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THE FUTURE OF CALIFORNIA HIGHWAY FINANCE

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FUNDING HIGHWAYS IN THE NEXT CENTURY

An effective highway system--one that invites minimal congestion, lowers transportation costs, and minimizes social and environmental impacts--is key to economic prosperity in California and to the quality of life of its citizens. The effectiveness of the highway system, in turn, is closely linked to the system of highway finance. This summary synopsizes our detailed study of highway finance in California; we identify both the strengths and weaknesses of our current finance system and make recommendations to improve its effectiveness, efficiency, and equity in the coming decades.

In order to maintain the effectiveness of its highway system, California must periodically reevaluate its highway finance system. As we enter the new century, travel needs are changing--as are citizens' attitudes and preferences regarding the financing of public infrastructure. Federal highway programs focus more on improved operations and maintenance and less on new construction than in years past. Authority for highway decision-making has increasingly shifted from the federal government to the states, and in California from the state to regional bodies and counties. This period of fundamental change provides an important opportunity to reconsider how revenues are raised for highways. Doing so requires that we carefully evaluate both the level of revenues that are collected and the methods used to raise them.

The evolution of California's highway policy has been characterized by lasting differences in priorities between Democrats and Republicans, rural and urban interests, trucking and automobile interests, and the environmental community and the construction industry. Despite their differences, these interests have agreed that highways play a central role in California's prosperity, and they have reached many compromises over the past nine decades to keep California's highway program fiscally viable. Such compromises, however, tend to focus attention on the structure and performance of the finance program itself, and not on how the highway finance program influences use of the highway system. Yet the way that revenues for highways are collected has a powerful influence on travel. The fees, tolls, and taxes paid by road users affect their decisions on where to travel, when to travel, how to travel, and even whether to travel. Thus, while the legislature has typically debated whether or not to raise revenues to pay for California's highway "needs," such debates have generally not considered how the collection of highway revenues affects these needs. But in today's era of increasing travel and constrained public resources, improving the way we price highway use can increase the effectiveness, efficiency, and

equity of our system and, in turn, can actually *reduce* the highway revenues needed.

In conducting this study of highway finance in California, we reviewed previous studies of motor-fuel taxes; conducted a comprehensive review of the legislative history of highway finance; analyzed data and projections on highway revenues, expenditures, fuel consumption, and travel; gathered information on the approaches to highway finance taken by other states; and interviewed dozens of analysts, advocates, activists, and elected officials regarding their perceptions and views on highway finance in California.

CALIFORNIA'S LONG-STANDING COMMITMENT TO USER-FEE FINANCING

A commitment to financing highways through a system of earmarked user fees emerged early in the twentieth century, was carefully crafted through the interaction of many interest groups over many years, and has persisted despite changes in administrations, and the evolution of the highway system itself. Rather than supporting highways through general revenues and depositing highway-related taxes into the general fund, state and federal contributions to the construction and maintenance of the highway system come largely from earmarked charges levied on highway users. Because highways are funded for the most part with user fees, they do not compete for revenues with other programs such as education and social services. This notable arrangement makes highways unique among state programs.

Another benefit of the reliance on user fees has been almost complete financing of the highway program out of current revenues, making the program far less dependent on bonded indebtedness than are many other public programs. While bonds can be a good way to finance large, occasional projects like dams or schools, the continuing nature of the highway program makes it far less suitable for bond finance. (From the late 1920s to the early 1990s, bonds were used only to finance a few toll bridges.) This pay-as-you-go approach has provided continuing benefits to system users because a much larger proportion of highway-related revenues has traditionally been spent directly on construction, maintenance, and operation than would have been the case had there been large and continuing obligations to pay interest on debt. In 1996, however, the state made a significant move away from its principled commitment to pay-as-you-go highway finance when voters approved Proposition 192, which authorized the state to sell $2 billion in general obligation bonds to fund seismic upgrading of bridges and highways.

Reliance on user fees also contributes to highway system efficiency and equity, and is consistent with the state's environmental policies. In an era of rising costs and limits on system expansion for economic, social, and environmental reasons, enormous benefits come from maximizing the efficiency of our existing highway system. An efficient system is one that is neither under- nor overutilized. Highway systems that are regularly underutilized at some locations are a waste of public resources, while those that are seriously overcrowded at rush hour are inconvenient and frustrating to citizens and costly to businesses.

