

Policy Analysis

No. 699

June 14, 2012

The Great Streetcar Conspiracy

by Randal O'Toole

Executive Summary

Streetcars are the latest urban planning fad, stimulated partly by the Obama administration's preference for funding transportation projects that promote "livability" (meaning living without automobiles) rather than mobility or cost-effective transportation. Toward that end, the administration wants to eliminate cost-effectiveness requirements for federal transportation grants, instead allowing non-cost-effective grants for projects promoting so-called livability. In anticipation of this change, numerous cities are preparing to apply for federal funds to build streetcar lines.

The real push for streetcars comes from engineering firms that stand to earn millions of dollars planning, designing, and building streetcar lines. These companies and other streetcar advocates make two major arguments in favor of streetcar construction.

The first argument is that streetcars promote economic development. This claim is largely based on the experience of Portland, Oregon, where installation of a \$103-million, 4-mile streetcar line supposedly resulted in \$3.5 billion worth of new construction. What streetcar advocates rarely if ever mention is that the city also gave developers hundreds of millions of dollars of infrastructure subsidies, tax breaks, and other incentives to build

in the streetcar corridor. Almost no new development took place on portions of the streetcar route where developers received no additional subsidies.

The second argument is that streetcars are "quality transit," superior to buses in terms of capacities, potential to attract riders, operating costs, and environmental quality. In fact, a typical bus has more seats than a streetcar, and a bus route can move up to five times as many people per hour, in greater comfort, than a streetcar line. Numerous private bus operators provide successful upscale bus service in both urban and intercity settings.

Streetcars cost roughly twice as much to operate, per vehicle mile, as buses. They also cost far more to build and maintain. Streetcars are no more energy efficient than buses and, at least in regions that get most electricity from burning fossil fuels, the electricity powering streetcars produces as much or more greenhouse gases and other air emissions as buses.

Based on 19th-century technology, the streetcar has no place in American cities today except when it functions as part of a completely self-supporting tourist line. Instead of subsidizing streetcars, cities should concentrate on basic—and modern—services such as fixing streets, coordinating traffic signals, and improving roadway safety.

*Randal O'Toole is a senior fellow with the Cato Institute and author of *Gridlock: Why We're Stuck in Traffic and What to Do about It* and *American Nightmare: How Government Undermines the Dream of Homeownership*.*

CATO
INSTITUTE

If there is a streetcar conspiracy, it is of politicians and contractors seeking to spend taxpayer dollars building frivolous and obsolete streetcar lines in today's cities.

Introduction

In 1974 a Senate staffer named Bradford Snell invented the myth of the “Great General Motors Streetcar Conspiracy.” According to Snell, GM, Firestone Tire, Phillips Petroleum, and Standard Oil of California conspired to “destroy public transit . . . by eliminating streetcars.” This would supposedly force people to buy cars that used gasoline and rubber tires.¹ Academic and other experts have repeatedly debunked Snell’s claims.²

Even James Graebner, who chairs the American Public Transit Association’s streetcar committee, calls the General Motors conspiracy “a rather satisfying urban legend,” but notes that, “in fact, when presented with the choice of either maintaining the street railway infrastructure . . . or operating buses on publicly funded roads,” replacing streetcars with buses “was an easy choice for the private sector.”³ Yet transit advocates continue to raise Snell’s claims to justify federal funding for rail transit.

The truth is that in 1948, GM and the other companies were held liable in a civil suit of conspiring to monopolize the sale of GM buses, along with Firestone tires and Phillips and Chevron fuel for those buses. They did so by investing in National City Lines, which owned transit companies in about 60 cities, starting in 1936. They sold that company in 1949 after losing the antitrust case. They were found innocent of any attempt to monopolize public transit, nor did they try to destroy streetcar lines, but merely recognized that the transit industry was rapidly replacing streetcars with buses and tried to take advantage of that trend.⁴

During the years GM and the other companies had an interest in National City, more than 300 streetcar systems converted to buses, but fewer than 30 of those systems were owned by National City.⁵ Many other transit systems owned by National City still had streetcars when the “conspirators” divested themselves of National City in 1949. When National City bought the St. Louis transit system in 1939, for example, it purchased more modern streetcars for the system and continued to operate

streetcars until 1963, when it sold the system to a public agency—which quickly converted all streetcars to buses.⁶

Transportation experts agreed that buses were superior to streetcars. In 1947 a New York City transit expert named John Bauer testified before the Portland, Oregon, city council that he was “absolutely opposed” to cities maintaining their streetcar lines. Streetcars, he told the council, are slow, noisy, and tie up traffic. The limitations of tracks also prevent express services that are possible with buses. “Streetcars maintain an average speed of only eight miles per hour,” he testified, “whereas [trackless] trolleys and gasoline buses average 12 miles per hour. The most modern streetcar equipment could make only about 10 miles per hour.”⁷

Replacing streetcars with buses was a rational decision then for all the same reasons that building streetcar lines is irrational today. Whereas buses share the cost of roads with autos and trucks, streetcars require their own dedicated infrastructure. This makes the cost of operating and maintaining streetcars far greater than that of buses. Buses can safely operate more frequently than streetcars, and if one bus breaks down or is in an accident, the entire line does not become disabled, as is the case with streetcars.

The Modern Streetcar Conspiracy

If there ever was a streetcar conspiracy, it is today’s conspiracy of politicians, engineering firms, contractors, railcar manufacturers, and transit agencies trying to persuade city governments and taxpayers to spend hundreds of millions of dollars on frivolous and obsolete transportation systems such as the so-called modern streetcar. That conspiracy aims to deceive taxpayers and appropriators into believing that, all by themselves, streetcars can magically revitalize blighted neighborhoods, produce jobs, and generate billions of dollars of economic development.

Spurred by the promise of federal funding,

more than 45 American cities are expanding, building, planning, or considering streetcar lines.⁸ Some of the most active projects or plans are in Albuquerque, New Mexico; Atlanta; Cincinnati; Dallas; Kansas City, Missouri; Los Angeles; Madison, Wisconsin; Miami; Milwaukee; Minneapolis; Oakland, California; Omaha, Nebraska; Portland, Oregon; Sacramento, California; Salt Lake City; San Antonio, Texas; Seattle; Tacoma, Washington; Tucson, Arizona; Washington, D.C.; and the Washington suburbs of Arlington and Alexandria.

Streetcar advocates claim a host of benefits from streetcars. Streetcars have higher capacities than buses, they say, which leads to lower operating costs, energy consumption, and air emissions per rider. But the biggest benefit, they claim, is that streetcars will revitalize downtowns or any area in which they are built. Even more, the installation of a streetcar will make a city a “magnet” for urban growth, attracting in particular the “creative class” of young workers whose high-paying jobs will boost the fortunes of any city and region smart enough to build a streetcar line.

All these claims are bogus and most are easily disproven. Yet a variety of engineering firms and rail contractors relentlessly promote them. No wonder: they stand to make millions in profits designing and building streetcar lines.

Streetcars differ from what has come to be known as “light rail” in several ways. While most light-rail routes are 6 to 20 miles long and connect a city’s downtown with one of its suburbs, most streetcar routes are 2 to 6 miles long and serve a downtown area or other distinct neighborhood. Most light-rail vehicles are about 100 feet long, often operate in two- to four-car trains, and sometimes operate in streets but often have their own dedicated right of way for much of their route. So-called “modern streetcars” are about 66 feet long, are never coupled together, and almost always operate in streets.

Building streetcars in cities today is analogous to asking businesses to supplement their computers with manual typewriters and adding machines or asking consumers to add crystal radios to their high-definition television/entertainment centers. While such options exist, they are slow, clumsy, inconvenient, and appeal

to only a small number of people.

One impetus for the current flurry in streetcar planning is a proposed change in Department of Transportation rules for transit grants. In 2005 Congress created the Small Starts grant program authorizing the Federal Transit Administration (FTA) to provide up to \$75 million in funds for transit capital projects whose total costs are less than \$250 million. This led many cities to start planning streetcars.

When Congress created the program, however, the FTA wrote rules requiring that agencies compare the cost effectiveness of streetcar and other projects against simple improvements in bus service. The measure of cost effectiveness was which mode cost less per hour of time that the project saves travelers. Since streetcars are never cost-effective as transportation compared with buses, only one streetcar project was ever funded out of Small Starts. This restriction did not apply to the 2009 economic stimulus bill, however, and several cities—including Atlanta, Cincinnati, Dallas, and Tucson—successfully sought stimulus funds for streetcar projects.

