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Reducing Livability How Sustainability Planning Threatens the American Dream

by Randal O'Toole

Executive Summary

In response to state laws and federal incentives, cities and metropolitan areas across the country are engaged in “sustainability planning” aimed at reducing greenhouse gas emissions. In many if not most cases, this planning seeks to reshape urban areas to reduce the amount of driving people do. In general, this means increasing urban population densities and in particular replacing low-density neighborhoods in transit corridors with dense, mixed-use developments.

Such planning tramples on property rights and personal preferences. To increase urban area densities, planners use containment policies such as urban-growth boundaries or greenbelts. Owners of land outside these boundaries are restricted from developing their land. Inside the boundaries, housing prices rise, making homeownership in general, and single-family homes in particular, unaffordable to large numbers of people.

Surveys show that people of all age groups aspire to own and live in a single-family home with a yard. Yet planners in Portland, San Francisco, and other urban areas seek to reduce the share of households living in single-family homes to well below 50 percent. They are doing this by restricting the construction of single-family homes while subsidizing multifamily housing.

To make matters worse, these policies are simply not effective at reducing greenhouse gas emissions. Plan Bay Area, a plan recently approved for the nine-county San Francisco–Oakland–San Jose metropolitan area, proposes to spend \$14 billion in subsidies for high-density housing and \$5 billion in subsidies for rail transit. Yet the combined effect of these subsidies will be to reduce the region’s greenhouse gas emissions by less than 2 percent, at a cost of nearly \$1,200 per ton of abated emissions. By contrast, a separate “climate initiative” program for the region includes projects such as car sharing, van pooling, and incentives for people to buy more fuel-efficient cars. It is expected to reduce the region’s emissions by nearly 3 percent, at a cost of just \$22 per ton of abated emissions.

Planners are undiscouraged by the wastefulness of their density-and-transit programs. Laws passed in California, Florida, Oregon, and Washington require cities to implement such programs no matter how costly, and the Obama administration is offering cities in other states grants to encourage them to write such plans as well. These plans should be abandoned because they intrude on property rights and personal housing preferences and are cost-ineffective at saving energy and reducing emissions.

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Plan Bay Area would reduce the share of San Francisco Bay Area households living in single-family homes from 56 percent to no more than 48 percent.

Introduction

On July 18, 2013, the Association of Bay Area Governments and the San Francisco Metropolitan Transportation Commission jointly approved Plan Bay Area. This plan attempts to reduce greenhouse gas emissions by mandating a 30 percent increase in population density for urbanized portions of the nine-county region and putting 80 percent of new housing and 66 percent of new jobs in high-density, mixed-use developments located along transit corridors.¹

If fully implemented, the plan will reduce the share of households living in single-family homes from 56 percent to no more, and possibly much less, than 48 percent. Meanwhile, the plan makes the vast majority of private land in the region, including some areas that were previously open for development, off-limits to development without providing any compensation to the landowners.

In one sense, Plan Bay Area is just an incremental tightening of the already draconian land-use regulations that plague much of California. But Plan Bay Area and similar plans for other California metropolitan areas also set a precedent for cities across the country that want to regulate land use, housing, and transportation as a way of reducing greenhouse gas emissions—or, alternatively, to use climate change as an excuse for regulating land use, housing, and transportation.

Indeed, the latest urban planning fad, often called *sustainability* or *climate action planning*, is taking place in cities and metropolitan areas throughout the nation. Supposedly, such planning aims at reducing greenhouse gas emissions. Yet the plans do the same things—increase urban densities and attempt to discourage driving—that urban planners have been trying to do for decades under very different pretenses.

In some places, these plans are driven by state laws. California, Washington, and Florida all passed laws in 2008 aimed at reducing driving through land-use planning.

For states that have not passed such laws, the Obama administration is “encouraging” metropolitan planners to include land-use regulation in their transportation plans and to focus that regulation on reducing greenhouse gas emissions. This encouragement comes in the form of grants, both for planning and for construction of transportation facilities for alternative modes of travel such as streetcars or bicycles.

Sustainability planning imposes high costs on urban areas and their residents. Housing prices increase, and people lose their freedom of choice over the kind of housing they live in. Costs rise as well for other businesses, including retail, industrial, office, or any business that requires land. Congestion increases—one of the tactics for getting people to drive less—wasting people’s time and fuel.

Yet despite these high costs, land-use regulation has at best negligible effects on greenhouse gas emissions. Optimistic assumptions built into planning models for Plan Bay Area predict that the land-use and transit aspects of the plan will reduce emissions just 2.6 percent. More realistic assessments suggest that the actual reduction will be close to zero.

The History of Sustainability Planning

The notion that central planners could reduce energy consumption in urban areas by increasing population densities was proposed in a 1973 book titled *Compact City: A Plan for a Livable Urban Environment*. The book claimed that higher-density cities would reduce housing and transportation costs by 25 percent “and would result in superior housing and superior transportation.”²

Among the many other benefits that the book claimed for higher-density cities was energy conservation. “In *Compact City* use of petroleum in autos and trucks would, of course, be dramatically reduced. So would direct use of petroleum for heating. . . . Overall,

there appears to be a reduction of energy use of at least 15 percent.”³ This number, along with most others in the book, was based on crude, hypothetical projections and not on any actual measurements.

The book noted that burning of fossil fuels could introduce too much carbon dioxide into the atmosphere, which “could affect the polar icecaps” and “influence the world heat levels enough to affect the climate and ecosystems noticeably.”⁴ However, the authors gave this problem less consideration than such things as the collection of solid waste and recycling or “mass horizontal transportation” (meaning some form of rail transit).

Though energy considerations were only a minor part of the book, the oil shortages of the 1970s brought this concept to the attention of a few members of Congress. In 1979, the House held a hearing on “Compact Cities: A Neglected Way of Conserving Energy.”⁵ Nearly all witnesses at the hearing agreed that urban sprawl wasted energy as well as increased housing and urban service costs, though none offered any evidence or support for these claims.

The hearing was led off by testimony from Oregon governor Tom McCall and Boulder, Colorado, mayor Ruth Correll as representatives of two areas that had supposedly “tamed” sprawl. Under McCall, Oregon had passed a land-use law requiring all cities to draw urban-growth boundaries, outside of which development would be limited. Boulder had similarly limited expansion by purchasing land around the city to form a greenbelt. However, these policies were too new for either elected official to be able to show that they had saved any energy.