User fees offer what economists call "price signals" that encourage more efficient use of the system. Gasoline taxes finance the highway system and simultaneously encourage travelers to purchase more

fuel-efficient vehicles. Tolls are increasingly used to finance parts of the system and also encourage travelers to consider alternatives such as public transit. In particular, tolls that are higher at peak hours and on crowded roads and lower when and where congestion is absent (as on State Route 91 in Orange County and on Interstate 15 in San Diego County) can dramatically increase system efficiency by encouraging some people to travel on alternate routes, at alternate times, by alternate modes, or to join carpools or vanpools. Many people are surprised to learn that even if user financing influences the behavior of only small numbers of travelers, traffic congestion can be substantially reduced, even eliminated. Thus variable pricing of highway use contributes to the efficiency of the system to the benefit of all users, including those who choose to drive gas-guzzlers or to use the roads at the peak periods and are willing to pay for their choices.

Reliance on a system of user fees also has the support of many environmental organizations. Most environmentalists believe that those who use resources or pollute the air should pay directly for the depletion of resources or the damage they inflict on the environment; doing so encourages people to make environmentally responsible choices. Charges that are directly associated with the purchase of fuel encourage travelers to consider more fuel-efficient vehicles, and charges that are directly linked to taking a specific trip encourage higher vehicle occupancies and the use of alternative modes of travel that are more environmentally benign than driving alone.

Some legislators have decried efforts to use finance policies to reduce traffic congestion as "social engineering," and we agree that punitive fees should not be imposed for the sole purpose of changing travel behavior. On the other hand, *every* highway finance program influences travel behavior to some extent, and we should be as careful to avoid programs that induce inefficient use of the system as we are to avoid those that do nothing more than manipulate travel behavior. For example, the elimination of tolls on the major Bay Area bridges might be politically popular, but would probably induce increased traffic congestion and demands for additional bridges, while simultaneously reducing the revenues that might be used to provide new facilities.

THE EMERGING VIEW OF HIGHWAY USER FEES AS JUST ANOTHER TAX

Today the state revenue raised for highways comes from a variety of highway and, increasingly, non-highway sources. The traditional sources of revenue have all been user fees: the federal and state fuel taxes, vehicle registration fees, motor-vehicle-weight fees, driver's license fees, and tolls. Of these various finance mechanisms, the fuel taxes have raised the majority of revenues. Over the years, the California Legislature has tended to authorize major changes in highway finance only when there has been a widely shared sense of impending crisis. Such "crises" have occurred regularly since the advent of the highway program, resulting in periodic adjustments in highway user fees to account for inflation, increasing vehicle fuel efficiency, and changing needs. In recent years, however, motor-fuel taxes and other highway-use fees have come to be seen by many elected officials as just another tax and thus part and parcel of larger partisan debates over taxation. The result has been a growing political unwillingness to raise the motor-fuel taxes, to raise tolls where they already exist, or to impose tolls on roads that have long been free.

Beginning in the 1960s, both the frequency and size of motor-fuel tax increases diminished, causing funding shortfalls. In response, the state authorized and voters in 18 counties approved the use of a new finance mechanism during the 1980s: supplemental sales taxes whose revenues are dedicated to specified transportation projects. These sales taxes, which are not directly related to use of the transportation system, are now a major source of highway funds. In the 19961997 fiscal year they raised roughly $400 million for highway projects, or about a quarter as much as the state fuel taxes raised for highways during the same period.

This increasing reliance on sales taxes and general obligation bonds marks a major departure from the state's long tradition of user-fee finance for highways. This shift was born out of both political pragmatism and a commitment by many public officials to put major public finance and taxation issues before the voters. And lay citizens, unaware of the tradition of user-fee finance for highways, have supported these measures out of genuine commitment to the improvement of the highway system in periods of perceived crisis. While such efforts have addressed funding shortfalls in the near term, they have also gradually disconnected highway revenues from highway use, both functionally and in the public mind.

