

South Bay Cities Council of Governments

January 25, 2017

TO: SBCCOG Board of Directors
FROM: Steve Lantz, SBCCOG Transportation Director
RE: SBCCOG Transportation Update – January 2018

Adherence to Strategic Plan:

Goal A: Environment, Transportation and Economic Development. Facilitate, implement and/or educate members and others about environmental, transportation and economic development programs that benefit the South Bay.

FEDERAL

Federal Employee Transportation Expense Deductions Eliminated in Tax Reform Act

Employee transportation expenses were among the former employee benefits deductions eliminated in the federal tax reform bill. A previous tax incentive for employers subsidized their employees' transit, parking and bicycle commuting expenses by allowing companies to provide parking or transit passes worth up to \$255 a month to employees as a pre-tax benefit, and then to deduct the costs from their corporate taxes. The deductible amount was set to increase to \$260 a month on Jan. 1, 2018.

The provision, in Section 3308, is effective for amounts paid or incurred after 2017. It aligns the treatment of transportation fringe benefits with other axed employer-provided benefits including on-premises gyms and other athletic facilities, and amenities provided to an employee that are primarily personal in nature and not directly related to a trade or business with other similar tax items.

The reasoning behind the elimination of the deduction is that since the tax bill substantially lowers the corporate tax rate, smaller tax breaks that complicate the tax code are no longer necessary. Companies can still provide the parking and transit passes to employees, but they no longer get the tax deduction. And employees who pay for their own transportation costs can still use pre-tax income.

The elimination of the subsidy has transit agencies worried that fewer commuters will opt for transit. They fear that, if employers can't write it off, they won't offer it. And if they don't offer the pre-tax benefit to the employees, it could ultimately hurt the ridership.

Three Federal Policy Fixes Proposed To Dramatically Reduce Transportation Emissions

U. S. transportation now surpasses electric power as the largest source of greenhouse gas emissions. Although tailpipe-emissions reductions could accelerate if the market for electric vehicles takes off, their cumulative impact is minimal so far. So a new paper published on October 29th from Allen Greenberg of the Federal Highway Administration and John Evans from Cambridge Systematics makes a compelling case for reducing transportation emissions with

three simple changes to driving incentives. “Comparing Greenhouse Gas Reductions and Legal Implementation Possibilities for Pay-to-Save Transportation Price-shifting Strategies and EPA’s Clean Power Plan,” recommends:

1. Converting fixed pricing mechanisms for car insurance to pay-as-drive-and-you-save (PAYDAYS), which charge people a variable rate, based upon how many miles they drive;
2. Requiring employers who provide free parking for their employees to implement parking cash-out programs, which provides an equivalent cash incentive to employees who do not drive alone to work; and
3. Converting fixed-percentage sales taxes on new vehicle purchases to mileage-based taxes spread over a three-year period.

The authors estimated that the impact of changing these pricing strategies could be substantial, achieving between 37 percent and 95 percent of the emissions reductions projected from the Obama administration’s Clean Power Plan (CPP). Because the Trump Administration is not particularly supportive of addressing global warming, the authors encourage states to implement the policy changes. They estimated that if California, the nine East Coast states in the Regional Greenhouse Gas Initiative (RGGI), and the eight other states that signed up to defend the CPP in federal court all took action, they could achieve 35% of the emissions savings from the CPP.

STATE

California's New Climate Plan Uses Incentives To Cut Vehicle Emissions

California has the toughest air quality regulations of any state in the country. But they're not tough enough to satisfy a new state law that seeks to cut greenhouse gas emissions in the state by 40 percent from 1990 levels by 2030. The key to a new California Air Resources Board (CARB) plan adopted on December 14th is to get about 4.2 million electric vehicles on the road by 2030, which is pretty bold considering the state currently has less than a million.

The California Air Resources Board projects that the plan will save \$11 billion in avoided environmental damage by extending or approving new programs that offer incentives to buy zero-emission vehicles. Under the new plan, the state will offer a \$2,500 incentive for electric cars and up to \$5,000 for trucks and other vehicles. The plan also calls for doubling the number of electric chargers because studies show that people need to see these charging stations to make them feel comfortable about buying an electric car. The plan also encourages the deployment of zero-emission trucks and spending more to shift to cleaner systems for moving the large amount of freight that enters and leaves the state at California airports and ports.

The plan provides \$208 million in incentives for truck and bus fleets to cut or eliminate diesel trucks by purchasing electric vehicles. Another \$190 million will be available for electrifying freight-moving and handling equipment within the ports.

