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**Yes, Parking Reform Is Possible: A progress report from the author of  
*The High Cost of Free Parking***

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# Yes, Parking Reform Is Possible

A progress report from the author of *The High Cost of Free Parking*.

By Donald Shoup, FAICP



The Adaptive Reuse Ordinance in Los Angeles has helped to save historic office buildings, like the Eastern Columbia Building, by allowing their conversion to residential properties—without requiring more parking.

Donald Shoup

*It is no doubt ironic that the motorcar, superstar of the capitalist system, expects to live rent-free.*

Wolfgang Zuckermann

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hat is the right price for curb parking? The price is too high if many curb spaces are vacant and too low if no spaces are vacant. But if one or two curb spaces are open



on each block so drivers can always find convenient parking at their destinations, the price is just right. This is the Goldilocks principle of parking prices.

Why should cities charge the right price for curb parking? Because the wrong prices can do so much harm. If the price is too high and many curb spaces are vacant, adjacent businesses will lose customers, employees will lose their jobs, and cities will lose tax revenue. If the price is too low and no curb spaces are vacant, drivers searching for a place to park will congest traffic, waste fuel, and pollute the air.

Twenty studies conducted between 1927 and 2008 found that, on average, 36 percent of the cars in congested downtown traffic were cruising for underpriced curb parking. In two of the most recent studies conducted in 2006 and 2007, researchers who interviewed drivers stopped at traffic signals in New York City found that 28 percent of the cars on a street in Manhattan and 45 percent on a street in Brooklyn were cruising for curb parking.

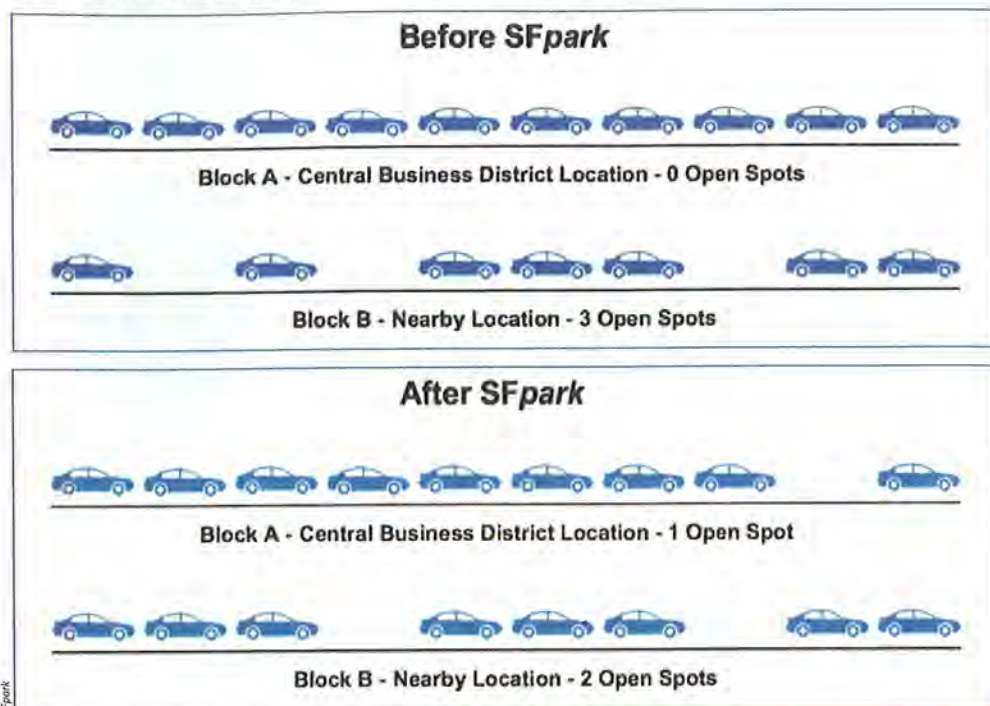
In another study in 2008, the average time it took to find a curb space in a 15-block area of the Upper West Side of Manhattan was 3.1 minutes and the average cruising distance was 0.37 miles. For each individual driver, 3.1 minutes is not a long time, and 0.37 miles is not a long distance, but because so many drivers park at the curb, the cumulative consequences are staggering. In just one year, cruising for underpriced parking on these 15 blocks created about 366,000 excess vehicle miles of travel (equal to 14 trips around the earth) and 325 tons of carbon dioxide.

