

The Case for Treating and Financing Roads as a Utility

David R. Riemer

One of American government's largest subsidies for a specific type of consumption is the use of local property taxes (and other local taxes) to pay for utilities. By far the greatest tax subsidy for a utility is the subsidy for the nation's network of local streets, bigger roads, highways, and bridges.

There is an alternative that makes more sense. It would result in improved maintenance of existing streets, roads, highways, and bridges. It would end the needless wasteful spending on widening roads in a vain effort to reduce congestion.

The alternative approach would dramatically lower local property taxes. It would eliminate the gas tax. It would also improve the environment, in part by reducing congestion. And it would reverse the destructive attack on cities by state and federal transportation policies.

The alternative is to eliminate all tax support for all local streets, bigger roads, highways, and bridges, and instead require users to pay for the full cost of maintaining this "surface transportation" utility grid.

Utilities are a necessity. Without water systems, sewage systems, electricity, natural gas, and telephones, the public's health would be endangered, society would decay, and our economy will collapse. Yet, in general, we do not require taxpayers to pay for these services.

Rather, the predominant mechanism for financing these other essential utilities is user fees. The more you drink, the more you pay. The more you water your lawn (if allowed), the more you pay. If you flush more, cook more, heat more, or cool more, you also pay more. Under the oversight of government public utility commissions, rates are set to generate enough revenue to pay the necessary costs of keeping the water system, sewage system, electric system, natural gas system, and telecommunication system in good repair.

We do not typically think of roads as a utility, but they are. "Roads" here means *all* roads: the entire grid of local streets, county highways, state highways, and interstate highways.

Just like "accepted" utilities like water, sewage, electric, gas, and telecommunication, road utilities are an absolute necessity. This critique of the current way America pays for roads is not an attack on roads. They are an essential part of modern civilization. Without highly integrated road utilities, public safety would be imperiled, society would shrink, and the economy would unravel.

The other main way in which roads resemble other “accepted” utilities is that they are natural monopolies.

It would be foolish for a metropolitan area or rural community to allow multiple, competing water systems, sewage systems, electricity systems, or natural gas systems. That’s why we require defined geographic areas to be “served” by only one of each. The public interest recognizes that such systems are natural monopolies. But precisely because they are monopolies, it would be devastating to individuals and business to allow them to exercise monopoly power. Thus, their pricing and other terms of service are regulated by government public utility commissions.

Roads are natural monopolies for the same reason. It would be crazy for cities or towns to allow multiple parallel lanes of asphalt or concrete, controlled by competing organizations, to occupy the same or different public (or private) rights-of-way.¹ The natural monopoly feature of the road grid is another reason why roads should be seen, treated, and financed as utilities.

Yet, uniquely, Americans continue to shell out billions in taxes each year to subsidize the local segments—the biggest segments—of their road utilities. In 2015, local *rural* roads constituted 2,020,272 miles or 69% of the nation’s 2,945,513 rural mileage. Local *urban* streets constituted 854,104 or 71% of the nation’s 1,209,214 urban mileage.² Switching from “mileage” to “lane miles,” the pattern remains roughly the same. In 2015, local *rural* roads constituted 4,040,544 lane miles or 67% of the nation’s 6,026,054 rural lane miles. Local *urban* streets constituted 1,708,209 or 63% of the nation’s 2,710,533 urban lane miles.³

Former U.S. House Speaker Tip O’Neill famously said: “All politics is local.” He might have added: “And two-thirds of roads are local.” And in most communities, it is local

¹ This is different than allowing the local road grid to be “overlaid” by county, state, or interstate road grids, each with its own distinct set of public rights-of-way. Even when different governments name a particular road as both a local street and state highway, or as both a state highway and a piece of the I-system, all government is doing is assigning different names to the same lanes of asphalt or concrete.