More than 602,000 heavy-duty diesel trucks operate in California, according to CARB. Although those diesel trucks account for just 2.3 percent of all on-road vehicles in the state, they emit 56 percent of key smog-forming nitrogen oxides, or NOx, and 66 percent of the soot attributable to motor vehicles.

More than 20 manufacturers offer 60 eligible models of hybrid, low-emission and zero-emission trucks and buses. However, electric heavy-duty trucks typically sell for 20 percent to 30 percent

more than comparable diesel vehicles. Funded almost entirely with proceeds from California's cap-and-trade program, the state's new clean transportation funding plan makes \$20 million in truck and bus incentives available as loans. All California fleets — whether they are public or private, or operated by transit agencies, schools or airports — can participate.

The incentives will help offset the difference between diesel and electric, clean natural gas, and other green truck propulsion technologies. The plan also calls for doubling the number of electric charging stations in California.

This all comes while the Environmental Protection Agency Administrator appears set to roll back federal fuel economy rules. California is the one state that can set its own emissions rules under the Clean Air Act of 1970, subject to a federal waiver that allows the state to make tougher emission rules than the federal government. Other states can follow California's lead or the federal government's lead but they aren't allowed to strike out on their own. Pruitt has said EPA is not reviewing California's special status.

Caltrans Generates Smoothness Controversy In Its Pavement Maintenance

How smooth should highway pavement be? When Caltrans repairs state highways it uses pavement standards of smoothness that are the strictest in the country. With that standard comes high pavement grinding costs that have surprised contractors who are fighting for reimbursement and bitterly condemning a level of smoothness they say no driver would ever notice. At least one major contractor also contends the smooth pavement is dangerous, arguing that corrective measures he takes to hit the target actually shave features that are supposed to keep steep roads safe in wet weather.

The dispute has been growing since standards were toughened four years ago. Nine pavement companies wrote a letter to Caltrans Director Malcolm Dougherty last June asking him to reconsider the rule. So far, Caltrans is holding to its smoothness standard, arguing that its long-term benefits outweigh any short-term spike in construction costs.

To implement the new standard, California joined most other states in measuring new pavement smoothness with a laser-based instrument known as an inertial profiler, replacing the manual method Caltrans had used since the 1940s. The profiler helped Caltrans measure road smoothness in a common system called the international roughness index. Smooth roads get lower scores. It estimates in inches how much a vehicle suspension system would move up and down over a mile because of imperfections in a road's surface, such as bumps or small divots.

Second, using the new system of measurement, Caltrans handed contractors the toughest road smoothness standard in the country. The smooth roads, Caltrans argued, would pay for themselves over time because they're known to last longer than rougher ones, and they may improve gas mileage enough to reduce greenhouse gas emissions.

Caltrans directed contractors to pave to mean roughness index 60, meaning the laser profiler should not capture more than 60 inches of up-and-down movement over a mile of road.

Caltrans is alone in requiring contractors to smooth out stretches of road that don't meet that target. Other states tend to penalize contractors for rougher patches, but do not require corrections unless the profiler captures 90 inches of up-and-down movement over a mile.

The remedy for rough pavement usually involves smoothing concrete with a diamond-bladed grinder. It's a safe fix that state transportation departments use to rehabilitate old roads, extending their usefulness until the road can be replaced. However, grinding long stretches of Cajon Pass reduces the highway's wet-weather safety features such as the thin grooves in concrete that whisk water away from tires during storms. The grinding also reduces macrotexture, intentionally rough features designed to enhance traction.

California Highway Patrol records show that the number of wet-weather injury accidents increased at Cajon Pass last year to their highest level in five years. It's hard to draw a conclusion from the records, however, because of last winter's heavy rains. The contractors point to recommendations from the National Academy of Sciences, as well as Caltrans' own standards, that indicate roads are safer in wet weather when they have features to induce friction. Caltrans responds that it conducts skid tests on new roads, and refuses to open them if they lack friction.

California Studying How To Charge Drivers By The Mile

Policies promoting fuel efficiency are clearly beneficial for California's environment and for its efforts to combat climate change. But, achieving these goals will adversely impact the revenues collected from the current gas tax model

Concerns about the long term viability of the gas tax, SB 1077 in 2014 directed the Chair of the California Transportation Commission (CTC), in collaboration with the Secretary of the California State Transportation Agency (CalSTA), to create a Road Charge Technical Advisory Committee (TAC) to study road charge as an alternative to the gas tax.

