



Addressing inequity in transportation: How to create a fair, functional transportation system with congestion pricing

WHITE PAPER | 2020

As transportation agencies and local governments implement more robust versions of congestion pricing to manage transportation demand, maximize person throughput and generally decongest corridors and areas, they also must actively work toward improving equity in the transportation system. This white paper explores inequity in transportation and offers proven solutions for bringing more equity to the transportation system with congestion pricing.

For this paper, congestion pricing is broadly defined as primarily charging automobiles for traveling on certain roadway corridors or into certain urban areas during time periods of heavy demand as a method to reduce congestion and redistribute transportation demand.

Inside:

- Addressing inequity
- The key to a genuinely equitable congestion pricing program
- Three types of equity programs and real-world applications

Anticipating traffic volumes will return and be worse than before

While many of the country's chronically congested interstates and urban cores are not experiencing the traffic volumes they did before the COVID-19 pandemic, transportation experts say the decline is only temporary. They predict traffic will return and to "soul-crushing levels," as the *Los Angeles Times* described. Why? Americans view automobiles as the highest form of physically distanced transportation. With more people preferring personal transportation to public transportation, urban roads and city centers will gridlock once again.

Managing supply and demand

As congestion returns, managing it will become an issue of increasing supply or managing demand. Major metropolitan areas, such as Atlanta, Boston, San Francisco and New York, can't easily increase supply by building new roads or rails, so they must regulate demand through operational strategies. One strategy is congestion pricing, now used in and around more than a dozen metropolitan areas throughout the U.S.

Congestion pricing improves the quality of travel and maximizes person throughput, by funding and prioritizing transit service and high-occupancy vehicles, without requiring states or cities to raise taxes or undertake large, expensive capital projects.

Benefits of congestion pricing

- Reduces peak-period congestion
- Facilitates transit reliability
- Reduces vehicle miles traveled
- Increases person throughput
- Improves environmental quality and sustainability
- Generates revenue for transportation investments
- Generates transit funding
- Supports state of good repair
- Attracts private investment
- Supports economic competitiveness

User fees charged as part of a congestion pricing program act as a regulator. The fee is increased to deter use of a facility or entry into a defined area when traffic volumes are high. It is decreased to encourage use or entrance when volumes are low.

Congestion pricing strategies aim, in part, to reduce congestion by encouraging people to change their travel habits, either by driving at a different time of day or, with the availability of suitable transit or active transportation options, not to drive at all.

The U.S. Congress understands its value. Both the House of Representatives and the Senate have drafted transportation reauthorization bills that support use of congestion pricing where appropriate.

Because congestion pricing has proven to be an effective tool, owners are now looking to expand its use from a single, linear highway corridor to a network of highways or a congested city center. Cordon or area pricing are forms of congestion pricing, whereby an invisible line or boundary is established around a congested urban area and a fee is assessed according to when a motorist enters or travels within the cordon or area. Currently, there are no cordon or area pricing programs in the U.S., but New York City, Washington, D.C., Seattle, San Francisco and other urban areas are studying the possibility.

Addressing inequity

Leaders in many cities believe their existing transportation systems have various levels and types of inequity. This inequity may exist for many reasons. Inequity could stem from how the transportation system was funded, and/or how transportation projects and programs were sited, constructed and operated.

So, as we consider the application of user fees to manage congestion on a specific corridor or in an urban area, we need to do so with a conscious understanding of the potential for inequity and develop a program that actively promotes a more equitable transportation system.

Determining the right solution

In determining the right congestion pricing solution for an area, it is important to understand where the congestion takes place, when it takes place and how severe it is. It also is important to understand how sensitive the people are to price signals, how much to charge them to affect a change in behavior as well as how their behaviors may change. For example, they may change what time they drive or what route they drive. They may look at starting a carpool. They may opt to leave their cars at home and ride public transit, or they may choose to telework if possible.

As owners understand who will be impacted by the congestion pricing program and how they will be impacted, they will want to develop a future transportation system that is ready to support the new set of transportation decisions the public is making. As this is being done, the agency will want to consider equity at every step of the way. It will be important to understand if and how potential policies would create additional burdens on lower income and other populations.

Providing for equity inside of a congestion pricing program is largely done by determining whom to price, how much to price and what to do with the revenue generated. Those answers only can be determined through an extensive program development phase that guides owners to the most equitable program for their communities, facilities and region.

During this phase, the agency seeks to align two significant groups of people: the stakeholders and the community. Stakeholders are typically public officials, transportation agencies and community-based organizations. The community includes residents, businesses and transportation system users. To create an equitable system, stakeholders and the community need to be actively and continuously engaged in the program development process to ensure congestion pricing elements are developed at the community level.

Exploring equity program alternatives

There are several ways to address inequities in transportation and establish equity programs. Below are three distinct equity program alternatives:

1. Direct equity inside a congestion pricing program. This form of equity would charge certain target populations (e.g. low-income, residing in a certain geography, etc.) a below market toll rate/entry fee or provide them a discount. Many congestion-priced express lanes today already offer toll-free travel or discounts for high-occupancy vehicles, permitted transit vehicles, electric vehicles and motorcycles.