The implicit assumptions behind the claim that density saved energy were that people living in denser cities would drive less and use transit more; and when they did drive, they would drive shorter distances because everything would be closer together. A 1977 book, *Public Transportation and Land Use Policy*, compared the population densities of various cities in history with the dominant forms of transport in those cities. Eu-

ropean cities in 1938, for example, typically had densities of 25,000 to 90,000 people per square mile and were dominated by mass transit. By comparison, American cities of the 1960s, where auto use was predominant, had densities of only about 3,000 to 9,000 people per square mile.⁶

Similarly, a 1989 study by urban planners Peter Newman and Jeffrey Kenworthy compared gasoline consumption in 10 American cities and concluded that the denser cities used less gasoline per capita.⁷ Studies such as these led urban planners to conclude that there was a “land use–transportation connection” that allowed them to influence people’s transportation choices by manipulating land uses. Higher densities would mean more transit and less driving. A further implicit assumption was that transit saved energy, even though most urban transit was in the form of diesel-powered buses that, on average, use far more energy per passenger mile than cars. While diesel may be more fuel efficient, that efficiency is lost when running buses that are so often empty or far under capacity.⁸

These ideas contributed to a movement among architects and planners known as “New Urbanism.” A 1991 statement defining New Urbanism declared that all communities should be designed “so that housing, jobs, daily needs and other activities are within easy walking distance of each other” as well as “within easy walking distance of transit stops.”⁹

New Urbanism consciously attempted to emulate cities as they were designed before automobiles. For New Urban architect Andres Duany, the ideal models were the “streetcar cities” built in the early part of the 20th century: multifamily dwellings and houses on small lots all within walking distance of small grocery stores and other businesses. “Urban planning reached a level of competence in the 1920s that was absolutely mind-boggling,” says Duany.¹⁰

These ideas were incorporated into a “land use transportation air quality” (LUTRAQ) study commissioned by the planning advocacy group 1000 Friends of Oregon. Or-

New Urban planners attempt to rebuild cities as they were designed before automobiles in the expectation that this will reduce driving.

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egon required cities to expand urban-growth boundaries to maintain a 20-year supply of developable land. But LUTRAQ proposed instead to rezone areas within the boundaries for higher-density, mixed-use developments, which the plan called “transit-oriented developments,” arguing that this would lead to less driving and less need to build more roads.¹¹

By the time climate change became a major issue in the early 1990s, the notion that dense cities used less fossil fuels, and therefore emitted less greenhouse gases, was deeply ingrained in the urban planning profession. However, when government officials met in Rio de Janeiro in 1992 to discuss climate issues, they included only a few lines related to urban planning in their 350-page “Agenda 21.” The paper urged countries to take “a comprehensive approach to urban-transport planning and management” and:

- a. Integrate land-use and transportation planning to encourage development patterns that reduce transport demand;
- b. Adopt urban-transport programmes favouring high-occupancy public transport in countries, as appropriate;
- c. Encourage non-motorized modes of transport by providing safe cycleways and footways in urban and suburban centres in countries, as appropriate.¹²

Note that the first statement is vague, and did not specifically mention density, while the other two are qualified with “as appropriate.” To urban planners, “integrating land-use and transportation planning to reduce transport demand” implied promoting dense, mixed-use developments. However, soon after the Rio meeting, a number of economists and planners began questioning the assumptions behind this proposal.

One of the first challenges came from University of Southern California planning professor Genevieve Giuliano, who noted in 1995 that LUTRAQ numbers projected that transit-oriented developments and other

land-use changes actually had very little effect on people’s decisions whether to drive. Instead, the main effect the LUTRAQ study projected came from an assumption that all suburban employers (and, presumably, retailers) would charge their employees and customers for parking. “If the aim is to reduce environmental damage generated by automobiles, the effective remedy is to directly price and regulate autos and their use, not land use,” Giuliano concluded.¹³

Giuliano also noted that planners’ assumptions that people want to live as close as possible to work were clearly false: in fact, people tended to put some distance between their homes and work, which suggested that efforts to move people closer would fail. Based on this and other evidence, Giuliano concluded that the land use–transportation connection was not as strong as most planners assumed. “Land use policies appear to have little impact on travel outcomes,” she wrote.¹⁴

Another 1995 challenge came from British geographer Michael Breheny. His analysis of data for British cities found that “energy savings from urban containment are likely to be disappointingly low. Indeed, even modest savings could only be achieved through draconian policies of containment.” He suggested “that the levels of energy savings likely to result from even quite tough compact-city proposals could be achieved in other, much simpler and relatively immediate ways” such as improved vehicle technology.¹⁵

In 1996, Marlon Boarnet, an urban planning professor at the University of California–Irvine, noted that “evidence on the link between land use and travel behavior is inconclusive.” He used travel diary data—actual travel records collected from 769 Southern California residents—to compare travel with the land-use patterns in which each individual lived. He found that “the influence of land use variables is quite weak” and sometimes the opposite of what planners think. For example, people living within walking distance of retail centers actually drove more than those who did not.¹⁶

University of California–Irvine planning professor Randall Crane did a similar study using travel diaries collected from nearly 7,500 people. In his 1998 paper he concluded that there is “little role for land use in explaining travel behavior.”¹⁷

In 1999, Jeffrey Kenworthy, one of the planners who claimed that denser American cities used less gasoline per capita than less-dense ones, published a massive, 704-page book detailing 1960 through 1990 data for nearly four dozen urban areas around the world. His goal was to show that people in denser urban areas drove less. But his data also showed that, no matter how dense they were and no matter how much money cities put into urban transit, auto driving had increased and transit ridership had declined or, at best, was stagnant everywhere. He failed to find a single urban area that had reduced per-capita driving between 1960 and 1990, much less one that reduced driving by increasing densities.¹⁸

Proponents of land-use regulation did many studies showing that people living in dense, mixed-use developments drove less than people in low-density suburbs.¹⁹ However, these studies rarely accounted for self-selection—that is, that people who want to drive less tend to live in denser areas. This doesn’t mean that forcing people who prefer to drive to live in higher-density areas will significantly change their travel habits.

In 2008, University of California–Irvine economist David Brownstone reviewed the literature on relationships between urban form and driving at the request of the Transportation Research Board. He found that most studies failed to account for self-selection, but those that did concluded that urban form had little influence on driving. While urban form did have a statistically measurable influence on driving, it was “too small to be useful” in saving energy or reducing greenhouse gas emissions.²⁰

There *is* a connection between transportation and land use, but it is mostly a one-way street. Changing transportation technologies leads to changes in land uses. But rede-

signing cities to look the way they did before cars were dominant won’t make people forget about the advantages of convenient, low-cost, door-to-door transportation. Planners who think this will work have a cargo-cult mentality; if high-density, mixed-use developments of the sort that were common in the early part of the 20th century could allow people to avoid driving, then cars would never have become popular.

California’s SB 375

Despite the growing literature showing that density and urban form have little effect on driving, in 2008 planning advocates persuaded the California legislature to impose density mandates on metropolitan areas in an effort to reduce carbon dioxide emissions. “Greenhouse gas emissions from automobiles and light trucks can be substantially reduced by new vehicle technology and by the increased use of low carbon fuel,” says California Senate Bill 375. “However, even taking these measures into account, it will be necessary to achieve significant additional greenhouse gas reductions.”²¹

The law set a target of reducing per capita automotive greenhouse gas emissions by 15 percent and specified that metropolitan areas meet this target by increasing the share of housing in dense developments located along transit lines. The law also required planners to ensure that housing in California, which has some of the least affordable housing in the nation, is made more affordable.