Shortly after enacting SB 1 in November 2016 to increase the state gas tax, California transportation officials performed a study, the California Road Charge Pilot Program report, studying ways to charge drivers based on mileage rather than the amount of fuel they use.

The report included results from a road charge experiment where more than 5,000 volunteer drivers had their mileage monitored over a period of nine months. Most volunteers used a wireless device that transmitted mileage information to a state contractor. The state then sent each driver a simulated monthly invoice, and drivers sent in online mock payments.

Officials said the test went well, but think a system based on paying per mile at the gas pump or charging station would be simpler, more cost effective and more readily accepted by the public.

Caltrans Deputy Director Carrie Pourvahidi told the news agency that, early in 2018, the state will send out a request to technology companies asking for ideas on a simple communication technology system at gas stations or electric charging stations that can instantly tell how many miles the car has driven. However, they believe it will likely take until 2025 to come up with a system.

REGION

LA Metro wants your opinion on possible changes to TAP

LA Metro Board will hold a public hearing at 1 p.m. on Jan. 17th at Metro Headquarters, 3rd Floor Board Room, 1 Gateway Plaza to take public comment on four proposed changes to the fare system. Members of the public can also email their comments by January 17th to: customerrelations@metro.net.

The proposals would:

- Eliminate paper interagency transfers. The interagency transfer fare will be automatically paid from existing Stored Value on a TAP card when boarding a second transit agency within 2.5 hours from the first boarding.
- Eliminate the sale of Metro day passes on board buses but continue the option to add stored cash value to a TAP card on the bus. The day pass costs the same as four regular base fares and it would still be available for purchase from TAP card vending machines, online and by phone – just not on the bus.
- Phase out the sale of Metro tokens. Metro hopes to transition all riders to TAP cards with stored value, which can be used to pay for transfers between Metro buses and rail lines and for non-Metro transfers.
- Standardize the cost of each TAP card at \$2 ending the introductory rate. Those who currently buy the cards at TAP vending machines and on buses will no longer get a discounted rate of \$1 that was intended as a pilot to increase TAP card use.

Bridge Support Structures Completed For Gerald Desmond Bridge Replacement

A “topping-out” ceremony was held on December 20th to celebrate the end of a three-year construction process to build the two 515-foot signature towers that will be the centerpieces of California's first cable-stayed bridge for vehicular traffic. The \$1.47 billion bridge project is scheduled for completion in 2019.

When fully completed, the new bridge will include six traffic lanes and four emergency shoulders, a higher clearance to accommodate large cargo ships, more efficient transition ramps and connectors to improve traffic flow, especially for trucks. The new bridge also incorporates the Mark Bixby Memorial Bicycle and Pedestrian Path with scenic overlooks. The towers provide an iconic gateway between the South Bay and the harbor and are the tallest structures in Long Beach. The Gerald Desmond Bridge will remain in use while the new bridge is under construction.

The replacement bridge project is a joint effort of Caltrans and the Port, with additional funding support from the U.S. Department of Transportation and L. A. Metro.

TRENDS

Is An Electric Slow-Speed Veloway In Our Future?

BMW and Tongji University have developed a concept, Vision E3 Way, that gives e-bike riders their own roads above streets (think electric veloways). An automatic speed limit (in the concept, about 15.5MPH) and Artificial-Intelligence-driven traffic management would prevent the faster vehicles from crashing into scooters and Segways. And you might not even need to own a machine to use it -- BMW envisions a rental system where you'd pick up a bike at an access point if you need to get across town in a hurry.

New Study Challenges Urban And Suburban Transportation Efficiency Assumptions

Sprawl is not sustainable. That's the basic assumption shaping high-rises, infill developments, and master plans in cities around the world. But a new report by the Council on Tall Buildings

and Urban Habitat challenges one of the central tenets of urbanism. Comparing the daily patterns household-to-household, researchers found that certain transportation habits and overall energy use can be more environmentally efficient in suburban housing than residential high-rises.

To date, most research into urban sustainability—in terms of, say, gasoline guzzled, miles traveled, and water, heat and electricity consumption—have generally concluded that suburbs are less efficient. But these analyses focus on urban impacts rather than building-type impacts.

The authors of the new study, Antony Wood, the executive director of the CTBUH and research professor at the Illinois Institute of Technology's College of Architecture and Peng Du, who is also a professor at IIT's College of Architecture, wanted to capture more nuance than that. They created a survey comparing transportation patterns, energy consumption, and use of public space, which they administered to 249 households in four downtown Chicago high-rises and 273 single-family homes in Oak Park, a historic residential neighborhood. Over three months in 2014, respondents answered detailed questionnaires about their daily habits, and submitted 12 months worth of utility bills.

