New York's state legislature last month **enacted legislation** to institute the nation's first congestion pricing plan in New York City. A new commission within the existing Metropolitan Transportation Authority will develop the plan's structure and details over the next two years, so very few specifics are known at this time. But as cities in California (including **San Francisco** and **Los Angeles**) consider their own congestion pricing programs, the results in New York—not only the program the city designs but also the stakeholder process, public debate, and rollout that deliver it—will offer vital reference points.

In the most basic sense, congestion pricing involves assessing a charge on each motor vehicle that enters a specified area within a city or road network. (The tolls on the San Francisco-bound sides of the Bay Bridge and Golden Gate Bridge, for example, act as a form of partial congestion pricing). The policy can take different shapes, but it serves three core goals:

- Reducing street traffic in overly congested downtown and business districts;
- Reducing greenhouse gas emissions and other harmful air pollutants from automobiles; and
- Raising revenue for public transportation and road maintenance.

Three major international cities—London, Singapore, and Stockholm—have forms of congestion pricing, with records of success on each front. **For example**, traffic in London's pricing zone is 27 percent below pre-charging levels, and bicycle use has increased by 66 percent. All three systems have **contributed to reductions** in air pollution.

Keeping track of key concepts and distinctions as New York City's program develops can help California policy makers maximize each of these three priorities when designing their own congestion pricing plans. It can also help minimize political roadblocks and ensure the broadest possible support for this increasingly necessary policy tool. These considerations include:

- Where does pricing apply? The first consideration in designing a congestion pricing program is defining the zone that drivers will have to pay to enter. The area should coincide with a) the most significant congestion problem and b) viable transportation alternatives, while c) being large enough to generate worthwhile revenue. In New York City, the zone will cover all of Manhattan below 60th Street, which includes the major Midtown and Wall Street/Financial District business districts where the city's congestion is worst. This zone also

has two design advantages: it is home to a tremendous number of transit alternatives (discussed below), and road access to it is limited: only eight north-south surface avenues take traffic down into the district, together with four bridges, four tunnels, and two surface highways. One San Francisco County Transportation Authority **proposal** would cover the city's northeastern corner, bordered by Laguna Street to the west and 18th Street to the south, which includes the busiest commercial and tourist areas. This area is accessible by dozens of surface streets in addition to one bridge and three freeways, which could increase the cost and complexity of installing the necessary equipment (although this may not differ from the **London zone**). ***As the New York plan moves forward, California policy makers should pay special attention to the impacts on traffic patterns at zone entry points, including any stakeholder issues that might arise among residents or businesses in bordering neighborhoods.***

- What transportation alternatives are available? Congestion pricing can only achieve its goals of alleviating traffic and pollution if it causes drivers to decide against driving into the zone rather than pay the fee. For essential trips, this means alternatives—public transit, biking, or walking—must be available. The New York City congestion pricing zone is the most transit-rich environment in the country, with (by my rough estimate) over 70 **subway stations**, service by nearly 100 city **bus routes**, seven **commuter ferry** docks, two commuter and long-distance rail stations, and the busiest commuter and long-distance bus terminal in the United States. The density (and flatness) of the city's business districts is also conducive to walking and biking. By comparison, the proposed northeastern San Francisco pricing zone **hosts** five BART stations, five Muni light rail stations, service by a few dozen bus lines, and ferry, bus, and commuter rail terminals (serving, of course, a much smaller resident and employee population). The district's hilly geography can also limit bicycle and walking options. Regulators will need to ensure that enough transit alternatives exist within their chosen boundaries, and that funds raised by the program are used to establish new bus and rail services and increase frequency of existing service. ***As New York City implements is program, California policy makers should pay special attention to the level of stress to existing stations and lines caused by increased ridership.***
- What is the amount of the fee? The fee should be high enough to discourage unnecessary trips and raise revenue, but not so high that all trips are prohibitively expensive. In New York City, the fee has not been set but estimates are around $10-15 to enter the zone for cars and $25 for trucks