### Performance parking prices

Free curb parking in a congested city gives a small, temporary benefit to a few drivers who are lucky on a particular day, but it imposes high costs on everyone else every day. To manage curb parking and avoid the problems caused by cruising, some cities have begun to adjust their curb parking prices by location and time of day. These cities do not employ a complicated pricing model, and they do not aim to raise a certain amount of revenue. Instead, they have established a target occupancy rate for curb parking: They aim to produce an occupancy rate of about 85 percent, which on a typical block with eight curb spaces corresponds to one open spot.

“Performance pricing” is what some cit-

As part of its pilot *SFpark* program, San Francisco is trying small changes, such as nudging up the price of parking on a busy block just enough to shift one car onto a nearby block with vacant spaces.



ies call the policy of setting prices to produce one or two open curb spaces on every block. This pricing strategy can improve performance in three ways.

First, curb parking will perform more efficiently. If all but one or two curb spaces are occupied on every block, parking will be well used but also readily available. Second, the transportation system will perform more efficiently because cruising for curb parking will not congest traffic, waste fuel, pollute the air, and squander drivers' time. Third, the local economy will perform more efficiently. In business districts, drivers will park, buy something, and leave promptly, allowing other customers to use the spaces.

### SFpark

The best example of performance parking is San Francisco's ambitious pilot program, called *SFpark*, to adjust curb parking prices to achieve a target occupancy rate. The city has installed meters that charge variable prices and sensors that report the occupancy of each space in real time. The city thus has information on curb occupancy rates and the ability to adjust prices in response to the occupancy rates.

The city adjusts prices once a month,

never by more than 50 cents an hour. By nudging prices up or down in a trial-and-error process, the city seeks a structure of prices, varying by time of day and location, that yield one or two open spaces on every block.

*SFpark* embodies two key ideas. First, you cannot set the right price for curb parking without observing the resulting occupancy rate. The goal is to set the lowest price the city can charge without creating a parking shortage.

Second, small changes in parking prices and location choices can lead to big improvements in transportation efficiency. Nudging up the price on crowded Block A by enough to shift only one car to less crowded Block B can significantly improve the performance of the transportation system. This shift will eliminate cruising on Block A and take advantage of the empty spaces on Block B. Even if all the curb spaces are occupied on all the nearby blocks, shifting only one car per block from a curb space to nearby off-street parking can also reduce cruising.

*SFpark's* first price changes took place in July 2011, and the meter rates in eight pilot areas now vary by block, time of day, and day of the week. All blocks initially had a price





In San Francisco's Civic Center area all meter rates used to be \$3 an hour, but now they vary by block, time, and day. On Saturdays from noon to 3 p.m., for instance, some meters went up 25 cents (red), some stayed the same (light blue), and some meters decreased in price, by 25 cents (dark blue) or 50 cents (black).

of \$3 per hour, and the prices increased on some blocks while decreasing on other nearby blocks. Meter prices in the entire SFpark pilot area increased for 32 percent of curb spaces, decreased for 31 percent, and were unchanged for 37 percent. The fine-grained pattern of price changes strongly suggests that predicting the right price for curb parking on any block is almost impossible without good occupancy data.

Beyond managing the curb parking supply, SFpark can help depoliticize parking by stating a clear principle used to set the prices for curb spaces: The demand for parking will set the prices. After shifting from a revenue goal to an outcome goal and choosing the occupancy rate for the desired outcome, the city council will no longer need to vote on parking prices. If too many curb spaces are vacant, the price will go down, and if no curb spaces are vacant, the price will go up. Because the city now relies on an impersonal market test to set prices, it can no longer justify raising prices simply to produce more revenue.

#### If the price is right, they will come

Proposals to increase parking prices or run the meters later in the evening usually provoke vehement complaints. For example, "If

this city operates its parking meters in the evening, I will never drive downtown to eat in a restaurant again." This threat to boycott downtown restaurants would be convincing except for one thing: If the meters are priced right, cars will fill most of the curb spaces, leaving only one or two vacant spaces on each block. If most curb spaces are filled, parking meters cannot be chasing all the customers away.

Meters will chase away some drivers on some trips, but the curb spaces these drivers would have occupied will become available to customers who are willing to pay for parking if they can easily find a convenient curb space. Because the curb spaces will remain almost fully occupied by paying parkers, merchants shouldn't worry that performance prices will harm their businesses.

Performance parking prices can help businesses because drivers who pay to park will probably arrive with more customers in each car. Both common sense and empirical research suggest that performance-priced curb parking will motivate more people to carpool, because carpoolers can share the cost of parking while a solo driver pays the full cost.