High-rise residents actually consumed about 27 percent more energy than suburbanites. Although high-rise dwellers traveled more on public transit, walked and biked more, and made more efficient use of outdoor public space. The researchers also added up all the roads, water pipes, sewage lines, power and electricity supply required to serve the two types of households, and found that suburban development required roughly eight times more “infrastructure network length” per person than the downtown high rises.

Score one for dense urban development, right? Overall, yes. But the details get more interesting.

The building industry often assumes that suburban single-family homes require more energy to heat, light, and cool, since they have larger surface-to-volume ratios than smaller apartment units. But on a per-person basis, Wood and Du found that high-rise residents actually consumed about 27 percent more energy. On a per-floor area basis, probably because of all the shared hallways, elevators, gymnasiums, and lobbies, the downtown towers still consumed about 5 percent more energy than the suburban homes. Comparing travel habits, Wood and Du also unexpectedly found that downtown households actually traveled more miles by car every year. The high rises also had more parking spaces per capita than the suburban dwellings.

Demographic differences between the two groups in the study probably explain the surprising results. The large suburban households of Oak Park outside Chicago were full of kids, while the apartment towers held childless young professionals and empty nesters. That means, at least in a given room, more people are using the same amount of energy. Similarly, the report noted that suburban households were much more likely to have children that they bring with them during car travel while single high-rise residents took more solo trips.

Eventually Wood and Du would like to take on a larger-scale version with many more families, buildings, and neighborhood shapes. But this pilot study offers quantified evidence that demographics count when it comes to environmental efficiency.

TNCs Are Creating Unsustainable Congestion in New York City And Other Metro Areas

Bruce Schaller, a former NYC DOT official and expert on New York City street traffic and the for-hire car industry, has a new report out on just how severely the rise of “transportation

network companies” (or TNCs) has affected congestion. Using data from the New York City Taxi and Limousine Commission, Schaller studied passenger trips, vehicle speeds, and mileage per hour of taxis and TNCs in Manhattan’s core business district from 2013 to 2017.

The key takeaways: Total passenger trips increased 15 percent, even as taxi trips declined, in that time period. That means TNCs have created new demand for backseat rides in Manhattan. And they increased the amount of miles traveled by for-hire vehicles around downtown by a whopping 36 percent, over the same time period. That adds up to more than 600 million miles of motor vehicle traffic in the past 3 years alone—reflecting not only the staggering growth in rides, but also a trend toward lengthier trips and more “deadheading,” or cars traveling without passengers.

With a whopping 59 percent increase in the number of for-hire vehicles, the data makes a pretty clear statement: On-demand mobility is transforming New York City streets, and it does not appear to be for the better.

In a recent documentary, Schaller noted that for years, as New York City grew, more and more people took the subway and bus. Now, as the city grows and more and more people are taking Uber, Lyft, and Via, Schaller is concerned that this is not a sustainable way for the city to grow.

To make matters worse, Schaller’s and other research offers evidence that TNCs are drawing more affluent passengers off trains and into cars. Fewer transit riders means less revenue and demand for improved transit—disproportionately affecting low-income New Yorkers who have no choice but to remain aboard trains and buses. Clogged streets are also slowing down private vehicles, city buses, packages, and freight. It slows down first responders, repairmen, teachers, and nursing aides.

This is hardly an “Only In New York” problem. A recent [study from UC Davis](#) took a comprehensive look at Uber and Lyft’s effects on transportation systems in eight U.S. cities (including New York) and found TNCs having similar adverse effects in Boston, Chicago, Los Angeles, the Bay Area, Seattle, and Washington, D.C. The reason Schaller’s traffic critique is so compelling and data-rich is because New York is one of only a few cities in the world that requires Uber, Lyft, and other such companies to share trip data for analyses like Schaller’s.

If the city wants to keep moving, Schaller suggests three key public policy moves:

- Prioritize lanes and parking space for the highest efficiency vehicles, like buses and vans, to reward and incentivize the use of shared transportation.
- Treat roads like a precious commodity, and charge drivers to use the ones in highest demand, perhaps with a special fee for TNC trips. Such a plan, known as congestion pricing, has long been proposed for the city.
- Move more freight traffic off peak hours, which may not be possible in a vertical city – even one that never sleeps.