² U.S. Department of Transportation, Bureau of Transportation Statistics, “Table 1-5: U.S. Public Road and Street Mileage by Functional System,” https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_05.html

³ U.S. Department of Transportation, Bureau of Transportation Statistics, “Table 1-6: Estimated U.S. Roadway Lane-Miles by Functional System,” https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_06.html

property taxes (or other local taxes) that provide the *primary* source of revenue for building, fixing, sweeping, plowing, lighting, and policing the local streets that dominate the nation's road grid. Local taxes like the property tax—not the state or federal gas tax—pay most of the cost for two-thirds of the nation's road grid.

In an earlier age, when no one had heard of computer chips or information technology, property taxpayers' massive subsidy for roads might have been the only practical way to pay for local streets. With the introduction of the gas tax in the early 20th century, the per-gallon charge *might* have become a way to end property tax subsidies for local streets, replacing local property tax financing with state gas tax revenue.⁴ This would have had the merit of creating at least a crude use-based fee—crude because a vehicle owner's purchase of gasoline does not fully correspond with the vehicle's actual use of the road utility.⁵

But government (pressured by the road building industry, the auto industry, and the oil industry) decided to siphon off virtually all gas tax revenue. The gas taxes that drivers on local streets have paid for nearly a century at the pump have seldom been returned to local communities to maintain those local streets. Instead, virtually all gas tax revenue has been diverted to finance the construction of new, multilane expressways, especially the I-system.

Local governments were thus compelled to levy an ever-growing property tax subsidy as year after year—pothole after pothole—they struggled to keep their local streets, bridges, and (in some cases) tunnels in some semblance of repair. This massive property tax bailout of the nation's road utility was locked in during the 1950s, when states took hold of the growing stash of gas tax revenue to go on an expressway building binge. States were induced to build new expressways, widen existing ones, and build even more of them by favorable federal “matching rates.”

With little gas tax revenue generated by driving on local streets coming back to them, local governments have faced enormous difficulty in maintaining their local grids. Raising taxes is no more popular in city halls or county courthouses than it is in Washington, DC. This is particularly so when raising taxes to fix local roads is in essence filling a hole left by the loss of locally generated gas tax revenue to finance the states' and federal government's appetite for widening expressways and building new ones. The greater problem, however, has been the competing claims on local property tax dollars (and other local tax dollars). Local officials face never-ending pressure to spend available tax revenue on popular services like police protection, fire protection, parks, and libraries. Inevitably, municipalities and counties have been forced to spend too little on road maintenance. Much of the degradation of the street grid is slow and quiet, but

⁴ The first state gas tax was introduced in 1919 in Oregon. The federal gas tax was introduced in 1932. https://en.wikipedia.org/wiki/Fuel_taxes_in_the_United_States

⁵ Gas guzzlers pay a higher share of gas taxes than their proportionate use of the road grid, while fuel-efficient vehicles pay a lower share of gas taxes than their proportionate use of the road grid

every now and then TV news will expose the crisis with a story about car-swallowing potholes, crumbling road surface, and too-dangerous-to-cross bridges.

The use of local property taxes (and other local taxes) to subsidize roads is the heart of the problem. There is no sound reason why taxpayers should subsidize what is in essence a network of road utilities. As with other utilities, the users of the utility—in this case, the drivers whose personal or business vehicles use (and often degrade) the streets, roads, and bridges, should pay for the full cost of the road grid in proportion to frequency, intensity, and time of use.

In the past, the lack of a practical system to do this was an obstacle. But with today's information technology, there is no practical obstacle. It would be technologically easy to eliminate the property tax subsidy for the road system, and instead implement a high-tech system that require users to pay fees for their use of all streets and roads (and bridges and tunnels) based on standard utility principles.