The Obama administration is currently rewriting the rules for Small Starts, and the draft rules, issued January 25, 2012, effectively eliminate the cost-effectiveness requirement.⁹ Instead, the administration proposes to judge projects by how well they promote “livability,” which Secretary of Transportation Ray LaHood defines as, “If you don’t want an automobile, you don’t have to have one.”¹⁰ In this case, it evidently also means, “If you don’t want to take a bus, taxpayers will provide an expensive rail alternative.”

When it created the New Starts program (which funds light-rail and other fixed-guideway transit lines), Congress required that transit agencies applying for grants under the fund consider “a wide range of public transportation alternatives” and do a cost-effectiveness analysis on those alternatives.¹¹ FTA rules required transit agencies to measure cost-effectiveness on the basis of cost per hour of travel time saved by the project.¹² When the FTA applied the same rules to the Small Starts program, however, streetcar advocates complained that the rules discriminated against streetcars because streetcars did

The Obama administration is rewriting cost-effectiveness rules so it can fund streetcars even though buses provide better transportation at a far lower cost.

Federal New Starts and Small Starts funds give cities incentives to favor transit projects with the highest capital costs over projects that provide the same services for less money.

not save time. Instead, advocates argued, the FTA should evaluate streetcars based on their perceived contributions to livability and economic development.¹³

The new rules proposed by the Obama administration don't require transit agencies to compare the cost effectiveness of streetcars against improvements in bus service. Moreover, they allow the administration to grant funds for streetcars on the basis of such criteria as livability, environmental justice, and multimodal connectivity.¹⁴ In comments on the proposed rule, I argued that it violates the law, which does not authorize the Department of Transportation to make grants on the basis of these criteria.¹⁵

A number of cities, including Kansas City, Los Angeles, Miami, Milwaukee, Minneapolis, Oakland, and San Antonio, are currently preparing streetcar plans in the hope of obtaining Small Starts funding once the new rules go into effect. As World Bank economist Wenling Chen points out, the existence of capital grant programs such as New Starts and Small Starts gives cities incentives to favor projects with the highest capital costs, partly in an effort to gain the largest share of federal funding.¹⁶

Electric streetcar technology is more than 125 years old. The first electric streetcar system in America opened in Richmond, Virginia, in 1888, but electric streetcars were introduced in some European cities earlier in the 1880s. At that time, streetcars were so much better than other 19th-century forms of urban transportation that, by 1910, entrepreneurs built electric streetcar lines in more than 850 American cities.

Streetcars were often built as a part of a real estate development. A developer owning land several miles from a city's central business district would connect that land to the downtown job center with a streetcar. The capital cost of the streetcar would be covered by profits from the land sales, so transit fares only had to cover operating costs.

Rail transit systems—including rails, railcars, stations, and electrical systems—must be replaced or rebuilt at least every 30 years. By the time the original streetcar lines needed renewal, growing automobile ownership

had eaten into streetcar patronage, and most streetcar owners lacked the capital funds to replace the rail lines. So most of them chose instead to replace streetcars with buses. As a result, the number of cities with streetcar lines fell from more than 700 in 1910 to just 6 (Boston, Cleveland, New Orleans, Philadelphia, Pittsburgh, and San Francisco) in 1964.

In the 1970s and 1980s, all of these cities except New Orleans upgraded their streetcars to light-rail standards. Meanwhile, in the late 1980s through the early 2000s, several cities—including Galveston, Texas; Dallas; Memphis; Kenosha, Wisconsin; Tampa, Florida; and Little Rock, Arkansas—installed vintage streetcars, using either old streetcars or replicas of such streetcars, on short routes, mainly as tourist attractions.

The current streetcar fad is for so-called modern streetcars: new, streamlined vehicles looking a little like shorter light-rail cars. This fad began in the late 1990s when Portland planned a downtown streetcar line to supplement its well-publicized light-rail line.

Portland's Failed Light Rail

Contrary to Portland's extensive publicity efforts, the city's initial light-rail line, which opened in 1986, was a failure. A 1990 report published by the U.S. Department of Transportation revealed that this line cost 55 percent more to build, 45 percent more to operate, and attracted 54 percent fewer passengers than originally projected. In all, the total costs per passenger were more than three times the original estimates.¹⁷

Cost overruns forced TriMet, Portland's transit agency, to raise bus fares and cut back on bus service. Even before the city's first light-rail line opened, high construction costs forced TriMet to cut bus service by 15 percent, and it did not fully restore that service for more than a decade. As a result, public transit's share of the region's commuters declined from 9.8 percent in 1980 to just 6.7 percent in 1990.

Light rail "is not worth the cost if you're just looking at transit," admitted John Fregonese

in 1995 when he was the director of planning at Metro, Portland's regional planning agency. "It's a way to develop your community at higher densities."¹⁸

Yet Portland's light rail (locally known as MAX) failed to do that either. At a Portland city council hearing in October 1996, city planner Mike Saba testified, "We have not seen any of the kind of development of a mid-rise, higher-density, mixed-use, mixed-income type that we would have liked to have seen" along the light-rail line. He advocated the use of property tax abatements and other subsidies to stimulate such developments.¹⁹

Developers also testified in support of the subsidies. Wayne Remboldt, who had built housing in the Portland area for several decades, testified that denser developments would not be feasible without subsidies.²⁰ Another developer, Dan Steffey, agreed, saying he could not finish a planned high-density project without a tax incentive.²¹ Both owned land along the light-rail line that the city had zoned for higher densities but found that the costs per unit were high and demand for high-density housing was already met by existing developments.

At the hearing, Portland transportation commissioner Charlie Hales observed, "We are in the hottest real estate market in the country," yet city planning maps revealed that "most of those sites [along the light-rail line] are still vacant." "It is a myth to think the market will take care of development along transit corridors," he added, which at least was true for the kind of dense development that planners such as Fregonese and Saba wanted.²²

Portland eventually gave hundreds of millions of dollars in subsidies to developers along its light-rail lines, including tax abatements, land sales at below-market prices, waivers of permit fees and system development charges that would otherwise average more than \$12,000 per dwelling unit, and taxpayer-funded infrastructure development. Even as city commissioner Hales promoted subsidies to developments along the light rail, he was also promoting construction of a downtown streetcar line, campaigning for his position on a promise of building such a line.²³

The Economic Development Hoax

Construction of Portland's streetcar line began in 1998 and the line opened in 2001. By the time the streetcar began operations, Portland had settled on tax-increment financing (TIF) as the main subsidy to transit-oriented development. The streetcar initially connected two urban-renewal districts: the River District (more popularly known as the Pearl District) and the South Park Blocks. In 2006 the line was extended into a third district, North Macadam (sometimes confusingly known as the South Waterfront District). A major extension to the streetcar that is now under construction connects three other districts: Downtown Waterfront, Convention Center, and Central Eastside.

TIF essentially allows cities to use the taxes paid on new developments—taxes that would otherwise go for schools, fire, libraries, and other urban services—to subsidize those developments. By 2010 Portland had sold \$725 million worth of bonds that would be repaid out of property taxes on new developments in the River, South Park Blocks, and North Macadam districts and used the revenues from those bonds to subsidize developments along the original streetcar line. About \$21 million of this money helped pay for streetcar construction, while the rest went for other infrastructure improvements. The city has also sold \$110 million worth of bonds to subsidize developments in the three urban renewal districts that are crossed by the extension that is now under construction and has the authority to sell another \$325 million worth of bonds in those districts.²⁴

The waiver of at least \$12,000 in fees per dwelling unit for many of the 10,200 housing units that have been built near the existing streetcar line adds tens of millions more in subsidies to the area. According to tax assessors, hundreds of those housing units have also been exempted from property taxes for 10 years, providing an effective subsidy of at least \$25 million more.

These aren't the only subsidies to property developers along the streetcar line. The Portland Development Commission, which oversees Port-

By 2010 Portland had sold \$725 million of TIF bonds to subsidize development along the city's downtown streetcar line.

In Portland's Pearl District, \$435 million in subsidies generated \$1.3 billion in development. In an equal area of land served by the streetcar outside the Pearl District, no subsidies led to only \$17.6 million in development.

land urban-renewal projects, gets only about half its budget from TIF. The rest comes from city general funds, federal grants, rentals and property sales, and other sources.²⁵ In addition, developers in Portland's urban-renewal districts enjoy a streamlined project-approval process.