Performance prices will also promote faster turnover because drivers will pay for

all the time they park. If a curb space turns over twice during the evening, each space can deliver two groups of diners to a restaurant. For both reasons—higher occupancy vehicles and faster turnover—performance prices for curb parking can attract more customers to a business district, generating more sales and more sales taxes.

A further advantage of performance prices is that they will decline when demand declines during a recession. The price of curb parking will automatically fall to keep the customers coming. The cheaper curb parking will help businesses survive and prevent job losses. But if curb parking prices remain high during a recession, curb spaces will be under-occupied, stores will lose customers, and more people will lose their jobs.

Performance prices also reduce cruising. Because drivers will no longer have to arrive at their destinations five to 10 minutes early to search for a curb space, their vehicle trips will be five to 10 minutes shorter. The reduction in traffic will come not from fewer vehicle trips but from shorter vehicle trips.

Everybody wants something for nothing, but we shouldn't promote free parking as a principle for transportation pricing and public finance. Using performance prices to manage curb parking can produce a host of benefits for businesses, neighborhoods, cities, transportation, and the environment. Parking wants to be paid for.

#### Curb parking pays for public services

Drivers want to park free, and that will never change. What can change, however, is that people can want to *charge* for curb parking. The simplest way to convince people to charge for curb parking in their neighborhood is to dedicate the resulting revenue to pay for added public services in the neighborhood, such as sidewalk repair, tree planting, and burying utility wires. That is, the city can offer each neighborhood a *package* that includes both performance-priced curb parking and the added public services financed by the meters. Those who live, work, and own property in the neighborhood will see the meter money at work, and the package will be much more popular than meters alone.

Old Pasadena, a historic business district in Pasadena, California, is the leading example of a battered area that dramatically improved after the city used parking meter revenue to finance added public services.



Spending more than \$1 million a year of meter money on new public services helped convert what had been a commercial skid row into one of the most popular tourist destinations in Southern California.

If all parking revenue disappears into a city's general fund, business leaders and residents probably won't campaign for meters, even with all the sophisticated hardware now available to charge performance prices. Dedicating the revenue to paying for local public services can be the political software necessary to create local popular support for performance prices.

### Setting policies, not prices

In 2005, Redwood City, California, south of San Francisco, adopted legislation establishing a performance parking policy and returning the meter revenue to the metered district. The city council set a performance goal for curb parking—a target occupancy rate of 85 percent—and gave city staff the responsibility for adjusting prices to achieve the target occupancy. The council thus sets parking *policies*, not parking *prices*.

The council also dedicated the meter revenue to pay for public improvements in the metered zone. Once the merchants understood that the revenue would remain in the metered district, they strongly backed the proposal, and the city council voted for it unanimously.

When Redwood City began to charge performance prices for curb parking, it also removed time restrictions at meters, and this has become a popular feature of the program. Because curb parking prices are higher than the adjacent off-street prices, most drivers who want to park for a long time naturally choose the off-street spaces.

Removing time limits for curb parking is especially important if meters operate in the evening. A one-hour time limit can make curb spaces almost useless for people who want to dine in a restaurant or go to a movie.

This point was proved in 2009 when Los Angeles, desperate for new revenue, extended the hours of meter operation to 8 p.m. in business districts but left many of the one-hour time limits in place. Today, many spaces remain empty in the evening and most revenue comes from tickets for overtime parking. The time limits harm the adjacent businesses by making it difficult for restaurant or theater patrons to park and they irritate all the customers who get tickets.

### Minimum parking requirements

Reform means repealing bad policies as well as adopting good ones. Minimum parking requirements are a bad policy that cities should repeal. Two big problems are leading cities to remove parking requirements. First, parking requirements prevent infill redevelopment on small lots where fitting both a new building and the required parking is difficult and expensive. Second, parking requirements prevent new uses for many older buildings that lack the parking spaces required for the new uses.

A search of newspaper articles found 129 reports of cities that have removed off-street parking requirements in their downtowns since 2005. Although newspaper articles do not represent what all cities are doing, they do include many comments on *why* cities are changing their policies.

Planners and elected officials have begun to realize that parking requirements can put the brakes on what they want to promote and accelerate what they want to prevent. Some of the reasons given for removing parking requirements are “to promote the creation of downtown apartments” (Greenfield, Massachusetts), “to see more affordable housing” (Miami), “to meet the needs of smaller businesses” (Muskegon, Michigan), “to give business owners more flexibility while creating a vibrant downtown” (Sandpoint, Idaho), and “to prevent ugly, auto-oriented townhouses” (Seattle).