Several other states passed laws in 2008 aimed at reducing driving. Washington passed a law mandating a 50 percent reduction in per capita driving by 2050 and encouraging cities to use land-use regulation to achieve that target.²² Oregon has enacted similar, though somewhat less ambitious, targets through its Land Conservation and Development Commission.

Florida passed a law in 2008 mandating “discouragement of urban sprawl” and

Despite research showing that urban form has little effect on driving, planning advocates persuaded the California legislature to impose density mandates on metropolitan areas to reduce carbon emissions.

Beginning in the 1970s, California land-use regulation cut the state's population growth in half.

“energy-efficient land-use patterns” aimed at reducing energy consumption. The law specifies that metropolitan planners must “incorporate transportation strategies to address reduction in greenhouse gas emissions from the transportation sector.”²³

Plan Bay Area

While several metropolitan areas in California have written plans under SB 375, Plan Bay Area is probably the most controversial and certainly provides a classic example of planners’ narrow vision overriding both reality and cost-effectiveness.

Prior to Plan Bay Area, most of the nine counties in the San Francisco Bay Area had drawn urban-growth boundaries outside of which development was strictly limited. For one reason or another, cities inside the boundaries also limited residential development. In some cases, local residents opposed increased densities for their neighborhoods. But many city officials also believed that, under proposition 13—a property tax limitation law passed by voters in 1978—residences paid less in property taxes to the cities than they cost the cities in urban services.²⁴

The result was a dramatic slowdown in the issuance of building permits in the 1970s. Where an average of 2.1 million housing permits per year had been issued in the decade before proposition 13, only 1.1 million permits per year were issued in the following two decades. Where the state’s population grew by 89 percent in the 20 years between 1950 and 1970, it took another 42 years for the population to grow by the same amount.

This slowing of growth is not because people no longer wanted to live in California’s pleasant climate and dramatic scenery. Instead, the demand to live in California was expressed by growing housing prices. Where the state’s median home price in 1969 was about two times the median family income, by 2006 it was more than eight times the median family income. Someone can buy a home that costs twice their annual income

and pay off the mortgage on the home in less than 10 years by dedicating a quarter of their income to the loan. But someone paying off a loan that is eight times their income requires dedicating half their income to the loan for 30 years.

The authors of SB 375 were conscious of the state’s housing affordability problems, so in addition to reducing greenhouse gas emissions they required planners to ensure that each region had adequate housing to meet its needs. They apparently expected that the construction of large amounts of multifamily housing would make up for shortages in single-family housing.

Plan Bay Area predicted 30 percent population growth by 2040, and the plan mandates that all of that growth take place within the existing “urban footprint,” meaning no new greenfield development will be allowed even though less than 18 percent of the region has been urbanized.²⁵ Moreover, the plan identifies scores of specific “priority development areas,” which are neighborhoods along major transit corridors that will be redeveloped into high-density, mixed-use districts, and directs that 80 percent of the population growth and more than 60 percent of new jobs be located in these areas.²⁶

The priority development areas are supposed to cover no more than 5 percent of the nine-county region. But the plan also says the existing urban footprint covers just 17.8 percent of the region. Meeting Plan Bay Area’s goals therefore means redeveloping as much as 28 percent of all neighborhoods and business districts to higher densities. The replacement of single-family homes with multifamily housing combined with limits on the ability to build new single-family homes means that the region will probably have far fewer single-family homes than it has today.

Planners offered the public four alternatives to Plan Bay Area. The “no project” alternative was a true no-action alternative. Instead of just allowing present trends to continue, this alternative contemplated no new transportation facilities or other infrastructure to accommodate the popula-

tion increase other than what has already been planned and budgeted for in the next five years. This alternative also allowed development inside of existing urban-growth boundaries, which include a few undeveloped areas, instead of inside the tighter boundary of the existing urban footprint.

The other three alternatives all kept all development within the existing urban footprint. They differed only by which areas would be selected for densification and by transportation investments, primarily rail transit. Although the plan itself and three alternatives called for increasing rail transit by more than the projected 30 percent increase in population, none of the alternatives allowed either bus transit or highway facilities to keep up with population growth.²⁷

Even as planners were writing Plan Bay Area, other California agencies were developing other programs to reduce the state's greenhouse gas emissions. Before the California legislature passed SB 375 in 2008, the legislature passed another law in 2006 that required the California Air Resources Board (ARB) to impose strict emissions standards on future cars, electrical generation plants, and other greenhouse gas emitters.²⁸ This is known as the ARB Scoping Plan.²⁹

The latest fuel economy standards adopted by the board in 2012 are identical to the Obama administration's fuel economy standards, which require more than a doubling of the fuel economy of new cars by 2025.³⁰ However, Plan Bay Area did not include these new standards in its analysis, instead counting only the agency's earlier standards, which required approximately a 30 percent increase in fuel economy by 2017.³¹

A second program was the Metropolitan Transportation Commission's "climate policy initiative." This consists of several different projects, the most important of which are:

- Promotion of car sharing, which was projected to reduce greenhouse gases by 704 billion tons per year by 2040;
- Installing "smart driving" equipment—

essentially devices that report moment-to-moment fuel consumption to drivers in the hope that drivers will drive more carefully to save fuel—projected to reduce greenhouse gasses by 385 billion tons per year by 2040;

- Incentives for people to buy electric and other clean vehicles, projected to save 385 billion tons per year by 2040;
- Vanpooling, projected to reduce greenhouse gasses by 99 billion tons per year; and
- A commuter benefits program encouraging employers to give their employees incentives, such as free transit passes, to get to work without driving, which was projected to save 65 billion tons per year by 2040.

Planners estimate that the Bay Area produced about 48.8 million tons of greenhouse gas emissions (carbon dioxide equivalents) in 2010. Implementing Plan Bay Area, they predict, will reduce this by about 7.5 million tons, or 15.4 percent, by 2040.

This is deceptive, however, as the California Air Resources Board Scoping Plan alone is responsible for more than 9.6 million tons of abated emissions (part of which is offset by increased population).³² The climate policy initiative reduces emissions by more than 1.6 million tons.³³ Meanwhile, the land-use and transit aspects of Plan Bay Area reduce emissions by less than 1.3 million tons.³⁴ Altogether then, the plan's land-use and transportation changes, including transit-oriented developments, reduce emissions by just 2.6 percent of 2010 emissions.³⁵

Even this 2.6 percent is an overestimate because it fails to account for the latest fuel-economy standards. Implementation of those standards is likely to make the average car on the road more than 25 percent more fuel-efficient in 2040 than under the previous standards.³⁶ This means the 5.6 percent reduction in driving translates to just 0.9 million tons of greenhouse gases, which is less than a 2.0 percent reduction in total 2010 emissions.

Land-use and transit aspects of Plan Bay Area reduce carbon dioxide emissions by just 2.6 percent of 2010 emissions.

Contrary to predictions of urban planners, densification of the San Francisco Bay Area since 1970 resulted in worse housing and transportation and failed to reduce per capita driving.