In total, then, the city provided close to a billion dollars in subsidies to property developers along the existing streetcar line on top of the \$103 million cost of the streetcar itself. TIF subsidies in the Pearl District alone amounted to \$435 million, or more than half the total. Developers eagerly responded to these subsidies, transforming a railroad yard and warehouse area into the Pearl District's mid-rise condos, apartments, offices, shops, and restaurants. The South Waterfront District was an industrial area that developers transformed into high-rise offices and apartments.

Streetcar promoters never mention these subsidies. In 2003 Portland published a report on "development-oriented transit" implying that all of this new development was due to the streetcar, never mentioning the hundreds of millions of dollars in other subsidies provided to developers. The city has regularly updated that report, and the latest version claims that nearly \$3.5 billion worth of development has taken place along the streetcar line.²⁶

Among the buildings supposedly "stimulated" by the streetcar are \$357 million of public university offices and classrooms. The city's list of developments along the streetcar line also includes more than 30 parking garages or buildings that incorporate parking, providing well over 6,000 parking spaces (the city did not list the number of spaces for all of the garages). The city of Portland built at least some of these garages using TIF dollars to entice development.²⁷

Some idea of the comparative influence on developers of subsidies versus streetcars can be gained by comparing development in the Pearl District with development in Northwest Portland outside of the Pearl District. About the same area of land is located within two blocks of the streetcar inside and outside of the Pearl District.

Portland's development-oriented transit report identified seven projects collectively worth about \$17.6 million, or about \$2.5 million each,

in Northwest Portland outside of the Pearl District. Inside the Pearl District, the report listed about 50 projects collectively worth more than \$1.3 billion, or an average of more than \$26 million per project. In other words, the subsidies inside the Pearl District contributed to 75 times as much private investment as the streetcar alone did outside the Pearl District.

Of the seven projects outside the Pearl District, one was a fitness center that closed after just five years. Another was a condominium that developers began building before the city had decided to build the streetcar line and that was completed two years before the streetcar opened, raising the question of whether the streetcar had anything to do with the decision to build that project.²⁸ This makes it apparent that developers were, for the most part, following the subsidies, not the streetcar.

The streetcar report itself never actually claims that any of this development took place because of the streetcar. While city officials never hesitated to make that claim when giving officials from other cities tours of their "streetcar miracle," they also never mentioned the hundreds of millions of dollars in TIF subsidies, tax abatements, and other subsidies to developers along the streetcar line.

Downtown Portland's revitalization owes more to the microbrewery revolution, which started in Portland in 1980, than to mass transit. By 1990 Portland had at least a dozen microbrew pubs, more per capita than any other city in the United States, and most were located in or on the periphery of downtown.²⁹ Today, Portland has nearly 50 such brewpubs. These, combined with other unique stores such as Powell's Books, which claims to be the largest bookstore in the world, turned downtown Portland from a place where "they rolled up the streets at 5 p.m." in the 1970s to one that, by the late 1990s, was as lively at 10 p.m. as at 10 a.m. and as busy on weekends as during weekdays.

Oregon's land-use policies may have also contributed to the downtown's revitalization. After 1990, tax breaks for silicon chip factories led to the construction of numerous such factories in Washington County, west of Portland, creating tens of thousands of jobs. But

Portland's urban-growth boundary (which restricted development outside of urbanized Washington County) produced a scarcity of land for suburban development and caused housing prices to double in the early 1990s and double again in the next decade.

The lack of new suburban homes led many young people to buy or rent homes in the Portland inner city, including Northwest Portland, just north of downtown, and the central eastside, just east of downtown. These neighborhoods provided the easiest "reverse commutes" from Portland to Washington County.

One option for such commutes was Portland's second light-rail line, which opened in 1998 and connected Washington County with downtown Portland. But the vast majority of reverse commuters drove their cars to work. According to surveys by John Charles of the Cascade Policy Institute, only about 3 percent of employees at an Intel factory next to a Washington County light-rail station take the light rail to work.³⁰

In 2001—the same year the streetcar opened—the city approved plans to spend hundreds of millions of dollars turning an old railroad yard and warehouse district into what became the Pearl District. The city removed obsolete structures at taxpayer expense, added new infrastructure to support housing, and—on top of direct government expendi-

tures—waived developer fees and 10 years of property taxes for many new condos and other high-density residences. The Pearl District piggybacked on the growing popularity of downtown for young people who wanted to live near restaurants and other entertainment centers.

Pearl District developers say that the streetcar "activated" the area.³¹ At best, the streetcar gave the Pearl District a Disneyland-like ambiance that made it a little more exciting. But cities cannot expect that a streetcar alone will stimulate development unless it is also accompanied by hundreds of millions of dollars in supporting subsidies and those subsidies are offered in a neighborhood that is in or adjacent to an area that is already rapidly growing.

The impact of the 6.5- to 7-mile-per-hour Portland streetcar on jobs has been, at best, nil. In 2001, when the streetcar opened, the Portland area had about 1.6 million people, of whom 86,769 worked in the downtown area. By 2005, the region's population had grown to 1.7 million, but downtown jobs declined by nearly 5 percent to 82,761. Downtown jobs recovered by 2010 to 87,038, but this was just 0.3 percent more than in 2001 despite a 14 percent increase in the region's population to more than 1.8 million.

Nor has the streetcar contributed to commuting, as shown in Table 1, which is

The impact of the Portland streetcar on downtown jobs has been, at best, nil: between 2001 and 2010, downtown jobs grew by just 0.3 percent even though the region grew by 14 percent.

Table 1
Percentage of Downtown Portland Commuters

	2001	2010
Drive alone	44	40
Carpool	5	7
Bus/light rail	45	38
Streetcar	1	1
Walk	2	5
Bike	3	9

Source: Portland Business Alliance.

One reason the Portland streetcar attracts any riders at all is that most of the route is free and the average fare collected is less than 4 cents per rider.

based on annual censuses by the Portland Business Alliance.³² The table shows that the big change between 2001 and 2010 is the increase in walking and cycling to work. This is likely due to the increased number of residences on the periphery, especially in and near the Pearl District. While some of those residents might say they were attracted to live downtown by the streetcar, it is likely that the more than \$725 million in subsidies to developers played a much larger role. The increase in walking and cycling reduced the number of people taking transit to work by 15 percent, while the number taking a car to work dropped by less than 4 percent.

One reason the streetcar attracts any riders at all is that most of the route (including the Pearl District but not the South Waterfront District) is in TriMet's downtown free-fare zone. Even outside the free-fare zone, a large share of riders—estimates range between 15 and 50 percent—evade fares.³³ According to data provided by the Portland Bureau of Transportation, fares paid by streetcar riders cover less than 3 percent of operating costs, compared with 23 percent for Portland buses. Although the city nominally charges \$2 for an all-day ticket, or \$100 for an annual pass, the actual average fare collected per rider is between 3 and 4 cents, compared with 90 cents for TriMet buses.

As of 2010, with three minor extensions, the Portland streetcar line is 4 route-miles long (8 miles of track). Including the cost of railcars, this line cost more than \$103 million, or just over \$25 million per route-mile. Operating the line costs about \$5.5 million per year, of which less than \$150,000 is recovered in fares.³⁴ The 3.3-mile extension that is now under construction is expected to cost \$148.3 million, or \$45 million per mile, making it “the most expensive streetcar expansion in U.S. history.”³⁵

Meanwhile, Portland is letting the city's most valuable asset—its 5,000-mile street network—crumble. A recent inventory found that more than a quarter of the city's major roads and nearly half of neighborhood streets are in “poor” or “very poor” shape, and at least 60 miles of streets have never even been paved.

Yet the city has deferred plans to repave any rutted streets until at least 2017. While Portland's light-rail lines are built by the region's transit agency, the city builds the streetcar lines, and it has made a conscious decision to put streetcars and bike paths ahead of street maintenance.³⁶

In addition to the streetcar, by 2010 TriMet had opened a total of five light-rail lines extending outward from downtown Portland plus a commuter-rail line. Regionwide, transit's share of commuting recovered slightly from the 1990 low of 6.7 percent, growing to 7.7 percent in 2000 (when Portland had just two light-rail lines extending out of downtown) but falling again after the streetcar and three other light-rail lines opened to 7.1 percent in 2010. Considering that transit carried 9.8 percent of commuters when Portland had a bus-only transit system, this is hardly a glowing endorsement of rail transit.

