic.

Access to Technology

This is a key measure especially with designing road pricing schemes that use transponders, credit cards, or other technology. Planners need to make sure that low-income households and communities of color have access to these devices and it is convenient for them.

Community Health

This metric is important to consider especially since transportation has been the source of many health concerns associated with pollution. Road pricing strategies can minimize the amount of driving and reduce the amount of pollution associated with it. It can also generate revenue for transit improvements, bike and pedestrian infrastructure or clean vehicles. Transportation planners should especially consider investing the money into the communities of Black, Indigenous, and people of color and low-income communities. Both have been burdened by pollution from highways and they have had limited mobility options. Investing funding in these communities would be one of the key ways to address outcome equity.

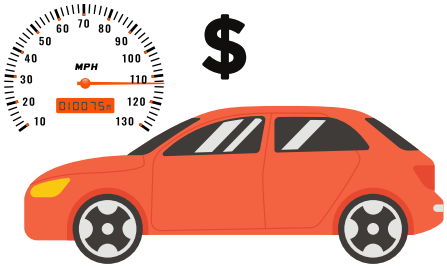
Current Statewide Conversations

Road pricing conversations are becoming more prominent statewide. This section presents some of the efforts happening on a statewide and regional scale.

STATEWIDE SCALE

Road Charge Technical Advisory Committee

In 2015, the CTC and CalSTA created a road charge technical advisory committee. This committee has already studied and implemented a pilot road user charge program for California. Right now, they are exploring another road user charge using lessons learned from the first study.



Road Pricing Workgroup

This workgroup was created by the Climate Action Plan for Transportation Infrastructure (CAPTI) framework. This workgroup is using road pricing to shift behaviors. Some of the action that are included in CAPTI are:

- Convene a workgroup of state, local, and regional partners to support road pricing efforts underway.
- Create an inventory of ongoing efforts across the state.
- Outline state and federal statutory and administrative opportunities and barriers to equitable implementation of various road pricing applications currently under consideration by local and regional partners, including but not limited to cordon pricing, congestion pricing and other dynamic pricing tools.

REGIONAL SCALE:

Regional Transportation Planning and Research

Four regional transportation planning agencies (metropolitan planning organizations [MPOS]) are using road pricing to implement sustainable community strategies.

Road Pricing in Action: Uses and Case Studies

As mentioned above, the use for road pricing determines the strategy that a transportation planner will choose. This section describes what road pricing has been used for, specifically how area pricing, cordon pricing, and the road-user charge has been implemented in London, New York, and Oregon respectively.

Managing Downtown Congestion and Pollution Reduction- Area pricing

LONDON

London is a well-known case-study that shows what considerations need to go into congestion pricing. One of the key lessons includes the need to plan for equity early in the process.

Pricing Design

London is using an area pricing strategy where vehicles are charged a flat fee to enter, drive-in, or exit the central business district at certain times on the weekend and weekdays. Drivers pay to register their vehicle registration number and their license plate. A camera will pick up the license plate and people can pay the charges by phone, online, or mail. There is also an additional charge in Ultra Low Emission Zones, zones where congestion needs to be reduced (may be in vulnerable communities). Motorcycles, taxis, and private hire vehicles are currently exempt from these charges. Alternative fuel vehicles used to be exempt, but this exception has been removed after it was found that the exemption did not reduce congestion.

Uses-Congestion & Pollution Reduction + Public Transit Revenue

The area pricing strategy has mainly been used to reduce traffic and vehicle emissions. With a new interest in equity, the city has committed to reinvest the program revenue from fees into public transit.

Equity

There are no income related exemptions, but there are exemptions for transportation for people with disabilities, buses, and emergency vehicles. But more recently, London has been evaluating whether the program is more regressive. There are also discounts for people living in the area. Revenues from the charges have been used to fund regional transit improvements.

Lessons Learned

- The exemptions of electric vehicles are likely to be contradictory to goals related to emissions and congestion reduction. They are also inequitable since high-income individuals are likely to own these cars.
- Equity analysis needs to be conducted at the beginning. The focus of the programs was to reduce traffic and vehicle emissions and recent equity analysis has found that low-income families and people with disabilities had a more difficult time affording the fees.

Managing Downtown Congestion and Pollution Reduction-Cordon pricing

NEW YORK

New York is one of the first cities to implement cordon pricing in the United States. While this case is ongoing, watching this case closely can help inform other cities that may be interested in cordon pricing.

Pricing Design

New York has decided to charge vehicles that are entering downtown once per day, but have yet to implement it. How much a driver pays will depend on different times, what day of the week it is, and what traffic conditions are like. It includes taxis and other ride-sharing, like Uber and Lyft. The charges are exempt, buses, school buses, and ambulances.

Uses-Road and Transit Investment + Congestion Management

The project is predicted to generate $1 billion in revenue and reduce 17 million metric tons of greenhouse gas emissions. Transportation planners are preparing to invest the revenue into New York's transit system.

Equity

There are additional exemptions for vehicles that move people with disabilities, and families that are making less than $60,000 a year. These families are able to apply for a tax credit. Moreover, during the planning process, transportation decision makers considered geographic and income equity. Both informed decisions on the boundaries of the area and the price.

The money from this pricing strategy will go towards transit fare passes and improving transit services.

Lessons Learned

- Since this program is still being implemented, there are no lessons learned yet. However, it might be important to watch how cordon pricing plays within a United States context.

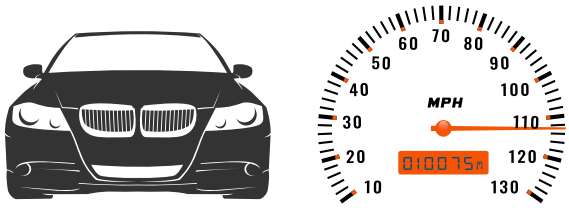
Replacing the Fuel Tax-Road User Charge- Oregon

OREGON

Oregon is one of the first states to study, adopt, and implement a pilot fuel-tax user charge. The state has since implemented a permanent voluntary program and is working to expand eligibility. The case study shows that a positive reception for a road user-charge and it is possible to implement it with a fuel tax road.

Pricing Design

Oregon is using an opt-in mileage fee program for residents who want to transition away from fuel tax and road charge, called"OreGO." Volunteers choose from either a government approved and managed tracking system or private sector-commercial system that competes by offering value-added services.



Uses- Road investment

The purpose is to replace the fuel tax charge. Right now, funds go towards the Oregon's state highway account to fund road maintenance, construction, and operations.

Equity

Because the program is voluntary, there are no substantial equity implications. However, the state department of transportation is planning on evaluating "how the transition from a fuel tax system to a per-mile road usage charge program will affect individuals categorized by income, race, and socioeconomic status."

Lessons Learned

- It is possible to create a system where it doesn't double tax the users for VMT and the fuel tax.
- There is positive reception for a road-user charge.

Authorship and Acknowledgements

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