It is likely that even this 2.0 percent reduction is optimistic, as Plan Bay Area is merely a continuation of trends over the past three decades that have failed to reduce driving. Since 1980, the population density of the San Francisco–Oakland and San Jose urbanized areas have each grown by more than 55 percent, and the region has built more than 200 miles of new rail transit lines. Dozens of high-density developments have been built along transit lines in such places as Concord, Fremont, Pleasant Hill, San Jose, and Walnut Creek.

Contrary to the predictions of the authors of *Compact City*, this densification did not result in superior housing and transportation at 25 percent lower costs. Instead, housing costs dramatically increased, and the quality of housing most people could afford declined. A 1,100-square-foot condominium in San Jose typically costs more than twice as much as a 2,200-square-foot single-family home on a large lot in lower-density urban areas such as Houston or Dallas.

Nor is transportation better. According to INRIX, which measures actual traffic congestion in urban areas throughout the nation, traffic congestion in the San Francisco Bay Area wasted more time per driver—49 hours per year—than almost any other metropolitan area in the country. Only Los Angeles, at 59 hours per year, was significantly worse, while New York and Honolulu, at 50 hours per year, were slightly worse than San Francisco.³⁷ At 6,999 people per square mile, Los Angeles is the only urban area that is significantly denser than San Francisco–Oakland’s 6,266, while densities in New York (5,319) and urban Honolulu (4,716) are also much higher than the national average for urban areas (2,526).³⁸

According to the Texas Transportation Institute, which has been keeping track of congestion in major urban areas since 1982, the annual number of hours of time wasted per commuter in the San Francisco–Oakland area has increased by 154 percent since 1982, while the increase in the San Jose area was 117 percent. The annual cost of congestion

in these two urban areas is more than \$4 billion, or close to \$1,500 per commuter.³⁹

Transportation in the San Francisco Bay Area is also more costly than in lower-density areas, partly because of the congestion and partly because of the region’s emphasis on high-cost rail transit. According to the Federal Transit Administration, total transit expenses in the San Francisco–Oakland area averaged 99 cents per passenger mile in 2011, while in San Jose they averaged \$1.88.⁴⁰ By comparison, in 2011 Americans spent an average of 40 cents per vehicle mile driving, including highway subsidies.⁴¹ With average occupancies of 1.67 people per vehicle, driving costs just 24 cents per passenger mile, so Bay Area transit is several times more expensive.⁴²

Despite the densification and rail transit construction, per capita driving has increased and transit ridership has been stagnant. The earliest year for which per capita driving by urbanized area is available is 1989, when San Francisco–Oakland residents drove 21.5 miles per day and San Jose residents drove 23.1 miles per day.⁴³ In the latest year, 2010, San Francisco–Oakland per capita driving had increased to 22.5 miles per day, and San Jose driving to 24.0 miles per day.⁴⁴ Meanwhile, per capita transit trips declined from 100 in trips per year in 1982 to 64 in 2011.⁴⁵ Over about the same time period, transit’s share of commuting dropped from 11.6 percent in 1980 to 10.6 percent in 2010, while the share of commuters driving to work rose from 80.7 percent in 1980 to 82.1 percent in 2010.⁴⁶

The failure of past densification, rail transit, and transit-oriented developments casts doubts on whether even the 2.0 percent reduction in greenhouse gas emissions projected by Plan Bay Area is realistic. Moreover, the high costs of the plan, including the subsidies that will be needed to get developers to build high-density housing when most Americans prefer to live in single-family homes, cannot be justified by a mere 2.0 percent decline in emissions.

For example, planners estimate that the climate policy initiatives that will reduce an-

nual greenhouse gas emissions by 1.6 million tons will cost the region \$630 million. By contrast, Plan Bay Area's land-use and transit plans that are expected to contribute to a 0.9-million ton reduction in annual emissions are expected to cost \$19 billion.⁴⁷ That means the cost per ton of the land-use and transit program will be more than 50 times greater than the cost of the climate policy initiatives.

If the capital costs are annualized at a 4 percent interest rate over 30 years, then the cost per ton of the climate policy initiatives averages \$22, well below the \$50 per ton that McKinsey says is the threshold of cost-effectiveness (see page 11). But the cost per ton of Plan Bay Area's land-use and transit plans is \$1,175—more than 20 times greater than the \$50 limit. This shows that the plan is not a cost-effective way of reducing greenhouse gases.

These costs include only the costs to the various government agencies implementing the plans. One of the biggest hidden costs of the plan is its effect on housing affordability. The costs of land and of housing and other land uses all rise when regions constrain development to limit urban expansion. Owing to previous plans and the resulting increases in land prices, California housing today is among the least affordable in the nation.

Although SB 375 also directed metropolitan areas to improve housing affordability, denser development turns out to be the wrong way to achieve this. The planners who wrote Plan Bay Area found that low- and lower-middle-income residents currently spend 66 percent of their incomes on transportation and housing, and they set a target of reducing this to 56 percent. Far from meeting this target, however, the plan actually increased it to 69 percent.⁴⁸ Planners refused to even consider any alternatives that would allow expansion of the urban footprint in order to make housing more affordable.

One thing Plan Bay Area did not do to reduce greenhouse gas emissions was attempt to significantly reduce congestion below its current levels. In fact, Plan Bay Area projects

that the amount of driving in severe congestion (known to highway engineers as “level of service F”) will more than double by 2040. According to the Texas Transportation Institute, traffic congestion in the San Francisco–Oakland and San Jose urban areas wasted nearly 85 million gallons of fuel in 2012, leading to more than 0.7 million tons of greenhouse gas emissions.⁴⁹ Since cars are expected to be, on average, about twice as fuel-efficient in 2040 as they are today, that means congestion-related emissions will still be more than 0.7 million tons, or nearly as much as the savings from the land-use and transit policies. It is likely that this congestion could be reduced at a far lower cost than the implementation of the land-use policies.

My comments on the Plan Bay Area environmental impact report pointed out that the plan is not cost-effective and that it would make housing less affordable. In response, the agencies dodged the questions by saying that these are not “environmental issues to which a response is required under CEQA.”⁵⁰ In fact, the billions of dollars that Plan Bay Area proposes to spend on programs that result in negligible effects on greenhouse gas emissions are funds that could otherwise be spent on programs that could have far greater environmental benefits. Cost-effectiveness therefore is crucial when considering environmental effects.

In short, Plan Bay Area disproved all of the assumptions made by SB 375. Improved fuel economy turns out to be the most effective way of reducing greenhouse gas emissions. Increased densities and transit-oriented developments are not just ineffective, they are extremely expensive. Moreover, one of those costs is a decline in housing affordability.

Plan Bay Area illustrates several of the problems fatal to all central planning. First, economic entities such as cities and urban areas are too complicated to plan, so planners oversimplify. Second, among those oversimplifications, planners become overly focused on one or two goals rather than consider all economic values and trade-offs. Third, in attempting to achieve those goals,

Bay Area planners refused to consider any alternative that would allow expansion of the urban footprint in order to make housing more affordable.

To make their oversimplified models applicable to the real world, planners seek to simplify reality by, for example, prohibiting lifestyle choices that don't fit into their models.

planners often focus too much on means rather than ends.