To provide federal funding for streetcar expansions, in 2003 Portland's representative in Congress, Earl Blumenauer, authored the bill creating the Small Starts program. Blumenauer's intentions were foiled when the FTA under the Bush administration wrote rules requiring that streetcars be cost-effective relative to buses.³⁷ Pressure from Earl Blumenauer and Oregon representative Peter DeFazio (who at the time chaired the Transit Subcommittee of the House Transportation Committee) led the Obama administration to ignore this rule in 2009 when it gave Portland \$75 million in Small Starts funding for the streetcar extension that is now under construction.³⁸ Other cities are waiting for the Obama administration to revise the cost-effectiveness rules before applying for Small Starts streetcar funds.

The streetcar vehicles are a prime example of crony capitalism. Portland purchased its first seven streetcars from manufacturers in the Czech Republic for \$13.4 million, or just over \$1.9 million per car.³⁹ This compares with about \$300,000 for a 40-seat bus. While streetcars are expected to last longer than buses, they don't last six times as long, so the streetcar cost per seat mile is much higher.

To be eligible for federal grants, federal

Selling Streetcars

“buy-America” rules require that at least 60 percent of the components of transit vehicles funded by federal grants be made in the United States. Seeing an opportunity, a Portland-area company called Oregon Iron Works, which had no experience building transit vehicles, increased its lobbying budget from \$25,000 a year in the late 1990s to more than \$100,000 a year after 2003.⁴⁰ One result was that Congress appropriated \$4 million for the construction of a prototype streetcar, and—after some arm-twisting by the Oregon congressional delegation—the FTA awarded the contract to Oregon Iron Works.⁴¹

Doing business as United Streetcar, Oregon Iron Works purchased plans from the Czech manufacturer. The resulting car, however, proved unsatisfactory, and another \$3 million (\$2.4 million of which came from the federal government) was needed to put the car into operation.⁴² This eventually produced a \$1.9 million car that cost \$7 million.

Even before problems with the first car were resolved, Portland gave Oregon Iron Works a \$20 million contract to make six new cars for the major extension of the streetcar line that is now under construction.⁴³ But in 2011 the company announced it would only be able to make five cars for the price Portland had planned to pay for six, or \$4 million per car. “You’re not getting less,” United Streetcar’s president managed to say with a straight face; “I actually think you’re getting more.”⁴⁴

Oregon Iron Works is using Buy-America requirements to convince other cities to buy its streetcars. Tucson, for example, is paying \$28 million for seven cars, or \$4 million per car.⁴⁵ The company’s factory has become a regular tour stop for Obama administration officials—including Transportation Secretary Ray LaHood on July 1, 2009, and Treasury Secretary Timothy Geithner on April 24, 2012—who tout the company’s “economic success.”⁴⁶ In fact, it is a political success, not an economic success, because without political pressure American cities would not be buying streetcars and, even if they did, without Buy-America requirements they would buy lower-cost streetcars made in Europe.

“The Portland Streetcar was the first modern streetcar system built in the United States when it opened in 2001,” says *Street Smart*, a book from the pro-rail group Reconnecting America. “By 2005, it had engendered so much development—about 100 projects worth \$2.3 billion—and such a high-quality urban environment that it stimulated tremendous interest in streetcars across the country.”⁴⁷ In fact, it took a lot of work to “stimulate” that interest, much of which was done by Charlie Hales, the Portland city commissioner who first proposed subsidies to Portland transit-oriented developments.

In 2000 a critic of Portland’s light rail and streetcars challenged Hales’ reelection for city commissioner. Hales simply called developers and rail contractors and quickly raised far more money than his opponent, enabling him to win reelection.⁴⁸ Yet, in 2002, Hales quit his seat on the city council in the middle of his term to take a job with HDR, an engineering firm that, among other things, designs streetcar lines.⁴⁹ (Hales returned to Portland to run for mayor in the 2012 election.)

In that job he persuaded Atlanta, Cincinnati, Salt Lake City, Tucson, and several other cities to apply for federal grants to build streetcars as an economic development tool, using Portland as an example. “The \$55 million streetcar line has sparked more than \$1.5 billion (and growing) in new development,” claimed Hales in 2006, without mentioning the hundreds of millions of dollars worth of other subsidies, all of which he voted for and some of which he himself proposed to supplement the streetcar line.⁵⁰

Tampa is another city Hales points to as an example of economic development resulting from a streetcar project. “Opened in 2002,” wrote Hales, “this 2.5-mile line has stimulated over \$600 million in public projects and a correspondingly robust \$700 million in private projects.”⁵¹

Of course, the only way a streetcar could “stimulate” \$600 million in public projects is if political leaders decided to build those proj-

Commissioner Charles Hales left office to take a job with a consulting firm selling streetcars to cities by bragging about the economic development along Portland’s streetcar line without mentioning the hundreds of millions of dollars in subsidies that he himself had voted for.

Without the supposed economic development benefits, the costs of streetcars are greater than the projected benefits as calculated by streetcar consultants.

ects to support the streetcar. The \$700 million in private projects are likely a response to the \$600 million in public projects as much as they are to the streetcar. In fact, the Tampa streetcar connects three TIF districts that have collectively spent well over \$160 million on local improvements since the streetcar opened.⁵² It is likely that Tampa's vintage streetcar, which is mainly a tourist line, was of little relevance to any of the private investments in the area.⁵³

Another oft-cited example of economic development following a streetcar line is the Seattle South Lake Union Trolley, which supposedly generated more than 13,000 new jobs.⁵⁴ In fact, according to a Seattle low-income housing group, those new jobs were offset by lost jobs displaced by new development; the new development was supported by infrastructure subsidies that “approach \$1 billion” on top of the streetcar; and thousands of the “new” jobs merely relocated from other parts of Seattle.⁵⁵

HDR, along with Parsons Brinckerhoff and other consulting firms hoping to cash in on the streetcar fad, co-sponsored *Street Smart*, Reconnecting America's book on streetcars. Like Hales's presentations, the book never mentions the other subsidies and incentives cities use to promote development along streetcar lines. *Street Smart* does include a chapter by G. B. Arrington—a former TriMet official who now works for Parsons Brinckerhoff—on “zoning for density” and mixed-use transit-oriented developments, which the book calls “streetcar-supportive development.”⁵⁶ The reasoning is circular: cities need streetcars to attract high-density development; streetcars need high-density development to attract riders; and both need subsidies.

The 2009 American Recovery and Reinvestment Act created the Transportation Investment Generating Economic Recovery (TIGER) program, which offered federal grants to cities and states for “shovel-ready” transportation projects. Reflecting its pro-transit bias, the Obama administration granted more funds for transit than for highways even though highways carry nearly 100 times as much passenger traffic, and far more freight, than transit.⁵⁷

Since the stimulus funds were not bound by FTA cost-effectiveness rules, Hales and

HDR persuaded several cities to apply for TIGER grants for streetcar projects. The applications relied almost exclusively on purported economic development benefits to justify the projects. Economic development (measured by a projected increase in land values near the streetcar line) accounts for 71 to 95 percent of the benefits calculated by HDR for five streetcar lines, four of which received TIGER grants and are currently under construction (Table 2). In every case, the economic development benefits alone are greater than the costs, and without the economic development benefits, the costs of all of the lines would be greater than all of the remaining benefits.

Even to the extent that a streetcar, by itself, can enhance the value of nearby properties, it is likely that such an enhancement is at the expense of other property owners in the region. Researchers have repeatedly shown that the use of government subsidies to improve one district or neighborhood has zero net benefits for an urban area as a whole.⁵⁸ Some research even shows that cities that subsidize economic development actually grow slower than those that don't.⁵⁹ Thus, rather than being a genuine social benefit, any increase in property values due to a streetcar is merely a transfer of wealth from property owners away from the streetcar to those nearby.

For rail transit in particular, research has found that rail's effect on economic development is also a zero-sum game. Rail transit does not lead urban areas to grow faster; instead, at most it shuffles growth around from one part of an urban area to another.⁶⁰ The rail transit lines that have had the greatest such shuffling effects, including the Washington Metrorail and San Francisco BART systems, carry hundreds of thousands of people a day.