Highway finance policy must balance several objectives: raising adequate revenues; enhancing system efficiency; equitably distributing costs and benefits among categories of citizens, businesses, and jurisdictions; minimizing environmental damage; minimizing costs associated with administering the finance program; and achieving acceptability among different political interests. Since user fees are able to raise appropriate levels of revenue to build and operate highway systems while encouraging increased efficiency in system operations, they should be favored over alternatives (like sales taxes and bonds) that either fail to achieve such objectives or that achieve one objective (raising revenues) while weakening attempts to attain others (such as reducing congestion and maintenance costs).

Put another way, given similar revenue-raising potential, we should prefer the finance instrument that charges users more fairly in relation to the benefits they receive from the highway system, or in proportion to the costs they impose on it. Such a user-benefit finance system is (1) *effective* because existing highway capacity is better utilized, congestion and emissions are reduced, and revenues rise and fall with system use; (2) *efficient* because highway construction and maintenance needs are minimized; and (3) *equitable* because light users of the transportation system are not forced to subsidize heavy users of the system.

THE FALLING PURCHASING POWER OF FUEL TAXES

Beginning in the 1960s California experienced a substantial**,** sustained contraction in the buying power of its highway funds. The problem was not an actual decrease in the dollars available, but rather a dramatic fall in the purchasing power of fuel-tax funds while highway use continued to rise. There were two primary causes for this situation. The first was that gas-tax revenues did not keep pace with inflation. Sales, property, and income tax revenues tend to rise automatically with inflation and, in turn, in rough proportion to rising costs. In contrast, California's motor-fuel taxes are levied at a fixed rate on

a per-gallon basis, and thus their proceeds do not vary automatically with inflation. So, despite their many advantages, motor-fuel taxes are saddled with a significant political liability--the fixed per-gallon levy must be regularly increased to keep pace with inflation. Otherwise, motor-fuel tax revenues, in effect, "sunset" over time. Figure 1* illustrates this point, comparing the actual gas tax rate over time to the rate in inflation-adjusted dollars.

Increasing vehicle fuel efficiency is a second reason for the gas tax's eroding buying power--per-mile revenues decline as fuel efficiency improves. The fuel economy of new cars improved from 14.2 miles per gallon in 1974 to 28.6 miles per gallon in 1997. Thus, even without inflation, the average new car on the road today is generating half the revenue per mile as new cars did 20 years ago. The effects of inflation and increased fuel economy on fuel-tax revenues are displayed in Figure 2*, which shows clear boom (the 1950s and early 1960s) and bust (the mid-1960s to the early 1980s) periods for adjusted fuel-tax revenues in California. Since the early 1980s, lower rates of inflation and several increases in the state and federal fuel-tax rates have resulted in a period of relative stability, although at far lower adjusted fuel-tax-revenue levels than in the 1950s, 1960s, or 1970s.

It can be tempting to observe the nearly annual increases in revenues for and expenditures on highways in California and conclude that financial support for highways is at an all-time high. This growth in revenues and expenditures is due to increases in the number of drivers, vehicles, motor-fuel tax rates, and fuel consumption in California since 1950. But Figures 3* and 4* show that such absolute increases can be deceiving; over the past 40 years, inflation and increased vehicle fuel efficiency have combined to prevent fuel-tax revenues from keeping pace with dramatic increases in vehicle travel in California, despite occasional increases to the levy.

* (Figures 1-4 are temporarily not available in html format. Please call CPRC at 510-642-5514 if you wish to have them faxed or sent to you).

RECOMMENDATIONS TO IMPROVE HIGHWAY FINANCE

On the basis of our historical and comparative studies and extensive interviews, we have developed seven pairs of findings and policy recommendations regarding the future of highway finance in California. The first two sets of findings and recommendations address the adequacy of existing funding levels and the state's procedures for estimating highway needs. The remainder of the conclusions and recommendations deal with specific strategies that might be employed to improve the highway finance system in California.

1. California does not today face an immediate highway funding crisis, but revenues will not keep up with program needs. The potential for repeated crises is a serious problem that the state legislature must address.

Finding: California does not face an immediate highway funding crisis. The majority of citizens, elected officials, and representatives of interest groups interviewed for this study do not believe that highway

funding needs urgent action. However, the longer-term trends in highway system conditions, usage, and revenues suggest that if California does not revise and improve its highway finance system, it will face dramatically increased congestion and deterioration in the condition of its highway system during the coming decade. Motor-fuel taxes have historically provided the core revenue spent on transportation. However, increasing fuel economy, the fact that the tax is levied on a per-gallon basis, and legislators' reluctance to regularly increase the tax rate to keep up with inflation have collectively undermined the purchasing power of the motor-fuel tax.