Oversimplification

A United Nations commission wrote the most commonly cited definition of “sustainable development” in 1987: “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁵¹ Any true sustainability plan would have to consider a broad range of resources, including soils, water, air, wildlife, fisheries, forests, energy, and minerals. A strict interpretation of the above definition would also have to take national finances into account, as a sustainability plan that is so expensive that left future generations in poverty would clearly compromise the ability of those generations to meet their needs.

A plan that takes into account all of these resources is simply too complicated to prepare. The production functions, cost functions, personal preferences for various resources, trade-offs, and other factors that must be taken into account are not only too numerous, they change from day to day, and the introduction of new technologies can dramatically alter them in unpredictable ways. Central plans simply cannot take these changes into account.

As a result, the so-called sustainability plans being written today consider only one thing: greenhouse gas emissions. While such emissions are something of a proxy for non-renewable energy consumption, they are otherwise not related to any other resource. Plans that ignore other resources ignore the potential trade-offs between, say, efforts to reduce greenhouse gas emissions and water, wildlife, or other resources.

As if it isn't enough to oversimplify the plans, planners also oversimplify reality. “If economic reality is so complex that it can only be described by complicated mathematical models,” says planning guru Herman Daly, “then the reality should be simplified.”⁵²

Such simplifications can be seen in land-use plans that attempt to pigeonhole the wide variety of possible land uses into a few narrow categories, with anything not fitting into one of these categories rendered illegal.

In 1961, for example, Hawaii passed legislation that placed all land uses into one of three categories: urban, rural, or agricultural. Later, a conservation category was added. Any land that wasn't placed in the urban category was off limits to development without special dispensation from the state. This soon became highly politicized, as elected officials became essential partners in any development projects outside of urban areas.

More recently, urban planners have defined what they call the *urban transect*, which defines land uses in six categories: rural preserve, rural reserve, edge residential, general residential, centers, and urban core.⁵³ Rural preserves and reserves are effectively off-limits to new development, and planners assume that only people with genuine rural occupations should be allowed to live in them.

For example, in 1995 an Oregon land-use agency passed a rule preventing people from building homes in rural areas unless they were actual farmers and actually earned (depending on the soil productivity of their land) \$40,000 to \$80,000 a year in two of the last three years from farming. This rule was needed, said the agency, to prevent “lawyers, doctors, and others not really farming [from] building houses in farm zones.”⁵⁴

This narrow view effectively rules out major lifestyles such as exurbanites (people with urban occupations who choose to live and possibly work in rural areas) and urban farmers (people who grow agricultural crops for local consumption in areas that are otherwise urbanized). Such oversimplification denies people's individuality, personal preferences, and consumer choices.

Narrow Goals

Having decided to focus on reducing greenhouse gas emissions, urban planning

advocates then focus their goals even further by aiming at per capita driving. One classic example of a focus on what may be the wrong priority is the 2008 Washington state law setting a target of “decreas[ing] the annual per capita vehicle miles traveled by fifty percent by 2050.”⁵⁵

In theory, there are three approaches towards reducing emissions such as carbon dioxide. One is to argue that all emissions must be reduced, no matter what the cost. If the goal is to reduce emissions by 3 gigatons, and if someone can find a way to eliminate 1 gigaton of emissions at a cost of \$1 million a ton, then the total cost of that gigaton is \$1 quintillion, which is more than 14,000 years of the gross domestic product of the entire world. That’s clearly not affordable, so some decision must be made about which actions are worthwhile and which are not.

A second approach is to argue that, if the goal is to reduce emissions by half, then all existing producers must reduce their emissions by half. The problem with this is that some producers may be able to reduce their emissions by far more than half at a very low cost, while others would have to spend far more to reduce their emissions by anything close to one half. It makes more sense to find the lowest cost or most cost-effective ways of reducing emissions.

The third approach, then, is to find cost-effective means of reducing emissions. Carbon trading and carbon taxes are two ways of attempting to find the most cost-effective emissions reduction techniques. While there are arguments for and against each, advocates of either tacitly admit that emissions should be reduced in a cost-effective manner. But if either of these systems were adopted, there would be no need for governments to engage in land-use regulation aimed at reducing emissions, as land-use changes would take place if they were cost-effective, and if they were not cost-effective then governments shouldn’t try to impose them.

One writer recently argued that carbon taxes are a bad idea because a tax of \$25 to \$30 per ton—which, he said, is the typical

range being considered—would only, by his calculations, reduce per capita driving by about 1 percent.⁵⁶ But the goal of carbon taxes is not to reduce per capita driving; it is to reduce greenhouse gas emissions. If carbon taxes only reduce per capita driving by 1 percent, it indicates that greater reductions in driving are not a cost-effective way of reducing emissions.

Despite this, urban planners seem to be especially focused on reducing driving. Leaning on the second approach to reducing emissions, they often point to the share of emissions produced by transportation. “Transportation accounts for a full third of CO₂ emissions in the United States,” says a report published by the Urban Land Institute.⁵⁷ In fact, the actual share is closer to 27 percent, and less than 17 percent of the total comes from cars and light-duty trucks, the only source addressed by many recent sustainability plans.⁵⁸

While 17 percent is still a substantial amount, that doesn’t automatically prove that reducing per capita driving is a cost-effective way of reducing emissions. It is quite possible that reducing emissions from other sources is more cost-effective than reducing emissions from driving, and it is further possible that reducing emissions per mile of driving is more cost-effective than reducing the number of miles driven.

A 2008 report from McKinsey & Company attempted to estimate the most cost-effective way of reducing greenhouse gas emissions by more than 50 percent by 2030. The report found that this ambitious goal could be achieved by investing in programs and projects that cost less than \$50 per ton of carbon dioxide-equivalent greenhouse gases abated. Many of these programs and projects, the report found, would actually save money in the long run (for example, the reduced costs of power to LED lighting would repay the costs of installing such lights), so that the overall net cost would be low. However, none of the practices that McKinsey considered to be cost-effective included efforts to reduce per capita driving.⁵⁹

A policy of reducing all emissions, no matter what the cost, would bankrupt the world; instead, it makes more sense to find the most cost-effective ways of reducing emissions.

**The
Congressional
Budget Office
predicts that total
gallons of fuel
consumed for
transportation
will decline by
20 percent by
2040.**

The main transport-related programs that McKinsey considered to be cost-effective involved improving the fuel economy of cars and trucks. President Obama's fuel-economy standards, which require manufacturers to increase their fleet-averages to 54.5 miles per gallon by 2025, will reduce per-mile emissions by nearly 30 percent by 2025 and nearly 40 percent by 2030.⁶⁰ Researchers at MIT believe manufacturers can easily meet these standards on a cost-effective basis with measures such as lighter-weight materials, like aluminum; improved auto designs, such as streamlining; and substituting diesel for gasoline engines.⁶¹

Driving-related strategies not considered by McKinsey include efforts to reduce congestion. Researchers at the University of California-Riverside estimate that congestion-reduction strategies, such as variable-priced toll roads, could reduce fuel consumption and emissions by another 30 percent.⁶²

One strategy that these researchers did *not* consider was traffic signal coordination. More than a third of all driving takes place on urban roads with signalized intersections.⁶³ Adding or updating signal coordination equipment could improve traffic flows at more than three-quarters of those intersections.⁶⁴ Such improvements would reduce vehicle energy consumption by 3 to 12 percent at a cost of \$25 to \$34 per ton of greenhouse gases abated.⁶⁵ This cost doesn't consider the savings to motorists in fuel and time, which effectively repay the costs of signal coordination in less than five years. Thus, the net benefits of signal coordination to society are positive without counting greenhouse gases.