A streetcar line that moves only a few thousand riders a day is not likely to have a similar effect. Even if it could, there is no reason why property owners throughout a region should pay higher taxes to support a project that will reduce (or slow the growth of) their own property values while it exclusively benefits a few property owners in one neighborhood or business district.

Table 2
Projected Benefits and Costs of New Streetcar Lines

City	Total Benefits (\$millions)	Economic Development Benefits (\$millions)	Economic Development Percentage	Total Costs (\$millions)
Atlanta	167.8	159.3	95.0	65.5
Cincinnati	240.0	211.3	88.0	169.0
Kansas City	316.7	251.4	79.0	157.0
Salt Lake City	89.1	63.6	71.0	62.2
Tucson	414.3	293.2	77.0	166.3

Sources: “Atlanta Streetcar TIGER II Funding Application Project Narrative,” City of Atlanta, 2010, p. 12; “Cincinnati Streetcar TIGER II Application,” State of Ohio, 2010, pp. 14–15; “Kansas City Downtown Streetcar TIGER IV Grant Application,” City of Kansas City, 2012, p. 21; “Sugar House Streetcar TIGER II Discretionary Grant Program: Economic Analysis Supplementary Documentation,” HDR, 2010, pp. 20–21; “Tucson Modern Streetcar Project TIGER Application,” City of Tucson, 2009, p. 17.

Note: All of these projections were made by HDR on behalf of the cities applying for federal stimulus funds.

Economic development is not the only questionable benefit claimed by HDR for the streetcar lines. Tucson claims its project will create \$108 million in “short-term employment benefits.” This \$108 million is apparently the income earned by construction workers and the indirect and induced jobs created when construction workers spend their incomes. However, it is inappropriate to count jobs as a benefit in benefit-cost analyses; after all, any spending will create jobs, but that doesn’t mean those jobs are worthwhile. The fact that HDR did not claim this as a benefit in any other city shows that even most HDR experts do not consider it to be appropriate.

By failing to mention the hundreds of millions of dollars in subsidies to developers along Portland’s streetcar line, Hales’s presentations led urban leaders in Cincinnati and other cities to believe that streetcars alone could revitalize blighted neighborhoods such as Cincinnati’s Over-the-Rhine. But, as noted above, Portland’s downtown was neither blighted when the city opened the streetcar line, nor was the streetcar line the only subsidy to developers.

Other streetcar advocates have made even more outlandish claims. Portland, says a presentation

by the City of Atlanta, made an “original system investment [of] \$57 million” that resulted in “\$3.5 billion development investment” which is supposed to be a “42x multiplier.”⁶¹ Aside from the error in arithmetic—\$57 million times 42 is not \$3.5 billion—this claim ignores the facts that much of the \$3.5 billion in development took place in areas served by the streetcar extensions that brought the cost up to \$103 million and that developers received close to a billion dollars in subsidies other than the streetcar.

The only pro-streetcar report I’ve been able to find that hints that streetcars might not be enough to revitalize blighted areas by themselves was a lengthy paper on streetcars from the Brookings Institution. “It can’t be expected for the streetcar to do all the work of rehabilitating a corridor and increasing land values,” says the report. “In Seattle, Portland, and Tampa many investments were made in infrastructure and planning for the line.”⁶² Although HDR contributed to this report, few, if any, of the HDR reports to the various cities contemplating streetcars mentions this.

The Brookings report proposes that cities pay for streetcar lines by taxing the increased

Hales’s presentations led urban leaders in Cincinnati to believe that streetcars alone could revitalize blighted areas such as the Over-the-Rhine neighborhood.

Transportation projects produce economic growth only when they provide transportation that is less expensive, faster, and/or more convenient than what was previously available.

property values along the route. Such “value-capture” taxes include tax-increment financing and special assessment districts that charge property owners for improvements in their neighborhoods. Such taxes are supposedly a sort of “user fee” to help pay for those transportation facilities. While this sounds reasonable to some, in fact this idea is absurd, especially when applied to transit projects such as a proposed streetcar line.

Transportation projects only truly produce economic growth when they provide transportation that is less expensive, faster, and/or more convenient than what was previously available. Such projects result in new travel that would not have otherwise taken place, and that travel produces economic benefits such as more productive workers, lower-cost consumer goods, and access to better housing.

The Interstate Highway System increased the value of properties that it served. But it did so by massively increasing personal mobility. The average American today travels about 4,000 miles a year on interstates, all of which is new travel (the average American travels about 15,000 miles a year total by auto today, compared with just 7,000 miles a year in 1960, before most interstates were built, so the 4,000 miles on interstates is all new travel). However, the interstates did not need to rely on “value-capture” since they were paid for more directly by users in the form of gas taxes and tolls.

Streetcars cannot produce similar economic benefits, being expensive, slow, and inflexible. Streetcar proponents are proud that most streetcar riders do not represent new travel but instead are drawn from other forms of travel, such as buses or cars, that are, in fact, less expensive. By substituting slow, expensive travel for faster, inexpensive travel, streetcars are a drag on any urban area that has them. Even if streetcars increase the value of properties adjacent to the line, they do so at the expense of property values elsewhere. Such value-capture taxes therefore become a tax on all property owners in the urban area.

If streetcars were truly worthwhile, the people who ride them would gladly pay all of

the costs of building, operating, and maintaining the lines. But, given a choice between paying \$5 to \$10 for a single streetcar ride and \$2 or \$3 for a bus ride, few people will choose the streetcar. Asking others to pay based on some mythical “value capture” is simply one more deception from the streetcar industry.

Other Alleged Streetcar Benefits

Aside from the purported economic development benefits, streetcar advocates claim that streetcars have higher capacities, lower operating costs, lower energy consumption, and less air pollution than buses. A close look at streetcars in Portland and other cities reveals that the reverse is true.

Capacity

Portland streetcars are 66 feet long and look like they can carry far more people than a typical 40-foot bus. In fact, the streetcars have far fewer seats than most buses—31 seats on the Portland streetcar vs. 39 to 43 seats on a 40-foot bus. Where the streetcars have more capacity is in their standing room: the Portland streetcar is supposed to have “crush capacity” standing room for 103 people, compared with 17 to 20 on a 40-foot bus. (Because Americans are not likely to accept crush conditions, actual standing room capacity on a streetcar is closer to about 50 people.)⁶³

Buses, however, aren’t limited to 40 seats. The Las Vegas transit agency has 130 double-decker buses with 85 seats that are also rated to carry 97 standees (though they would carry far fewer in actual practice).⁶⁴ Similar buses but with an open top provide tours in Washington, D.C., San Francisco, and several other cities. These buses cost about \$750,000, which is more than a 40-seat bus but far less than a streetcar.

The transit agency in Everett, Washington, uses slightly smaller double-decker buses with 77 seats. Though these buses have more seats than the 60-foot articulated buses (buses with a built-in trailer) many cities use, they take up no more roadway space and are

no more difficult to maneuver than a 40-passenger bus.⁶⁵ Cities that truly need more capacity than 40-seat buses and want to provide distinctive service to particular districts could use buses like these at a far lower cost than building streetcars.

Capacity per vehicle, however, isn't the true measure of a transit line's capacity. Instead, what counts is the capacity per hour. For safety reasons, streetcars cannot operate closely together; Portland's system allows no more than 20 railcars or trains per hour.⁶⁶ If every railcar is loaded with 134 passengers, the streetcar line can move 2,680 people per hour.

In contrast, a single bus stop can serve up to 42 buses per hour, and Portland's downtown area features staggered bus stops that allow 160 buses per hour.⁶⁷ At 40 seats per bus, that allows a throughput of 6,400 people per hour, more than twice that of the streetcar line, without requiring anyone to stand. Counting only seats, the double-decker buses can move 13,600 people per hour, five times as many as a streetcar line.

Operating Costs

Streetcar advocates claim lower operating costs, apparently using the logic that one streetcar driver can move 134 people, while one bus driver can move only 57 people. But operating a transit system requires more than just hiring drivers. Actual reported costs reveal that streetcars are far more expensive to operate than buses.

Portland streetcar schedules call for about 504 eight-mile round trips each week, or about 210,000 vehicle miles per year.⁶⁸ An annual operating cost of \$5.5 million works out to more than \$26 per vehicle mile. By comparison, TriMet spends about \$11 per revenue mile operating its buses. The average streetcar would have to attract more than twice as many passengers as the average bus for the streetcar to have lower per-passenger operating costs, but there is no reason to think that a bus operating the same route and schedule as a streetcar would attract less than half as many riders.