The Virginia Department of Transportation's low-income, toll-relief program is a case study in how to create an effective discount program. The Midtown and Downtown Tunnels provide passage under the Elizabeth River between the cities of Norfolk and Portsmouth. Tolls were removed in 1986, allowing both communities to enjoy toll free usage of the facilities for more than 30 years.

VDOT entered into an agreement with a concessionaire to provide a new, two-lane tunnel parallel to the existing Midtown Tunnel with fire, life and safety modifications and upgrades to the existing Midtown and Downtown Tunnels plus interchange modifications in Norfolk and Portsmouth, including extending the Martin Luther King interchange in Portsmouth all paid for by implementing tolling on the tunnels. While tolling the tunnels was necessary to ensure their continued safe operations, the low-income

community in Norfolk and Portsmouth felt they were inequitably burdened. Many couldn't afford to pay the toll. Without access to the tunnels, they would have to travel seven or so miles to the nearest toll-free interstate bridge.

To find an equitable solution, VDOT actively engaged with the community and formed a community-based steering committee to develop a toll-relief program with VDOT. The steering committee included social services agencies, military and community representatives and VDOT. The program grants a 50% discount on tolls to those customers who:

- Earn \$30,000 or less per year;
- Live in Norfolk or Portsmouth;
- Have a Virginia E-ZPass transponder; and
- Use the tunnels eight or more times a month.

Creating equitable cordoned areas will be more difficult due to the larger number of potential target populations and pricing zones to consider. While difficult, it is not impossible. It will require an intensive process of facilitated policymaking with community-based organizations and transportation agencies.

2. Indirect equity inside the congestion pricing program. Traditionally, transportation agencies have created equity by investing a large portion of their congestion pricing revenues in additional public transportation inside the congestion pricing program. The most notable example of this is the substantial investment the Transport for London made in additional public buses as part of its cordon pricing scheme. In the U.S., a robust example of this approach inside of a congestion-priced lane is the increased transit service on I-95 in Miami, where toll revenues fund single-seat suburban-to-urban bus ridership on the express lane to the tune of approximately \$1 million a month on average. Bus ridership there increased by more than 300%.

According to *Streetsblog USA*, an analysis of the proposed congestion pricing program in Manhattan, as part of the FixNYC Plan, found that for every outer-borough commuter who paid the toll, 18 others would benefit from upgrades to public transit. If you calculate the numbers by income levels instead of boroughs, the benefit for those with lower incomes is even greater. Some 38 people would benefit from each paid toll, which would fund both transit upgrades and

subsidized transit fares for the lowest-income riders.

3. Indirect equity outside of the congestion pricing program. This option provides public good beyond the congestion-priced facility or area to improve equity. For example, the peak-period, peak-direction express lanes on the I-66 Inside the Beltway corridor in Northern Virginia help fund the Commuter Choice Program managed by the Northern Virginia Transportation Commission. The Commuter Choice Program provides a source of revenue for area transportation projects that can be outside of the I-66 corridor, but in the general transportation service area. Examples of potential transportation projects and programs eligible to receive express lane revenues include new bus service (both capital and O&M), vanpools, park and ride lots and transit fare buy-down programs.

As congestion pricing programs expand beyond congested lanes and facilities are implemented in broader geographic areas, this version of equity will likely become more predominate as there will be more and larger target populations, requiring equity and larger sums of congestion pricing revenue to be allocated to equity programs. Equity program revenues could remain inside of the transport sector, or they could be allocated outside of transportation to provide relief for other forms of historical inequity. Example could include:

- Sidewalk construction to all the community's public schools
- More frequent bus service, vanpools or shuttles, serving certain communities
- Active transportation projects and bicycle lane networks
- Other community priorities

New York City's proposed congestion pricing scheme, for instance, was created specifically to improve the city's deteriorating subway network (operating inside and outside of the congestion pricing area) – and because of that focus, the majority of the program's revenues will go to the Metropolitan Transportation Authority.

Powering an equitable, efficient and reliable transportation system

Congestion pricing programs utilizing user fees can be powerful equity tools that create broader mobility and more equitable transportation options. To create an equitable system, stakeholders and the community need to be actively and continuously

engaged in the program development process. When developed appropriately, congestion pricing programs can help public agencies get maximum value and efficiencies from existing transportation assets, create a more equitable transportation system and provide all people with fuller access to economic opportunities.

Resource

For more information, please contact HNTB's expert:

Matt Click, AICP

Vice President

National Congestion Pricing Practice Leader

HNTB Corporation

(703) 999-8444; mclick@hntb.com

HNTB Corporation is an employee-owned infrastructure solutions firm serving public and private owners and contractors. With more than a century of service, HNTB understands the life cycle of infrastructure and addresses clients' most complex technical, financial and operational challenges. Professionals nationwide deliver a full range of infrastructure-related services, including award-winning planning, design, program management and construction management. For more information, visit www.hntb.com.

© 2020 HNTB Companies. All rights reserved. Reproduction in whole or in part without written permission is prohibited.