What would this look like? The key principle would be that the drivers of all engine-driven vehicles that use the nation's roads would pay fees that cover 100% of the cost of maintaining, lighting, sweeping, plowing, and policing the roads they drive on. Advances in communication and information technology make it possible to collect a basic per-mile fee, and then adjust that fee upward to reflect the following factors:

1. Weight of the vehicle (bigger trucks do more damage to the road);
2. Type of road (multi-lane highways with special on/off ramps that limit access, as well as bridges and tunnels, cost more per mile); and
3. Degree of congestion (with higher fees' creating a disincentive to drive during off-peak hours, thus helping to avoid the need to widen roads or build new roads simply to accommodate excessive peak demand).

Accuracy and privacy are both valid concerns. But modern technology allows road use fees to be charged with precision and collected without invasion of privacy.

Creating a user fee charging technology that works across the country, and then allocating the fee revenue to the appropriate localities and states, will be a challenge. But an excellent precedent already exists. State toll roads from Illinois to New Hampshire, under the aegis of the E-ZPass system, have already harmonized the technology they use to collect fees, and then distribute them to the appropriate toll road authorities.⁶ Adapting

⁶ E-ZPass is an electronic toll collection system used on most tolled roads, bridges, and tunnels in the Midwestern and Northeastern United States, as far south as North Carolina and as far west as Illinois. The E-ZPass Interagency Group (IAG) consists of 38 member agencies in operation within 16 states, which use the same technology and allow travelers to use the same transponder on toll roads throughout the network.

<https://en.wikipedia.org/wiki/E-ZPass>

the E-ZPass methodology to the wider collection and distribution of user fees will be a task, but it can be accomplished.

An equally important concern is ability to pay. Will lower-income and middle-class people be able to afford the new fees charged to use the road utility? The answer is: yes. The proposals for greatly reducing unemployment and ensuring that virtually all Americans achieve an adequate income level (in Chapter Eight, “Employment Security,” and Chapter Nine “Beyond the Labor Market”) will substantially increase the disposable resources of low-income and middle-income Americans. The economic position of all U.S. residents will be further enhanced by reforms that will lower their health insurance costs (as discussed in Chapter Ten, “The Way Forward on Health”) and lower education costs (as discussed in Chapter Eleven, “The Way Forward on Education”).

In addition, everybody’s property taxes (and other local taxes) will fall, in some cases sharply, because taxes will no longer be imposed to pay for the road system. Finally, the gas tax would be eliminated as part of the switch from subsidized roads to a fee-based utility system.

As a result of these policy changes, American drivers will have much more cash in hand, enabling them to pay the fees charged when they use the road grid. In large urban areas, moreover, drivers may be able to minimize their overall costs by driving more frequently during off-peak hours.

Three other benefits will also arise from converting the nation’s road into a road utility.

First, the total property tax cut will be huge. In 2013, local governments spent nearly \$65 billion on roads, plus billions more on road-related policing. This entire property tax burden would come to an end once the road system, in lieu of burdening property owners, derives its revenue (like any other utility) from its users. This massive reduction in the tax burden on property will in turn do what cuts in property taxation always do: encourage the development—the “improvement,” in legal language—of the nation’s more heavily tax-burdened property. The bigger the reduction in the tax burden that a local community now imposes on its taxable property, the more the private owners of that property will have a reason to improve their land and buildings.

The second benefit of treating streets, roads, and bridges as a regulated utility is that it will become easier to generate the revenue needed to fix and maintain America’s deteriorating streets, roads, and bridges. The removal of local property taxes (and other local taxes) as a funding source means that local elected officials will no longer have to agonize over whether to hold the line on taxes vs. paying for police, fire, parks, and library services vs. scrounging up money for road repair, a process that often shortchanges roads. Nor will state and federal transportation policymakers need to fret any longer about the decline in gas tax revenues, caused by high-MPG hybrids and the looming arrival of electric vehicles, as they try to keep their piece of the utility—that is: state highways and the I-roads—in good repair. Instead, state Public Utility Commissions

will decide how much money each regulated road utility needs, and thus what fees must be charged, to properly maintain the utility's infrastructure.