Portland streetcars are scheduled to travel about 210,000 miles a year in revenue service.

Given \$5.5 million in operating costs, this means 2010 operating costs averaged more than \$26 per vehicle-revenue mile. By comparison, TriMet spent an average of \$11.28 per vehicle-revenue mile operating buses in 2010.

This difference in operating costs is not peculiar to Portland. New Orleans has the nation's most extensive streetcar network, and it spends just over \$25 per vehicle mile on operations, while it spends less than \$14 per vehicle mile operating its buses. Other cities that have downtown or other local streetcars—Kenosha, Little Rock, Memphis, Seattle, Tacoma, and Tampa—spend an average of \$21 per vehicle mile running their streetcars compared with an average of \$10 per vehicle mile running their buses.

Operating costs are not the only costs that need to be considered. Rail transit lines require much more maintenance than buses, which share highway infrastructure with autos and trucks. The biggest maintenance expenses take place 25 to 30 years after the rail line is built, when vehicles, tracks, and electrical equipment begin to wear out. Except for that of New Orleans, none of the streetcar systems in America are that old, and recent New Orleans' maintenance costs have more to do with repairs after Hurricane Katrina than with worn-out infrastructure. Evidence from other types of rail systems, such as the Washington Metrorail, indicates that periodic maintenance costs can be a significant fraction—at least 50 to 100 percent—of the original construction costs. The Department of Transportation requires cities applying for streetcar grants to project costs only 20 years ahead, allowing them to ignore the long-term maintenance costs.

Of course, streetcar capital costs are also much higher than bus costs. The Portland streetcar system currently operates with 10 cars that cost an average of about \$3 million each. Even if twice as many buses were needed to provide comparable service, and even if those buses were outfitted with custom features such as leather seats and on-board WiFi, they would cost a total of less than \$10 million, or less than 10 percent of the capital cost of the streetcar line.⁶⁹

In addition to their high capital and maintenance costs, streetcars cost roughly twice as much to operate, per vehicle-mile of service, as buses.

Streetcars in the 2010 National Transit Database used more energy per passenger mile than either buses or passenger cars.

**Table 3
Austin, Texas, Bus vs. Streetcar Costs**

	Streetcar (\$millions)	Bus (\$millions)
Vehicles	31.7	13.5
Training	1.0	0.0
Maintenance facility	6.1	0.0
Track	66.2	0.0
Street improvements	0.0	12.3
Utility relocation	42.3	0.0
Engineering/management	35.2	3.5
Total	210.4	29.3

Source: Parsons Brinckerhoff, “Future Connections Study, Central Austin Circulator: Alternatives Evaluation,” Capital Metropolitan Transportation Authority, Austin, Texas, 2006, appendix G.

Parsons Brinckerhoff compared Austin, Texas’s, streetcar plans with a system of buses that would provide identical service. As shown in Table 3, the total capital costs of the bus alternative is less than 14 percent of the streetcar alternative. By any measure—capital costs, operating costs, maintenance costs—streetcars are far more expensive than buses. Note that the engineering costs of the streetcar are at least 10 times greater than for buses, which would naturally lead engineering firms such as Parsons Brinckerhoff and HDR to subtly promote streetcars over buses.

Energy Costs

Transit agencies report energy costs by mode to the FTA, but the FTA considers light rail and streetcars to be the same mode. This means the energy required to operate the Portland streetcar is not separately reported from Portland light rail. However, the other streetcar systems in the 2010 database—Kenosha, Little Rock, Memphis, New Orleans, Seattle,

Tacoma, and Tampa—required an average of 4,164 British thermal units (BTUs) per passenger mile. This compares with a 2010 average of 4,040 BTUs per passenger mile for transit buses⁷⁰ and a 2009 average of 3,540 BTUs per passenger mile for automobiles.⁷¹

This does not count the large energy cost of constructing a streetcar line. Portland has not estimated the energy cost of constructing its streetcar lines, but the environmental impact statement for the 5.8-mile North Interstate line estimated that construction would use 3.9 trillion BTUs, or about 670 billion BTUs per route mile.⁷² Light-rail stations are more elaborate than streetcar stations, but like the streetcar, most of this light-rail line operates in city streets rather than being elevated or in a subway as are some other light-rail lines. So this energy cost might be typical for or only a little higher than streetcar construction costs. Even if streetcar operations did save a little energy, that savings would be swamped by the energy cost of construction.

Researchers at the University of California at Berkeley have estimated the complete life-cycle energy costs of rail and highway transportation. While they did not specifically study streetcars, they found on average that the life-cycle costs of rail transit are about 250 percent of the operating costs, while the life-cycle costs of road transportation—car or bus—are only about 160 percent of operating costs.⁷³ This is because highways are much more heavily used than rail transit lines, so each traveler shares the energy costs of construction with far more users.

Air Pollution

More than three-fourths of the energy in Oregon comes from hydroelectric dams or other nonpolluting sources, so the electric-powered streetcar is cleaner than most buses.⁷⁴ In most states, however, the vast majority of electricity comes from fossil fuels, and thus air emissions from streetcars are comparable to or greater than those from buses or autos.

In 2010 generating the power for Portland's light rail (including the streetcar) resulted in 54 grams of carbon dioxide emissions per passenger mile. This compares with 245 grams for the average TriMet bus and 290 grams for the average transit bus nationwide. However, producing the electricity required to power the Memphis streetcar generated 966 grams per passenger mile, and the Kenosha streetcar was even worse at 2,005 grams per passenger mile.

Cities that wish to apply nonpolluting sources of electricity to public transit would do better with trolley buses than streetcars. Since transit is such a minor part of most cities' transportation systems, growing cities would do even better applying nonpolluting electricity to traditional home, office, and industrial uses while relying on improvements in auto efficiencies to reduce transportation emissions.

Rail vs. Bus

Rail transit proponents rely heavily on a myth that many people will ride railcars who won't ride buses. They use the term "quality transit" as a euphemism for rail transit, imply-

ing that buses are not quality transit. Apparently, "livability" not only means you don't have to have a car, but you don't have to lower yourself by taking a bus either. Taxpayers are supposed to cater to such snobs by providing them with rail alternatives that cost many times more than buses.

The reality is that transit riders are attracted mainly by frequencies and speeds, factors that are not intrinsic to rail. Most light-rail lines operate between four and eight times an hour throughout the day, while most bus routes operate just two to four times an hour. Most rail lines other than streetcars stop only about once every mile, allowing them to run faster than buses that often stop five or six times every mile. The higher frequencies and faster speeds resulting from fewer stops—either of which can be duplicated by buses—are what attract riders to rail, not the fact that the vehicles have steel wheels instead of rubber tires.

Private intercity bus companies such as Bolt Bus have shown that buses can offer high-quality service, with leather seats, on-board WiFi, and power outlets for laptops and other electronics. Such buses operate in numerous corridors in competition with Amtrak, with virtually no subsidies, often offering more frequent service at lower cost than the trains.⁷⁵ In a few corridors, companies such as LimoLiner offer first-class services with more spacious seats, on-board meals, and videos.⁷⁶

Commuter companies such as the Hampton Jitney and Bauer's Wi-Drive provide luxury buses with leather seats, on-board coffee and snacks, and other services.⁷⁷ Private tour bus companies, such as Big Bus Tours, operate for-profit circulator buses in Las Vegas, Miami, Philadelphia, San Francisco, Washington, and other cities.⁷⁸ These private companies, which share road costs with autos and trucks but otherwise require minimal private infrastructure, are moving in the opposite direction from transit agencies and city governments infatuated with rail transit, with its high infrastructure costs.

Streetcar proponents also claim that developers respond to the fact that a streetcar line is "permanent," while a bus route can change. As

Transit agencies can attract new riders to their buses by offering such amenities as leather seats, on-board WiFi, and electrical outlets, all at a far lower cost than streetcars.

“Paint is cheap; rail systems are extremely expensive,” says FTA Administrator Peter Rogoff. “You can entice even diehard rail riders onto a bus if you call it a ‘special’ bus and just paint it a different color.”