Removing a parking requirement is not the same as restricting parking or putting the city on a parking diet. Rather, parking requirements force-feed the city with parking spaces. Removing a parking requirement simply stops this force-feeding. Businesses will have the freedom to provide as much or as little parking as they like. Cities can remove minimum requirements without imposing maximum limits; opposition to maximum parking limits should not be confused with support for minimum parking requirements.

### In downtown Los Angeles

Minimum parking requirements can make restoring historic buildings difficult or impossible, because they rarely have all the parking spaces cities require for new uses. Spring Street in Los Angeles, once known as the Wall Street of the West, is a prime example. It has the nation's largest collection of intact office buildings built between 1900

Old Pasadena (below) gets kudos all around for using \$1 million a year in parking meter revenue to pay for public services. Last summer San Francisco began replacing some of its old coin-operated meters with “coin and card” smart meters.



www.oldpasadena.org

and 1930. Starting in the 1960s, the city's urban renewal program moved most office uses a few blocks west to Bunker Hill and left many splendid Art Deco and Beaux Arts buildings on Spring Street vacant except for retail uses on the ground floor.

In 1999, Los Angeles adopted its Adaptive Reuse Ordinance, which allows the conversion of economically distressed or historically significant office buildings into new residential units—with no new parking spaces. Before 1999, the city required at least two parking spaces per downtown condominium unit. Cornell planning professor Michael Manville studied the results of the ARO and found that many good things can happen when a city removes its parking requirements.





David Garner Photography/STMTA

Developers used the ARO to convert historic office buildings into at least 7,300 new housing units between 1999 and 2008. All the office buildings had been vacant for at least five years, and many had been vacant much longer. By contrast, only 4,300 housing units were added in downtown between 1970 and 2000.

Skeptics doubted that banks would finance developers who wanted to convert office buildings into residential condominiums without two parking spaces each, but the skeptics were proved wrong. Developers provided, on average, only 1.3 spaces per unit, with 0.9 spaces on-site and 0.4 off-site in nearby lots or garages. Had the ARO not been adopted, the city would have required at least two *on-site* spaces for every condo

unit, more than twice as many as developers did provide.

“The ability to supply parking off-site helped developers simultaneously satisfy lenders, minimize development costs, and maximize the potential of an old building,” Manville noted. Deregulating both the *quantity* and the *location* of parking for the new housing was a key factor in restoring and converting the 56 office buildings that Manville studied.

He concluded that removing the parking requirements led to both *more* housing and a greater *variety* of housing. “Not only were more units built, but these units were constructed in buildings and neighborhoods that had long been stagnant and underused,” he wrote. “Further, almost half

of these buildings unbundled parking from rent, allowing them to target an underserved demographic—people without cars.”

The ARO produced other benefits as well. It encouraged the preservation of many wonderful buildings that were in terrible condition and might have been demolished if minimum parking requirements had remained in place. Historic buildings are a scarce resource in any city, and the evidence shows that parking requirements stood in the way of preserving these buildings.

The ARO applied only to downtown when it was adopted in 1999, but the benefits were so quickly apparent that it was extended citywide in 2003. We usually can’t see things that don’t happen or count things that don’t occur, but the beautifully restored buildings on Spring Street give us some idea of what other cities are missing.

#### A quiet revolution in parking policies

Requiring Peter to pay for Paul’s parking and Paul to pay for Peter’s parking is a bad idea. People should pay for their own parking, just as they pay for their own cars and gasoline and tires. Parking requirements hide the cost of parking, but they cannot make it go away, and free parking often means fully subsidized parking. At the very least, parking requirements should carry labels that warn about the many dangerous side effects.

Despite institutional inertia in planning for parking, reforms are sprouting. Paradigm shifts in urban planning are often barely noticeable while they are happening, and afterward it is often hard to tell that anything has changed. But shifts happen. Planners simply begin to understand cities in a new way and can scarcely remember a time when they understood cities differently.

The incremental parking reforms now under way suggest that off-street parking requirements will not quickly disappear but will gradually erode. Cities may slowly shift from minimum parking requirements to performance parking prices without explicitly acknowledging that previous policies were wrong. Eventually, though, planners may wonder how their predecessors could have been so wrong for so long.

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