(assessed once per day even if a driver makes multiple crossings). The fee will likely incorporate existing bridge and tunnel toll payments so drivers are not double-charged. Like bridge and tunnel tolls, the fee should increase regularly over time. It should also be flexible, potentially increasing at peak congestion times and applying different rates for entering different concentric congestion zones (for example, London, Singapore, and Stockholm do not charge overnight). The San Francisco proposal noted above includes a $3 fee for crossing, charged no more than twice per day, with a partial rebate on bridge tolls. The level of the fee also raises major equity questions for lower-income drivers, but these may be addressed through exemptions or discounts. ***California policy makers should pay special attention to the political dynamics around the $10+ price proposal and how much flexibility the public demands from New York City leaders.***

- Who pays the fee? For the program to meet its congestion, environmental, and revenue goals, **as many drivers as possible should be required to pay**. However, equity demands certain exemptions or discounts, most prominently for disabled drivers who have limited ability to use transit, and for low-income drivers who have limited ability to pay. Residents of the pricing zone, whose ability to travel by car out of the zone would be hampered by their need to return to it at the end of a trip, should also likely receive a discount, as they do in London. (Full disclosure: I was born and raised, and my parents still reside, in the New York City congestion pricing zone.) The San Francisco proposal noted above includes discounts for all three groups. Emergency vehicles and on-duty police have clear reason for exemptions as well. But **a number of other groups** that have less justifiable arguments for discounts or exemptions are already positioning their claims: police officers driving to work, commercial delivery drivers, taxi drivers, tour buses, and more. If exemptions proliferate, the system could be weakened beyond usefulness. ***California policy makers should pay special attention to whether New York City grants exemptions or discounts to groups beyond those who a) have strong equity-based claims or b) suffer unique harm under the system, and c) cannot pass the cost along to consumers.***
- How will the fee be assessed? Installing physical toll booths with cash collection is an infrastructural impossibility that would also contribute significant congestion, so a tag-based or license plate recognition system with drive-through gantries or roadside cameras will be necessary (London and Stockholm employ recognition systems, while Singapore uses in-vehicle tags). The administrating agency will need to be vigilant about collection, but it will

also need to include flexibility for drivers who do not have vehicle tags (or credit cards). Thus, the system will likely need to emulate the one **employed at the Golden Gate Bridge**, which charges the fee to a driver's FasTrak account or, if the driver has no FasTrak account, sends a bill by mail based on identification of the license plate and vehicle registration. ***As New York City begins collecting payments, California policy makers should pay special attention to any difficulties that arise around payment by drivers of tag-less vehicles.***

- How will pricing affect taxi and TNC trips? Taxi, transportation network company (TNC), and other private hire vehicles must be subject to the fee for the program **to be effective**. Assessing the fee only once per day for taxi or TNC drivers who make dozens of crossings would frustrate the program's goals, though these companies will surely raise a host of arguments for limiting their exposure. If the fee is assessed only once per day, the total cost can be passed along pro rata to consumers without much impact, but if it is assessed on every trip, it could place a burden on lower income riders who live farther from city centers. ***California policy makers should pay special attention to how New York City addresses multiple charges or bulk rates to avoid undercutting program goals, cost pass-through rules to protect against inequitable impacts, and the political power of TNCs.***

These are only a few of the many considerations those designing a congestion pricing system will need to account for. New York City's high-congestion, high-transit environment is already among the least car-dependent in the country and is specially poised for the application of congestion pricing. But while New York City's answers to the above questions will be specific to its unique context, the process of identifying and implementing them should offer California's cities a lot to reflect on.

More importantly, as our urban areas become ever more choked with traffic, our **vehicle miles traveled** and transportation emissions continue to rise, and our public transit systems and roadways remain underfunded, congestion pricing will be an essential mechanism to improve our lived and natural environments. California cities should follow New York City's lead, and they should use its example in the coming years to build systems optimally suited to their needs.