In short, variable-priced roads, traffic signal coordination, and other congestion-reduction techniques combined with more fuel-efficient cars could reduce per mile vehicle emissions by well over 60 percent. Yet many planners are not enthused about signal coordination or other measures to relieve congestion because their goal is to reduce per capita driving, and they see increasing congestion as a means of achieving that goal.

"Congestion is our friend," says planner Dom Nozzi, and many other planners agree, their assumption being that forcing a few people out of their cars outweighs the costs of congestion to everyone else.⁶⁶ Aside from numbers, the problem with this assumption is that congestion is a deadweight loss to society. In short, congestion imposes costs without generating benefits.

Unfortunately, politicians are also unenthused about, and in some cases wary of, measures that actually reduce congestion. Signal coordination is probably the most cost-effective way of relieving congestion, but it is practically invisible, so politicians who support it don't get much credit for it among voters. Most economists agree that variable-priced toll roads can virtually solve most rush-hour congestion problems, but politicians fear imposing charges on users for things that were once "free." In contrast, building a light-rail line is highly visible, and the few people who actually use the rail line are loudly enthusiastic in praising it, so the fact that it may actually increase congestion for everyone else is conveniently ignored.

In any case, planning advocates remain convinced that improving fuel economy, either by improving automobiles or roads, will be insufficient to reduce greenhouse gas emissions. "Technological improvements in vehicles and fuels are likely to be offset by continuing, robust growth in VMT" or vehicle miles traveled, say planning advocates who focus on reducing driving.⁶⁷ To the contrary, since the time they wrote this in 2008, analysts at the Congressional Budget Office have concluded that future VMT growth will be outweighed by future improvements in fuel economy, so that the total gallons of fuel consumed each year will decline by more than 20 percent by the year 2040.⁶⁸

Even if it were true that VMT growth would outpace improvements in fuel economy, that doesn't prove that attempting to reduce per capita driving is a cost-effective way of reducing greenhouse gas emissions. Yet planners managed to get this assumption explicitly enshrined into the 2008 state

of Washington legislation, requiring not just a reduction in per capita greenhouse gas emissions, but a reduction in vehicle miles traveled. The law requires an 18 percent reduction by 2020; a 30 percent reduction by 2035; and a 50 percent reduction by 2050. These targets are aimed solely at personal vehicles; vehicles weighing more than 10,000 pounds are exempt.⁶⁹

Achieving such reductions will be quite costly. There are two main ways of reducing driving. One is to provide transit and other substitutes for driving. The other is to discourage driving by making it more costly. Transit is far more expensive than driving; in 2011, American transit agencies spent an average of 92 cents per passenger mile.⁷⁰ As previously noted, Americans spent 40 cents per vehicle mile driving in 2011, including highway subsidies.⁷¹ With average occupancies of 1.67 people per vehicle, driving costs just 24 cents per passenger mile, so transit is nearly four times more expensive.⁷²

Attempts to discourage driving can be even more costly because driving produces enormous benefits. Roads and streets go to far more places than public transportation, and driving is not only less expensive, it is faster and more convenient. Faster commute speeds offer employers a larger pool of workers and thereby increase worker productivity.⁷³ Driving also provides people access to lower-cost housing and other consumer goods.

Most European nations have attempted to discourage driving through a combination of subsidies to transit and high taxes on motor fuels. These taxes have been successful in the sense that the average European drives only about 63 percent as many miles per year as the average American. But public transport policies have been less successful in that total European travel is only 72 percent of American travel per capita.⁷⁴ By effectively suppressing total mobility, European countries have sacrificed worker incomes and increased housing and other costs.

Even if public transit could act as a substitute for driving, it isn't clear that transit

emits significantly less greenhouse gases per passenger mile than autos. In 2011, the average car on the road went about 23.1 miles per gallon and carried about 1.67 occupants.⁷⁵ Since greenhouse gas emissions of gasoline-powered vehicles are exactly proportional to the amount gasoline they use, this means the average car emitted about 230 grams of carbon dioxide per passenger mile.⁷⁶ By comparison, America's transit systems emitted an average of 209 grams of carbon dioxide per passenger mile. But most transit systems actually did far worse; of the nation's 100 largest urban areas, only transit in New York, Chicago, San Francisco–Oakland, Minneapolis–St. Paul, Las Vegas, Portland, New Orleans, Raleigh, and Honolulu emitted significantly less greenhouse gases per passenger mile than cars.⁷⁷

Substituting Means for Ends

Planners think they have found a way to reduce per capita driving without sacrificing worker productivity or increasing consumer costs: They want to rebuild American cities so that people can do everything they want to do without driving as much. This means higher density cities (so people are closer to destinations), mixed uses (so residents can walk to shops and work), and a special emphasis on density and mixed uses along transit corridors or near transit stations (so more people can take transit to get to destinations that are further than walking distances).

There are two problems with this approach. First, it is extraordinarily expensive, partly because it goes against the preferences of the majority of Americans of all ages to live in single-family homes rather than multifamily housing. Second, its effects on per capita driving are questionable and likely to be quite minor. As David Brownstone's 2008 literature review noted, "the magnitude of the link between the built environment and VMT is so small that feasible changes in the built environment will only have negligible

Attempts to reduce greenhouse gas emissions by discouraging driving can be especially costly because driving produces enormous benefits.

Having gone from “sustainability” to “reducing greenhouse gas emissions” to “reducing driving” to “increasing densities,” planners have removed themselves several steps away from the original problem.

impacts on VMT.” For example, one study he cites concluded that a 40 percent increase in density would reduce driving per household by 5 percent.⁷⁸

After reviewing Brownstone’s paper and other research on the subject, a Transportation Research Board committee concluded, “The literature suggests that doubling residential density across a metropolitan area might lower household VMT by about 5 to 12 percent, and perhaps by as much as 25 percent, if coupled with higher employment concentrations, significant public transit improvements, mixed uses, and other supportive demand management measures.”⁷⁹

A 25 percent reduction in driving may sound promising. But the conditions are both expensive and unlikely. Doubling a metropolitan area’s residential density would be painful and expensive. The San Jose urbanized area doubled its density between 1960 and 2000, but its median housing prices grew from about two times median family incomes to more than five times median family incomes. At the end of that time period, the region saw 23.6 miles of driving per capita each day, which is more than the national average for urbanized areas and far more than per capita driving in 1960.⁸⁰

Concentrating employment is even more difficult than doubling residential densities: factories, retail centers, and even offices increasingly prefer to locate in uncongested, low-density areas. A Brookings Institution study found that the recent recession had the greatest impact on industries that were most decentralized, such as construction and manufacturing. Despite this impact, American jobs continued to decentralize during the first decade of the 21st century: only 9 of the 100 largest metropolitan areas saw the share of jobs increase in the urban cores.