Drivers who pay fees (whether individuals or firms) may present different arguments than the various entities that manage the road utility (local governments and state government, for the most part) as to what the base per-mile fee should be. Street, road, and bridge "consumers" and utility operators may also differ on the added fees that should be paid by heavier vehicles, for high-cost road segments, and during rush hour. But the process will generally be more independent—and evidence-based—than the current process for deciding on how to pay for roads. Applying the same standards they apply to other utilities, Public Utility Commissions would be responsible for ensuring that road utilities are in excellent working order.

A third benefit of treating roads as a regulated utility is the positive impact on the environment. Drivers—once they are obliged to pay "as you drive" for the costs of each mile driven, and are further required to pay higher fees for high-cost road segments and during rush hours—will have a clear and strong incentive to choose to drive less, avoid the high-cost road segments, and avoid rush hour. No driver will be *told* whether, where, or when to drive. Each driver's choices will likewise be private: the system will never know whether a driver took the car out to go to a bar or attend church. But drivers will face clear price signals that encourage them to drive less frequently, travel fewer miles, use lower-cost roads, and avoid rush hour. Less traffic will move more effectively (and, in urban areas, less quickly) across the road grid—not because of restrictions, but because of the most powerful of all market forces: prices. The result will be less pollution of the nation's air and water.

In conclusion: Reliance on the property tax (and other local taxes) to massively subsidize the road grid, rather than treat and finance roads as a utility, is harmful all around.

- It imposes an immense and regressive tax burden on U.S. residents and firms.
- It is particularly unfair to individuals who do not drive or only drive a little.
- High local property taxes hurt communities by discouraging the improvement of property.
- The inappropriate use of property and gas taxes to pay for the road utility has trapped the American road network in a downward spiral of disrepair and deferred maintenance.
- Finally, reliance on taxes to subsidize roads, which has implicitly meant *not* requiring users of the road utility to pay for roads based on their use, has encouraged overuse of the road grid. That in turn has increased the number of potholes, cracks, and other types of road degradation. It has also exacerbated congestion and pollution. It has further stimulated the illusion that the problem of congestion can be solved—which it cannot—by highway widening and

expansion. The resulting political decision to continue down the path of further highway widening and expansion has in turn simply worsened congestion and pollution...resulting in more political pressure to widen and build highways...resulting in more congestion and pollution...and the vicious cycle continues.

We can end all of these harmful effects—that is: we can dramatically lower property taxes, encourage property improvement, better maintain existing roads, and reduce congestion and pollution—if we convert roads to a utility whose users bear the full cost.

And there's one more positive. A well-designed user fee system will trim overall road use, and it will spread out utilization of the existing road grid. The pressure to enlarge the road system's "capacity" by widening and expanding roads, especially big expressways, will shrink and perhaps disappear. *Not* increasing the road system's capacity will in turn save the new road utilities a great deal of money. They can then possibly lower fees (at the very least, avoid raising them too much), improve maintenance, or both.

Indeed, in a user-fee environment, road utilities may find it in their self-interest to tear down particularly high-cost segments of limited-access expressways that run through the densest parts of cities, suppress urban property improvement, and inflict ugly barriers on the urban landscape. This will save the utilities money, allowing them to lower fees or improve maintenance of the road grid.

Tearing down the most dysfunctional urban bits of the expressway system will also help to enrich U.S. cities. San Francisco, New York City, and Milwaukee all benefited from the tearing-down, respectively, of the Embarcadero Freeway, West Side Highway, and Park East Freeway, and restoring the prior urban grids. Each city saw hundreds of millions of dollars of new, privately funded, property improvement: new apartment buildings, new condos, and new commercial development. They also gained new tourist attractions and higher populations. The new addition to the wealth of cities will in turn help spur the greater wealth of the nation.⁷

⁷ See John O. Norquist, *The Wealth of Cities* (Reading, Massachusetts: Addison-Wesley, 1988), Chapter Nine.