Recommendation: To avoid inevitable fiscal crises and the need for repeated stopgap revenue measures, the state should develop a highway finance program which ensures that revenues keep pace with changes in the costs and use of the highway system. In particular, the state should ensure that fuel-tax rates are regularly adjusted to keep pace with inflation, and also so that revenue per vehicle mile traveled remains constant.

2. The state does not regularly evaluate the need for highway revenues in advance of raising them. Systematic needs studies should be more regularly undertaken in order to adjust revenues to programmatic and project needs.

Finding: The financing of the state highway system should respond to systematic statements of transportation needs and priorities. Surprisingly few needs studies have been performed in recent years by the state. The few recent statements of transportation system needs tend to reiterate assessments prepared earlier by others, and in particular one recent report prepared by road-building interests.

Recommendation: While each interest group has the right to assert its view of California's transportation priorities and needs, the state should improve its own capabilities to better inform the programming process. The legislature should direct Caltrans and the California Transportation Commission to jointly prepare a new analysis of state transportation system needs, including an estimate of revenues required to address those needs, over a time horizon of roughly 10 years. The needs study should address multiple modes of transportation and take into account system-management and operations needs as well as new capital investments. Needs studies should include careful cost-benefit analyses to inform decision-makers about the relative economic benefits of each project, and should be reviewed and updated approximately every five years.

3. There is a trend toward decreased reliance on user fees. The state should return to a highway finance system emphasizing user charges.

Finding: For more than a decade the trend in California highway finance has been to weaken the direct link between use of the highway system and payments that support the construction and maintenance of that system. A larger share of highway funding is being raised through the sales tax, an instrument unrelated to use of the highway system. In addition, the state has issued general obligation bonds to pay for seismic improvements to highways. The state has been reluctant to increase the gasoline tax, which at least to some extent links payments with use of the system, and has instead relied on these other

measures. This trend, which threatens the effectiveness, efficiency, and equity of the highway finance system, has occurred even as the technical capability to cheaply and easily link revenue collection with use of the system has improved. New technologies such as electronic toll payment make it possible to levy user fees more precisely and fairly and less intrusively than ever before.

Recommendation: The state should finance its highway system primarily through user fees. Travelers should pay in proportion to their travel and to the costs they impose on the system. Consequently, the state should increase reliance on fuel taxes, tolls, and truck-weight fees, while relying less on sales taxes to support highway investments. Where possible, tolls should vary by vehicle type, from one facility to another, and with time of day or congestion level in order to fairly reflect the significant differences in costs the different users impose on the highway system.

4. On political and administrative grounds, gasoline taxes and tolls are preferable to directly levied charges on vehicle miles of travel.

Finding: Some forms of user-based financing are more likely than others to improve the efficiency of system operations, and some are more likely than others to increase administrative costs and opportunities for fraud, and to raise citizen objections. The state should choose those finance mechanisms that enhance efficiency and equity while minimizing administrative complexity and intrusions into personal privacy. While the prospect that increasing use of alternative-fuel vehicles will reduce revenues from fuel taxes is of some concern, in the short run the use of such vehicles is likely to account for only a small percentage of vehicle miles of travel in California.

Recommendation: The fuel tax should continue to be the central component of the California highway finance system over the mid-term, and fuel-tax rates should be raised or lowered in accordance with financial need as the basis for system maintenance and operations. No other current financing mechanism works as well as this core system. However, additional funding approaches should be used to complement this base. Major new expansions in the highway system should be financed by even more direct user fees, such as electronically collected tolls that are dedicated to financing the facility on which they are collected. Annual vehicle-mile fees are for now an inferior alternative because of increased administrative expense, potential for fraud, and citizens' concerns that state monitoring of travel intrudes into personal privacy.

5. The trend toward the devolution of transportation decision-making authority will likely continue, but need not reduce reliance upon user-based approaches to highway finance.