San Jose was one of those nine. In fact, says the report, “San Jose registered as the most centralized metro area by far in 2010, with 64 percent of jobs located within three miles of CBDs in San Jose, Palo Alto, and Sunnyvale,” up from 62 percent in 2000.⁸¹ Yet, despite the recession and the increase in

San Jose’s job concentration, San Jose’s per capita driving grew to 24.0 miles per day in 2010.⁸²

Having gone from “sustainability” to “reducing greenhouse gas emissions” to “reducing driving” to “increasing densities,” planners have removed themselves several steps away from the original problem. As a result, they end up adopting costly plans without ever asking whether those plans will achieve their ultimate objectives or do so on a cost-effective basis.

Plan Lafayette

Lafayette, Louisiana, is economically, socially, and politically about as far from San Francisco as possible while still being in the United States. Yet Lafayette’s consolidated city-parish government, which serves about 225,000 people, is developing a plan much like Plan Bay Area. The plan even has a similar name: Plan Lafayette.

Like Plan Bay Area, Plan Lafayette has a “no action” alternative that is truly no action. Planners admit the alternative could not be implemented because it specifies no new infrastructure will be built in the region, which is obviously unrealistic in the face of population growth. The plan does not consider a “no change in current trends” alternative that would allow people to live where they want and build on their own land throughout the parish.

The plan has three other alternatives. Like Plan Bay Area, all three alternatives vary only in which part of the city is to be densified.⁸³ None of the alternatives contemplate allowing people to live where they want or to build on their own land if that land is outside an area designated by the plan for development.

Plan Bay Area has five alternatives, while Plan Lafayette has only four, but that’s probably because as of this writing Plan Lafayette is still in the “alternative analysis” stage of planning. It is likely that Lafayette planners will produce a preferred alternative in the

plan itself that can be compared with the four alternatives in the alternatives analysis. It is also likely that, as with Plan Bay Area, the preferred alternative will simply be another densification alternative, differing from the others only by which neighborhoods are to be densified.

The International Council for Local Environmental Initiatives

Why are plans from such disparate parts of the country so similar? One answer is that planners are learning from the same playbook, and to a large degree that playbook is being provided by a group called Local Governments for Sustainability. If there is an international connection behind sustainability planning, it is not the United Nations but this group.

Until recently, Local Governments for Sustainability was called the International Council for Local Environmental Initiatives, and it still uses the acronym ICLEI. The group has offices in ten countries other than the United States. It claims that more than 1,200 municipalities in 84 countries are members. In exchange for membership fees from local governments, ICLEI provides planning tools such as the *Sustainability Planning Toolkit*, a 55-page document that offers step-by-step instructions for writing a sustainability or climate action plan.

In 2012, the United States's office of ICLEI reported \$4.1 million in 2011 revenues to the IRS. More than \$1.4 million was in the form of government grants, while another \$0.7 million was membership fees from local governments, and nearly \$0.9 million was "fees for service contracts," which mostly—if not entirely—came from government agencies. While ICLEI also received about \$1.0 million in private grants and contributions, more than three-fourths of its budget ultimately came from tax dollars. Thus, taxpayers in cities across the country are effectively paying

ICLEI to lobby their local governments to take actions that are not necessarily in their best interests.

The *Sustainability Planning Toolkit* distinguishes between *sustainability plans* that have a broad range of goals but include "an overarching goal to reduce greenhouse gas emissions," and *climate action plans* that focus primarily on reducing greenhouse gas emissions.⁸⁴ By ICLEI's count, as of the end of 2009, 141 municipalities had written or were writing climate action plans while another 56 had written or were writing sustainability plans. These range from the town of Chevy Chase, Maryland, which has a population of 3,000, to New York City, which has more than 8 million people.⁸⁵

Not all of the plans look alike, but many share an obsession with reducing driving and increasing densities, combined with a failure to evaluate whether such policies are either effective or cost-effective at reducing greenhouse gas emissions. For example, the Sustainable Northhampton Plan uses transferable development rights to concentrate development in already dense areas.⁸⁶

The Sustainable Salt Lake City plan seeks to reduce total driving by 6.5 percent partly by extending light rail and subsidizing high-density development in transit corridors.⁸⁷ Salt Lake City's transit system uses more energy and emits more greenhouse gases per passenger mile than the average car, so reducing driving by increasing transit is not a good way to reduce greenhouse gas emissions.⁸⁸

Obama's Sustainability "Partnership"

The Obama administration is also promoting sustainability planning through a "partnership" of three departments: Transportation, Housing and Urban Development, and the Environmental Protection Agency. Among the goals of this partnership are:

- "Provide more transportation choices,"

Taxpayers in cities across the country are effectively paying the International Council for Local Environmental Initiatives to lobby their local governments to take actions that are not necessarily in their best interests.

Urban planners who believe that large numbers of retiring baby boomers and up-and-coming millennials want to live in dense, inner-city housing are largely engaging in wishful thinking.

which means directing federal funds—mostly from gasoline taxes and other highway user fees—to alternatives to the automobile such as transit or bike paths;

- “Promote equitable, affordable housing,” which means high-density housing, which is presumed to be more affordable than single-family homes; and
- “Support existing communities,” which means putting new development, especially “transit-oriented, mixed-use development,” in already developed areas instead of in undeveloped areas at the urban fringe.⁸⁹

These ideas are promoted through federal housing and transportation grants aimed at “integration of transportation, land use, and climate change.”⁹⁰ In addition, the administration wants metropolitan planning organizations to incorporate “land use changes, including land use mixing, pedestrian accessibility and friendliness, and increased density,” in the long-range transportation plans that they are required to write every five years.⁹¹

Misinterpreting Housing Demand

Planners who seek to increase the share of households living in multifamily housing often claim that changing demographics are reducing the demand for single-family homes. Baby boomers supposedly want to move to high-density, inner-city neighborhoods when their children leave home. Recent articles in the *Wall Street Journal* and *Washington Post* claimed that a million baby boomers had moved to inner-city neighborhoods between 2000 and 2010.⁹² Their grandchildren, meanwhile, are supposed to prefer vibrant mixed-use neighborhoods.

One of the first to make these claims was University of Utah urban planning professor Arthur Nelson. In a 2006 article in the

Journal of the American Planning Association, he predicted that by 2025 America would have a surplus of millions of single-family homes, and he argued that urban planners should take a leadership role by writing zoning codes and redevelopment plans to encourage developers to meet his projected demand for multifamily housing.⁹³

In fact, Nelson’s claims are largely based on wishful thinking for two reasons. First, his entire argument comes down to a single table in his article that he admitted was based on his “interpretation” of published surveys of American housing preferences.⁹⁴ In fact, where his table predicted that only 62 percent of Americans would want to live in single-family homes—and most of those on tiny lots—the surveys he used to reach this conclusion almost uniformly found that 75 to 85 percent of Americans prefer or aspire to live in single-family homes.⁹⁵

Second, a critic writing in the very same journal warned that the surveys Nelson used “may not be terribly reliable,” partly because they were not random and partly because “people often do not behave in ways that are consistent with the preferences or opinions they express.”⁹⁶ Random surveys and people’s actual behavior both reveal exactly the opposite of what Nelson predicts.