University of Minnesota transportation engineer David Levinson points out, the fact that most streetcars that existed a century ago have been torn up “believes their permanence. Yet on almost every former streetcar route, today we see continued bus transit service indicating that it is the service that is permanent if the demand is there.”⁷⁹

In fact, most transit lines carry so few people that they are, at best, ignored by developers. Some developers actually count transit as a negative, not a positive, factor in their location decisions, saying that it can bring in vandals, burglars, and other criminals.

Not even Peter Rogoff, the Obama administration’s official in charge of the FTA, believes that railcars are better at attracting riders than buses. Rogoff was stunned by a 2010 FTA report revealing that America’s transit systems—meaning, mainly, the rail transit systems—are suffering from a \$78 billion maintenance backlog. He concluded that it “isn’t responsible” for transit agencies to seek to build more rail transit when they can’t even afford to maintain the rail lines they have. “At times like these,” he said in a 2010 speech at a meeting sponsored by the Boston Federal Reserve Bank, “it’s more important than ever to have the courage to ask a hard question: if you can’t afford to operate the system you have, why does it make sense for us to partner in your expansion?”⁸⁰

Specifically addressing the question of rails versus buses, Rogoff noted that, “Paint is cheap; rail systems are extremely expensive.” While many people like trains, he continued, “it turns out you can entice even diehard rail riders onto a bus if you call it a ‘special’ bus and just paint it a different color than the rest of the fleet.” One way of improving bus service, bus-rapid transit, “is a fine fit for a lot more communities than are seriously considering it,” Rogoff added.⁸¹ The same can be said for downtown circulators, the bus-equivalent of streetcars.

Conclusion

Transit advocates who believe streetcars offer a “quality” alternative to buses are fooling themselves. Their low average speeds, limited number of seats, and inflexibility make street-

cars inferior to buses in every respect except in their ability to consume large amounts of taxpayer money.

City officials who believe that streetcars alone will revitalize blighted parts of their urban areas have been deceived by smooth-talking consultants and dissembling politicians who were foolish enough to build streetcars in their cities. Cities with a billion dollars or so to burn could spend \$100 million on a streetcar line, support it with \$900 million in other subsidies to developers, and still not get the success of Portland’s Pearl District unless they do it in an area that is already rapidly growing.

Streetcars are a long-obsolete technology. Cities that wish to revitalize neighborhoods would do better to invest in modern transportation, including repairing their streets, installing the latest traffic signal coordination systems, and improving safety for all travelers.

Notes

1. Bradford Snell, “The Streetcar Conspiracy: How General Motors Deliberately Destroyed Public Transit,” TomPaine.com, 2001, tinyurl.com/6j67gz.
2. For refutations of this myth, see Scott Bottles, *Los Angeles and the Automobile: The Making of the Modern City* (Berkeley, CA: UC Press, 1987), pp. 3–4; Christine Cosgrove, “Roger Rabbit Unframed: Revisiting the GM Conspiracy Theory,” *ITS Review Online* 3, no. 1, tinyurl.com/2bcg2t; Martha J. Bianco, *Kennedy, 60 Minutes, and Roger Rabbit: Understanding Conspiracy-Theory Explanations of the Decline of Urban Mass Transit*, Portland State University Center for Urban Studies Discussion Paper 98-11, November 1998; and Cliff Slater, “General Motors and the Demise of Streetcars,” *Transportation Quarterly* 51, no. 3 (Summer 1997): 45–66, tinyurl.com/yuth5m.
3. James Graebner, “A History of the Electric Streetcar,” in Gloria Ohland and Shelley Poticha, *Street Smart: Streetcars and Cities in the Twenty-First Century*, 2nd ed. (Oakland, CA: Reconnecting America, 2009), p. 21.
4. *United States v. National City Lines*, 334 U.S. 573 (1948).
5. Bill Vandervoort, “Cities Served by National City Lines,” 2005, tinyurl.com/9tuzb7.
6. “Physical Growth of the City of St. Louis,” St. Louis City Planning Commission, 1969, tinyurl.com/ckwand.

7. "Streetcars' Use Rapped: New Yorker Cites Expense, Slowness," *The Oregonian*, August 24, 1947, p. 14.
8. Ohland and Poticha, *Street Smart*, pp. 79–82.
9. See Randal O'Toole, "Comments on Advance Notice of Proposed Rulemaking," Cato Institute, July 15, 2010, tinyurl.com/7ref8z9; and Randal O'Toole, "Comments on Notice of Proposed Rulemaking: Major Capital Investment Projects," Cato Institute, March 5, 2012, tinyurl.com/894lz3b.
10. Elana Schor, "LaHood's Twelve-Word Definition of 'Livability,'" DC.StreetsBlog.org, October 5, 2009, tinyurl.com/345s46s.
11. 49 USC §5309(a)(1)(A); 49 USC §5309(d)(2)(B).
12. 49 USC §611, appendix A(d)(1).
13. Dylan Rivera, "Federal Rules Prefer Buses over Streetcar Expansion," *The Oregonian*, December 27, 2007, p. D1.
14. "Notice of Proposed Rulemaking: Major Capital Investment Projects," *Federal Register*, January 25, 2012, pp. 3908–09.
15. Randal O'Toole, "Comments on Notice of Proposed Rulemaking: Major Capital Investment Projects," p. 3, tinyurl.com/894lz3b.
16. Wenling Chen, "Analysis of Rail Transit Project Selection Bias with an Incentive Approach," *Planning Theory* 6, no. 1 (March 2007): 69–94.
17. Don H. Pickrell, "Urban Rail Transit Projects: Forecast Versus Actual Ridership and Costs," Urban Mass Transit Administration, Washington, 1990, p. xi.
18. Dee J. Hall, "The Choice: High Density or Urban Sprawl," *Wisconsin State Journal*, July 23, 1995.
19. Mike Saba, Testimony before Portland City Council, October 23, 1996, tinyurl.com/6mfxtl9.
20. Wayne Remboldt, Testimony before Portland City Council, October 23, 1996, tinyurl.com/86sbgub3.
21. Dan Steffey, Testimony before Portland City Council, October 23, 1996, tinyurl.com/7xx3wbh.
22. Charlie Hales, Comments at Portland City Council Hearing, October 23, 1996, tinyurl.com/88qpspe.
23. Wade Nkrumah, "1996 Voters' Guide Portland City Council, Seat 4," *The Oregonian*, April 24, 1996, p. C2.
24. "Portland Development Commission Adopted Budget FY 2011–12," Portland Development Commission, Portland, 2011, p. 37.
25. *Ibid.*, p. 29.
26. "Portland Streetcar: Development Oriented Transit," City of Portland Office of Transportation, April 2008, p. 2.
27. "Portland Streetcar Development Summary," City of Portland Office of Transportation, April 2008, pp. 1–6.
28. *Ibid.*, pp. 1–6.
29. "The History of Craft Beer in Oregon," Oregon Brewers Guild, p. 2, tinyurl.com/84gdq3x in 2012.
30. Ethan Epstein, "Portland Going Nowhere," *American Spectator*, March 2011, tinyurl.com/7dlkvpmg.
31. Kristina Brenneman, "They Bought. They Built. Now They Reflect," *Portland Tribune*, September 12, 2003.
32. "2006 Downtown Portland Business Census and Survey," *Portland Business Alliance*, 2007, pp. 3, 11.
33. Todd Murphy, "Streetcar Still a Free Ride for Scofflaws," *Portland Tribune*, September 12, 2006, tinyurl.com/7btn57k.
34. "Portland Streetcar Capital and Operations Funding," *Portland Streetcar*, 2010, pp. 1–2, tinyurl.com/ct3bb9r.
35. Brad Schmidt, "Portland's \$148.3 Million East-side Streetcar Project Delayed Five Months, Includes Five Streetcars Instead of Six," *The Oregonian*, July 19, 2011, tinyurl.com/3ty3zu5.
36. Beth Slovic, "Why Can't Portland Repave Its Rutted Roads?" *The Oregonian*, February 26, 2012, tinyurl.com/848ff3d.
37. Dylan Rivera, "Streetcar Bumps into Federal Bias for Buses," *The Oregonian*, September 25, 2007, tinyurl.com/br3v75z.
38. Charles Pope, "Feds Approve \$75 Million for Streetcar Expansion," *The Oregonian*, April 30, 2009, tinyurl.com/dn5p5w.
39. "Portland, Oregon," APTA Streetcar and Heritage Trolley Site, American Public Transportation Association, tinyurl.com/2oyoy5.
40. "Annual Lobbying by Oregon Iron Works," Center for Responsive Politics, 2012, tinyurl.com/79zzsk2.