Finding: Authority over the expenditure of funds is increasingly being "devolved" to regional organizations and county governments. For example, in 1997 the California Legislature approved Senate Bill 45, which gives metropolitan planning organizations increased control over the programming of funds for projects and programs within their jurisdictions. Although motor-fuel taxes and tolls are two major approaches to raising highway revenue at the state level, at the county and regional levels sales taxes are used much more commonly than user fees to raise transportation revenues.

Recommendation: The devolution of transportation authority to county and regional governments need not weaken the traditional reliance on user fees as the basis of highway finance. County and regional gasoline taxes and tolls should replace local (county) transportation sales taxes because they are both more equitable than sales taxes in that they charge only users, and more efficient in that they encourage travel patterns that reflect the cost of using the highway system.

6. Consideration should be given to using part of California's vehicle license fee as a highway user fee.

Finding: The California vehicle license fee is a property tax used by the state to fund certain local government programs largely unrelated to highways. The state budget for fiscal year 1998-1999 lowers vehicle license fees 25 percent as of January 1999, with the fee falling up to a total of 67.5 percent over five years if the state's economy performs well. This movement to lower the fees raises the possibility of making major changes to their use, as well.

Recommendation: California should consider using a portion of its vehicle license fee (VLF) as a highway user fee, to be returned to county governments for the funding of highway programs, including the mitigation of environmental impacts of highways and automobiles. Since the current fees raised approximately $3.6 billion in revenues in fiscal year 19961997 (an amount comparable to the state and federal fuel taxes combined), even a fraction of this money would substantially augment existing local transportation revenues. While the VLF is inferior to tolls and motor-fuel taxes as a direct user fee, it is more closely associated with vehicle ownership and use than are county general sales taxes. As county transportation sales taxes sunset, an alternative more in keeping with the principle of user-fee finance of highways would be the replacement of the sales taxes with allocations from VLF revenues.

7. The current state system of user fees for heavy vehicles is inefficient and inequitable. The state should evaluate these fees in comparison with alternatives that could both substantially reduce wear and tear on our road system and also raise revenue in more equitable and efficient ways.

Finding: The current system of levying charges against heavy vehicles is archaic and fails to recognize current knowledge that heavy axle loads can dramatically increase pavement damage. By basing vehicle fees on unladen vehicle weights and the number of axles, and not on axle loads imposed by fully laden vehicles, current truck-weight fees encourage unnecessary damage to pavements. The current system results in charges that are too high on trucks that operate relatively few miles per year, have relatively light laden-axle loads, or operate primarily on roads designed for heavy vehicles. Trucks that operate many miles per year, typically have heavy laden-axle loads, or frequently operate on low-weight-capacity roadbeds pay far less in taxes and fees than the wear and tear such vehicles inflict on the road system. New technology greatly enhances our ability to devise a system of charges that is more proportional to fully laden axle loads and the wide variation in the weight capacity of roadbeds.

Recommendation: The state should study alternative systems of user fees that would charge heavy vehicles more directly on the basis of the pavement damage associated with vehicle travel. It should be

clear that the goal of the study would be to reduce wear and tear on the road system and to assess fees more equitably and efficiently, rather than to simply increase heavy-vehicle fees. Representatives of the California trucking industry should participate in the study so that their concerns are included and the industry thus is more likely to support recommended changes.

CHANGE IS NEEDED BEFORE THE NEXT CRISIS

In the late 1980s there was widely perceived to be an impending transportation crisis in California. Vehicle travel was skyrocketing, traffic congestion was mushrooming, and highway revenues for operations, maintenance, and new construction fell far short of needs. In the early 1990s a severe economic recession cooled the growth in travel and eased congestion on one hand, and on the other new revenues were generated from a voter-approved motor-fuel tax increase, the adoption of transportation sales taxes by many counties, and bond measures for seismic upgrading. The crisis was averted. However, by turning to sales taxes and bonds, California did little to stabilize its increasingly problematic system of highway finance and took a historic and ill-advised step away from a 70-year commitment to a user-financed highway system.

California's economy is again booming, traffic is on the rise, and the next fiscal crisis is on the horizon. To ensure an effective, efficient, and equitable state highway system, reform of California's system of highway finance is clearly needed and will require careful deliberation and consensus-building. The stakes are high, the potential payoff is large, and the moment opportune. Work should begin before the next crisis is upon us.

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