Indeed, the *Wall Street Journal* and *Washington Post* were exactly wrong: between 2000 and 2010, a million baby boomers moved out from inner cities into suburbs or smaller towns.⁹⁷ (The *Journal* has since published a retraction.) In virtually every demographic, population growth in the suburbs is faster than in inner cities. Reports of inner-city growth are mostly anecdotal and often involve government-subsidized housing projects.

Random surveys also suggest that millennials and other young people are not as eager to spend their lives in dense housing developments as Nelson suggests. A 2011 survey of more than 2,000 “likely voters” commissioned by the National Association of Home Builders, whose constituency has a strong interest in having accurate information about

future housing demand, found that 92 percent of people in the 25–34 age bracket and 85 percent of people in the 18–24 age bracket hope to eventually own their own home.⁹⁸ Similarly, a 2012 survey of more than 1,000 18- to 35-year-olds commissioned by Better Homes Real Estate found that 75 percent aspire to own their own home.⁹⁹ Neither survey specifically mentioned single-family homes, but since about 17 out of 20 single-family homes are owner-occupied while about 17 out of 20 multifamily homes are renter-occupied, it is likely that most of these aspiring homeowners seek single-family houses.

Nelson and other planners who believe that single-family homes will soon be passé are guilty of a logical fallacy. Most households in multifamily housing lack children, so they assume that most households that lack children prefer multifamily. In fact, only a minority of all childless households live in multifamily housing, and many of those who do live there would choose single-family housing if they could afford it.

Nelson’s analysis of California housing supply and demand betrays a profound lack of understanding of the simplest of economic principles. He observes that California housing prices have been higher than in the rest of the country (which he fails to note is the result of restrictive planning) and that this has depressed homeownership rates. He concludes from this that tastes are changing and people in general, and Californians in particular, are less interested in owning homes.¹⁰⁰

Based on these and similar considerations, he predicted specific homeownership rates and the “demand” for single-family and multifamily housing in each of several California metropolitan areas. For example, he predicted that the 2035 demand for single-family housing in the San Francisco Bay Area will be for 1.3 million homes while multifamily housing (including attached townhouses) will be 2.4 million homes.¹⁰¹ Plan Bay Area planners cited these numbers to justify their policy of subsidizing new multifamily housing while restricting new single-family houses.¹⁰²

The problem with Nelson’s analysis is that demand is never a fixed number; instead, it is a correspondence between prices and quantities. Given a choice between \$600,000 for a single-family home and \$400,000 for a unit of a multifamily condominium, which are typical prices in the San Francisco Bay Area today, many people will not be able to afford the single-family home. But given the opportunity to buy a single-family home for under \$100,000, or a new, 2,200-square-foot home for under \$200,000, which are typical prices in Houston today, more people will choose single-family homes.

In short, at higher prices, people will consume lower quantities of housing and will be more likely to choose multifamily homes; at lower prices, they will consume higher quantities and will be more likely to choose single-family homes. Nelson, however, makes no reference to price in his projections of demand, effectively dismissing it as an issue. Past California plans have made housing expensive, depressing the quantity of single-family homes people could afford to buy. Plan Bay Area will make them more expensive, but Nelson misinterprets peoples’ response to these artificially high prices as changes in taste.

How It Should Be Done

Advocates of government planning of urban areas argue that planners can follow a multi-step rational planning process:

- First, they identify a goal or possibly alternative goals.
- Second, they identify a number of projects or policies that can help meet that goal or goals.
- Next, they estimate the costs of each project/policy and the benefits each will produce measured either in dollars or, if no dollar figures can be attributed to the benefits, in some other quantitative measure such as, in the case of greenhouse gases, tons of car-

Nelson’s analysis of California housing supply and demand betrays a profound lack of understanding of the simplest of economic principles.

The rational planning process that is taught in planning schools ultimately fails because cities and urban areas are too complex to plan.

bon dioxide-equivalent gases abated. If there is more than one goal (for example, congestion reduction or housing affordability), this estimation should be made for each goal.

- These data allow planners to calculate either a benefit-cost ratio or a cost per unit of benefit ratio for each project/policy.
- Planners would then package a plan by selecting the projects/policies that have the highest benefit-cost ratios or lowest costs per unit of benefit. If there is more than one goal, a separate alternative can be prepared for each goal.
- Given several alternatives, planners can try to design a preferred alternative that comes closest to meeting all the goals.

Sustainability plans such as Plan Bay Area violate this process in several ways. Many of the plans start out with a predetermined set of projects or policies, such as rail transit and densification. Given that predetermination, they don't bother to compare the benefits and costs of the various projects. Instead of identifying several contrasting alternatives that might meet different goals, such as reducing emissions versus making housing more affordable, they cloak their predetermination by developing several alternatives that, in fact, are just slightly different ways of implementing the same policies as the preferred alternative.

The rational planning process that is taught in planning schools ultimately fails because cities and urban areas are too complex to plan. This leaves plans susceptible to political and technical manipulation, thus subverting the rational goals of planning. Plan Bay Area is a prime example: when asked why planners did not account for the latest fuel-economy standards, which would allow the region to meet SB 375's greenhouse gas emissions targets without any

land-use regulation, planners said they were not legally allowed to consider those standards in determining whether an alternative can achieve SB 375's goals.¹⁰³ While not everyone agrees with that legal interpretation, the point is that planners allowed political considerations to override reality.

Sustainability planning represents a threat to the dreams and aspirations of Americans who want to own their own homes and to enjoy the mobility provided by the automobile. The fact that the authors of these plans rarely, if ever, consider the cost-effectiveness of their actions shows that their real goals are not to reduce greenhouse gas emissions but to enforce their ideological belief that high-density cities are somehow superior to low-density suburbs. City leaders often go along with this in order to gain power over the suburbs, whose residents don't pay taxes to the central cities.

Far from promoting "livability"—another buzzword that is often tied with "sustainability"—sustainability plans will significantly reduce the quality of life of urban Americans. Few people sincerely believe that dedicating 40 to 50 percent of their incomes to live in an 1,100-square-foot apartment or condominium is superior to spending just 25 percent of their incomes on a 2,200-square-foot single-family home. Those who do believe it are free to do so, as homebuilders will gladly build for any market. But they have no right to impose their belief on others in a misguided attempt to reduce the environmental effects of urban life.

Congress should kill the "livability" program that the Obama administration is using to promote sustainability planning. California and other states should repeal the laws that mandate such planning. To the extent that greenhouse gas emissions are a real problem, the problem should be addressed by ensuring that any reductions in such emissions are achieved in the most cost-effective ways possible.

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