41. Ryan Frank and Brent Hunsberger, "A Streetcar Named Acquire," *The Oregonian*, June 25, 2007, p. 1.
42. "Feds Give TriMet \$2.4M for Streetcar," *Portland Business Journal*, April 16, 2010, tinyurl.com/y3gvh92.
43. Dylan Rivera, "Portland Inks \$20 Million Deal for Locally Made Streetcars," *The Oregonian*, August 14, 2009, tinyurl.com/o6g9ft.
44. Schmidt.
45. Todd Murphy, "Ambition Sparks Oregon Iron Works VP," *Oregon Business*, January 2010, tinyurl.com/yl36r79.
46. Brent Hunsberger, "Treasury Secretary Timothy Geithner Tours Portland-Area Businesses, Touts Economic Success," *The Oregonian*, April 25, 2012, tinyurl.com/6ro4g6j; Dylan Rivera, "Streetcar 'Made in USA,'" *The Oregonian*, July 2, 2009.
47. Shelley Poticha and Gloria Ohland, "Urban Idyll: A Case Study of the Portland Streetcar," in Ohland and Poticha, *Street Smart*, p. 4.
48. Scott Learn, "Last-Minute Donations Come into Campaigns; Council Hopefuls Charlie Hales and Ted Piccolo and Mayor Vera Katz Collect from Familiar Sources," *The Oregonian*, May 16, 2000, p. B2.
49. Janet Christ, "Hugs and Flowers as Hales Hits the Road," *The Oregonian*, May 30, 2002, p. D2.
50. Charles Hales and Robert Cone, "Streetcars Bringing People, Businesses Back to the City," HDR Transit Line, 2006, p. 2, tinyurl.com/2nx6x5.
51. Ibid.
52. "Community Reinvestment Agency Annual Activity Reports," City of Tampa, 2005–2011, tinyurl.com/6quknys.
53. Streetcar supporters distinguish between "modern streetcars," which have a streamlined design and are built mainly for use by local residents, and "vintage streetcars," which have an early 20th-century design and are built mainly as tourist attractions. Galveston, Kenosha, Little Rock, Memphis, and Tampa are vintage; Atlanta, Cincinnati, Portland, Seattle, Tacoma, and Tucson are modern.
54. Jim Carlton, "Brownfields Bloom in Seattle," *Wall Street Journal*, July 25, 2011, tinyurl.com/bw99wub.
55. Carolee Colter and John V. Fox, "We've Paid in Spades, But South Lake Union's Job Growth Has Yet to Deliver," *Real Change News*, September 14, 2011, tinyurl.com/7zo2793.
56. G. B. Arrington, "Zoning for Density, Intensity, and Intimacy," in Ohland and Poticha, *Street Smart*, p. 28.
57. Yonah Freemark, "Rail and Transit Benefit, Highways Lose Out in TIGER Grant Distribution," *The Transport Politic*, February 17, 2010, tinyurl.com/6ou5d3l.
58. See, for example, David Swenson and Liesl Eathington, "Do Tax Increment Finance Districts in Iowa Spur Regional Economic and Demographic Growth?" Department of Economics, Iowa State University, 2002, p. 1, tinyurl.com/6unvc2u.
59. Richard Dye and David Merriman, "The Effects of Tax Increment Financing on Economic Development," Institute of Government and Public Affairs, University of Illinois, Chicago, 1999, p. 1, tinyurl.com/clptus.
60. Robert Cervero and Samuel Seskin, "An Evaluation of the Relationship between Transit and Urban Form," Transportation Research Board, 1995, p. 3.
61. "Atlanta Streetcar: Downtown Development Day 2011," GeorgiaTransitConnector.org, 2011, tinyurl.com/8a7olze.
62. Brookings Institution, HDR, Re-Connecting America, and RCLCO, "Value Capture and Tax-Increment Financing Options for Streetcar Construction," Brookings Institution, Washington, June 2009, p. 29.
63. "2010 National Transit Database," Federal Transit Administration, 2011, "Revenue Vehicle Inventory" spreadsheet.
64. Ibid.
65. "Double Decker Buses Perk Up the Fleet," Community Transit, Everett, Washington, 2007.
66. Robert L. Bertini, "Bus Facility Capacity," Portland State University, May 2, 2006, p. 5.
67. Ibid., p. 15.
68. "Streetcar Schedule," *Portland Streetcar*, 2012, portlandstreetcar.org/node/3.
69. Based on my personal interviews with bus manufacturers attending the California Bus Association annual meeting in Monterey, California, October 24, 2011, a basic transit bus costs about \$300,000 while the most luxurious single-decker buses cost up to about \$500,000.
70. Calculated from "2010 National Transit Database," Federal Transit Administration, 2011, "Energy" and "Service" spreadsheets.

71. Stacy C. Davis, Susan W. Diegel, and Robert G. Boundy, "Transportation Energy Data Book, 30th ed.," Oak Ridge National Laboratory, 2011, pp. 2-15.
72. *North Corridor Interstate MAX Final Environmental Impact Statement* (Portland, OR: Metro, 1999), pp. 4-104.
73. Mikhail V. Chester and Arpad Horvath, "Environmental Assessment of Passenger Transportation should Include Infrastructure and Supply Chains," *Environmental Research Letters* 4 (2009): 1, tinyurl.com/njz4vt.
74. "State Electricity Profiles 2010," Department of Energy, 2012, p. 224.
75. Randal O'Toole, "Intercity Buses: The Forgotten Mode," Cato Institute Policy Analysis no. 680, June 29, 2011, pp. 4-5.
76. "Quality Travel Time between New York and Boston," LimoLiner, Avon, Massachusetts. 2012, limoliner.com.
77. "Hampton Jitney," Hampton Jitney, Southampton, New York, 2012, www.hamptonjitney.com; "Welcome to Bauer's Wi-Drive," Bauer's Wi-Drive, San Francisco, 2012, www.bauerswi-drive.org.
78. "Big Bus Tours," The Big Bus Company, 2012, bigbustours.com.
79. David Levinson, "The Magic of Streetcars, the Logic of Buses," Streets.MN, April 23, 2012, tinyurl.com/7da6tx5.
80. Peter Rogoff, "Next Stop: A National Summit on the Future of Transit," Presentation at the Federal Reserve Bank of Boston, May 18, 2010, tinyurl.com/7v6e8aq.
81. Ibid.

RELATED STUDIES FROM THE CATO INSTITUTE

Ending Congestion by Refinancing Highways by Randal O'Toole, Policy Analysis no. 695 (May 15, 2012)

Intercity Buses: The Forgotten Mode by Randal O'Toole, Policy Analysis no. 680 (June 29, 2011)

Crony Capitalism and Social Engineering: The Case against Tax-Increment Financing by Randal O'Toole, Policy Analysis no. 676 (May 18, 2011)

Defining Success: The Case against Rail Transit by Randal O'Toole, Policy Analysis no. 663 (March 24, 2010)

Getting What You Paid For—Paying For What You Get: Proposals for the Next Transportation Reauthorization by Randal O'Toole, Policy Analysis no. 644 (September 15, 2009)

Roadmap to Gridlock: The Failure of Long-Range Metropolitan Transportation Planning by Randal O'Toole, Policy Analysis no. 617 (May 27, 2008)

Does Rail Transit Save Energy or Reduce Greenhouse Gas Emissions? by Randal O'Toole, Policy Analysis no. 615 (April 14, 2008)

Debunking Portland: The City That Doesn't Work by Randal O'Toole, Policy Analysis no. 596 (July 9, 2007)

A Desire Named Streetcar: How Federal Subsidies Encourage Wasteful Local Transit Systems by Randal O'Toole, Policy Analysis no. 559 (January 5, 2006)

High-Speed Rail Is Not "Interstate 2.0" by Randal O'Toole, Briefing Paper no. 113 (September 9, 2009)

Rails Won't Save America by Randal O'Toole, Briefing Paper no. 107 (October 7, 2008)

RECENT STUDIES FROM THE CATO INSTITUTE POLICY ANALYSIS SERIES

698. **Competition in Currency: The Potential for Private Money** by Thomas L. Hogan (May 23, 2012)

697. **If You Love Something, Set It Free: A Case for Defunding Public Broadcasting** by Trevor Burrus (May 21, 2012)